GlobalFoundries™

2021 ANNUAL REPORT ON FORM 20-F

UNITED STATES
SECURITIES AND EXCHANGE COMMISSION

Washington, DC 20549

FORM 20-F

☐ **REGISTRATION STATEMENT PURSUANT TO SECTION 12(b) OR 12(g) OF THE SECURITIES EXCHANGE ACT OF 1934**

OR

☒ **ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**

For the fiscal year ended December 31, 2021

OR

☐ **TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**

OR

☐ **SHELL COMPANY REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**

Date of event requiring this shell company report ________

For the transition period from ________ to ________

Commission file number 001-40974

GLOBALFOUNDRIES Inc.

(Exact Name of Registrant as Specified in Its Charter)

N/A	**Cayman Islands**
(Translation of Registrant's Name Into English)	**(Jurisdiction of Incorporation or Organization)**

400 Stonebreak
Road Extension
Malta, NY 12020
(518) 305-9013
(Address of Principal Executive Offices)

Dr. Thomas Caulfield, Chief Executive Officer
400 Stonebreak Road Extension
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(518) 305-9013
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Securities registered or to be registered pursuant to Section 12(b) of the Act:

Title of Each Class	Trading Symbol(s)	Name of Each Exchange on Which Registered
Ordinary shares, par value US$0.02 per share	**GFS**	**The NASDAQ Global Select Market**

Securities registered or to be registered pursuant to Section 12(g) of the Act:

None
(Title of Class)

Securities for which there is a reporting obligation pursuant to Section 15(d) of the Act: None
(Title of Class)

Indicate the number of outstanding shares of each of the issuer's classes of capital or common stock as of the close of the period covered by the annual report.

As of December 31, 2021, 531,845,744 ordinary shares, par value US$0.02 per share, were outstanding.

Indicate by check mark if the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act. Yes ☐ No ☒

If this report is an annual or transition report, indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or (15)(d) of the Securities Exchange Act of 1934. Yes ☐ No ☒

Indicate by check mark whether the registrant: (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. Yes ☒ No ☐

Indicate by check mark whether the registrant has submitted electronically every Interactive Data File required to be submitted pursuant to Rule 405 of Regulation S-T (§232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit such files). Yes ☒ No ☐

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer or an emerging growth company. See definition of "large accelerated filer," "accelerated filer," and "emerging growth company" in Rule 12b-2 of the Exchange Act.

Large Accelerated Filer ☐	Accelerated Filer ☐	Non-Accelerated Filer ☒
		Emerging Growth Company ☐

If an emerging growth company that prepares its financial statements in accordance with U.S. GAAP, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards† provided pursuant to Section 13(a) of the Exchange Act. ☐

†The term "new or revised financial accounting standard" refers to any update issued by the Financial Accounting Standards Board to its Accounting Standards Codification after April 5, 2012.

Indicate by check mark whether the registrant has filed a report on and attestation to its management's assessment of the effectiveness of its internal control over financial reporting under Section 404(b) of the Sarbanes-Oxley Act (15 U.S.C. 7262(b)) by the registered public accounting firm that prepared or issued its audit report. ☐

Indicate by check mark which basis of accounting the registrant has used to prepare the financial statements included in this filing:

U.S. GAAP ☐	International Financial Reporting Standards as issued by the International Accounting Standards Board ☒	Other ☐

If "Other" has been checked in response to the previous question, indicate by check mark which financial statement item the registrant has elected to follow. Item 17 ☐ Item 18 ☐

If this is an annual report, indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act). Yes ☐ No ☒

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GlobalFoundries Inc.

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CAUTIONARY STATEMENT REGARDING FORWARD-LOOKING INFORMATION

Certain statements in this Annual Report on Form 20-F (the "Annual Report") are or may be deemed to be, "forward-looking statements" within the meaning of U.S. securities laws. These forward-looking statements are based on current expectations, estimates, forecasts and projections. These forward-looking statements appear in a number of places throughout this Annual Report including, but not limited to "Risk Factors," "Business Overview," and "Results of Operations." Words such as "expect," "anticipate," "should," "believe," "hope," "target," "project," "goals," "estimate," "potential," "predict," "may," "will," "might," "could," "intend," "shall" and variations of these terms and similar expressions are intended to identify these forward-looking statements, although not all forward-looking statements contain these identifying words. Forward-looking statements are based on our management's beliefs and assumptions and on information currently available to our management.

By their nature, forward-looking statements involve risks and uncertainties because they relate to events and depend on circumstances that may or may not occur in the future. Forward-looking statements are not guarantees of future performance and our actual results of operations, financial condition and liquidity, and the development of the industries in which we operate may differ materially from those made in or suggested by the forward-looking statements contained in this Annual Report. Important factors that could cause those differences include, but are not limited to:

- general global economic conditions;
- our ability to meet production requirements under long-term supply agreements;
- our business and operating strategies and plans for the development of existing and new businesses, ability to implement such strategies and plans and expected time;
- our reliance on a small number of customers;
- our future business development, financial condition and results of operations;
- the seasonality, volatility and cyclical nature of the semiconductor and microelectronics industry;
- expected changes in our revenue, costs or expenditures;
- our dividend policy;
- our assumptions and estimates regarding design wins;
- our expectations regarding demand for and market acceptance of our products and services;
- our expectations regarding our relationships with customers, contract manufacturers, component suppliers, third-party service providers, strategic partners and other stakeholders;
- our expectations regarding our capacity to develop, manufacture and deliver semiconductor products in fulfillment of our contractual commitments;
- our ability to conduct our manufacturing operations without disruptions;
- our ability to manage our capacity and production facilities effectively;
- our ability to develop new technologies successfully and remain a technological leader;
- our ability to maintain control over expansion and facility modifications;
- our ability to generate growth or profitable growth;
- our ability to maintain and protect our intellectual property;
- our ability to hire and maintain qualified personnel;
- our effective tax rate or tax liability;
- our ability to acquire required equipment and supplies necessary to meet customer demand;

- the increased competition from other companies and our ability to retain and increase our market share;
- the potential business or economic disruptions caused by current and future pandemics, such as the ongoing COVID-19 pandemic;
- developments in, or changes to, laws, regulations, governmental policies, incentives and taxation affecting our operations relating to our industry; and
- assumptions underlying or related to any of the foregoing.

We caution you that the foregoing list does not contain all of the forward-looking statements made in this Annual Report.

Forward-looking statements include, but are not limited to, statements regarding our strategy and future plans, future business condition and financial results, our capital expenditure plans, our capacity management plans, expectations as to the commercial production using more advanced technologies, technological upgrades, investment in research and development, future market demand, future regulatory or other developments in our industry, business expansion plans or new investments as well as business acquisitions and financing plans. Please see "Item 3. Key Information—Risk Factors" for a further discussion of certain factors that may cause actual results to differ materially from those indicated by our forward-looking statements. Accordingly, you should not place undue reliance on these forward-looking statements. In any event, these statements speak only as of their dates, and we undertake no obligation to update or revise any of them, whether as a result of new information, future events or otherwise.

You should carefully consider the "Risk Factors" and subsequent public statements, or reports filed with or furnished to the SEC, before making any investment decision with respect to our securities. If any of these trends, risks or uncertainties actually occurs or continues, our business, financial condition or operating results could be materially adversely affected, the trading prices of our securities could decline and you could lose all or part of your investment. All forward-looking statements attributable to us or persons acting on our behalf are expressly qualified in their entirety by this cautionary statement.

As used in this Annual Report, all references to "we", "us", "our", the "Company" and "GF" are to GlobalFoundries Inc. and its consolidated subsidiaries.

PART I

ITEM 1. IDENTITY OF DIRECTORS, SENIOR MANAGEMENT AND ADVISORS

Not applicable.

ITEM 2. OFFER STATISTICS AND EXPECTED TIMETABLE

Not applicable.

ITEM 3. KEY INFORMATION

A. Reserved.

B. Capitalization and Indebtedness

Not applicable.

C. Reasons for the Offer and Use of Proceeds

Not applicable.

D. Risk Factors Summary

The following important factors, and those factors described in other reports submitted to, or filed with, the SEC, among other factors, could affect our actual results and could cause our actual results to differ materially from those expressed in any forward-looking statements made by us or on our behalf, and that such factors may adversely affect our business and financial status and therefore the value of your investment:

Risks Related to our Business and Industry

- Global economic and political conditions could materially and adversely affect us.
- We have long-term supply agreements with certain customers that obligate us to meet specific production requirements, which may expose us to liquidated and other damages, require us to return advanced payments, require us to provide products and services at reduced or negative margins and constrain our ability to reallocate our production capacity to serve new customers or otherwise.
- Our strategy of securing and maintaining long-term supply contracts and expanding our production capacity may not be successful.
- We depend on a small number of customers for a significant portion of our revenue and any loss of this or our other key customers, including potentially through further customer consolidation, could result in significant declines in our revenue.
- We rely on a complex silicon supply chain and breakdowns in that chain could affect our ability to produce our products.
- Reductions in demand and average selling prices for our customers' end products (e.g., consumer electronics).
- Our competitors have announced expansions and may continue to expand in the United States and Europe, which could materially and adversely affect our competitive position.
- Sales to government entities and highly regulated organizations are subject to a number of challenges and added risks, and we could fail to comply with these heightened compliance requirements, or effectively manage these challenges or risks.

Risks Related to Manufacturing, Operations and Expansion

- If we are unable to manage our capacity and production facilities effectively, our competitiveness may be weakened.
- Our manufacturing processes are highly complex, costly and potentially vulnerable to impurities and other disruptions, and cost increases, that can significantly increase our costs and delay product shipments to our customers.
- Our profit margin may substantially decline if we are unable to continually improve our manufacturing yields, maintain high shipment utilization or fail to optimize the process technology mix of our wafer production.
- If we are unable to obtain adequate supplies of raw materials in a timely manner and at commercially reasonable prices our revenue and profitability may decline.

Risks Related to Intellectual Property

- Any failure to obtain, maintain, protect or enforce our intellectual property and proprietary rights could impair our ability to protect our proprietary technology and our brand.
- There is a risk that our trade secrets, know-how and other proprietary information will be stolen, used in an unauthorized manner, or compromised.
- The laws of some foreign countries may not be as protective of intellectual property rights as those in the United States, and mechanisms for enforcement of intellectual property rights may be inadequate.
- Our success depends, in part, on our ability to develop and commercialize our technology without infringing, misappropriating or otherwise violating the intellectual property rights of third parties and we may not be aware of such infringements, misappropriations or violations.
- We may be unable to provide technology to our customers if we lose the support of our technology partners.
- We have been and may continue to become subject to intellectual property disputes, which are costly and may subject us to significant liability and increased costs of doing business.

Political, Regulatory and Legal Risks

- Environmental, health and safety laws and regulations expose us to liability and risk of non-compliance, and any such liability or non-compliance may adversely affect our business.
- We are subject to governmental export and customs compliance requirements that could impair our ability to compete in international markets or subject us to liability if we violate the controls.
- We are currently and may in the future become subject to litigation that could result in substantial costs, divert or continue to divert management's attention and resources.

Risks Related to Our Status as a Controlled Company and Foreign Private Issuer

- Mubadala will continue to have substantial control over the Company, which could limit your ability to influence the outcome of key transactions, including a change of control, and otherwise affect the prevailing market price of our ordinary shares.
- We are a foreign private issuer and, as a result, are not subject to U.S. proxy rules but are subject to reporting obligations that, to some extent, are more lenient and less frequent than those of a U.S. issuer.

Risk Factors

Risks Related to our Business and Industry

Global economic and political conditions could materially and adversely affect our results of operations, financial condition, business and prospects.

The semiconductor industry relies on a global supply chain and is considered strategically important by major trading countries, including the United States, China, and countries in the EU. Political, economic and financial crises have in the past negatively affected and in the future could negatively affect the semiconductor industry and its end markets. Our business may also be materially affected by the impact of geopolitical tensions and related actions. Recently, there have been political and trade tensions among, and between, a number of the world's major economies, most recently between Russia and the member nations of NATO and others and, most notably in our industry between the United States and China, with Hong Kong and Taiwan implicated in the tensions. These tensions have resulted in the implementation of trade barriers, including the use of economic sanctions and export control restrictions against certain countries and individual companies. For example, over the past two years, the U.S. Department of Commerce's Bureau of Industry and Security ("BIS") placed one of the largest mobile handset and 5G infrastructure providers in the world, Huawei, and China's largest semiconductor foundry, Semiconductor Manufacturing International Corporation ("SMIC"), on the BIS Entity List. Violations of these economic sanctions and export control restrictions can result in significant civil and criminal penalties. These trade barriers have had a particular impact on the semiconductor industry and related markets. Prolonged or increased use of trade barriers may result in a decrease in the growth of the global economy and semiconductor industry and could cause turmoil in global markets, which in turn often results in declines in our customers' electronic products sales and could decrease demand for our products and services. Also, any increase in the use of economic sanctions or export control restrictions to target certain countries and companies could impact our ability to continue supplying products and services to those customers and our customers' demand for our products and services, and could disrupt semiconductor supply chains. Finally, the recent conflict between Russia and Ukraine has created uncertainty regarding potential impacts on supply of materials needed for our operations (including natural gas), particularly in Europe, and regarding our customers' potential sales of electronic products and components to customers in Russia. The conflict has also created uncertainty about broader impacts that economic sanctions, prioritization of humanitarian shipments, and export control restrictions may have on global supply chains and markets generally.

Any future systemic political, economic or financial crisis or market volatility, including interest rate fluctuations, inflation or deflation and changes in economic, trade, fiscal and monetary policies in major economies, could cause revenue or profits for us or the semiconductor industry as a whole to decline dramatically. If the economic conditions in the markets in which our customers operate or the financial condition of our customers were to deteriorate, the demand for our products and services may decrease and impairments, write-downs and other accounting charges may be required, which could reduce our operating income and net income. Further, in times of market instability, sufficient external financing may not be available to us on a timely basis, on commercially reasonable terms or at all. If sufficient external financing is not available when we need such financing to meet our demand-driven capital requirements, we may be forced to curtail expansion, modify plans and delay the deployment of new or differentiated technologies, products, or services until we obtain such financing. Further escalation of trade tensions, the increased use of economic sanctions or export control restrictions or any future global systemic crisis or economic downturn could materially and adversely affect our results of operations, financial condition, business and prospects.

We have long-term supply agreements with certain customers that obligate us to meet specific production requirements, which may expose us to liquidated and other damages, require us to return advanced payments, require us to provide products and services at reduced or negative margins and constrain our ability to reallocate our production capacity to serve new customers or otherwise.

In response to the current global semiconductor supply shortage and in connection with our focus on differentiated technology platforms and deeper customer engagements, we have entered into multiple long-term supply agreements that provide for significant customer commitments in return for capacity reservation commitments from us. In many cases, in connection with these arrangements we have received, or will receive, customer advanced payments and capacity reservation fees. If we are unable to satisfy our obligations under these contracts, we may be forced to return such payments which could result in significant cash expenditures. Under most of our long-term supply agreements, we must maintain sufficient capacity at our manufacturing facilities to meet anticipated customer demand for our proprietary products. From time to time, this requires us to invest in expansion or improvements of those facilities, which often involves substantial cost and other risks, such as delays in completion. Such expanded manufacturing capacity may still be insufficient, or may not come online soon enough, to meet customer demand and we may have to limit the amount of products we can supply to customers, forgo sales or lose customers as a result. Further, capacity reserved for certain customers could cause us to breach obligations to other customers due to capacity constraints, or prevent us from serving new customers. If we are unable to satisfy our obligations under our customer agreements, we may be subject to significant liquidated damages or penalties, which could result in significant cash expenditures and require us to raise additional capital. Conversely, if we overestimate customer demand or a customer defaults on its purchase or payment obligations to us, we could experience underutilization of capacity at these facilities without a corresponding reduction in fixed costs. Our inability to maintain appropriate capacity could materially and adversely affect our results of operations, financial condition, business and prospects.

Our strategy of securing and maintaining long-term supply contracts and expanding our production capacity may not be successful.

We have undertaken, and will continue to undertake, various business strategies to sell a significant portion of our production capacity through long-term supply contracts, grow our production capacity, and improve operating efficiencies and generate cost savings. We cannot assure you that we will successfully implement those business strategies or that implementing these strategies will sustain or improve and not harm our results of operations. In particular, our ability to implement our strategy to enter into long-term supply contracts successfully is subject to certain risks, including:

- customers defaulting on their obligations to us, which may include significant payment obligations;
- our defaulting on our obligations to our customers (for example, due to raw materials shortages, production disruptions, or our subcontractors' default on test or packaging obligations), which could result in us owing substantial penalties to our customers;
- customers seeking to renegotiate key terms of their contracts, such as pricing and specified volume commitments, in the event market conditions change during the contract term; and
- our inability to extend contracts when they expire.

As a result, we cannot assure you that we will successfully implement this strategy or realize the anticipated benefits of these contracts.

Additionally, the costs involved in implementing our strategies may be significantly greater than we currently anticipate. For example, our ability to complete production capacity expansions or make other operational improvements as planned may be delayed, interrupted or made more costly by the need to obtain environmental and other regulatory approvals, the availability of semiconductor manufacturing equipment, labor and materials, unforeseen hazards, such as weather conditions, and other risks customarily associated with construction projects. Moreover, the cost of expanding production capacity could have a negative impact on our financial results until shipment utilization is sufficient to absorb the incremental costs associated with the expansion.

Our ability to successfully implement these strategies depends on a variety of factors, including, among other things, our ability to finance our operations, maintain high-quality and efficient manufacturing operations, respond to competitive and regulatory changes, access semiconductor manufacturing equipment or quality raw materials in a cost-effective and timely manner, and retain and attract highly skilled personnel. Further, some of our long-term supply agreements constrain our ability to change product mix within short time frames, given "end of life" provisions in our agreements that require substantial notice periods before we can cease production of existing products. Since 2018, we have been in the process of pivoting our development resources to focus on differentiated technologies, based on an analysis of market dynamics and our competitive strengths. Any failure to continue implementing this strategic pivot in a timely and cost-effective manner could materially and adversely affect our results of operations, financial condition, business and prospects.

We depend on a small number of customers for a significant portion of our revenue and any loss of this or our other key customers, including potentially through further customer consolidation, could result in significant declines in our revenue.

We have been largely dependent on a small number of customers for a substantial portion of our revenue. Our ten largest customers in 2019, 2020 and 2021 accounted for approximately 73%, 73% and 67% of our wafer shipment volume, respectively. We expect that a significant portion of our revenue will continue to come from a relatively limited number of customers. We cannot assure you that our revenue generated from these customers, individually or in the aggregate, will reach or exceed historical levels in any future period. Loss or cancellation of business from, significant changes in scheduled deliveries to, or a decrease of products and services sold to any of these customers could significantly reduce our revenue. Additionally, the increasing trend in mergers and acquisition activities in the semiconductor industry could reduce the total available customer base.

We rely on a complex silicon supply chain and breakdowns in that chain could affect our ability to produce our products and could materially and adversely affect our results of operations, financial condition, business and prospects.

We rely on a small number of suppliers for wafers, which is a key input into our products. In particular, only a limited number of companies in the world are able to produce silicon-on-insulator ("SOI") wafers. If there is an insufficient supply of wafers, particularly SOI wafers, to satisfy our requirements, we may need to limit or delay our production, which could materially and adversely affect our results of operations, financial condition, business and prospects. If our limited source suppliers and suppliers for wafer preparation were to experience difficulties that affected their manufacturing yields or the quality of the materials they supply to us, it could materially and adversely affect our results of operations, financial condition, business and prospects. In particular, we depend on Soitec S.A. ("Soitec"), our largest supplier of SOI wafers, for the timely provision of wafers in order to meet our production goals and obligations to customers. We have entered into multiple long-term agreements with Soitec across a wide spectrum of SOI products. Soitec supplied 46% of our SOI wafers in 2021. In April 2017, we entered into a multi-year materials supply agreement with Soitec that expires in 2022, with automatic annual extensions unless terminated by either party. In that same year, we agreed to an addendum to the materials supply agreement for Fully-Depleted SOI ("FDX™") wafers, in particular, as amended and restated in 2021. In November 2020, we agreed to an addendum to our original materials supply agreement to secure supply for 300 millimeter ("mm") RF SOI, partially-depleted SOI and Silicon Photonics ("SiPh") wafers. Our supply agreements with Soitec impose mutual obligations, in the form of capacity requirements, minimum purchase requirements and supply share percentages. We may be subject to penalties if we fail to comply with such obligations. If we are unable to obtain 300mm SOI wafers from Soitec for any reason, we expect that it would be challenging, if not infeasible, to find a replacement supplier on commercially acceptable terms in the near term. While we are in the process of developing relationships with alternate suppliers, we do not expect to be able to acquire a significant amount of SOI wafers from those suppliers in the near term, and there is no assurance that we will ever be able to do so.

The ability of our suppliers to meet our requirements could be impaired or interrupted by factors beyond their control, such as earthquakes or other natural phenomena, labor strikes or shortages, or political unrest or failure to obtain materials for their suppliers. For example, Soitec is reliant on third-party providers to obtain raw silicon wafers—difficulties in obtaining raw silicon wafers may result in Soitec's inability to produce SOI wafers. In the event one of our suppliers is unable to deliver products to us or is unwilling to sell materials or components to us, our operations may be adversely affected. Further, financial or other difficulties faced by our suppliers, or significant changes in demand for the components or materials they use in the products they supply to us, could limit the availability of those products, components, or materials to us. Any breakdown of our wafer supply chain could materially and adversely affect our results of operations, financial condition, business and prospects.

Reductions in demand and average selling prices ("ASPs") for our customers' end products (e.g., consumer electronics) and increases in inflation may decrease demand for our products and services and could materially and adversely affect our results of operations, financial condition, business and prospects.

The substantial majority of our revenue is derived from customers who use our products in intelligent and highly connected devices in markets such as Smart Mobile Devices, Home and Industrial internet of things ("IoT"), Communications Infrastructure & Datacenter, Automotive and Personal Computing. A deterioration or a slowdown in the growth of such end markets resulting in a substantial decrease in the demand for overall global semiconductor foundry services, including our products and services, could adversely affect our revenue and profit margins. Semiconductor manufacturing facilities require substantial investment to construct and are largely fixed-cost assets once they are in operation. Because we own our manufacturing facilities, a significant portion of our operating costs are fixed. In general, these costs do not decline when customer demand or our shipment utilization rate drops, and thus declines in customer demand, among other factors, may significantly decrease our profit margins. Our costs may also increase as a result of, among other things, inflation, which may have a greater impact on our profit margins than ASPs. In the past, there have been periods of sustained decline in ASPs of our customers' end products and applications. A return to historical trends could place downward pressure on the prices of the components, including our products, that go into such end products and applications. If ASPs decline and our cost reduction programs and actions do not offset the decrease or our costs increase due to inflation or otherwise and are not offset by an increase in ASPs, our results of operations, financial condition, business and prospects may be materially and adversely affected.

The seasonality and cyclical nature of the semiconductor industry and periodic overcapacity make us vulnerable to significant and sometimes prolonged economic downturns.

The semiconductor industry has exhibited cyclicality in the past and, at various times, has experienced downturns. Fluctuations in our customers' demand drive significant variations in order levels for our products and services and can result in volatility in our revenue and earnings. Because our business is, and will continue to be, largely dependent on the requirements of both consumer and industrial high-end technology product suppliers for our services, downturns in this broad industry will likely lead to reduced demand for our products and services.

Demand for our customers' end products is affected by seasonal variations in market conditions that contribute to the fluctuations of demand and prices for semiconductor services and products. The seasonal sales trends for semiconductor services and products closely mirror those for automotive, consumer electronics, communication and computer sales. These seasonal variations, and seasonal variation changes that we cannot anticipate, may result in increased volatility in our results of operation and could materially and adversely affect our results of operations, financial condition, business and prospects.

Overcapacity in the semiconductor industry may reduce our revenue, earnings and margins.

The prices that we can charge our customers for manufacturing services are significantly related to the overall worldwide supply of integrated circuits ("ICs") and semiconductor products. The overall supply of semiconductors is based in part on the capacity of other companies, which is outside of our control. For example, in light of current market conditions, we and some other companies, including competitors with access to material government support, have announced plans to increase capacity expenditures significantly. Additionally, some nations, including China, are investing heavily in developing additional domestic capacity for semiconductor fabrication. We believe such plans, if carried out as planned, will increase the industry-wide capacity and could result in overcapacity in the future. In periods of overcapacity, if we are unable to offset the adverse effects of overcapacity through, among other things, our technology and product mix, we may have to lower the prices we charge our customers for our products and services and/or we may have to operate at significantly less than full capacity. Such actions could reduce our margin and profitability and weaken our financial condition and results of operations. We cannot give any assurance that an increase in the demand for foundry services in the immediate and short-term will not lead to overcapacity in the future, which could materially and adversely affect our results of operations, financial condition, business and prospects.

If we are unable to attract customers with our technology, respond to fast-changing semiconductor market dynamics or maintain our leadership in product quality, we will become less competitive.

The semiconductor industry and the technologies it brings to market are constantly being created and evolving. We compete by developing process technologies that incorporate increasingly higher performance and advanced features, offering increasing functionality depending upon the customer's application requirements. If we do not anticipate these changes in technology requirements and fail to rapidly develop new and innovative solutions to meet these demands, we may not be able to provide foundry services on competitive terms with respect to cost, schedule or volume manufacturing capacity. There is a risk that our competitors may successfully adopt new or more differentiated technology before we do, resulting in us losing design wins (including in cases in which we have expended significant resources to pursue design wins) and market share. If we are unable to continue to offer differentiated services and processes on a competitive and timely basis, we may lose customers to competitors providing similar or better technologies.

A key differentiator in the marketplace is to significantly reduce the time in which technology products or services are launched into the market. If we are unable to meet the shorter time-to-market requirements of our customers or fail to impress them with our newer technology solutions or are unable to allocate or develop new production capacity to meet those customers' demands in a timely manner, we risk losing their business and not generating the market adoption needed to pay for our development efforts. These factors have also been intensified by the shift of the global technology market to consumer-driven products and increasing concentration of customers and competition. Further, the increasing complexity of technology also imposes challenges for achieving expected product quality, cost and time-to-market expectations. If we fail to maintain quality, it may result in loss of revenue and additional cost, as well as loss of business or customer trust. If we are unable to meet the expected production yields of a new technology, we will not be able to meet the expected costs of that technology. In addition, the market prices for technology and services tend to fall over time, except in times of extreme supply shortage. As a result, if we are unable to offer new differentiated services and processes on a competitive and timely basis, we may need to decrease the prices that we set for our existing services and processes. If we are unable to innovate new and differentiated technologies and bring them to a cost-competitive volume manufacturing scale that meets the demand of our customers, we may become less competitive and our revenue and margins may decline significantly.

External risks also exist that can impact our position as a technology leader. Differentiated technology offerings may rely upon unique or specialized materials as compared to our competitors, including specialized wafers upon which some of our technologies are currently manufactured, raw materials for wafer fabrication, and materials used in the packaging of ICs to enable them to be used in the end products. A disruption in the availability of or quality of these new or unique materials during technology development can impact time-to-market, or have impact on the quality or cost of finished goods in the marketplace. Similarly, our technology roadmap relies on externally sourced design tools and component circuit designs that allow our end customers to more readily realize their products in our technologies, and disruption or delays in our ability to obtain those resources may impair our ability to compete effectively and serve our customers.

The rapidly changing nature of advanced semiconductor technology can also culminate in the emergence of highly disruptive or unconventional technologies and new disruptive solutions using existing technologies, which can create a rapid inflection point leaving those on a conventional technology roadmap path at a significant disadvantage and unprepared to react in a timely manner.

If we are unable to compete effectively with other sophisticated players in the highly competitive foundry segment of the semiconductor industry, we may lose customers and our profit margins and earnings may decrease.

We believe the foundry market is comprised of five major pure-play foundries that accounted for the vast majority of worldwide foundry revenue in 2021. We define a scaled pure-play foundry as a company that focuses on producing ICs for other companies, rather than those of its own design, with more than $2 billion of annual foundry revenue. Taiwan Semiconductor Manufacturing Company, Limited ("TSMC") at $56.8 billion of revenue in 2021 accounted for more than 50% of the total market. Other key competitors include SMIC and United Microelectronics Corporation ("UMC"), as well as the foundry operation services of some integrated device manufacturers, such as Samsung and, more recently, Intel Corporation ("Intel"). Integrated Device Manufacturers ("IDMs") principally manufacture and sell their own proprietary semiconductor products but may also offer foundry services. Other smaller dedicated foundry competitors include X-FAB Silicon Foundries, Tower Semiconductor Ltd., Vanguard International Semiconductor Corporation ("Vanguard") and WIN Semiconductors Corp. Some of our competitors may offer more advanced or differentiated technologies than we do and some have greater access to capital and substantially greater production capacity, research and development ("R&D"), marketing and other resources, including access to government subsidies and economic stimulus (including protective demand-side measures), than we do. As a result, these companies may be able to compete more aggressively over a longer period of time than we can.

The principal elements of competition in the wafer foundry market include:

- scale and the ability to access capital to fund future growth;
- capacity utilization;
- technical competence, including internal and access to external design enablement capabilities;
- technology leadership and differentiation;
- price;
- time-to-volume production and cycle time;
- time-to-market;
- investment in R&D and related quality of results;
- manufacturing yields;
- optimization of the technology mix of wafer production at particular process technology nodes;
- design/technology interaction and resulting chip reliability;
- customer service and design support;
- management expertise; and
- strategic alliances and geographic diversification.

Our ability to compete successfully also depends on factors partially outside of our control, including component supply, intellectual property, including cell libraries that our customers embed in their product designs, and industry and general economic trends.

Our competitors have announced expansions and may continue to expand in the United States and Europe, which could materially and adversely affect our competitive position.

TSMC, Samsung and Intel have announced plans to develop new fabrication facilities ("fabs") and substantially increase their manufacturing capacity in the United States, and other competitors may seek to do likewise. Similarly, our competitors may seek to develop new fabs in Europe and substantially increase their manufacturing capacity. Such expansions may increase the attractiveness of our competitors to customers who wish to utilize fabs located in the United States or Europe, use geographically dispersed suppliers or mitigate risks posed by geopolitical tensions and export controls. Further, it may lead to increased competition for funding and talent in those jurisdictions. This increased competition could materially and adversely affect our results of operations, financial condition, business and prospects.

The semiconductor industry is capital-intensive and, if we are unable to invest the necessary capital to operate and grow our business, we may not remain competitive.

To remain competitive and comply with evolving regulatory requirements, we must constantly improve our facilities and process technologies and carry out extensive R&D, each of which requires investment of significant amounts of capital. The costs of manufacturing facilities and semiconductor manufacturing equipment continue to rise. We expect to incur additional capital expenditures in connection with our revenue expansion plans to expand our fabs in Dresden, Germany; Malta, New York; and Singapore. On June 22, 2021, we announced plans to spend approximately $4.0 billion to expand our operations in Singapore, and on July 19, 2021 announced fab expansion plans in Malta, New York involving approximately $1.0 billion, with the construction of a new fab on the same campus to follow. Our actual expenditures may exceed our planned spend due to global economic and industry-wide equipment or material price increases during the long lead time to build capacity. Given the fixed-cost nature of our business, we have in the past incurred, and may in the future incur, operating losses if our revenue do not adequately offset the impact of our capital expenditures and the cost of financing these expenditures. Additionally, a significant portion of any operating income we do generate is needed to service our outstanding debt.

We invest significantly in R&D, and to the extent our R&D efforts are unsuccessful, our competitive position may be harmed and we may not be able to realize a return on our investments. To compete successfully, we must maintain a successful R&D effort, develop new product technologies, features and manufacturing processes, and improve our existing products and services, technologies and processes. Our R&D efforts may not deliver the benefits we anticipate. To the extent we do not timely introduce new technologies and features relative to competitors, we could face cost, product performance, and time-to-market disadvantages, which could materially and adversely affect our results of operations, financial condition, business and prospects.

Financing, including equity capital, debt financing, customer co-investments and government subsidies, may not be available on commercially acceptable terms or at all. Any additional debt financing we may undertake could require debt service and financial and operational requirements that could adversely affect our business. If we are unable to generate sufficient cash or raise sufficient capital to meet both our debt service and capital investment requirements, or if we are unable to raise required capital on favorable terms when needed, we may be forced to curtail revenue expansion plans or delay capital investment, which could materially and adversely affect our results of operations, financial condition, business and prospects.

We may not be able to implement our planned growth and development or maintain the differentiation of our solutions if we are unable to recruit and retain key executives, managers and skilled technical personnel.

We rely on the continued services and contributions of our management team and skilled technical and professional personnel. In this industry, the competitive pressures to find and retain the most talented personnel are intense and constant. The top talent in the industry is often well-known and pursued by competitors. In addition, with the speed of technological and business change, skills need to be constantly refreshed and built upon. Our business could suffer if we are unable to fulfill and sustain resource requirements with qualified individuals in required positions globally. Fulfilling new resource needs on a timely basis continues to be a challenge in this highly competitive market for semiconductor talent. Competition for talent exists in all of our operating regions, emphasizing the importance of strong employee retention, and if we fail to attract and retain top talent, our business and results of operations could be materially adversely impacted.

We receive subsidies and grants in certain countries and regions in which we operate, and a reduction in the amount of governmental funding available to us or demands for repayment could increase our costs and affect our results of operations.

As is the case with other large semiconductor companies, we receive subsidies and grants from governments in certain countries and regions in which we operate. In response to increased geopolitical tensions, national security and supply chain concerns, as well as recent supply shortages, the United States and the European Union are considering new semiconductor industry incentive programs. For example, the United States Congress has passed appropriations bills to fund the Creating Helpful Incentives to Produce Semiconductors for America ("CHIPS") Act. Similarly, the European Commission recently proposed the European Chips Act. These programs represent potentially significant new sources of government funding for capital and R&D investment for our industry. Historically, we have benefited from these kinds of government programs, and we intend to continue to benefit from government programs to help fund our expansion efforts. However, we may be unable to secure government funding at the levels we expect or at all, and the availability of government funding is outside our control. Moreover, should we terminate any activities or operations related to government funds that we receive or upon which government funds have been conditioned, we may face adverse consequences. In particular, government agencies could seek to recover subsidies or grants from us, seek repayment of loans, or could cancel, reduce or deny our requests for future subsidies or grants. This could materially and adversely affect our results of operations, financial condition, business and prospects.

Strong government support in China for capacity expansion, combined with weaker demand from and strained economic relations with that country, could lead to underutilization or significant ASP erosion for fab fill.

China's aggressive investment in its "buy from China" initiatives have inflated the capital available for technology development in China and resulted in an expansion of fabrication capacity for semiconductors. China's decision to build capacity for China, to be sourced primarily from indigenous suppliers like SMIC, will have the effect of limiting the Chinese market for other global suppliers like us. Increases in China's fabrication capacity for semiconductors may also significantly increase the competition we face globally, which may make it more difficult for us to retain and obtain new customers and lead to material reductions in ASPs.

Any outbreak of contagious disease, such as the ongoing COVID-19 pandemic, could materially and adversely affect our results of operations, financial condition, business and prospects.

Any outbreak of contagious disease, including, but not limited to, COVID-19, Zika virus, Ebola virus, avian or swine influenza or severe acute respiratory syndrome, may disrupt our ability to adequately staff our business and may generally disrupt our operations. The ongoing COVID-19 pandemic has slowed economic growth, including in regions of the world where we, our customers and suppliers operate, and has negatively impacted the global supply chain, market and economies. We have significant operations in the United States, Europe, and Singapore, including supply chain and manufacturing facilities and sales and marketing channels and information technology ("IT") design and other support services in these countries and regions as well as other countries such as Japan, India, Bulgaria, Taiwan and China.

If the COVID-19 outbreak worsens or continues longer term, or new outbreaks of COVID-19 or other contagious diseases occur, we may experience material adverse effects on our business, including, among other things:

- declines in sales activities and customer orders;

- significant fluctuations in demand for our products and services, which could in turn cause uncertainty for our capacity planning, production delays and reduced workforce availability;
- difficulties in domestic and international travel and communications and interruption;
- delays in our planned expansion in Singapore, including from temporary governmental work stoppage orders to control COVID-19 infection rates or as a result of border closures with Malaysia, both of which have occurred;
- delays in other potential expansion plans; or
- slowdown of R&D activities.

Likewise, such an outbreak of disease could slow or suspend the operations of our suppliers and cause them to be unable to deliver needed raw materials as required. Any of these factors could materially and adversely affect our results of operations, financial condition, business and prospects.

Sales to government entities and highly regulated organizations are subject to a number of challenges and added risks, and our failure to comply with these heightened compliance requirements, or effectively manage these challenges or risks, could impact our operations and financial results.

We currently sell to the U.S. federal government and to customers in highly regulated industries, and may sell to state and local governments and to foreign governmental agency customers in the future. Sales to such entities are subject to a number of compliance challenges and risks, including regarding access to and required protection of classified information. Failure to comply with Foreign Ownership, Control or Influence ("FOCI") agreements could lead to a loss of our security clearance and certain government business and reputational harm. Selling to governmental and highly regulated entities can be highly competitive, expensive and time-consuming, often requiring significant upfront time and expense without any assurance that these efforts will generate a sale. Government contracting requirements may change and in doing so restrict our ability to sell into the government sector until we have attained any revised necessary certification or authorization. Government demand and payment for our products and services are affected by public sector budgetary cycles and funding authorizations, with funding reductions or delays adversely affecting public sector demand for our products and services. Such sales are made more difficult by the fact that many of our product design and life cycles are very long, compared to public fiscal budget calendars.

Further, governmental and highly regulated entities may demand contract terms that differ from our standard commercial arrangements, and those contract terms may be in some respects less favorable than terms agreed to by private sector customers. Governments routinely retain certain rights to IP developed in connection with government contracts. Such entities may have statutory, contractual or other legal rights to terminate contracts with us or our partners for convenience or for other reasons that are out of our control or influence. Any such terminations, or other adverse actions, may materially adversely affect our ability to contract with other government customers, as well as our reputation, results of operations, financial condition, business and prospects. In addition, our U.S. government contracts obligate us to comply with various cybersecurity requirements. These requirements include ongoing investment in systems, policies and personnel, and we expect these requirements to continue to impact our business in the future by increasing our legal, operational and compliance costs.

Certain of our government contracts require us to notify the applicable governmental actor and discuss options with the governmental actor before making certain potential transfers of intellectual property developed under those contracts, and certain of our government contracts impose specific limitations on our use and licensing of certain of our intellectual property. Additionally, production of sensitive, export-controlled products for governmental and highly regulated entities requires adherence to strict export and security controls. In the event of a breach or other security event involving one of these products, we may be subject to investigations to determine the extent and impact to such products, regulatory proceedings, litigation, mitigation and other actions, as well as penalties, fines, increased insurance premiums, indemnification expenditures and administrative, civil and criminal liabilities and reputational harm, each of which could negatively impact operations for multiple products and future business, cause production and sales delays and materially and adversely affect our results of operations, financial condition, business and prospects.

We may be exposed to liabilities if it is determined that our compensation arrangements do not comply with, or are not exempt from, Section 409A of the Code.

Section 409A ("Section 409A") of the Internal Revenue Code of 1986, as amended ("the Code"), sets forth the rules governing non-qualified deferred compensation arrangements. Section 409A contains many technical, complicated and ambiguous rules and regulations, including proposed but not yet finalized regulations that do not currently have the force of law, making compliance with Section 409A difficult to assess and to ensure. While we have attempted to structure our compensation arrangements (including our equity incentive awards) so that they either comply with, or are exempt from, Section 409A, it is possible that some of these compensation arrangements are not so exempt or compliant. In some instances, we have determined that amendments to certain of our compensation arrangements were advisable in order to mitigate or eliminate potential Section 409A non-compliance risk, though there can be no assurance that such amendments will mitigate or eliminate any such risk. If it is determined that any of our compensation arrangements are neither compliant with, nor exempt from, Section 409A, we may be subject to significant liabilities and costs, including penalties for failing to properly report deferred compensation arrangements under Section 409A and to withhold taxes payable by our service providers, including our employees, and we may be required to pay to the applicable governmental authorities the amount of taxes we should have withheld and related interest and penalties. In addition, those of our service providers, including our employees, participating in such arrangements may experience significant adverse tax consequences under Section 409A, including a 20% federal penalty tax imposed on the amount of compensation involved (and, as applicable, similar excise taxes under state law or foreign law). These liabilities may be significant and the imposition of such liabilities may materially affect our employee relations. In addition, in the event any such liabilities were imposed on our service providers, including our employees, we could decide to take remedial action, including making cash payments to adversely affected service providers, including our employees. Any amounts so paid by us could materially and adversely affect our results of operations, financial condition, business and prospects.

Improper disclosure of confidential information could negatively impact our business.

In the ordinary course of our business, we maintain sensitive data on our networks, including our intellectual property and proprietary or confidential business information relating to our business and that of our customers and business partners. In addition, we regularly enter into confidentiality obligations with our customers, suppliers and parties that we license intellectual property to or from. The secure maintenance of this information is critical to our business and reputation. We have put in place policies, procedures and technological safeguards designed to protect the security of this information. However, we cannot guarantee that this information will not be improperly disclosed or accessed. Disclosure of this information could harm our reputation, subject us to liability under our contracts and harm our relationships with key counterparties, which could materially and adversely affect our results of operations, financial condition, business and prospects.

Risks Related to Manufacturing, Operations and Expansion

If we are unable to manage our capacity and production facilities effectively, our competitiveness may be weakened.

We perform long-term market demand forecasts for our products to manage, and plan for, our overall capacity. Because market conditions are dynamic, our market demand forecasts may change significantly at any time. During periods of decreased demand, certain manufacturing lines or tools in some of our manufacturing facilities may be idled or shut down temporarily, to save costs while preserving capacity. However, if subsequent demand increases rapidly, we may not be able to restore the capacity in a timely manner to take advantage of the upturn. In light of market demand forecasts, we have recently been adding capacity to meet market needs for our products. In some instances, we increase or otherwise manage capacity by transferring technologies from one location to another. Expansion of our capacity will increase our costs. For example, we will need to purchase additional equipment, and hire and train additional personnel to operate the new equipment. In case of a technology transfer, we may also need to source new tooling and materials, train personnel to learn and stabilize new processes and, depending on the technology, obtain government approval for such transfer. If demand does not increase as planned or expansion is delayed, we may not increase our net revenue accordingly, which could materially and adversely affect our results of operations, financial condition, business and prospects.

Because we own and operate high-tech manufacturing facilities, our operations have high costs that are fixed or difficult to reduce in the short term, including our costs related to utilization of existing facilities, facility construction and equipment, R&D, and the employment and training of a highly skilled workforce. To the extent demand decreases, capacity does not increase in time to meet demand or we fail to forecast demand accurately, we could be required to write off inventory or record underutilization charges, which would lower our gross margin. To the extent any demand decrease is prolonged, our manufacturing capacity could be underutilized, and we may be required to write down our long-lived assets, which would increase our expenses. We may also be required to shorten the useful life of under-used facilities and equipment and accelerate depreciation.

Our manufacturing processes are highly complex, costly and potentially vulnerable to impurities and other disruptions, and cost increases, that can significantly increase our costs and delay product shipments to our customers.

Our semiconductor manufacturing processes are highly complex, require advanced and costly equipment, difficult to transfer and are continuously being modified to improve manufacturing yields and product performance intended to improve or protect our ability to achieve our revenue and profit plan. Disruptions in manufacturing operations could be caused by numerous issues including impurities in our raw materials (such as chemicals, gases and wafers), supply chain changes to support expansion plans, facilities issues (such as electrical power and water outages), equipment failures (such as performance issues or defects) or IT issues (such as down computer systems and viruses). Any of these issues, and others, could lower production yields or interrupt manufacturing, which could result in the loss of products in process that could cause delivery delays, reduced revenue, increased cost or reduced quality delivered to our customers. These factors could significantly affect our financial results as well as our ability to attract new and retain existing customers.

In the past, we have encountered, among other issues:

- capacity constraints due to changes in product mix or the delayed delivery of equipment critical to our production;
- construction delays during expansions of our clean rooms and other facilities;
- difficulties in upgrading or expanding existing facilities;
- failure of manufacturing execution system or automatic transportation systems;
- unexpected breakdowns in manufacturing equipment and/or related facilities;
- disruptions in connection with changing, transferring or upgrading our process technologies;
- electrical power outages;
- raw materials shortages and impurities; and
- delays in delivery or shortages of spare parts used in the maintenance of our equipment.

If the above issues recur or we face similar challenges in the future, we may suffer delays in our ability to deliver our products, which could have a material and adverse effect on our results of operations, financial condition, business and prospects. In addition, we cannot guarantee that we will be able to increase our manufacturing capacity and efficiency in the future to the same extent as in the past. Additionally, increases in the costs of key inputs to fabs, including raw materials, electric power and water, could materially and adversely affect our results of operations, financial condition, business and prospects.

We are subject to risks associated with the development and implementation of new manufacturing technologies.

Production of ICs is a complex process. We are continually engaged in the development of new manufacturing process technologies and features. Forecasting our progress and schedule for developing new process technologies and features is challenging, and at times we encounter unexpected delays due to the complexity of interactions among steps in the manufacturing process, challenges in using new materials, and other issues. We may expend substantial resources on developing new technologies that are ultimately not successful, which may result in our recognizing significant impairment charges. Diagnosing defects in our manufacturing processes often takes a long time, as manufacturing throughput times can delay our receipt of data about defects and the effectiveness of fixes. We are not always successful or efficient in developing or implementing new technologies and manufacturing processes.

Our profit margin may substantially decline if we are unable to continually improve our manufacturing yields, maintain high shipment utilization or fail to optimize the process technology mix of our wafer production.

Our ability to maintain our profit margin depends, in part, on our ability to:

- maintain high capacity utilization;
- maintain or improve our production yields; and
- optimize the technology mix of our production by increasing the number of wafers manufactured by utilizing different processing technologies.

Our shipment utilization affects our operating results because a large percentage of our operating costs is fixed. Our manufacturing yields directly affect our ability to attract and retain customers, as well as the prices of our services. Different technologies load the available capacity differently, and an increase of lower margin product demand could lower the financial performance of a factory while still fully utilizing the available capacity. If we are unable to continuously maintain high capacity utilization, improve our manufacturing yields or optimize the technology mix of our wafer production, our profit margin may substantially decline.

Our manufacturing processes are highly complex, require advanced and costly equipment and are continuously being modified in an effort to improve yields and product performance. Minute impurities or other difficulties in the manufacturing process can lower yields. Further, at the beginning of each semiconductor technological upgrade, the manufacturing yield utilizing the new technology may be lower than the yield under current technology. Our manufacturing efficiency is an important factor in our profitability, and we cannot assure you that we will be able to maintain our manufacturing efficiency or increase manufacturing efficiency to the same extent as our competitors.

In addition, as is common in the semiconductor industry, we have from time to time experienced difficulty in effecting transitions to new manufacturing processes. As a consequence, we may suffer delays in product deliveries or reduced yields. We may experience manufacturing problems in achieving acceptable yields or experience product delivery delays in the future as a result of, among other things, capacity constraints, upgrading or expanding our existing facilities or changing our process technologies, any of which could materially and adversely affect our results of operations, financial condition, business and prospects.

We may be unable to obtain manufacturing equipment in a timely manner and at a reasonable cost that is necessary for us to remain competitive.

Our operations and ongoing revenue expansion plans depend on our ability to obtain complex and specialized manufacturing equipment and related services from a limited number of suppliers in a market that is characterized from time to time by limited supply and long delivery cycles. During such times, supplier-specific or industry-wide lead times for delivery can be as long as twelve months or more. Further, growing complexities of the most valuable equipment may delay the timely delivery of such equipment and parts needed to capitalize on time-sensitive and perishable business opportunities. Industry-wide demand increases for this equipment could increase its market price as well as the market price of replacement parts and consumable materials needed to operate the equipment. As a result of demand driven by the semiconductor supply shortage, as well as significant new sources of funding in China as well as potentially other governments (such as Korea, the United States and Europe), the current demand for semiconductor manufacturing equipment and equipment supply constraints are resulting in longer than normal lead times for such equipment. If we are unable to obtain equipment in a timely manner to fulfill our customers' demand on technology and production capacity, or at a reasonable cost, we may be unable to meet commitments under our contracts with customers, which could expose us to substantial liquidated damages and other claims and could materially and adversely affect our results of operations, financial condition, business and prospects.

If we are unable to obtain adequate supplies of raw materials in a timely manner and at commercially reasonable prices our revenue and profitability may decline.

Our production operations require that we obtain adequate supplies of raw materials, such as silicon wafers, gases, chemicals and photoresist, on a timely basis and at commercially reasonable prices, many of which are not commodities easily replaced with substitutions. In the past, shortages in the supply of some materials, whether by specific vendors or by the industry generally, have resulted in occasional industry-wide price adjustments and delivery delays. Moreover, major natural disasters, trade barriers and political or economic turmoil occurring within the country of origin of such raw materials may also significantly disrupt the availability of such raw materials or increase their prices. Further, since we procure some of our raw materials from sole-sourced suppliers, there is a risk that our need for such raw materials may not be met or that back-up supplies may not be readily available. In addition, recent trade tensions between the United States and China could result in increased prices or the unavailability of raw materials, including rare earth metals used in our products. Tariffs, export control or other non-tariff barriers, due to global or local economic conditions could also affect material cost and availability.

Certain raw materials and other inputs, such as electricity and water, necessary for our production operations may experience substantial price volatility. Hedging transactions for many of those raw materials and other inputs are not available to us, or are not available on terms we believe are commercially acceptable. Hedges that we enter into with respect to certain inputs, such as electricity, may not be effective. Additionally, once our prices with a customer are negotiated, we are generally unable to revise pricing with that customer until our next regularly scheduled price adjustment. As a result, if market prices for essential components increase, we will often be unable to pass the price increases through to our customers for products purchased under an existing agreement. Consequently, we are exposed to the risks associated with the volatility of prices for these components and our cost of revenue could increase and our gross margins could decrease in the event of price increases. Recently, as a result of demand driven by the semiconductor supply shortage, the costs of raw wafers as well as certain other raw materials are relatively high. Failure to obtain adequate supplies could result in our being unable to meet commitments under our contracts with customers, which could expose us to substantial liquidated damages and other claims, which could materially and adversely affect our results of operations, financial condition, business and prospects.

Failure to adjust our supply chain volume due to changing market conditions or failure to estimate our customers' demand could adversely affect our sales and could result in additional charges for obsolete or excess inventories or non-cancelable purchase commitments.

We make significant decisions, including determining the levels of business that we will seek and accept, production schedules, personnel needs and other resource requirements, based on our estimates of customer requirements. The possibility of rapid changes in demand for our customers' products reduces our ability to accurately estimate our customers' future requirements for our products. On occasion, our customers may require rapid increases in production, which can challenge our resources. We may not have sufficient capacity at any given time to meet our customers' demands. Conversely, downturns in the semiconductor industry have in the past caused and may in the future cause our customers to significantly reduce the amount of products ordered from us. Because many of our sales, R&D, and manufacturing expenses are relatively fixed, a reduction in customer demand may decrease our gross margins and operating income, which could materially and adversely affect our results of operations, financial condition, business and prospects.

In addition, we base many of our operating decisions, and enter into purchase commitments, on the basis of anticipated sales, which are highly unpredictable. Some of our purchase commitments are not cancelable, and in some cases we are required to recognize a charge representing the amount of material or capital equipment purchased or ordered that exceeds our actual requirements. For example, we have non-cancelable purchase commitments with vendors and long-term supply agreements with certain of our third-party wafer fabrication partners, under which we are required to purchase a minimum number of wafers per year or face financial penalties. These types of commitments and agreements could reduce our ability to adjust our inventory to address declining market demands. If demand for our products is less than we expect, we may experience additional excess and obsolete inventories and be forced to incur additional charges. If sales in future periods fall substantially below our expectations, or if we fail to accurately forecast changes in demand mix, we could again be required to record substantial charges for obsolete or excess inventories or non-cancelable purchase commitments.

Moreover, during a market upturn, we may not be able to purchase sufficient supplies or components to meet increasing product demand, which could prevent us from taking advantage of opportunities and reduce our sales. In addition, a supplier could discontinue a component necessary for our design, extend lead times, limit supply or increase prices due to capacity constraints or other factors. Our failure to adjust our supply chain volume or estimate our customers' demands could materially and adversely affect our results of operations, financial condition, business and prospects.

Until recently, as a result of current market conditions, we did not typically operate with any significant backlog, except in periods of capacity shortage. The historic lack of significant backlog and the unpredictable length and timing of semiconductor cycles made it more difficult for us to accurately forecast revenue in future periods. Additionally, as we now face more significant backlog, it may not necessarily be indicative of actual sales for any succeeding period. Moreover, our expense levels are based in part on our expectations of future revenue, and we may be unable to fully adjust costs in a timely manner to compensate for revenue shortfalls.

Certain of our debt agreements contain covenants that may constrain the operation of our business, and our failure to comply with these covenants could materially and adversely affect our results of operations, financial condition, business and prospects.

Restrictive covenants in our credit facilities may prevent us from pursuing certain transactions or business strategies, including by limiting our ability to, in certain circumstances:

- incur additional indebtedness;
- pay dividends or make distributions;
- acquire assets or make investments outside of the ordinary course of business;

- sell, lease, license, transfer or otherwise dispose of assets;
- enter into transactions with our affiliates;
- create or permit liens;
- guarantee indebtedness; and
- engage in certain extraordinary transactions.

Failure to comply with any of the covenants in our debt agreements, including due to events beyond our control, could result in an event of default. The holders of the defaulted debt could terminate commitments to lend and accelerate amounts outstanding to be due and payable immediately. This could also result in cross-defaults under our other debt instruments, significantly impacting our liquidity and ability to fund our operations. Any of these occurrences could materially and adversely affect our results of operations, financial condition, business and prospects.

Aging infrastructure, power grids and risks to the supply of fresh water or natural gas could interrupt production.

The semiconductor fabrication process requires extensive amounts of fresh water and a stable source of electricity and natural gas. In addition, it requires effective facilities to manage wastewater. As our production capabilities and our business grow, our requirements for these factors will grow substantially. Although we have not, to date, experienced any instances of lack of sufficient supplies of water or natural gas or material disruptions in the electricity supply to, or wastewater processing capacity of, any of our fabs beyond temporary or short-term stoppages, we may not have access to sufficient supplies of water, natural gas, electricity or wastewater processing capacity to accommodate our planned growth. Droughts, pipeline interruptions, power interruptions, electricity shortages, geopolitical tensions, or government intervention, particularly in the form of rationing, are factors that could restrict our access to these utilities in the areas in which our fabs are located. If there is an insufficient supply of fresh water, natural gas, electricity or wastewater processing capacity to satisfy our requirements, we may need to limit or delay our production. In addition, a power outage, even of very limited duration, could result in a loss of wafers in production and a deterioration in yield. Any of these occurrences could materially and adversely affect our results of operations, financial condition, business and prospects.

We may be subject to the risk of loss due to fire because the materials we use in our manufacturing processes are highly flammable.

We use highly flammable materials such as silane and hydrogen in our manufacturing processes and may therefore be subject to the risk of loss arising from fires. The risk of fire associated with these materials cannot be completely eliminated. We maintain insurance policies to reduce losses caused by fire, including business interruption insurance. However, our insurance coverage is subject to deductibles and self-insured retention and may not be sufficient to cover all of our potential losses. If any of our fabs were to be damaged or cease operations as a result of a fire, our manufacturing capacity would be reduced, which could materially and adversely affect our results of operations, financial condition, business and prospects.

Our operations are subject to the risks of earthquakes, fires, floods, severe weather incidents and other natural catastrophic events, and to interruption by man-made problems such as power disruptions, industrial accidents, or terrorism.

Significant natural disasters such as earthquakes, fires, floods, severe weather incidents or acts of terrorism occurring in any of our manufacturing or office locations, or where a business partner, such as a customer or supplier, is located, could adversely affect our operational and financial performance. In addition, natural disasters, spills or hazardous exposure incidents, accidents and acts of terrorism could cause disruptions in our business or our suppliers' or customers' businesses, national economies or the global economy as a whole, and we may not have insurance coverage for these matters. Our operations, as well as our computing systems, are vulnerable to interference, or interruption from terrorist attacks, natural disasters or pandemics (including COVID-19), the effects of climate change (such as sea level rise, drought, flooding, wildfires, and increased storm severity), power loss, telecommunications failures, criminal fraud or impersonation, inadvertent or intentional actions by our employees, or other attempts to harm or access our systems. In the event of a major disruption caused by a natural disaster or any of the foregoing, we may be unable to continue our operations and may endure system interruptions, reputational harm, delays in our development activities, lengthy interruptions in service, breaches of data security and loss of critical data or personal information, any of which could materially and adversely affect our results of operations, financial condition, business and prospects. We are also at risk of data breaches, as further described below.

The risk of cyberattacks and other data security breaches requires us to incur significant costs to maintain the security of our networks and data, and, in the event of such breaches, may expose us to liability, adversely affect our operations, damage our reputation, and affect our net revenue and profitability, and our efforts to combat breach and misuse of our systems and unauthorized access to our data may not be successful.

We rely on our IT systems and those of our service providers to conduct much of our business operations. Our and our service providers' IT and computer systems store and transmit customer information, trade secrets, corporate data and personal information, and are otherwise essential to the operation of our production lines, which may make us a target for cyberattacks. In addition, our accreditation as a Trusted Foundry by the Defense Microelectronics Activity ("DMEA") and our processing of sensitive information may make us an attractive target for attacks, including industrial or nation-state espionage, organized criminals, and terrorist cyberattacks. Hackers may seek to disrupt our operations, blackmail us to regain control of our systems, or spy on us for sensitive information. Further, we depend on our employees and the employees of our service providers to appropriately handle confidential and sensitive data and deploy our IT resources in a safe and secure manner that does not expose our network systems to security breaches or the loss of data. However, there is always a risk that inadvertent disclosure or actions or internal malfeasance by our employees or those of our service providers could result in a loss of data or a breach or interruption of our IT systems.

We are making significant investments in cybersecurity and data security, as well as other efforts to combat breach and misuse of our systems and unauthorized access to our and our customers' data by third parties. While we seek to continuously review and assess our cybersecurity policies and procedures to ensure their adequacy and effectiveness, all IT and computer systems are vulnerable to attacks, especially via methods that have not been observed yet or quickly evolve. The risk of security breaches may be higher during times of a natural disaster or pandemic (including COVID-19) due to remote working arrangements. We cannot guarantee that our IT and computer systems which control or maintain vital corporate functions, such as our manufacturing operations and enterprise accounting, would be immune to cyberattacks. In the event of a serious cyberattack, our systems may lose important customer information, trade secrets, corporate data or personal information or our production lines may be shut down pending the resolution of such an attack.

In addition, we employ certain third-party service providers for us and our affiliates worldwide with whom we need to share highly sensitive and confidential information to enable them to provide the relevant services. While, to date, we have not been subject to cyberattacks which, individually or in the aggregate, have been material to our operations or financial conditions, some of our third-party service providers have experienced cyberattacks of which we have been made aware.

Despite requiring certain third-party service providers to comply with the confidentiality and security requirements in our service agreements with them, there is no assurance that each of them will strictly fulfill any of their obligations or that they will be successful in preventing further cyberattacks. The on-site network systems and the off-site cloud computing networks such as servers maintained by these service providers and/or their contractors are also subject to risks associated with cyberattacks. While we attempt to take prompt action once we are alerted to a cyberattack against one of our third-party service providers and implement steps designed to mitigate associated risks to our systems and data, we may in the future not be made aware of such events in a timely manner or may be unable to successfully sever network connectivity or otherwise limit the risk to our own systems.

If we or our service providers are not able to timely contain, remediate and resolve the respective issues caused by cyberattacks and data breaches, or ensure the integrity and availability of our systems and data (or data belonging to our customers or other third parties) or control of our or our service providers' IT or computer systems, then such attacks, breaches or failures could:

- disrupt the proper functioning of these networks and systems and, therefore, our operations and/or those of certain of our customers;
- result in the unauthorized access to, and destruction, loss, theft, misappropriation or release of, proprietary, confidential, sensitive or otherwise valuable information of ours, our customers or our employees, including trade secrets, which could be used to compete against us or for disruptive, destructive or otherwise harmful purposes and outcomes;
- result in litigation and governmental investigation and proceedings that could expose us to civil or criminal liabilities;
- compromise national security and other sensitive government functions;
- require significant management attention and resources to remedy the damages that result;
- result in our incurring significant expenses in implementing remedial and improvement measures to enhance our IT network or computer systems;
- result in costs which exceed our insurance coverage and/or indemnification arrangements;
- subject us to claims for contract breach, damages, credits, penalties or termination; and
- damage our reputation with our customers (including the U.S. government) and the general public.

Further, remediation efforts may not be successful and could result in interruptions, delays or cessation of service, unfavorable publicity, damage to our reputation, customer allegations of breach-of-contract, possible litigation, and loss of existing or potential customers that may impede our sales or other critical functions. Additionally, any such attack or unauthorized access may require spending resources on correcting the breach and indemnifying the relevant parties and litigation, regulatory investigations, regulatory proceedings, increased insurance premiums, lost revenue, penalties fines and other potential liabilities, which could materially and adversely affect our results of operations, financial condition, business and prospects.

Any of the foregoing factors could materially and adversely affect our results of operations, financial condition, business and prospects.

Compliance with applicable data security and data privacy laws and regulations may be costly and, in the case of a breach of applicable law, could harm our reputation.

In the United States, federal and state laws impose limits on, or requirements regarding the collection, distribution, use, security and storage of personal information of individuals, and there has been increased regulation of data privacy and security particularly at the state level, including the California Consumer Privacy Act (effective on January 1, 2020), and the California Privacy Rights Act (expected to take effect on January 1, 2023). Currently, many states are actively considering or enacting similar laws and we operate in many of these jurisdictions. Outside the United States, the European Union and other countries in which we operate also have privacy and data protection laws, regulations and standards.

The interpretation and application of many of these existing or recently enacted laws and regulations are increasingly complex, uncertain and fluid, and could be inconsistent with our existing data management practices. For example, recent developments in Europe have created complexity and uncertainty regarding transfers of personal data from the EEA and the UK to the United States and other jurisdictions. Furthermore, the long-term regulation of data transfers between the EEA and the UK is uncertain, as a relevant adequacy decision enabling such transfers is due to expire. These developments could lead to substantial costs, require significant changes, divert the attention of our technology personnel, adversely affect our margins, increase costs and subject us to additional liabilities. If we are unable to transfer personal data between and among countries and regions in which we operate, it could affect the geographical location or segregation of our relevant systems and operations, and could adversely affect our financial results. In addition, the existing EU and UK privacy laws on cookies and e-marketing are also in flux and are likely to be replaced by new regulations, which may introduce more stringent requirements for using cookies and similar technologies for direct marketing and significantly increase fines for non-compliance in-line with the General Data Protection Regulation ("GDPR"). Stricter enforcement of such laws could limit the effectiveness of our marketing activities, divert the attention of our technology personnel, increase costs and subject us to additional liabilities.

Inappropriate disclosure of personal and other sensitive data, even if inadvertent, or other actual or perceived violations of or noncompliance with such laws and regulations could expose us to significant administrative, civil or criminal liability as well as reputational harm. For example, a breach of the GDPR could result in fines of up to 20 million euros ("EUR") under the European GDPR or British pound sterling ("GBP") 17.5 million under the U.K. GDPR or up to 4% of the annual global revenue of the infringer, whichever is greater, as well as regulatory investigations, reputational damage, orders to cease or change our processing of personal data, enforcement notices and/or assessment notices (for a compulsory audit). Privacy-related claims or lawsuits initiated by governmental bodies, employees or other third parties, whether meritorious or not, could be time-consuming, result in costly regulatory proceedings, litigation, penalties and fines, or require us to change our business practices, sometimes in expensive ways, or other potential liabilities.

Additionally, a failure to comply with the National Institute of Standards and Technology Special Publication 800-171 or the DoD's cybersecurity requirements, including the Cyber Security Material Model Certificate ("CMMC"), which will require all contractors to receive specific third-party cybersecurity certifications to be eligible for contract awards, could restrict our ability to bid for, be awarded and perform on DoD contracts. The DoD expects that all new contracts will be required to comply with the CMMC by 2026, and initial requests for information and for proposal have already begun. We are in the process of evaluating our readiness and preparing for the CMMC. To the extent we, or our subcontractors or other third parties on whom we rely are unable to achieve certification in advance of contract awards that specify the requirement, we may be unable to bid on contract awards or follow-on awards for existing work with the DoD, which could materially and adversely affect our results of operations, financial condition, business and prospects. We will also be required to go through a recertification process every two years. In addition, any obligations that may be imposed on us under the CMMC may be different from or in addition to those otherwise required by applicable laws and regulations, which may cause additional expense for compliance.

Our products may contain defects that could harm our reputation, be costly to correct, delay revenue and expose us to litigation.

Our products are highly complex and sophisticated and, from time to time, may contain defects, errors, hardware failures or other failures that are difficult to detect and correct. Errors, defects and other failures may be found in new solutions, products or services or improvements to existing solutions, products or services after delivery to our customers. If these defects, errors and failures are discovered, we may not be able to successfully correct them in a timely manner or otherwise mitigate or eliminate the impact of the error or failure. The occurrence of errors, defects and other failures in our products could result in the delay or the denial of market acceptance of our products and alleviating such errors, defects and other failures may require us to make significant expenditure of our resources. Our products are often used for critical business processes and as a result, any defect in or failure of our products may cause customers to reconsider renewing their contract with us, cause significant customer dissatisfaction and possibly giving rise to claims for indemnification or other monetary damages. The harm to our reputation resulting from errors, defects and other failures may be material. Any claims for actual or alleged losses to our customers' businesses may require us to spend significant time and money in litigation or arbitration or to pay significant settlements or damages. Defending a lawsuit, regardless of merit, can be costly and divert management's attention and resources. Accordingly, any such claim could materially and adversely affect our results of operations, financial condition, business and prospects.

Any problem in the semiconductor outsourcing infrastructure could materially and adversely affect our results of operations, financial condition, business and prospects.

Many of our customers depend on third parties to provide assembly, testing and other related services. Many of these services are geographically concentrated primarily in Asia. If these customers cannot timely obtain those services on reasonable terms, they may not order foundry products and services from us, which could materially and adversely affect our results of operations, financial condition, business and prospects.

Risks Related to Intellectual Property

Any failure to obtain, maintain, protect or enforce our intellectual property and proprietary rights could impair our ability to protect our proprietary technology and our brand.

Our success depends to a significant degree on our ability to obtain, maintain, protect and enforce our intellectual property rights. We rely on a combination of patents, trade secrets, copyrights, trademarks, service marks, and other forms of intellectual property, contractual restrictions and confidentiality procedures to establish and protect our proprietary rights. However, the steps we take to obtain, maintain, protect and enforce our intellectual property rights may be inadequate. We may not be able to protect our technology, know-how, and/or brand if we are unable to enforce our rights for whatever reason or if we do not detect unauthorized use of our intellectual property rights. If we fail to protect our intellectual property rights adequately, our competitors may gain access to our proprietary technology and develop and commercialize substantially similar products, services or technologies, which could materially and adversely affect our results of operations, financial condition, business and prospects.

We have filed various applications for certain aspects of our intellectual property in the United States and other countries, and we have built a comprehensive patent portfolio of approximately 9,000 worldwide patents. In the future, we may acquire additional patents or patent portfolios, license patents from third parties or agree to license the technology of third parties, which could require significant cash expenditures. Our patents do not cover all of our technologies, systems, products and product components and our competitors or others may design around our patented technologies. Further, when we seek patent protection for a particular technology, there is no assurance that the applications we file will result in issued patents or that if patents do issue as a result that they will be found to be valid and enforceable or that they will effectively block competitors from creating competing technology. In addition, we may need to license technology from third parties to develop and market new products and we cannot be certain that we could license that technology on commercially reasonable terms or at all. Our inability to license this technology could harm our ability to compete and materially and adversely affect our results of operations, financial condition, business and prospects.

Some of our know-how or technology is not patented or patentable and may constitute trade secrets. To protect our trade secrets, we have a policy of requiring our employees, consultants, advisors and other collaborators who contribute to our material intellectual property to enter into confidentiality agreements. We also rely on customary contractual protections with our suppliers and customers, and we implement security measures intended to protect our trade secrets, know-how and other proprietary information. However, no assurances can be given that those contracts will not be breached. Further, those contracts and arrangements may be ineffective in protecting our intellectual property and may not prevent unauthorized disclosure. See also "—There is a risk that our trade secrets, know-how and other proprietary information will be stolen, used in an unauthorized manner, or compromised, which could materially and adversely affect our results of operations, financial condition, business and prospects." In addition, third parties may independently develop technologies that may be substantially equivalent or superior to our technology.

There is a risk that our trade secrets, know-how and other proprietary information will be stolen, used in an unauthorized manner, or compromised, which could materially and adversely affect our results of operations, financial condition, business and prospects.

Our trade secrets, know-how and other proprietary information may be stolen, used in an unauthorized manner, or compromised through a direct intrusion by private parties or foreign actors, including those affiliated with or controlled by state actors, through cyber intrusions into our computer systems, physical theft through corporate espionage or other means, or through more indirect routes, including by joint venture partners, licensees that do not honor the terms of the license, potential licensees that were ultimately not licensed, or other parties reverse engineering our company's solutions, products or components. Any of the foregoing factors could materially and adversely affect our results of operations, financial condition, business and prospects.

The laws of some foreign countries may not be as protective of intellectual property rights as those in the United States, and mechanisms for enforcement of intellectual property rights may be inadequate.

The absence of internationally harmonized intellectual property laws and different enforcement regimes makes it more difficult to ensure consistent protection of our proprietary rights. Our strong international presence may lead to increased exposure to unauthorized copying and use of our manufacturing technologies and proprietary information. Moreover, policing unauthorized use of our technologies, trade secrets, and intellectual property may be difficult, expensive and time-consuming, particularly in foreign countries where the laws may not be as protective of intellectual property rights as those in the United States and where mechanisms for enforcement of intellectual property rights may be weak. Accordingly, despite our efforts, we may be unable to prevent third parties from infringing upon, misappropriating or otherwise violating our intellectual property rights. Our inability to secure or enforce our intellectual property rights could materially and adversely affect our results of operations, financial condition, business and prospects.

We have been and may continue to become subject to intellectual property disputes, which are costly and may subject us to significant liability and increased costs of doing business.

The semiconductor industry is subject to claims of infringement by patent owners and is characterized by frequent litigation regarding patent rights. From time to time, we receive communications from third parties that allege that our products or technologies infringe their patent or other intellectual property rights and we have had patent infringement lawsuits filed against us claiming that certain of our products, services, or technologies infringe the intellectual property rights of others. We may continue to become subject to such intellectual property disputes in the future. Further, we have entered into licenses, including patent licenses with third parties in settlements of claims or in order to avoid intellectual property disputes and the loss of license rights, including as a result of a termination or expiration of such licenses, may limit our ability to use certain technologies in the future, which could cause us to incur significant costs, prevent us from commercializing certain of our products or otherwise have a material adverse effect on us. In addition, there may be issued patents held by third parties that, if found to be valid and enforceable, could be alleged to be infringed by our current or future technologies or products. There also may be pending patent applications of others that may result in issued patents, which could be alleged to be infringed by our current or future technologies or products.

In order to protect our intellectual property rights, we may be required to spend significant resources to monitor and protect those rights. Litigation brought to protect and enforce our intellectual property rights could be costly, time-consuming and distracting to management. Further, our efforts to enforce our intellectual property rights may be met with defenses, counterclaims and countersuits attacking the validity and enforceability of our intellectual property rights, and if such defenses, counterclaims or countersuits are successful, we could lose valuable intellectual property rights. Our inability to protect our proprietary technology against unauthorized copying or use, as well as any costly litigation or diversion of our management's attention and resources, could delay the implementation of our manufacturing technologies, delay introductions of new solutions or injure our reputation and could have a material and adverse effect on our results of operations, financial condition, business and prospects.

Further, many of our agreements with our customers and partners, the terms of which often survive termination or expiration of the applicable agreement, require us to defend such parties against certain intellectual property infringement claims and indemnify them for damages and losses arising from certain intellectual property infringement claims against them, which have in the past resulted, and could in the future result, in increased costs for defending such claims or significant damages if there is an adverse ruling in any such claims. These defense costs and indemnity payments could materially and adversely affect our results of operations, financial condition, business and prospects. Such customers and partners may also discontinue the use of our products, services, and solutions, as a result of injunctions or otherwise, which could result in loss of revenue and adversely affect our business. We may also have to seek a license for the technology, which may not be available on reasonable terms, if at all, and may significantly increase our operating expenses or may require us to restrict our business activities and limit our ability to develop and deliver our products. As a result, we may also be required to develop alternative non-infringing technology, which could require significant effort and expense or which may not be possible, which could negatively affect our business. Moreover, intellectual property indemnities provided to us by our suppliers, when obtainable, may not cover all damages and losses suffered by us and our customers arising from intellectual property infringement claims. Even if we were to prevail in such a dispute, any litigation regarding our intellectual property could be costly and time-consuming and divert the attention of our management and key personnel from our business operations.

Any of the foregoing factors could materially and adversely affect our results of operations, financial condition, business and prospects.

Our success depends, in part, on our ability to develop and commercialize our technology without infringing, misappropriating or otherwise violating the intellectual property rights of third parties and we may not be aware of such infringements, misappropriations or violations.

Third parties may bring claims alleging infringement, misappropriation or violation of intellectual property rights. We cannot guarantee that we have not, do not or will not infringe, misappropriate or otherwise violate the intellectual property rights of others. Our technologies may not be able to withstand any third-party claims against their use. In addition, some companies may have the capability to dedicate substantially greater resources to enforce their intellectual property rights and to defend claims that may be brought against them. Furthermore, third parties have and may continue to assert infringement claims against us in the future, including the sometimes aggressive and opportunistic actions of non-practicing entities whose business model is to obtain patent-licensing revenue from operating companies such as us. Regardless of the merit of such claims, any claim that we have violated intellectual property or other proprietary rights of third parties, whether or not it results in litigation, is settled out of court or is determined in our favor, could be expensive and time-consuming, and could divert the time and attention of management and technical personnel from our business. The litigation process is subject to inherent uncertainties, and we may not prevail in litigation matters regardless of the merits of our position. In some jurisdictions, plaintiffs can also seek injunctive relief that may limit the operation of our business or prevent the marketing and selling of our services that infringe or allegedly infringe on the plaintiff's intellectual property rights. If a third party is able to obtain an injunction preventing us from using our technology, accessing third-party intellectual property rights, or if we cannot license or develop alternative technology for any infringing aspect of our business, we could be forced to limit or stop manufacturing activities or sales of our products or cease other business activities related to such intellectual property. To resolve these claims, we may enter into licensing agreements with restrictive terms or significant fees, stop selling our products or services or be required to implement costly or inferior redesigns to the affected products or services, or pay damages to satisfy contractual obligations to others. If we do not resolve these claims in advance of a trial, there is no guarantee that we will be successful in court. These outcomes could materially and adversely affect our results of operations, financial condition, business and prospects.

We may be unable to provide technology to our customers if we lose the support of our technology partners.

Enhancing our manufacturing process technologies is critical to our ability to provide services for our customers. We intend to continue to advance our process technologies through internal R&D and alliances with other companies. In addition to our internal R&D focused on developing new and improved semiconductor manufacturing process technologies, our business involves collaboration, including customization and other development of technologies and intellectual property, with and for our customers, vendors and other third parties. We frequently enter into agreements with customers, vendors, equipment suppliers and others that involve customization and other development of technologies and intellectual property. As a result of these agreements, we may be required to limit use of, or refrain from using, certain technologies and intellectual property rights in parts of our business. Determining inventorship and ownership of technologies and intellectual property rights resulting from development activities can be difficult and uncertain.

Disputes may arise with customers, vendors and other third parties regarding ownership of and rights to use and enforce these technologies and intellectual property rights or regarding interpretation of our agreements with these third parties, and these disputes may result in claims against us or claims that intellectual property rights are not owned by us, are not enforceable, or are invalid. The cost and effort to resolve these types of disputes, or the loss of rights in technologies in intellectual property rights if we lose these types of disputes, could harm our business and financial condition. In addition, our customers, vendors and other third parties may suffer delays, quality issues, or other problems affecting their development activities and ability to supply us with certain technology and intellectual property, which could adversely affect our business and operating results. Further, if we are unable to continue any of our joint development arrangements or other agreements, on mutually beneficial terms, or if we cannot re-evaluate the technological and economic benefits of such relationships with these partners, vendors or suppliers in a timely manner sufficient to support our ongoing technology development, we may be unable to continue providing our customers with leading edge or differentiated mass-producible process technologies and may, as a result, lose important customers, which could have a materially adverse effect on our results of operations, financial condition, businesses and prospects.

Risks Related to Strategic Transactions

We are in the process of divesting our East Fishkill ("EFK") facility to ON Semiconductor as part of a transaction we entered into in 2019. Failure to successfully manage the divestment of that asset in a timely manner may adversely affect our operations and have a material impact on our cost savings initiatives.

In April 2019, we entered into an Asset Purchase Agreement with Semiconductor Components Industries, LLC ("ON Semiconductor") pursuant to which we agreed to transfer substantially all the assets and employees related to our EFK facility in return for $400 million in consideration and $30 million for a technology license. ON Semiconductor paid $100 million upon signing, which included $30 million for the technology license, and an additional $100 million in 2020. We expect the completion of the sale will occur, subject to regulatory approvals, at the end of 2022. The transaction excluded the transfer of our commercial customer arrangements. Since the transaction was entered into, we have transferred a number of technologies from the EFK facility to our other global manufacturing sites to ensure continuous supply to key customers. In order to facilitate these transfers, we and ON Semiconductor have agreed to provide transition services, including reciprocal supply agreements and technology transfer and intellectual property licensing agreements. Pursuant to the Asset Purchase Agreement, we also agreed to transition approximately 1,000 employees to ON Semiconductor. While we do not anticipate issues related to the transfer and anticipate satisfying all the conditions to closing as set forth in the agreements, the divestment has taken and will continue to require management time and attention and, if for any reason, we fail to complete the transfer on a timely manner or at all or ON Semiconductor fails to fulfill its obligations under the applicable agreements, we may not be able to realize our anticipated benefits, including cost savings, related to the divestment, which could materially and adversely affect our results of operations, financial condition, business and prospects.

We may make strategic acquisitions, and such acquisitions may introduce significant risks and uncertainties, including risks related to integrating the acquired companies, assets or businesses.

We have in the past sought, and may in the future seek, to acquire or invest in businesses, joint ventures and technologies that we believe could complement or expand our capacity, enhance our technology offerings or otherwise offer growth opportunities. These efforts may divert the attention of management and cause us to incur various expenses in identifying, investigating and pursuing suitable opportunities, whether or not the transactions are completed, and may result in unforeseen operating difficulties and expenditures. These transactions, particularly acquisitions, may be subject to regulatory approvals, including approval from the Committee on Foreign Investment in the United States ("CFIUS") and approvals from antitrust authorities. With regard to CFIUS, our transactions may be more likely to require CFIUS review given the expansion of CFIUS jurisdiction to critical technologies. Failure to obtain CFIUS approval, as applicable, and other required regulatory approvals may delay or otherwise limit our ability to make strategic transactions. Our integration efforts may periodically expose deficiencies in the controls and procedures relating to cybersecurity and the compliance with data privacy and protection laws, regulations and standards of an acquired company or business that were not identified in our due diligence undertaken prior to consummating the acquisition. Additionally, we may encounter difficulties assimilating or integrating the businesses, technologies, products, personnel or operations of any acquired companies, particularly if the key personnel of an acquired company cannot be retained, or we have difficulty preserving the customers of any acquired business. Any such transactions that we are able to complete may not result in the synergies or other benefits we expected to achieve, which could result in substantial impairment charges. These transactions could also result in dilutive issuances of equity securities or the incurrence of debt, which could adversely affect our results of operations. Any of the foregoing factors could materially and adversely affect our results of operations, financial condition, business and prospects.

Political, Regulatory and Legal Risks

Environmental, health and safety laws and regulations expose us to liability and risk of non-compliance, and any such liability or non-compliance could adversely affect our business.

In each jurisdiction in which we operate, our operations are subject to diverse environmental, health and safety laws and regulations that govern, among other things, emissions of pollutants into the air, wastewater discharges, the use and handling of hazardous substances, waste disposal, the investigation and remediation of soil and ground water contamination and the health and safety of our employees. Semiconductor manufacturing depends on a wide array of process materials, including hazardous materials that are subject to local, state, national or international regulations. These materials, our manufacturing operations and our products and services are subject to diverse environmental, health and safety laws, regulations and regulatory requirements. Sourcing of materials could also present reputational risks if our direct or indirect suppliers are found to be in violation of environmental health and safety regulations, or of ethical or human rights regulations or standards.

Regulatory changes, including restrictions on new or existing materials critical to our manufacturing processes, such as per- and polyfluoroalkyl substances, increased restrictions related to wastewater, air emissions and hazardous substances, or changes to necessary permitting requirements, could cause disruptions to our operations or necessitate additional costs or capital expenditures, such as those associated with identifying and qualifying substitute materials or processes, or with installing additional controls related to wastewater, air emissions or waste management. Regulatory limitations or restrictive covenants at contaminated properties could affect our ability to expand manufacturing operations or capacities and may affect our ability to import materials or equipment.

Industrial accidents or releases, including those associated with storage, use, transportation or disposal of hazardous materials or wastes, could expose us to liabilities or remediation obligations and we may not have insurance coverage for such matters. Non-compliance with environmental, health and safety regulations or associated permit requirements may result in liabilities or monetary penalties. Non-compliance with or public controversy regarding environmental, health and safety matters could result in reputational harm.

Certain environmental laws, including the Comprehensive Environmental Response, Compensation and Liability Act, the Resource Conservation and Recovery Act and state equivalents, make us potentially liable on a strict, joint and several basis for the investigation and remediation of contamination at, or originating from, facilities that are currently or formerly owned or operated by us and third-party sites to which we send or have sent materials for disposal or materials for recycling, along with related natural resources damages. We could become subject to potential material liabilities for the investigation and cleanup of historic contamination on the U.S. properties where we operate should the currently responsible parties cease their ongoing remediation efforts notwithstanding their contractual obligations to us.

Regulations and customer-imposed requirements in response to climate change could result in additional costs related to changes in process materials, control of process emissions, "carbon taxes" or related fees, and sourcing of energy supplies. Increased frequency of extreme weather events, and chronic conditions like higher temperatures and droughts could cause disruptions to our manufacturing facilities, non-manufacturing operations and supply chain.

We have policies, controls, and procedures designed to help ensure compliance with applicable laws, including as part of our Environmental, Social and Governance ("ESG") initiatives. However, there can be no assurance that our employees, contractors, suppliers or agents will not violate such laws or our policies. Violations of these laws and regulations can result in fines, criminal sanctions against us, our officers, or our employees, prohibitions on the conduct of our business, and damage to our reputation. Any of the foregoing factors could materially and adversely affect our results of operations, financial condition, business and prospects.

We are subject to anti-corruption, anti-bribery, anti-money laundering, counter-terrorist financing laws and similar laws and regulations, and non-compliance with such laws, regulations and standards can subject us to administrative, criminal or civil liability and harm our business, financial condition, results of operations and reputation.

We are subject to the U.S. Foreign Corrupt Practices Act of 1977, as amended, U.S. anti-bribery laws and other anti-corruption, anti-bribery, anti-money laundering and counter-terrorist financing laws and regulations in the countries in which we conduct business. Anti-corruption and anti-bribery laws have been enforced aggressively in recent years and are interpreted broadly to generally prohibit companies, their employees and their third-party intermediaries from authorizing, offering or providing, directly or indirectly, improper payments or benefits to recipients in the public or private sectors. In connection with our international sales and business and sales to the public sector, we may engage with business partners and third-party intermediaries to market our products and services and to obtain necessary permits, licenses, and other regulatory approvals. In addition, our third-party intermediaries, or other business partners, may have direct or indirect interactions with officials and employees of government agencies or state-owned or affiliated entities. We can be held liable for corrupt or other illegal activities of these third-party intermediaries or other business partners, their employees, representatives, contractors, partners, and agents, even if we do not explicitly authorize such activities. Although we have policies and procedures to address compliance with such laws and regulations, there is a risk that our employees and agents will take actions in violation of our policies and applicable law, for which we may be ultimately held responsible.

Detecting, investigating and resolving actual or alleged violations of anti-corruption laws can require a significant diversion of time, resources and attention from senior management. In addition, noncompliance with anti-corruption, anti-bribery, anti-money laundering or counter-terrorist financing laws and regulations could subject us to whistleblower complaints, investigations, sanctions, settlements, prosecution, enforcement actions, fines, damages, other civil or criminal penalties or injunctions, suspension or debarment from contracting with certain persons, reputational harm, adverse media coverage and other collateral consequences. If any subpoenas or investigations are launched, or governmental or other sanctions are imposed, or if we do not prevail in any possible civil or criminal proceeding, our results of operations, financial condition, business and prospects could be materially and adversely affected. Even in the event of a positive outcome in such an investigation or proceeding, the cost of the investigation or defense could be significant and negatively affect our financial performance.

These laws, regulations and standards are driving the review and updating of many corporate policies and systems, often at significant expense. Until there is a settling of a consistent and stable global approach, our company, with customers and employees around the world, will be exposed to financial risk in complying with these requirements. Any of the foregoing factors could materially and adversely affect our results of operations, financial condition, business and prospects.

We are subject to governmental export and customs compliance requirements that could impair our ability to compete in international markets or subject us to liability if we violate the controls.

Our products and technology are subject to export controls in the jurisdictions where we do business. For example, in the United States, we are subject to the Export Administration Regulations and the International Traffic in Arms Regulations ("ITAR"). Under these regulations, certain commodities, software and technology may be exported only with the required export authorizations. Some technology and software that we create or possess is controlled under these regulations, and in certain cases, we are required to maintain controls limiting the access to such technology and software, even among our own employees. Furthermore, our activities are subject to economic sanctions laws and regulations, including U.S. economic sanctions laws and regulations administered by the U.S. Department of the Treasury's Office of Foreign Assets Control that prohibit or restrict dealings that are within U.S. jurisdiction with, in or involving certain jurisdictions subject to comprehensive U.S. sanctions and certain designated persons and entities. We have corporate policies and procedures in place reasonably designed to ensure compliance with all applicable export control and economic sanctions laws and regulations.

In some cases, our compliance obligations may result in the loss of sales opportunities. In other cases, we may experience delays in our ability to conduct business as we await government authorization. Violations of economic sanctions or export control regulations can result in significant administrative fines or penalties or even criminal prosecution.

We are currently and may in the future become subject to litigation that could result in substantial costs, divert or continue to divert management's attention and resources, and materially and adversely affect our results of operations, financial condition, business and prospects.

On June 7, 2021 we filed a complaint in the Supreme Court of New York seeking declaratory judgment that we had not violated certain agreements entered into with International Business Machines Corporation ("IBM") relating to our acquisition of IBM's Microelectronics division in 2015, and subsequent development and research activities and sales of our products to IBM. On June 8, 2021, IBM filed a complaint in the Supreme Court of New York asserting intentional breach of contract and fraudulent misrepresentation claims under the same set of agreements. IBM argues that it is entitled to a return of its $1.5 billon payment to the company and at least $1 billion in damages. On September 14, 2021, the Court granted our motion to dismiss IBM's claims of fraud, unjust enrichment and breach of the implied covenant of good faith and fair dealing. Our complaint seeking declaratory judgment was dismissed. The case will proceed based on IBM's breach of contract and promissory estoppel claims. We believe, based on discussions with legal counsel, that we have meritorious defenses against IBM's claims. We dispute IBM's claims and intend to vigorously defend against them.

In addition, we are, and may become subject to, legal proceedings and claims that arise in the ordinary course of business, such as claims brought by our customers in connection with commercial disputes, product liability claims, employment claims made by our current or former employees or claims of infringement raised by intellectual property owners, in connection with the technology used in our manufacturing operations. The risk of such litigation may increase due to use of our products in safety-related systems of other advanced technologies, including automobiles.

Any existing or future disputes, claims or proceedings could result in substantial costs and may divert management's attention and resources. Insurance might not cover such claims, might not provide sufficient payments to cover all the costs to resolve one or more such claims and might not continue to be available on terms acceptable to us. A claim brought against us that is uninsured or underinsured could result in unanticipated costs, potentially harming our business, financial position and results of operations. Any of the foregoing factors could materially and adversely affect our results of operations, financial condition, business and prospects. Further, negative publicity arising from disputes, claims or proceedings may damage our reputation and adversely affect the image of our brand and our products. In addition, if any verdict or award is rendered against us, we could be required to pay significant monetary damages, assume other liabilities and even to suspend or terminate related business ventures or projects.

If regular or statutory consultation processes with employee representatives such as works councils fail or are delayed, or if our employees were to engage in a strike or other work stoppage, our results of operations, financial condition, business and prospects could be materially and adversely affected.

We may be required to consult with our employee representatives, such as works councils, on items such as work hours, restructurings, acquisitions and divestitures. Although we believe that our relations with our employees, employee representatives and works councils are satisfactory, no assurance can be given that we will be able to successfully extend or renegotiate these agreements as they expire from time to time or, in the case of transactions, to conclude potential consultation processes in a timely way. Also, if we fail to extend or renegotiate our labor agreements and social plans, if significant disputes with unions arise, or if our workers engage in a strike or other work stoppage, we could incur higher ongoing labor costs or experience a significant disruption of operations. We have experienced minor work stoppages involving a small number of employees at our Dresden, Germany manufacturing facility. Although those work stoppages did not materially impact production, future work stoppages, if more frequent or on a larger scale, could impact our production and our ability to timely provide products to our customers. Any of the foregoing factors could materially and adversely affect our results of operations, financial condition, business and prospects.

Currency and Interest Rate Risks

We are exposed to foreign currency risk, which could materially adversely affect our expenses and profit margins and could result in exchange losses.

The majority of our sales are denominated in U.S. dollars, and therefore, our revenue is not subject to foreign currency risk. However, an increase in the value of the U.S. dollar can increase the real cost to our customers of our products and services in those markets outside of the United States where we sell in U.S. dollars. Conversely, a weakened U.S. dollar can increase the cost of expenses such as our direct labor, raw materials and overhead that are incurred outside of the United States. These operating expenses are denominated in foreign currencies and are subject to fluctuations due to changes in foreign currency exchange rates. Additionally, this could impact our capital expenditures with foreign suppliers we pay in non-U.S. dollar currencies. We also engage in financing activities in local currencies. Our hedging programs may not be able to effectively offset any, or more than a portion, of the impact of currency exchange rate movements. As a result, unfavorable changes in exchange rates could materially and adversely affect our results of operations, financial condition, business and prospects.

LIBOR and certain other interest rate "benchmarks" may be subject to regulatory guidance and/or reform that could cause interest rates under our current or future debt agreements to perform differently than in the past or cause other unanticipated consequences.

Because a majority of our debt is primarily based on floating interest rate benchmarks (including the London Interbank Offered Rate, or "LIBOR"), fluctuations in interest rates could have a material effect on our business. We currently utilize, and may in the future utilize, derivative financial instruments such as interest rate swaps or interest rate caps to hedge some of our exposure to interest rate fluctuations, but such instruments may not be effective in reducing our exposure to interest fluctuations, and we may discontinue utilizing them at any time. As a result, we may incur higher interest costs if interest rates increase. These higher interest costs could have a material adverse impact on our financial condition and the levels of cash we maintain for working capital.

In addition, LIBOR and certain other interest rate “benchmarks” may be subject to regulatory guidance and/or reform that could cause interest rates under our current or future debt agreements to perform differently than in the past or cause other unanticipated consequences. Since December 31, 2021, LIBOR in Swiss Francs and Euro has permanently ceased to be determined or published, Sterling and Japanese Yen LIBOR has continued, but only for certain tenors and only using a changed methodology resulting in an unrepresentative rate setting and, in U.S. dollars, the one week and two-month LIBOR tenors have permanently ceased to be determined or published. The United Kingdom’s Financial Conduct Authority, which regulates LIBOR, has announced that, after June 30, 2023, the overnight and twelve-month tenors of USD LIBOR will permanently cease to be determined or published and, if the remaining USD LIBOR tenors continue, it will be on the basis of a changed methodology resulting in unrepresentative settings. The FCA has prohibited use of the continuing USD LIBOR settings by UK-supervised entities in new regulated financial contracts, instruments and/or investment fund performance measurement, although there are some exceptions. Other regulatory authorities have imposed restrictions on new use of the continuing USD LIBOR settings.

If USD LIBOR ceases to exist or if the methods of calculating USD LIBOR change from their current form before the end of June 2023, interest rates on our current or future debt obligations may be adversely affected.

If a published USD LIBOR rate is unavailable, we may be required to substitute an alternative reference rate, such as a different benchmark interest rate or the Secured Overnight Financing Rate (“SOFR”), in lieu of LIBOR. The Alternative Reference Rates Committee has proposed SOFR as its recommended alternative to LIBOR and the Federal Reserve Bank of New York began publishing SOFR rates in April 2018. SOFR is intended to be a broad measure of the cost of borrowing cash overnight that is collateralized by U.S. Treasury securities. However, because SOFR is a broad U.S. Treasury repo financing rate that represents overnight secured funding transactions, it differs fundamentally from LIBOR. For example, SOFR is a secured overnight rate, while LIBOR is an unsecured rate that represents interbank funding over different maturities. In addition, SOFR is a backward-looking rate, in that by the time it is published each day, all the transactions on which it is based will have matured, whereas LIBOR is forward-looking. Because of these and other differences, there is no assurance that SOFR will perform in the same way as LIBOR would have performed at any time, and there is no guarantee that it is a comparable substitute for LIBOR. A change from LIBOR to any of the proposed alternative reference rates could result in interest obligations that are more than or that do not otherwise correlate over time with the payments that would have been made on our debt if USD LIBOR were available in its current form. Any of these changes could have a material adverse effect on our financing costs. Moreover, the phase-out of LIBOR may adversely affect our assessment of effectiveness or measurement of ineffectiveness for accounting purposes of any interest rate hedging agreements indexed to LIBOR.

Risks Related to Changes in Effective Tax Rate and Accounting Principles

Changes in our effective tax rate or tax liability may have an adverse effect on our results of operations.

Our effective tax rate could increase due to several factors, including, but not limited to:

- changes in the relative amounts of income before taxes in the various jurisdictions in which we operate that have differing statutory tax rates;
- changes in tax laws, tax treaties and regulations or the interpretation of them;
- changes to our assessment about our ability to realize our deferred tax assets that are based on estimates of our future results, the prudence and feasibility of possible tax planning strategies, and the economic and political environments in which we do business;
- the outcome of current and future tax audits, examinations or administrative appeals; and
- limitations or adverse findings regarding our ability to do business in some jurisdictions.

Changes, such as these, that affect our effective tax rate could materially and adversely affect our results of operations and financial condition.

Our international operations subject us to potentially adverse tax consequences.

We generally conduct our international operations through subsidiaries and report our taxable income in various jurisdictions worldwide based upon our business operations in those jurisdictions. Our intercompany relationships are subject to complex transfer pricing regulations administered by taxing authorities in various jurisdictions. The relevant taxing authorities may disagree with our determinations as to the value of assets sold or acquired or income and expenses attributable to specific jurisdictions. If such a disagreement were to occur, and our position were not sustained, we could be required to pay additional taxes, interest, and penalties, which could result in one-time tax charges, higher effective tax rates, reduced cash flows, and lower overall profitability of our operations. There is also a high level of uncertainty in today's tax environment stemming from both global initiatives put forth by the Organisation for Economic Co-operation and Development, or the "OECD", and unilateral measures being implemented by various countries due to a historic lack of consensus on these global initiatives. As an example, the OECD has put forth two proposals—Pillar One and Pillar Two—that revise the existing profit allocation and nexus rules (profit allocation based on location of sales versus physical presence) and ensure a minimal level of taxation, respectively. If these proposals are passed, it is likely that we will have to pay higher income taxes in countries where such rules are applicable.

Our reported financial results may be adversely affected by changes in accounting principles.

International Financial Reporting Standards ("IFRS"), as issued by the International Accounting Standards Board ("IASB"), is subject to interpretation by the IASB and various bodies formed to promulgate and interpret appropriate accounting principles. A change in these principles or interpretations could have a significant effect on our reported results of operations, financial position and cash flows and could affect the reporting of transactions already completed before the announcement of a change.

Risks Related to Our Status as a Controlled Company and Foreign Private Issuer

Our majority shareholder, Mubadala Investment Company PJSC ("Mubadala") will continue to have substantial control of the business, which could limit your ability to influence the outcome of key transactions, including a change of control, and otherwise affect the prevailing market price of our ordinary shares.

Mubadala beneficially owns, in the aggregate, approximately 88.3% of our outstanding ordinary shares. See "Item 7. Major Shareholder and Related Party Transactions." In addition, we have entered into a shareholder's agreement with Mubadala, which will entitle Mubadala, subject to the level of Mubadala's beneficial ownership of our ordinary shares, to certain consent rights and director nomination rights. As a result, Mubadala will continue to have significant influence over the management and affairs of our company, as well as the ability to control the outcome of matters submitted to our shareholders for approval, including the election of directors and the approval of significant corporate transactions, including any merger, consolidation or sale of all or substantially all of our assets and the issuance or redemption of equity interests in certain circumstances. The interests of Mubadala may not always coincide with, and in some cases may conflict with, our interests and the interests of our other shareholders. For instance, Mubadala could attempt to delay or prevent a change in control of our company, even if such change in control would benefit our other shareholders, which could deprive our shareholders of an opportunity to receive a premium for their ordinary shares. This concentration of ownership may also affect the prevailing market price of our ordinary shares due to investors' perceptions that conflicts of interest may exist or arise, and because Mubadala may sell, or investors may perceive that Mubadala is likely to sell, a significant amount of our ordinary shares.

As a foreign private issuer and a controlled company, we are not subject to certain corporate governance rules applicable to U.S. listed companies.

As a foreign private issuer that has listed our ordinary shares on the Nasdaq, we rely on a provision in the Nasdaq corporate governance listing standards that allows us to follow Cayman Islands law with regard to certain aspects of corporate governance. This allows us to follow certain corporate governance practices that differ in significant respects from the corporate governance requirements applicable to U.S. companies listed on the Nasdaq.

For example, we are exempt from Nasdaq regulations that require a listed U.S. company to:

- have a majority of the board of directors consist of independent directors;
- require non-management directors to meet on a regular basis without management present;
- have an independent compensation committee;
- have an independent nominating committee; and
- seek shareholder approval for the implementation of certain equity compensation plans and issuances of ordinary shares.

As a foreign private issuer, we are permitted to follow home country practice in lieu of the above requirements. Our audit, risk and compliance committee is required to comply with the provisions of Rule 10A-3 of the Securities Exchange Act of 1934, as amended (the "Exchange Act"), which is applicable to U.S. companies listed on the Nasdaq. Therefore, we intend to have a fully independent audit, risk and compliance committee within one year from the effective date of our initial public offering registration statement, in accordance with Rule 10A-3 of the Exchange Act. However, because we are a foreign private issuer, our audit, risk and compliance committee is not subject to additional Nasdaq corporate governance requirements applicable to listed U.S. companies, including the requirements to have a minimum of three members and to affirmatively determine that all members are "independent," using more stringent criteria than those applicable to us as a foreign private issuer.

We are a foreign private issuer and, as a result, are not subject to U.S. proxy rules but are subject to reporting obligations that, to some extent, are more lenient and less frequent than those of a U.S. issuer.

We are a non-U.S. company with foreign private issuer status. Because we qualify as a foreign private issuer under the Exchange Act, and although we follow the laws and regulations of the Cayman Islands with regard to such matters, we are exempt from certain provisions of the Exchange Act that are applicable to U.S. public companies, including: (i) the sections of the Exchange Act regulating the solicitation of proxies, consents or authorizations in respect of a security registered under the Exchange Act, (ii) the sections of the Exchange Act requiring insiders to file public reports of their stock ownership and trading activities and liability for insiders who profit from trades made in a short period of time and (iii) the rules under the Exchange Act requiring the filing of quarterly reports on Form 10-Q containing unaudited financial and other specified information, or current reports on Form 8-K, upon the occurrence of specified significant events. Foreign private issuers are required to file their annual report on Form 20-F within four months after the end of each fiscal year. Foreign private issuers are also exempt from the Regulation Fair Disclosure, aimed at preventing issuers from making selective disclosures of material information. As a result of the above, you may not have the same protections afforded to shareholders of companies that are not foreign private issuers. This may be the case even though we intend to make interim reports available to our shareholders, copies of which we are required to furnish to the U.S. Securities and Exchange Commission ("SEC") on a Form 6-K, and even though we are required to file reports on Form 6-K disclosing whatever information we have made or are required to make public pursuant to Cayman Islands law or distribute to our shareholders and that is material to us.

We are a Cayman Islands company and, because judicial precedent regarding the rights of shareholders is more limited under Cayman Islands law than that under U.S. law, you may have less protection for your shareholder rights than you would under U.S. law.

Our corporate affairs are governed by our Amended and Restated Memorandum and Articles of Association (the "Memorandum and Articles of Association"), as amended and restated from time to time, the Cayman

Islands Companies Act (as amended) (the "Cayman Companies Act") and the common law of the Cayman Islands. The rights of shareholders to take action against the directors, actions by minority shareholders and the fiduciary responsibilities of our directors to us under Cayman Islands law are to a large extent governed by the common law of the Cayman Islands. The common law of the Cayman Islands is derived in part from comparatively limited judicial precedent in the Cayman Islands as well as that from English common law, which has persuasive, but not binding, authority on a court in the Cayman Islands. The rights of our shareholders and the fiduciary responsibilities of our directors under Cayman Islands law are not as clearly defined as they would be under statutes or judicial precedent in some jurisdictions in the United States. In particular, the Cayman Islands has a less prescriptive body of securities laws than the United States. In addition, some U.S. states, such as Delaware, have more fulsome and judicially interpreted bodies of corporate law than the Cayman Islands. As a result of all of the above, public shareholders may have more difficulty in protecting their interests in the face of actions taken by management, members of the board of directors or controlling shareholders than they would as shareholders of a corporation incorporated in a jurisdiction in the United States.

Our officers and directors presently have, and any of them in the future may have, additional fiduciary or contractual obligations to other entities, and, accordingly, may have conflicts of interest in determining to which entity a particular business opportunity should be presented.

Our directors and officers presently have, and any of them in the future may have, additional fiduciary or contractual obligations to other entities pursuant to which such officer or director is or will be required to present a business opportunity to such entity, subject to his or her fiduciary duties under Cayman Islands law. Accordingly, they may have conflicts of interest in determining to which entity a particular business opportunity should be presented. These conflicts may not be resolved in our favor and a potential business opportunity may be presented to another entity prior to its presentation to us, subject to their fiduciary duties under Cayman Islands law.

Our Memorandum and Articles of Association provide that, to the fullest extent permitted by applicable law: (i) no individual serving as a director or an officer shall have any duty, except and to the extent expressly assumed by contract, to refrain from engaging directly or indirectly in the same or similar business activities or lines of business as us; (ii) we renounce any interest or expectancy in, or in being offered an opportunity to participate in, any potential transaction or matter which may be a corporate opportunity for any director or officer, on the one hand, and us, on the other; and (iii) no individual serving as a director or an officer shall have a duty to communicate or offer any such corporate opportunity to us, nor shall such individuals be liable to us for a breach of fiduciary duty solely by reason of the fact that such party pursues or acquires such corporate opportunity for himself or herself, directs such corporate opportunity to another person, or does not communicate information regarding such corporate opportunity to us.

For a complete discussion of our executive officers' and directors' business affiliations and the potential conflicts of interest that you should be aware of, please see "Item 6. Directors, Senior Management and Employees" and "Item 7. Major Shareholders and Related Party Transactions."

The Cayman Islands Economic Substance Act may affect our operations.

The Cayman Islands has recently enacted the International Tax Co-operation (Economic Substance) Act, or the Cayman Economic Substance Act. The Cayman Economic Substance Act generally requires legal entities domiciled or registered in the Cayman Islands to have demonstrable substance in the Cayman Islands. The Cayman Economic Substance Act was introduced by the Cayman Islands to ensure that it meets its commitments to the European Union, as well as its obligations under the OECD's global Base Erosion and Profit Shifting initiatives. We are required to comply with the Cayman Economic Substance Act. As we are a Cayman Islands company, compliance obligations include filing annual notifications for us, which need to state whether we are carrying out any relevant activities and, if so, whether we have satisfied economic substance tests to the extent required under the Cayman Economic Substance Act. As it is a relatively new regime, it is anticipated that the

Cayman Economic Substance Act will evolve and be subject to further clarification and amendments. We may need to allocate additional resources to keep updated with these developments, and may have to make changes to our operations in order to comply with all requirements under the Cayman Economic Substance Act. Failure to satisfy these requirements may subject us to penalties under the Cayman Economic Substance Act. The Cayman Islands Tax Information Authority shall impose a penalty of CI$10,000 (or US$12,500) on a relevant entity for failing to satisfy the economic substance test or CI$100,000 (or US$125,000) if it is not satisfied in the subsequent financial year after the initial notice of failure. Following failure after two consecutive years the Grand Court of the Cayman Islands may make an order requiring the relevant entity to take specified action to satisfy the economic substance test or ordering it that it is defunct or be struck off. As the Cayman Islands Economic Substance Act is relatively new legislation, there is some uncertainty as to whether the Company met the requirements of the Economic Substance Act for the 2019 and 2020 reporting periods. However, the Company has not been notified by the Cayman Islands Tax Information Authority of any such failure or applicable penalties.

Risks Related to Operating as a Public Company

We are incurring increased costs and expenses as a result of operating as a public company and our management is required to devote substantial time to compliance with our public company responsibilities and corporate governance practices.

As a public company, we are incurring greater legal, accounting and other expenses than we incurred as a private company. We are subject to the reporting requirements of the Exchange Act, the Sarbanes-Oxley Act of 2002 (“SOX”), the Dodd-Frank Wall Street Reform and Consumer Protection Act of 2010 (the “Dodd-Frank Act”), and the rules and regulations of the Nasdaq, which impose various requirements on public companies, including establishment and maintenance of effective disclosure and financial controls and corporate governance practices. These requirements increase our legal, accounting, and financial compliance costs and make some activities more difficult, time-consuming, and costly, and place significant strain on our personnel, systems and resources.

We are continuing to evaluate these rules and regulations and cannot predict or estimate the amount of additional costs or the timing of such costs. These rules and regulations are often subject to varying interpretations, in many cases due to their lack of specificity, and, as a result, their application in practice may evolve over time as new guidance is provided by regulatory and governing bodies. This could result in continuing uncertainty regarding compliance matters and higher costs necessitated by ongoing revisions to disclosure and governance practices.

We are also required to comply with auditor attestation requirements of Section 404 of SOX. In that regard, we are working to hire additional accounting and financial staff with appropriate public company experience and technical accounting knowledge. We cannot predict or estimate the amount of additional costs we may incur or the timing of such costs.

If we fail to establish and maintain proper and effective internal control over financial reporting, our operating results and our ability to operate our business could be harmed.

Ensuring that we have adequate internal financial and accounting controls and procedures in place so that we can produce accurate financial statements on a timely basis is a costly and time-consuming effort that needs to be re-evaluated frequently. Our internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements in accordance with generally accepted accounting principles. In connection with our initial public offering, we have begun the process of documenting, reviewing and improving our internal controls and procedures for compliance with Section 404 of SOX, which will require annual management assessment of the effectiveness of our internal control over financial reporting. Implementing any appropriate changes to our internal controls may distract our officers and employees, entail substantial costs to modify our existing processes and take significant time to complete. These changes may not, however, be effective in maintaining the adequacy of our internal controls, and any failure to maintain that adequacy, or consequent inability to produce accurate financial statements on a timely basis, could increase our operating costs and harm our business. In addition, investors' perceptions that our internal controls are inadequate or that we are unable to produce accurate financial statements on a timely basis may harm the trading price of our ordinary shares and make it more difficult for us to effectively market and sell our service to new and existing customers.

Risks Related to our Ordinary Shares

Future sales or distributions of our shares by Mubadala could depress the price of our ordinary shares.

Sales by Mubadala in the public market or other distributions of substantial amounts of our ordinary shares, or the filing of a registration statement relating to a substantial amount of our ordinary shares, could depress our ordinary share price. In addition, Mubadala has the right, subject to certain conditions, to require us to file registration statements covering its shares or to include its shares in other registration statements that we may file. By exercising its registration rights and selling a large number of shares, Mubadala could cause the price of our ordinary shares to decline.

We do not expect to declare or pay any dividends on our ordinary shares for the foreseeable future.

We do not intend to pay cash dividends on our ordinary shares for the foreseeable future. Consequently, investors must rely on sales of their shares of our ordinary shares after price appreciation, which may never occur, as the only way to realize any future gains on their investment. Investors seeking dividends should not purchase shares of our ordinary shares. Any future determination to pay dividends will be at the discretion of our board of directors and subject to, among other things, our compliance with applicable law, and depending on, among other things, our business prospects, financial condition, results of operations, cash requirements and availability, debt repayment obligations, capital expenditure needs, the terms of any preferred equity securities we may issue in the future, covenants in the agreements governing our current and future indebtedness, other contractual restrictions, industry trends and any other factors or considerations our board of directors may regard as relevant. See "Item 8. Financial Information—Dividends and Dividend Policy."

Anti-takeover provisions in our organizational documents and Cayman Islands law may discourage or prevent a change of control, even if an acquisition would be beneficial to our shareholders, which could depress the price of our ordinary shares and prevent attempts by our shareholders to replace or remove our current management.

Our Memorandum and Articles of Association contain provisions that may discourage unsolicited takeover proposals that shareholders may consider to be in their best interests. Our board of directors is divided into three classes with staggered, three-year terms. Our board of directors has the ability to designate the terms of and issue preferred shares without shareholder approval. We are also subject to certain provisions under Cayman Islands law that could delay or prevent a change of control. Together these provisions may make more difficult the removal of management and may discourage transactions that otherwise could involve payment of a premium over prevailing market prices for our ordinary shares.

Our Memorandum and Articles of Association provide that the courts of the Cayman Islands will be the exclusive forum for certain disputes between us and our shareholders, which could limit our shareholders' ability to obtain a favorable judicial forum for complaints against us or our directors, officers or employees.

Our Memorandum and Articles of Association provide that unless we consent in writing to the selection of an alternative forum, the courts of the Cayman Islands will, to the fullest extent permitted by the law, have exclusive jurisdiction over any claim or dispute arising out of or in connection with our Memorandum and

Articles of Association or otherwise related in any way to each shareholder's shareholding in us, including but not limited to (i) any derivative action or proceeding brought on our behalf, (ii) any action asserting a claim of breach of any fiduciary or other duty owed by any of our current or former directors, officers or other employees to us or our shareholders, (iii) any action asserting a claim arising pursuant to any provision of the Cayman Companies Act or our Memorandum and Articles of Association, and (iv) any action asserting a claim against us governed by the "Internal Affairs Doctrine" (as such concept is recognized under the laws of the United States) and that each shareholder irrevocably submits to the exclusive jurisdiction of the courts of the Cayman Islands over all such claims or disputes. Our Memorandum and Articles of Association will provide that, unless we consent in writing to the selection of an alternative forum, to the fullest extent permitted by law, the federal district courts of the United States will be the exclusive forum for the resolution of any complaint asserting a cause or causes of action arising under the Securities Act of 1933, as amended ("Securities Act"), or Exchange Act, including all causes of action asserted against any defendant named in such complaint.

Our Memorandum and Articles of Association also provide that, without prejudice to any other rights or remedies that we may have, each of our shareholders acknowledges that damages alone would not be an adequate remedy for any breach of the selection of the courts of the Cayman Islands as exclusive forum and that accordingly we shall be entitled, without proof of special damages, to the remedies of injunction, specific performance or other equitable relief for any threatened or actual breach of the selection of the courts of the Cayman Islands as exclusive forum.

This choice of forum provision may increase a shareholder's cost and limit the shareholder's ability to bring a claim in a judicial forum that it finds favorable for disputes with us or our directors, officers or other employees, which may discourage lawsuits against us and our directors, officers and other employees. Any person or entity purchasing or otherwise acquiring any of our shares or other securities, whether by transfer, sale, operation of law or otherwise, shall be deemed to have notice of and have irrevocably agreed and consented to these provisions. There is uncertainty as to whether a court would enforce such provisions, and the enforceability of similar choice of forum provisions in other companies' charter documents has been challenged in legal proceedings. It is possible that a court could find this type of provisions to be inapplicable or unenforceable, and if a court were to find this provision in our Memorandum and Articles of Association to be inapplicable or unenforceable in an action, we may incur additional costs associated with resolving the dispute in other jurisdictions, which could have adverse effect on our business and financial performance.

Our Memorandum and Articles of Association provide for indemnification of officers and directors at our expense, which may result in a major cost to us and hurt the interests of our shareholders because corporate resources may be expended for the benefit of officers and/or directors.

Our Memorandum and Articles of Association and applicable law of the Cayman Islands provide for the indemnification of our directors and officers, under certain circumstances, against any liability, action, proceeding, claim, demand, costs, damages or expenses, including legal expenses, whatsoever which they or any of them may incur as a result of any act or failure to act in carrying out their functions in connection with our company, other than such liability (if any) that they may incur by reason of their own actual fraud, dishonesty, willful neglect or willful default. We will also bear the expenses of such litigation for any of our directors or officers, upon such person's undertaking to repay any amounts paid, advanced, or reimbursed by us if it is ultimately determined that any such person shall not have been entitled to indemnification. This indemnification policy could result in substantial expenditures by us that we will be unable to recoup.

We have been advised that, in the opinion of the SEC, indemnification for liabilities arising under federal securities laws is against public policy as expressed in the Securities Act, and is, therefore, unenforceable.

ITEM 4. INFORMATION ON THE COMPANY

A. History and Development of the Company

Our History

We were established in 2009 when a subsidiary of Mubadala acquired the manufacturing operations of Advanced Micro Devices, Inc. ("AMD") in Dresden, Germany, and their fab project site in Malta, New York. Since our inception, we have grown through a combination of acquisitions, greenfield expansions and strategic partnerships. In 2010, we combined with Chartered Semiconductor Manufacturing, the third-largest foundry by revenue at the time, forming the basis for our Singapore manufacturing hub. In 2015, we acquired IBM's Microelectronics division with manufacturing facilities in New York and Vermont, adding distinctive technology capabilities, including more than 2,000 IBM engineers. By 2017, we had successfully ramped our most advanced manufacturing site in Malta, New York. Through our organic and strategic growth initiatives, we increased manufacturing capacity and now have a global footprint with five manufacturing sites on three continents with approximately 14,600 employees and approximately 9,000 worldwide patents. In 2021, we shipped approximately 2.4 million 300mm equivalent semiconductor wafers. With this level of market presence and capability, our technologies are found across most semiconductor end markets in devices used on a daily basis.

Strategic Repositioning

Beginning in 2018, we embarked on a new strategy to significantly reposition our business to better align with our customers' needs, drive margin expansion and accelerate value creation for our stakeholders. Today, we focus on and are growing sales of foundry solutions for the pervasive semiconductor market, where we are trusted to reliably innovate and deliver premium performance, functionality, efficiency and quality, rather than focusing merely on transistor density and processing speed.

Key elements of our strategy include:

- **Focus on feature-rich solutions.** In August 2018, we shifted our focus to address the pervasive foundry market opportunity and the growing demand for specialized process technologies in emerging high-growth markets. Examples of feature-rich solution include embedded Non-volatile memory ("eNVM") and high voltage.
- **Market-based customer engagement strategy.** In order to better address and capture the pervasive semiconductor foundry market opportunity, we restructured our go-to-market organizations to better align with the growing opportunities in Smart Mobile Devices, Home and Industrial IoT, Communications Infrastructure & Datacenter, Automotive and Personal Computing. We supplemented our existing workforce with talented executives holding deep domain expertise in these growing markets.
- **Optimized portfolio.** We took a number of steps to streamline and optimize our business and manufacturing footprint to improve our bottom line and return on capital. In 2019, we divested three assets that were not aligned with our strategic priorities.
- **Resized and refocused cost structure.** We have realigned our engineering, sales and marketing organizations toward higher-margin, higher-return products and opportunities to drive our improved bottom line.
- **Disciplined, capital-efficient expansion strategy.** Since our repositioning, we have focused on a capital-efficient expansion strategy that is based on long-term demand certainty and partnerships with our customers. In addition, by repositioning to focus on differentiated technologies, we have been able to efficiently add features to our existing platforms while significantly reducing overall capital expenditures. Additionally, this strategy provides us with the opportunity to pursue highly accretive investments to meet market demand.

For a description of our principal capital expenditures in the last three fiscal years and a discussion of our acquisitions and dispositions, please see “Item 5. Operating and Financial Review and Prospects.”

Corporate Information

Our legal and commercial name is GLOBALFOUNDRIES Inc. We are an exempted company incorporated in the Cayman Islands with limited liability on October 7, 2008. We have appointed Corporation Service Company as our agent to receive service of process with respect to any action brought against us in the United States under the federal securities laws of the United States or of any state in the United States. The address of Corporation Service Company is 251 Little Falls Drive, Wilmington, DE 19808. Our principal executive offices are located at 400 Stonebreak Road Extension, Malta, New York 12020, United States, and our telephone number is (518) 305-9013.

Our website address is www.gf.com. Information contained on, or that can be accessed through, our website is not incorporated by reference into this Annual Report, and you should not consider information on our website to be part of this Annual Report. In addition, the SEC maintains an Internet website that contains reports and other information about issuers, like us, that file electronically with the SEC. The address of that website is www.sec.gov.

The GF design logo, “GF” and our other registered or common law trademarks, service marks, or trade names appearing in this Annual Report are the property of GLOBALFOUNDRIES Inc. Other trade names, trademarks and service marks used in this Annual Report are the property of their respective owners.

B. Business Overview

We are one of the world’s leading semiconductor foundries. We manufacture complex, feature-rich ICs that enable billions of electronic devices that are pervasive throughout nearly every sector of the global economy. With our specialized foundry manufacturing processes, a library consisting of thousands of qualified circuit-building block designs (known as IP titles or IP blocks), and differentiated transistor and device technology, we serve a broad range of customers, including the global leaders in IC design, and provide optimized solutions for the function, performance and power requirements of critical applications driving key secular growth end markets. As the only scaled pure-play foundry with a global footprint that is not based in China or Taiwan, we help customers mitigate geopolitical risk and provide greater supply chain certainty.

We provide differentiated foundry solutions that enable the era for data-centric, connected, intelligent and secure technologies. We are redefining the foundry model with feature-rich solutions that enable our customers to develop innovative products for an increasingly wide variety of applications across broad and pervasive markets. We unlock value for our customers by helping drive technology in multiple dimensions, making their products more intelligent and intuitive, more connected and secure, and more powerful and energy-efficient. Our objective is to be the global leader in feature-rich semiconductor manufacturing—the foundry of choice for the pervasive semiconductor market.

Since our founding in 2009, we have invested over $23 billion in our company to build a global manufacturing footprint with multiple state-of-the-art facilities across three continents, offering customers the flexibility and security their supply chains require. As semiconductor technologies become more complex with advanced integration requirements, we are also able to offer comprehensive, state-of-the-art design solutions and services that provide our customers with a high-quality, cost-effective and faster path to market. We continue to add new ecosystem partners spanning IP, electronic design automation, outsourced assembly and test and design services. Building on an existing library of more than 4,400 IP titles, we currently have more than 970 IP titles in active development across 27 process nodes and 34 IP partners.

We focus on feature-rich devices that include digital, analog, mixed-signal, radio frequency (“RF”), ultra-low power and embedded memory solutions that connect, secure and process data, and efficiently power the digital world around us. As the semiconductor and technology industries become more complex, we expect to become an even more vital partner to fabless semiconductor design companies, IDMs and original equipment manufacturers (“OEMs”), bringing their designs to life in physical hardware. Our core technology portfolio includes a range of differentiated technology platforms, including our industry-leading RF SOI solutions, advanced high-performance Fin Field-Effect Transistor (“FinFET”), feature-rich Complementary Metal-Oxide Semiconductor (“CMOS”), our proprietary FDX™, high-performance Silicon Germanium (“SiGe”) products and SiPh, all of which can be purposely engineered, innovated and designed for a broad set of demanding applications. Customers depend on us for feature-rich solutions based on these differentiated technologies in a growing number of applications that require low power, real-time connectivity and on-board intelligence.

The combination of our highly-differentiated technology and our scaled manufacturing footprint enables us to attract a large share of single-sourced products and long-term supply agreements, providing a high degree of revenue visibility and significant operating leverage, resulting in improved financial performance and bottom line growth. As of December 31, 2021, the aggregate lifetime revenue commitment reflected by these agreements amounted to more than $21 billion, including more than $10 billion during the period from 2022 through 2023 and more than $3.0 billion in advanced payments and capacity reservation fees. These agreements include binding, multi-year, reciprocal annual (and, in some cases, quarterly) minimum purchase and supply commitments with wafer pricing and associated mechanics outlined for the contract term. Through an intense focus on collaboration, we have built deep strategic partnerships with a broad base of more than 250 customers as of December 31, 2021, many of whom are the global leaders in their field. For the year 2021, our top ten customers, based on wafer shipment volume, included some of the largest semiconductor companies in the world: Advanced Micro Devices, Inc. (“AMD”), Cirrus Logic, Inc. (“Cirrus Logic”), Infineon Technologies AG (“Infineon”), MediaTek Inc. (“MediaTek”), NXP Semiconductors N.V. (“NXP”), pSemi Corporation (“pSemi”), Qorvo, Inc. (“Qorvo”), Qualcomm Inc. (“Qualcomm”), Samsung Electronics Co., Ltd. (“Samsung”), and Skyworks Solutions, Inc. (“Skyworks”). A key measure of our position as a strategic partner to our customers is the mix of our wafer shipment volume attributable to single-sourced business, which represented approximately 62% of wafer shipment volume in 2021, up from 61% in 2020. We define single-sourced products as those that we believe can only be manufactured with our technology and cannot be manufactured elsewhere without significant customer redesigns.

In addition to our highly-differentiated technology platforms, our capital-efficient, scaled manufacturing footprint gives us the flexibility and agility to meet the dynamic needs of our customers around the globe, help them mitigate geopolitical risk and provide greater supply chain certainty. We are also one of the most advanced accredited foundry providers to the U.S. DoD and have the ability to extend this high-assurance model to serve commercial customers and to enhance supply chain security and resilience at a time when they are becoming more critical to national and economic security. Since foundry production is concentrated in China and Taiwan, we believe our global manufacturing footprint is a key differentiator that makes us the ideal partner for local and regional government stakeholders at a time when many regions, in particular the United States and Europe, are contemplating significant funding to secure and grow domestic semiconductor manufacturing capabilities.

We currently operate five manufacturing sites in the following locations: Dresden, Germany; Singapore; Malta, New York; Burlington, Vermont; and East Fishkill, New York. Subsequent to our transfer of our EFK facility, we will have four world-class manufacturing sites on three continents, providing the scale, technology differentiation and geographic diversification that we believe are critically important to our customers’ success, with total 300mm equivalent baseline capacity in 2021 of approximately 2,228 kilo wafers per annum (“kwpa”). See Note 32 to our Annual Consolidated Financial Statements for our revenue and non-current assets by geography.

Technology Platforms

We offer a wide range of feature-rich solutions that can address the needs of mission-critical applications in Smart Mobile Devices, Home and Industrial IoT, Communications Infrastructure & Datacenter, Automotive and

Personal Computing. To solve our customers' most complex challenges, we have developed a broad range of sophisticated technology platforms that leverage our extensive patent portfolio and deep technical expertise in digital, analog, mixed-signal, RF and embedded memory.

We devote the majority of our R&D efforts to our six primary differentiated technology platforms:

- **RF SOI:** Our industry-leading RF SOI technologies are utilized in high-growth, high-volume wireless and Wi-Fi markets and are optimized for low power, low noise and low latency/high frequency applications that enable longer battery life for mobile applications and high cellular signal quality. Our RF SOI technologies are found in almost all cellular handsets from major manufacturers and in cellular ground station transceivers.
- **FinFET:** Our FinFET process technology is purpose-built for high-performance, power-efficient Systems-on-a-Chip ("SoCs") in demanding, high-volume applications. Advanced features such as RF, automotive, ultra-low power memory and logic provide a best-in-class (12 to 16 nanometer ("nm")) combination of performance, power and area, and are well-suited for compute and AI, mobile/consumer and automotive processors, high-end IoT applications, high performance transceivers and wired/wireless networking applications.
- **Feature-Rich CMOS:** Our CMOS platforms combined with foundational and complex IP and design enablement offer mixed-technology solutions on volume production-proven processes and are well-suited for a wide variety of applications. Technology features include Bipolar-CMOS-DMOS ("BCD") for power management, high-voltage triple-gate oxide for display drivers, and embedded non-volatile memory for micro-controllers.
- **FDX™:** Our proprietary FDX™ process technology platform is especially well-suited for efficient single-chip integration of digital and analog signals delivering cost-effective performance for connected and low-power embedded applications. A full range of features, such as Ultra-Low Power ("ULP"), Ultra-Low Leakage ("ULL"), RF and mmWave, embedded Magnetoresistive Random Access Memory ("MRAM") and automotive, makes our FDX™ process technology platform especially well-matched for IoT/wireless, 5G (including mmWave), automotive radar, and satellite communications applications.
- **SiGe:** Our SiGe Bipolar CMOS ("BiCMOS") technologies are uniquely optimized for either power amplifier applications or very-high-frequency applications for optical and wireless networking, satellite communications and communications infrastructure. Our SiGe technologies are performance-competitive with more costly compound semiconductor technologies while taking full advantage of being integrated with conventional Silicon CMOS ("Si CMOS").
- **SiPh:** Our SiPh platforms address the increasing need for data centers to handle ever higher data rates and volumes with greater power efficiency, as conventional copper wire connections are becoming prohibitive from a power consumption perspective. Our SiPh platforms integrate photonics components with CMOS logic and RF to enable a fully integrated, monolithic electrical and optical computing and communications engine. Our SiPh technologies are also being extended to applications such as Light Detection and Ranging ("LiDAR"), quantum computing and consumer optical networks.

Recent Industry and Market Dynamics

The Global Semiconductor Supply Shortage

While technology megatrends have been driving increased semiconductor demand, the COVID-19 pandemic accelerated demand trends already underway, including remote work, learning and medicine, driving sustainable demand for electronic devices such as networking and infrastructure to maintain a distributed environment. As a result, demand has outstripped supply across most of the semiconductor industry. Meanwhile, other industries, such as the automotive sector, which were initially hard-hit by the pandemic, began to halt new purchases and depleted existing inventories of semiconductor chips. As some parts of the world have started to re-open, these impacted sectors have seen significant increases in new demand, which, when coupled with underlying megatrends not related to the COVID-19 pandemic, such as the electrification of vehicles, have resulted in a significant imbalance between demand and supply. Although the supply-demand imbalance is expected to improve over the medium-term, the semiconductor industry will require a significant increase in investment to keep up with demand.

Government Incentives to Secure Supply

Against this backdrop, governments have been proposing bold new incentives to fund and secure their local semiconductor manufacturing industries. The United States Congress authorized the CHIPS Act, which, if funded, as proposed in legislation pending in Congress, will provide for $52 billion in funding to the domestic semiconductor industry, with approximately two-thirds directed toward semiconductor manufacturing. However, the timing of when we may receive funding under the CHIPS Act is difficult to predict. The European Union recently proposed the European Chips Act, which is intended to provide significant funding to strengthen the EU's semiconductor industry. These programs, and similar programs under consideration, are designed to bring back share in the semiconductor industry to the United States and Europe by encouraging manufacturers such as GF to increase their local capacities in these regions.

Similarly, we believe that foundry customers are increasingly seeking to diversify and secure their semiconductor supply chains, and are looking for foundry partners with manufacturing footprints in Europe, the United States and Asia, outside of China and Taiwan. Fabless companies and IDMs increasingly view their foundry relations as highly strategic and are looking to secure long-term capacity contracts by paying to access capacity expansions at their foundry partners. This trend has the potential to help balance the geographical distribution of manufacturing and drive increased long-term visibility and profitability of the foundry industry.

Technology Megatrends

Semiconductors are the core building blocks of electronic devices and systems, including those used in mobile devices, automobiles, consumer electronics, wearables, smart home devices, 5G wireless infrastructure, robotics, PCs, cloud computing, data networking and others. Historically, semiconductor innovation was driven by a few select compute-centric applications—initially PCs and later the internet and mobile phones. Mobile devices have evolved from a convenient communication appliance to a feature-rich, always-connected device, enabling users to do and control nearly everything in their lives. This has driven significant growth in semiconductor demand.

Another significant driver of semiconductor demand has been, and we believe will continue to be, the tremendous growth in the deployment of intelligent software which is increasingly transforming a wide variety of business functions across all sectors. Semiconductors enable the functionality that software delivers. With wide-scale adoption of mobile devices and software solutions, society has grown to expect high-speed connectivity, convenience and security in all applications, providing a catalyst for increased semiconductor content in nearly every industry. These trends were accelerated by the COVID-19 pandemic, which emphasized the criticality of connectivity to allow the world to continue to work, communicate, educate, and deliver goods and services. We believe that accelerated adoption of technologies such as video conferencing, telemedicine, e-education and e-commerce will serve to drive increased requirements for these technologies going forward.

Semiconductors are enabling the transformation of other sectors of the economy as well. In particular, autonomous driving applications are driving a sharp increase in semiconductor sensors. Semiconductors are increasingly integral to the performance, safety and comfort of vehicles, and we believe the continued electrification of automobiles will only further accelerate this trend.

Semiconductors have become mission-critical to the functionality, safety, transformation and success of many industries in addition to the automotive industry. As a result, the diversification of semiconductor demand across a wide range of industries has made the sector more foundational and central to the broader economy and in turn less vulnerable to cyclicality.

Technology megatrends including IoT, 5G, cloud, artificial intelligence (“AI”) and next-generation automotive are reshaping the global economy and driving a new golden age for semiconductors. Semiconductors have become ubiquitous, powering a broad range of applications from consumer devices to enterprise and industrial applications. Semiconductor innovation is essential to the growth and development of many parts of the technology ecosystem. This includes the software and AI revolution and data collection, transmission and processing at an unprecedented scale, as well as increasing use of advanced driver-assistance systems (“ADAS”) and electrification of automobiles. Semiconductor innovation is also essential for many industrial applications. As the manufacturing backbone of the semiconductor industry, foundries are the bedrock of the global technology ecosystem, and, by extension, the world economy. Foundries such as GF drive innovation by providing advances in process technologies, materials science and IC design IP within the global supply chain to enable customers to develop ICs, accelerate time-to-market and offer value-added services.

Impact of COVID-19

All of our manufacturing facilities continue to remain open and are operating at normal production levels. We have been classified as an essential business in the United States, Germany and Singapore and we expect our facilities to remain open throughout the COVID-19 pandemic. Our manufacturing sites are limited to essential personnel only and we are able to maintain appropriate staffing levels to support production. We are also taking all appropriate measures to protect our workforce and community.

At the beginning of the pandemic, we increased the frequency of monitoring our cash flows and working capital, and to date we have seen no impacts. As an essential business, we stayed open throughout 2021 and have continued to do so based on what we believe to be effective measures to maintain a safe work environment, while scaling production to meet increasing demand.

In March 2020, we drew down a $235 million revolving credit facility as a safeguard measure in case of pressure on the banking system, which was fully paid back in July 2020. Our suppliers continue to support our business without material impacts from the pandemic. We are also evaluating and participating in government initiatives as appropriate. To date, we have benefited from approximately $29 million from payroll tax deferrals in the United States and approximately $26 million in grants from the government of Singapore.

Our customers have not signaled material demand shifts at this point and non-cancellable revenue coverage is within the normal historical range. We continue to closely monitor the business environment for changes and are prepared to adjust capital and operational spending as appropriate.

Key Strengths

We have several distinct advantages that differentiate us from our peers:

- **Scaled manufacturing capabilities.** In 2021, we shipped approximately 2.4 million 300mm equivalent semiconductor wafers. We believe that our scaled global manufacturing footprint enables our customers to leverage the security of our fabs and ensure a trusted supply of critical semiconductors.
- **Differentiated technology platforms and ecosystem.** We deliver highly-differentiated solutions to meet customer demand for superior performance, lower power consumption and better thermal efficiency for mission-critical applications across IoT, 5G, cloud, AI, next-generation automotive and other secular growth markets that are driving the economy of the future.
- **Diversified and secure geographic footprint.** Our scaled global manufacturing footprint helps mitigate geopolitical, natural disaster and competitive risks. We are the only U.S.-based scaled

semiconductor foundry with a global footprint. We believe that this geographic diversification is critical to our customers as well as governments around the world as they look to secure semiconductor supply. Furthermore, a significant number of our technology platforms are qualified across our manufacturing footprint, providing our customers with a geographically diverse one-stop supply chain solution.

- **Market-centric solutions driving deep customer relationships.** We are pioneering a new sustainable foundry relationship with fabless companies, IDMs and OEMs by partnering with customers to redefine the supply chain and economics for the entire value chain. The insights we gain through our market-centric approach enable us to focus on and invest in the markets and applications in which we believe we can achieve a clear leadership position.
- **Capital-efficient model.** Our focus on the pervasive semiconductor market results in lower capital requirements compared to foundries that focus on processor-centric compute semiconductors and are therefore obligated to invest significant capital to transition from node to node. Additionally, as the only scaled pure-play foundry with existing manufacturing capacity in the United States and Europe, we are well-positioned to benefit from government support, as governments around the world implement or contemplate large aid packages to encourage manufacturers such as us to increase their local capacities in these regions.
- **World-class team and focus on sustainability.** We have a highly technically proficient, talented and experienced management team of executive officers and key employees with average industry experience of 20 years. We are dedicated to ethical and responsible business practices, the personal and social well-being of our diverse and highly-skilled employee base, and supply chain and environmental stewardship. As of December 31, 2021, we employed approximately 14,600 employees, and approximately 65% of our employees were engineers or technicians.

Our Growth Strategies

Key elements of our growth strategies include:

- **Deepen relationships with key customers.** We operate a customer-focused partnership model in which we work closely with our customers to better understand their requirements in order to invest in and develop tailored solutions to suit their specific needs. We intend to expand our customer base and increase market share by leveraging our core IP, comprehensive portfolio, scale and flexibility to redefine the fabless-foundry model.
- **Expand portfolio of differentiated, feature-rich technologies.** We believe that maintaining and enhancing our leadership position in differentiated technologies is critical to attracting and retaining customers, which increasingly rely on specific silicon features to differentiate their products. We will continue to invest in R&D across our six key technology platforms, which we believe will lead to continued innovation and growth within our addressable market for the foreseeable future.
- **Disciplined capacity expansion.** We believe that we have a capital-efficient model that allows us to expand capacity in a disciplined and economically attractive manner. Our focus on the pervasive semiconductor market requires lower capital intensity than that of the compute-focused foundries to drive revenue growth.
- **Strengthen government partnerships.** We intend to continue expanding our existing footprint by building on the strength of our public/private investment partnerships. As regions around the world work to establish domestic semiconductor supply, we believe governmental funding to secure local manufacturing will continue.
- **Continued operational excellence.** Through intensive management focus on operational efficiency, we will continue to implement efficiency measures aimed at expanding margins, improving our bottom line, and generating higher returns on investment. We expect our business model to provide significant bottom line benefits as revenue scales at each of our existing locations.

Raw Materials

One of the most important raw materials used in our production processes is silicon wafers, which is the basic raw material from which integrated circuits are made. In recent years, the silicon substrate market has experienced price volatility and supply shortages. The principal suppliers for our wafers are Soitec, GlobalWafers Singapore Pte. Ltd. (“GlobalWafers”), SK Siltron, Inc., Siltronic AG, Sumco Corporation and Shin-Etsu Handotai (“S.E.H.”). In order to secure a reliable and flexible supply of high-quality wafers, we have entered into multiple long-term agreements with the majority of our principal suppliers, the largest of which is Soitec. We have entered into multiple long-term agreements with Soitec across a wide spectrum of SOI products. See also “Item 3. Risk Factors—We rely on a complex silicon supply chain and breakdowns in that chain could affect our ability to produce our products and could materially and adversely affect our results of operations, financial condition, business and prospects.”

Research and Development

We have a strong heritage of innovation, stemming from our roots at AMD, Chartered Semiconductor and IBM, and have built a comprehensive technology portfolio supported by approximately 9,000 worldwide patents. As of December 31, 2021, we had approximately 1,400 employees dedicated to R&D. We have a strong commitment to R&D, and, since our strategic repositioning in 2018, have been able to invest more efficiently, focusing our R&D efforts primarily on delivering a comprehensive and expanded portfolio of highly-differentiated, feature-rich solutions for our customers, including RF, FinFET, feature-rich CMOS, FDXTM, SiGe and SiPh. Our investments cover a broad range of innovation vectors, including materials and substrates, architecture, integration, services, including packaging, and the development of our ecosystem. We have developed and continue to develop resources that allow our customers to develop innovative products to fuel the global economy. In 2019, 2020 and 2021, we spent $583 million, $476 million and $478 million, respectively, on R&D, which represented 10%, 10% and 7% of our net revenue in each respective year. The sequential decline in R&D spending was driven primarily by the sale of our ASIC business.

Intellectual Property

We rely on IP rights, particularly patents and trade secrets, as well as contractual arrangements, to protect our core process and design enablement technologies and provide our customers with protected technology to enable their mission-critical offerings. On average, we file hundreds of new patent applications annually, and approximately 90% of our filed patent applications have successfully been issued as patents (based on U.S. patent applications filed between 2016 and 2020), which reflects the innovation of our engineers. Following our 2018 pivot to focus on differentiated technologies, our recent patent applications have closely tracked our areas of focus, including RF, FDX™, SiGe, and SiPh. We file our patent applications in the United States and in key countries such as Taiwan, Korea, China and Germany based on the location of other semiconductor manufacturers or major markets. In addition to patents invented by our engineers, we have also acquired thousands of patents from other leading semiconductor manufacturers, including AMD, Chartered Semiconductor and IBM. We periodically conduct in-depth reviews of our patents and the industry’s manufacturing technologies, and we cull patents having limited or no value, yielding both savings in patent office maintenance fees and a strong, active patent portfolio. As of December 31, 2021, we held approximately 9,000 worldwide patents.

Over the years, we have used our patent portfolio to successfully fend off operating companies seeking to extract patent license fees from us. Additionally, in 2019, we filed patent infringement lawsuits against TSMC in the U.S. International Trade Commission and district courts in the United States and Germany. The case was quickly settled with a patent cross-license. We have also entered into patent cross-licenses with a number of other leading advanced semiconductor companies, including AMD, Samsung and IBM. These cross-licenses provide us with valuable freedom of operation under patents owned or subsequently divested by such companies. As is the case with many companies in the semiconductor industry, we have from time to time received communications from third parties, in particular, so-called non-practicing entities, asserting patents that allegedly cover certain of our technologies, and we expect to receive similar communications in the future. Some of the patents that others have chosen to assert against us are not valid based on pre-existing prior art, and we have successfully defended ourselves using *inter partes* review ("IPR") and other procedures in the U.S. Patent and Trademark Office. Regardless of the validity or the successful assertion of such claims, we could incur significant costs and devote significant management resources to the defense of these claims, which could seriously harm our company. Additionally, many of our agreements with our customers and partners require us to defend such parties against certain IP infringement claims and indemnify them for damages and losses arising from certain intellectual property infringement claims against them. See "Item 3. Key Information—Risk Factors—Intellectual Property—We have been and may continue to become subject to intellectual property disputes, which are costly and may subject us to significant liability and increased costs of doing business."

Environmental, Social and Governance (ESG) Initiatives

We are dedicated to ethical and responsible business practices, the personal and social well-being of our employees, and supply chain and environmental stewardship. ESG is fundamental to our culture and our value proposition to our customers, the communities in which we live and do business, and our full range of global stakeholders.

We currently focus our ESG efforts in the following key areas:

Employee Safety, Health and Well-being

Our Journey to Zero commitment is the leading theme of our Global Environmental Health and Safety ("EHS") Policy and Standards, which serve as the foundation of health and safety programs at each of our manufacturing locations. We strive to continuously reduce occupational injuries and illnesses in all of our operations, and aspire to achieve the goal of zero annual incidents. In November 2020, we received the America's Safest Companies award from EHS Today. Our enterprise-wide health and safety management system is certified to the ISO 45001:2018 standard.

Environmentally Sustainable Manufacturing and Operations

Semiconductor manufacturing is generally resource-intensive. Therefore, our Journey to Zero commitment also represents our pursuit of sustainable and environmentally efficient manufacturing operations, seeking to minimize environmental- and climate-related impacts from our operations through pollution prevention and resource conservation. Our Global EHS Policy and Standards establish a continual improvement process and performance requirements that apply throughout the company. Our enterprise-wide environmental management system is certified to the ISO 14001:2015 standard. In August 2021, we launched our Journey to Zero Carbon commitment that aims to reduce greenhouse gas emissions by 25% by 2030, compared to a 2020 baseline.

Responsible Sourcing

As a member of the Responsible Business Alliance ("RBA"), we are committed to responsible sourcing practices. We progressively apply the RBA Code of Conduct to our major suppliers and monitor its application. We encourage and support our suppliers to do the same in our continuous pursuit of excellence in corporate responsibility and extension of responsible practices throughout the supply chain.

Technology Solutions for Humanity

We are focused on creating innovations in the largest and most pervasive segments of the semiconductor industry. As power efficiency has become a critical success factor for our industry, we strive to develop solutions that can lower the power consumption of digital technology.

Human Capital: Diversity & Inclusion and Talent Development

We believe that our success rests on empowering employees to bring their whole selves to the company and that building a culture of inclusion drives better business outcomes. As a global company, we recognize and value the wide variety of cultural values, traditions, experiences, education and perspectives of our team and communities. We previously established a Diversity & Inclusion office and as of December 31, 2021, we employed a multicultural workforce representing more than 90 nationalities across 13 countries. We believe that our culture of inclusion leads to higher levels of belonging, engagement and ultimately, higher-performing teams. We strive to focus on all aspects of the employee lifecycle, including recruitment, retention, professional development, and advancement of diverse talent. As part of this effort, we established our first employee resource group, GLOBALWOMEN, in 2013 to have a positive impact on our business through the enrichment of our female employees. Since then, we have established the Black Resource Affinity Group (B.R.A.G.), Globalfamilies, the United States Veteran's Resource Group (VRG), and the Early Career and Tenure Resource Group. Employee driven, our employee resource groups support our diversity and inclusion strategy. We use an annual engagement survey process to help measure employee engagement and our diversity and inclusion strategy progress.

Community Support and Engagement

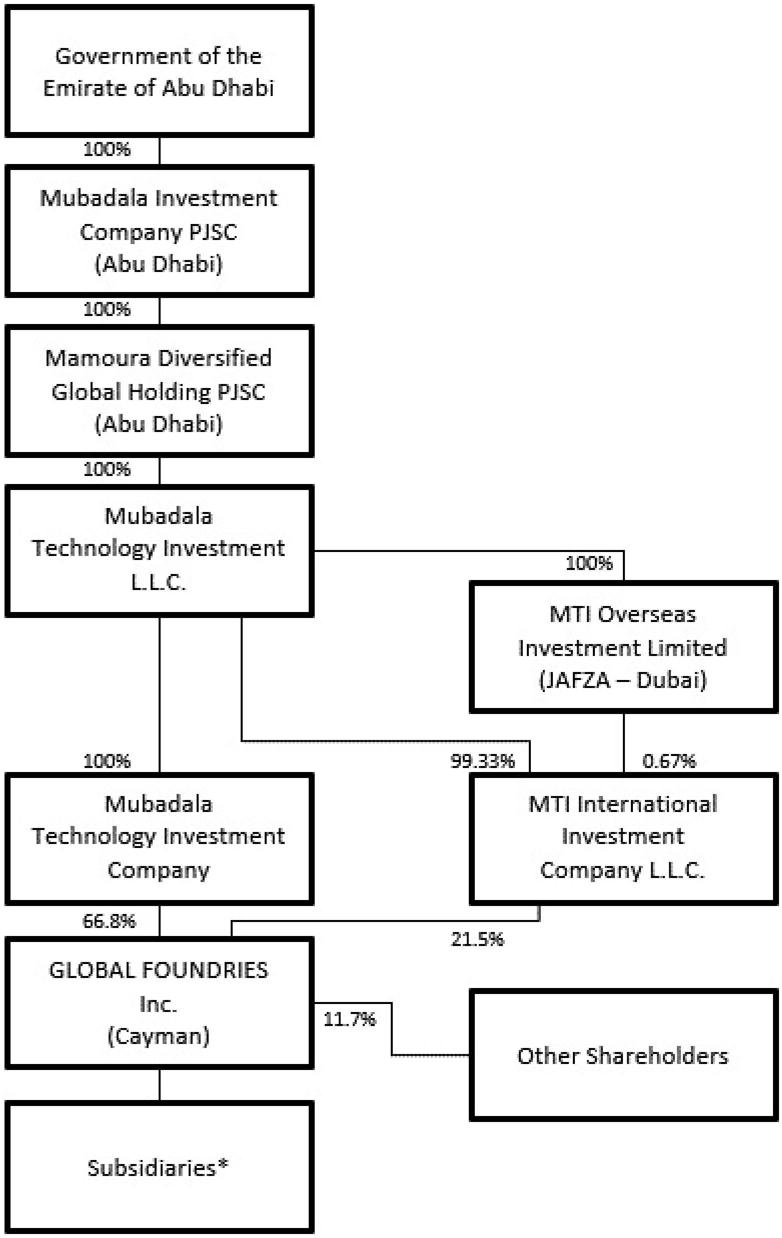
We have a long history of community involvement, with well-established programs and global and local teams dedicated to enriching the lives of the people in our communities around the world. Through our worldwide GlobalGives program, we provide employees with the opportunity to make a positive impact in their local communities through personal donations, company-matched donations as well as through volunteering their time.

Stakeholder Engagement

Our key stakeholders have a significant interest in our business and help shape our company and the products and services we provide. We regularly engage with our employees, customers, communities, suppliers, and industry peers, sharing perspectives and gaining valuable insight relevant to our business and operations.

C. Organizational Structure

The following is a chart of our current corporate structure as of December 31, 2021:



* Please refer to Note 29 to our Annual Consolidated Financial Statements for more information on our subsidiaries.

D. Property, Plant and Equipment

Fab Facilities

In 2021, we shipped approximately 2.4 million 300mm equivalent semiconductor wafers. We currently operate five manufacturing sites in the following locations: Dresden, Germany; Singapore; Malta, New York; Burlington, Vermont; and East Fishkill, New York.

Global Footprint

Our focus on highly-differentiated solutions, quality, security and reliability requires world-class manufacturing capabilities. Since our strategic repositioning in 2018, we have shifted focus to digital, analog, mixed-signal and RF technologies, where we believe we can add significant value. We are streamlining and aligning our manufacturing footprint with this priority.

As part of our strategy to consolidate manufacturing to at-scale sites, on December 31, 2019, we sold our Fab 3E facility and operations in Tampines, Singapore to Vanguard for $236 million.

Furthermore, in April 2019, we agreed to transfer substantially all the assets and employees related to our EFK facility to ON Semiconductor in return for $400 million in consideration and $30 million for a technology license, of which ON Semiconductor paid $100 million upon signing, which included $30 million for the technology license, and an additional $100 million in 2020. This transfer will allow us to refocus investment into differentiated technologies at scale in our three globally diversified 300mm sites in New York, Germany and Singapore. We expect the completion of the asset sale to occur, subject to regulatory approvals, at the end of 2022. Since the transaction was entered into, we have transferred a number of technologies from the EFK facility to our other global manufacturing sites to ensure continuous supply to key customers.

Subsequent to our divestiture of Fab 3E and transfer of the EFK facility, we will have four world-class manufacturing sites on three continents, providing the scale, technology differentiation and geographic diversification that we believe are critically important to our customers' success.

Our manufacturing sites currently occupy an aggregate area of approximately 6.2 million square meters, which equates to approximately 1,170 U.S.-style football fields. The total clean room space is approximately 255,000 square meters spread across five manufacturing sites. Each site is equipped with thousands of highly sophisticated manufacturing equipment and tools. We currently have more than 7,500 tools across all of our fabs. Each site has dedicated power, water, gas and chemical distribution systems.

Our products have applications that span the global markets from mobility to wireless, wired and satellite communication, to automotive, industrial, consumer electronics, to personal computing, data center, to power, power management, photonics and more, with sizes that range from just a few millimeters square to 400 millimeters square, across our six differentiated technology platforms.

Dresden Facility

Our Dresden facility is the largest semiconductor manufacturing site in Europe, with approximately 500,000 300mm equivalent semiconductor wafers shipped in 2021. The facility occupies an area of approximately 407,000 square meters, with clean room extending over an area of approximately 63,000 square meters, which is home to our CMOS and FDX™ process technologies from 55nm down to the 28/22nm node.

In Germany and the rest of Europe, we employ approximately 3,350 people from over 37 nations.

Singapore Facility

Our Singapore facility is one of the largest semiconductor foundry manufacturing sites in South-east Asia, with approximately 1,075,000 300mm equivalent semiconductor wafers shipped in 2021. The facility occupies an area of approximately 182,000 square meters, with clean room extending over an area of approximately 72,000 square meters, which is home to process technology of 40nm to 0.6 micrometer ("μm").

In Singapore, we employ approximately 4,000 people, which we believe makes us the second largest semiconductor-related employer and the largest foundry employer in the country.

Malta, New York Facility

Our Malta, New York facility is the largest and most advanced 300mm pure-play foundry site in the United States, with approximately 357,000 300mm equivalent semiconductor wafers shipped in 2021. The facility occupies an area of approximately 976,000 square meters, with clean room extending over an area of approximately 42,000 square meters, which is home to our FinFET process technology. We believe that our Malta facility is the most advanced ITAR-compliant semiconductor manufacturing facility of its kind in the world.

At our Malta facility, we employ approximately 2,700 people, which we believe makes the facility one of the largest manufacturing employers in the area.

Burlington, Vermont Facility

Our Burlington, Vermont facility is the largest 200mm pure-play foundry site in the United States with approximately 263,000 300mm equivalent semiconductor wafers shipped in 2021. The facility occupies an area of approximately 2.7 million square meters, with clean room extending over an area of approximately 44,000 square meters, which is home to most of our RF process technologies. Our Burlington facility is an accredited member of the DoD's Trusted Foundry Program.

In the State of Vermont, we employ approximately 2,200 people, which we believe makes us one of the largest private-sector employers in the state.

East Fishkill, New York Facility

Our East Fishkill, New York facility is located in the Hudson Valley. The site has been developing and manufacturing a wide range of technologies in Digital Logic, RF SiPh, and now discrete devices for end-customer applications. This facility shipped approximately 138,000 300mm equivalent semiconductor wafers in 2021. The facility occupies over 2 million square meters, with clean room space extending over an area of approximately 33,000 square meters. We agreed to transfer ownership of this facility to ON Semiconductor by the end of 2022, allowing us to refocus investment into differentiated technologies in our three world-scale 300mm sites in New York, Germany and Singapore.

At the East Fishkill facility, we employ approximately 1,250 people, which we believe makes the facility one of the largest manufacturing employers in the area.

The following table describes each of our core manufacturing facilities as of December 31, 2021:

Our Global Manufacturing Footprint

	Key Technologies[1]	Wafer Size (mm)	2021 Shipments (kwpa, 300mm equivalent)	Fully Equipped Clean Room Space (kwpa, 300mm equivalent)
Malta, New York	FinFET, RF SOI, SiPh	300	~357	~570
Burlington, Vermont	RF SOI, SiGe	200	~263	~275
Dresden, Germany	FDX™, NVM, HV, BCDL	300	~500	~850
East Fishkill, New York[2]	HP CMOS, RF SOI, SiPh	300	~138	N/A
Singapore	BCD/BCDL, HV, NVM, DDI, RF SOI, LP SiGe	300, 200	~1,075	~1040[3]

(1) NVM refers to Non-Volatile Memory. eNVM refers to embedded non-volatile memory.
(2) Transfer of ownership of this facility to ON Semiconductor is expected to be completed by the end of 2022.
(3) Excludes Fab 7 Module 7H 450 kwpa expansion under construction.

In early 2021, we announced plans to accelerate the buildout of capacity within our existing fabs to meet committed customer demand. These investments are expected to add scale with attractive economic returns. For new fab expansions that require additional construction beyond our existing clean rooms, our strategy is to continue to build scale in each of our locations through public/private partnerships, coupled where possible with deep customer commitments, as well as advanced payments and capacity reservation fees to secure supply for our customers.

On June 22, 2021, we announced fab expansion plans in Singapore, with the addition of Module 7H, an extension of our existing 300mm Fab 7 operations. We expect to invest close to $4 billion in capital investments to build and fit out the new module, with construction to be completed by the end of 2023 and first products qualified shortly thereafter. The expansion will be funded in part by the Singapore Economic Development Board ("EDB") in the form of long-term developmental loans and grants. We anticipate hiring an additional 1,000 people to the site, and once fully ramped, we anticipate having an additional 450,000 wafers of 300mm capacity.

On July 19, 2021, we announced fab expansion plans in Malta, New York, including the construction of a new fab on the same campus. We expect to invest approximately $1 billion in capital investments to expand the capacity of the existing fab by approximately 150,000 wafers per year, to be followed by the construction of an additional fab that we expect to double existing capacity. We are planning to fund the expansion through private/public partnerships in the United States.

ITEM 4A. UNRESOLVED STAFF COMMENTS

None.

ITEM 5. OPERATING AND FINANCIAL REVIEWS AND PROSPECTS

How We Generate Revenue

We generate the vast majority of our revenue from wafer fabrication and sales of finished semiconductor wafers, which accounted for approximately 94% of our $6.6 billion of net revenue in 2021. We derived the remainder of our revenue primarily from photomask manufacturing and sourcing services and post-fab manufacturing services. In 2020, our net revenue was $4.9 billion, which included a one-time, non-recurring reduction in revenue due to our moving from recognizing wafer revenue on a Percentage-of-Completion basis to recognizing revenue on a Wafer Shipment basis, as a result of amendments to the majority of our customer contractual terms. See "—Critical Accounting Policies and Estimates—Revenue Recognition." Had the change in terms not occurred, net revenue in 2020 would have been an estimated $810 million higher than reported results and 2020 cost of revenue would have likewise been higher by an estimated $634 million, with a commensurate decrease in our inventories. In addition, we divested our ASIC business in 2019. The divested business generated $391 million of revenue in 2019.

Components of Results of Operations

Net Revenue

We generate the majority of our revenue from volume production and sales of semiconductor wafers, which are priced on a per-wafer basis for the applicable design. We also generate revenue from pre-fabrication services such as rendering of non-recurring engineering ("NRE") services, mask production and post-fabrication services such as bump, test, and packaging. Pricing is typically agreed prior to production and then updated based on subsequent period negotiations.

We recognize the vast majority of our revenue upon shipment of finished wafers to our customers. Prior to 2020, we recognized wafer revenue primarily on a Percentage-of-Completion basis. In 2020, the majority of our customer contractual terms were amended in a manner that resulted in moving from recognizing wafer revenue on a Percentage-of-Completion basis to recognizing revenue on a Wafer Shipment basis. This resulted in a one-time, non-recurring reduction in net revenue recognized in 2020. Our net revenue in 2020 were $4.9 billion, and had the change in terms not occurred, net revenue would have been an estimated $810 million higher than reported results. In addition, we divested our ASIC business in 2019. The divested business generated $391 million of revenue in 2019.

Cost of Revenue

Cost of revenue consists primarily of material expenses, depreciation and amortization, employee-related expenses, facility costs and costs of fixed assets, including maintenance and spare parts. Costs related to NRE services are also included within the cost of revenue.

Material expenses primarily include the costs of raw wafers, test wafers, photomasks, resists, process gases, process chemicals, other operating supplies and external service costs for wafer manufacturing. Depreciation and amortization charges primarily include the depreciation of clean room production equipment. We depreciate equipment on a straight-line basis over a two- to ten-year period and buildings on a straight-line basis over up to 26 years (or the remaining lease term of related land on which the buildings are erected, if shorter). Prior to 2021, we depreciated equipment on a straight-line basis over a two- to eight-year period. Employee-related expenses primarily include employee wages and salaries, social security contributions and benefits costs for operators, maintenance technicians, process engineers, supply chain, IT production, yield improvement and health and safety roles. Facility costs primarily consist of the costs of electricity, water and other utilities and services.

Operating Expenses

Our operating expenses consist of R&D and selling, general and administrative expenses. Personnel costs are the most significant component of our operating expenses and consist of salaries, benefits, bonuses, share-based compensation, and commissions.

Research and Development ("R&D")

Our R&D efforts are focused on developing highly-differentiated process technologies and solutions. As part of our strategic repositioning, we shifted our R&D efforts to focus on technologies where we can deliver a 72 highly-differentiated solution and discontinued our R&D-intensive single-digit node program. Our R&D expense includes personnel costs, materials costs, software license and intellectual property expenses, facility costs, supplies, professional and consulting fees, and depreciation on equipment used in R&D activities. Our development roadmap includes new platform investments, platform features and extensions, and investments in emerging technology capabilities and solutions. We expense R&D costs as incurred. We believe that continued investment in our technology portfolio is important for our future growth and acquisition of new customers. We expect our R&D expense as a percentage of revenue to moderately decline over time as revenue increases.

Selling, General and Administrative ("SG&A")

SG&A expenses consist primarily of personnel-related costs, including sales commissions to independent sales representatives and professional fees, including the costs of accounting, audit, legal, regulatory and tax compliance. Additionally, costs related to advertising, trade shows, corporate marketing and allocated overhead costs are also included in SG&A expenses.

We expect our SG&A expenses to decrease as a percentage of net revenue. We anticipate that we will incur increased accounting, audit, legal, regulatory, compliance and director and officer insurance costs as well as investor and public relations expenses associated with becoming and operating as a public company.

Other Operating Charges

Impairment Charges

We review, at each reporting date, or upon occurrence of a triggering event, the carrying amount of our property, plant and equipment and finite lived intangible assets to determine whether there is any indication that those assets have suffered an impairment loss. If it is determined that impairment of an asset has occurred, impairment losses are recognized in the consolidated statements of operations and comprehensive loss to the extent that the recoverable amount, measured at the present value of discounted cash flows attributable to the assets, is less than its carrying value.

Finance Expenses

Finance expenses consists primarily of interest on borrowings, amortization of debt issuance costs under our term loans, revolving credit facility, finance leases and the other credit facilities we maintain with various financial institutions.

Share of Profit from Joint Ventures

Share of profit from joint ventures relates to our portion of profit and loss in investments that we do not consolidate. See Note 14 in our Annual Consolidated Financial Statements for more information.

Gain on Sale of a Fabrication Facility and ASIC Business

Gain on sale of a fabrication facility and ASIC business relates to the sale of Fab 3E facility in Singapore in December 2019, and the sale of our ASIC business in November 2019.

Other Income (Expense), net

Other income (expense), net consists of one-time gains and losses and other miscellaneous income and expense items unrelated to our core operations. Included are payments received related to a recent legal settlement as part of a patent dispute with one of our competitors, as well as one-time gains related to a remeasurement of existing equity interests.

Income Tax Benefit (Expense)

Income tax expense consists primarily of income taxes in certain foreign jurisdictions in which we conduct business, which mainly include Germany, Singapore and U.S. federal and state income taxes.

The following discussion covers items for and a comparison between the years ended December 31, 2019, 2020 and 2021.

A. Results of Operations

The following table sets forth our consolidated statements of operations data for the periods indicated:

	For the year ended December 31,		
	2019	**2020**	**2021**
	(dollars in millions)		
Net revenue	$ 5,813	$ 4,851	$6,585
Cost of revenue(1)(2)	6,345	5,564	5,572
Gross profit	**(532)**	**(713)**	**1,013**
Operating expenses			
Research and development(1)(2)	583	476	478
Selling, general and administrative(1)(2)	446	445	595
Total operating expense	**1,029**	**921**	**1,073**
Impairment charges	64	23	—
Other operating charges	**64**	**23**	**—**
Loss from operations	**(1,625)**	**(1,656)**	**(60)**
Finance income	11	3	6
Finance expenses	(230)	(154)	(114)
Share of profit of joint ventures	8	4	4
Gains on sale of a fabrication facility and ASIC business	615	—	—
Other income (expense), net	74	440	(12)
Loss before income taxes	**(1,147)**	**(1,363)**	**(176)**
Income tax (expense) benefit	(224)	12	(78)
Net loss	**(1,371)**	**(1,351)**	**(254)**

(1) Includes amortization of acquired intangibles:

	Year ended December 31,		
	2019	**2020**	**2021**
	(dollars in millions)		
Cost of revenue	$ 92	$100	$113
Research and development	$104	$ 99	$ 74
Selling, general and administrative	$ 46	$ 85	$ 20

(2) Includes share-based compensation expense as follows:

	Year ended December 31,		
	2019	2020	2021
	(dollars in millions)		
Cost of revenue	$—	$—	$ 55
Research and development	$—	$—	$ 22
Selling, general and administrative	$—	$ 1	$151

Comparison of Year Ended December 31, 2021 and December 31, 2020

Net Revenue

	Year ended December 31,			
	2020	2021	Change	% Change
	(dollars in millions)			
Net revenue	$4,851	$6,585	$1,734	35.7%

Net revenue increased by $1,734 million, or 35.7%, for the year ended December 31, 2021, compared to the year ended December 31, 2020. The increase was primarily a result of 2021 wafer shipment volumes, which increased 17% compared to 2020, resulting in an approximately $900 million increase in wafer revenue compared to 2020 and higher ASPs. In addition, in 2020, the majority of our customer contractual terms were amended in a manner that resulted in moving from recognizing wafer revenue on a Percentage-of-Completion basis to recognizing revenue on a Wafer Shipment basis. This resulted in a one-time, non-recurring reduction in net revenue recognized in 2020. Had the change in terms not occurred, our net revenue in 2020 would have been an estimated $810 million higher than reported results.

Cost of Revenue

	Year ended			
	2020	2021	Change	% Change
	(dollars in millions)			
Cost of revenue	$5,563	$5,572	$9	0.2%
Gross margin	(14.7)%	15.4%		*+3008bps*

Cost of revenue increased by $9 million, or 0.2%, for the year ended December 31, 2021, compared to the year ended December 31, 2020. The increase in costs of revenue was driven by higher revenue associated with increased wafer shipments. This increase was offset by lower depreciation and amortization expense of $765 million and, to a lesser extent, improvements associated with manufacturing cost reduction initiatives of $210 million. Additionally, 2020 was impacted favorably by the Percentage-of-Completion change, which lowered cost of revenue in that period by approximately $634 million.

Research and Development Expenses

	Year ended December 31,			
	2020	2021	Change	Change%
	(dollars in millions)			
Research and development expenses	$476	$478	$2	0.4%
As a % of revenue	9.8%	7.3%		

Research and development expenses remained consistent for the years ended December 31, 2021 and December 31, 2020, increasing by $2 million. The year-over-year change was primarily driven by an increase in share-based compensation expense of $22 million, which was offset by a decrease in amortization of intangible assets of $25 million.

Selling, General and Administrative Expenses

	Year ended December 31, 2020	2021	Change	Change%
	(dollars in millions)			
Selling, general and administrative expenses	$445	$595	$150	33.7%
As a % of revenue	9.2%	9.0%		

Selling, general and administrative expenses increased by $150 million, or 33.7%, for the year ended December 31, 2021, compared to the year ended December 31, 2020. The increase was primarily attributable to the employee annual incentive plan (AIP) and share-based compensation of $170 million, as well as IPO-related expenses of $24 million. These increases were partially offset by lower depreciation of PPE and amortization of intangible assets of approximately $65 million.

Finance expenses

	Year ended December 31, 2020	2021	Change	Change%
	(dollars in millions)			
Finance expenses	$(154)	$(114)	$40	(26.0)%

Finance expenses decreased by $40 million, or 26.0%, for the year ended December 31, 2021, compared to the year ended December 31, 2020. This decrease was driven by a $325 million reduction in outstanding loan balances and lower interest rates primarily due to a 200bps reduction in margin from a recent refinancing.

Share of profit of joint ventures

	Year ended December 31, 2020	2021	Change	Change%
	(dollars in millions)			
Share of profit of joint ventures	$4	$4	$—	— %

Share of profit of joint ventures remained flat at $4 million for the years ended December 31, 2021 and 2020, respectively.

Other Income (expense), net

	Year ended December 31, 2020	2021	Change	Change%
	(dollars in millions)			
Other income (expense), net	$440	$(12)	$452	NM

Other income (expense), net decreased by $452 million for the year ended December 31, 2021, compared to the year ended December 31, 2020. The decrease is due to gains of $333 million related to a legal settlement and remeasurement of existing equity interests in 2020, as well as a $98 million reduction in income from gains on tool sales in 2021 compared to 2020.

Income tax (expense) benefit

	Year ended December 31, 2020	2021	Change	Change%
	(dollars in millions)			
Income tax (expense) benefit	$12	$(78)	$(90)	NM

Income tax expense increased by $90 million for the year ended December 31, 2021, compared to the year ended December 31, 2020. The increase is a result of $59 million of increased expense due to increasing taxable income in Europe and Singapore, and a $64 million tax benefit in 2020 resulting from the extension of a tax incentive in Singapore, which was partially offset by a $33 million reduction in withholding tax related to a legal settlement in 2020.

Comparison of Year Ended December 31, 2020 and December 31, 2019

Net Revenue

	Year ended December 31, 2019	Year ended December 31, 2020	Change	% Change
	(dollars in millions)			
Net revenue	$5,813	$4,851	$(962)	(16.6)%

Net revenue decreased by $962 million, or 16.6%, for the year ended December 31, 2020, compared to the year ended December 31, 2019. In 2020, the majority of our customer contractual terms were amended in a manner that resulted in moving from recognizing wafer revenue on a Percentage-of-Completion basis to recognizing revenue on a Wafer Shipment basis. This resulted in a one-time, non-recurring reduction in net revenue recognized in 2020. Had the change in terms not occurred, our net revenue in 2020 would have been an estimated $810 million higher than reported results. In addition, we divested our Application Specific Integrated Circuit ("ASIC") business, which generated $391 million of revenue in 2019. These changes were offset by an increase in wafer shipment volume of approximately 272,000.

Cost of Revenue

	Year ended December 31, 2019	Year ended December 31, 2020	Change	% Change
	(dollars in millions)			
Cost of revenue	$6,345	$5,563	$(782)	(12.3)%
Gross margin	(9.2)%	(14.7)%		*(5500)bps*

Cost of revenue decreased by $782 million, or 12.3%, for the year ended December 31, 2020, compared to the year ended December 31, 2019. The decrease was attributable to the change in our customer contractual terms, which were amended in a manner that resulted in moving from recognizing wafer revenue on a Percentage-of-Completion basis to recognizing revenue on a Wafer Shipment basis. Had the change in terms not occurred, our cost of revenue in 2020 would have been an estimated $634 million higher than reported results, with a commensurate decrease in inventories. In addition, we divested our ASIC business in 2019. Cost of revenue related to this business was approximately $150 million in 2019.

Research and Development Expenses

	Year ended December 31, 2019	Year ended December 31, 2020	Change	Change%
	(dollars in millions)			
Research and development expenses	$ 583	$476	$(107)	(18.4)%
As a % of revenue	10.0%	9.8%		

Research and development expenses decreased by $107 million, or 18.4%, for the year ended December 31, 2020, compared to the year ended December 31, 2019. This decrease was due to the sale of our ASIC business, which incurred research and development expenses of $91 million in 2019, and a $9 million increase in grants and NRE, reducing R&D.

Selling, General and Administrative Expenses

	Year ended December 31, 2019	2020	Change	Change%
	(dollars in millions)			
Selling, general and administrative expenses	$446	$445	$(1)	(0.2)%
As a % of revenue	7.7%	9.2%		

Selling, general and administrative expenses decreased by $1 million, or 0.2%, for the year ended December 31, 2020, compared to the year ended December 31, 2019. This decrease was due to a reduction in administrative expenses related to the ASIC business which was sold to Marvell Technology Group Ltd. ("Marvell").

Other operating charges

	Year ended December 31, 2019	2020	Change	Change%
	(dollars in millions)			
Other operating charges	$64	$23	$(41)	(64.1)%

Other operating charges decreased by $41 million, or 64.1%, for the year ended December 31, 2020, compared to the year ended December 31, 2019. This decrease was due to lower impairment charges in 2020 related to equipment held for sale.

Finance income

	Year ended December 31, 2019	2020	Change	Change%
	(dollars in millions)			
Finance income	$11	$3	$(8)	NM

Finance income decreased by $8 million for the year ended December 31, 2020, compared to the year ended December 31, 2019. This decrease was due to lower cash balances and lower interest rates in 2020 compared to 2019, resulting in a decrease of interest earned.

Finance expenses

	Year ended December 31, 2019	2020	Change	Change%
	(dollars in millions)			
Finance expenses	$230	$154	$(76)	(33.0)%

Finance expenses decreased by $76 million, or 33.0%, for the year ended December 31, 2020, compared to the year ended December 31, 2019. This decrease was driven by lower outstanding loan balances, and matured loans refinanced with lower interest rates.

Share of profit of joint ventures

	Year ended December 31, 2019	2020	Change	Change%
	(dollars in millions)			
Share of profit of joint ventures	$8	$4	$(4)	NM

Share of profit of joint ventures decreased by $4 million for the year ended December 31, 2020, compared to the year ended December 31, 2019. This decrease was due to the consolidation of our AMTC (as defined below) mask operations joint venture in Germany.

Gain on Sale of a Fabrication Facility and ASIC Business

	Year ended December 31,			
	2019	2020	Change	Change%
	(dollars in millions)			
Gain on sale of a fabrication facility and application specific integrated circuit business	$615	$—	$(615)	NM

In 2019, we recorded a $197 million gain on sale of Fab 3E and a $418 million gain on the sale of our ASIC business.

Other Income (Expense), net

	Year ended December 31,		$	$
	2019	2020	Change	Change%
	(dollars in millions)			
Other income (expense), net	$74	$440	$366	NM

Other income (expense), net increased by $366 million for the year ended December 31, 2020, compared to the year ended December 31, 2019. This increase was due to gains of $333 million related to a legal settlement and remeasurement of existing equity interests in 2020.

Income tax (expense) benefit

	Year ended December 31,			
	2019	2020	Change	Change%
	(dollars in millions)			
Income tax (expense) benefit	$(224)	$12	$236	NM

We had an income tax benefit of $12 million for the year ended December 31, 2020, compared to an income tax expense of $224 million for the year ended December 31, 2019. This change was due to the one-time 2019 deferred tax asset write-down of $190 million in Germany, and a one-time reduction in Singapore deferred tax liabilities of $64 million in 2020, after satisfying investment conditions necessary for an extension of a lower tax rate incentive during the year. This combined year-to-year expense reduction of $254 million was partially offset by a $33 million withholding tax expense on a negotiated lawsuit settlement in 2020.

B. Liquidity and Capital Resources

We have financed operations primarily through cash generated from our business operations, including prepayments under LTAs, debt and government funding. As of December 31, 2020 and 2021, our principal source of liquidity was our cash balance of $908 million and $2,939 million, respectively. As of December 31, 2020, we had an undrawn revolving credit facility of $398 million and a $400 million revolving credit facility made available to us by Mubadala. As of December 31, 2021 we had an undrawn revolving credit facility of $1,000 million, which was upsized in November 2021. Concurrently, we terminated the $400 million Mubadala revolving credit facility. In addition to our available revolvers, which were undrawn as of December 31, 2020, and 2021, we had $2,338 million and $2,013 million of debt outstanding as of December 31, 2020 and 2021, respectively, which was primarily comprised of multiple term loans in various currencies. As of December 31, 2021, we believe that our existing cash, cash equivalents, investments, credit under our revolving credit facility, and cash generated from operations are sufficient to meet our short-term and long-term capital requirements, although we could be required, or could elect, to seek additional funding prior to that time.

The following table shows a summary of our term loan facilities, other debt facilities, which consist primarily of equipment financing and accounts receivable factoring, and our committed undrawn revolvers.

	For the year ended December 31,		
	2019	2020	2021
		(in millions)	
Term loan facilities	$1,838	$1,771	$1,603
Other debt facilities	891	566	410
Revolvers	639	803	1,010

We entered into loan facilities with Mubadala in 2012 to 2016 (collectively, the "Shareholder Loans"). The Shareholder Loans were non-interest bearing and principal repayment, in whole or in part, was entirely at our discretion. The Shareholder Loans had no maturity date. Further, there were no contingent settlements in the agreements. Since the Shareholder Loans did not contain any contractual obligations to deliver cash, but rather allowed us to make repayment at our absolute discretion and further prohibited Mubadala from demanding repayment, we classified the Shareholder Loans as equity within the consolidated financial statements. As of December 31, 2020 and 2021, we had $10,681 million and $0 million of Shareholder Loans, respectively. On October 1, 2021, our board approved an agreement with Mubadala to convert the previously outstanding $10,113 million of the Shareholder Loan balance into additional paid-in-capital ("the Conversion"). The Conversion did not have an impact on shares outstanding or have any dilutive effects, as no additional shares were issued.

Government grants are also a source of capital. Those grants are primarily provided in connection with construction and operation of our wafer manufacturing facilities, employment and R&D. For the years ended December 31, 2019, 2020 and 2021, we received $335 million, $312 million and $83 million, respectively, in proceeds from government grants. The reduction in grants relates to wind down of historical grant programs in New York and Dresden. We expect new grant programs in both the United States and EU.

We monitor capital using a gearing ratio, which is net debt divided by total capital plus net debt. Our policy is to keep the gearing ratio within a range to meet our business needs. Our future capital requirements will depend on many factors, including our revenue growth rate, the timing and the amount of cash received from customers, the timing and extent of spending to support development efforts, the introduction of new and enhanced products and solutions, and the continuing market adoption of our platform. We may from time to time seek to raise additional capital to support our growth. Any equity financing we may undertake could be dilutive to our shareholders, and any additional debt financing we may undertake could require debt services and financial and operational requirements that could adversely affect our business. We cannot provide any assurance that we would be able to obtain future financing on favorable terms or at all.

Cash Flows

The following table shows a summary of our cash flows for the periods presented:

	Years Ended December 31,		
	2019	2020	2021
		(in millions)	
Cash provided by operating activities	$ 497	$1,006	$ 2,839
Cash provided by (used in) investing activities	344	(366)	$(1,450)
Cash (used in) provided by financing activities	(684)	(733)	$ 650
Effect of exchange rate changes on cash and cash equivalents	$ (4)	$ 4	$ (8)
Net increase (decrease) in cash and cash equivalents	$ 153	$ (89)	$ 2,031

Operating Activities

Cash provided by operating activities for the year ended December 31, 2021 of $2,839 million was primarily related to a lower net loss of $254 million, adjusted for $1,619 million of depreciation and amortization of intangible assets. Other drivers for the period include $223 million of share-based compensation expense as well as $93 million of deferred tax assets. Favorable changes in working capital of $1,230 million included an increase in trade and other payables of $1,829 million, which was driven principally by customer prepayments for future wafer shipments. This increase was partially offset by a $387 million increase in receivables and other assets, and a $202 million increase in inventories.

Cash provided by operating activities for the year ended December 31, 2020 of $1,006 million primarily related to our net loss of $1,351 million, adjusted for $2,523 million of depreciation and amortization of intangible assets. Other drivers for the period relate to $154 million of finance expenses, offset by a decrease related to a $79 million gain on sale of plant equipment, and $51 million amortization of government grants. Changes in assets and liabilities were $59 million, which included a decrease in receivables, prepayments and other assets of $753 million and an increase of $21 million of income tax payable, offset by a $560 million increase in inventory and $155 million decrease in trade and other payables. The changes in inventory and prepayments and receivables, prepayments and other assets are primarily driven by impacts related to the change in method of revenue recognition from Percentage-of-Completion basis to Wafer Shipment basis.

Cash provided by operating activities for the year ended December 31, 2019 of $497 million primarily related to our net loss of $1,371 million, adjusted for $2,678 million of depreciation and amortization of intangible assets. The main drivers of the cash provided by operating activities relate to a $615 million gain on transaction-related proceeds primarily consisting of sale of our ASIC business and Fab 3E facility in Singapore as well as changes in working capital, which primarily related to a $144 million increase in receivables, prepayments and other assets, and decrease in trade and other payables of $97 million.

Investing Activities

Cash used in investing activities was $1,450 million for the year ended December 31, 2021, compared to a use of $366 million for the year ended December 31, 2020, reflecting a $1,084 million increase. The year-over-year change was primarily attributable to an increase in purchases of property, plant, equipment and intangibles (“capital expenditures”) of $1,174 million, principally associated with activities to expand capacity within certain of our fabrication facilities. These increases were partially offset by advances and proceeds from the sale of property, plant, equipment and intangible assets.

Cash used in investing activities was $366 million for the year ended December 31, 2020, compared to $344 million of cash provided by investing activities for the year ended December 31, 2019, reflecting a decrease of $710 million year-over-year. This is primarily attributable to lower capital expenditures of $181 million (2020 capital expenditures of $592 million and 2019 capital expenditures of $773 million) offset by lower proceeds of $865 million from transaction-related activities and asset sales.

Financing Activities

Cash provided by financing activities were $650 million for the year ended December 31, 2021, compared to a use of $733 million for the year ended December 31, 2020. This increase was primarily due to $1,444 million of proceeds from our initial public offering, proceeds from borrowings of $617 million, and proceeds from government grants of $82 million. These were partially offset by $1,528 of repayments of debt, lease obligations, and shareholder loan.

Cash used in financing activities was higher by $49 million for the fiscal year ended December 31, 2020, compared to the same period in 2019. This change was primarily due to the refinancing of existing debt obligations.

Contractual Obligations

As of December 31, 2021, we had $6,399 million of unconditional purchase commitments, $2,995 million of which related to contracts for capital expenditures, and $3,405 million of contracts related to operating expenditures. Of the total balance as of December 31, 2021, $3,543 million is due within the next 12 months. See Note 27 to our Annual Consolidated Financial Statements for additional details.

C. Research and Development, Patents and Licenses

Refer to “Item 4. Information on the Company”, for discussion on our research and development, and intellectual property.

D. Trend information

Our financial condition and results of operations have been, and will continue to be, affected by numerous factors and trends, including the following:

Global Demand for Semiconductor Products

Demand for our products is dependent on market conditions in the end markets in which our customers operate, which are generally subject to seasonality, cyclicality and competitive conditions. Additionally, we derive a portion of our net revenue from sales to customers that purchase large volumes of our products. Customers generally provide periodic forecasts of their requirements, but these forecasts do not commit such customers to minimum purchases except when long-term contracts are in place.

Increasing Design Wins with New and Existing Customers

We believe that we provide highly-differentiated solutions that enable our customers to innovate and deliver exceptional products to the marketplace. A key measure of our success is customer design wins, and as our number of design wins has increased, our customer base has become larger and more diverse, having grown from only one customer, AMD, in 2009, to a global base of more than 200 customers as of December 31, 2021. As design wins for our highly-differentiated solutions are put into production and generate revenue, we expect significant benefits to our bottom line as our core solutions sell at premium pricing. We define a design win as the successful completion of the evaluation stage, where a customer has assessed our technology solution, verified that it meets its requirements, qualified it for their products and confirmed to us their selection.

Increasing Single-sourced Revenue Mix

We manufacture products based on a combination of our own technologies and our customers' IP, resulting in a significant number of products that can only be sourced from us. Our sales and marketing strategy centers on deepening relationships with top customers and investing in technologies to become their single-source supplier for mission-critical applications. We believe a key measure of our success as a differentiated technology partner to our customers is the mix of our wafer shipment volume attributable to single-sourced business, which represented approximately 62% of wafer shipment volume in 2021, up from 61% in 2020. We define single-sourced products as those that we believe can only be manufactured with our technology and cannot be manufactured elsewhere without significant customer redesigns.

Technology Solution Mix and Pricing

Product mix is among the most important factors affecting revenue and margins, as our wafer price varies significantly across technology platforms. The value of a wafer is determined principally by the uniqueness and complexity of the technology, performance characteristics, yield and defect density. Devices with richer feature sets, higher performance, better yields and greater system-level integration require more substantial R&D investments and more complex manufacturing expertise and equipment, and thus generally command higher wafer prices.

Pricing and margins depend on the volumes and features of the solutions we deliver. We continually monitor and work to reduce the cost of our products and improve the potential value that our solutions deliver to our customers as we target new design win opportunities. While individual product prices may decline, we believe our R&D investments, differentiated product and single-sourced strategy should lead to improvements in pricing mix and overall ASPs if we compete effectively. We establish pricing levels for specific periods of time with our customers, some of which are subject to adjustment during the course of that period to take into account market conditions and other factors. We believe our efforts to provide a wide range of highly-differentiated solutions support our premium position in the marketplace.

Customer Advanced Payments

We recently began to more frequently enter into multiple long-term supply agreements with leading companies in the industry. Many of these contracts include customer advanced payments and capacity reservation fees in order to secure future supply. We have in place multiple long-term supply agreements with approximately $21 billion in aggregate lifetime revenue commitment, as of December 31, 2021.

Government Policy and Grants

We have received investment grants from the Federal Republic of Germany, the State of Saxony, various agencies of the Government of Singapore and the Empire State Development Corporation in New York. These grants are primarily provided in connection with construction and operation of our wafer manufacturing facilities, employment and R&D. We incorporate committed government grants into our planning process for future expansions.

Shipment Utilization

Beginning in 2020, our shipment utilization rates began to increase significantly compared to prior years, as we have optimized and streamlined our manufacturing footprint. We define shipment utilization as the ratio of wafer shipment volume divided by our estimated total capacity for wafer manufacturing in a specified period. Shipment utilization remains a very important factor in driving our financial performance, as we incur significant costs regardless of the number of wafers we actually produce. These fixed costs include staffing, electricity, infrastructure, depreciation and maintenance costs at each fab.

Our average shipment utilization rate across our 300mm fabs was 70%, 84% and 106% for the years ended December 31, 2019, 2020 and 2021, respectively. Factors affecting shipment utilization rates include efficiency in production facilities, complexity and mix of wafer types ordered by customers, including the impact of export controls and other regulatory changes affecting customers and competitors. Our production capacity is determined based on the capacity ratings of the equipment in the fab, adjusted for expected down time due to set up for production runs and maintenance and R&D. In 2021, we exceeded our production capacity in order to meet customer demand; this was largely achieved through a continuous improvement focus on the overall efficiency and productivity of our manufacturing operations.

E. Critical Accounting Policies and Estimates

Our Annual Consolidated Financial Statements and the related notes included elsewhere in this Annual Report are prepared in accordance with IFRS. The preparation of our Annual Consolidated Financial Statements requires us to make estimates and assumptions that affect the reported amounts of assets, liabilities, revenue, costs and expenses, and related disclosures. We base our estimates on historical experience and on various other assumptions that are available to us at the time, which we believe to be reasonable under the circumstances. Actual results could differ significantly from the estimates made by management. To the extent there are differences between our estimates and actual results, our future financial statement presentation, financial condition, results of operations and cash flows will be affected.

We believe that the accounting policies described below involve a greater degree of judgment and complexity. Accordingly, these are the policies we believe are the most critical to aid in fully understanding and evaluating our consolidated financial condition and results of operations.

Revenue Recognition

We recognize revenue when control of the promised goods or services is transferred to customers for an amount that reflects the consideration that we expect to receive in exchange for those goods or services. Generally, our customers obtain control at the point of shipment from our facilities for wafers, and over time for pre-fabrication services such as non-recurring engineering services and mask production based on a percentage of costs incurred over total expected costs. Sales taxes collected from customers and remitted to governmental authorities are accounted for on a net basis and therefore excluded from revenue in the consolidated statements of operations and comprehensive loss.

Prior to 2021, we concluded that we met the criteria to recognize revenue for wafers over time upon the initial application of IFRS 15, “Revenue from Contracts with Customers” in 2018, on the basis that we fabricated customized wafers to customers’ specifications and had contractual enforceable right to payment including a reasonable profit (due to the existence of cancellation clauses for each arrangement). Thus, we previously recognized wafer revenue over time during the manufacturing process, based on a percentage of wafer costs incurred over total expected wafer costs (“Percentage-of-Completion basis”). Cost of revenue was recognized in the same period as related revenue. During the year ended December 31, 2020, we modified the cancellation terms of our contracts with customers that are applicable to wafer products. As a result, we no longer met the criteria to account for revenue recognition from contracts with customers over time on the outstanding purchase orders at the contract modification date, and future orders thereafter. Consequently, we now recognize revenue on the impacted outstanding wafers orders and future orders at the point at which control of the wafers is transferred to the customer, which we determined to be at the point of wafer shipment from our facilities (“Wafer Shipment basis”). Cost of revenue is recognized at the same time as related revenue, at the point of shipment. Prior to the point of shipment, inventories are increased to reflect costs incurred.

We recognize revenue at transaction prices that we determine using contractual prices reduced by sales returns and allowances, which we estimate based on historical experience having determined that a significant reversal in the amount of cumulative revenue recognized is not probable to occur. We recognize refund liabilities for estimated sales returns and allowances based on the customer complaints, historical experience and other known factors.

We recognize accounts receivable when we transfer control of the goods or services to customers and have a right to an amount of consideration that is unconditional. Such accounts receivable are short term and do not contain a significant financing component. For certain contracts that do not provide us unconditional rights to the consideration, and the transfer of controls of the goods or services has been satisfied, we recognize contract assets and revenue.

We account for consideration received from customers prior to having satisfied our performance obligations as contract liabilities which are transferred to revenue after the performance obligations are satisfied. We recognize costs to fulfill a contract when the costs relate directly to the contract, generate or enhance resources to be used to satisfy performance obligations in the future, and are expected to be recovered. We recognize the costs and revenue when we satisfy our performance obligations to customers upon transfer of control of promised goods and services.

Inventory Valuation

As a build-to-order foundry, we procure raw materials based on forecasted demand and produce work-in-progress and finished goods inventory against specific customer purchase orders. We state inventories at the lower of cost or net realizable value for finished goods, work-in-progress, raw materials, and spare parts. The cost of supplies is determined based on a weighted-average cost formula. We make inventory write-downs on an item-by-item basis, except where it may be appropriate to group similar or related items.

A significant amount of our manufacturing cost is fixed because our global footprint of manufacturing facilities that are the source of our production capacity require substantial investment for construction and fit up. These are largely fixed-cost assets once they become operational. Utilization of these assets can have a material impact on product cost of revenue and inventory valuations. Our objectives for inventory are to maintain high levels of customer service, maintain stable and competitive lead times, minimize inventory obsolescence and optimize manufacturing asset utilization.

We value work-in-process and finished goods product cost based on a standard costing approach. We base standard cost on the planned utilization of installed factory capacity and adjust it annually as factory capacity conditions change and cost efficiencies are realized. We make allowances for saleability quarterly based on the aging characteristics of our inventory. Additionally, we make allowances where necessary to ensure saleable inventory is valued at a realizable value based on customer pricing agreements.

Realization of Deferred Income Tax Assets

When we have temporary differences in the amount of tax expenses recorded for tax purposes and financial reporting purposes, we may be able to reduce the amount of tax that we would otherwise be required to pay in future periods. We generally recognize deferred tax assets to the extent that it is probable that sufficient taxable income will be available in the future to utilize such assets. We record the income tax benefit or expense when there is a net change in our total deferred tax assets and liabilities in a period. The ultimate realization of the deferred tax assets depends upon the generation of future taxable income during the periods in which the temporary differences may be utilized. Specifically, the realization of deferred income tax assets is impacted by our expected future revenue growth and profitability, tax holidays and the amount of tax credits that can be utilized within the statutory period. In determining the amount of deferred tax assets as of December 31, 2020 and 2021, we considered past performance, the general outlook of the semiconductor industry, business conditions, future taxable income and prudent and feasible tax planning strategies.

Because the determination of the amount of deferred tax assets that can be realized is based, in part, on our forecast of future profitability, it is inherently uncertain and subjective. Changes in market conditions and our assumptions may cause the actual future profitability to differ materially from our current expectation, which may require us to increase or decrease the deferred tax assets that we have recorded. As of December 31, 2020 and 2021, deferred tax assets were $444 million and $353 million, respectively.

Property, Plant and Equipment

We make estimates and assumptions when accounting for property, plant and equipment. We compute depreciation using the straight-line method over the estimated useful life of the assets, and our depreciation expense is highly dependent on the assumptions we make about the estimated useful life of our assets. We estimate the useful life of our property, plant and equipment based on our experience with similar assets and our estimate of the usage of the asset. Whenever events or circumstances occur that change the estimated useful life of an asset, we account for the change prospectively. We must also make judgments about the capitalization of costs. We capitalize costs of major improvements, while we charge costs of normal repairs and maintenance to expense as incurred. If an asset or asset group is disposed of or retired before the end of its previously estimated useful life, we may be required to accelerate our depreciation expense or recognize a loss on disposal.

During the first quarter of 2021, we revised the estimated useful life of certain production equipment and machinery from a range of five to eight years, to ten years. We made this change to better reflect the expected pattern of economic benefits from the use of the equipment and machinery over time, based on an analysis of production equipment's current use, historical age patterns, and future plans and technology roadmaps, as well as an analysis of industry trends and practices. The analysis concluded that an increase in useful lives was warranted, and consistent with the Company's continuing portfolio shift from leading-edge to feature-rich trailing edge technologies. The change in estimated useful life is a change in accounting estimate that was applied prospectively from January 1, 2021. Refer to Note 3 to our Annual Consolidated Financial Statements included elsewhere in this Annual Report for additional details.

Share-Based Payment

We measure and recognize compensation expense related to share-based transactions, including employee, consultant, and non-employee director share option awards, in the Annual Consolidated Financial Statements based on fair value. We estimate the share option fair value at the date of grant using the Black-Scholes option pricing model, which requires management to make certain assumptions of future expectations based on historical and current data. The assumptions include the expected term of the share option, expected volatility, dividend yield, and risk-free interest rate. The expected term represents the amount of time that options granted are expected to be outstanding, based on forecasted exercise behavior. The risk-free rate is based on the rate at grant date of zero-coupon U.S. Treasury notes with a term comparable to the expected term of the option. We estimate expected volatility based on the historical volatility of comparable public entities' share price from the same industry. We base our dividend yield on forecasted expected payments, which we expect to be zero for the immediate future. We recognize compensation expense over the vesting period of the award on a graded attribution basis, and we estimate forfeitures.

We will continue to use judgment in evaluating the assumptions related to our share-based compensation on a prospective basis. As we continue to accumulate additional data related to our ordinary shares, we may have refinements to our estimates, which could materially impact our future share-based compensation expense.

See Note 30 to our Annual Consolidated Financial Statements for more information.

Off Balance Sheet Arrangements

During the periods presented, we did not have, and we do not currently have, any off-balance sheet financing arrangements or any relationships with unconsolidated entities or financial partnerships, including entities sometimes referred to as structured finance or special purpose entities, that were established for the purpose of facilitating off-balance sheet arrangements or other contractually narrow or limited purposes.

Safe Harbor

See "Cautionary Statement Regarding Forward-Looking Information".

ITEM 6. DIRECTORS, SENIOR MANAGEMENT AND EMPLOYEES

A. Directors and Senior Management

The following table sets forth information for our executive officers and directors as of the date of this Annual Report:

Name	Age	Title
Executive Officers		
Dr. Thomas Caulfield	63	President and Chief Executive Officer, Board Director
David Reeder	47	Chief Financial Officer
Kay Chai (KC) Ang	63	Senior Vice President
Saam Azar	45	Chief Legal Officer
Juan Cordovez	43	Senior Vice President
Emily Reilly	57	Senior Vice President
Board of Directors		
Ahmed Yahia Al Idrissi	49	Chairman
Dr. Thomas Caulfield	63	President and Chief Executive Officer, Board Director
Ahmed Saeed Al Calily	48	Board Director
Tim Breen	44	Board Director
Glenda Dorchak	67	Board Director
Martin L. Edelman	80	Board Director
David Kerko	48	Lead Independent Director
Jack Lazar	56	Board Director
Elissa E. Murphy	53	Board Director
Carlos Obeid	57	Board Director
Bobby Yerramilli-Rao	55	Board Director

Executive Officers

Dr. Thomas Caulfield is the President and Chief Executive Officer (CEO) of GF and was elected to the board of directors in March 2018. Dr. Caulfield joined the Company in May 2014 as Senior Vice President and General Manager of the company's Fab 8 semiconductor wafer manufacturing facility in Malta, NY, where he led operations, expansion and the ramp-up of semiconductor manufacturing production, and the process development organization. Dr. Caulfield has an extensive career spanning engineering, executive management and global operational leadership with leading technology companies. Prior to joining GF, Dr. Caulfield served as President and Chief Operations Officer (COO) at Soraa from May 2012 to May 2014, the world's leading developer of GaN on GaN™ (gallium nitride on gallium nitride) solid-state lighting technology. Before Soraa, Dr. Caulfield served as President and COO of Ausra from 2009 to 2010, a leading provider of large-scale concentrated solar power solutions for electrical power generation and industrial steam production. Prior to leading at Ausra, Dr. Caulfield served as Executive Vice President of Sales, Marketing and Customer Service at Novellus Systems, Inc. Before that, Dr. Caulfield spent 17 years at IBM in a variety of senior leadership roles, ultimately serving as Vice President of 300mm semiconductor operations for IBM's Microelectronics division, leading its wafer fabrication and R&D operations in East Fishkill, NY. He currently serves as a member of the board of directors for Western Digital Corporation. Dr. Caulfield earned a Bachelor of Science in Physics from St. Lawrence University before entering Columbia University's Fu Foundation School of Engineering and Applied Science, where he earned both his Bachelor and Master of Science in Materials Science and Engineering as well as a Doctorate in Materials Science and Engineering. Dr. Caulfield was also a postdoctoral fellow at Columbia's Engineering Center for Strategic Materials.

David Reeder is Chief Financial Officer (CFO) of GF, responsible for the Company's financial strategy and leading the global financial, information technology, supply chain and procurement organizations. He joined GF in August 2020 and has extensive experience in the semiconductor industry and other fields. Previously, he was Chief Executive Officer for Tower Hill Insurance Group from 2017 to 2020. Prior to that, he was President and CEO for Lexmark International, Inc. from 2015 to 2017. Earlier in his career, Mr. Reeder was CFO at Electronics for Imaging from 2014 to 2015 and Cisco's Enterprise Networking Division from 2012 to 2014, and held executive positions at Broadcom and Texas Instruments. Mr. Reeder currently serves as a member of the board of directors of the National Action Council for Minorities in Engineering. He holds a Bachelor of Science degree in Chemical Engineering from University of Arkansas and a Master of Business Administration degree from Southern Methodist University.

Kay Chai (KC) Ang is Senior Vice President of Global Fab Operations for GF since October 2020. Mr. Ang joined GF in July 2009 and has served in a variety of senior leadership roles for the Company including head of all of our Singapore operations from 2012 to 2020 and as head of the Fab 1 manufacturing facility, customer engineering and corporate quality organizations. Mr. Ang has more than 30 years of foundry industry experience with a proven track record in manufacturing operations, fab start-up, and technology transfer. Prior to joining the company, he held senior leadership positions at Chartered Semiconductor Manufacturing from 1988 to 2009, including Senior Vice President of Sales and Marketing with responsibility for global sales, marketing, services, customer support and regional business operations, and Senior Vice President of Fab Operations, with responsibility for manufacturing strategy and operational excellence. He is also the SEMI Southeast Asia Regional Advisory Chairman and the Board Advisor to Singapore Semiconductor Industry Association. Mr. Ang holds a bachelor's degree in Mechanical Engineering from National Taiwan University and a master's degree in Engineering from University of Texas.

Saam Azar is Chief Legal Officer for GF since January 2017. He oversees all legal, compliance, government relations, strategic transactions and M&A matters worldwide. Mr. Azar also serves as Secretary to the GF board of directors and has been involved with the company since its founding in 2009. From 2006 to 2017, Mr. Azar has also served in various roles for GF's majority shareholder, Mubadala Investment Company, as a senior member of the Legal & Compliance Unit, working primarily on complex, cross border partnerships. Prior to Mubadala, he worked as a corporate associate at the international law firm of Cleary Gottlieb in New York, where he supported numerous corporate transactions with an emphasis on debt and equity capital markets. Mr. Azar holds a J.D. from New York University School of Law and a Bachelor of Science degree in Civil and Environmental Engineering from Duke University.

Juan Cordovez is Senior Vice President of Global Sales for GF since July 2019, leading client-facing functions including sales, commercial operations, field applications and customer engineering. Prior to his current role, Mr. Cordovez led GF's EMEA and later APAC sales from 2016 to 2019. Prior to that, Mr. Cordovez led GF's Customer Design Enablement Team including the PDK, device modeling and field applications engineering teams from 2013 to 2016. Prior to joining GF, Mr. Cordovez was founder and Vice President of Sentinel IC Technologies from 2008 to 2013 and Manager of Design Enablement at Jazz Semiconductor from 2002 to 2008. He holds a Master of Science degree in Electrical and Computer Engineering from the University of California, Irvine**.**

Emily Reilly is Senior Vice President of Human Resources at GF since March 2018 and has worldwide responsibility for all aspects of strategic human resources including talent and leadership development, delivering world-class people solutions, shaping the company's culture and creating an environment of diversity, inclusion and belonging within GF. A member of GF's original startup team, she joined the Company in 2009 and has been instrumental in GF's growth into a thriving, global organization of approximately 14,600 employees. Prior to joining GF, she worked in several roles as an engineer with GE Advanced Materials and Momentive Performance Materials, and held leadership roles at GE in both engineering and human resources. Ms. Reilly serves on the Women's Leadership Council of the Global Semiconductor Association (GSA), providing inspiration and sponsorship for the next generation of women leaders. She holds a Bachelor of Science degree in Industrial Engineering from Cornell University.

Board of Directors

Ahmed Yahia Al Idrissi was elected to the board of directors as Chairman in December 2013. Mr. Al Idrissi is currently the Chief Executive Officer, Direct Investments at Mubadala Investment Company with oversight of the energy, chemicals, technology, life sciences, consumer, industrial and financial services portfolios. Prior to joining Mubadala, Mr. Al Idrissi was a Partner at McKinsey, where he co-led the Principal Investor practice and was also the Managing Partner of the Abu Dhabi practice. He was formerly a Marketing Manager at Procter & Gamble, where he led several flagship brands. He also serves as Chairman of the board of directors of Compañía Española de Petróleos (Cepsa), and of NOVA Chemicals, and is a member of the board of directors of Emirates Global Aluminium, Mubadala Capital and PCI Pharma Services. Previously, Mr. Al Idrissi served as a board member for AMD from 2012 to 2019. He holds a Bachelor of Science in Industrial Engineering from École Centrale Paris and a Master of Science in Mechanical Engineering from the Massachusetts Institute of Technology.

Dr. Thomas Caulfield is the President and Chief Executive Officer (CEO) of GF and was elected to the board of directors in March 2018. Please see above under "Executive Officers" for a description of the business experience of Dr. Caulfield.

Ahmed Saeed Al Calily was elected to the board of directors in March 2018. Mr. Al Calily is the Chief Strategy & Risk Officer for Mubadala Investment Company, with oversight over portfolio strategy, enterprise risk management, and responsible investing. Prior to that, Mr. Al Calily was the Chief Executive Officer of Energy at Mubadala, where he oversaw the company's energy assets. Prior to re-joining Mubadala, Mr. Al Calily was director general of the Abu Dhabi Technology Development Committee and Chief Executive Officer and managing director of the Abu Dhabi Ports Company. Mr. Al Calily also served as deputy director of the infrastructure and services unit at Mubadala. He currently serves as a member of the board of directors at Abu Dhabi Future Energy Company (Masdar), Cleveland Clinic Abu Dhabi LLC, Medical Holding Company LLC and Abu Dhabi Commercial Bank PJSC. Mr. Al Calily holds a bachelor's degree in Economics and Political Science from Boston University.

Tim Breen was elected to the board of directors in January 2018. In 2020, he served as Executive Vice President of Strategy and Business Performance and as senior counselor to the Chief Executive Officer. Prior to that, he served as the Executive Vice President of Strategy and Business Transformation from 2018 to August 2020. He is currently a member of the senior leadership team of Mubadala Investment Company and head of its New York Office, responsible for the firm's direct investments in the technology and consumer sectors and serves on the board of directors of several of Mubadala's North American investments, including NOVA Chemicals, and Truck Hero. Prior to joining Mubadala, Mr. Breen was a Partner with McKinsey. in Abu Dhabi. He holds a Master of Business Administration degree from London Business School.

Glenda Dorchak was elected to the board of directors in June 2019. Ms. Dorchak spent over thirty years in operational leadership roles in the technology industry, most recently as Executive Vice President and General Manager of Global Business with Spansion, Inc., a flash memory manufacturer. She started her career with 20 years at IBM where she held a range of operating roles including General Manager PC Direct. She eventually moved to e-retail startup Value America where she was part of the IPO team eventually becoming Chairman and CEO. She also served as Vice President and General Manager of Intel Broadband Products Group and Vice President and General Manager of Intel Consumer Electronics Group. After Intel, Ms. Dorchak was Chairperson and Chief Executive Officer of Intrinsyc Software and Vice Chairman and Chief Executive Officer of VirtualLogix. Ms. Dorchak currently does advisory and board work and serves as a member of the board of directors at ANSYS, Inc. and Wolfspeed Inc.

Martin L. Edelman was elected to the board of directors in February 2017. Mr. Edelman serves as "Of Counsel" in the real estate practice of Paul Hastings LLP. He has been an advisor to Grove Investors and is a partner at Fisher Brothers, a real estate partnership. Mr. Edelman is a Director of Blackstone Mortgage Trust, Inc.

and Aldar Properties and currently serves on the boards of various nongovernmental organizations. Previously, Mr. Edelman served as a board member for AMD from 2013 to 2017. He has more than 40 years of experience and concentrates his practice on real estate and corporate mergers and acquisitions transactions. Mr. Edelman holds a Bachelor of Arts degree from Princeton University and a law degree from Columbia Law School.

David Kerko was elected to the board of directors in January 2018. Mr. Kerko is Head of North America Private Equity at Elliott Investment Management L.P. Prior to joining Elliott, Mr. Kerko was an advisor, member and co-head of the Technology Group at Kohlberg Kravis Roberts & Co. Inc. (KKR). Prior to joining KKR, he worked for Gleacher NatWest Inc. on mergers and acquisition transactions and financing. Mr. Kerko is a member of the board of directors of Cubic Corporation. Mr. Kerko holds a Bachelor of Science degree and a Bachelor of Science in Engineering degree, summa cum laude, from the University of Pennsylvania.

Jack Lazar was elected to the board of directors in July 2021. Mr. Lazar has spent over thirty years in operational and finance leadership roles at technology companies across multiple industries, most recently as Chief Financial Officer of GoPro, Inc., which he helped to take public in 2014. Prior to GoPro, Mr. Lazar served as Senior Vice President of Corporate Development and General Manager of Qualcomm Atheros, Inc. From 2003 until the time in which it was acquired by Qualcomm in 2011, he served in a variety of leadership roles at Atheros Communications, Inc. most recently as Chief Financial Officer and Senior Vice President of Corporate Development. In 2004, Mr. Lazar was part of the team that took Atheros public. He also served in leadership roles at NetRatings, Apptitude, and Electronics for Imaging, Inc. Mr. Lazar currently serves as a member of the board of directors of several publicly traded companies including Box, Inc., Resideo Technologies Inc., Silicon Labs, Inc. and thredUP Inc. He holds a Bachelor of Science in Commerce degree with an emphasis in Accounting from Santa Clara University and is a certified public accountant (inactive).

Elissa E. Murphy was elected to the board of directors in September 2021. Ms. Murphy has served as a Vice President of Engineering at Google, Inc. since 2016. Prior to Google, she was the Chief Technology Officer and Executive Vice President of Cloud Platforms at GoDaddy from 2013 to 2016. Ms. Murphy previously served as Vice President of Engineering at Yahoo! from late 2010 to 2013, where she oversaw the world’s largest private Hadoop cluster, a technology essential to massive-scale computing that is the basis of big data today. Prior to her time at Yahoo!, Ms. Murphy spent 13 years at Microsoft in various engineering positions including part of the original team responsible for Microsoft’s shift to the cloud, which led to the creation of Azure, and as a member of the High Performance Computing team. Ms. Murphy began her technology career designing and building many of the best-selling computer security and system utilities with 5th Generation Systems, Quarterdeck and the Norton Group, a division at Symantec responsible for Norton Antivirus and other Norton products. Ms. Murphy brings expertise in global-scale platforms, big data and predictive analytics to our Board. She currently has over 30 patents issued with several more pending in the areas of distributed systems, cloud, machine learning and security.

Carlos Obeid was elected to the board of directors in January 2012. Mr. Obeid is currently the Chief Financial Officer of Mubadala Investment Company, with oversight of its commercial functions including treasury, investor relations, financial planning, business performance, financial governance and reporting. Before joining Mubadala, Carlos worked with the United Arab Emirates Offset Program Bureau where he led a wide range of initiatives including privatization, utilities and financial services. He serves as the chairman of the board of directors of Mubadala Infrastructure Partners Ltd. and is a member of the board of directors of Cleveland Clinic Abu Dhabi LLC, Mubadala Capital LLC and Abu Dhabi Commercial Bank PJSC. Carlos holds a Bachelor of Science in Electrical Engineering degree from American University of Beirut, Lebanon, and a Master of Business Administration degree from INSEAD in Fontainebleau, France.

Bobby Yerramilli-Rao was elected to the board of directors in March 2022. Dr. Yerramilli-Rao has served as Chief Strategy Officer and Corporate Vice President, Corporate Strategy at Microsoft Corporation since 2020. Prior to Microsoft, he was Co-founder and Managing Partner of Fusion Global Capital, from 2011 to 2020. Dr. Yerramilli-Rao previously served as Corporate Strategy Director and Internet Services Director of Vodafone, from, 2006 to 2010, where he was responsible for strategy and acquisitions related to digital services, serving on the company's investment committee. Prior to his time at Vodafone, Dr. Yerramilli-Rao spent more than a decade at McKinsey, elected partner in 2000 and helping co-lead the telecom, media and technology practice. Dr. Yerramilli-Rao currently serves as a member of the board of directors of Cambridge Epigenetix. He holds a Master of Arts degree in Electrical Engineering from the University of Cambridge and a Doctorate in Robotics from the University of Oxford.

B. Compensation

Under Cayman Islands law, we are not required to disclose compensation paid to our directors and executive officers on an individual basis and we have not otherwise publicly disclosed this information elsewhere.

For the year ended December 31, 2021, the aggregate compensation paid by us and our subsidiaries for our directors and executive officers for services in all capacities to us and our subsidiaries was $33 million which includes both benefits paid in kind and compensation, as well as the grant of in the aggregate, 150,385 restricted share units, and the grant of share option awards to purchase, in the aggregate, 340,759 ordinary shares with an exercise price equal to $10.00 per ordinary share pursuant to the terms and conditions of our 2018 Equity Plan. Share Units and Share option awards granted pursuant to our 2018 Equity Plan vest or are exercisable and expire as set forth in "2018 Equity Plan" below.

Of the amounts above, for the year ended December 31, 2021, $71,000 was set aside or accrued by us or our subsidiaries to provide defined contribution retirement benefits or similar benefits to our directors and executive officers.

In addition, some share options are expected to be exercised in calendar year 2022 as a result of our long term incentive plans. The number of share options that are currently expected to be exercised in calendar year 2022 is approximately 12.2 million.

Our executive compensation philosophy includes the following objectives:

- To pay for performance;
- To attract, develop, reward, and retain great talent; and
- To motivate our talent to achieve short-term and long-term goals that lead to sustainable long-term shareholder value creation.

Our executive officers receive fixed and variable compensation. They also receive benefits in line with market practice and with the benefits extended to our broad-based employee population.

The fixed component of compensation consists of base salary. This provides a fixed source of income and acts as foundation for other pay components. The base salary is reflective of executive role, responsibility, and individual performance, and it is designed to be market-competitive and attract and retain critical talent. We review base salaries annually, and make adjustments as appropriate based on market, performance and any change in responsibility.

In 2021, the variable pay elements of our executive officers' compensation consisted of an annual incentive program ("AIP") and a long-term share option or share unit program.

While none of our directors have service contracts with us or our subsidiaries that provide for benefits upon termination of their services, consistent with market practice, certain of our executive officers are entitled to certain benefits upon termination, including a cash severance payment if we terminate their employment without cause.

Annual Incentive Program

The AIP is a short-term annual cash incentive that incentivizes and rewards our executive officers for achieving critical company financial and operational goals as well as individual goals. Each of our executives has an AIP target opportunity, set as a percentage of their base salary, which is reviewed annually to assure that both our performance and pay opportunities are aligned with competitive practices and that our rewards are reflective of company and individual performance.

In 2021, our executive officers' awards under the AIP were determined as follows:

- 50% based on our financial and operational performance;
- 30% based on individual performance on key objectives; and
- 20% based on our CEO's discretion including but not limited to: leadership, employee engagement, diversity & inclusion, collaboration, business process improvement, strategic contributions and business context.

For our CEO and CFO, their 2021 AIP award payout was 75% based on our financial and operational performance and 25% as a discretionary component determined by our board of directors.

2017 LTIP

We maintain a long-term incentive plan (the "2017 LTIP") pursuant to which a small number of current employees hold vested share options that were granted in 2017. Vested share options granted under the 2017 LTIP become exercisable upon the first anniversary of an IPO or change in control occurring following the vesting date but during the term of the share option. In connection with the establishment and adoption of the 2018 Equity Plan, we ceased making awards under the 2017 LTIP. As of December 31, 2021, there are 54,651 nonqualified share options to buy ordinary shares outstanding under the 2017 LTIP.

2018 Equity Plan

We maintain a long-term equity incentive program (the "2018 Equity Plan") designed to enable our executives and select other high-performing and high-potential participants to share in the value creation of the company as we execute our business plan and deliver returns to our shareholders. Officers, employees, consultants, advisors and members of our board of directors are eligible to participate in the 2018 Equity Plan. The 2018 Equity Plan is administered by our people and compensation committee, which was delegated authority to administer the 2018 Equity Plan by our board of directors.

Awards under the 2018 Equity Plan may be granted in the form of nonqualified share options, share awards, or share unit awards. The vesting conditions and all other terms of these awards will be determined by the administrator of the 2018 Equity Plan and set out in the applicable award agreements.

Participants in the 2018 Equity Plan typically receive a one-time grant upon hire or promotion into an eligible role. Generally, awards of share options granted in 2020 or later vest over four years, with 25% of the share options vesting on the later of December 31 of the first four years following the grant date and the six-month anniversary of the consummation of our initial public offering, subject to continued employment through the applicable vesting date (with limited exceptions for certain qualifying terminations). The majority of share options granted in 2019 vest over five years, with 20% of the options vesting on the later of December 31 of the first five years following the grant date and the six-month anniversary of the consummation of our initial public offering, subject to continued employment through the applicable vesting date (with limited exceptions for certain qualifying terminations). Share options held by U.S. taxpayers that vest on the six-month anniversary of our initial public offering will be exercisable for a period commencing on the vesting date and ending on a fixed date in 2022. Any outstanding in the money exercisable share options not exercised as of the end of such period will be automatically exercised on the last day of such period. All other outstanding share options held by U.S. taxpayers will become exercisable for a period commencing on January 1 of the year following the year in which such share options vest and ending on a fixed date in such year, with any outstanding exercisable share options not exercised as of the end of such period being automatically exercised as of the last day of such period. Share options held by non-U.S. taxpayers will become exercisable on the date such share options vest and will remain exercisable, pursuant to normal share option exercise procedures under the terms and conditions of the 2018 Equity Plan for the duration of the term of the share option, with any outstanding exercisable share options not exercised before the expiration of such share options in accordance with their terms being automatically exercised as of the expiration date of the share options by means of "net exercise" in order to satisfy the exercise price and applicable taxes due in respect of such share options.

As of December 31, 2021 there are 21,694,907 nonqualified share options to buy ordinary shares and 847,430 restricted share unit awards to our employees outstanding. Generally, awards of restricted share units vest over four years, with 25% of the share units vesting on each of the first four anniversaries of the earlier of the grant date or the participant's hire or promotion date, subject to continued employment through the applicable vesting date (with limited exceptions for certain qualifying terminations). Certain restricted share unit grants made to certain current and former non-employee members of our board of directors in connection with our initial public offering generally vest over three years, with 33% of the share units vesting on the first three anniversaries of the grant date, subject to their continued provision of services (whether as a non-employee director or otherwise) to the company through the applicable vesting date.

As of December 31, 2021, there are 2,457,663 ordinary shares that remain available for grant under the 2018 Equity Plan. No awards may be granted under the 2018 Equity Plan after our board of directors terminates the 2018 Equity Plan or ten years from its effective date, whichever is earlier.

Shareholder Proceeds Bonus Program

We maintain a bonus program (the "Shareholder Proceeds Bonus Program") pursuant to which eligible option holders under our 2018 Equity Plan may receive cash awards depending on financial results linked to annual operating cash flow and other financial metrics.

If our board of directors determines that any amounts are to be paid under the Shareholder Proceeds Bonus Program, the aggregate amount of the cash payment to be received by any participant is based on the per share bonus payment amount, a multiple determined by the board and the number of outstanding share options to which the award under the Shareholder Proceeds Bonus Program relates, with the aggregate cash payment pro-rated based on the number of vested share options as of each payment date over the vesting schedule of the share option. Payment of any amounts under the Shareholder Proceeds Bonus Program is independent of and not contingent upon the exercise of any share options.

Awards under the Shareholder Proceeds Bonus Program were granted in 2021, and payments in respect of outstanding awards under the Shareholder Bonus Program were paid in December 2021. No new awards will be granted under the Shareholder Proceeds Bonus Program in respect of calendar year 2022 or beyond and all existing awards will continue to be paid out on their current payment schedule.

2021 Equity Compensation Plan

In connection with our initial public offering, our board of directors adopted, and Mubadala approved, the GLOBALFOUNDRIES Inc. 2021 Equity Compensation Plan (the "Equity Plan"). Our Equity Plan is administered by our board of directors or, as applicable, its delegate (the "Equity Plan Administrator").

The purpose of the Equity Plan is to attract and retain certain employees, non-employee directors, consultants, and advisors. All of our (and our subsidiaries') employees, non-employee directors and key advisors and consultants who perform services for us are eligible to receive awards under the Equity Plan. The Equity Plan provides for the issuance of incentive share options, non-qualified share options, share awards, share units, share appreciation rights, and other share-based awards.

The Equity Plan Administrator will determine the allocation of awards and all of the terms and conditions applicable to awards under the Equity Plan, except that awards to members of our board of directors must be authorized by a majority of our board of directors.

Subject to adjustment as described below, the maximum aggregate number of our ordinary shares that may be issued or transferred under the Equity Plan with respect to awards is 17,500,000 ordinary shares; provided that the share reserve under the Equity Plan will, unless otherwise determined by our board of directors, automatically increase on January 1 of each year for 10 years commencing on January 1, 2023 and ending on (and including) January 1, 2032 in an amount equal to 1% of the total number of ordinary shares outstanding on December 31 of the preceding year.

In general, if any share options or share appreciation rights terminate, expire or are canceled, forfeited, exchanged, or surrendered without having been exercised, or if any share awards, share units or other share-based awards are forfeited, terminated, or otherwise not paid in full in our ordinary shares, the shares subject to such awards will again be available for purposes of the Equity Plan. In addition, the maximum aggregate value of our ordinary shares subject to new awards made to any non-employee director pursuant to the Equity Plan, together with any cash fees earned by such non-employee director, for services rendered as a non-employee director during any calendar year, will not exceed $1,500,000, which value will be calculated based on the grant date fair value of such awards for financial reporting purposes.

In connection with certain events affecting the outstanding ordinary shares reserved for issuance as awards, the Equity Plan Administrator will equitably adjust the maximum number and kind of our ordinary shares available for issuance under the Equity Plan, the maximum number and kind of ordinary shares for which any individual may receive awards in any year, the kind and number of shares covered by outstanding awards, the kind and number of shares that may be issued under the Equity Plan, and the price per share or market value of any outstanding awards, and other conditions as the Equity Plan Administrator deems appropriate to prevent the enlargement or dilution of rights under the Equity Plan.

If there is a change in control and awards are not assumed by, or replaced with grants that have comparable terms by, the surviving corporation, all outstanding share options and share appreciation rights will immediately vest and become exercisable, any restrictions on share awards will lapse, and all other awards will become payable as of the date of the change in control. If there is a change in control and we (or our successor) terminate a participant's employment without cause upon or within one year after the change in control, the participant's outstanding share options and share appreciation rights will vest and become exercisable, any restrictions on share awards will lapse, and all other awards will become payable. In each of the foregoing events, awards based on performance objectives will vest and be payable in accordance with the terms set forth in the applicable award agreement. Notwithstanding the foregoing, the committee may establish any other terms and conditions relating to the effect of a change in control on awards as the Equity Plan Administrator deems appropriate and take any of the actions enumerated under the terms and conditions of the Equity Plan, without the consent of any participant.

Except as permitted by the committee with respect to non-qualified share options, only a participant may exercise rights under an award during the participant's lifetime. Upon death, the personal representative or other person entitled to succeed to the rights of the participant may exercise such rights. A participant cannot transfer those rights except by will or by the laws of descent and distribution or pursuant to a domestic relations order. The committee may provide in an award agreement that a participant may transfer non-qualified share options to family members, or one or more trusts or other entities for the benefit of or owned by family members, consistent with applicable securities laws.

Our board of directors may amend or terminate the Equity Plan at any time, except that our shareholders must approve an amendment if such approval is required in order to comply with the Code, applicable laws, or applicable stock exchange requirements. Unless terminated sooner by our board of directors or extended with shareholder approval, the Equity Plan will terminate on the day immediately preceding the tenth anniversary of its effective date. No awards have been issued under the 2021 Equity Compensation Plan as of December 31, 2021.

2021 Employee Stock Purchase Plan

In connection with, and prior to the consummation of, our initial public offering, our board of directors adopted, and Mubadala approved, the GLOBALFOUNDRIES Inc. 2021 Employee Stock Purchase Plan (the "ESPP"). Our ESPP is administered by our board of directors or, as applicable, its delegate (the "ESPP Administrator").

Any of our employees, or any employees of a subsidiary or affiliate that the ESPP Administrator has designated as eligible to participate in an offering, will be eligible to participate in an offering under the ESPP, other than an employee who owns ordinary shares possessing 5% or more of our voting shares, or the voting shares of a parent or subsidiary, or certain other employees as determined by the ESPP Administrator.

Our ESPP will permit eligible employees to purchase our ordinary shares through contributions in the form of payroll deductions (by timely delivering a subscription agreement to us) or otherwise, as permitted by the ESPP Administrator. The ESPP permits two types of offerings: (1) an offering intended to qualify for favorable U.S. federal tax treatment under Section 423 of the Code; and (2) an offering not intended to be tax qualified under Section 423 of the Code to facilitate participation for employees who are not eligible to benefit from favorable U.S. federal tax treatment and, to the extent applicable, to provide flexibility to comply with non-U.S. law and other considerations. The timing of the offering periods will be determined by the ESPP Administrator.

The terms and conditions applicable to each offering period will be set forth in an offering document adopted by the ESPP Administrator for the particular offering period. We also may choose to issue matching ordinary shares with respect to ordinary shares purchased under the ESPP for an offering period. In that event, on the relevant ESPP purchase date, we will grant to each eligible employee in the ESPP a number of ordinary shares with a fair market value equal to a percentage of the aggregate purchase price paid to exercise the employee's right to purchase ordinary shares on such purchase date. Such matching percentage for each purchase period shall be established by the ESPP Administrator in an offering document.

Subject to certain equitable adjustments in connection with certain events affecting the outstanding ordinary shares reserved for issuance as awards, the maximum aggregate number of our ordinary shares that may be issued or transferred under the ESPP with respect to awards is 7,500,000 ordinary shares; provided that the share reserve under the ESPP will, unless otherwise determined by our board of directors, automatically increase on January 1 of each year for 8 years commencing on January 1, 2023 and ending on (and including) January 1, 2031 in an amount equal to 0.25% of the total number of ordinary shares outstanding on December 31 of the preceding year. In no event will the number of ordinary shares that may be issued or transferred pursuant to rights granted under the ESPP exceed 18,750,000, in the aggregate, subject to the adjustments described above.

The ESPP Administrator will have the authority to amend, suspend or terminate the ESPP. However, shareholder approval shall be required to amend the ESPP to increase the aggregate number or change the class of shares that may be sold pursuant to rights under the ESPP (other than an adjustment as provided above) or as may otherwise be required under Section 423 of the Code or as may otherwise be required by applicable stock exchange requirements.

C. Board Practices

Composition of our Board of Directors

Our board of directors currently consists of eleven members, all of whom were elected pursuant to our Memorandum and Articles of Association. The board is divided into three classes designated as Class I, Class II and Class III, with the members of each class each serving staggered, three-year terms. The terms of our Class I directors will expire at the 2022 annual general meeting of members; the terms of our Class II directors will expire at the 2023 annual meeting of members; and the terms of our Class III directors will expire at the 2024 annual meeting of members. At the expiration of the respective terms of the Class I, Class II and Class III directors, new Class I, Class II and Class III directors will be elected to serve for a full term of the three years respectively.

Dr. Thomas Caulfield, Ahmed Saeed Al Calily, Tim Breen and Glenda Dorchak serve as Class I directors (with terms expiring in 2022). Martin L. Edelman, David Kerko, Jack Lazar and Carlos Obeid serve as Class II directors (with terms expiring in 2023). Ahmed Yahia Al Idrissi, Elissa E. Murphy and Bobby Yerramilli-Rao serve as Class III directors (with terms expiring in 2024).

While we do not have a formal policy regarding board diversity, our nominating & governance committee and board of directors will consider a broad range of factors relating to the qualifications and background of nominees, which may include diversity (not limited to race, gender or national origin). Our nominating & governance committee's and board of directors' priority in selecting board members is identification of persons who will further the interests of our shareholders through their established record of professional accomplishment, the ability to contribute positively to the collaborative culture among board members, knowledge of our business, understanding of the competitive landscape and professional and personal experiences and expertise relevant to our growth strategy. Under a shareholder's agreement entered into with Mubadala through two of its subsidiaries holding our ordinary shares, Mubadala Technology Investment Company ("MTIC") and MTI International Investment Company LLC ("MTIIIC") (the "Shareholder's Agreement") prior to the consummation of our initial public offering, we agreed to nominate for election to our board of directors a certain number of designees selected by Mubadala. See "Item 7. Major Shareholders and Related Party Transactions—Certain Relationships and Related Party Transactions—Shareholder's Agreement."

There is no Cayman Islands law requirement that a director must hold office for a certain term and stand for re-election unless the resolutions appointing the director impose a term on the appointment. We do not have any age limit requirements relating to our director's term of office.

The Shareholder's Agreement provides that, for so long as MTIC, MTIIIC and certain of their affiliates (the "Mubadala Entities"), in the aggregate, beneficially own 50% or more of the ordinary shares held by the Mubadala Entities upon consummation of our initial public offering, MTIC will be entitled to nominate a number of designees (the "Mubadala Designees") to our board of directors representing a majority of our directors. MTIC designated the following directors as Mubadala Designees as of the date of our initial public offering: Ahmed Yahia Al Idrissi, Ahmed Saeed Al Calily, Tim Breen, Martin L. Edelman, and Carlos Obeid. By making such designation, MTIC retains the right to appoint any additional Mubadala Designees in accordance with the Shareholder's Agreement and the Memorandum and Articles of Association.

Our Memorandum and Articles of Association also provide that our directors may only be removed for cause by an affirmative vote of 75% of our shareholders, provided that (1) a Mubadala Designee may only be removed with or without cause by MTIC, and (2) as long as the Mubadala Entities beneficially own in the aggregate at least 50% of our outstanding ordinary shares, directors other than Mubadala Designees may be removed with or without cause by a majority of shareholders. Any vacancy resulting from an enlargement of our board of directors (which shall not exceed any maximum number stated in our Memorandum and Articles of Association), may be filled by ordinary resolution or by vote of a majority of our directors then in office; provided that any vacancy with respect to a Mubadala Designee may only be filled by a decision of majority of the Mubadala Designees then in office, or if there are none, by MTIC.

Board's Role in Risk Oversight

Our board of directors oversees the management of risks inherent in the operation of our business and the implementation of our business strategies. Our board of directors performs this oversight role by using several different levels of review. In connection with its reviews of our operations and corporate functions, our board of directors addresses the primary risks associated with those operations and corporate functions. In addition, our board of directors reviews the risks associated with our business strategies periodically throughout the year as part of its consideration of undertaking any such business strategies.

Each of our board committees also oversees the management of our risk that falls within the committee's areas of responsibility. In performing this function, each committee has full access to management, as well as the ability to engage advisors. Our Chief Financial Officer provides reports to the audit, risk and compliance committee and is responsible for identifying, evaluating and implementing risk management controls and methodologies to address any identified risks. In connection with its risk management role, our audit, risk and compliance committee meets privately with representatives from our independent registered public accounting firm and our Chief Financial Officer. The audit, risk and compliance committee oversees the operation of our risk management program, including the identification of the primary risks associated with our business and periodic updates to such risks, and reports to our board of directors regarding these activities.

Board Committees

Our board of directors has established an audit, risk and compliance committee, a people and compensation committee, a strategy and technology committee and a nominating & governance committee, each of which operates pursuant to a separate charter adopted by our board of directors.

Audit, Risk and Compliance Committee

Glenda Dorchak, Jack Lazar and Carlos Obeid currently serve on the audit, risk and compliance committee, which is chaired by Jack Lazar. Our board of directors has determined that Glenda Dorchak and Jack Lazar are "independent" for audit, risk and compliance committee purposes as that term is defined in the rules of the SEC and the applicable rules of the Nasdaq. We intend to have a fully independent audit, risk and compliance committee within one year from effectiveness of our initial public offering registration statement, as permitted by Rule 10A-3 of the Exchange Act. The audit, risk and compliance committee's responsibilities include:

- appointing our independent registered public accounting firm, and approving the audit and permitted non-audit services to be provided by our independent registered public accounting firm;
- evaluating the performance and independence of our independent registered public accounting firm;
- monitoring the integrity of our financial statements and our compliance with legal and regulatory requirements as they relate to our financial statements or accounting matters;
- reviewing the adequacy and effectiveness of our accounting and internal control policies and procedures;
- establishing and overseeing procedures for the receipt, retention and treatment of accounting-related complaints and concerns;
- reviewing and discussing with the independent registered public accounting firm the results of our year-end audit, and recommending to our board of directors, based upon such review and discussions, whether our financial statements shall be included in our Annual Report on Form 20-F;
- reviewing all related party transactions for potential conflict of interest situations and approving all such transactions;
- overseeing the Company's ESG programs and periodically reporting to the board of directors; and
- overseeing and reviewing major corporate risks and periodically reporting to the board of directors.

We have one financial expert as of the date hereof. Our board of directors has determined that Jack Lazar qualifies as an “audit committee financial expert” as defined in SEC rules and satisfies the financial sophistication requirements of the Nasdaq.

People and Compensation Committee

Ahmed Saeed Al Calily, Tim Breen, David Kerko and Elissa E. Murphy currently serve on the people and compensation committee, which is chaired by David Kerko. The people and compensation committee’s responsibilities include:

- establishing and reviewing the goals and objectives of our executive compensation plans;
- establishing the goals and objectives relevant to Chief Executive Officer compensation, and making recommendations to our board of directors in evaluating our Chief Executive Officer’s performance in light of these goals and objectives;
- evaluating the performance of our executive officers in light of the goals and objectives of our executive compensation plans and making recommendations to our board of directors with respect to the compensation of our executive officers, including our Chief Executive Officer;
- making recommendations to our board of directors with respect to improvement of existing, or adoption of new, employee compensation plans and programs; and
- retaining and approving the compensation of executive compensation advisors and other advisors advising the people and compensation committee.

Strategy and Technology Committee

Ahmed Yahia Al Idrissi, Dr. Thomas Caulfield, Tim Breen, Glenda Dorchak, David Kerko and Bobby Yerramilli-Rao currently serve on the strategy and technology committee, which is chaired by Ahmed Yahia Al Idrissi. The strategy and technology committee’s responsibilities include:

- assisting our board of directors in reviewing significant investments, divestments, joint ventures, partnerships, and other strategic agreements;
- providing guidance to our board of directors on long range strategy and business plans;
- assisting our board of directors in reviewing our technology road map; and
- assisting our board of directors in reviewing strategic long-term customer and supplier agreements.

Nominating & Governance Committee

Ahmed Yahia Al Idrissi, Glenda Dorchak, Martin L. Edelman and David Kerko currently serve on the nominating & governance committee, which is chaired by Martin L. Edelman. The nominating & governance committee’s responsibilities include:

- assisting our board of directors in identifying prospective director nominees and recommending nominees for election by the shareholders or appointment by our board of directors;
- reviewing and assessing the adequacy of our corporate governance guidelines and recommending proposed changes to our board of directors; and
- overseeing the evaluation of our board of directors.

D. Employees

We have a highly-skilled employee base and as of December 31, 2021, we employed approximately 14,600 employees primarily located at our manufacturing sites. As of December 31, 2021, approximately 45% of our employees were located in North America, approximately 23% in EMEA, and approximately 32% in APAC. We also engage temporary employees and consultants. Overall, we believe we have good relations with our employees. As of December 31, 2021, approximately 68% of our employees were engineers or technicians.

E. Share Ownership

Refer to “Item 7. Major Shareholders and Related Party Transactions” below for information on share ownership.

See “Item 6. Directors, Senior Management and Employees—B. Compensation” for information on our arrangements for involving employees in the capital of the Company.

ITEM 7. MAJOR SHAREHOLDERS AND RELATED PARTY TRANSACTIONS

A. Major Shareholders

The following table sets forth certain information with respect to the beneficial ownership of our ordinary shares as of December 31, 2021 for (i) each person known by us to be the beneficial owner of more than 5% of our outstanding shares of ordinary shares and (ii) all of our directors and executive officers as a group.

Name of Beneficial Owner	Number of Ordinary Shares Owned	Percentage of Ordinary Shares Owned
Mubadala	469,501,994	88.28%
Directors and named executive officers:		
Dr. Thomas Caulfield	*	*
David Reeder	*	*
Kay Chai (KC) Ang	*	*
Saam Azar	*	*
Juan Cordovez	*	*
Emily Reilly	*	*
Ahmed Yahia Al Idrissi	*	*
Ahmed Saeed Al Calily	*	*
Tim Breen	*	*
Glenda Dorchak	*	*
Martin L. Edelman	*	*
David Kerko	*	*
Jack Lazar	*	*
Elissa E. Murphy	*	*
Carlos Obeid	*	*
Bobby Yerramilli-Rao	*	*

* Represents beneficial ownership of less than 1% of our issued and outstanding ordinary shares.

B. Related Party Transactions

Mubadala

Shareholder Loan Facilities

We entered into several loan facilities with a subsidiary of Mubadala. Each of the Shareholder Loans were non-interest bearing and principal repayment, in whole or in part, was entirely at our discretion as explicitly stated in the loan agreements. The Shareholder Loans were subordinated to any claims of other unsubordinated and subordinated creditors, including beneficiaries under guarantees issued, of the company. The Shareholder Loans had no maturity date. We made payments of $568 million in the year ended December 31, 2021. On October 1, 2021, our board approved the conversion of the remaining $10.1 billion of the loan balance into additional paid in capital, and on October 3, 2021, we executed the Conversion. The Conversion did not have an impact on shares outstanding or have any dilutive effects, as no additional shares were issued.

Secondments

Between January 1, 2018 and the date of this Annual Report, Mubadala has seconded seven persons to us. Two secondees, including Tim Breen, who is a member of our board of directors and previously served as an executive officer of the company, continue to be seconded to us as of the date of this Annual Report. From January 1, 2019 through December 31, 2021, we paid Mubadala an average annual amount of approximately $2 million in consideration of the services provided by the secondees.

Shareholder's Agreement

Prior to the consummation of our initial public offering, we entered into the Shareholder's Agreement with Mubadala through two of its subsidiaries holding our ordinary shares, MTIC and MTIIIC. The Shareholder's Agreement provides that, for so long as the Mubadala Entities, in the aggregate, beneficially own 50% or more of the ordinary shares held by the Mubadala Entities, MTIC is entitled to nominate a number of Mubadala Designees to our board of directors representing a majority of our directors. The Shareholder's Agreement specifies how such nomination rights decrease as the Mubadala Entities' beneficial ownership of our ordinary shares decreases. Specifically, for so long as the Mubadala Entities, in the aggregate, beneficially own (i) 40% or more, but less than 50%, (ii) 30% or more, but less than 40%, (iii) 20% or more, but less than 30%, and (iv) 5% or more, but less than 20%, of the ordinary shares held by the Mubadala Entities, MTIC shall be entitled to Mubadala Designees on our board of directors representing at least 50%, 40%, 30% and 20%, respectively, of our directors. The Shareholder's Agreement provides that for so long as MTIC is entitled to nominate at least 30% of our directors, the chairman of our board of directors shall be appointed by a majority vote of the Mubadala Designees directors.

The Shareholder's Agreement specifies that, where there is a vacant board position in respect of a Mubadala Designee director, such vacancy shall be filled only by a decision of a majority of the Mubadala Designee directors then in office or, if there are no such directors then in office, by MTIC. Additionally, we will include the Mubadala Designees on the slate that is included in our proxy statement relating to the appointment of directors of the class to which such persons belong and provide the highest level of support for the appointment of each such person as we provide to any other individual standing for appointment as a director.

The Shareholder's Agreement also specifies that until such time as the Mubadala Entities no longer beneficially own at least 30% of our outstanding ordinary shares, we will not, nor will we permit our subsidiaries, to take certain significant actions specified therein without the prior consent of MTIC. These actions include:

- amendments or modifications to, or repealing of, (whether by merger, consolidation or otherwise) any provisions of our organizational documents in a manner that would adversely affect the Mubadala Entities beneficially owning outstanding ordinary shares;
- issuances of equity securities, subject to customary exceptions;
- acquisitions or dispositions in an amount exceeding $300 million in any single transaction or $500 million in any calendar year, other than pursuant to ordinary course transactions;
- mergers, consolidations, or other transactions that would involve a change of control of our company;
- incurring financial indebtedness in an amount exceeding $200 million, subject to certain exceptions;
- hiring or terminating our Chief Executive Officer, Chief Financial Officer or Chief Legal Officer or designating any replacement thereto;
- liquidation, dissolution or winding up of our company;
- any material change in the nature of the business of our company and our subsidiaries, taken as a whole; or
- changes to the size of our board of directors.

The Shareholder's Agreement entitles the Mubadala Entities to certain information rights. The Mubadala Entities are permitted to share such disclosed information with other Mubadala Entities and their directors, officers, employees, consultants, advisers, and financing providers, provided that the recipient maintain the confidentiality of such disclosed information.

We will use our reasonable best efforts, if permitted by applicable law and regulation (including, in particular, our audit, risk and compliance committee's responsibilities under U.S. securities laws and regulations) and if in the best interests of the company, to select the same independent certified public accounting firm, or auditor, used by Mubadala (or an affiliate of such auditor) and to provide to Mubadala as much prior notice as reasonably practical of any change in our auditor until the first fiscal year end occurring after the date on which Mubadala and any entities owned by the Government of Abu Dhabi, together with their subsidiaries, no longer own in aggregate at least 25% of the voting power of our then outstanding securities. When selecting our auditor, we have agreed that we will give due consideration to the benefits arising to our company from the use of the same auditor as Mubadala (or an affiliate of such auditor).

The Shareholder’s Agreement is governed by Cayman Islands law and will terminate on the earlier to occur of (i) such time as the Mubadala Entities, in aggregate, cease to beneficially own 5% or more of our outstanding ordinary shares, and (ii) upon the delivery of a written notice by MTIC to us requesting its termination.

Certain of the provisions of the Shareholder’s Agreement have been included in our Memorandum and Articles of Association.

Registration Rights Agreement

Prior to the consummation of our initial public offering, we entered into a registration rights agreement with MTIC and MTIIIC, pursuant to which those holders of ordinary shares are entitled to demand the registration of the sale of certain or all of our ordinary shares that they beneficially own (the “Registration Rights Agreement”). Among other things, under the terms of the Registration Rights Agreement:

- Each holder has an unlimited right, subject to certain conditions and exceptions, to request that we file registration statements with the SEC for one or more underwritten offerings of all or part of our ordinary shares that the holder beneficially owns, and we are required to cause any such registration statements (a) to be filed with the SEC as promptly as practicable and (b) to use commercially reasonable efforts to cause such registration statements to become effective as soon as reasonably practicable;
- If we propose to file certain types of registration statements under the Securities Act with respect to an offering of equity securities by us, we are required to use commercially reasonable efforts to offer the other parties to the Registration Rights Agreement, if any, the opportunity to register the sale of all or part of their shares on the terms and conditions set forth in the Registration Rights Agreement (customarily known as “piggyback rights”); and
- All expenses of registration under the Registration Rights Agreement, including the legal fees of one counsel retained by or on behalf of the holders, will be paid by us.

The registration rights granted in the Registration Rights Agreement are subject to customary restrictions such as minimum offering sizes, blackout periods and, if a registration is underwritten, any limitations on the number of shares to be included in the underwritten offering as reasonably advised by the managing underwriter. The rights of the holders under the Registration Rights Agreement are assignable to certain transferees of the holders’ ordinary shares. The Registration Rights Agreement also contains customary indemnification and contribution provisions. The Registration Rights Agreement is governed by New York law.

MTHC Revolving Credit Facility

On December 15, 2013, we entered into a revolving credit agreement with Mubadala Treasury Holding Company LLC (“MTHC”) that provided for an aggregate commitment of $600 million. Subsequently, on November 28, 2017, we entered into an amended agreement to reduce the aggregate commitment to $400 million. As further amended on July 27, 2020, the revolving credit agreement was to terminate on December 31, 2023, unless MTHC would have elected to terminate the facility upon the company ceasing to be a direct or indirect wholly owned subsidiary of Mubadala. Amounts outstanding under the loan bore interest at LIBOR plus 1.5%. This undrawn facility was terminated on November 11, 2021, following the closing of our initial public offering.

SMP

Silicon Manufacturing Partners Pte Ltd. (“SMP”) is a joint venture with LSI Technology (Singapore) Pte. Ltd. We hold a 49% interest in SMP and manage all aspects of its manufacturing operations. In the year ended December 31, 2021 we purchased products, primarily wafers, from SMP for an aggregate of $54 million. We also reimbursed expenses of and contributed tools to SMP in that period, with an aggregate expense of $39 million.

C. Interests of Experts and Counsel.

Not applicable.

ITEM 8. FINANCIAL INFORMATION

A. Consolidated Financial Statements and Other Financial Information

Please see “Item 18. Financial Statements”. Other than as disclosed elsewhere in this Annual Report, no significant change has occurred since the date of the Annual Consolidated Financial Statements.

Legal Proceedings

On April 28, 2021, IBM sent us a letter alleging for the first time that we did not fulfill our obligations under the contracts we entered into with IBM in 2014 associated with our acquisition of IBM’s Microelectronics division. IBM asserted that we engaged in fraudulent misrepresentations during the underlying negotiations, and claimed we owed them $2.5 billion in damages and restitution. We believe, based on discussions with legal counsel, that we have meritorious defenses against IBM’s claims and on June 7, 2021, we filed a complaint with the New York State Supreme Court seeking a declaratory judgment that we did not breach the relevant contracts. IBM subsequently filed a complaint with the New York State Supreme Court on June 8, 2021. On September 14, 2021, the Court granted our motion to dismiss IBM’s claims of fraud, unjust enrichment and breach of the implied covenant of good faith and fair dealing. Our complaint seeking declaratory judgment was dismissed. The case will proceed based on IBM’s breach of contract and promissory estoppel claims. We do not currently anticipate this proceeding to have a material impact on our results of operations, financial condition, business and prospects.

In 2017, we entered into a set of agreements with a joint venture partner related to the establishment of a joint venture in China to establish and operate a greenfield wafer production site. The parties contemplated that the manufacturing operations would be implemented in two phases. Due to a variety of factors, including unanticipated market conditions, the manufacturing operations did not proceed as planned and the parties have been working to wind-down operations of the joint venture. On April 26, 2021, we received a letter from our joint venture partner requesting that we share in its alleged losses and related costs incurred to support the joint venture. We recorded a provision of $34 million in June 2021. We engaged in negotiations with our joint venture partner to settle the claims and on November 15, 2021 we resolved the claims consistent with the recorded provision.

In addition to the foregoing proceeding, from time to time, we become involved in legal proceedings arising in the ordinary course of our business, such as claims brought by our customers in connection with commercial disputes, product liability claims, employment claims made by our current or former employees or claims of infringement raised by intellectual property owners, in connection with the technology used in our manufacturing operations. Based on the information currently available to us, we believe that the outcome of these proceedings would not have a material impact on our results of operations, financial condition, business and prospects.

Dividends and Dividend Policy

We currently intend to retain all available funds and any future earnings to fund the development and growth of our business. Therefore, we do not anticipate declaring or paying any cash dividends to our shareholders in the foreseeable future. Any future determination as to the declaration and payment of dividends, if any, will be at the discretion of our board of directors, subject to applicable laws, and will depend on a number of factors, including our business prospects, results of operations, financial condition, cash requirements and availability, debt repayment obligations, capital expenditure needs, covenants in the agreements governing our current and future indebtedness, other contractual restrictions, industry trends and any other factors or considerations our board of directors may regard as relevant.

Under Cayman Islands law, dividends may be declared and paid only out of funds legally available therefor, namely out of either profit or distributable reserves, including our share premium account, and provided further that a dividend may not be paid if this would result in us being unable to pay our debts as they fall due in the ordinary course of business.

For additional information, see "Item 3. Key Information—Risk Factors—We do not expect to declare or pay any dividends on our ordinary shares for the foreseeable future."

B. Significant Changes

None.

ITEM 9. THE OFFER AND LISTING

A. Offer and Listing Details

On November 1, 2021, we completed our initial public offering. The principal trading market for our ordinary shares is the Nasdaq. Our ordinary shares have been listed on the Nasdaq under the symbol "GFS" since October 28, 2021.

B. Plan of Distribution

Not applicable.

C. Markets

See "—Offer and Listing Details" above.

D. Selling Shareholders

Not applicable.

E. Dilution

Not applicable.

F. Expenses of the Issue

Not applicable.

ITEM 10. ADDITIONAL INFORMATION

A. Share Capital

Not applicable.

B. Memorandum and Articles of Association

The information required to be disclosed under this item is incorporated by reference to Exhibit 2.3 to this Annual Report on Form 20-F.

Differences in Corporate Law

The Cayman Companies Act was modelled originally after similar laws in England and Wales but does not follow subsequent statutory enactments in England and Wales. In addition, the Cayman Companies Act differs from laws applicable to U.S. corporations and their shareholders. Set forth below is a summary of the significant differences between the provisions of the Cayman Companies Act applicable to us and the laws applicable to companies incorporated in the United States and their shareholders.

Mergers and Similar Arrangements

The Cayman Companies Act permits mergers or consolidations between two Cayman Islands companies, or between a Cayman Islands company and a company incorporated in another jurisdiction (provided that is facilitated by the laws of that other jurisdiction).

Where the merger or consolidation is between two Cayman Islands companies, the directors of each company must approve a written plan of merger or consolidation, which must then be authorized by (a) a special resolution of the shareholders of each company; and (b) such other authorization, if any, as may be specified in such constituent company's articles of association. No shareholder resolution is required for a merger between a parent company (i.e., a company that owns at least 90% of the issued shares of each class in a subsidiary company) and its subsidiary company. The consent of each holder of a fixed or floating security interest of a constituent company must be obtained, unless the court waives such requirement. If the Cayman Islands Registrar of Companies is satisfied that the requirements of the Cayman Companies Act (which includes certain other formalities) have been complied with, the Registrar of Companies will register the plan of merger or consolidation. Where the merger or consolidation involves a foreign company, the procedure is similar, save that with respect to the foreign company, the director of the Cayman Islands company is required to make a declaration to the effect that, having made due inquiry, the director is of the opinion that the requirements set out below have been met: (i) that the merger or consolidation is permitted or not prohibited by the constitutional documents of the foreign company and by the laws of the jurisdiction in which the foreign company is incorporated, and that those laws and any requirements of those constitutional documents have been or will be complied with; (ii) that no petition or other similar proceeding has been filed and remains outstanding or order made or resolution adopted to wind up or liquidate the company in any foreign jurisdictions; (iii) that no receiver, trustee, administrator or other similar person has been appointed in any jurisdiction and is acting in respect of the foreign company, its affairs or property or any part thereof; and (iv) that no scheme, order, compromise or similar arrangement has been entered into or made in any jurisdiction whereby the rights of creditors of the foreign company are and continue to be suspended or restricted.

Where the surviving company is the Cayman Islands company, the director of the Cayman Islands company is further required to make a declaration to the effect that, having made due inquiry, the director is of the opinion that the requirements set out below have been met: (i) that the foreign company is able to pay its debts as they fall due and that the merger or consolidated is bona fide and not intended to defraud unsecured creditors of the foreign company; (ii) that in respect of the transfer of any security interest granted by the foreign company to the surviving or consolidated company (a) consent or approval to the transfer has been obtained, released or waived; (b) the transfer is permitted by and has been approved in accordance with the constitutional documents of the foreign company; and (c) the laws of the jurisdiction of the foreign company with respect to the transfer have been or will be complied with; (iii) that the foreign company will, upon the merger or consolidation becoming effective, cease to be incorporated, registered or exist under the laws of the relevant foreign jurisdiction; and (iv) that there is no other reason why it would be against the public interest to permit the merger or consolidation.

Where the above procedures are adopted, the Cayman Companies Act provides for a right of dissenting shareholders to be paid a payment of the fair value of his shares upon their dissenting to the merger or consolidation if they follow a prescribed procedure. In essence, that procedure is as follows:

a. the shareholder must give the shareholder's written objection to the merger or consolidation to the constituent company before the vote on the merger or consolidation, including a statement that the shareholder proposes to demand payment for the shareholder's shares if the merger or consolidation is authorized by the vote;

b. within 20 days following the date on which the merger or consolidation is approved by the shareholders, the constituent company must give written notice to each shareholder who made a written objection;

c. a shareholder must within 20 days following receipt of such notice from the constituent company, give the constituent company a written notice of the shareholder's intention to dissent including, among other details, a demand for payment of the fair value of his shares;

d. within seven days following the date of the expiration of the period set out in paragraph (c) above or seven days following the date on which the plan of merger or consolidation is filed, whichever is later, the constituent company, the surviving company or the consolidated company must make a written offer to each dissenting shareholder to purchase the shareholder's shares at a price that the company determines is the fair value and if the company and the shareholder agree the price within 30 days following the date on which the offer was made, the company must pay the shareholder such amount; and

e. if the company and the shareholder fail to agree a price within such 30-day period, within 20 days following the date on which such 30-day period expires, the company (and any dissenting shareholder) must file a petition with the Grand Court of the Cayman Islands to determine the fair value and such petition must be accompanied by a list of the names and addresses of the dissenting shareholders with whom agreements as to the fair value of their shares have not been reached by the company. At the hearing of that petition, the court has the power to determine the fair value of the shares together with a fair rate of interest, if any, to be paid by the company upon the amount determined to be the fair value.

Any dissenting shareholder whose name appears on the list filed by the company may participate fully in all proceedings until the determination of fair value is reached. These rights of a dissenting shareholder are not available in certain circumstances, for example, to dissenters holding shares of any class in respect of which an open market exists on a recognized stock exchange or recognized interdealer quotation system at the relevant date or where the consideration for such shares to be contributed are shares of any company listed on a national securities exchange or shares of the surviving or consolidated company.

Moreover, Cayman Islands law also has separate statutory provisions that facilitate the reconstruction or amalgamation of companies. In certain circumstances, schemes of arrangement will generally be more suited for complex mergers or other transactions involving widely held companies, commonly referred to in the Cayman Islands as a "scheme of arrangement," which may be tantamount to a merger. In the event that a merger is sought pursuant to a scheme of arrangement (the procedures of which are more rigorous and take longer to complete than the procedures typically required to consummate a merger in the United States), the arrangement in question must be approved by a majority in number of each class of shareholders and creditors with whom the arrangement is to be made, and who must in addition represent three-fourths in value of each such class of shareholders or creditors, as the case may be, that are present and voting either in person or by proxy at a meeting, or meetings summoned for that purpose. The convening of the meetings and subsequently the terms of the arrangement must be sanctioned by the Grand Court of the Cayman Islands. While a dissenting shareholder would have the right to express to the court the view that the transaction should not be approved, the court can be expected to approve the arrangement if it satisfies itself that:

- we are not proposing to act illegally or beyond the scope of our corporate authority and the statutory provisions as to majority vote have been complied with;

- the shareholders have been fairly represented at the meeting in question;
- the arrangement is such as a businessman would reasonably approve; and
- the arrangement is not one that would more properly be sanctioned under some other provision of the Cayman Companies Act or that would amount to a "fraud on the minority."

If a scheme of arrangement or takeover offer (as described below) is approved, any dissenting shareholder would have no rights comparable to appraisal rights, which would otherwise ordinarily be available to dissenting shareholders of U.S. corporations, providing rights to receive payment in cash for the judicially determined value of the shares.

Our Memorandum and Articles of Association provide that until such time as the Mubadala Entities no longer beneficially own at least 30% of our outstanding ordinary shares, the board of directors shall not cause our company to merge or consolidate with another entity without the prior written approval of MTIC.

Squeeze-out Provisions

When a takeover offer is made and accepted by holders of 90% of the shares to whom the offer is made within four months, the offeror may, within a two-month period, require the holders of the remaining shares to transfer such shares on the terms of the offer. An objection may be made to the Grand Court of the Cayman Islands but is unlikely to succeed unless there is evidence of fraud, bad faith, collusion or inequitable treatment of the shareholders.

If the arrangement and reconstruction is thus approved, the dissenting shareholder would have no rights comparable to appraisal rights, which might otherwise ordinarily be available to dissenting shareholders of United States corporations and allow such dissenting shareholders to receive payment in cash for the judicially determined value of the shares. However, appraisal rights would also not be available to shareholders of a Delaware target in a business combination transaction if the shares of the target were listed on a national securities exchange and target shareholders receive only shares of a corporation which shares are also listed on a national securities exchange.

Further, transactions similar to a merger, reconstruction and/or an amalgamation may in some circumstances be achieved through other means to these statutory provisions, such as a share capital exchange, asset acquisition or control, through contractual arrangements, of an operating business.

Shareholders' Suits

A shareholder of a Delaware corporation has the right to bring a derivative action on behalf of the corporation if the shareholder was a shareholder of the corporation at the time of the transaction in question. Derivative actions have been brought in the Cayman Islands courts, and the Cayman Islands courts have confirmed the availability for such actions. In most cases, we will be the proper plaintiff in any claim based on a breach of duty owed to us, and a claim against (for example) our officers or directors usually may not be brought by a shareholder. However, based on English authorities, which would in all likelihood be of persuasive authority and be applied by a court in the Cayman Islands, exceptions to the foregoing principle apply in circumstances in which:

- a company is acting or proposing to act illegally or beyond the scope of its authority;
- the act complained of, although not beyond the scope of the authority, could be effected if duly authorized by more than the number of votes which have actually been obtained; and
- those who control the company are perpetrating a "fraud on the minority."

A shareholder may have a direct right of action against us where the individual rights of that shareholder have been infringed or are about to be infringed.

Our Memorandum and Articles of Association provide that each shareholder agrees to waive any claim or right of action he or she might have, whether individually or by or in the right of our Company, against any director or officer on account of any action taken by such director or officer, or the failure of such director to take any action in the performance of their duties with or for our company. However, such waiver shall not extend to any matter in respect of any dishonesty, actual fraud or willful default which may attach to such director or officer.

Maples and Calder (Cayman) LLP, our Cayman Islands counsel, is not aware of any reported class action suits having been brought in a Cayman Islands court. However, a class action suit could nonetheless be brought in the United States courts pursuant to an alleged violation of the securities laws of the United States.

Directors' Fiduciary Duties

As a matter of Cayman Islands law, a director of a Cayman Islands company is in the position of a fiduciary with respect to the company. Accordingly, directors and officers owe the following fiduciary duties:

- duty to act in good faith in what the director or officer believes to be in the best interests of the company as a whole;
- duty to exercise powers for the purposes for which those powers were conferred and not for a collateral purpose;
- directors should not improperly fetter the exercise of future discretion;
- duty to exercise powers fairly as between different sections of shareholders;
- duty to exercise independent judgment; and
- duty not to put themselves in a position in which there is a conflict between their duty to the company and their personal interests.

However, this obligation may be varied by the company's articles of association, which may permit a director to vote on a matter in which the director has a personal interest provided that the director has disclosed that nature of his interest to the board of directors. With respect to the duty of directors to avoid conflicts of interest, our Memorandum and Articles of Association vary from the applicable provisions of Cayman Islands law mentioned above by providing that a director must disclose the nature and extent of the director's interest in any contract or proposed contract or arrangement, and following such disclosure and subject to any separate requirement under applicable law or applicable listing rules, and unless disqualified by the chairman of the relevant meeting, such director may vote in respect of any transaction or arrangement in which the director is interested and may be counted in the quorum at the meeting.

In addition to the above, under Cayman Islands law, directors also owe a duty of care which is not fiduciary in nature. This duty has been defined as a requirement to act as a reasonably diligent person having both the general knowledge, skill and experience that may reasonably be expected of a person carrying out the same functions as are carried out by that director in relation to the company and the general knowledge skill and experience which that director has.

As set out above, directors have a duty not to put themselves in a position of conflict and this includes a duty not to engage in self-dealing, or to otherwise benefit as a result of their position. However, in some instances what would otherwise be a breach of this duty can be forgiven and/or authorized in advance by the shareholders provided that there is full disclosure by the directors. This can be done by way of permission granted in the Memorandum and Articles of Association or alternatively by shareholder approval at general meetings. The Memorandum and Articles of Association provide that, to the fullest extent permitted by applicable law: (i) no individual serving as a director or an officer shall have any duty, except and to the extent expressly assumed by contract, to refrain from engaging directly or indirectly in the same or similar business activities or lines of business as us; and (ii) we renounce any interest or expectancy in, or in being offered an opportunity to participate in, any potential transaction or matter which may be a corporate opportunity for any director or officer, on the one hand, and us, on the other. Accordingly, as a result of multiple business affiliations, our officers and directors may have similar legal obligations relating to presenting business opportunities meeting the above-listed criteria to multiple entities. In addition, conflicts of interest may arise when our board evaluates a particular business opportunity with respect to the above-listed criteria. However, under our Memorandum and Articles of Association, we renounced our interest in any corporate opportunity offered to any director or officer. Additionally, any such director or officer shall be permitted to pursue competing opportunities without any liability to us. Furthermore, each of our officers and directors may have pre-existing fiduciary obligations to other businesses of which they are officers or directors.

A director of a Cayman Islands company also owes to the company duties to exercise independent judgment in carrying out his functions and to exercise reasonable skill, care and diligence, which has both objective and subjective elements. Recent Cayman Islands case law confirmed that directors must exercise the care, skill and diligence that would be exercised by a reasonably diligent person having the general knowledge, skill and experience reasonably to be expected of a person acting as a director. Additionally, a director must exercise the knowledge, skill and experience which the director actually possesses.

A general notice may be given to the board of directors to the effect that:

- the director is a member or officer of a specified company or firm and is to be regarded as interested in any contract or arrangement which may after the date of the notice be made with that company or firm; or
- the director is to be regarded as interested in any contract or arrangement which may after the date of the notice to the board of directors be made with a specified person who is connected with the director, will be deemed sufficient declaration of interest.

This notice shall specify the nature of the interest in question. Following the disclosure being made pursuant to our Memorandum and Articles of Association and subject to any separate requirement under applicable law or applicable listing rules, a director may vote in respect of any transaction or arrangement in which the director is interested and may be counted in the quorum at the meeting.

In comparison, under Delaware corporate law, a director of a Delaware corporation has a fiduciary duty to the corporation and its shareholders. This duty has two components: the duty of care and the duty of loyalty. The duty of care requires that a director act in good faith, with the care that an ordinarily prudent person would exercise under similar circumstances. Under this duty, directors must inform themselves of, and disclose to shareholders, all material information reasonably available regarding a significant transaction. The duty of loyalty requires that directors act in a manner they reasonably believe to be in the best interests of the corporation. They must not use their corporate position for personal gain or advantage. This duty prohibits self-dealing by a director and mandates that the best interest of the corporation and its shareholders take precedence over any interest possessed by a director, officer or controlling shareholder and not shared by the shareholders generally. In general, actions of a director are presumed to have been made on an informed basis, in good faith and in the honest belief that the action taken was in the best interests of the corporation. However, this presumption may be rebutted by evidence of a breach of one of the fiduciary duties. Should such evidence be presented concerning a transaction by a director, a director must prove the procedural fairness of the transaction, and that the transaction was of fair value to the corporation.

Shareholder Action by Written Consent

Under the Delaware General Corporation Law, a corporation may eliminate the right of shareholders to act by written consent by amendment to its certificate of incorporation. Cayman Islands law and our Memorandum and Articles of Association provide that shareholders may approve corporate matters by way of a unanimous written resolution signed by or on behalf of each shareholder who would have been entitled to vote on such matter at a general meeting without a meeting being held.

Shareholder Proposals

Under the Delaware General Corporation Law, a shareholder has the right to put any proposal before the annual meeting of shareholders, provided it complies with the notice provisions in the governing documents. The Delaware General Corporation Law does not provide shareholders an express right to put any proposal before the annual meeting of shareholders, but Delaware corporations generally afford shareholders an opportunity to make proposals and nominations provided that they comply with the notice provisions in the certificate of incorporation or bylaws. A special meeting may be called by the board of directors or any other person authorized to do so in the governing documents, but shareholders may be precluded from calling special meetings.

The Cayman Companies Act does not provide shareholders with rights to requisition a general meeting, and does not provide shareholders with any right to put any proposal before a general meeting. However, these rights may be provided in a company's articles of association. Our Memorandum and Articles of Association provide that upon the requisition of one or more shareholders representing not less than one-third of the voting rights entitled to vote at general meetings, the board will convene an extraordinary general meeting and put the resolutions so requisitioned to a vote at such meeting. Our Memorandum and Articles of Association provide no other right to put any proposals before annual general meetings or extraordinary general meetings.

Cumulative Voting

Under the Delaware General Corporation Law, cumulative voting for elections of directors is not permitted unless the corporation's certificate of incorporation specifically provides for it. Cumulative voting potentially facilitates the representation of minority shareholders on a board of directors since it permits the minority shareholder to cast all the votes to which the shareholder is entitled on a single director, which increases the shareholder's voting power with respect to electing such director. As permitted under Cayman Islands law, our Memorandum and Articles of Association do not provide for cumulative voting. As a result, our shareholders are not afforded any less protections or rights on this issue than shareholders of a Delaware corporation.

Removal of Directors

Under the Delaware General Corporation Law, a director of a corporation may be removed with the approval of a majority of the outstanding shares entitled to vote, unless the certificate of incorporation provides otherwise. Under our Memorandum and Articles of Association, directors can be removed for cause by an affirmative vote of at least 75% of shareholders, provided that (1) Mubadala Designees may only be removed with or without cause by MTIC and (2) as long as the Mubadala Entities beneficially own in the aggregate at least 50% of the outstanding shares, directors other than the Mubadala Designees may be removed with or without cause by a majority of shareholders.

The notice of general meeting must contain a statement of the intention to remove the director and must be served on the director not less than ten calendar days before the meeting. The director is entitled to attend the meeting and be heard on the motion for his removal.

The office of a director will be vacated automatically if the director:

- becomes prohibited by law from being a director;
- becomes bankrupt or makes an arrangement or composition with the director's creditors;
- dies or is in the opinion of all the director's co-directors, incapable by reason of mental disorder of discharging his duties as director;

- resigns the director's office by notice to us; or
- has for more than six months been absent without permission of the directors from meetings of the board of directors held during that period, and the remaining directors resolve that the director's office be vacated.

Our Memorandum and Articles of Association provide that any vacancy on the board of directors in respect of a Mubadala Designee may only be filled by a decision of majority of the Mubadala Designees then in office, or if there are none, by MTIC.

Proceedings of the Board of Directors

Our business is to be managed and conducted by the board of directors. The quorum necessary for any meeting of our board of directors shall consist of a simple majority of the members provided that, for so long as the Mubadala Entities are entitled to nominate one Mubadala Designee to our board of directors, the presence of at least one Mubadala Designee shall be required on first call to a meeting of the board of directors.

Subject to the provisions of our Memorandum and Articles of Association, the board of directors may regulate its proceedings as they determine is appropriate.

Subject to the provisions of our Memorandum and Articles of Association, to any directions given by ordinary resolution of the shareholders and applicable listing rules, the board of directors may from time to time at its discretion exercise all of our powers, including, subject to the Cayman Companies Act, the power to issue debentures, bonds and other securities of the company, whether outright or as collateral security for any debt, liability or obligation of our company or of any third party.

Transactions with Interested Shareholders

The Delaware General Corporation Law contains a business combination statute applicable to Delaware corporations whereby, unless the corporation has specifically elected not to be governed by such statute by amendment to its certificate of incorporation, it is prohibited from engaging in certain business combinations with an "interested shareholder" for three years following the date that such person becomes an interested shareholder. An interested shareholder generally is a person or group who owns or owned 15% or more of the target's outstanding voting shares within the past three years. This has the effect of limiting the ability of a potential acquiror to make a two-tiered bid for the target in which all shareholders would not be treated equally. The statute does not apply if, among other things, prior to the date on which such shareholder becomes an interested shareholder, the board of directors approves either the business combination or the transaction which resulted in the person becoming an interested shareholder. This encourages any potential acquiror of a Delaware corporation to negotiate the terms of any acquisition transaction with the target's board of directors.

Cayman Islands law has no comparable statute. As a result, we cannot avail ourselves of the types of protections afforded by the Delaware business combination statute. However, although Cayman Islands law does not regulate transactions between a company and its significant shareholders, it does provide that the board of directors owes duties to ensure that these transactions are entered into bona fide in the best interests of the company and for a proper corporate purpose and, as noted above, a transaction may be subject to challenge if it has the effect of constituting a fraud on the minority shareholders.

Dissolution; Winding Up

Under the Delaware General Corporation Law, unless the board of directors approves the proposal to dissolve, dissolution must be approved by shareholders holding 100% of the total voting power of the corporation. If the dissolution is initiated by the board of directors it may be approved by a simple majority of the corporation's outstanding shares. Delaware law allows a Delaware corporation to include in its certificate of incorporation a supermajority voting requirement in connection with dissolutions initiated by the board. Under Cayman Islands law, a company may be wound up by either an order of the courts of the Cayman Islands or by a special resolution of its members or, if the company resolves by ordinary resolution that it be wound up because it is unable to pay its debts as they fall due. The court has authority to order winding up in a number of specified circumstances including where it is, in the opinion of the court, just and equitable to do so.

Under the Cayman Companies Act, we may be dissolved, liquidated or wound up by a special resolution of shareholders (requiring a two-thirds majority vote of those shareholders attending and voting at a quorate meeting). Our Memorandum and Articles of Association also give our board of directors the authority to petition the Cayman Islands Court for our wind up.

Variation of Rights of Shares

Under the Delaware General Corporation Law, a corporation may vary the rights of a class of shares with the approval of a majority of the outstanding shares of such class, unless the certificate of incorporation provides otherwise. Under Cayman Islands law and our Memorandum and Articles of Association, if our share capital is divided into more than one class of shares, we may vary the rights attached to any class without the consent of the holders of the issued shares of that class where such variation is considered by the directors not to have a material adverse effect upon such rights. Otherwise, all or any of the special rights attached to any class of shares may be varied with either the written consent of the beneficial holders of two-thirds of the issued shares of that class, or with the approval of a special resolution passed at a general meeting of the holders of the shares of that class.

The rights conferred upon the holders of the shares of any class issued with preferred or other rights shall not, subject to any rights or restrictions for the time being attached to the shares of that class, be deemed to be materially adversely affected by the creation, allotment or issuance of further shares (whether ranking in priority to, pari passu or subordinated to them) pursuant to the board of director's ability to issue preference shares. The rights of the beneficial holders of the issued shares shall not be deemed to be materially adversely varied by the creation, allotment or issuance of shares with preferred or other rights including, without limitation, the creation of shares with enhanced or weighted voting rights.

Amendment of Governing Documents

Under the Delaware General Corporation Law, a corporation's governing documents may be amended with the approval of a majority of the outstanding shares entitled to vote, unless the certificate of incorporation provides otherwise. Under Cayman Islands law, our Memorandum and Articles of Association generally (and save for certain amendments to share capital described in this section) may only be amended by special resolution of shareholders (requiring a two-thirds majority vote of those shareholders attending and voting at a quorate meeting).

Indemnification of Directors and Executive Officers and Limitation of Liability

The Cayman Companies Act does not limit the extent to which a company's articles of association may provide for indemnification of directors and officers, except to the extent that it may be held by the Cayman Islands courts to be contrary to public policy, such as to provide indemnification against civil fraud or the consequences of committing a crime. Our Memorandum and Articles of Association provide that we shall indemnify and hold harmless our directors and officers against any liability, action, proceeding, claim, demand, costs, damages or expenses, including legal expenses, whatsoever which they or any of them may incur as a result of any act or failure to act in carrying out their functions in connection with the company other than such liability (if any) that they may incur by reason of their own actual fraud, dishonesty, willful neglect or willful default. We will also bear the expenses of any reasonable attorneys' fees and other costs and expenses incurred in connection with the defense of any action, suit, proceeding or investigation involving such director or officer, upon such person's undertaking to repay any amounts paid, advanced, or reimbursed by us if it is ultimately determined that any such person shall not have been entitled to indemnification. No director or officer shall be liable to our company for any loss or damage incurred by our company as a result (whether direct or indirect) of the carrying out of their functions unless that liability arises through the actual fraud, dishonesty, willful neglect or willful default of such officer or director. This standard of conduct is generally the same as permitted under the Delaware General Corporation Law for a Delaware corporation.

Insofar as indemnification for liabilities arising under the Securities Act may be permitted to our directors, officers or persons controlling us under the foregoing provisions, we have been informed that, in the opinion of the SEC, this indemnification is against public policy as expressed in the Securities Act and is therefore unenforceable.

Enforcement of Civil Liabilities

We have been advised by Maples and Calder (Cayman) LLP, our Cayman Islands legal counsel, that the courts of the Cayman Islands are unlikely (i) to recognize or enforce against us judgments of courts of the United States predicated upon the civil liability provisions of the federal securities laws of the United States or any state in the United States; and (ii) in original actions brought in the Cayman Islands, to impose liabilities against us predicated upon the civil liability provisions of the federal securities laws of the United States or any state in the United States, so far as the liabilities imposed by those provisions are penal in nature. In those circumstances, although there is no statutory enforcement in the Cayman Islands of judgments obtained in the United States, the courts of the Cayman Islands will recognize and enforce a foreign money judgment of a foreign court of competent jurisdiction without retrial on the merits based on the principle that a judgment of a competent foreign court imposes upon the judgment debtor an obligation to pay the sum for which judgment has been given provided certain conditions are met. For a foreign judgment to be enforced in the Cayman Islands, such judgment must be final and conclusive and for a liquidated sum, and must not be in respect of taxes or a fine or penalty, inconsistent with a Cayman Islands judgment in respect of the same matter, impeachable on the grounds of fraud or obtained in a manner, or be of a kind the enforcement of which is, contrary to natural justice or the public policy of the Cayman Islands (awards of punitive or multiple damages may well be held to be contrary to public policy). A Cayman Islands court may stay enforcement proceedings if concurrent proceedings are being brought elsewhere.

C. Material Contracts

For information concerning certain contracts important to our business, see “Item 4. Information on the Company—B. Business Overview—Raw Materials” and “Item 7. Major Shareholders and Related Party Transactions—Related Party Transactions.”

2021 SGD EDB Loan—On September 3, 2021, the Company entered into a loan agreement with Singapore Economic Development Board (EDB), which provided loan facilities with maximum drawdown of $1,149 million (SGD1,541) at a fixed nominal interest rate of 1.4%. The difference between the nominal interest rate of the loan and the market interest rate for an equivalent loan is recognized as a government grant. The loan matures on June 1, 2041, with interest-only payments for the first 5 years and principal repayments commence thereafter, payable on a semi-annual basis.

Except as otherwise described in this Annual Report on Form 20-F (including the documents filed as exhibits to this Annual Report on Form 20-F), we have not entered into any material contracts other than in the ordinary course of business.

D. Exchange Controls

The Cayman Islands currently has no exchange control restrictions.

E. Taxation

Cayman Islands Tax Considerations

The following summary contains a description of certain Cayman Islands tax consequences of the acquisition, ownership and disposition of our ordinary shares, but it does not purport to be a comprehensive description of all the tax considerations that may be relevant to a decision to purchase our ordinary shares. The summary is based upon the tax laws of Cayman Islands and regulations thereunder as of the date hereof, which are subject to change. If you are considering the purchase of our ordinary shares, you should consult your own tax advisors concerning the particular tax consequences to you of the purchase, ownership and disposition of our ordinary shares, as well as the consequences to you arising under the laws of your country of citizenship, residence or domicile.

The following is a discussion of certain Cayman Islands income tax consequences of an investment in our ordinary shares. The discussion is a general summary of present law, which is subject to prospective and retroactive change. It is not intended to be tax advice, does not consider any investor's particular circumstances, and does not consider tax consequences other than those arising under Cayman Islands law.

Under Existing Cayman Islands Laws

Payments of dividends and capital in respect of our ordinary shares will not be subject to taxation in the Cayman Islands and no withholding will be required on the payment of interest and principal or a dividend or capital to any holder of our ordinary shares, as the case may be, nor will gains derived from the disposal of our ordinary shares be subject to Cayman Islands income or corporation tax. The Cayman Islands currently has no income, corporation or capital gains tax and no estate duty, inheritance tax or gift tax.

No stamp duty is payable in respect of the issue of ordinary shares or on an instrument of transfer in respect of an ordinary share.

We were incorporated under the laws of the Cayman Islands as an exempted company with limited liability and, as such, has received an undertaking from the Governor in Cabinet of the Cayman Islands in substantially the following form:

The Tax Concessions Law

(1999 Revision)

Undertaking as to Tax Concessions

In accordance with Section 6 of the Tax Concessions Law (1999 Revision) the Governor in Cabinet undertakes with GLOBALFOUNDRIES Inc.:

(a) that no Law which is hereafter enacted in the Islands imposing any tax to be levied on profits, income, gains or appreciations shall apply to us the company or our operations; and

(b) in addition, that no tax to be levied on profits, income, gains or appreciations or which is in the nature of estate duty or inheritance tax shall be payable:

   a. on or in respect of the shares, debentures or other obligations of the company; or

   b. by way of the withholding in whole or part, of any relevant payment as defined in Section 6(3) of the Tax Concessions Law (20181 Revision).

These concessions shall be for a period of TWENTY years from 21st day of October 2008.

United States Federal Income Taxation

The following is a summary of material U.S. federal income tax considerations that are likely to be relevant to the purchase, ownership and disposition of our ordinary shares by a U.S. Holder (as defined below).

This summary is based on provisions of the Code, and regulations, rulings and judicial interpretations thereof, in force as of the date hereof. Those authorities may be changed at any time, perhaps retroactively, so as to result in U.S. federal income tax consequences different from those summarized below.

This summary is not a comprehensive discussion of all of the tax considerations that may be relevant to a particular investor's decision to purchase, hold, or dispose of ordinary shares. In particular, this summary is directed only to U.S. Holders that hold ordinary shares as capital assets and does not address particular tax consequences that may be applicable to U.S. Holders who may be subject to special tax rules, such as banks, brokers or dealers in securities or currencies, traders in securities electing to mark to market, financial institutions, life insurance companies, tax-exempt entities, regulated investment companies, real estate investment trusts, entities or arrangements that are treated as partnerships for U.S. federal income tax purposes (or partners therein), holders that own or are treated as owning 10% or more of our stock by vote or value, persons holding ordinary shares as part of a hedging or conversion transaction or a straddle, persons whose functional currency is not the U.S. dollar, or persons holding our ordinary shares in connection with a trade or business outside the United States. Moreover, this summary does not address state, local or foreign taxes, the U.S. federal estate and gift taxes, the Medicare contribution tax applicable to net investment income of certain non-corporate U.S. Holders, or alternative minimum tax consequences of acquiring, holding or disposing of ordinary shares.

For purposes of this summary, a "U.S. Holder" is a beneficial owner of ordinary shares that is a citizen or resident of the United States or a U.S. domestic corporation or that otherwise is subject to U.S. federal income taxation on a net income basis in respect of such ordinary shares.

You should consult your own tax advisors about the consequences of the acquisition, ownership, and disposition of the ordinary shares, including the relevance to your particular situation of the considerations discussed below and any consequences arising under foreign, state, local or other tax laws.

Taxation of Distributions

Subject to the discussion below under "—Passive Foreign Investment Company Status," the gross amount of any distribution of cash or property with respect to our shares that is paid out of our current or accumulated earnings and profits (as determined for U.S. federal income tax purposes) will generally be includible in your taxable income as ordinary dividend income on the day on which you receive the dividend and will not be eligible for the dividends-received deduction allowed to corporations under the Code.

We do not expect to maintain calculations of our earnings and profits in accordance with U.S. federal income tax principles. U.S. Holders therefore should expect that distributions generally will be treated as dividends for U.S. federal income tax purposes.

Subject to certain exceptions for short-term positions, dividends received by an individual with respect to the shares will be subject to taxation at a preferential rate if the dividends are "qualified dividends." Dividends paid on the shares will be treated as qualified dividends if:

- the shares are readily tradable on an established securities market in the United States or we are eligible for the benefits of a comprehensive tax treaty with the United States that the U.S. Treasury determines is satisfactory for purposes of this provision and that includes an exchange of information program; and
- we were not, in the year prior to the year in which the dividend was paid, and are not, in the year in which the dividend is paid, a passive foreign investment company (a "PFIC").

The ordinary shares are listed on the Nasdaq, and will qualify as readily tradable on an established securities market in the United States so long as they are so listed. Based on our financial statements and relevant market and shareholder data, we believe that we were not treated as a PFIC for U.S. federal income tax purposes with respect to our 2020 and 2021 taxable years. In addition, based on our financial statements and our current expectations regarding the value and nature of our assets, the sources and nature of our income, and relevant market and shareholder data, we do not anticipate becoming a PFIC for our current taxable year or in the foreseeable future. Holders should consult their own tax advisors regarding the availability of the reduced dividend tax rate in light of their own particular circumstances.

Dividend distributions with respect to our shares generally will be treated as "passive category" income from sources outside the United States for purposes of determining a U.S. Holder's U.S. foreign tax credit limitation.

U.S. Holders that receive distributions of additional shares or rights to subscribe for shares as part of a pro rata distribution to all our shareholders generally will not be subject to U.S. federal income tax in respect of the distributions, unless the U.S. Holder has the right to receive cash or property, in which case the U.S. Holder will be treated as if it received cash equal to the fair market value of the distribution.

Taxation of Dispositions of Shares

Subject to the discussion below under "—Passive Foreign Investment Company Status," upon a sale, exchange or other taxable disposition of the shares, U.S. Holders will realize gain or loss for U.S. federal income tax purposes in an amount equal to the difference between the amount realized on the disposition and the U.S. Holder's adjusted tax basis in the shares, as determined in U.S. dollars as discussed below. Such gain or loss will be capital gain or loss, and will generally be long-term capital gain or loss if the shares have been held for more than one year. Long-term capital gain realized by a U.S. Holder that is an individual generally is subject to taxation at a preferential rate. The deductibility of capital losses is subject to limitations.

Gain, if any, realized by a U.S. Holder on the sale or other disposition of the shares generally will be treated as U.S. source income.

Passive Foreign Investment Company Status

Special U.S. tax rules apply to companies that are considered to be PFICs. We will be classified as a PFIC in a particular taxable year if either:

- 75% or more of our gross income for the taxable year is passive income; or
- the average percentage of the value of our assets that produce or are held for the production of passive income is at least 50%.

For this purpose, passive income generally includes dividends, interest, gains from certain commodities transactions, rents, royalties and the excess of gains over losses from the disposition of assets that produce passive income.

We believe, and this discussion assumes, that we were not a PFIC for our taxable year ending December 31, 2021 and that, based on the present composition of our income and assets and the manner in which we conduct our business, we will not be a PFIC in our current taxable year or in the foreseeable future. Whether we are a PFIC is a factual determination made annually, and our status could change depending, among other things, upon changes in the composition of our gross income and the relative quarterly average value of our assets. If we were a PFIC for any taxable year in which you hold ordinary shares, you generally would be subject to additional taxes on certain distributions and any gain realized from the sale or other taxable disposition of the ordinary shares regardless of whether we continued to be a PFIC in any subsequent year. You are encouraged to consult your own tax advisor as to our status as a PFIC, the tax consequences to you of such status, and the availability and desirability of making a mark-to-market election to mitigate the unfavorable rules mentioned in the preceding sentence.

Foreign Financial Asset Reporting

Individual U.S. Holders that own "specified foreign financial assets" with an aggregate value in excess of US$50,000 on the last day of the taxable year or US$75,000 at any time during the taxable year are generally required to file an information statement along with their tax returns, currently on Form 8938, with respect to such assets. "Specified foreign financial assets" include any financial accounts held at a non-U.S. financial institution, as well as securities issued by a non-U.S. issuer that are not held in accounts maintained by financial institutions. Higher reporting thresholds apply to certain individuals living abroad and to certain married individuals. Regulations extend this reporting requirement to certain entities that are treated as formed or availed of to hold direct or indirect interests in specified foreign financial assets based on objective criteria. U.S. Holders who fail to report the required information could be subject to substantial penalties. In addition, the statute of limitations for assessment of tax would be suspended, in whole or part. Prospective investors are encouraged to consult with their own tax advisors regarding the possible application of these rules, including the application of the rules to their particular circumstances.

Backup Withholding and Information Reporting

Dividends paid on, and proceeds from the sale or other disposition of, the shares to a U.S. taxpayer generally may be subject to the information reporting requirements of the Code and may be subject to backup withholding unless the U.S. taxpayer provides an accurate taxpayer identification number and makes any other required certification or otherwise establishes an exemption. Backup withholding is not an additional tax. The amount of any backup withholding from a payment to a U.S. taxpayer will be allowed as a refund or credit against the U.S. taxpayer's U.S. federal income tax liability, provided the required information is furnished to the U.S. Internal Revenue Service in a timely manner.

A holder that is not a U.S. taxpayer may be required to comply with certification and identification procedures in order to establish its exemption from information reporting and backup withholding.

F. Dividends and Paying Agents

Not applicable.

G. Statements by Experts

Not applicable.

H. Documents on Display

The SEC maintains a website www.sec.gov that contains reports and other information regarding registrants, including the Company, that file electronically with the SEC. Please note that copies of the Company's annual reports on Form 20-F and reports on Form 6-K filed by us can be inspected at the website set forth above and are also available on our website at www.gf.com (the website does not form part of this Annual Report on Form 20-F).

I. Subsidiary Information

Not applicable.

ITEM 11. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISKS

We are exposed to market risks in the ordinary course of our business. Market risk represents the risk of loss that may impact our financial position due to adverse changes in financial market prices and rates. Our market risk exposure is primarily the result of fluctuations in interest rates and foreign currency exchange rates. See Note 31 to our Annual Consolidated Financial Statements for additional details.

Foreign Currency Risk: As a result of foreign operations, we have costs, assets and liabilities denominated in foreign currencies, primarily the Euro, the Singapore dollar and the Japanese yen. Therefore, movements in exchange rates could cause foreign currency-denominated expenses to increase as a percentage of net revenue, which are denominated in U.S. dollars, affecting profitability and cash flows. We use foreign currency forward contracts to reduce exposure to foreign currency fluctuations. We also incur a certain portion of our interest expenses in Euro and Singapore Dollar, exposing us to exchange rate fluctuations between U.S. dollar and Euro and Singapore Dollar. We use cross currency swaps to reduce our exposure to variability from foreign exchange impacting cash flows arising from our foreign currency-denominated debt cash flows to the extent that it is practicable and cost effective to do so. As of December 31, 2021, we do not believe that a hypothetical 1,000 basis point increase or decrease in the relative value of the U.S. dollar to currencies other than the Euro Japanese Yen, and Singapore Dollar would have a material effect on our operating results.

Interest Rate Risks: Our exposure to market risk for changes in interest rates relates primarily to interest-earning financial assets and interest-bearing financial liabilities. Our interest-earning financial assets are mostly highly liquid investments and consist of primarily money market funds and time deposits. As these financial assets are mainly short-term in nature, our exposure to mark-to-market risk is limited. Our interest-bearing financial liabilities include fixed and floating rate loans and lease obligations. Floating rate loans bear interest at base rate or LIBOR or Euro Interbank Offered Rate ("EURIBOR") plus a premium, which is fixed. We use pay-fixed / receive-float interest rate swaps to protect against adverse fluctuations in interest rates and to reduce our exposure to variability in cash flows on our forecasted floating-rate debt facility to the extent that it is practicable and cost-effective to do so. As of December 31, 2021, a hypothetical 1,000 basis point change in interest rates would not have a material impact on our consolidated financial statements.

ITEM 12. DESCRIPTION OF SECURITIES OTHER THAN EQUITY SECURITIES

None.

PART II

ITEM 13. DEFAULTS, DIVIDEND ARREARAGES AND DELINQUENCIES

None.

ITEM 14. MATERIAL MODIFICATIONS TO THE RIGHTS OF SECURITY HOLDERS AND USE OF PROCEEDS

A. Material Modifications to Instruments

Not applicable.

B. Material Modifications to Rights

Not applicable.

C. Withdrawal or Substitution of Assets

Not applicable.

D. Change in Trustees or Paying Agents

Not applicable.

E. Use of Proceeds

On October 27, 2021, our registration statement on Form F-1, as amended (File No. 333-260003) was declared effective by the SEC in relation to our initial public offering (the “IPO”). Additionally, we participated in a concurrent private placement for 1,595,744 ordinary shares (the “Private Placement”). We issued and sold an aggregate 31,845,744 ordinary shares in our IPO and the Private Placement at the IPO price of $47.00 per share, after deducting underwriting commissions of $43 million and estimated offering expenses payable by us of $30 million, for approximately $1.4 billion of net proceeds.

Morgan Stanley & Co. LLC, BofA Securities, Inc. and J.P. Morgan Securities LLC were the representatives of the underwriters for our IPO. We did not receive any proceeds from the initial sale of 24,750,000 ordinary shares by Mubadala, the selling shareholder in our IPO, nor from the sale of 5,748,006 additional ordinary shares pursuant to the underwriters’ exercise of their option to purchase additional ordinary shares from Mubadala, for an aggregate price of approximately $1.4 billion. We paid affiliates of Mubadala, First Abu Dhabi Bank PJSC and Abu Dhabi Commercial Bank PJSC, a fee of $0.7 million and $0.7 million, respectively, for acting as our GCC Markets Advisors in connection with the IPO.

For the period from the closing of our IPO on November 1, 2021 to December 31, 2021, we used a portion of the net proceeds from our IPO and the Private Placement to support construction related to our fabrication facility in Singapore and capacity expansion projects in certain other facilities. We still intend to use the remainder of the proceeds from our IPO and Private Placement as disclosed in our registration statement on Form F-1.

ITEM 15. CONTROLS AND PROCEDURES

A. Disclosure Controls and Procedures.

Pursuant to Rule 13(a)-15(b) of the Securities Exchange Act of 1934, as amended (the “Exchange Act”), an evaluation was carried out under the supervision and with the participation of our principal executive and principal financial officers of the effectiveness of our disclosure controls and procedures. Based upon that evaluation, the Chief Executive Officer and Chief Financial Officer concluded that these disclosure controls and procedures were effective as of December 31, 2021.

B. Management's Annual Report on Internal Control over Financial Reporting

This Annual Report does not include a report of management's assessment regarding internal control over financial reporting or an attestation report of the company's independent registered public accounting firm due to a transition period established by rules of the SEC for newly public companies.

C. Attestation Report of the Independent Registered Public Accounting Firm.

This Annual Report does not include an attestation report of the Company's registered public accounting firm regarding internal control over financial reporting. Management's report is not subject to attestation by the Company's registered public accounting firm pursuant to rules of the SEC that permit the Company to provide only management's report in this Annual Report.

D. Changes in Internal Control over Financial Reporting.

This Annual Report does not include disclosure of changes in control over financial reporting due to a transition period established by rules of the SEC for newly public companies. During 2021, there was no material change to our internal control over financial reporting.

ITEM 16A. AUDIT COMMITTEE FINANCIAL EXPERT

We have one financial expert serving on our audit, risk and compliance committee as of the date hereof. Our board of directors has determined that Jack Lazar qualifies as an "audit committee financial expert" as defined in SEC rules and satisfies the financial sophistication requirements of the Nasdaq. In addition, our board of directors has determined that Jack Lazar is "independent" for audit, risk and compliance committee purposes as that term is defined in the rules of the SEC and the applicable rules of the Nasdaq.

ITEM 16B. CODE OF ETHICS

Our board has adopted a code of conduct that applies to all of our directors, officers and employees (the "Code of Conduct"). Our board has also adopted a code of ethics applicable to our executive officers and senior finance executives (the "Code of Ethics"), who must also comply with the Code of Conduct. Both the Code of Conduct and the Code of Ethics are available on our website: www.gf.com. We intend to disclose any amendments to the Code of Ethics, and any waivers of the Code of Ethics or the Code of Conduct for our directors, executive officers and senior finance executives, on our website to the extent required by applicable U.S. federal securities laws and the corporate governance rules of the Nasdaq.

ITEM 16C. PRINCIPAL ACCOUNTANT FEES AND SERVICES

The following table sets forth the fees billed to us by our independent registered public accounting firms during the years ended December 31, 2020 and 2021. Our independent registered public accounting firm was KPMG LLP (PCAOB ID 1051) for the year ended December 31, 2021. Our independent registered public accounting firm was Ernst & Young LLP (PCAOB ID 42) for the year ended December 31, 2020.

	2020	2021
	(dollars in thousands)	
Audit fees	$4,427	$4,900
Tax fees	195	152
All other fees	—	29
Total	**$4,622**	**$5,081**

Audit fees

Audit fees are fees billed for professional services rendered by the principal accountant for the audit of the registrant's annual combined financial statements or services that are normally provided by the accountant in connection with statutory and regulatory filings or engagements for those fiscal years. It includes the audit of our financial statements, interim reviews and other services that generally only the independent accountant reasonably can provide, such as comfort letters, statutory audits, consents and assistance with and review of documents filed with the SEC.

Tax fees

Tax fees are fees billed for professional services for tax compliance, tax advice and tax planning.

All other fees

All other fees are fees billed for payroll processing, human resources administration and immigration services.

Audit Committee Pre-Approval Policies and Procedures

In accordance with applicable requirements of the U.S. Sarbanes-Oxley Act of 2002 and rules issued by the SEC, the policy of our audit committee is to pre-approve all audit and non-audit services provided by KPMG LLP since their appointment as the independent registered public accounting firm, including audit-related services, tax services and other services.

ITEM 16D. EXEMPTIONS FROM THE LISTING STANDARDS FOR AUDIT COMMITTEES

We are relying on the exemption under Rule 10A-3(b)(1)(iv)(A)(2) of the Exchange Act, which currently exempts one of the members of our audit committee from the independence requirements of paragraph (b)(1)(ii) of Rule 10A-3. Our audit, risk and compliance committee currently comprises three directors, of whom two are independent directors.

We do not believe that our reliance on the temporary exemption permitted by Rule 10A-3(b)(1)(iv)(A)(2) materially adversely affects the ability of our audit, risk and compliance committee to act independently or to satisfy the requirements of Rule 10A-3 under the Exchange Act. Our audit, risk and compliance committee will consist solely of independent directors within one year of our initial public offering.

ITEM 16E. PURCHASES OF EQUITY SECURITIES BY THE ISSUER AND AFFILIATED PURCHASERS

There were no purchases of equity securities by us or by any affiliated purchaser during the period covered by this Annual Report.

ITEM 16F. CHANGE IN REGISTRANT'S CERTIFYING ACCOUNTANT

None.

ITEM 16G. CORPORATE GOVERNANCE

We are a "foreign private issuer" under the securities laws of the United States and the rules of Nasdaq. Nasdaq listing rules include certain accommodations in the corporate governance requirements that allow foreign private issuers, such as us, to follow "home country" corporate governance practices in lieu of the otherwise applicable corporate governance standards of the Nasdaq. The application of such exceptions requires that we disclose each Nasdaq corporate governance standard that we do not follow and describe the Cayman Islands corporate governance practices we do follow in lieu of the relevant Nasdaq corporate governance standard. We currently follow Cayman Islands corporate governance practices in lieu of the corporate governance requirements of the Nasdaq in respect of the following:

- the majority independent director requirement under Section 5605(b)(1) of Nasdaq listing rules;
- the requirement under Section 5605(d) of Nasdaq listing rules that a compensation committee comprised solely of independent directors governed by a compensation committee charter oversee executive compensation;
- the requirement under Section 5605(e) of Nasdaq listing rules that director nominees be selected or recommended for selection by either a majority of the independent directors or a nominations committee comprised solely of independent directors;
- the Shareholder Approval Requirements under Section 5635 of the Nasdaq listing rules; and
- the requirement under Section 5605(b)(2) of Nasdaq listing rules that the independent directors have regularly scheduled meetings with only the independent directors present.

ITEM 16H. MINE SAFETY DISCLOSURE

Not applicable.

ITEM 16I. DISCLOSURE REGARDING FOREIGN JURISDICTIONS THAT PREVENT INSPECTIONS

Not applicable.

PART III

ITEM 17. FINANCIAL STATEMENTS

Not applicable.

ITEM 18. FINANCIAL STATEMENTS

See pages F-1 through F-64, incorporated herein by reference.

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INDEX TO CONSOLIDATED FINANCIAL STATEMENTS

Consolidated Financial Statements of Global Foundries Inc. and Subsidiaries

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the Shareholders and Board of Directors
GLOBALFOUNDRIES Inc.:

Opinion on the Consolidated Financial Statements

We have audited the accompanying consolidated statements of financial position of GLOBALFOUNDRIES Inc. and subsidiaries (the Company) as of December 31, 2021, the related consolidated statements of operations, other comprehensive loss, changes in equity, and cash flows for the year then ended, and the related notes (collectively, the consolidated financial statements). In our opinion, the consolidated financial statements present fairly, in all material respects, the financial position of the Company as of December 31, 2021, and the results of its operations and its cash flows for the year then ended, in conformity with International Financial Reporting Standards issued by the International Accounting Standards Board.

Basis for Opinion

These consolidated financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on the consolidated financial statements based on our audit. We are a public accounting firm registered with the Public Company Accounting Oversight Board (United States) (PCAOB) and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audits in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the consolidated financial statements are free of material misstatement, whether due to error or fraud. Our audit included performing procedures to assess the risks of material misstatement of the consolidated financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the consolidated financial statements. Our audit also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the consolidated financial statements. We believe that our audit provide a reasonable basis for our opinion.

Critical Audit Matter

The critical audit matter communicated below is a matter arising from the current period audit of the consolidated financial statements that was communicated or required to be communicated to the audit committee and that: (1) relates to accounts or disclosures that are material to the consolidated financial statements and (2) involved our especially challenging, subjective, or complex judgments. The communication of a critical audit matter does not alter in any way our opinion on the consolidated financial statements, taken as a whole, and we are not, by communicating the critical audit matter below, providing separate opinion on the critical audit matter or on the accounts or disclosures to which it relates.

Determination of Useful Life of 300mm Production Equipment

As discussed in Note 3 to the consolidated financial statements, the Company revised the estimated useful life of certain production equipment and machinery from a range of five to eight years to ten years. The impact of the revision on depreciation expense for the year ended December 31, 2021 amounted to $628 million, which included a revision of 300mm production equipment useful life from eight to ten years. Management estimated the useful life of production equipment based on production equipment current use, historical age patterns, and future plans and technology roadmaps, as well as an analytical of industry trends and practices.

We identified the determination of useful life of 300mm production equipment as critical audit matter. To evaluate management's judgement in developing the revised useful life of ten years for the 300mm production equipment, we used significant auditor judgement, subjectivity and effort in performing procedures to evaluate the reasonableness of the significant assumptions used in determining the useful life.

The following are the primary procedures we performed to address this critical audit matter. We evaluated the design of certain internal controls related to the determination of the useful life of 300mm production equipment and related data used for that determination. We also tested management's process for developing the ten year useful life and assessed the reasonableness of the significant assumptions used by management, which included (1) testing the completeness, accuracy, and relevance of the underlying data used in management's historical length of service assessment, (2) assessing the Company's future business strategy, technology roadmaps, and planned capital expenditures as compared to historical strategies and current industry practices, and (3) evaluating the completeness, accuracy, and relevance of the useful lives of peer companies used in management's assessment.

/s/ KPMG LLP

We have served as the Company's auditor since 2021.

Singapore, Singapore
March 31, 2022

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the Shareholder and the Board of Directors of GLOBALFOUNDRIES Inc.

Opinion on the Financial Statements

We have audited the accompanying consolidated statements of financial position of GLOBALFOUNDRIES Inc. (the "Company") as of December 31, 2020, the related consolidated statements of operations and comprehensive loss, changes in equity and cash flows for each of the two years in the period ended December 31, 2020, and the related notes (collectively referred to as the consolidated financial statements). In our opinion, the consolidated financial statements present fairly, in all material respects, the financial position of the Company at December 31, 2020, and the results of its operations and its cash flows for each of the two years in the period ended December 31, 2020, in conformity with International Financial Reporting Standards issued by the International Accounting Standards Board.

Basis for Opinion

These financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on the Company's financial statements based on our audits. We are a public accounting firm registered with the Public Company Accounting Oversight Board (United States) ("PCAOB") and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audits in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement, whether due to error or fraud. Our audits included performing procedures to assess the risks of material misstatement of the financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the financial statements. Our audits also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the financial statements. We believe that our audits provide a reasonable basis for our opinion.

/s/ Ernst & Young LLP

We have served as the Company's auditor since 2016.

San Jose, California

August 6, 2021

GLOBALFOUNDRIES INC.
CONSOLIDATED STATEMENTS OF OPERATIONS
(Dollars in thousands, except share amounts)

	Notes	For the year ended December 31, 2019	2020	2021
Net revenue	4	$ 5,812,788	$ 4,850,505	$ 6,585,079
Cost of revenue	5	6,345,032	5,563,225	5,571,810
Gross (loss) profit		**(532,244)**	**(712,720)**	**1,013,269**
Research and development expenses	6	582,974	475,769	478,161
Selling, general and administrative expenses	7	445,628	444,860	594,920
Operating expenses		**1,028,602**	**920,629**	**1,073,081**
Impairment charges	8	63,950	22,672	—
Other operating charges		**63,950**	**22,672**	**—**
Loss from operations		**(1,624,796)**	**(1,656,021)**	**(59,812)**
Finance income		11,379	3,098	5,703
Finance expenses	9	(230,176)	(154,387)	(113,705)
Share of profit of joint ventures and associates	14	7,859	3,876	3,631
Gain on sale of a fabrication facility and application specific integrated circuit business	10	614,554	—	—
Other income (expense), net	11	74,055	440,307	(11,481)
Loss before income taxes		**(1,147,125)**	**(1,363,127)**	**(175,664)**
Income tax (expense) benefit	15	(224,061)	12,267	(78,267)
Net loss for the year		**$ (1,371,186)**	**$ (1,350,860)**	**$ (253,931)**
Attributable to:				
Shareholder of GLOBALFOUNDRIES INC.		$ (1,371,186)	$ (1,347,571)	$ (250,313)
Non-controlling interest		—	(3,289)	(3,618)
Net loss for the year		$ (1,371,186)	$ (1,350,860)	$ (253,931)
Net loss per share attributable to the equity holders of the Company:				
Basic and diluted weighted average common shares outstanding		504,003,126	500,000,000	505,758,409
Basic and diluted loss per share	28	$ (2.72)	$ (2.70)	$ (0.49)
Net loss per share		**$ (2.72)**	**$ (2.70)**	**$ (0.49)**

GLOBALFOUNDRIES INC.
CONSOLIDATED STATEMENTS OF OTHER COMPREHENSIVE LOSS
(Dollars in thousands, except share amounts)

	Notes	For the year ended December 31, 2019	2020	2021
Net loss for the year		**$(1,371,186)**	**$(1,350,860)**	**$(253,931)**
Attributable to:				
Shareholder of GLOBALFOUNDRIES INC.		$(1,371,186)	$(1,347,571)	$(250,313)
Non-controlling interest		—	(3,289)	(3,618)
Net loss for the year		$(1,371,186)	$(1,350,860)	$(253,931)
Other comprehensive income (loss), net of tax:				
Items that may be reclassified subsequently to profit or loss:				
Share of foreign exchange fluctuation reserve of joint ventures		—	—	(11,993)
Effective portion of changes in the fair value of cash flow hedges	18	$ 12,351	$ (22,802)	$ (45,132)
Income tax effect	15	(1,081)	(2,106)	2,788
		11,270	(24,908)	(54,337)
Items that will not be reclassified subsequently to profit or loss:				
Remeasurement of existing equity interests	14	—	6,553	—
Share of foreign exchange fluctuation reserve of joint ventures and associates		(566)	13,890	—
		$ 10,704	$ (4,465)	$ (54,337)
Total other comprehensive income (loss)				
Attributable to:				
Shareholder of GLOBALFOUNDRIES INC.		$ 10,704	$ (9,165)	$ (50,433)
Non-controlling interest		—	4,700	(3,904)
Total other comprehensive income (loss) for the year		**$ 10,704**	**$ (4,465)**	**$ (54,337)**
Attributable to:				
Shareholder of GLOBALFOUNDRIES INC.		$(1,360,482)	$(1,356,736)	$(300,746)
Non-controlling interest		—	1,411	(7,522)
Total comprehensive loss for the year		**$(1,360,482)**	**$(1,355,325)**	**$(308,268)**

GLOBALFOUNDRIES INC.
CONSOLIDATED STATEMENTS OF FINANCIAL POSITION
(Dollars in thousands)

	Notes	As of December 31, 2020	As of December 31, 2021
ASSETS			
Noncurrent assets:			
Property, plant and equipment, net	12	$ 8,226,202	$ 8,712,978
Goodwill and intangible assets, net	13	547,942	376,749
Investments in joint ventures	14	36,702	37,938
Other noncurrent financial assets	18	34,054	2,317
Deferred tax assets	15	443,566	352,770
Restricted cash	19	1,583	1,155
Receivables, prepayments and other assets	16	46,443	253,511
Total noncurrent assets		**9,334,909**	**9,736,263**
Current assets:			
Inventories	17	919,519	1,121,251
Other current financial assets	18	50,534	23,183
Receivables from government grants		51,660	45,806
Receivables, prepayments and other assets	16	1,056,934	1,161,912
Restricted cash	19	34,071	—
Cash and cash equivalents	19	908,077	2,939,187
Total current assets		**2,986,724**	**5,291,339**
Total assets		**$ 12,321,633**	**$ 15,027,602**
EQUITY AND LIABILITIES			
Equity:			
Share capital			
Ordinary shares, $0.02 par value, 500,000 thousand and 531,846 thousand shares issued and outstanding as of December 31, 2020 and 2021, respectively	20	$ 10,000	$ 10,637
Additional paid-in capital	20	11,707,515	23,487,463
Loan from shareholder	29	10,680,687	—
Accumulated deficit		(15,218,509)	(15,468,822)
Accumulated other comprehensive loss		(3,319)	(53,752)
Equity attributable to the shareholder of GLOBALFOUNDRIES INC.		**7,176,374**	**7,975,526**
Non-controlling interest		65,128	57,606
Total equity		**7,241,502**	**8,033,132**
Noncurrent liabilities:			
Noncurrent portion of long-term debt	21	1,956,148	1,715,833
Noncurrent portion of lease obligations	22	333,242	290,547
Other noncurrent liabilities	25	412,666	1,445,324
Provisions	23	353,308	232,536
Noncurrent portion of deferred income from government grants	24	128,697	147,371
Total noncurrent liabilities		**3,184,061**	**3,831,611**
Current liabilities:			
Current portion of long-term debt	21	381,807	297,266
Current portion of lease obligations	22	131,270	134,971
Current portion of deferred income from government grants	24	40,505	28,926
Other current financial liabilities	18	1,318	48,593
Trade payables and other current liabilities	25	1,342,488	2,585,750
Provisions	23	—	115,946
Income tax payable	15	30,609	13,883.873
Total current liabilities		**1,896,070**	**3,162,859**
Total liabilities		**5,080,131**	**6,994,470**
Total liabilities and equity		**$ 12,321,633**	**$ 15,027,602**

GLOBALFOUNDRIES INC.
CONSOLIDATED STATEMENTS OF CHANGES IN EQUITY
(Dollars in thousands)

	Equity Attributable to Shareholder of GLOBALFOUNDRIES INC.									
	Common Share		Additional Paid-In Capital	Loan from Shareholder	Accumulated Deficit	Hedging Reserve	Foreign Currency Translation Reserve	Total	Non-controlling Interest	Total Equity
	Shares	Amount								
As of December 31, 2018	576,902,150	$11,538	$11,704,997	$ 11,567,687	$(12,499,752)	$ (1,303)	$ (3,555)	$10,779,612	$ —	$10,779,612
Surrender of issued shares	(76,902,150)	(1,538)	1,538	—	—	—	—	—	—	—
Repayment of loan from shareholder	—	—	—	(400,000)	—	—	—	(400,000)	—	(400,000)
Net loss for the year	—	—	—	—	(1,371,186)	—	—	(1,371,186)	—	(1,371,186)
Other comprehensive loss	—	—	—	—	—	11,270	(566)	10,704	—	10,704
As of December 31, 2019	500,000,000	$10,000	$11,706,535	$ 11,167,687	$(13,870,938)	$ 9,967	$ (4,121)	$ 9,019,130	$ —	$ 9,019,130
Share-based payments	—	—	980	—	—	—	—	980	—	980
Acquisition of subsidiaries	—	—	—	—	—	—	—	—	63,717	63,717
Repayment of loan from shareholder	—	—	—	(487,000)	—	—	—	(487,000)	—	(487,000)
Net loss for the year	—	—	—	—	(1,347,571)	—	—	(1,347,571)	(3,289)	(1,350,860)
Other comprehensive loss	—	—	—	—	—	(24,908)	15,743	(9,165)	4,700	(4,465)
As of December 31, 2020	500,000,000	$10,000	$11,707,515	$ 10,680,687	$(15,218,509)	$(14,941)	$11,622	$ 7,176,374	$65,128	$ 7,241,502
Proceeds from issuance of equity instruments	31,845,744	637	1,443,859	—	—	—	—	1,444,496	—	1,444,496
Share-based payments	—	—	223,402	—	—	—	—	223,402	—	223,402
Repayment of loan from shareholder	—	—	—	(568,000)	—	—	—	(568,000)	—	(568,000)
Conversion of loan from shareholder	—	—	10,112,687	(10,112,687)	—	—	—	—	—	—
Net loss for the year	—	—	—	—	(250,313)	—	—	(250,313)	(3,618)	(253,931)
Other comprehensive loss	—	—	—	—	—	(42,344)	(8,089)	(50,433)	(3,904)	(54,337)
As of December 31, 2021	531,845,744	$10,637	$23,487,463	$ —	$(15,468,822)	$(57,285)	$ 3,533	$ 7,975,526	$57,606	$ 8,033,132

GLOBALFOUNDRIES INC.
CONSOLIDATED STATEMENTS OF CASH FLOWS
(Dollars in thousands)

	Notes	Years Ended December 31, 2019	2020	2021
CASH FLOWS FROM OPERATING ACTIVITIES				
Net loss		$(1,371,186)	$(1,350,860)	$ (253,931)
Adjustments to reconcile net loss to net cash provided by operating activities:				
Depreciation	12	2,435,899	2,238,405	1,411,418
Amortization of intangible assets	13	242,325	284,109	207,426
Share-based payments	30	—	980	223,402
Impairment charges	8	63,950	22,672	—
Finance income		(11,379)	(3,098)	(5,703)
Finance expenses	9	230,176	154,387	113,705
Amortization of deferred income from government grants	24	(156,793)	(51,043)	(33,366)
Deferred income taxes	15	214,272	(37,749)	92,994
Gain on disposal of property, plant and equipment	12	(88,319)	(79,266)	(19,103)
Gain on sale of fabrication facilities	10	(614,554)	—	—
Other operating activities		20,232	(62,146)	(20,853)
Change in assets and liabilities:				
Receivables, prepayments and other assets	16	(143,710)	752,862	(387,448)
Inventories	17	(42,325)	(559,876)	(201,732)
Trade and other payables	25	(96,868)	(154,514)	1,828,946
Income tax payable	15	(1,942)	20,920	(9,954)
		679,778	1,175,783	2,945,801
Interest received		15,196	3,886	700
Interest paid	9	(196,351)	(145,528)	(100,693)
Income tax paid	15	(1,804)	(28,244)	(6,778)
Net cash provided by operating activities		**496,819**	**1,005,897**	**2,839,030**
CASH FLOWS FROM INVESTING ACTIVITIES				
Purchases of property, plant and equipment	12	(587,934)	(449,288)	(1,661,565)
Purchases of intangible assets	13	(184,884)	(143,200)	(104,771)
Loans issued to related parties	25, 29	(22,386)	—	—
Advances and proceeds from sale of property, plant and equipment and intangible assets	12, 13	252,158	109,052	323,665
Proceeds from sale of fabrication facilities and ASIC business	10	832,627	110,851	—
Proceeds from settlement of loans issued to joint ventures and associates	29	49,568	—	—
Other investing activities		4,600	6,420	(7,615)
Net cash provided by (used in) investing activities		**343,749**	**(366,165)**	**(1,450,286)**
CASH FLOWS FROM FINANCING ACTIVITIES				
Proceeds from issuance of equity instruments		—	—	1,444,496
Repayments of shareholder loan	29	(400,000)	(487,000)	(568,000)
Repayments of borrowings from shareholder	21, 29	(246,984)	(111,516)	—
Net proceeds from borrowings	21	2,814,827	2,800,789	617,064
Repayments of debt and finance lease obligations	21, 22	(3,158,861)	(3,245,594)	(960,451)
Proceeds from government grants	19	335,222	311,833	82,832
Decrease (increase) in restricted cash	19	(28,036)	(1,255)	34,499
Net cash (used in) provided by financing activities		**(683,832)**	**(732,743)**	**650,440**
Effect of exchange rate changes on cash and cash equivalents	31	(3,399)	3,773	(8,074)
Net increase (decrease) in cash and cash equivalents	19	153,337	(89,238)	2,031,110
Cash and cash equivalents at the beginning of the year	19	843,978	997,315	908,077
Cash and cash equivalents at the end of the year		**$ 997,315**	**$ 908,077**	**$ 2,939,187**
Noncash investing and financing activities:				
Amounts payable for property, plant and equipment		$ 19,644	$ 201,745	$ 427,772
Property, plant and equipment acquired through lease		$ 74,592	$ 8,933	$ 97,298
Amounts payable for intangible assets		$ 81,024	$ 159,295	$ 89,039

1. Organization

GLOBALFOUNDRIES Inc. ("GLOBALFOUNDRIES") is an exempted company with limited liability incorporated under the laws of the Cayman Islands. The address of GLOBALFOUNDRIES' registered office is P.O. Box 309, Ugland House, Grand Cayman, KY1-1104 Cayman Islands.

GLOBALFOUNDRIES and its subsidiaries (together referred to as the "Company") is one of the world's largest pure-play semiconductor foundries and offer a full range of mainstream wafer fabrication services and technologies. The Company manufactures a broad range of semiconductor devices, including microprocessors, mobile application processors, baseband processors, network processors, radio frequency modems, microcontrollers, and power management units.

GLOBALFOUNDRIES is a majority owned subsidiary of Mubadala Technology Investments LLC ("Shareholder") through its subsidiaries, Mubadala Technology Investment Company and MTI International Investment Company LLC. Mubadala Technology Investments LLC is a subsidiary of Mamoura Diversified Global Holding PJSC ("MDGH"). Mubadala Investment Company PJSC ("MIC") is the ultimate parent company. See Note 29 for further discussion of the Company's related party disclosures.

On April 15, 2019, the Company entered into an agreement with Semiconductor Components Industries, LLC ("ON Semiconductor") to sell the Company's facility in East Fishkill, New York for $400,000, including buildings, facilities, certain equipment, inventories, certain contracts, furniture, employees and $30,000 for a technology license. Under the agreement the Company will manufacture 300mm wafers for ON Semiconductor until the end of 2022 for additional fees, allowing ON Semiconductor to increase its 300mm production at the East Fishkill fab over several years. Under the agreement, ON Semiconductor committed to minimum fixed cost payments in each year from 2020 through 2022. The agreement also includes a technology transfer and development agreement and a technology license agreement. The Company received $100,000 and recognized license revenue of $30,000 for the technology license in 2019. On October 1, 2020, the Company entered into an amendment to the agreement with ON Semiconductor Corporation. On Semiconductor Corporation agreed to pay the Company an additional $100,000 non-refundable deposit on the purchase price in exchange for a reduction in the minimum fixed cost commitment for 2021. On October 5, 2020, the Company received $100,000 and recorded it as a deposit received. The Company continues to operate the facility until the sale is closed.

The consolidated financial statements were authorized by the GLOBALFOUNDRIES' Board of Directors on March 30, 2022 to be issued and subsequent events have been evaluated for their potential effect on the consolidated financial statements through March 31, 2022.

2. Basis of Preparation

Statement of Compliance—The consolidated financial statements of the Company have been prepared in accordance with International Financial Reporting Standards ("IFRS") as issued by the International Accounting Standards Board. The consolidated financial statements comprise the financial statements of GLOBALFOUNDRIES and its subsidiaries.

Basis of Measurement—These financial statements have been prepared on the historical cost basis except as otherwise described in the notes below.

Functional and Presentation Currency—The consolidated financial statements are presented in United States (U.S.) dollars ($), which is the Company's functional and presentation currency.

Foreign Currency Translation—Assets and liabilities of foreign operations having a functional currency other than the U.S. dollar are translated at the rate of exchange prevailing at the reporting date and revenue and expenses at the rate of exchange prevailing at the dates of the transactions during the period. Gains or losses on translation of foreign subsidiaries are included in other comprehensive income (loss).

In preparing the consolidated financial statements of the company, foreign currency-denominated monetary assets and liabilities are translated into the functional currency using the closing rate at the applicable consolidated statement of financial position dates. Non-monetary assets and liabilities, denominated in a foreign currency and measured at fair value, are translated at the rate of exchange prevailing at the date when the fair value was determined and non-monetary assets measured at historical cost are translated at the historical rate. Revenue and expenses are measured in the functional currency at the rates of exchange prevailing at the dates of the transactions with gains or losses included in income.

Basis of Consolidation—The consolidated financial statements comprise the financial statements of GLOBALFOUNDRIES and its subsidiaries. Subsidiaries are fully consolidated from the date of acquisition, being the date on which GLOBALFOUNDRIES obtains control, and continue to be consolidated until the date when such control ceases. All intercompany transactions, balances, income and expenses are eliminated in full on consolidation. Wholly owned subsidiaries and controlled entities included in these consolidated financial statements are disclosed in Note 14.

Control is achieved when the Company is exposed, or has rights, to variable returns from its involvement with the subsidiary and has the ability to affect those returns through its power over the subsidiary. Specifically, the Company controls a subsidiary if, and only if, the Company (a) has a power over the subsidiary, (b) is exposed, or has rights, to variable returns from its involvement with subsidiary, and (c) has the ability to use the power to affect its returns.

Profit or loss and each component of other comprehensive income (loss) ("OCI") are attributed to the equity holder of the Company and to the non-controlling interests.

A change in the ownership interest of a subsidiary, without a loss of control, is accounted for as an equity transaction.

If the Company loses control over a subsidiary, it derecognizes the related assets (including goodwill), liabilities, non-controlling interest and other components of equity, while any resulting gain or loss is recognized in profit or loss. Any investment retained is recognized at fair value.

Reclassification—Certain prior period amounts have been reclassified to conform to the current period presentation.

3. Summary of Accounting Policies, Judgements, Estimates and Assumptions

Business Combinations—Business combinations are accounted for using the acquisition method. The cost of an acquisition is measured as the aggregate of the consideration transferred, which is measured at acquisition date fair value, and the amount of any non-controlling interests in the acquiree. For each business combination, the Company elects whether to measure the non-controlling interests in the acquiree at fair value or at the proportionate share of the acquiree's identifiable net assets. Acquisition-related costs are expensed as incurred and included in selling, general and administrative expenses.

When the Company acquires a business, assets acquired and liabilities assumed are measured at their respective fair values on the acquisition date. The Company assesses the assets acquired and liabilities assumed for appropriate classification in accordance with the contractual terms, economic circumstances and pertinent conditions as at the acquisition date. This includes the separation of embedded derivatives in host contracts by the acquiree.

Investments in Joint Ventures—Joint ventures are those entities over whose activities the Company has joint control, established by contractual agreement and requiring unanimous consent for strategic financial and operating decisions.

Investments in jointly controlled entities are accounted for using the equity method of accounting (herein after referred to as “equity accounted investees”) and are recognized initially at cost. The consolidated financial statements include the Company’s share of the income and expenses and equity movements of equity accounted investees, after adjustments to align the accounting policies with those of the Company, from the date that joint control commences until the date that joint control ceases. The most recent available financial statements of the equity accounted investees are used in applying the equity method. When the end of the reporting period of the equity accounted investees is different from the Company, and it is impracticable for the equity accounted investees to prepare financial statements as of the same date as the Company, the Company’s share of the income and expenses and equity movements of equity accounted investees may be recorded with up to a one-month lag. After application of the equity method, the Company determines whether it is necessary to recognize an impairment loss on its investment in its joint venture. At each reporting date, the Company determines whether there is objective evidence that the investment in the joint venture is impaired. If there is such evidence, the Company calculates the amount of impairment as the difference between the recoverable amount of the joint venture and its carrying value, and then recognizes the loss as share of profit (loss) of joint ventures and associates in the consolidated statements of operations and comprehensive loss.

When the Company’s share of losses exceeds its interest in an equity accounted investee, the carrying amount of that interest, including any long-term investments, is reduced to zero, and the recognition of further losses is discontinued except to the extent that the Company has an obligation on behalf of the investee.

Cash and Cash Equivalents—Cash and cash equivalents includes cash on hand and balances at banks, deposits held on call with banks, and financial instruments that are not subject to significant risk of changes in value, are readily convertible into cash and have original maturities of three months or less at the time of purchase.

Trade Accounts Receivable—Trade accounts receivable are recognized initially at fair value. A provision for impairment of trade accounts receivable is established when there is objective evidence that the Company will not be able to collect all amounts due according to the original terms of the receivables.

Financial Instruments:

Category of financial instruments and measurement

Recognition and Initial Measurement—Trade receivables are initially recognized when they are originated. All other financial assets and financial liabilities are initially recognized when the Company becomes a party to the contractual provisions of the instrument.

A financial asset (unless it is a trade receivable without a significant financing component), or financial liability is initially measured at fair value plus, in the case of a financial asset not at fair value recognized in profit and loss (“FVPL”), transaction costs that are directly attributable to its acquisition or issue. Transaction costs of a financial assets carried at FVPL are expensed in profit and loss. A trade receivable without a significant financing component is initially measured at the transaction price.

Classification and Measurement—All recognized financial assets are measured based on amortized cost or fair value. The classification is based on two criteria, the Company’s business model for managing the assets and whether the instrument’s contractual cash flows represent solely payments of principal and interest (“SPPI”).

The assessment of whether contractual cash flows on debt instruments are solely comprised of principal and interest is made based on the facts and circumstances as at the initial recognition of assets.

Financial assets are recorded at amortized cost when such financial assets are held with the objective to collect contract cash flows that meet the SPPI criterion. This category includes debt, trade and other receivables and loans to related parties included under receivables, prepayments and other assets.

Financial assets recorded at FVPL comprise unquoted equity instruments which the Company had not irrevocably elected, at initial recognition, to classify at fair value through other comprehensive income ("FVOCI"). This category would also include debt instruments (including loans to related parties) whose cash flow characteristics fail the SPPI criterion or are not held to either collect contractual cash flows or to both collect contractual cash flows and sell financial assets.

Financial assets recorded at FVOCI comprise unquoted equity investments which the Company irrevocably elects, at initial recognition, to classify at fair value through OCI when they meet the definition of equity and are not held for trading. The classification is determined on an instrument-by-instrument basis. Gains and losses on these financial assets are never recorded to profit or loss. Dividends are recognized as other income in the consolidated statements of operations and comprehensive income when the right of payment has been established, except when the Company benefits from such proceeds as a recovery of part of the cost of the financial asset, in which case, such gains are recorded in OCI. Equity instruments designated at FVOCI are not subject to impairment assessment.

Derecognition—The company derecognizes a financial asset when the contractual rights to the cash flows from the financial asset expire or transfer. The company derecognizes a financial liability when its contractual obligations are discharged, cancelled or expired. The difference between the carrying amount extinguished and the consideration paid (including any non-cash assets transferred or liabilities assumed) is recognized in profit and loss.

Impairment of financial assets

The Company will record an allowance for expected credit losses ("ECL") for all loans, contract assets, and other debt financial assets not recorded at FVPL. ECLs are based on the difference between the contractual cash flows due in accordance with the contract and all the cash flows that the Company expects to receive. The shortfall is then discounted at an approximation to the asset's original effective interest rate.

The Company estimated its expected credit losses for its contract assets, loans to related parties, trade receivables and other receivables and other receivables at an amount equal to lifetime credit losses.

Offsetting of Financial Instruments—Financial assets and financial liabilities are offset and the net amount reported in the consolidated statements of financial position when there is an enforceable legal right to offset the recognized amounts, and there is an intention to settle on a net basis, or to realize the assets and settle the liabilities simultaneously.

Fair Value of Financial Instruments—The fair value of financial instruments that are traded in active markets at each reporting date is determined by reference to quoted market prices or dealer price quotations (bid price for long positions and ask price for short positions), without any deduction for transaction costs.

For financial instruments not traded in an active market, the fair value is determined using appropriate valuation techniques. Such techniques may include using recent arm's-length market transactions; reference to the current fair value of another instrument that is substantially the same; a discounted cash flow analysis or other valuation models.

Derivative Financial Instruments and Hedge Accounting—The Company uses derivative financial instruments, such as foreign currency forward contracts, interest rate swaps, cross currency swaps and commodity forward contracts to mitigate the risks associated with changes in foreign currency exchange, interest rates and commodity price. The Company does not use derivative financial instruments for trading or speculative purposes. Derivative financial instruments are initially recognized at fair value on the date on which a derivative contract is entered into and are subsequently remeasured at fair value at each reporting date. Derivatives are carried as financial assets when the fair value is positive and as financial liabilities when the fair value is negative.

In applying its strategy, from time to time, the Company uses foreign currency forward contracts to hedge certain forecasted expenses denominated in foreign currencies, primarily the Euro and Singapore Dollar. The Company hedges future cash flows for capital expenditures denominated in foreign currencies, primarily the Euro and Yen. In addition, the Company uses pay-fixed/receive-float interest rate swaps and cross-currency swaps to protect the Company against adverse fluctuations in interest rates and foreign currency rates and to reduce its exposure to variability in cash flows on the Company's forecasted floating-rate debts and foreign currency- denominated debts. The Company also uses commodity forward contracts to hedge forecasted electricity consumption to minimize the impact of commodity price movements on the reported earnings of the Company and on future cash flows related to fluctuations of the contractually specified, separately identifiable and reliably measurable commodity risk component.

At the inception of the hedge relationship, the Company documents the relationship between the hedging instrument and the hedged item along with its risk management objectives and its strategy for undertaking various hedge transactions. Furthermore, at the inception of the hedge, and on an ongoing basis, the Company documents whether a hedging relationship meets the hedge effectiveness requirements under IFRS 9 and whether there continues to be an economic relationship between the hedged item and the hedging instrument. The Company designates these contracts and swaps as cash flow hedges of forecasted expenses, capital expenditures or floating-rate and foreign currency denominated debts, as applicable, and evaluates hedge effectiveness prospectively.

As such, the effective portion of the gain or loss on these contracts and swaps is reported as a component of OCI and reclassified to the consolidated statements of operations and comprehensive loss in the same line item as the associated forecasted transaction for expenses and in the same period during which the hedged item affects earnings. For hedges of capital expenditures, the amount in OCI is incorporated into the initial carrying amounts of the non-financial assets and depreciated over the average useful life of the underlying assets. Any ineffective portion of hedges for expenses or capital expenditures is immediately recorded in the consolidated statements of operations and comprehensive loss.

Hedge accounting is discontinued when the hedging instrument expires or is sold, terminated, or exercised, or when it no longer meets the criteria for hedge accounting. Any gain or loss recognized in the cash flow hedge reserve remains in equity and is recognized in profit or loss when the forecast transaction is ultimately recognized in profit or loss. When a forecasted transaction is no longer expected to occur, the gain or loss accumulated in equity is recognized immediately in profit or loss.

Derecognition of financial assets

The Company derecognizes a financial asset only when the contractual rights to the cash flows from the financial asset expire, or when it transfers the financial asset and substantially all the risks and rewards of ownership of the financial asset to another entity. On derecognition of a financial asset at amortized cost in its entirety, the difference between the asset's carrying amount and the sum of the consideration received and receivable is recognized in profit or loss.

On derecognition of an investment in a debt instrument at FVOCI, the difference between the asset's carrying amount and the sum of the consideration received and receivable and the cumulative gain or loss that had been recognized in other comprehensive income is recognized in profit or loss. However, on derecognition of an investment in an equity instrument at FVOCI, the cumulative gain or loss that had been recognized in OCI is transferred directly to retained earnings, without recycling through profit or loss.

Current versus noncurrent classification of derivative instruments—Derivative instruments are classified as current or noncurrent or separated into a current and noncurrent portion based on an assessment of the facts and circumstances. Derivative financial instruments are classified as a current asset or liability when they have a maturity period within 12 months. Where derivative financial instruments have a maturity period greater than 12 months, they are classified within either noncurrent assets or liabilities.

Where the Company will hold a derivative as an economic hedge (and does not apply hedge accounting) for a period beyond 12 months after the reporting date, the derivative is classified as noncurrent (or separated into current and noncurrent portions) consistent with the classification of the underlying item. Derivative instruments that are designated as, and are effective hedging instruments, are classified based on the settlement date.

Intangible Assets—Technology, patent, software licenses and similar rights acquired separately are stated at cost or are adjusted to fair value when impaired. Intangible assets acquired through business combinations which include customer relationships and manufacturing and process technology, are recorded at estimated fair values at the date of acquisition. Intangible assets are amortized based on the pattern in which the economic benefits of the respective intangible asset are consumed, which is in general on a straight-line basis over their estimated useful lives of between three and ten years. The amortization period and the amortization method for an intangible asset with a finite useful life are reviewed at least at the end of each reporting period. Changes in the expected useful life or the expected pattern of consumption of future economic benefits embodied in the asset are considered to modify the amortization period or method, as appropriate, and are treated as changes in accounting estimates. The amortization expense on intangible assets with finite lives is recognized in the consolidated statements of operations and comprehensive loss in the expense category that is consistent with the function of the intangible assets.

Impairment of Non-Financial Assets—The Company reviews, at each reporting date, the carrying amount of the Company's property, plant and equipment and finite lived intangible assets to determine whether there is any indication that those assets have suffered an impairment loss. Factors that the Company considers important in deciding when to perform an impairment review include, but are not limited to:

- Significant underperformance relative to historical or projected future operating results;
- Significant changes in the manner of the Company's use of the acquired assets or the Company's overall business strategy; and
- Significant unfavorable industry or economic trends.

If any indication exists, the recoverable amount of the asset is estimated in order to determine the extent, if any, of the impairment loss. Where it is not possible to estimate the recoverable amount of an individual assets, The Company estimates the recoverable amount of the cash generating unit ("CGU") to which the asset belongs. The recoverable amount of an asset or CGU is estimated to be the higher of an asset's or CGU's fair value less costs to dispose and its value in use. When the carrying amount of an asset or CGU exceeds its recoverable amount, the asset or CGU is considered impaired and is written down to its recoverable amount. The Company also evaluates, and adjusts if appropriate, the asset's useful lives, at each reporting date or when impairment indicators exist.

In assessing value in use, the estimated future post-tax cash flows are discounted to their present value using a post-tax discount rate that reflects current market assessments of the time value of money and the risks specific to the asset for which the estimates of future cash flows have not been adjusted. The Company bases its impairment calculation on detailed budgets and forecast calculations, which may include an approved formal five-year management plan for each of the CGUs to which the individual assets are allocated. In determining fair value less costs to sell, recent market transactions are taken into account. If no such transactions can be identified, an appropriate valuation model is used.

Impairment losses are recognized in the consolidated statements of operations and comprehensive loss to the extent of the recoverable amount, measured at the present value of discounted cash flows attributable to the assets, is less than their carrying value.

The Company also performs periodic reviews to identify assets that are no longer used and are not expected to be used in future periods and record an impairment charge to the extent that the carrying amount of the tangible and intangible assets exceeds the recoverable amount.

If the recoverable amount subsequently increases, the impairment loss previously recognized will be reversed to the extent of the increase in the recoverable amount, provided that the increased carrying amount does not exceed the carrying amount that would have been determined had no impairment loss been recognized for the asset in prior years. The impairment loss reversal is recognized immediately in the consolidated statements of operations and comprehensive loss.

Provisions—Provisions are recognized when the Company has a present legal or constructive obligation as a result of past events; it is probable that an outflow of resources will be required to settle the obligation; and the amount has been reliably estimated. Provisions are mainly made up of site restoration obligations. The associated site restoration costs are capitalized as part of the carrying amount of the underlying asset and depreciated over the estimated useful life of the related long-lived assets.

The Company records site restoration obligations in the period in which they are incurred at their estimated fair value. Site restoration obligations consist of the present value of the estimated costs of dismantlement, removal, site reclamation and similar activities associated with facilities built on land held under long-term operating leases. The site restoration obligations are recorded as a liability at the estimated present value as of the related long-lived asset's inception discounted using a pre-tax rate that reflects the current market assessment of the time value of money and risks specific to the site restoration obligations. After initial recognition, the liability is increased for the passage of time, with the increase being reflected as accretion expense in the line item "finance expenses" in the consolidated statements of operations and comprehensive loss. The associated site restoration costs are capitalized as part of the carrying amount of the underlying asset and depreciated over the estimated useful life of the related long-lived asset. Subsequent adjustments in the discount rates, estimated amounts, timing and probability of the estimated future costs and changes resulting from the passage of time are recognized as an increase or decrease in the carrying amount of the liability and the related site restoration cost capitalized as part of the carrying amount of the related long-lived asset on a prospective basis. If the decrease in the liability exceeds the remaining carrying amount of the related long-lived assets, the excess is recognized in the consolidated statements of operations.

Leasing—On January 1, 2019, the Company adopted IFRS 16, *Leases*, using the modified retrospective approach by applying the new standard to all leases existing at the adoption date and not restating comparative periods. The Company assesses at contract inception whether a contract is, or contains, a lease. That is, if the contract conveys the right to control the use of an identified asset for a period of time in exchange for consideration.

Right-of-use assets—The Company recognizes right-of-use assets at the commencement date of the lease (i.e. the date the underlying asset is available for use). Right-of-use assets are reported within property, plant and equipment, and are measured at cost, less any accumulated depreciation and impairment losses, and adjusted for any remeasurement of lease liabilities. The cost of right-of-use assets includes the amount of lease liabilities recognized, initial direct costs incurred, and lease payments made at or before the commencement date less any lease incentives received. Right-of-use assets are depreciated on a straight-line basis over the shorter of the lease term and the estimated useful lives of the assets.

If ownership of the leased asset transfers to the Company at the end of the lease term or the cost reflects the exercise of a purchase option, depreciation is calculated using the estimated useful life of the asset.

Lease liabilities—At the commencement date of the lease, the Company recognizes lease liabilities measured at the present value of the lease payments to be made over the lease term. Only lease payments that are fixed and determinable are considered at the time of commencement. The lease payment includes fixed payments (including in-substance fixed payments) less any lease incentives, variable lease payments that depend on an index or a rate, and amounts expected to be paid under residual value guarantees. The lease payments also include the exercise price of a purchase option reasonably certain to be exercised by the Company and payments of penalties for terminating the lease, if the lease term reflects the Company exercising the option to terminate. Variable lease payments that do not depend on an index or a rate are recognized as expenses (unless they are incurred to produce inventories) in the period in which the event or condition that triggers the payment occurs.

In calculating the present value of lease payments, the Company uses its incremental borrowing rate at the lease commencement date because the interest rate implicit in the lease is not readily determinable. After the commencement date, the amount of lease liabilities is increased to reflect the accretion of interest and reduced for the lease payments made. In addition, the carrying amount of lease liabilities is remeasured if there is a modification, a change in the lease term, a change in the lease payments (*e.g.*, changes to future payments resulting from a change in an index or rate used to determine such lease payments) or a change in the assessment of an option to purchase the underlying assets.

The Company's lease liabilities are separately reported in the consolidated statements of financial position under noncurrent portion of lease obligations and current portion of lease obligations.

Short-term leases and leases of low-value assets—The Company applies the short-term lease recognition exemption to leases that have a lease term not exceeding 12 months, or for leases of low-value assets. The payment for such leases is recognized in the Company's consolidated statement of operations and comprehensive loss on a straight-line basis over the lease term.

Earnings Per Share—Basic earnings per share is calculated by dividing the profit or loss attributable to equity holders of the Company by the weighted average number of ordinary shares outstanding during the year.

Diluted earnings per share is calculated by dividing the profit attributable to equity holders of the Company by the weighted average number of ordinary shares outstanding, adjusted for the effects of all dilutive potential ordinary shares. The weighted average number of ordinary shares outstanding is increased by the number of additional ordinary shares that would have been issued by the Company assuming exercise of all options with exercise prices below the average market price for the year.

Government Grants—The Company has received investment grants from the Federal Republic of Germany, the State of Saxony, various agencies of the Government of Singapore and the Empire State Development Corporation in New York (collectively referred to as "Government Grants"). These grants are primarily provided in connection with construction and operation of the Company's wafer manufacturing facilities, employment and research and development.

In 2020, the Company has received non-refundable cash grants from the Government of Singapore as part of the Government's relief measures to help businesses deal with the impact from the COVID-19 pandemic under the Job Support Scheme totaling $29,113, which was recorded as a reduction of staff costs. The Company has received $26,313 in 2020 and $2,996 in 2021.

Government grants are recognized when there is reasonable assurance that the grant will be received and all attached conditions will be complied with. When the grant relates to an expense item, it is recognized as deferred income and released to the consolidated statements of operations and comprehensive loss over the period necessary to match the grant on a systematic basis to the costs that it is intended to compensate, and is presented as a reduction of those costs. Where the grant relates to an asset, it is recognized as a reduction in the basis of the asset and released as a reduction to depreciation expense in equal amounts over the expected useful life of the related asset.

Research and Development Costs—Research costs are expensed as incurred. Development costs are recognized as intangible assets only when it is probable that expected future economic benefits, attributable to the development activities, will accrue to the Company.

Borrowing Costs—Borrowing costs directly attributable to the construction phase of property, plant and equipment are capitalized as part of the cost of assets which are constructed by the Company and for which a considerable period of time (at least six months) is planned for construction. Borrowing costs are capitalized from the start of construction until the date the asset is ready for its intended use. All other borrowing costs are recognized as an expense in the period in which they are incurred.

Current Income Tax—Current income tax assets and liabilities are measured at the amount expected to be recovered from or paid to the taxation authorities. The tax rates and tax laws used to compute the amount are those that are enacted or substantively enacted by the balance sheet date.

Current versus noncurrent classification—Current assets are assets held for trading purposes and assets expected to be converted to cash, sold or consumed within one year from the end of the reporting period. Current liabilities are obligations incurred for trading purposes and obligations expected to be settled within one year from the end of the reporting period. Assets and liabilities that are not classified as current are noncurrent assets and liabilities, respectively.

Recent Accounting Pronouncements, Adopted:

Amendments to IFRS 7, IFRS 9 and IAS 39 Interest Rate Benchmark Reform ("IBOR") —

Phase 1 Amendments—On 1 January 2020, the Company adopted the Phase 1 amendments arising from the IBOR reform amendments issued in September 2019, which provides temporary relief from applying specific hedge accounting requirements to hedge relationships directly affected by IBOR reform, such that the effect is that IBOR reform should not generally cause hedge accounting to terminate.

Phase 2 Amendments—On 1 January 2021, the Company adopted the Phase 2 amendments arising from the IBOR reform issued in August 2020. The Phase 2 amendments address issues that arise from the implementation of the IBOR reform, including the replacement of an interest rate benchmark with an alternative benchmark rate. The key reliefs provided to the Company are as follows:

- financial instruments measured at amortized cost are allowed to account for changes in the basis for determining contractual cash flows as a direct consequence of the IBOR reform by updating the effective interest rate, provided that the new basis is economically equivalent to the previous basis, such that there is no immediate gain or loss recognized; and
- most IFRS 9 hedge relationships that are directly affected by the IBOR reform are allowed to continue.

The Company has evaluated the extent to which its cash flow hedging relationships are subject to uncertainty driven by IBOR reform as at December 31, 2021. The Company's hedged items and hedging instruments continue to be indexed to EURIBOR and LIBOR. These benchmark rates are quoted each day and the IBOR cash flows are exchanged with counterparties as usual. The Company has also evaluated the extent to which contracts reference IBOR cash flows, whether such contracts will need to be amended as a result of IBOR reform. There has been communication about IBOR reform with the counterparties. However, no amendments has been to made to the Company's existing IBOR-referenced loan and derivative contracts as of December 31, 2021.

As of December 31, 2021, there is still uncertainty about when and how replacement may occur with respect to the relevant hedged items and hedging instruments. Accordingly, the Company will continue to apply the Phase 1 amendments until the uncertainty arising from the IBOR reform with respect to the timing and the amount of the underlying cash flows that the Company is exposed to is no longer present. This uncertainty will not end until the Company's contracts that reference IBOR are amended to specify the alternative benchmark rate and the relevant adjustment, if any. This will, in part, be dependent on the negotiation with the counterparties and the introduction of fall back clauses which have yet to be added to the Company's contracts.

The Company has a limited exposure to changes in the IBOR benchmark. The Company has $992,867 of interest rate swaps which are in a cash flow hedge relationship of USD Equipment Financing and USD Term Loan A. Also, the Company has EUR 488,993 thousand of cross currency swaps which are in cash flow hedge relationships of EUR Equipment Financing and EUR Term Loan A.

The table below indicates the nominal amount and weighted average maturity of derivatives in hedging relationships that will be affected by IBOR reform as financial instruments transition to risk-free rates, analyzed by interest rate basis. The derivative hedging instruments provide a close approximation to the extent of the risk exposure the Company manages through hedging relationships.

As of December 31, 2021 Interest rate swaps	Currency	Nominal amount	Maturity
Three-month LIBOR	USD	93,750	2023
Three-month LIBOR	USD	709,688	2024
Six-month LIBOR	USD	189,429	2026
Total		**992,867**	
Cross currency swaps (in thousand Euro)			
Three-month LIBOR	EUR	83,000	2024
Six-month LIBOR	EUR	334,564	2024
Six-month LIBOR	EUR	71,429	2026
Total		**488,993**	

Recent Accounting Pronouncements, Not Adopted:

The Company has not adopted the following new, revised or amended IFRS standards that have been issued by the IASB but not yet effective:

- *COVID-19-Related Rent Concessions beyond 30 June 2021 (Amendment to IFRS 16);*
- *Annual Improvements to IFRS Standards 2018–2020;*
- *Property, Plant and Equipment: Proceeds before Intended Use (Amendments to IAS 16);*
- *Reference to Conceptual Framework (Amendments to IFRS 3);*
- *Classification of Liabilities as Current or Non-current (Amendments to IAS 1);*
- *Disclosure of Accounting Policies (Amendments to IAS 1 and IFRS Practice Statement 2);*
- *Definition of Accounting Estimates (Amendments to IAS 8);*

As of the date the accompanying financial statements were authorized for issue, the Company continues in evaluating the impact on its financial position and performance as a result of the initial adoption of the aforementioned standards or interpretations and related applicable period.

Significant Accounting Judgments, Estimates and Assumptions

Revenue Recognition—The Company derives revenue primarily from fabricating semiconductor wafers using the Company's manufacturing processes for the Company's customers based on their own or third parties' proprietary integrated circuit designs and, to a lesser extent, from design, mask making, bumping, probing, assembly and testing services.

The Company recognizes revenue from contracts with customers by applying the following steps: (i) identify the contracts with the customers; (ii) identify performance obligations in the contracts; (iii) determine the transaction price; (iv) allocate the transaction price to the performance obligations per the contracts; and (v) recognize revenue when (or as) the entity satisfies a performance obligation.

The majority of the Company's revenue is derived from contracts with customers for wafer fabrication and engineering and other pre-fabrication services such as rendering of non-recurring engineering ("NRE") services and mask production. The Company accounts for a contract with a customer when it has approval and commitment from parties, the rights and obligations of the parties are identified, payments terms are identified, the contract has commercial substance, and collectability of consideration is probable.

The Company generally requires a purchase order from all of its customers, to which the Company responds with an order acknowledgement and a copy of the Company's standard terms and conditions. The Company also enters into master supply agreements ("MSA") with certain of its customers that may specify additional terms and conditions, such as pricing formulas based on volume, volume discounts, calculation of yield adjustments, indemnifications, transfer of title and risk of loss, and payment terms. Under these agreements, volumes are usually not guaranteed. The Company also requires a purchase order from its customers with which it has MSAs for specific products and quantities. As a result, the Company has concluded that the combination of a purchase order and order acknowledgement, including the Company's standard terms and conditions, and the MSA, if applicable, create enforceable rights and obligations between the Company and its customers.

Typically, goods and services provided under the Company's contracts are accounted for as a single performance obligation. However, in some contracts, the Company provides multiple distinct goods or services to a customer. In those cases, the Company accounts for the distinct contract deliverables as separate performance obligations at the stated contract value, which appropriately represents the individual performance obligation's estimated standalone selling price.

The Company fabricates wafers for its customers to the customers' specifications. Since the wafers in process have no alternative use, and the Company has an enforceable right to payment including a reasonable profit (due to the existence of cancellation clauses for each arrangement), the Company concluded that it met the criteria to recognize revenue over time as a percentage of costs incurred over total expected costs.

As discussed in Note 4, a change in cancellation terms in certain wafer orders during the year ended December 31, 2020 resulted in the Company no longer meeting the criteria to account for revenue recognition from contracts with customers over time. As such, the Company recognizes revenue for such modified wafer orders at the point at which control of the wafers is transferred to the customer, which is determined to be at the point of wafer shipment from the Company's facilities or delivery to the customer location. This modification did not have an impact to its contracts to provide NRE services. For its contracts to provide NRE services to the customers' specifications, the Company recognizes revenue as it delivers the service as a percentage of costs incurred over total expected costs.

Certain of the Company's contracts with its customers include potential price adjustments such as volume rebates and yield adjustments that may be refundable to customers. The Company estimates the variable consideration related to these price adjustments as part of the total transaction price and recognizes revenue in accordance with the pattern applicable to the performance obligation, subject to a constraint. The Company constrains the amount of revenue recognized for these contractual provisions based on its best estimate of the amount which will not result in a significant reversal of revenue in a future period. The Company determines the amounts to be recognized based on the amount of potential refund required by the contract, historical experience and other surrounding facts and circumstances. These obligations are typically settled with the customer after shipment through the issuance of a credit note applied against the customer's accounts receivable balance. Any difference between the amount accrued upon shipment for potential refunds and the actual amount agreed to with the customer is recorded as an increase or decrease in revenue. These potential price adjustments are accrued and netted against accounts receivable on the consolidated statements of financial position.

The Company's contracts with its customers also warrant that products and services will meet the specified functionality. Defective products returned by customers are compensated through replacements, repairs or credit notes.

A contract asset ("unbilled accounts receivables") is recognized when the Company has recognized revenue, but not issued an invoice for payment. The Company has determined that unbilled receivables are not considered a significant financing component of the Company's contracts. Contract assets are included in receivables, prepayments and other assets and transferred to receivables when invoiced (See Note 16).

A contract liability is recognized when the Company receives payments in advance of the satisfaction of performance obligations and are included in deferred revenue on the consolidated statements of financial position (See Note 25).

Costs to obtain a contract are incremental direct costs incurred to obtain a contract with a customer, including sales commissions, and are capitalized if material. Costs to fulfill a contract include costs directly related to a contract or specific anticipated contract (e.g., certain design costs) that generate or enhance the Company's ability to satisfy the Company's performance obligations under these contracts. These costs are capitalized to the extent they are expected to be recovered from the associated contract and are material.

Inventory Valuation—Inventories are stated at standard cost adjusted to the lower of cost or net realizable value. The company measures the cost of its inventory based on a standard cost process with appropriate adjustments for purchasing and manufacturing variances, which approximates weighted average cost. The cost of raw materials is determined using applicable raw material purchase prices. The cost of supplies is determined based on a weighted-average cost formula. Work in process and finished goods are valued at the cost of direct materials and a proportion of manufacturing labor and overhead costs based on normal operating capacity.

Inventory allowances are made on an item-by-item basis, except where it may be appropriate to group similar or related items. An allowance is made for the estimated losses due to obsolescence based on expected future demand and market conditions. Net realizable value is the estimated selling price in the ordinary course of business, less estimated costs of completion and the estimated costs necessary to make the sale.

Realization of Deferred Income Tax Asset—Deferred income tax is provided using the liability method on temporary differences at the balance sheet date between the tax bases of assets and liabilities and their carrying amounts for financial reporting purposes. Deferred income tax liabilities are recognized for all taxable temporary differences, except:

- Where the deferred income tax liability arises from the initial recognition of goodwill or of an asset acquired or liability assumed in a transaction that is not a business combination and, at the time of the transaction, affects neither the accounting profit nor taxable profit or loss; and
- In respect of taxable temporary differences associated with investments in subsidiaries, associates and interests in joint ventures, where the timing of the reversal of the temporary differences can be controlled and it is probable that the temporary differences will not reverse in the foreseeable future.

Deferred income tax assets are recognized for all deductible temporary differences, carryforward of unused tax credits and unused tax losses, to the extent that it is probable that taxable profit will be available against which the deductible temporary differences, and the carryforward of unused tax credits and unused tax losses can be utilized except in respect of deductible temporary differences associated with investments in subsidiaries, associates and interests in joint ventures, deferred income tax assets are recognized only to the extent that it is probable that the temporary differences will reverse in the foreseeable future and taxable profit will be available against which the temporary differences can be utilized.

The carrying amount of deferred income tax assets is reviewed at each balance sheet date and reduced to the extent that it is no longer probable that sufficient taxable profit will be available to allow all or part of the deferred income tax asset to be utilized. Unrecognized deferred income tax assets are reassessed at each balance sheet date and are recognized to the extent that it has become probable that future taxable profit will allow the deferred tax asset to be recovered.

Deferred income tax assets and liabilities are measured at the tax rates that are expected to apply to the year when the asset is realized or the liability is settled, based on tax rates (and tax laws) that have been enacted or substantively enacted at the balance sheet date.

Deferred income tax relating to items recognized directly in equity is recognized in equity and not in profit or loss.

Deferred income tax assets and deferred income tax liabilities are offset, if a legally enforceable right exists to set off current tax assets against current income tax liabilities and the deferred income taxes relate to the same taxable entity and the same taxation authority.

Property, Plant and Equipment—Construction in progress, property, plant and equipment are stated at historical cost, net of accumulated depreciation and accumulated impairment losses. The assets' residual values and useful life are reviewed, and adjusted if appropriate, at each balance sheet date. Major additions and improvements are capitalized as appropriate, only when it is probable that future economic benefits associated with the item and the cost of the item can be measured reliably; minor replacements and repairs are charged to the consolidated statement of operations and comprehensive loss. The Company also capitalizes interest on borrowings related to eligible capital expenditures. Capitalized interest is added to the cost of qualified assets and depreciated together with that asset cost. The Company also records capital-related government grants, not subject to forfeiture, as a reduction to property, plant and equipment.

Depreciation begins when the asset is in the location and condition necessary for it to be capable of operating in the manner intended by management (available for use). Depreciation is calculated on a straight-line basis over the estimated useful life of the assets as follows:

Building and leasehold/land improvements	Up to 26 years (or the remaining lease term of related land on which the buildings are erected, if shorter)
Equipment	2 to 10 years
Computers	5 years

During the first quarter of 2021, we revised the estimated useful life of certain production equipment and machinery from a range of five to eight years, to ten years. We made this change to better reflect the expected pattern of economic benefits from the use of the equipment and machinery over time, based on an analysis of production equipment's current use, historical age patterns, and future plans and technology roadmaps, as well as an analysis of industry trends and practices. The analysis concluded that an increase in useful lives was warranted, and consistent with the Company's continuing portfolio shift from leading-edge to feature-rich trailing edge technologies. The change in estimated useful life is a change in accounting estimate that was applied prospectively from January 1, 2021.

Share-based payments—Share-based payment expense related to share awards is recognized based on the fair value of the awards granted. The fair value of each option award is estimated on the grant date using the Black-Scholes option pricing model. The option pricing model requires the input of highly subjective assumptions, including the estimated fair value of the Company's stock, expected term of the option, expected volatility of the price of the Company's shares, risk free interest rate and the expected dividend yield of ordinary shares. The assumptions used to determine the fair value of the option awards represent management's best estimates. These estimates involve inherent uncertainties and the application of management's judgment. The Company estimates the expected forfeiture for options utilizing historical data, and only recognizes expense when a defined liquidity event (change in control or IPO) is deemed probable on the number of awards that are expected to vest. After applying a forfeiture estimate during each reporting period for when the options are probable of vesting, the Company recognizes expense on a graded attribution basis for each tranche of the award over the period from the grant date to the later of the one-year anniversary of estimated time following a liquidity event or the legal vesting dates (see Note 30).

The grant date fair value of equity-settles share-based payment awards granted to employee is recognized as an employee benefit expense, with a corresponding increase in equity, over the vesting period of the awards, The amount recognized as an expense is adjusted to reflected the number of awards for which the service and non-market performance conditions are expected to be met, such that the amount ultimately recognized as an expense is based on the number of wards that meet the service and non-market performance conditions at the vesting date. For share-based payment awards with non-vesting conditions, the grant date fair value of the share-based payment is measured to reflect such conditions and there is no true-up for differences between expected and actual performance.

The principles of modification accounting are applied when new share-based payment is granted as a replacement for another share-based payment that is cancelled. When modification accounting is applied, the entity accounts for any incremental fair value in addition to the grant-date fair value of the original award. In the case of a replacement, the incremental fair value is the difference between the fair value of the replacement award and the net fair value of the cancelled award, both measured at the date on which the replacement award is issued. The net fair value is the fair value of the cancelled award measured immediately before the cancellation, less any payment made to the employees on cancellation.

A package of modifications might include several changes to the terms of a grant, some of which are favorable to the employee and some not. In the event if the net effect is not beneficial to the employee, cancellation accounting will be applied. Cancellations or settlements of equity-settled share-based payments during the vesting period by the Company are accounted for as accelerated vesting; therefore, the amount that would otherwise have been recognized for services received is recognized immediately.

The preparation of the consolidated financial statements in conformity with IFRS requires management to make judgments, estimates and assumptions that affect the application of accounting policies and the reported amounts of assets, liabilities, income and expenses as well as the disclosure of commitments and contingencies. Actual results may differ from these estimates and such differences may be material to the consolidated financial statements.

Enterprise Value—Given the absence of a public trading market of the Company's ordinary shares prior to the initial public offering, and in accordance with the American Institute of Certified Public Accountants Practice Aid, Valuation of Privately-Held Company Equity Securities Issued as Compensation, the Company's board of directors exercised reasonable judgment and considered numerous objective and subjective factors to determine the best estimate of the fair value of the Company's ordinary shares at each grant date. These factors include:

- valuations of the Company's ordinary shares performed by independent third-party specialists;
- lack of marketability of the Company's ordinary shares;
- the Company's actual operating and financial performance;
- current business conditions and projections;
- hiring of key personnel and the experience of the Company's management;
- the history of the Company and the introduction of new products;
- the Company's stage of development;
- the market performance of comparable publicly traded companies; and
- the U.S. and global capital market conditions.

In valuing the Company's ordinary shares, the Company's board of directors determined the equity value of the Company's business using various valuation methods including combinations of income and market approaches with input from management. The income approach estimates value based on the expectation of future cash flows that a company will generate. These future cash flows are discounted to their present values using a discount rate derived from an analysis of the cost of capital of comparable publicly traded companies in the Company's industry or similar business operations as of each valuation date and is adjusted to reflect the risks inherent in the Company's cash flows. For the market approach, the Company reviews the performance of a set of guideline comparable public companies, and considers the guideline companies' various financial characteristics, including size, profitability, balance sheet strength, and diversification as compared to the Company. Subsequent to IPO, the fair value of the ordinary shares is determined based on market share price.

Application of these approaches involves the use of estimates, judgment, and assumptions that are highly complex and subjective, such as those regarding the Company's expected future revenue, expenses, and future cash flows, discount rates, market multiples, and the selection of comparable companies. Changes in any or all of these estimates and assumptions or the relationships between those assumptions impact the Company's valuations as of each valuation date and may have a material impact on the valuation of the Company's ordinary shares.

Impairment Assessment of Non-Financial Assets—Impairment exists when the carrying value of an asset or CGU exceeds its recoverable amount, which is the higher of its fair value less costs of disposal and its value in use. The fair value less costs to sell calculation is based on a discounted cash flow analysis that a potential buyer would perform in determining a transaction value of the CGU less incremental costs for disposing of the asset. The value in use calculation is based on a discounted cash flow model. When preparing the discounted cash flow analysis, the Company makes subjective judgments in determining the independent cash flows that can be related to a specific CGU based on its asset usage model and manufacturing capabilities in addition to the discount rate used in the analysis. In addition, because subjective judgments are made regarding the remaining useful lives of assets and expected future revenue and expenses associated with the assets, changes in these estimates based on changes in economic conditions or business strategies could result in material impairment charges in future periods. The key assumptions used to determine the recoverable amount for the different CGUs, including sensitivity analysis, are disclosed and further explained in Note 14.

Income Taxes—In determining taxable income for financial statement reporting purposes, management makes certain estimates and judgments specific to taxation issues. These estimates and judgments are applied in the calculation of certain tax liabilities and in the determination of the recoverability of deferred tax assets, which arise from temporary differences between the recognition of assets and liabilities for income tax and financial statement reporting purposes.

Deferred taxes are recognized for unused losses, among other events, to the extent that it is probable that taxable profit will be available against which the losses can be utilized.

This evaluation requires the exercise of judgment with respect to, among other things, benefits that could be realized from available tax strategies and future taxable income, as well as other positive and negative factors. The ultimate realization of deferred tax assets is dependent upon, among other things, the Company's ability to generate future taxable income that is sufficient to utilize loss carry-forwards or tax credits before their expiration or the Company's ability to implement prudent and feasible tax planning strategies.

If estimates of projected future taxable income and benefits from available tax strategies are reduced as a result of a change in the assessment or due to other factors, or if changes in current tax regulations are enacted that impose restrictions on the timing or extent of the Company's ability to utilize net operating losses and tax credit carry-forwards in the future, the Company may be required to reduce the amount of total deferred tax assets resulting in a decrease of total assets. Likewise, a change in the tax rates applicable in the various jurisdictions or unfavorable outcomes of any ongoing tax audits could have a material impact on the future tax provisions in the periods in which these changes could occur.

In addition, the calculation of tax liabilities involves dealing with uncertainties in the application of complex tax rules and the potential for future adjustment of uncertain tax positions by the tax authorities in the countries in which the Company operates. If estimates of these taxes are greater or less than actual results, an additional tax benefit or charge may result.

Changes in estimates—We regularly assess the estimated useful lives of our property, plant, and equipment. Based on our assessment of the longer product life cycles, the versatility of production equipment to provide better flexibility to meet changes in customer demands, and the ability to re-use production equipment over several technology cycles, we revised the estimated useful lives of our 200mm and 300mm production equipment from 5 and 8 years, respectively, to 10 years, beginning the first quarter of 2021. As a result, this benefited loss before income taxes by approximately $628,000 for the year ended December 31, 2021. This change increased the Company's total basic and diluted earnings per share by approximately $1.24 for the year ended December 31, 2021.

4. Net Revenue

The following table presents the Company's revenue disaggregated based on revenue source and timing of revenue recognition. The Company believes these categories best depict how the nature, timing, and uncertainty of revenue cash flows are affected by economic factors.

	2019	2020	2021
Type of goods and services:			
Wafer fabrication	$5,442,550	$4,440,291	$6,204,068
Engineering and other pre-fabrication services	370,238	410,214	381,011
	$5,812,788	**$4,850,505**	**$6,585,079**
Timing of revenue recognition:			
Revenue recognized over time	$5,736,926	$4,227,448	$ 356,862
Revenue recognized at a point in time	75,862	623,057	6,228,217
	$5,812,788	**$4,850,505**	**$6,585,079**

During the year ended December 31, 2020, due to operational and commercial reasons, the Company modified the cancellation terms of its contracts with customers that are applicable to wafer fabrication products.

As a result, the Company no longer has an enforceable right to payment covering cost incurred plus a reasonable profit margin for work completed to date when a customer cancels its wafers purchase order at any stage of production. The change was effective to all wafer outstanding purchase orders as at the date of contract modification and future purchase orders thereafter. The contract modification had no impact on the originally agreed wafer volume, the related wafer price, and other terms and conditions of its existing contracts with customers. Likewise, the modification did not have an impact to its contracts to provide NRE services to the customers' specifications; therefore, the Company continuously recognizes revenue as it delivers the NRE service as a percentage of costs incurred over total expected costs. Prior to the contract modification, the Company satisfied its performance obligations over time because of the customer's contractual obligation to pay for work completed to date with a reasonable profit. The change in cancellation terms substantively modified the contracts with customers. As a result, the Company no longer meets the criteria to account for revenue recognition from contracts with customers over time on the outstanding purchase orders at the contract modification date and future orders thereafter. Consequently, the Company recognizes revenue on the impacted outstanding wafers orders and future orders at the point at which control of the wafers is transferred to the customer, which is determined to be at the point of wafer shipment from the Company's facilities or delivery to the customer location, as determined by the agreed shipping terms.

In 2020, the Company recognized a cumulative decrease in revenue of $315,308 and a corresponding decrease in unbilled accounts receivable, and a cumulative decrease in cost of revenue of $255,557 and a corresponding increase in inventories, with a net decrease in gross margin of $59,751 on the impacted outstanding purchase orders on the date of contract modification.

5. Cost of Revenue

	2019	2020	2021
Depreciation of PPE and amortization of intangible assets[1]	$2,382,199	$2,186,957	$1,421,798
Inventory changes and materials costs	1,796,906	1,098,318	1,725,374
Staff costs, maintenance costs, and utilities	2,121,007	2,189,481	2,423,744
Other	44,920	88,469	894
	$6,345,032	**$5,563,225**	**$5,571,810**

(1) Amounts are net of amortization of government grants relating to assets. See Note 12 for the detailed movements of property, plant and equipment.

6. Research and Development Expenses

	2019	2020	2021
Staff costs, maintenance costs, and utilities	$300,124	$229,996	$256,715
Depreciation of PPE and amortization of intangible assets	209,339	220,475	147,157
Other[1]	73,511	25,298	74,289
	$582,974	**$475,769**	**$478,161**

(1) Other primarily includes material costs and net (income) expenses related to research funding agreements and wafer, labor, software license costs allocated (to) and from cost of revenue.

7. Selling, General and Administrative Expenses

	2019	2020	2021
Staff costs, maintenance costs, and utilities[1]	$343,005	$339,728	$536,803
Depreciation of PPE and amortization of intangible assets	86,686	115,082	49,889
Other[2]	$ 15,937	$ (9,950)	8,228
	$445,628	**$444,860**	**$594,920**

(1) Staff costs, maintenance costs, and utilities costs include share-based payments of $0, $980 and $151,730 for share options for the year ended December 31, 2019, 2020 and 2021, respectively. See Note 3 for further discussion on the timing of expense recognition.
(2) Other primarily includes net professional charges, marketing expenses and facility costs. Real estate transfer taxes are also included in Other.

8. Impairment Charges

The Company recorded the following impairment charges:

	2019	2020	2021
Equipment	$17,886	$22,672	$—
Equipment held for sale[1]	43,880	—	—
Intellectual property and other	2,184	—	—
Total impairment charges	**$63,950**	**$22,672**	**$—**

(1) In the year ended December 31, 2019, the Company identified certain underutilized fabrication tools and also offered them for sale. These assets were no longer being depreciated while awaiting sale. The carrying values of these assets exceeded the recoverable values based on agreements to sell or a valuation report obtained from a third-party valuation firm.

9. Finance Expenses

	2019	2020	2021
Interest on long-term debt	$159,114	$ 97,855	$ 71,991
Interest on lease obligations	43,666	34,807	26,859
Commitment fees and amortization of debt issuance costs	23,457	18,366	12,442
Accretion costs and other	3,939	3,359	2,413
Total Finance Expenses	**$230,176**	**$154,387**	**$113,705**

10. Gain on Sale of a Fabrication Facility and Application Specific Integrated Circuit Business

For the year ended December 31, 2019, the Company recognized the following gain from sale of a fabrication facility and Application Specific Integrated Circuit ("ASIC") business-related assets:

	2019
Facility in Tampines, Singapore	$196,554
ASIC Business	418,000
Total gain on sale of a fabrication facility and ASIC business	**$614,554**

Facility in Tampines, Singapore

On January 31, 2019, the Company entered into an agreement with Vanguard International Semiconductor Corporation ("VIS") to sell the Company's facility in Tampines, Singapore for $236,000, including buildings, facilities, equipment and intellectual properties associated with the Company's Micro Electro Mechanical Systems, or MEMS, business. Under the terms of the agreement, the Company continued to operate the facility through the end of 2019, providing a transition period to facilitate technology transfers for VIS and the Company's remaining customers. The sale closed on December 31, 2019 and the Company recognized a gain upon the completion of the sale amounting to $196,554 after derecognition of net assets of $39,446. The following is the breakdown of the net assets that were derecognized:

	December 31, 2019
Property, plant and equipment	$ 54,061
Inventories	1,908
Receivables	800
Total Assets	**56,769**
Lease liabilities	(9,681)
Other current and noncurrent liabilities	(6,739)
Other	(903)
Total Liabilities	**(17,323)**
Net Assets	**$ 39,446**

ASIC Business

On May 20, 2019, the Company entered into an agreement with Marvell Technology Group Ltd. to sell certain ASIC assets, contracts, intellectual properties, inventories and employees. On November 5, 2019, the sale closed for a consideration of $555,977. The Company recognized a gain of $418,000 after derecognition of net assets of $124,067, and commission and termination costs of $13,900. Under the agreement, the Company will manufacture wafers for Marvell Technology Group Ltd for additional fees and the Company received advanced fees of $40,000 in 2019. As of December 31, 2020, $28,766 of advanced fees continue to be recorded in trade and other payables and other noncurrent liabilities.

The following is the breakdown of the net assets that were derecognized:

	December 31, 2019
Property, plant and equipment	$ 18,894
Intangible assets	10,239
Unbilled accounts receivable	95,857
Inventories	30,285
Other current and noncurrent assets	8,039
Total Assets	**163,314**
Lease liabilities	(619)
Deferred revenue	(36,417)
Other current and noncurrent liabilities	(2,211)
Total Liabilities	**(39,247)**
Net Assets	**$124,067**

11. Other Income (Expense), Net

	2019	2020	2021
Gain on legal settlement[(2)]	$ —	$294,217	$ —
Gain on remeasurement of existing equity interests (Note 14)	—	38,470	—
Other[(1)]	74,055	107,620	(11,481)
Total other income, net	**$74,055**	**$440,307**	**$(11,481)**

(1) Relate primarily to gains on the sales of property, plant and equipment and intangible assets.

(2) On April 10, 2020, under the terms of a settlement agreement, the Company received a settlement and recorded total gains of $294,217 related to this settlement for the year ended December 31, 2020.

12. Property, Plant And Equipment

	Land and Land Improvements	Building and Leasehold Improvements	Equipment	Computer	Construction in Progress	Total
Cost						
As of December 31, 2019	$107,011	$7,330,889	$21,750,367	$403,774	$ 232,378	$29,824,419
Additions[1]	—	15,016	31,494	276	570,576	617,362
Transfers from construction in progress	—	43,833	373,359	7,928	(425,120)	—
Transfers from assets held for sale	—	—	75,158	—	—	75,158
Acquisition of subsidiaries	9,362	57,426	167,509	—	76,491	310,788
Disposals	(11,926)	(6,781)	(358,502)	(1,266)	(3,538)	(382,013)
As of December 31, 2020	104,447	7,440,383	22,039,385	410,712	450,787	30,445,714
Additions[1]	25,615	70,831	32,608	969	1,794,343	1,924,366
Transfers from construction in progress	—	116,406	676,866	27,514	(820,786)	—
Disposals	—	(45,864)	(371,007)	(4,717)	(717)	(422,305)
Effect of exchange rate changes	105	(5,990)	(27,544)	—	(325)	(33,754)
As of December 31, 2021	**$130,167**	**$7,575,766**	**$22,350,308**	**$434,478**	**$1,423,302**	**$31,914,021**
Accumulated Depreciation and Impairment						
As of December 31, 2019	$ 27,909	$3,438,689	$16,401,216	$338,701	$ 6,635	$20,213,150
Additions[1]	3,960	424,304	1,783,572	26,569	—	2,238,405
Impairments	—	5,331	18,786	—	—	24,117
Transfers from assets held for sale	—	—	71,681	—	—	71,681
Disposals	(582)	(2,172)	(323,916)	(1,171)	—	(327,841)
As of December 31, 2020	31,287	3,866,152	17,951,339	364,099	6,635	22,219,512
Additions[1]	5,622	444,417	936,797	24,582	—	1,411,418
Disposals	68	(44,286)	(361,589)	(4,706)	—	(410,513)
Effect of exchange rate changes	—	4	(19,378)	—	—	(19,374)
As of December 31, 2021	**$ 36,977**	**$4,266,287**	**$18,507,169**	**$383,975**	**$ 6,635**	**$23,201,043**
Net book value as of December 31, 2020	**$ 73,160**	**$3,574,231**	**$ 4,088,046**	**$ 46,613**	**$ 444,152**	**$ 8,226,202**
Net book value as of December 31, 2021	**$ 93,190**	**$3,309,479**	**$ 3,843,139**	**$ 50,503**	**$1,416,667**	**$ 8,712,978**

(1) The Company earned investment tax credits related to the Company's construction of a wafer fabrication facility in Saratoga County, New York (which were netted against additions relating to Building and Leasehold Improvements and Equipment). These credits were generally earned based on when the related assets were placed in service. The Company recorded the investment tax credits as a reduction of property and equipment costs. As of December 31, 2020, and 2021, the investment tax credits included in property and equipment amounted to $259,969 and $214,282, respectively.

The Company has lease contracts for various facilities, plant, machinery, vehicles and other equipment. Before the adoption of the new standard on January 1, 2019, the Company classified each of its leases (as lessee) at the inception date as either a finance lease or an operating lease. A lease was classified as a finance lease if it transferred substantially all of the risk and profit incidentals of the leased asset to the Company; otherwise it was classified as an operating lease.

Upon adoption of the new standard the Company applied a single recognition and measurement approach for all leases that it is the lessee, except for leases with terms of 12 months or less, and leases of low value items. The Company recognized lease liabilities for lease payments and right of use ("ROU") assets representing the right to use the underlying assets.

On January 1, 2019, the Company recognized total ROU assets of $358,518 with corresponding liabilities of $525,543 on the consolidated financial position, which includes $280,415 of pre-existing ROU assets and $417,850 of pre-existing lease liabilities.

The gross amount of assets recorded under ROU leases, which are included in property, plant and equipment amounted to $858,138 and $906,831 as of December 31, 2020 and 2021, respectively. The net carrying value of ROU leases amounted to $292,193 and $305,277 as of December 31, 2020 and 2021, respectively. Amortization of ROU assets is included in depreciation expense. Depreciation expense for the years ended December 31, 2019, 2020 and 2021 for all ROU assets was $55,798, $56,964 and $80,689 respectively.

Depreciation expenses on property, plant and equipment are as follows:

	2019	2020	2021
Cost of revenue	$2,290,531	$2,087,376	$1,308,777
Research and development expenses	105,113	121,078	73,161
Selling, general and administrative expenses	40,255	29,951	29,480
Total	**$2,435,899**	**$2,238,405**	**$1,411,418**

13. Goodwill and Intangible Assets

Cost	Technology, Licenses and Similar Rights	Software	Patents	Goodwill	Others	Total
As of December 31, 2019	$1,274,547	$270,844	$264,826	$ 5,477	$131,200	$1,946,894
Additions	192,507	12,323	—	—	610	205,440
Acquisitions of subsidiaries	—	326	—	12,547	—	12,873
Disposals	(217,825)	(4,192)	(30,349)	—	—	(252,366)
As of December 31, 2020	1,249,229	279,301	234,477	18,024	131,810	1,912,841
Additions	32,471	4,300	—	—	—	36,771
Disposals	(79,958)	(32)	(4,554)	—	—	(84,544)
As of December 31, 2021	**$1,201,742**	**$283,569**	**$229,923**	**$18,024**	**$131,810**	**$1,865,068**
Accumulated Amortization						
As of December 31, 2019	$ 821,298	$243,738	$173,057	$ —	$ 74,020	$1,312,113
Additions	166,707	20,748	39,474	—	57,180	284,109
Impairments	(1,445)	—	—	—	—	(1,445)
Disposals	(201,674)	(1,891)	(26,313)	—	—	(229,878)
As of December 31, 2020	784,886	262,595	186,218	—	131,200	1,364,899
Additions	162,066	14,629	30,731	—	—	207,426
Disposals	(79,958)	129	(4,177)	—	—	(84,006)
As of December 31, 2021	**$ 866,994**	**$277,353**	**$212,772**	**$ —**	**$131,200**	**$1,488,319**
Net book value as of December 31, 2020	**$ 464,343**	**$ 16,706**	**$ 48,259**	**$18,024**	**$ 610**	**$ 547,942**
Net book value as of December 31, 2021	**$ 334,748**	**$ 6,216**	**$ 17,151**	**$18,024**	**$ 610**	**$ 376,749**

Amortization expenses on intangible assets are as follows:

	2019	2020	2021
Cost of revenue	$ 91,668	$ 99,581	$113,021
Research and development expenses	104,226	99,397	73,996
Selling, general and administrative expenses	46,431	85,131	20,409
Total	**$242,325**	**$284,109**	**$207,426**

14. Investments in Joint Ventures

The Company has the following investments and voting rights in joint venture:

	Country of Incorporation	December 31, 2020	December 31, 2021
Silicon Manufacturing Partners Pte Ltd. (“SMP”)	Singapore	49%	49%
Sensry GmbH (“Sensry”)	Germany	25%	25%

- SMP is an independent foundry that fabricates semiconductor integrated circuits on silicon wafers using advanced production facilities and the propriety integrated circuit designs of its customers in the semiconductor industry.
- Sensry manufactures customized industrial sensor modules.

On January 1, 2020, the Company executed amendments to its joint venture agreement and limited partnership agreements related Advanced Mask Technology Centre GmbH & Co. KG (“AMTC”) and Maskhouse

Building Administration GmbH & Co. KH ("BAC") under which the terms of the agreements were extended to March 31, 2022 and the Company obtained the determining vote over changes in the business plans of AMTC and BAC. The Company has concluded that it has obtained control over the AMTC and BAC joint venture and has consolidated the joint venture effective January 1, 2020.

The Company evaluated whether the legal form of joint ventures gave the owning parties rights to the underlying assets and liabilities of the joint ventures and concluded that the Company only had access to its net investment (and not a specific share of the assets and liabilities). Further, the Company evaluated the associated joint ventures agreements to support the acquisition of output noting that the agreements allowed external third parties to acquire the output. Considering these factors, the Company has concluded that these entities would be classified as joint ventures. According to the provisions of IAS 28 (revised 2011) and IFRS 11, the joint ventures have been recognized through the equity method of accounting.

The following table presents the movement in investment in joint ventures:

	2020	2021
Beginning balance	$ 77,331	$36,702
Share of profits for the period	3,876	3,631
Capital reduction	(50)	—
Dividends declared during the period	(2,586)	(2,395)
Reduction in investments due to the consolidation of AMTC and BAC	(41,869)	—
Ending balance	**$ 36,702**	**$37,938**

As part of a cost reduction strategy, the Company decided in 2019 to wind down its mask production operations at its Burlington, Vermont location and transfer those operations to its joint venture mask house, AMTC in Dresden, Germany and increase its share of the joint venture mask house's productive capacity. On January 1, 2020, the Company obtained control of the AMTC and BAC joint ventures through an amendment of the joint venture agreement granting the Company the determining vote over changes in the business plans of AMTC and BAC. The Company consolidated the joint venture effective January 1, 2020. No consideration was paid to the non-controlling shareholder as a result of the amendment to the joint venture agreement. The Company recognized a non-operating gain on remeasurement of existing equity interest of $38,470 upon the remeasurement of its previously held ownership interest to fair value, which was $86,896 and release of the foreign currency translation reserve related to its ownership interest of $6,553.

The Company has elected to measure the non-controlling interests in the acquiree at fair value.

The Company has made an assessment of the fair value of assets and liabilities of AMTC and BAC at the date control was obtained as follows:

	Fair value recognized on deemed acquisition		
	AMTC	BAC	Total
Assets:			
Property, plant and equipment	$243,974	$ 66,815	$310,789
Intangible assets	310	16	326
Inventories	7,720	—	7,720
Receivables from government grants	161	—	161
Receivables, prepayments and other assets	31,022	1,335	32,357
Cash and cash equivalents	1,812	2,321	4,133
	284,999	**70,487**	**355,486**
Liabilities:			
Debt	$179,217	$ 9,071	$188,288
Deferred tax liabilities	3,370	7,009	10,379
Deferred income from government grants	3,143	3,039	6,182
Trade and other payables	9,866	1,800	11,666
Income taxes payable	865	—	865
	196,461	**20,919**	**217,380**
Total identifiable net assets acquired at fair value	88,538	49,568	138,106
Goodwill arising on acquisition	5,498	7,009	12,507
Less: Non-controlling interest measured at fair value	(35,411)	(28,306)	(63,717)
Fair value of equity interest held	**$ 58,625**	**$ 28,271**	**$ 86,896**

Receivables, prepayments and other assets include the fair value of trade receivables amounting to $31,079. The gross amount of trade receivables is $31,079 and it is expected that the full contractual amounts will be collected.

The goodwill is attributed to the synergies expected to arise after the acquisition and is allocated to the Company's mask house cash generating unit, AMTC. None of the goodwill recognized is expected to be deductible for income tax purposes.

The fair value of the non-controlling interest has been estimated based on a proportional allocation of the fair value of the net tangible assets based on a valuation obtained by the Company from a third party valuation firm. The fair value measurements are based on significant inputs that are not observable in the market. The fair value estimate is based on:

- An assumed discount rate of 8.5% to 9.0%.
- A terminal value, calculated based on the Gordon Growth Model with a perpetual growth rate of 3.0%.

During the year ended December 31, 2021, AMTC contributed $39,822 of net revenue after intercompany eliminations and $8,122 to loss before income taxes from operations of the Company, while BAC contributed $0 of revenue and $(3,088) to loss before income taxes from operations of the Company.

The Company has allocated $(3,618) in the statements of operations and comprehensive loss for the year ended December 31, 2021 to the non-controlling interest.

Analysis of cash flows on acquisition:

	AMTC	BAC	Total
Net cash acquired with the subsidiary (included in cash flows from investing activities)	$1,812	$2,321	$4,133
Net cash flow on acquisition	$1,812	$2,321	$4,133

15. Income Taxes

For tax reporting purposes, the Company consolidates its entities under GLOBALFOUNDRIES Inc., a Cayman Islands entity as described in Note 1. Accordingly, the Company has presented the domestic portion of the disclosures below based on its country of domicile in the Cayman Islands.

As a Cayman Islands corporation, the Company's domestic statutory income tax rate is 0.0%. The difference between the Company's domestic statutory income tax rate and its (provision) benefit for income taxes is due to the effect of the tax rates in the other jurisdictions in which the Company operates. Principally, for the years ended December 31, 2020 and 2021, the Company is subject to United States' federal and state taxes with a combined statutory tax rate of 22.05% and 22.10%, respectively; German corporation and trade taxes with a combined statutory tax rate of 31.58%; and Singapore's statutory tax rate of 17%.

Income tax benefit (expense) consisted of the following:

	December 31, 2019	December 31, 2020	December 31, 2021
Current income tax expense:			
Current income tax benefit (expense)	$ (6,205)	$(28,713)	$ 1,686
Adjustments in respect of current income tax of previous year	103	98	(872)
Deferred tax			
Net operating and investment allowance carryforwards	(216,582)	34,561	(78,043)
Currency effect on non-monetary assets of subsidiary	8,961	43,155	(36,859)
Other change in temporary differences	(10,338)	(36,834)	35,821
Income tax benefit (expense) reported in the consolidated statements of operations and comprehensive loss	**(224,061)**	**12,267**	**(78,267)**

A reconciliation between tax benefit and accounting profit multiplied by the Company's statutory rate of 0% is as follows:

	December 31, 2019	December 31, 2020	December 31, 2021
Loss before income taxes	$(1,147,125)	$(1,363,127)	$(175,664)
Foreign tax rate differential	10,567	58,505	(74,664)
Adjustments in respect to current income tax of previous years	103	98	(972)
Government grants exempt from tax	20,094	12,950	4,735
Deductible expense for tax purpose	1,944	(8,033)	(1,499)
Impact of unrecognized deferred tax assets	(246,465)	(62,734)	9,481
Non-deductible expenses for tax purposes	569	—	(4,067)
Effects of foreign exchange gains (loss)	(10,347)	40,256	(22,021)
Impact of change in liability for uncertain tax positions	(77)	8,922	6,992
Withholding Tax	—	(33,504)	—
Other effects	(449)	(4,193)	3,748
Income tax benefit (expense)	**$ (224,061)**	**$ 12,267**	**$ (78,267)**
Effective income tax rate	**19.53%**	**(0.90)%**	**44.55%**

The Company has determined that it is probable that 100% of deferred tax assets can be realized in Singapore. The Company has determined that realization of deferred taxes associated with loss carryforwards is limited to reserves for uncertain tax positions in the United States that would generate future taxable income, and deferred tax assets resulting from consolidation of AMTC and BAC.

In 2019, a decrease in net deferred tax assets of $189,614 was recorded for the Company's German subsidiary mainly due to a write-down of deferred tax assets on loss carryforwards because the Company has changed how the German operations are compensated from a cost-plus-reimbursement approach to a resale, or buy-sell compensation arrangement. The ability to forecast future profit under the new intercompany pricing approach is less certain compared to prior cost plus concept, which requires an incremental tax expense write-down of German deferred tax assets.

In 2020, Singapore recorded a tax benefit of $63,655 (included under "Foreign tax rate differential" of $58,505) relating to a revaluation of deferred tax liabilities after satisfying investment conditions necessary for an extension of a lower tax rate incentive during the year. The conditions that were required for the reduced tax rate related to fixed asset investment, increased wafer production, targeted research projects, and increased employment.

In 2020, the Company recorded withholding tax amounting to $33,504, triggered primarily from a legal settlement.

Components of the Company's deferred tax assets and liabilities are attributable as follows:

	December 31, 2020	December 31, 2021
Accelerated depreciation on property, plant and equipment	$(589,699)	$(458,482)
Losses, credits and investment allowances available for offsetting against future taxable income	648,141	394,021
Accrued expenses	313,404	348,710
Inventory	67,692	65,084
Other comprehensive income	(2,677)	111
Currency effect	(718)	(8,386)
Deferred income	13,363	9,657
Other	(14,362)	(249)
Net deferred tax assets	**$ 435,144**	**$ 350,466**

The classification of the net deferred tax assets (liabilities) in the statements of financial position is as follows:

	December 31, 2020	December 31, 2021
Deferred tax assets	$443,566	$352,770
Deferred tax liabilities	(8,422)	(2,304)
Net deferred tax assets	**$435,144**	**$350,466**

Total unrecognized deferred tax assets as of December 31, 2020 and 2021 was $3,231,522 and $3,355,488, respectively. The Company does not anticipate any significant changes to the total amounts of unrecognized deferred tax assets within the next 12 months of the reporting date.

As of December 31, 2020 and 2021, the Company has accumulated corporate losses in Germany of $1,305,372 and $1,182,005, respectively, and trade tax losses in Germany of $998,114 and $897,586, respectively. Except for a fully deductible base amount, utilization of German net operating loss carryforwards is limited to 60% of taxable income in any one year. German net operating losses do not expire with the passage of time, but may forfeit partially or completely as a result of legal entity restructurings.

As of December 31, 2020 and 2021, the Company has unutilized capital allowances on the property and equipment held in Singapore of $1,609,695 and $1,168,847, respectively, and unutilized tax losses available for carryforward of $58,484 and $58,484, respectively. Under Singapore tax law, unutilized capital allowances and unutilized tax losses are deductible to the extent of income available. Unutilized capital allowances and unutilized tax losses can be carried forward indefinitely subject to compliance with the conditions that there is no substantial change in shareholders and no change in the Company's principal activities, where applicable. As of December 31, 2020 and 2021, the Company has investment allowances of $843,336 and $843,336, respectively in Singapore which can be carried forward indefinitely. These carryforward tax attributes have been fully recognized as deferred tax assets.

As of December 31, 2020 and 2021, the Company has gross operating loss carryforwards in the United States of $8,095,256 and $8,065,586, respectively; $6,532,886 will expire in years 2029 through 2037. As of December 31, 2020 and 2021, the Company has $853,519 and $853,519, respectively of California gross operating loss carryforwards and, in the other states in which it operates, it has gross operating loss carryforwards of $970,016 and $963,307, respectively. The state carryforwards expire beginning in 2023. In addition, the Company has U.S. research and development tax credit carryforwards of $144,282 and $145,683 for the years December 31, 2020 and 2021, respectively, that will expire in years 2030 through 2041. The Company has California research and development tax credits of $14,889 and $15,412 as of December 31, 2020 and 2021, respectively, that do not expire. In addition, the Company has nonrefundable New York Empire Zone credit carryforwards of $1,115,078 and $1,115,078 as of December 31, 2020 and 2021, respectively, that do not expire. Five other states have research and development tax credits, Texas, Minnesota, Vermont, North Carolina, and New Jersey for which the Company has calculated a total credit carryforward of $8,132 and $8,217 for the years December 31, 2020 and 2021, respectively. These credits have a carryforward that expire between 2030 through 2039. These carryforward attributes have not been recognized as deferred tax assets.

At December 31, 2020 and 2021, no deferred tax liabilities were recorded for taxes that would be payable on the undistributed earnings of certain of the Company's subsidiaries as the Company is able to control the timing of the distributions and does not anticipate requiring any distributions for the foreseeable future.

A reconciliation of deferred taxes, net is as follows:

	December 31, 2020	December 31, 2021
Beginning balance	$407,459	$435,144
Tax expense recognized to consolidated statements of operations	40,882	(79,081)
Tax benefit (expense) recognized to other comprehensive loss	(2,106)	2,788
Tax benefit (expense) recognized from acquisition of subsidiaries	(10,379)	—
Uncertain tax positions and others	(712)	(8,385)
Ending balance	**$435,144**	**$350,466**

As of December 31, 2020 and 2021, the Company's current tax receivables were $113 and $267, respectively, related to its subsidiaries in Europe.

As of December 31, 2020 and 2021, the Company's current income tax payable of $30,609 and $13,884, respectively, is composed of $2,491, $11,836, $16,282 and $2,001, $2,519, $9,364 for entities incorporated in Europe, the United States/Cayman Islands and Singapore, respectively. The current income tax payable amounts include the following uncertain tax provisions: $9,276 in the United States for December 31, 2020 and $0 for December 31, 2021; $16,175 and $9,159 in Singapore for December 31, 2020 and 2021, respectively, for exposure arising from unutilized capital allowances and domestic related party transactions. Europe had no current income taxable amounts included in uncertain tax provisions for either December 31, 2020 or 2021. The $9,276 United States uncertain tax provision was reclassified against deferred tax assets.

16. Receivables, Prepayments and Other Assets

	December 31, 2020	December 31, 2021
Noncurrent:		
Advances to suppliers[1]	$ —	$ 199,199
Non-trade receivables	11,993	12,914
Payment in Lieu of Tax (“PILOT”’) Bonds	20,037	8,045
Prepaid expenses	—	10,658
Other	14,413	22,695
Total	**$ 46,443**	**$ 253,511**
Current:		
Trade receivables, other than related parties[2]	$ 767,257	$ 872,362
Unbilled accounts receivable[3]	62,226	42,953
Other receivables	218,717	238,464
Receivables from related parties (Note 29)	8,734	8,133
	$1,056,934	**$1,161,912**

(1) Primarily represents advances to supplier to offset against future purchases.
(2) The Company’s trade receivables, other than related parties, are all classified as current and are expected to be collected within one year. The Company’s provision for sales returns was not material for either for the years ended December 31, 2020 or 2021. See the table below for the aging of the Company’s trade receivables, other than related parties.
(3) Unbilled accounts receivable represents amounts recognized on revenue contracts less associated advances and progress billings. These amounts will be billed in accordance with the agreed-upon contractual terms or upon shipment of products or rendering services.

The following table presents the activities in unbilled accounts receivable as of December 31, 2020 and 2021:

	December 31, 2020	December 31, 2021
Beginning balance	$ 956,663	$ 62,226
Revenue recognized during the year	4,548,456	44,148
Cumulative catch-up adjustment to revenue (Note 4)	(315,308)	—
Amounts invoiced	(5,127,585)	(69,421)
Other	—	6,000
Ending balance	**$ 62,226**	**$ 42,953**

	December 31, 2020	December 31, 2021
Receivables neither past due nor impaired	$754,308	$830,098
Receivables past due—not impaired individually:		
Less than 30 days	12,706	40,927
31 to 60 days	198	528
61 to 90 days	—	22
90 to 120 days	45	787
	$767,257	**$872,362**

17. Inventories

	December 31, 2020	December 31, 2021
Work in progress	$ 930,107	$ 961,590
Raw materials and supplies	232,407	259,581
Inventory reserve	(242,995)	(99,920)
Total	**$ 919,519**	**$1,121,251**

The following table presents the movement in the inventory reserve:

	December 31, 2020	December 31, 2021
Beginning balance	$143,193	$ 242,995
Additions[(1)]	228,559	125,727
Written-off and scrapped	(96,972)	(29,243)
Elimination of reserve upon sale of inventory	(31,785)	(239,559)
Ending balance	**$242,995**	**$ 99,920**

(1) This includes additional inventory reserve of $26,149 arising from the adjustment to cost of revenue recorded by the Company in 2020 in conjunction with the modification of its customer contracts as discussed in Note 4.

18. Other Financial Assets And Liabilities

The following foreign currency forward contracts are outstanding at December 31, 2020 and 2021 (in thousands, except average foreign currency/US$):

Derivative Instruments	Fair Value of Derivative Instruments: Other Current Financial Assets	Other Noncurrent Financial Assets	Other Current Financial Liabilities	Other Noncurrent Financial Liabilities	Notional Amount	Average Foreign Currency/ US$	Average Strike Price	Maturity
Outstanding as of December 31, 2020:								
Forward contracts:								
Euro forward contracts (receive euros/pay US$)	$28,489	$ —	$ (818)	$ —	$ 594,169	0.85	—	2021
Singapore dollar forward contracts (receive Singapore$/pay US$)	13,266	—	(439)	—	360,328	1.37	—	2021
Japanese yen forward contracts (receive Japanese yen/pay US$)	444	—	(61)	—	23,939	104.77	—	2021
Interest rate swaps	—	—	—	(33,287)	1,190,752	—	0.382% - 1.731%	2023 - 2026
Cross currency swaps (receive euros/pay US$)	—	33,169	—	—	566,497	0.89	3.834% - 4.182%	2024 - 2026
Commodity hedge	8,335	885	—	(58)	56,262	235.2	—	2021 - 2022
Total	$50,534	$34,054	$ (1,318)	$(33,345)	$2,791,947			
Outstanding as of December 31, 2021:								
Forward contracts:								
Euro forward contracts (receive Euros/Pay US$)	$ 4,030	$ —	$(37,822)	$ —	$1,239,770	0.86	—	2022 - 2023
Singapore dollar forward contracts (receive Singapore$/pay US$)	3,359	—	(2,755)	—	858,227	1.35	—	2022
Japanese yen forward contracts (receive Japanese yen/pay US$)	1,700	—	(7,308)	—	300,158	112.77	—	2022 - 2023
Interest rate swaps	—	628	—	(7,803)	992,866	—	0.382% - 1.731%	2023 - 2026
Cross currency swaps (receive euros/pay US$)	—	28	—	(4,181)	550,580	0.89	3.834% - 4.182%	2024 - 2026
Cross currency swaps (receive Singapore $/pay US$)	—	60	—	(4,328)	109,612	1.37	1.830% - 1.941%	2028
Commodity hedge	14,094	1,601	(708)	(664)	96,097	—	—	2022 - 2023
Total	$23,183	$ 2,317	$(48,593)	$(16,976)	$4,147,310			

The following table presents the fair values and locations of these derivative instruments recorded in the consolidated statements of financial position:

	Fair Value of Derivative Instruments			
	Assets Derivatives		Liabilities Derivatives	
	Statement of Financial Position Location	Fair Value	Statement of Financial Position Location	Fair Value
As of December 31, 2020:				
Derivatives designated as hedging instruments				
- foreign currency forward contracts	Other current financial assets	$37,602	Other current financial liabilities	$ (375)
- interest rate swaps	Other noncurrent financial assets	—	Other noncurrent financial liabilities	(33,287)
- cross currency swaps	Other noncurrent financial assets	33,169	Other noncurrent financial liabilities	—
- commodity hedge	Other current financial assets	8,335	Other current financial liabilities	—
	Other noncurrent financial assets	885	Other noncurrent financial liabilities	(58)
Derivatives not designated as hedging instruments				
- foreign currency forward contracts	Other current financial assets	4,597	Other current financial liabilities	(943)
Total derivatives		**$84,588**		**$(34,663)**
As of December 31, 2021:				
Derivatives designated as hedging instruments				
- foreign currency forward contracts	Other current financial assets	$ 6,029	Other current financial liabilities	$(45,695)
- interest rate swaps	Other noncurrent financial assets	628	Other noncurrent financial liabilities	(7,803)
- cross currency swaps	Other noncurrent financial assets	88	Other noncurrent financial liabilities	(8,509)
- commodity hedge	Other current financial assets	14,094	Other current financial liabilities	(708)
	Other noncurrent financial assets	1,601	Other noncurrent financial liabilities	(664)
Derivatives not designated as hedging instruments				
- foreign currency forward contracts	Other current financial assets	3,060	Other current financial liabilities	(2,190)
Total derivatives		**$25,500**		**$(65,569)**

The following table presents the effect of derivatives designated as hedging instruments on the consolidated statements of operations and comprehensive loss (net of tax):

As of December 31, 2021, the estimated amount of loss from cash flow hedges currently retained in consolidated statements of comprehensive loss expected to be reclassified into consolidated statements of operations within the next 12 months is approximately $(39,678).

	Amount of Gains (Losses) Recognized in Accumulated OCI on Derivatives (effective Portion)	Amount of Gains (Losses) Reclassified from Accumulated OCI to cost of Property, Plant and Equipment	Location of Gains (Losses) Reclassified from Accumulated OCI into Income (Effective Portion)	Amounts of Gains (Losses) Reclassified from Accumulated OCI into Income (Effective Portion)	Location of Gains (Losses) Recognized into Income (Ineffective Portion)	Amount of Gain (Losses) Recognized into income (Ineffective Portion)
Year ended December 31, 2020						
Derivatives designated as hedging instruments—Forward currency forward contracts	$ 37,481	$ (470)	Cost of revenue and operating expenses	$12,294	Selling, general and administrative expenses	$ 40
Derivatives designated as hedging instruments—Interest rate swaps	$(36,726)	$ —	Finance expense	$ —	Selling, general and administrative expenses	$ (277)
Derivatives designated as hedging instruments—Cross currency swaps	$(23,001)	$ —	Cost of revenue and operating expenses	$ —	Selling, general and administrative expenses	$ 564
Derivatives designated as hedging instruments—Commodity hedge	$ 9,162	$ —	Cost of revenue and operating expenses	$ —	Selling, general and administrative expenses	$ —
Year ended December 31, 2021						
Derivatives designated as hedging instruments—Forward currency forward contracts	$(76,101)	$(6,447)	Cost of revenue and operating expenses	$10,826	Selling, general and administrative expenses	1,066
Derivatives designated as hedging instruments—Interest rate swaps	$ 20,655	$ —	Finance expense	$ (4,703)	Selling, general and administrative expenses	267
Derivatives designated as hedging instruments—Cross currency swaps	$ (2,146)	$ —	Cost of revenue and operating expenses	$ (9,773)	Selling, general and administrative expenses	(1,201)
Derivatives designated as hedging instruments—Commodity hedge	$ 29,352	$ —	Cost of revenue and operating expenses	$24,201	Selling, general and administrative expenses	$ 9

The following table presents the effect of derivatives not designated as hedging instruments on the consolidated statements of operations and comprehensive loss:

	Location of Gains (Losses) Recognized in Income on Derivative	Amount of Gains (Losses) Recognized in Income on Derivative
Year ended December 31, 2019		
Derivatives not designed as hedging instruments—foreign currency forwards contracts	Selling, general and administrative expenses	$(14,240)
Year ended December 31, 2020		
Derivatives not designed as hedging instruments—foreign currency forwards contracts	Selling, general and administrative expenses	$ 6,342
Year ended December 31, 2021		
Derivatives not designed as hedging instruments—foreign currency forwards contracts	Selling, general and administrative expenses	$(17,169)

19. Cash And Cash Equivalents

	December 31, 2020	December 31, 2021
Cash balances on hand and at banks	$347,879	$ 764,185
Investments in money market funds	560,198	2,150,002
Time deposits	—	25,000
Total	**$908,077**	**$2,939,187**

Movements in cash and cash equivalents are presented in the Company's consolidated statements of cash flows.

The following are the reconciliation of assets and liabilities arising from financing activities:

	As of December 31, 2019 Assets (Liabilities)	Cash Flows (Inflows)/ Outflows	Non-cash changes Addition	Foreign exchange movement	Others	As of December 31, 2020 Assets (Liabilities)
Restricted cash	$ 34,399	$ 1,255	$ —	$ —	$ —	$ 35,654
Government grants receivable[1]	126,140	(177,322)	80,065	720	—	29,603
Other receivables	175,298	(134,511)	448	—	—	41,235
Debt	(2,729,167)	483,072	(13,529)	(64,473)	(13,858)	(2,337,955)
Lease obligations	(519,169)	73,249	(623)	(19,236)	1,267	(464,512)
Loan from shareholder	(11,167,687)	487,000	—	—	—	(10,680,687)
Share capital	(10,000)	—	—	—	—	(10,000)
Additional Paid-In Capital	(11,706,535)	—	(980)	—	—	(11,707,515)
Total	**$(25,796,721)**	**$ 732,743**	**$ 65,381**	**$(82,989)**	**$ (12,591)**	**$(25,094,177)**

	As of December 31, 2020 Assets (Liabilities)	Cash Flows (Inflows)/ Outflows	Non-cash changes Addition	Foreign exchange movement	Others	As of December 31, 2021 Assets (Liabilities)
Restricted cash	$ 35,654	$ (34,499)	$ —	$ —	$ —	$ 1,155
Government grants receivable[2]	29,603	(40,600)	60,176	(2,317)	—	46,862
Other receivables	41,235	(42,232)	899	—	98	—
Debt	(2,337,955)	265,127	(5)	50,714	9,020	(2,013,099)
Lease obligations	(464,512)	78,260	(52,472)	11,936	1,270	(425,518)
Loan from shareholder	(10,680,687)	568,000	—	—	10,112,687	—
Share capital	(10,000)	(637)	—	—	—	(10,637)
Additional Paid-In Capital[3]	(11,707,515)	(1,443,859)	(10,112,687)	—	(223,402)	(23,487,463)
Total	**$(25,094,177)**	**$ (650,440)**	**$(10,104,089)**	**$ 60,333**	**$ 9,899,673**	**$(25,888,700)**

(1) Government grant receivable and the current portion of the employee incentive credits amounting to $29,603 and $22,057 (See Note 16), respectively, are reflected in the Receivables from government grants in the consolidated statements of financial position amounting to $51,660, as of December 31, 2020.

(2) Government grant receivable amounting to $46,862 is reflected in the Receivables from government grants and noncurrent receivables, prepayments and other assets in the consolidated statements of financial position amounting to $45,806 and $1,056 respectively, as of December 31, 2021.

(3) On October 1, 2021, the Company's board approved the conversion of the Shareholder Loans (defined below) to additional paid-in-capital, and on October 3, 2021, the Company executed an agreement with Mubadala Investment Company PJSC ("Mubadala") to convert the remaining $10,112,687 of the Shareholder Loan balance into additional paid-in-capital ("the Conversion"). The Conversion did not have an impact on shares outstanding or have any dilutive effects, as no additional shares were issued.

Geographical concentration of cash and cash equivalents is as follows:

	December 31, 2020	December 31, 2021
United States of America	$632,707	$1,357,062
Republic of Singapore	207,031	1,484,972
Other	68,339	97,153
Total	**$908,077**	**$2,939,187**

20. Issued Capital and Reserves

Share Capital—On January 20, 2019, the Company accepted the surrender of 76,902,150 shares for no consideration from MIC. The Company cancelled the shares and transferred $1,538 from common shares to additional paid-in capital.

On September 12, 2021, The Company effected a 1-for-2 reverse share split, which was approved by our board of directors on September 9, 2021.

On October 27, 2021, the Company completed an initial public offering, issuing 30,250,000 ordinary shares, as well as 1,595,744 ordinary shares in a concurrent private placement agreement.

As of December 31, 2021, there were 1,300,000 thousand ordinary shares and 200,000 thousand shares preferred shares with a par value of $0.02 authorized, and 531,846 thousand ordinary shares issued and outstanding.

Additional Paid-In Capital—Additional paid-in capital represents the excess of assets less liabilities contributed to GLOBALFOUNDRIES by shareholders over the share capital issued in exchange for those contributions and share-based compensation charges for share-based payments.

Reserves

All other reserves as stated in the consolidated statements of changes in equity:

Hedging Reserve—The cash flow hedge reserve contains the effective portion of the cash flow hedge relationships incurred as at the reporting date.

Foreign Currency Translation Reserve—The foreign currency translation reserve is used to record exchange differences arising from the translation of AMTC and BAC's financial statements for consolidation purpose.

21. Long-Term Debt

	December 31, 2020	December 31, 2021
Noncurrent:		
Term loans	$1,956,148	$1,715,833
Current:		
Term loans	381,807	297,266
Total	**$2,337,955**	**$2,013,099**

The above balances are net of $19,106 and $17,710 of unamortized debt issuance costs for the years ended December 31, 2020 and 2021, respectively.

Movements in interest bearing borrowings during the reporting period were as follows:

	December 31, 2020	December 31, 2021
Opening balance	$ 2,729,167	$2,337,955
New loans and borrowings	2,816,871	618,414
Repayments	(3,283,861)	(882,191)
Other	75,778	(61,079)
Ending balance	**$ 2,337,955**	**$2,013,099**

Terms and Debt Repayment Schedule

The following table summarizes term loan facilities. The below arrangements are all considered to be secured with the exception of the Mubadala Treasury Holding Company Loan Facility, which is unsecured.

Description	Currency	Nominal Interest Rate	Interest Payment Terms	Principal Payment Terms	Year of Maturity	2020 Carrying Amount	2021 Carrying Amount
PILOT Bonds[1]	USD	Variable Rate Note[1]	Monthly	Annually	2021	10,457	—
Accounts Receivable Factoring	USD	LIBOR + 0.60% - 0.90%	Monthly	Monthly	2022	86,944	16,345
2018 Tool Equipment Purchase and Lease Financing[2]	USD	LIBOR + 1.60%	Quarterly	Quarterly	2023	74,250	74,668
2019 Tool Equipment Purchase and Lease Financing[3]	USD	LIBOR + 1.75%	Quarterly	Quarterly	2024	83,812	84,251
2019 USD Dresden Equipment Financing[4]	USD	LIBOR + 1.75%	Semi-Annual	Semi-Annual	2024	35,473	35,628
2018 IKB Term Loan	EUR	EURIBOR + 2.50%	Semi-annual	Semi-annual	2024	12,240	11,283
2020 USD Equipment Financing[5]	USD	LIBOR + 1.90%	Quarterly	Quarterly	2025	58,539	58,893
2019 EUR Dresden Equipment Financing[4]	EUR	EURIBOR + 1.75%	Semi-Annual	Semi-Annual	2026	15,366	14,096
TPI Loan	EUR	2.60%	Quarterly	Monthly	2026	2,687	1,962
i. Park East Fishkill[6]	USD	0.30%	Monthly	Monthly	2027	2,039	140
Current total						**381,807**	**297,266**
Noncurrent:							
2018 Tool Equipment Purchase and Lease Financing[2]	USD	LIBOR + 1.60%	Quarterly	Quarterly	2023	93,401	18,733
2019 Tool Equipment Purchase and Lease Financing[3]	USD	LIBOR + 1.75%	Quarterly	Quarterly	2024	190,186	105,935
2019 USD Dresden Equipment Financing[4]	USD	LIBOR + 1.75%	Semi-Annual	Semi-Annual	2024	179,779	144,151
2018 IKB Term Loan	EUR	EURIBOR + 2.50%	Semi-annual	Semi-annual	2024	36,815	22,613
2020 USD Equipment Financing[5]	USD	LIBOR + 1.90%	Quarterly	Quarterly	2025	211,382	152,493
USD Term Loan A	USD	LIBOR + 2.90%	Quarterly	Semi-Annual	2025	646,005	647,287
EUR Term Loan A	EUR	EURIBOR + 2.60%	Quarterly	Semi-Annual	2025	101,380	93,529
2019 EUR Dresden Equipment Financing[4]	EUR	EURIBOR + 1.75%	Semi-Annual	Semi-Annual	2026	474,522	422,908
TPI Loan	EUR	2.60%	At Maturity	At Maturity	2026	11,053	8,238
i. Park East Fishkill[6]	USD	0.30%	Monthly	Monthly	2027	11,625	9,619
2021 SGD EDB Loan	SGD	1.40%	Semi-annual	Semi-annual	2041	—	90,327
Noncurrent total						**1,956,148**	**1,715,833**
Total						**$2,337,955**	**$2,013,099**

(1) The interest rate for the PILOT bonds is reset on a weekly basis by the bank based on prevailing market conditions, not to exceed 12% per annum. The weighted average interest rates were 0.91% and 0.14% for 2020 and 2021, respectively.
(2) On March 2, 2018, GLOBALFOUNDRIES SINGAPORE PTE, LTD. ("GFS") entered into several Equipment Purchase and Lease Agreements with 4 banks to sell and leaseback certain semiconductor manufacturing equipment located in GFS' Fabs in Singapore for a total of $375,000. The total minimum lease payments amount to $375,000, to be paid in equal quarterly installments through March 1, 2023.
(3) On January 21, 2019, GFS entered into several Equipment Purchase Agreements and Lease Agreements with five banks to sell and leaseback certain semiconductor manufacturing equipment located in GFS' Fabs in Singapore for a total of $425,000.
(4) On October 31, 2019, the Company, GLOBALFOUNDRIES Dresden Module One Limited Liability Company & Co., KG. and GLOBALFOUNDRIES Dresden Module Two Limited Liability Company & Co. KG. entered into a term facilities agreement with Bank of America Merrill Lynch International Designated Activity Company and ING Bank, a branch of ING-DIBA AG, as coordinating mandated lead arrangers, and Bank of America Merrill Lynch International Designated Activity Company as facility and security agent, which provides a maximum incremental facility commitment totaling $750,000 secured by certain qualifying equipment assets.
(5) On April 23, 2020, GLOBALFOUNDRIES SINGAPORE PTE, LTD. entered into several Equipment Purchase Agreements and Lease Agreements with four banks to sell and leaseback certain semiconductor manufacturing equipment located in GFS' fabrication facilities in Singapore for a total of $300,000.
(6) On September 1, 2017, the Company completed a sale and partial leaseback transaction of a portion of its facilities in East Fishkill, New York to i. Park East Fishkill LLC and ii. Park East Fishkill I LLC. Due to the Company's ongoing involvement with the properties sold and leased back, the transaction has been accounted for as financing. The total transaction amounted to $22,950, which consists of $17,150 cash and buyer's assumption of certain liabilities of $5,800.

Accounts Receivable Factoring—On February 17, 2021, the Company entered into agreements to amend and restate the terms of the original Accounts Receivable Factoring arrangements to factor certain of its accounts receivable up to a maximum outstanding amount of $91,700. The Company agreed to pay financing costs of LIBOR plus 0.90%.

2021 SGD EDB Loan—On September 3, 2021, the Company entered into a loan agreement with Singapore Economic Development Board (EDB), which provided loan facilities with maximum drawdown of $1,148,500 (SGD1,541,000) at a fixed nominal interest rate of 1.4%. The difference between the nominal interest rate of the loan and the market interest rate for an equivalent loan is recognized as a government grant. The loan matures on June 1, 2041, with interest-only payments for the first 5 years and principal repayments commence thereafter, payable on a semi-annual basis.

As of December 31, 2021 $110,769 was drawn down of which $90,327 was recorded in long-term debt based on an effective interest rate of 3.2% and $19,821 was recorded in deferred income from government grants.

Five-year Revolving and Letter of Credit Facilities Agreement—On October 13, 2021, the Company entered into an amendment to the Five-year Revolving and Letter of Credit Facilities Agreement to increase the commitment to $1,000,000.

Mubadala Development Corporation Revolving Credit Facility—On November 11, 2021, the Company terminated the undrawn $400 million revolving credit agreement with Mubadala Treasury Holding Company LLC ("MTHC").

The following table summarizes unutilized credit facilities available to the Company to maintain liquidity to fund operations:

		December 31, 2020	December 31, 2021
SGD EDB Loan	Committed	$ —	$1,028,602
Citibank Revolving Credit Facility	Committed	403,271	1,009,505
Societe Generale Singapore Factoring	Committed	34,756	75,355
Societe Generale Singapore Revolving Credit Facility	Uncommitted*	23,958	27,150
Deutsche Bank	Uncommitted*	3,122	3,163
Citibank—USD	Uncommitted*	780	806
JPMorgan Chase PILOT Letter of Credit	Committed	12,211	—
Mubadala Development Corporation Revolving Credit Facility	Committed	400,000	—
Total		**$878,098**	**$2,144,581**

* Uncommitted facility is a facility is a credit facility made available to the Company but the lender is not obligated to loan funds.

***Assets pledged as security*—**Various assets have been pledged to secure borrowings under mortgages for the Company. Cash and cash equivalents, trade accounts receivables, property, plant and equipment, inventories, and financial assets have been pledged to secure borrowings under mortgages for the Company. The Company is not allowed to pledge these assets as security for other borrowings or to sell them outside normal course of business.

22. Leases

The Company has various lease agreements for certain of its offices, facilities, and equipment. Leases may include one or more options to renew. Renewals are not in the determination of the lease term unless the renewals are deemed to be reasonably certain at lease commencement. The Company's lease agreements do not contain any material residual value guarantees or material restrictive covenants. All leases were measured under a single criterion with the exception of those with terms not exceeding 12 months and low-value leases.

	December 31, 2020	December 31, 2021
Amortization of right-of-use assets	$ 56,964	$ 80,689
Interest expense on lease liabilities	34,807	26,859
Short-term and low-value leases expense	1,409	1,195
Total net lease cost	**$ 93,180**	**$ 108,743**
Weighted average remaining lease term	7.35 years	6.51 years
Weighted average discount rate	7.99%	6.65%

The following is a schedule, by years, of maturities of lease liabilities as of December 31, 2020 and 2021:

	December 31, 2020		December 31, 2021	
	Minimum Lease Payments	Present Value of Payments	Minimum Lease Payments	Present Value of Payments
Within 1 year	$ 165,621	$131,270	$156,784	$134,971
2-5 years	256,597	185,261	231,819	190,801
After 5 years	175,778	147,981	123,298	99,746
	597,996	464,512	511,901	425,518
Less: amounts representing finance charges	(133,484)	—	$ (86,383)	—
Present value of minimum lease payments	$ 464,512	$464,512	$425,518	$425,518
Noncurrent		$333,242		$290,547
Current		131,270		134,971
		$464,512		**$425,518**

Supplemental cash flow information related to leases is as follows:

	December 31, 2020	December 31, 2021
Cash flows used in operating activities:		
Payments of short-term and low-value leases	$ (1,409)	(1,195)
Interest paid	(34,807)	(26,859)
Cash flows used in financing activities:		
Payment of lease obligations	(73,249)	(78,260)

The following table summarizes the movement of right-of-use assets which primarily relates to building and leasehold improvements during the years ended December 31, 2020 and 2021 is as follows:

	December 31, 2020	December 31, 2021
Beginning balance	$348,163	$292,193
Additions	994	93,773
Amortization	(56,964)	(80,689)
Ending balance	**$292,193**	**$305,277**

23. Provisions

The movement in provision for asset retirement obligations during the years ended December 31, 2020 and 2021 is as follows:

	December 31, 2020	December 31, 2021
Beginning balance	$337,765	$353,308
Arising during the period	14,888	431
Accretion cost	655	(2,160)
Utilized	—	(3,097)
Ending balance	**$353,308**	**$348,482**

The Company records a provision for site restoration costs as required by legal and contractual obligations if assessed to be probable that it will incur such costs. Because of the long-term nature of the liability, the greatest uncertainty in estimating the provision is the costs that will be incurred. The Company has estimated costs based on currently available information provided by experts about the extent of restoration work required.

The provision has been calculated using a discount rate of -1.59% to 1.95% (2020: -1.61% to 0.77%), which is the risk-free rate in the jurisdiction of the liability. The site restoration costs are expected to be incurred on site abandonment for its owned property and on lease expiration for its leasehold land. The expected timing of incurring site restoration costs is consistent with the remaining useful lives of the underlying property, plant and equipment.

24. Government Grants

The following table presents the movement in deferred income from government grants for the years ended December 31, 2020 and 2021:

	December 31, 2020	December 31, 2021
Beginning balance	$194,209	$169,202
Received/receivable during the period	19,854	40,461
Acquisition of subsidiaries	6,182	—
Released to the consolidated statements of operations and comprehensive loss	(51,043)	(33,366)
Ending balance	**$169,202**	**$176,297**
Noncurrent	128,697	147,371
Current	40,505	28,926
	$169,202	**$176,297**

Government grants were recognized in the consolidated statements of operations and comprehensive loss as follows:

	December 31, 2019	December 31, 2020	December 31, 2021
Cost of revenue	$155,451	$49,025	$33,031
Research and development expenses	1,342	2,018	335
Selling, general and administrative	—	—	—
Total balance	**$156,793**	**$51,043**	**$33,366**

The Company has received government support in the form of investment grants, research and development subsidies, refundable credits and miscellaneous receipts for employee support. Amount receivable from government but not yet received has been included in receivables from government grants. Certain investment grants are subject to forfeiture in declining amounts over the life of the agreement if the Company does not maintain agreed upon conditions specified in the relevant subsidy agreements. The Company continues to comply with the government grant conditions mainly relating to qualifying property, plant and equipment and employment levels.

25. Trade Payables and Other Liabilities

	December 31, 2020	December 31, 2021
Noncurrent:		
Advances and deposits	$ 206,766	$ 11,116
Payable for Intangible Assets	109,451	44,667
Contract liabilities(1)	30,258	1,368,328
Deferred tax liabilities	8,422	2,304
Other(2)	57,769	18,909
	$ 412,666	**$1,445,324**
Current:		
Trade payables	$ 414,547	$ 551,138
Accrued expenses	470,800	602,495
Contract liabilities(1)	104,466	532,985
Advances and deposits(3)	68,026	309,129
Payable for PPE and Intangible Assets	235,789	472,144
Other(2)	48,860	117,859
	$1,342,488	**$2,585,750**

(1) Contract liabilities comprises contract liabilities for payments received in advance of the satisfaction of performance obligations for wafers, as well as non-recurring engineering services. In 2021, the Company entered into multiple long-term supply agreements with customers. Many of these contracts include customer advanced payments and capacity reservation fees in order to secure future supply.

(2) Other includes other financial liabilities. See Note 18 for further details on other financial liabilities.

(3) Advances and deposits include advances from customers of $117,882 (2020: $34,713) collected for purchase orders.

	December 31, 2020	December 31, 2021
Beginning contract liabilities balance	$ 144,562	$ 134,724
Cash receipts in advance of satisfaction of performance obligations	123,573	1,894,049
Released to the consolidated statements of operations and comprehensive loss(1)	(133,411)	(127,460)
Ending contract liabilities balance	$ 134,724	$1,901,313
Noncurrent	$ 30,258	$1,368,328
Current	104,466	532,985
	$ 134,724	$1,901,313

(1) Of revenue released to the consolidated statements of operations and comprehensive loss for the years ended December 31, 2020 and 2021, $73,435 and $48,363, respectively were included in the beginning balance of the contract liabilities.

26. Employee Benefits Plans

Retirement Savings Plans—The Company has a retirement savings plan, commonly known as a 401(k) plan, that allows participating employees in the United States to contribute a portion of their pre-tax salary up to Internal Revenue Service limits. The Company matches employee contributions dollar for dollar for the first 3% of participants' contributions and 50 cents on each dollar of additional 3% of participants' contributions, to a maximum of 4.5% of eligible compensation. The Company's contributions to the 401(k) plan were $33,809, $31,986 and $31,055 for the years ended December 31, 2019, 2020 and 2021, respectively.

The Company also has an employee benefits plan that requires the Company to make monthly contributions based on the statutory funding requirement into a Central Provident Fund ("CPF") for substantially all Singapore citizens and permanent residents. The Company's contributions under this plan were $34,434, $22,023 and $29,295 for the years ended December 31, 2019, 2020 and 2021, respectively.

27. Commitments and Contingencies

Commitments—The Company's unconditional purchase commitments are as follows:

	December 31, 2020	December 31, 2021
Contracts for capital expenditures	$ 952,604	$2,994,554
Contracts for operating expenditures	1,044,560	3,404,865
	$1,997,164	**$6,399,419**
Due within the next 12 months	**$1,316,090**	**$3,542,823**

In addition to the above, the Company obtained letters of credit to primarily guarantee the PILOT bonds' interest payments, payments for utility supplies and foreign statutory payroll related charges. The Company has obtained letters of credit of $36,211 and $20,000 at December 31, 2020 and 2021, respectively, and bank guarantees of $3,098 and $3,239 at December 31, 2020 and 2021, respectively.

Leases of low-value items and short-term leases that do not meet the capitalization criteria under the Company's lease policy are treated as operating expenses. The following summarizes the Company's non-cancellable operating lease arrangements which were not capitalized and the minimum future rental payments under these arrangements:

	December 31, 2020	December 31, 2021
Within one year	$1,409	$1,195
After one year but not more than five years	1,557	548
	$2,966	**$1,743**

The Company has a patent license agreement with LSI Technology Corporation ("LSI") under which the parties grant to one another a license to use certain of each other's patents. Under the terms of the patent license agreement, the Company may provide wafer capacity in lieu of payment for royalties. Such royalties under the patent license agreement are waived until such time the interest of LSI in SMP falls below 49%. In exchange, the Company has waived capacity shortfall obligations from LSI. Should the interest of LSI in SMP fall below 49%, the Company may be required to make royalty payments to LSI under this patent license agreement. The Company has not made any royalty payments to LSI. The patent license agreement continues for as long as the joint venture agreement between the parties remains.

In 2017, we entered into a set of agreements with a joint venture partner related to the establishment of a joint venture in China to establish and operate a greenfield wafer production site. The parties contemplated that the manufacturing operations would be implemented in two phases. Due to a variety of factors, including unanticipated market conditions, the manufacturing operations did not proceed as planned and the parties have been working to wind-down operations of the joint venture. On April 26, 2021, we received a letter from our joint venture partner requesting that we share in its alleged losses and related costs incurred to support the joint venture. We recorded a provision of $34,000 in June 2021. We engaged in negotiations with our joint venture partner to settle the claim and on November 15, 2021 we resolved the claims consistent with the recorded provision.

On April 28, 2021, International Business Machines ("IBM") sent the Company a letter alleging for the first time that the Company did not fulfill the Company's obligations under the contracts the Company entered into with IBM in 2014 associated with the Company's acquisition of IBM's Microelectronics business. IBM asserted that the Company engaged in fraudulent misrepresentations during the underlying negotiations, and claimed the Company owed them $2,500,000 in damages and restitution. On June 7, 2021, the Company filed a complaint with the New York State Supreme Court (the "Court") seeking a declaratory judgment that the Company did not breach the relevant contracts. IBM subsequently filed its complaint with the Court on June 8, 2021. On September 14, 2021, the Court granted our motion to dismiss IBM's claims of fraud, unjust enrichment and breach of the implied covenant of good faith and fair dealing. Our complaint seeking declaratory judgment was dismissed. The case will proceed based on IBM's breach of contract and promissory estoppel claims. The Company believes, based on discussions with legal counsel, that we have meritorious defenses against IBM's claims. The Company disputes IBM's claims and intend to vigorously defend against them.

28. Earnings Per Share

Basic and diluted loss per share have been calculated for the years ended December 31, 2019, 2020, and 2021 as follows:

	2019	2020	2021
	(in thousands, except for share amounts)		
Net loss available to equity shareholder of the Company	$ (1,371,186)	$ (1,347,571)	$ (250,313)
Weighted average common shares outstanding	504,003,126	500,000,000	505,758,409
Total basic and diluted earnings per share attributable to equity shareholders	**$ (2.72)**	**$ (2.70)**	**$ (0.49)**

For the years ended December 31, 2019, 2020 and 2021, there were 32,560,289, 22,286,278 and 21,749,558 share options outstanding, respectively, which were not included in the calculation of diluted earnings per share as their inclusion would have been anti-dilutive.

29. Related Party Disclosures

The consolidated financial statements include the following subsidiaries which are all wholly owned, except for GLOBALFOUNDRIES (Chengdu) Integrated Circuit Manufacturing Co., Limited, Advanced Mask Technology Centre GmbH & Co. KG, Maskhouse Building Administration GmbH & Co. KH, Advanced Mask Technology Center Verwaltungs GmbH, and Maskhouse Building Administration Verwaltungs GmbH:

Subsidiary	Jurisdiction of Incorporation or Organization	December 31, 2019	December 31, 2020	December 31, 2021
GLOBALFOUNDRIES Dresden Module One LLC	United States	X	X	X
GLOBALFOUNDRIES Dresden Module Two LLC	United States	X	X	X
GLOBALFOUNDRIES Innovation Investments LLC	United States	X	X	X
GLOBALFOUNDRIES Investments LLC	United States	X	X	X
GLOBALFOUNDRIES U.S. Inc.	United States	X	X	X
GLOBALFOUNDRIES U.S. 2 LLC	United States	X	X	X
GLOBALFOUNDRIES Borrower LLC	United States	X	X	X
Hudson Valley Research Park Sewage Works Corporation	United States	X	X	X
GLOBALFOUNDRIES Dresden Module One Holding GmbH	Germany	X	X	X
GLOBALFOUNDRIES Dresden Module One LLC & Co. KG	Germany	X	X	X
GLOBALFOUNDRIES Dresden Module Two LLC & Co. KG	Germany	X	X	X
GLOBALFOUNDRIES Dresden Module Two Holding GmbH	Germany	X	X	X
GLOBALFOUNDRIES Management Services LLC & Co. KG	Germany	X	X	X
Advanced Mask Technology Centre GmbH & Co. KG (50%)	Germany	N/A	X	X
Maskhouse Building Administration GmbH & Co. KH (50%)	Germany	N/A	X	X
Advanced Mask Technology Center Verwaltungs GmbH (50%)	Germany	N/A	X	X
Maskhouse Building Administration Verwaltungs GmbH (50%)	Germany	N/A	X	X
GLOBALFOUNDRIES Europe Sales & Support GmbH	Germany	N/A	X	X
GLOBALFOUNDRIES Engineering Private Limited	India	X	X	X
GLOBALFOUNDRIES Japan Ltd.	Japan	X	X	X
GLOBALFOUNDRIES Netherlands Cooperatief U.A.	The Netherlands	X	X	X
GLOBALFOUNDRIES Netherlands Holding B.V.	The Netherlands	X	X	X
GLOBALFOUNDRIES Netherlands B.V.	The Netherlands	X	X	N/A
GLOBALFOUNDRIES Bulgaria EAD	Bulgaria	X	X	X
GF Asia Investments Pte. Ltd.	Singapore	X	X	X
GF Asia Sales Pte. Ltd.	Singapore	N/A	N/A	X
GLOBALFOUNDRIES Singapore Pte. Ltd.	Singapore	X	X	X
GLOBALFOUNDRIES Taiwan Ltd.	Taiwan	X	X	X
GLOBALFOUNDRIES Europe Ltd.	United Kingdom	X	X	X
GLOBALFOUNDRIES (Chengdu) Integrated Circuit Manufacturing Co., Limited (51%)	China	X	X	X
GLOBALFOUNDRIES China (Beijing) Co., Limited	China	X	X	X
GLOBALFOUNDRIES China (Shanghai) Co., Limited	China	X	X	X
Nanjing APD Technologies Co. Ltd.	China	X	X	X

Related parties represent associated companies, the shareholder, directors and key management personnel of the Company and entities controlled, or significantly influenced by such parties. Pricing policies and terms of these transactions are approved by the audit, risk and compliance committee or the Company's management, as applicable.

Below are the related parties which the Company has entered into transactions with:

Related Party Name	December 31, 2020	December 31, 2021
SMP	Joint venture	Joint venture
Mubadala Treasury Holding Company ("MTHC")	Shareholder entity	Shareholder entity
Mubadala Technology Investments LLC ("Mubadala Technology")	Shareholder entity	Shareholder entity

Related parties represent associated companies, the shareholder, directors and key management personnel of the Company and entities controlled, or significantly influenced by such parties. Pricing policies and terms of these transactions are approved by the Company's management.

Balances with related parties included in the consolidated statements of financial positions are as follows:

	December 31, 2020		December 31, 2021	
	Due from Related Parties	Due to Related Parties	Due from Related Parties	Due to Related Parties
SMP	$8,734	10,480	$8,133	$9,025
Mubadala Technology	—	313	—	96
Total(1)	**$8,734**	**10,793**	**$8,133**	**9,121**

(1) The total amounts of $8,734 and $8,133 due from related parties as of the years ended December 31, 2020 and 2021, respectively, has been included in receivables, prepayments and other assets (see Note 16). The total amounts of $10,793 and $9,121 due to related parties' balance for the years ended December 2020 and 2021, respectively, has been included in trade and other payables (see Note 25).

The following table presents the related party transactions included in the consolidated statements of operations and comprehensive loss:

	December 31, 2019	December 31, 2020	December 31, 2021
Purchases and recharges from:			
SMP(1)	$ 61,950	$57,579	$59,596
AMTC	124,196	—	—
	$186,146	**$57,579**	**$59,596**
Other transactions with:			
SMP (reimbursement of expenses and contribution of tools)	$ 51,251	$47,065	$44,808
AMTC	27,527	—	—
Mubadala Technology (reimbursement of expenses)	496	618	2,602
BAC	263	—	—
	$ 79,537	**$47,683**	**$47,410**

(1) Purchases from SMP were primarily comprised of wafers.

Terms and Conditions of Transactions with Related Parties

Outstanding balances at the year-end are unsecured, interest free, repayable on demand and settlement occurs in cash. The Company has not recorded any allowance of receivables relating to amounts owed by related parties for the years ended December 31, 2020 and 2021. This assessment is undertaken each financial year through examining the financial position of the related party and the market in which the related party operates.

Transactions with Shareholder:

Shareholder Loan Agreement—The Company, as a borrower, entered into loan facilities with its shareholder in 2012 to 2016 (collectively the "Shareholder Loans"). The Shareholder Loans are non-interest bearing and principal repayment, in whole or in part, is entirely at the Company's discretion as explicitly stated in the loan agreement. The Shareholder Loans are subordinated to any claims of other unsubordinated and subordinated creditors, including beneficiaries under guarantees issued, of the Company. The loans have no maturity date and remain outstanding until the loans are paid in full. Further, there are no contingent settlements in the agreements. Since the Shareholder Loans do not contain any contractual obligations to deliver cash, but rather allows the Company to make repayment at its absolute discretion and further prohibits the shareholder from demanding repayment, the Company treated the Shareholder Loans as equity.

The Company repaid $487,000 and $568,000 during the years ended December 31, 2020 and 2021, respectively.

On October 1, 2021, the Company's board approved the conversion of the Shareholder Loans to additional paid-in-capital, and on October 3, 2021, the Company executed an agreement with Mubadala Investment Company PJSC ("Mubadala") to convert the remaining $10,112,687 of the Shareholder Loan balance into additional paid-in-capital ("the Conversion"). The Conversion did not have an impact on shares outstanding or have any dilutive effects, as no additional shares were issued.

Compensation of Key Management Personnel

The compensation of key management personnel during the following years were as follows:

	2020	2021
Chief Executive Officer and Chief Financial Officer		
Short-term benefits	$11,260	$ 8,316
Share-based payments(1)	—	42,034
Board of Directors	800	2,887
	$12,060	**$53,237**

(1) 2021 amount represents the share-based payment expense for all vested options that were issued prior to 2021. The Company started recognizing share-based payment expense in the second quarter of 2021 when an IPO became probable. See Note 30 for more information on share-based payment expense recognition.

30. Share-Based Payments

RSUs

In 2021, the Company granted restricted share units ("RSUs") under the 2018 Share Incentive Plan. The RSUs have a time-based vesting requirement, which provides that the RSUs will generally vest in four annual installments, with 25% vesting on each one-year anniversary of the vesting commencement date subject to the employee's continued employment with the Company. In addition, the RSUs have a liquidity event vesting requirement which is satisfied on the earlier of the six-month anniversary of a qualified IPO, or a change in control event (the “Liquidity Trigger”). Both of the liquidity event vesting requirements are subject to the participant’s continued employment with the Company. RSUs will continue to vest under the time-based vesting requirement if a Liquidity Trigger occurs prior to the time-based vesting requirement having been satisfied.

	Number of RSUs	Weighted average grant date fair value
Outstanding as of December 31, 2020	—	$ —
Granted	851,530	$39.56
Forfeited	(4,100)	$34.46
Outstanding as of December 31, 2021	**847,430**	**$39.59**

Prior to the IPO, the value of the RSUs was determined by the Company’s Board of Directors. Because there had been no public market for the ordinary shares, the Board of Directors determined the fair value at the time of grant of the RSU by contemporaneous valuations performed by unrelated third-party valuation firms as well as a number of objective and subjective factors including valuation of comparable companies, operating and financial performance, the lack of liquidity of capital stock and general and industry specific economic outlook, among other factors.

As of December 31, 2019, 2020 and 2021, there was $0, $0, and $25,704, respectively, of total unrecognized compensation cost related to outstanding RSUs.

Share Options

In 2017, the Company approved the Share Incentive Plan, which is intended to attract and retain talented employees and align shareholder and employee interests. Share options under the Share Incentive Plan will be deemed vested shares over a five-year period.

In 2019, the Company offered to exchange the share options under the Share Incentive Plan with new share options under the “2018 Share Incentive Plan,” under which the Company may grant up to 25 million options to purchase shares in the Company with an exercise price of $10.00 per share. The options vest based on service over four or five years, depending on the timing of the grant, and contingent upon a liquidity event (change in control or IPO) with the earliest vesting date on the one-year anniversary of a liquidity event. On April 19, 2019, the Company issued the share options subject to the tender offer. The exchange of 2017 plan options into 2018 plan options resulted in a total incremental fair value of $63,974, of which $39,180 was recognized in the second quarter of 2021 when an IPO became probable. The remainder was attributed prospectively. In the fourth quarter of 2021, the Company modified the earliest vesting date from one year post-anniversary of a liquidity event to six-months post-anniversary of a liquidity event, and shortened the contractual term for options held by US taxpayers to be the calendar year end after or within the year of vest. The options that remain outstanding at expiration will be auto-exercised through the broker.

The share options are effective for a term of ten years from the grant date. Because the vesting and exercisability of these share options are dependent on a qualified liquidity event, the Company had to assess the probability of such an event in order to determine the expenses related to the share-based payments for the period. On June 30, 2021, the Company deemed an IPO to be probable under IFRS.

Upon the tender offer, the Company measured the pre-modification value of the old share options and compared that to the fair value of the new share options using the Black-Scholes option pricing model. The equity volatility was determined based on the historical volatilities of comparable publicly traded companies over a period equal to the expected average share-based payments life. The risk-free rate of interest was interpolated from the U.S. Constant Maturity Treasury rate curve to reflect the remaining expected life of share options. The fair value of the ordinary shares underlying the stock options has historically been determined by the Company's Board of Directors. Because there had been no public market for the ordinary shares, the Board of Directors determined the fair value of the ordinary shares at the time of grant of the option by contemporaneous valuations performed by unrelated third-party valuation firms as well as a number of objective and subjective factors including valuation of comparable companies, operating and financial performance, the lack of liquidity of capital stock and general and industry specific economic outlook, among other factors.

The assumptions used to value the Company's options granted during the period presented and their expected lives were as follows:

	December 31,		
	2019	2020	2021
Expected dividend yield	0.00%	0.00%	0.00%
Expected volatility	40.90%	43.50%	45.0%
Expected term	6.0 years	5.5 years	4.5 years
Risk-free interest rate	1.59%—2.41%	0.32%—1.46%	0.56%
Estimated ordinary shares valuation	\$18.52—\$20.48	\$20.48—\$24.62	\$24.64—\$26.04

As of December 31, 2020 and 2021, the additional paid-in capital related to the share options amounted to \$34,572, and \$0, respectively. The share-based payment expenses amounted to \$0, \$980, and \$223,402 for the years ended December 31, 2019, 2020 and 2021, respectively. The Company incurred \$4,672 of payroll taxes associated with the share-based compensation expense for the year ended December 31, 2021.

	Number of Share options	Weighted average exercise price per Share
Balance as of December 31, 2018	34,305,235	\$21.54
Exchanged	(18,837,010)	\$21.54
Granted	19,954,794	\$10.00
Forfeited	(2,862,730)	\$17.69
Outstanding as of December 31, 2019	32,560,289	\$14.80
Granted	5,078,456	\$10.00
Forfeited	(15,352,467)	\$20.14
Outstanding as of December 31, 2020	22,286,278	\$10.04
Granted	995,409	\$10.00
Forfeited	(1,532,129)	\$10.00
Outstanding as of December 31, 2021	**21,749,558**	**\$10.03**

The following table summarizes information about employees' share options outstanding as of December 31, 2021:

Outstanding		
Range of exercise prices	Number Outstanding	Weighted average remaining contractual life (in years)
\$10.00	21,694,907	2.89
\$19.07	23,422	5.04
\$22.54	23,422	5.04
\$26.00	7,807	5.04

The weighted average remaining contractual life is calculated based on the 10-year contract terms of the options. And the weighted average exercise price is calculated using the exercise price of the outstanding options, which pertain to the 2018 Share Incentive Plan.

As of December 31, 2019, 2020 and 2021, there was $200,591, $251,483 and $62,680, respectively, of total unrecognized compensation cost related to outstanding stock options.

As of December 31, 2020 and 2021, the Company had 2,790,590 and 2,457,663 share options available for future grant.

31. Financial Risk Management Objectives and Policies

GLOBALFOUNDRIES has implemented a cash investment policy which determines the overall objectives of the Company's investment strategy. This policy is aimed to ensure the preservation of capital and the maintenance of sufficient liquidity necessary to fund operations while balancing the needs for appropriate returns. The cash investment policy limits permissible investments and credit quality.

The primary objective of the Company's capital management is to ensure that it maintains a healthy capital ratio in order to support its business and maximize shareholder value.

The Company manages its capital structure and makes adjustments to it in light of changes in economic conditions. There are no regulatory imposed requirements on the level of share capital which the Company has to maintain.

The Company monitors capital using a gearing ratio, which is net debt divided by total capital plus net debt. The Company's policy is to keep the gearing ratio within a range to meet the business needs of the Company.

The Company includes within net debt, interest bearing loans and borrowings and obligations under lease less bank balances and cash. Capital includes total equity including non-controlling interests less cumulative changes in fair value.

The Company's interest-bearing loans and borrowings have certain financial covenants. Restrictive covenants in the Company's credit facilities may prevent the Company from pursuing certain transactions or business strategies, including by limiting the Company's ability to, in certain circumstances:

- incur additional indebtedness;
- pay dividends or make distributions;
- acquire assets or make investments outside of the ordinary course of business;
- sell, lease, license, transfer or otherwise dispose of assets;
- enter into transactions with the affiliates;
- create or permit liens;
- guarantee indebtedness; and
- engage in certain extraordinary transactions.

As of December 31, 2021, the Company is in compliance with the financial covenants.

Risks Arising from Financial Instruments—The main risks arising from the Company's financial instruments are market risk (including foreign currency risk and interest rate risk), credit risk and liquidity risk. The Board of Directors reviews and approves policies for managing each of these risks which are summarized below.

Market Risk—Market price risk is the risk that the fair value of future cash flows of a financial instrument will fluctuate because of changes in market prices. Market prices comprise the following types of risk: interest rate risk, foreign currency risk and equity price risk.

Interest Rate Risk—The Company's exposure to market risk for changes in interest rates relates primarily to interest-earning financial assets and interest-bearing financial liabilities. The Company's interest-earning financial assets are mostly highly liquid investments and consist of primarily money market funds and time deposits. As these financial assets are mainly short-term in nature, the Company's exposure to mark-to-market risk is limited. The Company's interest-bearing financial liabilities include fixed and floating rate loans and lease obligations. Floating rate loans bear interest at Base Rate or LIBOR or EURIBOR plus a premium, which is fixed. The Company uses pay-fixed / receive-float interest rate swaps to protect the Company against adverse fluctuations in interest rates and to reduce its exposure to variability in cash flows on the Company's forecasted floating-rate debt facility to the extent that it is practicable and cost effective to do so.

Cash Flow Sensitivity Analysis for Variable Rate Instruments—The sensitivity of profit or loss in the consolidated statement of comprehensive income is the effect of the assumed changes in interest rates on the Company's profit or loss for one year, based on the floating rate financial assets and financial liabilities held on December 31, 2020.

The following table demonstrates the sensitivity of profit or loss in the consolidated statement of operations to reasonably possible changes in interest rates, with all other variables held constant.

	Increase/ (Decrease) in Percentages	Effects on Loss before Tax
December 31, 2019	10%	$ 2,164
	(10)%	$ (2,164)
December 31, 2020	10%	$ 19,194
	(10%)	$(19,194)
December 31, 2021	10%	$ 2
	(10)%	$ (2)

Foreign Currency Risk—As a result of foreign operations, the Company has costs, assets and liabilities that are denominated in foreign currencies, primarily the Euro, the Japanese Yen and the Singapore Dollar. Therefore, movements in exchange rates could cause foreign currency denominated expenses to increase as a percentage of net revenue, affecting profitability and cash flows. The Company uses foreign currency forward contracts to reduce exposure to foreign currency fluctuations. The Company also incurs certain portion of its interest expense in Euro and Singapore Dollars, exposing the Company to exchange rate fluctuations between USD and EUR and SGD. The Company uses cross-currency swaps to reduce its exposure to variability from foreign exchange impacting cash flows arising from Company's foreign currency denominated debt cash flows to the extent than it is practicable and cost effective to do so.

Exposure to Currency Risk—The Company's exposure to foreign currency risk against financial assets and financial liabilities was as follows, based on notional amounts:

	EUR	JPY	SGD
December 31, 2020			
Receivables and prepayments	$ 141,603	$ 353	$ 12,020
Cash and cash equivalents	54,043	2,150	8,531
Loans and borrowings	(26,992)	—	42
Trade and other payables	(150,127)	(13,820)	(65,966)
	$ 18,527	**$(11,317)**	**$ (45,373)**
December 31, 2021			
Receivables and prepayments	$ 160,684	$ 315	$ 12,573
Cash and cash equivalents	45,178	1,922	3,924
Loans and borrowings	(14,361)	—	(90,912)
Trade and other payables	(253,558)	(72,867)	(147,284)
	$ (62,057)	**$(70,630)**	**$(221,699)**

Credit Risk—Credit risk can be defined as the risk of suffering financial loss from financial instruments due to the failure by a counterparty to fulfill an obligation. Financial instruments that subject the Company to concentrations of credit risk include investments and cash equivalents and foreign exchange transactions. With respect to credit risk arising from the Company's cash and cash equivalents, the Company's exposure to credit risk arises from default of the counterparty, with maximum exposure equal to the carrying amount of these instruments.

The Company generally does not require collateral to secure accounts receivable. The risk with respect to trade receivables is mitigated by credit evaluations the Company performs on the Company's customers, the short duration of the Company's payments terms for the significant majority of the Company's customer contracts and by the diversification of the Company's customer base. The expected credit losses of trade and other receivables are not significant.

The Company's five largest customers account for approximately 63% and 61% of the outstanding trade receivables balance as of December 31, 2020 and 2021, respectively.

Exposure to Credit Risk—The carrying amount of financial assets represents the maximum credit exposure. The maximum exposure to credit risk at the reporting date was:

The aging of financial assets including trade receivables is as follows:

			Past Due but Not Impaired			
	Total	Neither part Due Nor Impaired	< 30 Days	31-90 Days	91-120 Days	Great than 120 days
December 31, 2020	$1,041,389	$1,026,367	$14,795	$197	$ 30	$—
December 31, 2021	$1,067,350	$1,023,506	$42,507	$550	$787	$—

Liquidity Risk—The Company monitors its risk to a shortage of funds by monitoring its cash flow situation. Ongoing cash forecasting and review processes have been set up to determine the amount of external funding needed. The Company has set up a process of mid- and long-term financial planning. The Company's financing structure, including maturities of debt, is determined in response to the financing requirements identified with the long-term business planning process.

The table below summarizes the maturity profile of the Company's financial liabilities:

	Carrying Value	Contractual Cash Flows	1 Year or Less	1 to 5 Years	Greater than 5 Years	Total
December 31, 2020						
Loans and borrowings	$2,337,955	$2,507,456	$ 447,490	$2,000,928	$ 59,038	$2,507,456
Lease obligations	464,512	597,996	165,621	256,597	175,778	597,996
Derivative financial liability	34,663	34,663	1,318	33,345	—	34,663
Trade payables and other liabilities	1,271,944	1,271,944	1,138,069	133,875	—	1,271,944
	$4,109,074	**$4,412,059**	**$1,752,498**	**$2,424,745**	**$234,816**	**$4,412,059**
December 31, 2021						
Loans and borrowings	$2,013,099	$2,204,618	$ 349,373	$1,735,562	$119,683	2,204,618
Lease obligations	425,518	511,901	156,784	231,820	123,297	511,901
Derivative financial liability	65,569	65,569	48,593	16,976	—	65,569
Trade payables and other liabilities	1,894,595	1,894,595	1,848,083	46,512	—	1,894,595
	$4,398,781	**$4,676,683**	**$2,402,833**	**$2,030,870**	**$242,980**	**$4,676,683**

In preparing the maturity profile, undiscounted payments are calculated based on contractually agreed interest rates where these are fixed, or, in the case of discounted liabilities for leases, where the interest rate is implicit in the financing arrangement. For variable interest arrangements undiscounted payments are determined based on the interest rate prevailing at the reporting date.

Assets and Liabilities Measured at Fair Value—The Company uses the following hierarchy for determining and disclosing the fair value of financial instruments by valuation technique:

Level 1—Quoted (unadjusted) prices in active markets for identical assets or liabilities

Level 2—Other techniques for which all inputs which have a significant effect on the recorded fair value are observable, either directly or indirectly

Level 3—Techniques which use inputs which have a significant effect on the recorded fair value that are not based on observable market data

Time deposits and money market funds are primarily classified within Level 1 or Level 2 because time deposits and money market funds are valued primarily using quoted market prices of similar instruments or alternative pricing sources and models utilizing market observable inputs.

For assets and liabilities that are recognized at fair value on a recurring basis, the Company determines whether transfers have occurred between levels in the hierarchy by re-assessing categorization (based on the lowest level input that is significant to the fair value measurement as a whole) at the end of each reporting period. Foreign currency forward contracts are classified within Level 2. The fair values of foreign currency forward contracts are determined using quantitative models that require the use of multiple market inputs, including interest rates, prices and maturity dates to generate pricing curves, which are used to value the positions. The market inputs are generally actively quoted and can be validated through external sources. For foreign currency forward contract asset and liability positions with maturity dates which fall between the dates of quoted prices, interpolation of rate or maturity scenarios are used in determining fair values. During the years ended December 31, 2020 and 2021, there were no transfers between Level 1 and Level 2 fair value measurements.

Financial Instruments Measured at Fair Value on a Recurring Basis

The following table presents the Company's assets and liabilities measured at fair value on a recurring basis:

	Fair Value Measurement at Reporting Date Using			
	Total	Quoted Prices Identical Assets/ Liabilities (Level 1)	Significant Other Inputs (Level 2)	Significant Unobservable Inputs (Level 3)
December 31, 2020				
Assets:				
Cash equivalents[1]	$560,198	$560,198	$ —	$ —
Investments in equity instruments[2]	$ 12,737	$ —	$ —	$12,737
Derivatives[3]	$ 84,588	$ —	$84,588	$ —
Liabilities:				
Derivatives[4]	$ 34,663	$ —	$34,663	$ —

	Fair Value Measurement at Reporting Date Using			
	Total	Quoted Prices Identical Assets/ Liabilities (Level 1)	Significant Other Inputs (Level 2)	Significant Unobservable Inputs (Level 3)
December 31, 2021				
Assets:				
Cash equivalents [1]	$2,175,002	$2,150,002	$25,000	$ —
Investments in equity instruments [2]	$ 16,806	$ 770	$ —	$16,036
Derivatives[3]	$ 25,500	$ —	$25,500	$ —
Liabilities:				
Derivatives[4]	$ 65,569	$ —	$65,569	$ —

(1) Included in cash and cash equivalents on the Company's consolidated statements of financial position.
(2) Included in current and noncurrent receivables, prepayments and other assets on the Company's consolidated statements of financial position.
(3) Consists of foreign currency forward contracts, interest rate swaps, cross currency swaps and commodity hedge. Included in other current and noncurrent financial assets on the Company's consolidated statements of financial position.
(4) Consists of foreign currency forward contracts, interest rate swaps, cross currency swaps and commodity hedge. Included in other current and noncurrent financial liabilities on the Company's consolidated statements of financial position.

Financial Instruments Not Recorded at Fair Value on a Recurring Basis

Financial instruments not recorded at fair value on a recurring basis include non-marketable equity securities (that have not been re-measured or impaired in the current period), grants receivable, loans receivable, lease obligations and the Company's short-term and long-term debt.

The carrying and fair values of the Company's financial instruments not recorded at fair value on a recurring basis are presented in the following table, classified according to the categories of loans and receivables ("LaR") and financial liabilities at amortized cost ("FLAC"):

		December 31, 2020		December 31, 2021	
Financial Liability	**Category**	**Carrying Amount**	**Fair Value**	**Carrying Amount**	**Fair Value**
Other long-term debt	FLAC	2,337,955	2,336,114	2,013,099	2,005,999
Total		$2,337,955	$2,336,114	$2,013,099	$2,005,999

Estimated fair values of loans and borrowings is based on quoted prices for similar liabilities for which significant inputs are observable and represents a Level 2 valuation. The fair values are estimated based on the type of loan and maturity. The Company estimates the fair value using market interest rates for the Company's debts with similar maturities.

32. Operating Segments Information

(a) Operating segments, segment revenue, operating results

The Company's chief operating decision-maker is the Company's Chief Executive Officer who makes resource allocation decisions and assesses performance based on financial information presented on a consolidated basis. There are no segment managers who are held accountable by the chief operating decision-maker, or anyone else, for operations, operating results, and planning for levels or components below the consolidated unit level. Accordingly, the Company has determined that the Company has a single reportable segment and operating segment structure.

(b) Revenue and non-current assets by geography and major customers' representing at least 10% of revenue based on customer's headquarters were as follows:

	For the year ended December 31,		
Revenue by Geography	**2019**	**2020**	**2021**
United States	$4,140,201	$3,368,262	$3,975,215
Europe, the Middle East, and Africa	695,193	451,283	805,226
Other	977,394	1,030,960	1,804,638
	$5,812,788	**$4,850,505**	**$6,585,079**

Noncurrent Assets by Geography	**2020**	**2021**
United States	$5,843,023	$5,433,410
Germany	1,404,202	1,989,121
Singapore	1,114,603	1,547,094
Other	495,461	411,551
Total	**$8,857,289**	**$9,381,176**

Non-current assets include property, plant, equipment, right-of-use assets, intangible assets, investments in joint venture and associates, restricted cash (non-current) and receivables, prepayments and other assets (non-current).

	For the year ended December 31,					
Major Customer	**2019**		**2020**		**2021**	
	Amount	**%**	**Amount**	**%**	**Amount**	**%**
Customer A	$1,600,750	28	$1,000,750	21	$811,304	12
Customer B	$ 442,537	8	$ 536,915	11	$995,241	15

33. Customer And Supplier Concentration

Significant customers and suppliers are those that account for greater than 10% of the Company's revenue and purchases.

The Company earned a substantial portion of revenue from two customers in 2019, 2020 and 2021: Customer A amounted to 28%, 21% and 12% of total revenue, respectively, and Customer B amounted to 8%, 11%, and 15% of total revenue, respectively. As of December 31, 2020 and 2021, the amounts due from Customer A included in accounts receivable were $129,895 and $178,506, respectively, and the amounts due from Customer B included in accounts receivable were $100,410 and $159,597, respectively. The loss of the significant customers or the failure to attract new customers could have a material adverse effect on our business, results of operations and financial condition for the Company.

The Company purchased 42%, 52% and 46% of its SOI wafers, a key input into its products, from a single supplier in 2019, 2020 and 2021, respectively. As of December 31, 2020 and 2021, the net amount due to the supplier was $32,450 and $63,237 respectively. Any failure in the supplier's ability to provide SOI wafers could materially and adversely affect the Company's results of operations, financial condition, business and prospects.

ITEM 19. EXHIBITS

Documents filed as exhibits to this Form 20-F:

1.1	Second Amended and Restated Memorandum and Articles of Association of the Registrant (incorporated by reference to Exhibit 4.1 of the Registrant's Registration Statement on Form S-8 (File No. 333-260674) filed with the SEC on November 2, 2021)
2.1*	Shareholder's Agreement among the Registrant and other parties thereto
2.2*	Registration Rights Agreement among the Registrant and other parties thereto
2.3*	Description of the Registrant's Securities Registered Pursuant to Section 12 of the Securities Exchange Act of 1934
4.1	2017 Share Incentive Plan (incorporated by reference to Exhibit 10.7 of the Registrant's Registration Statement on Form F-1 (File No. 333-260003) filed with the SEC on October 4, 2021)
4.2	2018 Share Incentive Plan (incorporated by reference to Exhibit 10.8 of the Registrant's Registration Statement on Form F-1 (File No. 333-260003) filed with the SEC on October 4, 2021)
4.3	2021 Share Incentive Plan (incorporated by reference to Exhibit 10.1 of the Registrant's Registration Statement on Form F-1 (File No. 333-260003) filed with the SEC on October 4, 2021)
4.4	2021 Amendment of the GLOBALFOUNDRIES Inc. 2018 Share Incentive Plan Share Option Agreement (incorporated by reference to Exhibit 10.9 of the Registrant's Registration Statement on Form F-1 (File No. 333-260003) filed with the SEC on October 4, 2021)
4.5	2021 Amendment of the GLOBALFOUNDRIES Inc. 2018 Share Incentive Plan (incorporated by reference to Exhibit 10.10 of the Registrant's Registration Statement on Form F-1 (File No. 333-260003) filed with the SEC on October 4, 2021)
4.6	2021 Employee Stock Purchase Plan (incorporated by reference to Exhibit 10.11 of the Registrant's Registration Statement on Form F-1 (File No. 333-260003) filed with the SEC on October 4, 2021)
4.7†	Materials Supply Agreement, dated April 25, 2017, between the Company and Soitec S.A. (incorporated by reference to Exhibit 10.3 of the Registrant's Registration Statement on Form F-1 (File No. 333-260003) filed with the SEC on October 4, 2021)
4.8†	Addendum to Materials Supply Agreement, dated November 2, 2020, between the Company and Soitec S.A. (incorporated by reference to Exhibit 10.4 of the Registrant's Registration Statement on Form F-1 (File No. 333-260003) filed with the SEC on October 4, 2021)
4.9†	Amended and Restated Exhibit 3 to the Long Term Addendum, dated July 1, 2021, between the Company and Soitec S.A. (incorporated by reference to Exhibit 10.5 of the Registrant's Registration Statement on Form F-1 (File No. 333-260003) filed with the SEC on October 4, 2021)
4.1	Term Loan Facility Agreement, dated September 3, 2021, between GLOBALFOUNDRIES Singapore Pte. Ltd., the Company and Economic Development Board (incorporated by reference to Exhibit 10.6 of the Registrant's Registration Statement on Form F-1 (File No. 333-260003) filed with the SEC on October 4, 2021)
4.11*	2019 Revolving and L/C Facilities Agreement, dated October 18, 2019, between the Company and Citibank, N.A., London Branch and DBS Bank Ltd.
4.12*	2020 Amendment Agreement to Revolving and L/C Facilities Agreement, dated November 11, 2020, between the Company and Bank of America, N.A., Citibank, N.A., DBS Bank Ltd. and JPMorgan Chase Bank, N.A, Intesa Sanpaolo S.p.A., London Branch, Morgan Stanley Senior Funding, Inc., Deutsche Bank AG, ING Bank, Commerzbank AG and Credit Suisse AG, Cayman Islands Branch

4.13*	2021 Amendment to Revolving and L/C Facilities Agreement, dated October 13, 2021, between Bank of America, N.A., DBS Bank Ltd., Intesa Sanpaolo S.p.A., London Branch, JPMorgan Chase Bank, N.A., Morgan Stanley Senior Funding, Inc., Citibank, N.A., Deutsche Bank AG, Credit Suisse AG, Cayman Islands Branch, HSBC Bank USA, National Association and First Abu Dhabi Bank PJSC
4.14	Share Purchase Agreement by and between the Company and Silver Lake, dated as of October 18, 2021 (incorporated by reference to Exhibit 10.15 of the Registrant's Amendment No. 1 to Registration Statement on Form F-1 (File No. 333-260003) filed with the SEC on October 19, 2021)
4.15	Form of Director and Officer Indemnification Agreement (incorporated by reference to Exhibit 10.2 of the Registrant's Registration Statement on Form F-1 (File No. 333-260003) filed with the SEC on October 4, 2021)
8	List of subsidiaries of the Registrant (incorporated by reference to Exhibit 21.1 of the Registrant's Registration Statement on Form F-1 (File No. 333-260003) filed with the SEC on October 4, 2021)
12.1*	CEO Certification pursuant to Rule 13a-14(a)/15d-14(a)
12.2*	CFO Certification pursuant to Rule 13a-14(a)/15d-14(a)
13.1*	Certification pursuant to Rule 13a-14(b)/15d-14(b) and 18 U.S.C. §1350
101.INS*	Inline XBRL Instance Document (the instance document does not appear in the Interactive Data File because its XBRL tags are embedded within the Inline XBRL document)
101.SCH*	Inline XBRL Taxonomy Extension Schema Document
101.CAL*	Inline XBRL Taxonomy Extension Calculation Linkbase Document
101.DEF*	Inline XBRL Taxonomy Extension Definition Linkbase Document
101.LAB*	Inline XBRL Taxonomy Extension Label Linkbase Document
101.PRE*	Inline XBRL Taxonomy Extension Presentation Linkbase Document
104*	Cover Page Interactive Data File (formatted as Inline XBRL and contained in Exhibit 101)

* Filed herewith.

† Pursuant to Item 601(b)(10) of Regulation S-K, certain confidential portions of this exhibit have been omitted by means of marking such portions with asterisks [***] as the identified confidential information is both (i) not material and (ii) is the type that the registrant treats as private or confidential.

SIGNATURE

The registrant hereby certifies that it meets all of the requirements for filing on Form 20-F and that it has duly caused and authorized the undersigned to sign this Annual Report on its behalf.

/s/Thomas Caulfield

Dr. Thomas Caulfield
President and Chief Executive Officer, Board Director

Date: March 31, 2022

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