UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549

FORM 10-Q

☒ **QUARTERLY REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**
For the quarterly period ended July 28, 2019

OR

☐ **TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**
Commission file number: 0-23985

NVIDIA CORP ORATION

(Exact name of registrant as specified in its charter)

Delaware	**94-3177549**
(State or Other Jurisdiction of Incorporation or Organization)	**(I.R.S. Employer Identification No.)**

2788 San Tomas Expressway
Santa Clara , California 95051
(408) 486-2000
(Address, including zip code, and telephone number, including area code, of principal executive offices)

N/A
(Former name, former address and former fiscal year if changed since last report)

Securities registered pursuant to Section 12(b) of the Act:

Title of each class	Trading Symbol(s)	Name of each exchange on which registered
Common Stock, $0.001 par value per share	NVDA	The Nasdaq Global Select Market

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, a smaller reporting company, or an emerging growth company. See definitions of “large accelerated filer”, “accelerated filer”, “smaller reporting company”, and "emerging growth company" in Rule 12b-2 of the Exchange Act.

Large accelerated filer ☒ Accelerated filer ☐ Non-accelerated filer ☐ Smaller reporting company ☐ Emerging growth company ☐

If an emerging growth company, 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. ☐

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act). Yes ☐ No ☒

The number of shares of common stock, $0.001 par value, outstanding as of August 9, 2019 , was 609 million .

NVIDIA CORPORATION
FORM 10-Q
FOR THE QUARTER ENDED July 28, 2019

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WHERE YOU CAN FIND MORE INFORMATION

Investors and others should note that we announce material financial information to our investors using our investor relations website, press releases, SEC filings and public conference calls and webcasts. We also use the following social media channels as a means of disclosing information about the company, our products, our planned financial and other announcements and attendance at upcoming investor and industry conferences, and other matters and for complying with our disclosure obligations under Regulation FD:

NVIDIA Twitter Account (https://twitter.com/nvidia)

NVIDIA Company Blog (http://blogs.nvidia.com)

NVIDIA Facebook Page (https://www.facebook.com/nvidia)

NVIDIA LinkedIn Page (http://www.linkedin.com/company/nvidia)

NVIDIA Instagram Page (https://www.instagram.com/nvidia)

In addition, investors and others can view NVIDIA videos on YouTube.

The information we post through these social media channels may be deemed material. Accordingly, investors should monitor these accounts and the blog, in addition to following our press releases, SEC filings and public conference calls and webcasts. This list may be updated from time to time. The information we post through these channels is not a part of this quarterly report on Form 10-Q. These channels may be updated from time to time on NVIDIA's investor relations website.

PART I. FINANCIAL INFORMATION

ITEM 1. FINANCIAL STATEMENTS (UNAUDITED)

NVIDIA CORPORATION AND SUBSIDIARIES
CONDENSED CONSOLIDATED STATEMENTS OF INCOME
(In millions, except per share data)
(Unaudited)

	Three Months Ended		Six Months Ended	
	July 28, 2019	July 29, 2018	July 28, 2019	July 29, 2018
Revenue	$ 2,579	$ 3,123	$ 4,799	$ 6,330
Cost of revenue	1,038	1,148	1,962	2,287
Gross profit	1,541	1,975	2,837	4,043
Operating expenses				
Research and development	704	581	1,379	1,124
Sales, general and administrative	266	237	529	467
Total operating expenses	970	818	1,908	1,591
Income from operations	571	1,157	929	2,452
Interest income	47	32	92	57
Interest expense	(13)	(14)	(27)	(29)
Other, net	1	5	1	11
Total other income (expense)	35	23	66	39
Income before income tax	606	1,180	995	2,491
Income tax expense	54	79	48	146
Net income	$ 552	$ 1,101	$ 947	$ 2,345
Net income per share:				
Basic	$ 0.91	$ 1.81	$ 1.56	$ 3.86
Diluted	$ 0.90	$ 1.76	$ 1.54	$ 3.74
Weighted average shares used in per share computation:				
Basic	609	607	608	607
Diluted	616	626	616	627

See accompanying Notes to Condensed Consolidated Financial Statements.

NVIDIA CORPORATION AND SUBSIDIARIES
CONDENSED CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME
(In millions)
(Unaudited)

	Three Months Ended		Six Months Ended	
	July 28, 2019	July 29, 2018	July 28, 2019	July 29, 2018
Net income	$ 552	$ 1,101	$ 947	$ 2,345
Other comprehensive income (loss), net of tax				
Available-for-sale securities:				
Net change in unrealized gain	1	6	9	3
Reclassification adjustments for net realized gain included in net income	—	—	—	1
Net change in unrealized gain	1	6	9	4
Cash flow hedges:				
Net unrealized gain (loss)	—	(4)	4	(8)
Reclassification adjustments for net realized gain (loss) included in net income	—	(2)	(2)	(1)
Net change in unrealized gain (loss)	—	(6)	2	(9)
Other comprehensive income (loss), net of tax	1	—	11	(5)
Total comprehensive income	$ 553	$ 1,101	$ 958	$ 2,340

See accompanying Notes to Condensed Consolidated Financial Statements.

NVIDIA CORPORATION AND SUBSIDIARIES
CONDENSED CONSOLIDATED BALANCE SHEETS
(In millions)
(Unaudited)

	July 28, 2019	January 27, 2019
ASSETS		
Current assets:		
Cash and cash equivalents	$ 7,105	$ 782
Marketable securities	1,370	6,640
Accounts receivable, net	1,561	1,424
Inventories	1,204	1,575
Prepaid expenses and other current assets	151	136
Total current assets	11,391	10,557
Property and equipment, net	1,484	1,404
Operating lease assets	535	—
Goodwill	618	618
Intangible assets, net	49	45
Deferred income tax assets	588	560
Other assets	110	108
Total assets	$ 14,775	$ 13,292
LIABILITIES AND SHAREHOLDERS' EQUITY		
Current liabilities:		
Accounts payable	$ 437	$ 511
Accrued and other current liabilities	880	818
Total current liabilities	1,317	1,329
Long-term debt	1,989	1,988
Long-term operating lease liabilities	483	—
Other long-term liabilities	650	633
Total liabilities	4,439	3,950
Commitments and contingencies - see Note 13		
Shareholders' equity:		
Preferred stock	—	—
Common stock	1	1
Additional paid-in capital	6,543	6,051
Treasury stock, at cost	(9,524)	(9,263)
Accumulated other comprehensive loss	(1)	(12)
Retained earnings	13,317	12,565
Total shareholders' equity	10,336	9,342
Total liabilities and shareholders' equity	$ 14,775	$ 13,292

See accompanying Notes to Condensed Consolidated Financial Statements.

NVIDIA CORPORATION AND SUBSIDIARIES
CONDENSED CONSOLIDATED STATEMENTS OF SHAREHOLDERS' EQUITY
FOR THE THREE MONTHS ENDED JULY 28, 2019 AND JULY 29, 2018
(Unaudited)

	Common Stock Outstanding		Additional Paid-in Capital	Treasury Stock	Accumulated Other Comprehensive Income (Loss)	Retained Earnings	Total Shareholders' Equity
(In millions, except per share data)	**Shares**	**Amount**					
Balances, April 28, 2019	609	$ 1	$ 6,317	$ (9,474)	$ (2)	$ 12,862	$ 9,704
Other comprehensive income	—	—	—	—	1	—	1
Net income	—	—	—	—	—	552	552
Tax withholding related to vesting of restricted stock units	—	—	—	(50)	—	—	(50)
Cash dividends declared and paid ($0.16 per common share)	—	—	—	—	—	(97)	(97)
Stock-based compensation	—	—	226	—	—	—	226
Balances, July 28, 2019	609	$ 1	$ 6,543	$ (9,524)	$ (1)	$ 13,317	$ 10,336

	Common Stock Outstanding		Additional Paid-in Capital	Treasury Stock	Accumulated Other Comprehensive Income (Loss)	Retained Earnings	Total Shareholders' Equity
(In millions, except per share data)	**Shares**	**Amount**					
Balances, April 29, 2018	607	$ 1	$ 5,546	$ (7,755)	$ (23)	$ 9,948	$ 7,717
Net income	—	—	—	—	—	1,101	1,101
Issuance of common stock from stock plans	1	—	3	—	—	—	3
Tax withholding related to vesting of restricted stock units	—	—	—	(65)	—	—	(65)
Exercise of convertible note hedges	—	—	1	(1)	—	—	—
Cash dividends declared and paid ($0.15 per common share)	—	—	—	—	—	(92)	(92)
Stock-based compensation	—	—	131	—	—	—	131
Balances, July 29, 2018	608	$ 1	$ 5,681	$ (7,821)	$ (23)	$ 10,957	$ 8,795

See accompanying Notes to Condensed Consolidated Financial Statements.

NVIDIA CORPORATION AND SUBSIDIARIES
CONDENSED CONSOLIDATED STATEMENTS OF SHAREHOLDERS' EQUITY
FOR THE SIX MONTHS ENDED JULY 28, 2019 AND JULY 29, 2018
(Unaudited)

	Common Stock Outstanding		Additional Paid-in Capital	Treasury Stock	Accumulated Other Comprehensive Income (Loss)	Retained Earnings	Total Shareholders' Equity
(In millions, except per share data)	**Shares**	**Amount**					
Balances, January 27, 2019	606	$ 1	$ 6,051	$ (9,263)	$ (12)	$ 12,565	$ 9,342
Other comprehensive income	—	—	—	—	11	—	11
Net income	—	—	—	—	—	947	947
Issuance of common stock from stock plans	5	—	83	—	—	—	83
Tax withholding related to vesting of restricted stock units	(2)	—	—	(261)	—	—	(261)
Cash dividends declared and paid ($0.32 per common share)	—	—	—	—	—	(195)	(195)
Stock-based compensation	—	—	409	—	—	—	409
Balances, July 28, 2019	609	$ 1	$ 6,543	$ (9,524)	$ (1)	$ 13,317	$ 10,336

	Common Stock Outstanding		Additional Paid-in Capital	Treasury Stock	Accumulated Other Comprehensive Income (Loss)	Retained Earnings	Total Shareholders' Equity
(In millions, except per share data)	**Shares**	**Amount**					
Balances, January 28, 2018	606	$ 1	$ 5,351	$ (6,650)	$ (18)	$ 8,787	$ 7,471
Retained earnings adjustment due to adoption of new revenue accounting standard	—	—	—	—	—	8	8
Other comprehensive loss	—	—	—	—	(5)	—	(5)
Net income	—	—	—	—	—	2,345	2,345
Issuance of common stock from stock plans	7	—	69	—	—	—	69
Tax withholding related to vesting of restricted stock units	(2)	—	—	(515)	—	—	(515)
Share repurchase	(3)	—	—	(655)	—	—	(655)
Exercise of convertible note hedges	—	—	1	(1)	—	—	—
Cash dividends declared and paid ($0.30 per common share)	—	—	—	—	—	(183)	(183)
Stock-based compensation	—	—	260	—	—	—	260
Balances, July 29, 2018	608	$ 1	$ 5,681	$ (7,821)	$ (23)	$ 10,957	$ 8,795

See accompanying Notes to Condensed Consolidated Financial Statements.

NVIDIA CORPORATION AND SUBSIDIARIES
CONDENSED CONSOLIDATED STATEMENTS OF CASH FLOWS
(In millions)
(Unaudited)

	Six Months Ended	
	July 28, 2019	July 29, 2018
Cash flows from operating activities:		
Net income	$ 947	$ 2,345
Adjustments to reconcile net income to net cash provided by operating activities:		
Stock-based compensation expense	401	262
Depreciation and amortization	183	116
Deferred income taxes	(27)	113
Other	1	(22)
Changes in operating assets and liabilities:		
Accounts receivable	(137)	(386)
Inventories	378	(295)
Prepaid expenses and other assets	36	(44)
Accounts payable	(45)	172
Accrued and other current liabilities	(79)	96
Other long-term liabilities	(2)	1
Net cash provided by operating activities	1,656	2,358
Cash flows from investing activities:		
Proceeds from maturities of marketable securities	3,592	2,957
Proceeds from sales of marketable securities	3,152	77
Purchases of marketable securities	(1,461)	(7,136)
Purchases of property and equipment and intangible assets	(241)	(247)
Investment in non-affiliates	(2)	(7)
Net cash provided by (used in) investing activities	5,040	(4,356)
Cash flows from financing activities:		
Proceeds related to employee stock plans	83	69
Payments related to tax on restricted stock units	(261)	(515)
Dividends paid	(195)	(182)
Payments related to repurchases of common stock	—	(655)
Repayment of Convertible Notes	—	(2)
Other	—	(1)
Net cash used in financing activities	(373)	(1,286)
Change in cash and cash equivalents	6,323	(3,284)
Cash and cash equivalents at beginning of period	782	4,002
Cash and cash equivalents at end of period	$ 7,105	$ 718
Other non-cash investing activity:		
Assets acquired by assuming related liabilities	$ 80	$ 52

See accompanying Notes to Condensed Consolidated Financial Statements.

Note 1 - Summary of Significant Accounting Policies

Basis of Presentation

The accompanying unaudited condensed consolidated financial statements were prepared in accordance with accounting principles generally accepted in the United States of America, or U.S. GAAP, for interim financial information and with the instructions to Form 10-Q and Article 10 of Securities and Exchange Commission, or SEC, Regulation S-X. The January 27, 2019 consolidated balance sheet was derived from our audited consolidated financial statements included in our Annual Report on Form 10-K for the fiscal year ended January 27, 2019 , as filed with the SEC, but does not include all disclosures required by U.S. GAAP. In the opinion of management, all adjustments, consisting only of normal recurring adjustments considered necessary for a fair statement of results of operations and financial position have been included. The results for the interim periods presented are not necessarily indicative of the results expected for any future period. The following information should be read in conjunction with the audited consolidated financial statements and notes thereto included in our Annual Report on Form 10-K for the fiscal year ended January 27, 2019 .

Significant Accounting Policies

Except for the accounting policy for leases, which was updated as a result of adopting a new accounting standard related to leases, there have been no material changes to our significant accounting policies in Note 1 - Organization and Summary of Significant Accounting Policies, of the Notes to the Consolidated Financial Statements included in our Annual Report on Form 10-K for the fiscal year ended January 27, 2019 .

Leases

We determine if an arrangement is or contains a lease at inception. Operating leases with lease terms of more than 12 months are included in operating lease assets, accrued and other current liabilities, and long-term operating lease liabilities on our consolidated balance sheet. Operating lease assets represent our right to use an underlying asset for the lease term and lease liabilities represent our obligation to make lease payments over the lease term.

Operating lease assets and liabilities are recognized based on the present value of the remaining lease payments discounted using our incremental borrowing rate. Operating lease assets also include initial direct costs incurred and prepaid lease payments, minus any lease incentives. Our lease terms include options to extend or terminate the lease when it is reasonably certain that we will exercise that option. Lease expense is recognized on a straight-line basis over the lease term.

We combine the lease and non-lease components in determining the operating lease assets and liabilities.

Refer to Note 3 of these Notes to Condensed Consolidated Financial Statements for additional information.

Fiscal Year

We operate on a 52- or 53-week year, ending on the last Sunday in January. Fiscal years 2020 and 2019 are both 52-week years. The second quarters of fiscal years 2020 and 2019 were both 13-week quarters.

Reclassifications

Certain prior fiscal year balances have been reclassified to conform to the current fiscal year presentation.

Principles of Consolidation

Our condensed consolidated financial statements include the accounts of NVIDIA Corporation and our wholly-owned subsidiaries. All intercompany balances and transactions have been eliminated in consolidation.

Use of Estimates

The preparation of financial statements in conformity with U.S. GAAP requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosures of contingent assets and liabilities at the date of the financial statements and the reported amounts of revenue and expenses during the reporting period. Actual results could differ materially from our estimates. On an on-going basis, we evaluate our estimates, including those related to revenue recognition, cash equivalents and marketable securities, accounts receivable, inventories, income taxes, goodwill, stock-based compensation, litigation, investigation and settlement costs, restructuring and other charges, and other contingencies. These estimates are based on historical facts and various other assumptions that we believe are reasonable.

Adoption of New and Recently Issued Accounting Pronouncements

Recently Adopted Accounting Pronouncement

The Financial Accounting Standards Board, or FASB, issued an accounting standards update regarding the accounting for leases under which lease assets and liabilities are recognized on the balance sheet. We adopted this guidance on January 28, 2019 using the optional transition method by recognizing a cumulative-effect adjustment to the consolidated balance sheet. Refer to Note 3 of these Notes to Condensed Consolidated Financial Statements for additional information.

Recent Accounting Pronouncement Not Yet Adopted

In June 2016, the FASB issued a new accounting standard to replace the incurred loss impairment methodology under current GAAP with a methodology that reflects expected credit losses and requires consideration of a broader range of reasonable and supportable information to inform credit loss estimates. We will be required to use a forward-looking expected credit loss model for accounts receivable and other financial instruments, including available-for-sale debt securities. The standard will be effective for us beginning in the first quarter of fiscal year 2021, with early adoption permitted. We are currently evaluating the impact of this standard on our Consolidated Financial Statements.

Note 2 - Merger Agreement with Mellanox Technologies, Ltd .

On March 10, 2019, we entered into an Agreement and Plan of Merger, or the Merger Agreement, with Mellanox Technologies Ltd., or Mellanox, pursuant to which we will acquire all of the issued and outstanding common shares of Mellanox for $125 per share in cash, representing a total enterprise value of approximately $6.9 billion as of the date of the Merger Agreement. The closing of the merger is subject to approval by regulatory agencies. If the Merger Agreement is terminated under certain circumstances involving the failure to obtain the required regulatory approvals, we could be obligated to pay Mellanox a termination fee of $350 million . We have received regulatory approval in the United States and Mexico and are engaged with regulators in Europe and China. In June 2019, Mellanox shareholders approved the merger.

Note 3 - New Lease Accounting Standard

Method and Impact of Adoption

On January 28, 2019, we adopted the new lease accounting standard using the optional transition method by recognizing a cumulative-effect adjustment to the consolidated balance sheet and not adjusting comparative information for prior periods. In addition, we elected the package of practical expedients permitted under the transition guidance, which allowed us not to reassess (1) whether any expired or existing contracts are or contain leases, (2) lease classification for any expired or existing leases, and (3) initial direct costs for any existing leases.

The cumulative-effect adjustment upon adoption of the new lease accounting standard resulted in the recognition of $ 470 million of operating lease assets and $ 500 million of operating lease liabilities on our Consolidated Balance Sheet. The difference of $ 30 million represents deferred rent for leases that existed as of the date of adoption, which was an offset to the opening balance of operating lease assets.

Lease Obligations

Our lease obligations consist of operating leases for our headquarters complex, domestic and international office facilities, and data center space, with lease periods expiring between fiscal years 2020 and 2035 .

Future minimum lease payments under our non-cancelable operating leases as of July 28, 2019 , are as follows:

	Operating Lease Obligations	
	(In millions)	
Fiscal Year:		
2020 (excluding first half of fiscal year 2020)	$	55
2021		109
2022		100
2023		81
2024		57
2025 and thereafter		281
Total		683
Less imputed interest		116
Present value of net future minimum lease payments		567
Less short-term operating lease liabilities		84
Long-term operating lease liabilities	$	483

Future minimum lease payments under our non-cancelable operating leases as of January 27, 2019, based on the previous lease accounting standard, are as follows:

	Lease Obligations	
	(In millions)	
Fiscal Year:		
2020	$	100
2021		97
2022		90
2023		77
2024		54
2025 and thereafter		265
Total	$	683

Operating lease expense for the second quarter and first half of fiscal year 2020 was $28 million and $55 million , respectively. Operating lease expense for the second quarter and first half of fiscal year 2019 was $20 million and $36 million , respectively. Short-term and variable lease expenses for the second quarter and first half of fiscal year 2020 were not significant.

Other information related to leases was as follows:

	Three Months Ended		Six Months Ended	
	July 28, 2019		July 28, 2019	
	(In millions)			
Supplemental cash flows information				
Operating cash flows used for operating leases	$	26	$	50
Operating lease assets obtained in exchange for lease obligations	$	21	$	108

As of July 28, 2019 , our operating leases had a weighted average remaining lease term of 8.7 years and a weighted average discount rate of 3.70% .

Note 4 - Stock-Based Compensation

Our stock-based compensation expense is associated with restricted stock units, or RSUs, performance stock units that are based on our corporate financial performance targets, or PSUs, performance stock units that are based on market conditions, or market-based PSUs, and our employee stock purchase plan, or ESPP.

Our Condensed Consolidated Statements of Income include stock-based compensation expense, net of amounts allocated to inventory, as follows:

	Three Months Ended		Six Months Ended	
	July 28, 2019	July 29, 2018	July 28, 2019	July 29, 2018
	(In millions)			
Cost of revenue	$ 8	$ 8	$ 12	$ 16
Research and development	145	76	259	150
Sales, general and administrative	71	48	130	96
Total	$ 224	$ 132	$ 401	$ 262

Equity Award Activity

The following is a summary of equity award transactions under our equity incentive plans:

	RSUs, PSUs, and Market-based PSUs Outstanding	
	Number of Shares	Weighted Average Grant-Date Fair Value Per Share
	(In millions, except per share data)	
Balances, January 27, 2019	16	$ 129.92
Granted (1) (2)	6	$ 183.33
Vested restricted stock	(4)	$ 67.51
Canceled and forfeited	(1)	$ 189.95
Balances, July 28, 2019	17	$ 161.37

(1) Includes the number of PSUs granted that will be issued and eligible to vest if the maximum corporate financial performance goal for fiscal year 2020 is achieved. Depending on the actual level of the corporate performance achievement at the end of fiscal year 2020 , the PSUs issued could be up to 0.4 million shares.

(2) Includes the number of market-based PSUs granted that will be issued and eligible to vest if the maximum goal for total shareholder return, or TSR, over the 3 -year measurement period is achieved. Depending on the ranking of our TSR compared to those of the companies comprising the Standard & Poor's 500 Index during that period, the market-based PSUs issued could be up to 60 thousand shares.

As of July 28, 2019 , there was $2.06 billion of aggregate unearned stock-based compensation expense, net of forfeitures. This amount is expected to be recognized over a weighted average period of 2.5 years for RSUs, PSUs, and market-based PSUs, and 1.1 years for ESPP.

Note 5 – Net Income Per Share

The following is a reconciliation of the denominator of the basic and diluted net income per share computations for the periods presented:

	Three Months Ended		Six Months Ended	
	July 28, 2019	July 29, 2018	July 28, 2019	July 29, 2018
	(In millions, except per share data)			
Numerator:				
Net income	$ 552	$ 1,101	$ 947	$ 2,345
Denominator:				
Basic weighted average shares	609	607	608	607
Dilutive impact of outstanding securities:				
Equity awards	7	18	8	19
1.00% Convertible Senior Notes	—	1	—	1
Diluted weighted average shares	616	626	616	627
Net income per share:				
Basic (1)	$ 0.91	$ 1.81	$ 1.56	$ 3.86
Diluted (2)	$ 0.90	$ 1.76	$ 1.54	$ 3.74
Equity awards excluded from diluted net income per share because their effect would have been anti-dilutive	11	—	12	1

(1) Calculated as net income divided by basic weighted average shares.

(2) Calculated as net income divided by diluted weighted average shares.

Note 6 – Income Taxes

We recognized an income tax expense of $54 million and $48 million for the second quarter and first half of fiscal year 2020 , respectively, and $79 million and $146 million for the second quarter and first half of fiscal year 2019 , respectively. The effective tax rate for the second quarter and first half of fiscal year 2020 was 8.8% and 4.9% , respectively, and 6.7% and 5.9% for the second quarter and first half of fiscal year 2019 , respectively.

The increase in our effective tax rate for the second quarter of fiscal year 2020 as compared to the second quarter of fiscal year 2019 was primarily due to an increase in the amount of earnings subject to United States tax, and a decrease of tax benefits from stock-based compensation, partially offset by an increase in the impact of tax benefits from the U.S. federal research tax credit. The decrease in our effective tax rate for the first half of fiscal year 2020 as compared to the first half of fiscal year 2019 was primarily due to an increase in the impact of tax benefits from the U.S. federal research tax credit and stock-based compensation.

Our effective tax rates for the first half of fiscal years 2020 and 2019 were 4.9% and 5.9% , respectively, and were lower than the U.S. federal statutory rate of 21% due to income earned in jurisdictions that are subject to taxes lower than the U.S. federal statutory tax rate, tax benefits related to stock-based compensation, and the benefit of the U.S. federal research tax credit.

For the first half of fiscal year 2020, there have been no material changes to our tax years that remain subject to examination by major tax jurisdictions. Additionally, there have been no material changes to our unrecognized tax benefits and any related interest or penalties since the fiscal year ended January 27, 2019.

While we believe that we have adequately provided for all uncertain tax positions, or tax positions where we believe it is not more-likely-than-not that the position will be sustained upon review, amounts asserted by tax authorities could be greater or less than our accrued position. Accordingly, our provisions on federal, state and foreign tax related matters to be recorded in the future may change as revised estimates are made or the underlying matters are settled or otherwise resolved with the respective tax authorities. As of July 28, 2019 , we do not believe that our estimates, as otherwise provided for, on such tax positions will significantly increase or decrease within the next twelve months.

Note 7 - Marketable Securities

Our cash equivalents and marketable securities are classified as “available-for-sale” debt securities.

The following is a summary of cash equivalents and marketable securities as of July 28, 2019 and January 27, 2019 :

	July 28, 2019					
					Reported as	
	Amortized Cost	Unrealized Gain	Unrealized Loss	Estimated Fair Value	Cash Equivalents	Marketable Securities
	(In millions)					
Money market funds	$ 2,868	$ —	$ —	$ 2,868	$ 2,868	$ —
Debt securities issued by the United States Treasury	2,161	—	—	2,161	1,833	328
Corporate debt securities	2,103	1	—	2,104	1,282	822
Debt securities of United States government agencies	1,120	—	—	1,120	995	125
Foreign government debt securities	45	—	—	45	—	45
Asset-backed securities	44	—	—	44	—	44
Certificates of deposit	24	—	—	24	24	—
Mortgage-backed securities issued by United States government-sponsored enterprises	6	—	—	6	—	6
Total	$ 8,371	$ 1	$ —	$ 8,372	$ 7,002	$ 1,370

	January 27, 2019					
					Reported as	
	Amortized Cost	Unrealized Gain	Unrealized Loss	Estimated Fair Value	Cash Equivalents	Marketable Securities
	(In millions)					
Corporate debt securities	$ 2,626	$ —	$ (6)	$ 2,620	$ 25	$ 2,595
Debt securities of United States government agencies	2,284	—	(4)	2,280	—	2,280
Debt securities issued by the United States Treasury	1,493	—	(1)	1,492	176	1,316
Money market funds	483	—	—	483	483	—
Foreign government debt securities	209	—	—	209	—	209
Asset-backed securities	152	—	(1)	151	—	151
Mortgage-backed securities issued by United States government-sponsored enterprises	88	1	—	89	—	89
Total	$ 7,335	$ 1	$ (12)	$ 7,324	$ 684	$ 6,640

For the second quarter and first half of fiscal years 2020 and 2019 , there were no other-than-temporary impairment losses and net realized gains were not significant.

The amortized cost and estimated fair value of cash equivalents and marketable securities as of July 28, 2019 and January 27, 2019 are shown below by contractual maturity.

	July 28, 2019	January 27, 2019

	Amortized Cost	Estimated Fair Value	Amortized Cost	Estimated Fair Value
		(In millions)		
Less than 1 year	$ 8,255	$ 8,255	$ 5,042	$ 5,034
Due in 1 - 5 years	112	113	2,271	2,268
Mortgage-backed securities issued by United States government-sponsored enterprises not due at a single maturity date	4	4	22	22
Total	$ 8,371	$ 8,372	$ 7,335	$ 7,324

Note 8 – Fair Value of Financial Assets and Liabilities

The fair values of our financial assets and liabilities are determined using quoted market prices of identical assets or quoted market prices of similar assets from active markets. We review fair value hierarchy classification on a quarterly basis.

		Fair Value at	
	Pricing Category	July 28, 2019	January 27, 2019
		(In millions)	
Assets			
Cash equivalents and marketable securities:			
Money market funds	Level 1	$ 2,868	$ 483
Debt securities issued by the United States Treasury	Level 2	$ 2,161	$ 1,492
Corporate debt securities	Level 2	$ 2,104	$ 2,620
Debt securities of United States government agencies	Level 2	$ 1,120	$ 2,280
Foreign government debt securities	Level 2	$ 45	$ 209
Asset-backed securities	Level 2	$ 44	$ 151
Certificates of deposit	Level 2	$ 24	$ —
Mortgage-backed securities issued by United States government-sponsored enterprises	Level 2	$ 6	$ 89
Liabilities			
Other noncurrent liabilities:			
2.20% Notes Due 2021 (1)	Level 2	$ 999	$ 978
3.20% Notes Due 2026 (1)	Level 2	$ 1,022	$ 961

(1) These liabilities are carried on our Consolidated Balance Sheets at their original issuance value, net of unamortized debt discount and issuance costs, and are not marked to fair value each period. Refer to Note 12 of these Notes to Condensed Consolidated Financial Statements for additional information.

Note 9 - Amortizable Intangible Assets

The components of our amortizable intangible assets are as follows:

	July 28, 2019			January 27, 2019		
	Gross Carrying Amount	Accumulated Amortization	Net Carrying Amount	Gross Carrying Amount	Accumulated Amortization	Net Carrying Amount
		(In millions)			*(In millions)*	
Acquisition-related intangible assets	$ 195	$ (190)	$ 5	$ 195	$ (188)	$ 7
Patents and licensed technology	508	(464)	44	491	(453)	38
Total intangible assets	$ 703	$ (654)	$ 49	$ 686	$ (641)	$ 45

The increase in gross carrying amount of intangible assets is due to purchases of licensed technology during the first half of fiscal year 2020 . Amortization expense associated with intangible assets was $6 million and $13 million for the second quarter and first half of fiscal year 2020 , respectively, and $6 million and $17 million for the second quarter and first half of fiscal year 2019 , respectively. Future amortization expense related to the net carrying amount of intangible assets as of July 28, 2019 is estimated to be $12 million for the remainder of fiscal year 2020 , $16 million in fiscal year 2021 , $9 million in fiscal year 2022 , $7 million in fiscal year 2023 , and $5 million in fiscal year 2024 .

Note 10 - Balance Sheet Components

Certain balance sheet components are as follows:

	July 28, 2019	January 27, 2019
Inventories:	*(In millions)*	
Raw materials	$ 362	$ 613
Work in-process	203	238
Finished goods	639	724
Total inventories	$ 1,204	$ 1,575

	July 28, 2019	January 27, 2019
Accrued and Other Current Liabilities:	*(In millions)*	
Customer program accruals	$ 312	$ 302
Accrued payroll and related expenses	183	186
Deferred revenue (1)	127	92
Operating lease liabilities	84	—
Taxes payable	37	91
Licenses payable	21	12
Coupon interest on debt obligations	20	20
Other	96	115
Total accrued and other current liabilities	$ 880	$ 818

(1) Deferred revenue primarily includes customer advances and deferrals related to license and development arrangements and post contract customer support, or PCS.

	July 28, 2019	January 27, 2019
Other Long-Term Liabilities:	*(In millions)*	
Income tax payable (1)	$ 501	$ 513
Deferred revenue (2)	54	46
Licenses payable	26	1
Deferred income tax liability	23	19
Employee benefits liability	22	20
Deferred rent	—	21
Other	24	13
Total other long-term liabilities	$ 650	$ 633

(1) As of July 28, 2019 , represents the long-term portion of the one-time transition tax payable of $317 million , as well as unrecognized tax benefits of $159 million and related interest and penalties of $25 million .

(2) Deferred revenue primarily includes deferrals related to PCS.

Deferred Revenue

The following table shows the changes in deferred revenue during the first half of fiscal years 2020 and 2019 .

	July 28, 2019	July 29, 2018
	(In millions)	
Balance at beginning of period	$ 138	$ 63
Deferred revenue added during the period	161	194
Revenue recognized during the period	(118)	(153)
Balance at end of period	$ 181	$ 104

Note 11 - Derivative Financial Instruments

We enter into foreign currency forward contracts to mitigate the impact of foreign currency exchange rate movements on our operating expenses. These contracts are designated as cash flow hedges for hedge accounting treatment. Gains or losses on the contracts are recorded in accumulated other comprehensive income or loss and reclassified to operating expense when the related operating expenses are recognized in earnings or ineffectiveness should occur. The fair value of the contracts was not significant as of July 28, 2019 and January 27, 2019 .

We also enter into foreign currency forward contracts to mitigate the impact of foreign currency movements on monetary assets and liabilities that are denominated in currencies other than U.S. dollar. These forward contracts were not designated for hedge accounting treatment. Therefore, the change in fair value of these contracts is recorded in other income or expense and offsets the change in fair value of the hedged foreign currency denominated monetary assets and liabilities, which is also recorded in other income or expense.

The table below presents the notional value of our foreign currency forward contracts outstanding as of July 28, 2019 and January 27, 2019 :

	July 28, 2019	January 27, 2019
	(In millions)	
Designated as cash flow hedges	$ 420	$ 408
Not designated for hedge accounting	$ 269	$ 241

As of July 28, 2019 , all designated foreign currency forward contracts mature within eighteen months . The expected realized gains and losses deferred into accumulated other comprehensive income (loss) related to foreign currency forward contracts within the next twelve months was no t significant.

During the second quarter and first half of fiscal years 2020 and 2019 , the impact of derivative financial instruments designated for hedge accounting treatment on other comprehensive income or loss was not significant and all such instruments were determined to be highly effective. Therefore, there were no gains or losses associated with ineffectiveness.

Note 12 - Debt

Long-Term Debt

2.20% Notes Due 2021 and 3.20% Notes Due 2026

In fiscal year 2017, we issued $1.00 billion of the 2.20% Notes Due 2021, and $1.00 billion of the 3.20% Notes Due 2026, or collectively, the Notes. Interest on the Notes is payable on March 16 and September 16 of each year. Upon 30 days' notice to holders of the Notes, we may redeem the Notes for cash prior to maturity, at redemption prices that include accrued and unpaid interest, if any, and a make-whole premium. However, no make-whole premium will be paid for redemptions of the Notes Due 2021 on or after August 16, 2021, or for redemptions of the Notes Due 2026 on or after June 16, 2026. The net proceeds from the Notes were $1.98 billion , after deducting debt discount and issuance costs.

The Notes are our unsecured senior obligations and rank equally in right of payment with all existing and future unsecured and unsubordinated indebtedness. The Notes are structurally subordinated to the liabilities of our subsidiaries and are effectively subordinated to any secured indebtedness to the extent of the value of the assets securing such indebtedness. All existing and future liabilities of our subsidiaries will be effectively senior to the Notes.

The carrying value of the Notes and the associated interest rates were as follows:

	Expected Remaining Term (years)	Effective Interest Rate	July 28, 2019	January 27, 2019
			(In millions)	
2.20% Notes Due 2021	2.1	2.38%	$ 1,000	$ 1,000
3.20% Notes Due 2026	7.1	3.31%	1,000	1,000
Unamortized debt discount and issuance costs			(11)	(12)
Net carrying amount			$ 1,989	$ 1,988

Revolving Credit Facility

We have a Credit Agreement under which we may borrow up to $575 million for general corporate purposes and can obtain revolving loan commitments up to $425 million . As of July 28, 2019 , we had no t borrowed any amounts under this agreement.

Commercial Paper

We have a $575 million commercial paper program to support general corporate purposes. As of July 28, 2019 , we had no t issued any commercial paper.

Note 13 - Commitments and Contingencies

Inventory Purchase Obligations

As of July 28, 2019 , we had outstanding inventory purchase obligations totaling $757 million .

Capital Purchase Obligations

As of July 28, 2019 , we had outstanding capital purchase obligations totaling $133 million .

Performance Obligations

Revenue related to remaining performance obligations represents the amount of contracted license and development arrangements and PCS that has not been recognized. As of July 28, 2019 , the amount of our remaining performance obligations that has not been recognized as revenue was $418 million , of which we expect to recognize approximately 48 % as revenue over the next twelve months and the remainder thereafter. This amount excludes the value of remaining performance obligations for contracts with an original expected length of one year or less.

Accrual for Product Warranty Liabilities

The estimated amount of product returns and warranty liabilities was $17 million and $18 million as of July 28, 2019 and January 27, 2019 , respectively.

In connection with certain agreements that we have entered in the past, we have provided indemnification to cover the indemnified party for matters such as tax, product, and employee liabilities. We have included intellectual property indemnification provisions in our technology related agreements with third parties. Maximum potential future payments cannot be estimated because many of these agreements do not have a maximum stated liability. We have not recorded any liability in our Condensed Consolidated Financial Statements for such indemnifications.

Litigation

Securities Class Action and Derivative Lawsuits

On December 21, 2018, a purported securities class action lawsuit was filed in the United States District Court for the Northern District of California, captioned Iron Workers Joint Funds v. Nvidia Corporation, et al. (Case No. 18-cv-7669), naming as defendants NVIDIA and certain of NVIDIA's officers. On December 28, 2018, a substantially similar purported securities class action was commenced in the Northern District of California, captioned Oto v. Nvidia Corporation, et al. (Case No. 18-cv-07783), naming the same defendants, and seeking substantially similar relief. On February 19, 2019, a number of shareholders filed motions to consolidate the two cases and to be appointed lead plaintiff and for their respective counsel to be appointed lead counsel. On March 12, 2019, the two cases were consolidated under case number 4:18-cv-07669-HSG and titled In Re NVIDIA Corporation Securities Litigation. On May 2, 2019, the Court appointed lead plaintiffs and lead counsel. On June 21, 2019, the lead plaintiffs filed a consolidated class action complaint. The consolidated complaint asserts that the defendants violated Section 10(b) of the Securities Exchange Act of 1934, and SEC Rule 10b-5, by making materially false or misleading statements related to channel inventory and the impact of cryptocurrency mining on GPU demand between May 10, 2017 and November 14, 2018. The plaintiffs also allege that the NVIDIA executives who they named as defendants violated Section 20(a) of the Exchange Act. The plaintiffs seek class certification, an award of unspecified compensatory damages, an award of reasonable costs and expenses, including attorneys' fees and expert fees, and further relief as the Court may deem just and proper. On August 2, 2019, NVIDIA moved to dismiss the consolidated class action complaint on the basis that plaintiffs failed to state any claims for violations of the securities laws by NVIDIA or the named defendants.

On January 18, 2019, a shareholder, purporting to act on the behalf of NVIDIA, filed a derivative lawsuit in the Northern District of California, captioned Han v. Huang, et al. (Case No. 19-cv-00341), seeking to assert claims on behalf of NVIDIA against the members of NVIDIA's board of directors and certain officers. The lawsuit asserts claims for breach of fiduciary duty, unjust enrichment, waste of corporate assets, and violations of Sections 14(a), 10(b), and 20(a) of the Exchange Act based on the dissemination of allegedly false and misleading statements related to channel inventory and the impact of cryptocurrency mining on GPU demand. The plaintiff is seeking unspecified damages and other relief, including reforms and improvements to NVIDIA's corporate governance and internal procedures. On February 12, 2019, a substantially similar derivative lawsuit was filed in the Northern District of California captioned Yang v. Huang, et. al. (Case No. 19-cv-00766), naming the same named defendants, and seeking the same relief. On February 19, 2019, a third substantially similar derivative lawsuit was filed in the Northern District of California captioned The Booth Family Trust v. Huang, et. al. (Case No. 3:19-cv-00876), naming the same named defendants, and seeking substantially the same relief. On March 12, 2019, the three derivative actions were consolidated under case number 4:19-cv-00341-HSG, and titled In re NVIDIA Corporation Consolidated Derivative Litigation. The parties stipulated to stay the In Re NVIDIA Corporation Consolidated Derivative Litigation pending resolution of any motion to dismiss that NVIDIA may file in the In Re NVIDIA Corporation Securities Litigation.

It is possible that additional suits will be filed, or allegations received from shareholders, with respect to these same or other matters, naming NVIDIA and/or its officers and directors as defendants.

Litigation Related to Mellanox Merger

On May 3, 2019, an alleged stockholder of Mellanox filed a putative class action lawsuit alleging that the proxy statement filed by Mellanox in connection with the stockholder vote on NVIDIA's pending acquisition of Mellanox violates Sections 14(a) and 20(a) of the Securities Exchange Act of 1934 and asserting claims under those statutes against Mellanox and its board of directors as well as NVIDIA. The complaint, which is captioned Stein v. Mellanox Technologies, Ltd., et al., Case No. 19-2428 (United States District Court, Northern District of California), seeks declaratory and injunctive relief and unspecified damages. A number of other alleged Mellanox stockholders have filed substantially similar lawsuits against Mellanox and its directors in the United States District Court for the Northern District of California and in the United States District Court for the Southern District of New York, but to date, NVIDIA has not been named as a defendant in any of these other lawsuits.

Accounting for Loss Contingencies

We are engaged in legal actions not described above arising in the ordinary course of business and, while there can be no assurance of favorable outcomes, we believe that the ultimate outcome of these actions will not have a material adverse effect on our operating results, liquidity or financial position. As of July 28, 2019 , we have not recorded any accrual for contingent liabilities associated with the legal proceedings described above based on our belief that liabilities, while possible, are not probable. Further, except as specifically described above, any possible loss or range of loss in these matters cannot be reasonably estimated at this time.

Note 14 - Shareholders' Equity

Capital Return Program

Beginning August 2004, our Board of Directors authorized us to repurchase our stock.

During the second quarter and first half of fiscal year 2020 , we paid $97 million and $195 million , respectively, in cash dividends to our shareholders.

Through July 28, 2019 , we have repurchased an aggregate of 260 million shares under our share repurchase program for a total cost of $7.08 billion . All shares delivered from these repurchases have been placed into treasury stock. As of July 28, 2019 , we were authorized, subject to certain specifications, to repurchase additional shares of our common stock up to $7.24 billion through December 2022.

Preferred Stock

As of July 28, 2019 and January 27, 2019 , there were no shares of preferred stock outstanding.

Common Stock

We are authorized to issue up to 2.00 billion shares of our common stock at $0.001 per share par value.

Note 15 - Segment Information

Our Chief Executive Officer, who is considered to be our chief operating decision maker, or CODM, reviews financial information presented on an operating segment basis for purposes of making operating decisions and assessing financial performance. Our operating segments are equivalent to our reportable segments.

We report our business in two primary reportable segments - the GPU business and the Tegra Processor business - based on a single underlying architecture.

Our GPU product brands are aimed at specialized markets including GeForce for gamers; Quadro for designers; Tesla and DGX for artificial intelligence, data scientists and big data researchers; and GRID for cloud-based visual computing users. Our Tegra brand integrates an entire computer onto a single chip, and incorporates GPUs and multi-core CPUs to drive supercomputing for autonomous robots, drones, and cars, as well as for game consoles and mobile gaming and entertainment devices.

Under the single unifying architecture for our GPU and Tegra Processors, we leverage our visual computing expertise by charging the operating expenses of certain core engineering functions to the GPU business, while charging the Tegra Processor business for the incremental cost of the teams working directly for that business. In instances where the operating expenses of certain functions benefit both reportable segments, our CODM assigns 100% of those expenses to the reportable segment that benefits the most.

The “All Other” category presented below represents the expenses that our CODM does not assign to either the GPU business or the Tegra Processor business for purposes of making operating decisions or assessing financial performance. The expenses include stock-based compensation expense, corporate infrastructure and support costs, acquisition-related costs, legal settlement costs, contributions, restructuring and other charges, product warranty charge, and other non-recurring charges and benefits that our CODM deems to be enterprise in nature.

Our CODM does not review any information regarding total assets on a reportable segment basis. Reportable segments do not record intersegment revenue, and, accordingly, there is none to be reported. The accounting policies for segment reporting are the same as for our consolidated financial statements. The table below presents details of our reportable segments and the “All Other” category.

	GPU	Tegra Processor	All Other	Consolidated
		(In millions)		
Three Months Ended July 28, 2019				
Revenue	$ 2,104	$ 475	$ —	$ 2,579
Depreciation and amortization expense	$ 76	$ 12	$ 4	$ 92
Operating income (loss)	$ 746	$ 122	$ (297)	$ 571
Three Months Ended July 29, 2018				
Revenue	$ 2,656	$ 467	$ —	$ 3,123
Depreciation and amortization expense	$ 43	$ 12	$ 3	$ 58
Operating income (loss)	$ 1,259	$ 97	$ (199)	$ 1,157
Six Months Ended July 28, 2019				
Revenue	$ 4,126	$ 673	$ —	$ 4,799
Depreciation and amortization expense	$ 152	$ 24	$ 7	$ 183
Operating income (loss)	$ 1,415	$ 78	$ (564)	$ 929
Six Months Ended July 29, 2018				
Revenue	$ 5,421	$ 909	$ —	$ 6,330
Depreciation and amortization expense	$ 83	$ 22	$ 11	$ 116
Operating income (loss)	$ 2,653	$ 194	$ (395)	$ 2,452

	Three Months Ended		Six Months Ended	
	July 28, 2019	July 29, 2018	July 28, 2019	July 29, 2018
		(In millions)		
Reconciling items included in "All Other" category:				
Stock-based compensation expense	$ (224)	$ (132)	$ (401)	$ (262)
Unallocated cost of revenue and operating expenses	(66)	(65)	(135)	(129)
Acquisition-related and other costs	(5)	(2)	(15)	(4)
Legal settlement costs	(2)	—	(13)	—
Total	$ (297)	$ (199)	$ (564)	$ (395)

Revenue by geographic region is allocated to individual countries based on the location to which the products are initially billed even if our customers' revenue is attributable to end customers that are located in a different location. The following table summarizes information pertaining to our revenue from customers based on the invoicing address by geographic regions:

	Three Months Ended		Six Months Ended	
	July 28, 2019	July 29, 2018	July 28, 2019	July 29, 2018
	(In millions)			
Revenue:				
Other Asia Pacific	$ 756	$ 676	$ 1,178	$ 1,259
Taiwan	635	843	1,333	1,810
China (including Hong Kong)	583	760	1,136	1,514
Europe	288	234	537	469
United States	188	413	353	847
Other countries	129	197	262	431
Total revenue	$ 2,579	$ 3,123	$ 4,799	$ 6,330

The following table summarizes information pertaining to our revenue by each of the specialized markets we serve:

	Three Months Ended		Six Months Ended	
	July 28, 2019	July 29, 2018	July 28, 2019	July 29, 2018
	(In millions)			
Revenue:				
Gaming	$ 1,313	$ 1,805	$ 2,368	$ 3,528
Professional Visualization	291	281	557	532
Data Center	655	760	1,289	1,461
Automotive	209	161	375	306
OEM and Other	111	116	210	503
Total revenue	$ 2,579	$ 3,123	$ 4,799	$ 6,330

One customer represented approximately 11% of our total revenue for the second quarter and the first half of fiscal year 2020 , and was attributable primarily to the GPU business. No customer represented 10% or more of total revenue for the second quarter and first half of fiscal year 2019 .

One customer represented approximately 20% of our accounts receivable balance as of July 28, 2019 , and one customer represented approximately 19% of our accounts receivable balance as of January 27, 2019 .

ITEM 2. MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

Forward-Looking Statements

This Quarterly Report on Form 10-Q contains forward-looking statements within the meaning of Section 27A of the Securities Act of 1933, as amended, and Section 21E of the Securities Exchange Act of 1934, as amended, which are subject to the "safe harbor" created by those sections. Forward-looking statements are based on our management's beliefs and assumptions and on information currently available to our management. In some cases, you can identify forward-looking statements by terms such as "may," "will," "should," "could," "goal," "would," "expect," "plan," "anticipate," "believe," "estimate," "project," "predict," "potential" and similar expressions intended to identify forward-looking statements. These statements involve known and unknown risks, uncertainties and other factors, which may cause our actual results, performance, time frames or achievements to be materially different from any future results, performance, time frames or achievements expressed or implied by the forward-looking statements. We discuss many of these risks, uncertainties and other factors in this Quarterly Report on Form 10-Q in greater detail under the heading "Risk Factors." Given these risks, uncertainties and other factors, you should not place undue reliance on these forward-looking statements. Also, these forward-looking statements represent our estimates and assumptions only as of the date of this filing. You should read this Quarterly Report on Form 10-Q completely and with the understanding that our actual future results may be materially different from what we expect. We hereby qualify our forward-looking statements by these cautionary statements. Except as required by law, we assume no obligation to update these forward-looking statements publicly, or to update the reasons actual results could differ materially from those anticipated in these forward-looking statements, even if new information becomes available in the future.

All referen ces to "NVIDIA," "we," "us," "our" or the "Company" mean NVIDIA Corporation and its subsidiaries.

NVIDIA, the NVIDIA logo, CUDA, CUDA-X AI, GeForce, GeForce GTX, GeForce RTX, GeForce RTX SUPER, NVIDIA DGX, NVIDIA DGX SuperPOD, NVIDIA DRIVE, NVIDIA DRIVE Constellation, NVIDIA GRID, NVIDIA Omniverse, NVIDIA RTX, NVIDIA Turing, Quadro, Quadro RTX, Tegra and Tesla are trademarks and/or registered trademarks of NVIDIA Corporation in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated. Features, pricing, availability, and specifications are subject to change without notice.

The following discussion and analysis of our financial condition and results of operations should be read in conjunction with "Item 6. Selected Financial Data" of our Annual Report on Form 10-K for the fiscal year ended January 27, 2019 and "Item 1A. Risk Factors" of this Quarterly Report on Form 10-Q and our Condensed Consolidated Financial Statements and related Notes thereto, as well as other cautionary statements and risks described elsewhere in this Quarterly Report on Form 10-Q, before deciding to purchase or sell shares of our common stock.

Overview

Our Company and Our Businesses

Starting with a focus on PC graphics, NVIDIA invented the GPU to solve some of the most complex problems in computer science. We have extended our focus in recent years to the revolutionary field of AI. Fueled by the sustained demand for better 3D graphics and the scale of the gaming market, NVIDIA has evolved the GPU into a computer brain at the intersection of virtual reality, high performance computing, or HPC, and artificial intelligence, or AI.

Our two reportable segments - GPU and Tegra Processor - are based on a single underlying architecture. From our proprietary processors, we have designed, created, and marketed platforms that address four large markets where our expertise is critical: Gaming, Professional Visualization, Data Center, and Automotive.

Our GPU product brands are aimed at specialized markets including GeForce for gamers; Quadro for designers; Tesla and DGX for AI data scientists and big data researchers; and GRID for cloud-based visual computing users. Our Tegra brand integrates an entire computer onto a single chip, and incorporates GPUs and multi-core CPUs to drive supercomputing for autonomous robots, drones, and cars, as well as for consoles and mobile gaming and entertainment devices.

Headquartered in Santa Clara, California, NVIDIA was incorporated in California in April 1993 and reincorporated in Delaware in April 1998.

Recent Developments, Future Objectives and Challenges

Second Quarter of Fiscal Year 2020 Summary

	Three Months Ended				
	July 28, 2019	April 28, 2019	July 29, 2018	Quarter-over-Quarter Change	Year-over-Year Change
	($ in millions, except per share data)				
Revenue	$ 2,579	$ 2,220	$ 3,123	16%	(17)%
Gross margin	59.8%	58.4%	63.3%	140 bps	(350) bps
Operating expenses	$ 970	$ 938	$ 818	3%	19 %
Income from operations	$ 571	$ 358	$ 1,157	59%	(51)%
Net income	$ 552	$ 394	$ 1,101	40%	(50)%
Net income per diluted share	$ 0.90	$ 0.64	$ 1.76	41%	(49)%

Revenue for the second quarter of fiscal year 2020 decreased 17% year over year and increased 16% sequentially.

GPU business revenue was $2.10 billion , down 21% from a year earlier and up 4% sequentially.

Tegra Processor business revenue - which includes Automotive, SOC modules for gaming platforms, and embedded edge AI platforms - was $475 million , up 2% from a year ago and up 140% sequentially.

From a market-platforms perspective, Gaming revenue was $1.31 billion , down 27% from a year ago and up 24% sequentially. The year-on-year decrease reflects a decline in shipments of gaming desktop GPUs and SOC modules for gaming platforms, partially offset by growth in gaming notebook GPUs. The sequential increase reflects growth from SOC modules for gaming platforms, gaming notebook GPUs, and GeForce RTX SUPER gaming GPUs.

Professional Visualization revenue was $291 million , up 4% from a year earlier and up 9% sequentially. The year-on-year and sequential growth reflects strength across mobile workstation products.

Data Center revenue was $655 million , down 14% from a year ago and up 3% sequentially. The year-on-year decline reflects lower hyperscale revenue. The sequential increase was due to enterprise revenue growth driven by expanding AI workloads.

Automotive revenue of $209 million was up 30% from a year earlier and up 26% sequentially. The year-on-year and sequential growth was primarily driven by a development services agreement in the second quarter of fiscal year 2020. The growth in revenue also reflected AI cockpit solutions and other autonomous vehicle development agreements.

OEM and Other revenue was $111 million , down 4% from a year ago and up 12% sequentially. The sequential increase was primarily due to growth in shipments of embedded edge AI products.

Gross margin for the second quarter of fiscal year 2020 was 59.8% , down 350 basis points from a year earlier and up 140 basis points sequentially. The year-on-year decrease reflects lower Gaming and Data Center margins, driven primarily by product costs. The sequential increase reflects automotive development services, a favorable mix in Gaming, and lower component costs.

Operating expenses for the second quarter of fiscal year 2020 were $970 million , up 19% from a year earlier and up 3% sequentially, reflecting primarily employee additions and increases in employee compensation and other related costs, including infrastructure costs.

Income from operations for the second quarter of fiscal year 2020 was $571 million , down 51% from a year earlier and up 59% sequentially. Net income and net income per diluted share for the second quarter of fiscal year 2020 were $552 million and $0.90 , respectively, down 50% and 49%, respectively, from a year earlier, and up 40% and 41%, respectively, sequentially. The year-on-year decrease reflects lower revenue and gross margin, and higher operating expenses. The sequential increase reflects higher revenue and gross margin.

We previously communicated our intent to return $3.00 billion to shareholders by the end of fiscal year 2020, including $700 million in share repurchases made during the fourth quarter of fiscal year 2019. In the first half of fiscal year 2020, we returned $195 million in quarterly cash dividends. We intend to return the remaining $2.11 billion through a combination of share repurchases and cash dividends. We do not expect to repurchase shares prior to the close of the acquisition of Mellanox Technologies, Ltd., or Mellanox, and therefore the intended repurchases may extend into fiscal year 2021.

Cash, cash equivalents and marketable securities were $8.47 billion as of July 28, 2019 , compared with $7.42 billion as of January 27, 2019. The increase was primarily related to growth in operating cash flow.

On March 10, 2019, we entered into an Agreement and Plan of Merger, or the Merger Agreement, with Mellanox, pursuant to which we will acquire all of the issued and outstanding common shares of Mellanox for $125 per share in cash, representing a total enterprise value of approximately $6.9 billion as of the date of the Merger Agreement. The closing of the merger is subject to approval by regulatory agencies. If the Merger Agreement is terminated under certain circumstances involving the failure to obtain the required regulatory approvals, we could be obligated to pay Mellanox a termination fee of $350 million . We have received regulatory approval in the United States and Mexico and are engaged with regulators in Europe and China. In June 2019, Mellanox shareholders approved the merger.

GPU Business

During the second quarter of fiscal year 2020 , in our Gaming platform, we introduced GeForce RTX 2060 SUPER, GeForce RTX 2070 SUPER and GeForce RTX 2080 SUPER to our GeForce GPU lineup; accelerated the momentum of ray-tracing games by supporting newly announced blockbuster titles; introduced new RTX Studio laptops powered by GeForce RTX and Quadro RTX GPUs for online and studio-based creatives and prosumers; and announced OEMs will be launching additional gaming laptops incorporating NVIDIA GeForce Turing GPUs.

In our Professional Visualization platform, we rolled out a full range of Turing architecture-based Quadro GPUs for mobile workstations, also incorporating ray tracing for product design, architecture, effects and scientific visualization.

In our Data Center platform, we announced NVIDIA's DGX SuperPOD, which provides the AI infrastructure for our autonomous-vehicle development program; set eight records in AI training performance in the latest MLPerf benchmarking tests; and announced support for Arm CPUs, providing a new path to build highly energy-efficient, AI-enabled exascale supercomputers.

During the first quarter of fiscal year 2020, in our Gaming platform, we introduced the GeForce GTX 1660 Ti, GTX 1660 and GTX 1650 gaming GPUs with improved performance and efficiency for today’s most popular games; announced a number of gaming laptop models based on Turing GPUs from top makers; and announced that real-time ray tracing is now integrated into Unreal Engine and Unity commercial game engines.

In our Professional Visualization platform, we announced expanded adoption of NVIDIA RTX ray-tracing technology by top 3D application providers and unveiled the NVIDIA Omniverse open-collaboration platform to simplify creative workflows for content creation.

In our Data Center platform, we introduced the NVIDIA CUDA-X AI platform for accelerating data science; announced availability of NVIDIA T4 Tensor Core GPUs from leading OEMs and Amazon Web Services; partnered with global system builders to create powerful data-science workstations integrating NVIDIA Quadro RTX GPUs and NVIDIA CUDA-X AI; and launched beta access to NVIDIA Quadro Virtual Workstation software in the Alibaba Cloud Marketplace.

Tegra Processor Business

During the second quarter of fiscal year 2020 , in our Automotive platform, Volvo Group announced that it is using the NVIDIA DRIVE end-to-end autonomous driving platform to train networks in the data center, test them in simulation, and deploy them in self-driving vehicles, targeting freight transport, refuse and recycling collection, public transport, construction, mining, forestry and more.

During the first quarter of fiscal year 2020, in our Automotive platform, we announced that we are partnering with Toyota Research Institute-Advanced Development to develop, train and validate self-driving vehicles; unveiled the NVIDIA DRIVE AP2X automated driving solution, encompassing DRIVE AutoPilot software, DRIVE AGX and DRIVE validation tools; introduced NVIDIA DRIVE AV Safety Force Field to enable safe, comfortable driving experiences; and announced availability of the NVIDIA DRIVE Constellation autonomous vehicle simulation platform.

Financial Information by Business Segment and Geographic Data

Refer to Note 1 5 of the Notes to Condensed Consolidated Financial Statements for disclosure regarding segment information.

Results of Operations

The following table sets forth, for the periods indicated, certain items in our Condensed Consolidated Statements of Income expressed as a percentage of revenue.

	Three Months Ended		Six Months Ended	
	July 28, 2019	July 29, 2018	July 28, 2019	July 29, 2018
Revenue	100.0 %	100.0 %	100.0 %	100.0 %
Cost of revenue	40.2	36.7	40.9	36.1
Gross profit	59.8	63.3	59.1	63.9
Operating expenses				
Research and development	27.3	18.6	28.7	17.8
Sales, general and administrative	10.3	7.7	11.0	7.4
Total operating expenses	37.6	26.3	39.7	25.2
Income from operations	22.2	37.0	19.4	38.7
Interest income	1.8	1.0	1.9	0.9
Interest expense	(0.5)	(0.4)	(0.6)	(0.5)
Other, net	—	0.2	—	0.2
Total other income (expense)	1.3	0.8	1.3	0.6
Income before income tax	23.5	37.8	20.7	39.3
Income tax expense	2.1	2.5	1.0	2.3
Net income	21.4 %	35.3 %	19.7 %	37.0 %

Revenue

Revenue by Reportable Segments

	Three Months Ended				Six Months Ended			
	July 28, 2019	July 29, 2018	$ Change	% Change	July 28, 2019	July 29, 2018	$ Change	% Change
				($ in millions)				
GPU	$ 2,104	$ 2,656	$ (552)	(21)%	$ 4,126	$ 5,421	$ (1,295)	(24)%
Tegra Processor	475	467	8	2 %	673	909	(236)	(26)%
Total	$ 2,579	$ 3,123	$ (544)	(17)%	$ 4,799	$ 6,330	$ (1,531)	(24)%

GPU Business. GPU business revenue decreased by 21% in the second quarter of fiscal year 2020 compared to the second quarter of fiscal year 2019 , which reflects declines in gaming GPU and Data Center revenue. GeForce GPU product sales for gaming decreased 29%, reflecting a decline in shipments of gaming desktop GPUs partially offset by revenue growth in gaming notebook GPUs. Data Center revenue, including Tesla, GRID and DGX, decreased 14%, primarily reflecting a decline in hyperscale revenue partially offset by enterprise revenue growth, driven by expanding AI workloads. Revenue from Quadro GPUs for professional visualization increased 4%, primarily reflecting strength across mobile workstation products. Our PC OEM revenue decreased by 4%, primarily driven by the absence of cryptocurrency mining processor sales.

GPU business revenue decreased by 24% in the first half of fiscal year 2020 compared to the first half of fiscal year 2019 , which reflects declines in gaming GPU and Data Center revenue. GeForce GPU product sales for gaming decreased 29%, reflecting a decline in shipments of gaming desktop GPUs partially offset by growth in gaming notebook GPUs. Data Center revenue, including Tesla, GRID and DGX, decreased 12%, primarily reflecting a decline in hyperscale revenue partially offset by enterprise revenue growth driven by expanding AI workloads. Revenue from Quadro GPUs for professional visualization increased 5% due primarily reflecting strength across mobile workstation products. Our PC OEM revenue decreased by 58% primarily driven by the absence of cryptocurrency mining processor sales.

Tegra Processor Business. Tegra Processor business revenue increased by 2% for the second quarter of fiscal year 2020 compared to the second quarter of fiscal year 2019 . This was driven by an increase of 30% in Automotive revenue primarily driven by a development services agreement in the second quarter of fiscal year 2020. The growth in Automotive revenue also reflected AI cockpit solutions and other autonomous vehicle development agreements. The increase in Automotive revenue was partially offset by a decline in revenue from SOC modules for gaming platforms.

Tegra Processor business revenue decreased by 26% for the first half of fiscal year 2020 compared to the first half of fiscal year 2019 . This was driven by a decline in revenue from SOC modules for gaming platforms, which was partially offset by an increase of 23% in Automotive revenue. Growth in Automotive revenue primarily reflects a development services agreement in the second quarter of fiscal year 2020, AI cockpit solutions, and other autonomous vehicle development agreements.

Concentration of Revenue

Revenue from sales to customers outside of the United States accounted for 93% of total revenue for the second quarter and first half of fiscal year 2020 . Revenue from sales to customers outside of the United States accounted for 87% of total revenue for the second quarter and first half of fiscal year 2019 . Revenue by geographic region is allocated to individual countries based on the location to which the products are initially billed even if the revenue is attributable to end customers in a different location.

One customer represented approximately 11% of our total revenue for the second quarter and the first half of fiscal year 2020 , and was attributable primarily to the GPU business. No customer represented 10% or more of total revenue for the second quarter and first half of fiscal year 2019 .

Gross Margin

Our overall gross margin decreased to 59.8% for the second quarter of fiscal year 2020 from 63.3% for the second quarter of fiscal year 2019 . Our overall gross margin decreased to 59.1% for the first half of fiscal year 2020 from 63.9% for the first half of fiscal year 2019 . These decreases reflect lower Gaming and Data Center margins, driven primarily by product costs.

Inventory provisions totaled $28 million and $21 million for the second quarter of fiscal years 2020 and 2019 , respectively. Sales of inventory that was previously written-off or written-down totaled $19 million and $12 million for the second quarter of fiscal years 2020 and 2019 , respectively. As a result, the overall net effect on our gross margin was an unfavorable impact of 0.4% and 0.3% for the second quarter of fiscal years 2020 and 2019 , respectively.

Inventory provisions totaled $72 million and $54 million for the first half of fiscal years 2020 and 2019 , respectively. Sales of inventory that was previously written-off or written-down totaled $31 million and $16 million for the first half of fiscal years 2020 and 2019 , respectively. As a result, the overall net effect on our gross margin was an unfavorable impact of 0.9% and 0.6% for the first half of fiscal years 2020 and 2019 , respectively.

A discussion of our gross margin results for each of our reportable segments is as follows:

GPU Business. The gross margin of our GPU business decreased during the second quarter and first half of fiscal year 2020 compared to the second quarter and first half of fiscal year 2019 , primarily reflecting lower gaming GPU and data center margins driven by product costs.

Tegra Processor Business. The gross margin of our Tegra Processor business increased during the second quarter of fiscal year 2020 compared to the second quarter of fiscal year 2019 , primarily driven by automotive development services. The gross margin of our Tegra Processor business decreased during the first half of fiscal year 2020 compared to the first half of fiscal year 2019, primarily due to mix shifts.

Operating Expenses

	Three Months Ended				Six Months Ended			
	July 28, 2019	July 29, 2018	$ Change	% Change	July 28, 2019	July 29, 2018	$ Change	% Change
	($ in millions)				($ in millions)			
Research and development expenses	$ 704	$ 581	$ 123	21%	$ 1,379	$ 1,124	$ 255	23%
% of net revenue	*27%*	*19%*			*29%*	*18%*		
Sales, general and administrative expenses	266	237	29	12%	529	467	62	13%
% of net revenue	*10%*	*8%*			*11%*	*7%*		
Total operating expenses	$ 970	$ 818	$ 152	19%	$ 1,908	$ 1,591	$ 317	20%

Research and Development

Research and development expenses increased by 21% and 23% during the second quarter and first half of fiscal year 2020 , compared to the second quarter and first half of fiscal year 2019 , respectively, driven primarily by employee additions, increases in employee compensation and other related costs, including infrastructure costs and stock-based compensation expense.

Sales, General and Administrative

Sales, general and administrative expenses increased by 12% during the second quarter of fiscal year 2020 , compared to the second quarter of fiscal year 2019 , driven primarily by employee additions, increases in employee compensation and other related costs, including stock-based compensation expense and infrastructure costs.

Sales, general and administrative expenses increased by 13% during the first half of fiscal year 2020 , compared to the first half of fiscal year 2019 , driven primarily by costs related to our plans to acquire Mellanox, costs related to employee additions, and increases in employee compensation and other related costs, including stock-based compensation expense and infrastructure costs.

Total Other Income (Expense)

Interest Income and Interest Expense

Interest income consists of interest earned on cash, cash equivalents and marketable securities. Interest income was $47 million and $32 million during the second quarter of fiscal years 2020 and 2019 , respectively, and $92 million and $57 million during the first half of fiscal years 2020 and 2019 , respectively. The increase in interest income was primarily due to higher average invested balances, higher rates from our floating rate securities, and the purchase of new securities.

Interest expense is primarily comprised of coupon interest and debt discount amortization related to the 2.20% Notes Due 2021 and 3.20% Notes Due 2026 issued in September 2016. Interest expense was $13 million and $14 million during the second quarters of fiscal years 2020 and 2019 , respectively, and $27 million and $29 million during the first half of fiscal years 2020 and 2019 , respectively.

Other, Net

Other, net, consists primarily of realized or unrealized gains and losses from non-affiliated investments, and the impact of changes in foreign currency rates. Other, net, was not significant during the second quarter or the first half of fiscal years 2020 and 2019 .

Income Taxes

We recognized an income tax expense of $54 million and $48 million for the second quarter and first half of fiscal year 2020 , respectively, and $79 million and $146 million for the second quarter and first half of fiscal year 2019 , respectively. The effective tax rate for the second quarter and first half of fiscal year 2020 was 8.8% and 4.9% respectively, and 6.7% and 5.9% for the second quarter and first half of fiscal year 2019 , respectively.

The increase in our effective tax rate for the second quarter of fiscal year 2020 as compared to the second quarter of fiscal year 2019 was primarily due to an increase in the amount of earnings subject to United States tax, and a decrease of tax benefits from stock-based compensation, partially offset by an increase in the impact of tax benefits from the U.S. federal research tax credit. The decrease in our effective tax rate for the first half of fiscal year 2020 as compared to the first half of fiscal year 2019 was primarily due to an increase in the impact of tax benefits from the U.S. federal research tax credit and stock-based compensation.

Refer to Note 6 of the Notes to Condensed Consolidated Financial Statements for further information.

Liquidity and Capital Resources

	July 28, 2019	January 27, 2019
	(In millions)	
Cash and cash equivalents	$ 7,105	$ 782
Marketable securities	1,370	6,640
Cash, cash equivalents and marketable securities	$ 8,475	$ 7,422

	Six Months Ended	
	July 28, 2019	July 29, 2018
	(In millions)	
Net cash provided by operating activities	$ 1,656	$ 2,358
Net cash provided by (used in) investing activities	$ 5,040	$ (4,356)
Net cash used in financing activities	$ (373)	$ (1,286)

As of July 28, 2019 , we had $8.47 billion in cash, cash equivalents and marketable securities, an increase of $1.05 billion from the end of fiscal year 2019 . Our investment policy requires the purchase of highly rated fixed income securities, the diversification of investment types and credit exposures, and certain limits on our portfolio duration.

Cash provided by operating activities decreased in the first half of fiscal year 2020 compared to the first half of fiscal year 2019 , due to lower net income, partially offset by changes in working capital.

Cash provided by investing activities increased in the first half of fiscal year 2020 compared to the first half of fiscal year 2019 , due to lower purchases of marketable securities and higher maturities and sales of marketable securities.

Cash used in financing activities decreased in the first half of fiscal year 2020 compared to the first half of fiscal year 2019 , due to lower share repurchases and lower tax payments related to employee stock plans.

Liquidity

Our primary sources of liquidity are our cash and cash equivalents, our marketable securities, and the cash generated by our operations. Our marketable securities consist of debt securities issued by the U.S. government and its agencies, highly rated corporations and financial institutions, asset-backed issuers, mortgage-backed securities by government-sponsored enterprises, and foreign government entities. These marketable securities are denominated in United States dollars. Refer to Note 7 of the Notes to Condensed Consolidated Financial Statements for additional information.

As a result of the Tax Cuts and Jobs Act, substantially all of our cash, cash equivalents and marketable securities held outside of the United States as of July 28, 2019 are available for use in the United States without incurring additional U.S. federal income taxes.

Capital Return to Shareholders

We previously communicated our intent to return $3.00 billion to shareholders by the end of fiscal year 2020, including $700 million in share repurchases made during the fourth quarter of fiscal year 2019. In the first half of fiscal year 2020, we returned $195 million in quarterly cash dividends. We intend to return the remaining $2.11 billion through a combination of share repurchases and cash dividends. We do not expect to repurchase shares prior to the close of the acquisition of Mellanox, and therefore the intended repurchases may extend into fiscal year 2021. As of July 28, 2019, we were authorized, subject to certain specifications, to repurchase additional shares of our common stock up to $7.24 billion through December 2022.

Our cash dividend program and the payment of future cash dividends under that program are subject to our Board's continuing determination that the dividend program and the declaration of dividends thereunder are in the best interests of our shareholders. Refer to Note 14 of the Notes to Condensed Consolidated Financial Statements for additional information.

Notes Due 2021 and Notes Due 2026

In fiscal year 2017, we issued $1.00 billion of the 2.20% Notes Due 2021 and $1.00 billion of the 3.20% Notes Due 2026, collectively, the Notes. The net proceeds from the Notes were $1.98 billion, after deducting debt discounts and issuance costs.

Revolving Credit Facility

We have a Credit Agreement under which we may borrow up to $575 million for general corporate purposes and can obtain revolving loan commitments up to $425 million . As of July 28, 2019 , we had not borrowed any amounts under this agreement.

Commercial Paper

We have a $575 million commercial paper program to support general corporate purposes. As of July 28, 2019 , we had not issued any commercial paper.

Operating Capital and Capital Expenditure Requirements

In fiscal year 2019, we began construction on a 750 thousand square foot building on our Santa Clara campus, which is currently targeted for completion in fiscal year 2022. We believe that our existing cash and cash equivalents, marketable securities, anticipated cash flows from operations, and our available revolving credit facility or commercial paper program mentioned above will be sufficient to meet our operating requirements for at least the next twelve months.

Off-Balance Sheet Arrangements

As of July 28, 2019 , we had no material off-balance sheet arrangements as defined by applicable SEC regulations.

Contractual Obligations

There were no material changes in our contractual obligations from those disclosed in our Annual Report on Form 10-K for the fiscal year ended January 27, 2019 other than our proposed acquisition of Mellanox as described in Note 2 of the Notes to Condensed Consolidated Financial Statements.

Refer to Item 7, “Management’s Discussion and Analysis of Financial Condition and Results of Operations - Liquidity and Capital Resources” in our Annual Report on Form 10-K for the fiscal year ended January 27, 2019 for a description of our contractual obligations.

Adoption of New and Recently Issued Accounting Pronouncements

Refer to Note 1 of the Notes to Condensed Consolidated Financial Statements for a discussion of adoption of new and recently issued accounting pronouncements.

ITEM 3. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK

Investment and Interest Rate Risk

Financial market risks related to investment and interest rate risk are described in our Annual Report on Form 10-K for the fiscal year ended January 27, 2019. As of July 28, 2019 , there have been no material changes to the financial market risks described as of January 27, 2019 .

Foreign Exchange Rate Risk

The impact of foreign currency transactions related to foreign exchange rate risk is described in our Annual Report on Form 10-K for the fiscal year ended January 27, 2019. As of July 28, 2019 , there have been no material changes to the foreign exchange rate risks described as of January 27, 2019 .

Refer to Note 11 of the Notes to Condensed Consolidated Financial Statements for additional information.

ITEM 4. CONTROLS AND PROCEDURES

Controls and Procedures

Disclosure Controls and Procedures

Based on their evaluation as of July 28, 2019 , our management, including our Chief Executive Officer and Chief Financial Officer, has concluded that our disclosure controls and procedures (as defined in Rule 13a-15(e) under the Securities Exchange Act of 1934, as amended, or the Exchange Act) were effective to provide reasonable assurance.

Changes in Internal Control Over Financial Reporting

There were no changes in our internal control over financial reporting during the second quarter of fiscal year 2020 that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

Inherent Limitations on Effectiveness of Controls

Our management, including our Chief Executive Officer and Chief Financial Officer, does not expect that our disclosure controls and procedures or our internal controls, will prevent all error and all fraud. A control system, no matter how well conceived and operated, can provide only reasonable, not absolute, assurance that the objectives of the control system are met. Further, the design of a control system must reflect the fact that there are resource constraints, and the benefits of controls must be considered relative to their costs. Because of the inherent limitations in all control systems, no evaluation of controls can provide absolute assurance that all control issues and instances of fraud, if any, within NVIDIA have been detected.

PART II. OTHER INFORMATION

ITEM 1. LEGAL PROCEEDINGS

Refer to Part I, Item 1, Note 13 of the Notes to Condensed Consolidated Financial Statements for a discussion of significant developments in our legal proceedings since January 27, 2019 . Also refer to Item 3, “Legal Proceedings” in our Annual Report on Form 10-K for the fiscal year ended January 27, 2019 for a prior discussion of our legal proceedings.

ITEM 1A. RISK FACTORS

Refer to the description of the risk factors associated with our business previously disclosed in Item 1A of our Annual Report on Form 10-K for the fiscal year ended January 27, 2019. There have been no material changes from the risk factors previously described under Item 1A of our Annual Report on Form 10-K for the fiscal year ended January 27, 2019 and Item 1A of our Quarterly Report on Form 10-Q for the quarter ended April 28, 2019.

Before you buy our common stock, you should know that making such an investment involves some risks including, but not limited to, the risks described in Item 1A of our Annual Report on Form 10-K for the fiscal year ended January 27, 2019 and Item 1A of our Quarterly Report on Form 10-Q for the quarter ended April 28, 2019. Additionally, any one of those risks could harm our business, financial condition and results of operations, which could cause our stock price to decline. Additional risks and uncertainties not presently known to us or that we currently deem immaterial may also impair our business operations.

ITEM 2. UNREGISTERED SALES OF EQUITY SECURITIES AND USE OF PROCEEDS

Issuer Purchases of Equity Securities

Beginning August 2004, our Board of Directors authorized us to repurchase our stock.

Since the inception of our share repurchase program, we have repurchased an aggregate of 260 million shares under our share repurchase program for a total cost of $7.08 billion through July 28, 2019 . All shares delivered from these repurchases have been placed into treasury stock.

As of July 28, 2019 , we were authorized to repurchase additional shares of our common stock up to $7.24 billion through December 2022.

The repurchases can be made in the open market, in privately negotiated transactions, or in structured share repurchase programs, and can be made in one or more larger repurchases. The program does not obligate NVIDIA to acquire any particular amount of common stock and the program may be suspended at any time at our discretion.

We previously communicated our intent to return $3.00 billion to shareholders by the end of fiscal year 2020, including $700 million in share repurchases made during the fourth quarter of fiscal year 2019. In the first half of fiscal year 2020, we returned $195 million in quarterly cash dividends. We had no share repurchases during the first half of fiscal year 2020. We intend to return the remaining $2.11 billion through a combination of share repurchases and cash dividends. We do not expect to repurchase shares prior to the close of the acquisition of Mellanox, and therefore the intended repurchases may extend into fiscal year 2021.

Restricted Stock Unit Share Withholding

We also withhold common stock shares associated with net share settlements to cover tax withholding obligations upon the vesting of restricted stock unit awards under our employee equity incentive program. During the second quarter of fiscal year 2020 , we withheld approximately 0.3 million shares at a total cost of $50 million through net share settlements. During the first half of fiscal year 2020 , we withheld approximately 1.5 million shares at a total cost of $261 million through net share settlements. Refer to Note 4 of the Notes to Condensed Consolidated Financial Statements for further discussion regarding our equity incentive plans.

ITEM 6. EXHIBITS

Exhibit No.	Exhibit Description	Schedule /Form	File Number	Exhibit	Filing Date
10.1+	Offer Letter, dated May 21, 2019, between NVIDIA Corporation and Donald Robertson	8-K	000-23985	10.1	6/17/2019
31.1*	Certification of Chief Executive Officer as required by Rule 13a-14(a) of the Securities Exchange Act of 1934				
31.2*	Certification of Chief Financial Officer as required by Rule 13a-14(a) of the Securities Exchange Act of 1934				
32.1#*	Certification of Chief Executive Officer as required by Rule 13a-14(b) of the Securities Exchange Act of 1934				
32.2#*	Certification of Chief Financial Officer as required by Rule 13a-14(b) of the Securities Exchange Act of 1934				
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 Labels Linkbase Document				
101.PRE*	Inline XBRL Taxonomy Extension Presentation Linkbase Document				
104	Cover Page Interactive Data File - the cover page interactive data file does not appear in the Interactive Data File because its XBRL tags are embedded within the Inline XBRL document.				

* Filed herewith

+ Management contract or compensatory plan or arrangement

In accordance with Item 601(b)(32)(ii) of Regulation S-K and SEC Release Nos. 33-8238 and 34-47986, Final Rule: Management's Reports on Internal Control Over Financial Reporting and Certification of Disclosure in Exchange Act Periodic Reports, the certifications furnished in Exhibits 32.1 and 32.2 hereto are deemed to accompany this Quarterly Report on Form 10-Q and will not be deemed “filed” for purpose of Section 18 of the Exchange Act. Such certifications will not be deemed to be incorporated by reference into any filing under the Securities Act or the Exchange Act, except to the extent that the registrant specifically incorporates it by reference.

Copies of above exhibits not contained herein are available to any shareholder upon written request to:

Investor Relations: NVIDIA Corporation, 2788 San Tomas Expressway, Santa Clara, CA 95051.

SIGNATURE

Pursuant to the requirements of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized.

Date: August 15, 2019

NVIDIA Corporation

By: /s/ Colette M. Kress

Colette M. Kress

Executive Vice President and Chief Financial Officer (Duly Authorized Officer and Principal Financial Officer)

EXHIBIT 31.1

CERTIFICATION

I, Jen-Hsun Huang, certify that:

1. I have reviewed this Quarterly Report on Form 10-Q of NVIDIA Corporation;

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;

4. The registrant's other certifying officer(s) and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:

(a) designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

(b) designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;

(c) evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

(d) disclosed in this report any change in the registrant’s internal control over financial reporting that occurred during the registrant’s most recent fiscal quarter (the registrant’s fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant’s internal control over financial reporting; and

5. The registrant's other certifying officer(s) and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):

(a) all significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and

(b) any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: August 15, 2019

/s/JEN-HSUN HUANG
Jen-Hsun Huang
President and Chief Executive Officer

EXHIBIT 31.2

CERTIFICATION

I, Colette M. Kress, certify that:

1. I have reviewed this Quarterly Report on Form 10-Q of NVIDIA Corporation;

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;

4. The registrant's other certifying officer(s) and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:

(a) designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

(b) designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;

(c) evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

(d) disclosed in this report any change in the registrant’s internal control over financial reporting that occurred during the registrant’s most recent fiscal quarter (the registrant’s fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant’s internal control over financial reporting; and

5. The registrant's other certifying officer(s) and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):

(a) all significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and

(b) any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: August 15, 2019

/s/ COLETTE M. KRESS
Colette M. Kress
Executive Vice President and Chief Financial Officer

EXHIBIT 32.1

CERTIFICATION

Pursuant to the requirement set forth in Rule 13a-14(b) of the Securities Exchange Act of 1934, as amended (the “Exchange Act”), and Section 1350 of Chapter 63 of Title 18 of the United States Code (18 U.S.C. § 1350), Jen-Hsun Huang, the President and Chief Executive Officer of NVIDIA Corporation (the “Company”), hereby certifies that, to the best of his knowledge:

1. The Company’s Quarterly Report on Form 10-Q for the period ended July 28, 2019 , to which this Certification is attached as Exhibit 32.1 (the “Periodic Report”), fully complies with the requirements of Section 13(a) or Section 15(d) of the Exchange Act; and

2. The information contained in the Periodic Report fairly presents, in all material respects, the financial condition of the Company at the end of the period covered by the Periodic Report and results of operations of the Company for the period covered by the Periodic Report.

Date: August 15, 2019

/s/JEN-HSUN HUANG

Jen-Hsun Huang
President and Chief Executive Officer

A signed original of this written statement required by Section 906 of 18 U.S.C. § 1350 has been provided to NVIDIA Corporation and will be retained by NVIDIA Corporation and furnished to the Securities and Exchange Commission or its staff upon request.

This certification accompanies the Form 10-Q to which it relates, is not deemed filed with the Securities and Exchange Commission and is not to be incorporated by reference into any filing of the Company under the Securities Act of 1933, as amended, or the Exchange Act (whether made before or after the date of the Form 10-Q), irrespective of any general incorporation language contained in such filing.

EXHIBIT 32.2

CERTIFICATION

Pursuant to the requirement set forth in Rule 13a-14(b) of the Securities Exchange Act of 1934, as amended (the “Exchange Act”), and Section 1350 of Chapter 63 of Title 18 of the United States Code (18 U.S.C. § 1350), Colette M. Kress, the Executive Vice President and Chief Financial Officer of NVIDIA Corporation (the “Company”), hereby certifies that, to the best of her knowledge:

1. The Company’s Quarterly Report on Form 10-Q for the period ended July 28, 2019 , to which this Certification is attached as Exhibit 32.2 (the “Periodic Report”), fully complies with the requirements of Section 13(a) or Section 15(d) of the Exchange Act; and

2. The information contained in the Periodic Report fairly presents, in all material respects, the financial condition of the Company at the end of the period covered by the Periodic Report and results of operations of the Company for the period covered by the Periodic Report.

Date: August 15, 2019

/s/ COLETTE M. KRESS
Colette M. Kress
Executive Vice President and Chief Financial Officer

A signed original of this written statement required by Section 906 of 18 U.S.C. § 1350 has been provided to NVIDIA Corporation and will be retained by NVIDIA Corporation and furnished to the Securities and Exchange Commission or its staff upon request.

This certification accompanies the Form 10-Q to which it relates, is not deemed filed with the Securities and Exchange Commission and is not to be incorporated by reference into any filing of the Company under the Securities Act of 1933, as amended, or the Exchange Act (whether made before or after the date of the Form 10-Q), irrespective of any general incorporation language contained in such filing.