import os

from swarms import Agent

from swarm models import OpenAlChat

from swarms.structs.mixture\_of\_agents import MixtureOfAgents

SEC\_DATA = """

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 Corporate Blog (http://blogs.nvidia.com)

NVIDIA Technical Blog (http://developer.nvidia.com/blog/)

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

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

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

NVIDIA X Account (https://x.com/nvidia)

In addition, investors and others can view NVIDIA videos on YouTube (https://www.YouTube.com/nvidia).

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.

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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

Apr 28, 2024 Apr 30, 2023

Revenue \$ 26,044 \$ 7,192

Cost of revenue 5,638 2,544

Gross profit 20,406 4,648

Operating expenses

Research and development 2,720 1,875

Sales, general and administrative 777 633

Total operating expenses 3,497 2,508

Operating income 16,909 2,140

Interest income 359 150

Interest expense (64) (66)

Other, net 75 (15)

Other income (expense), net

370 69

Income before income tax 17,279 2,209

Income tax expense 2,398 166

Net income \$ 14,881 \$ 2,043

Net income per share:

Basic \$ 6.04 \$ 0.83

Diluted \$ 5.98 \$ 0.82

Weighted average shares used in per share computation:

Basic 2,462 2,470

Diluted 2,489 2,490

See accompanying Notes to Condensed Consolidated Financial Statements.

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**NVIDIA Corporation and Subsidiaries** 

Condensed Consolidated Statements of Comprehensive Income

(In millions)

(Unaudited)

Three Months Ended

Apr 28, 2024 Apr 30, 2023

Net income \$ 14,881 \$ 2,043

Other comprehensive loss, net of tax

Available-for-sale securities:

Net change in unrealized gain (loss) (128) 17

Cash flow hedges:

Net change in unrealized loss (4) (13)

Reclassification adjustments for net realized loss included in net income (4) (11)

Net change in unrealized loss (8) (24)

Other comprehensive loss, net of tax (136) (7)

Total comprehensive income \$ 14,745 \$ 2,036

See accompanying Notes to Condensed Consolidated Financial Statements.

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**NVIDIA Corporation and Subsidiaries** 

Condensed Consolidated Balance Sheets

(In millions)

(Unaudited)

Apr 28, 2024 Jan 28, 2024

Assets

Current assets:

Cash and cash equivalents \$7,587 \$7,280

Marketable securities 23,851 18,704

Accounts receivable, net 12,365 9,999

Inventories 5,864 5,282

Prepaid expenses and other current assets 4,062 3,080

Total current assets 53,729 44,345

Property and equipment, net 4,006 3,914

Operating lease assets 1,532 1,346

Goodwill 4,453 4,430

Intangible assets, net 986 1,112

Deferred income tax assets 7,798 6,081

Other assets 4,568 4,500

Total assets \$ 77,072 \$ 65,728

Liabilities and Shareholders' Equity

**Current liabilities:** 

Accounts payable \$ 2,715 \$ 2,699

Accrued and other current liabilities 11,258 6,682

Short-term debt 1,250 1,250

Total current liabilities 15,223 10,631

Long-term debt 8,460 8,459

Long-term operating lease liabilities 1,281 1,119

Other long-term liabilities 2,966 2,541

Total liabilities 27,930 22,750

Commitments and contingencies - see Note 12

Shareholders equity:

Preferred stock

Common stock 2 2

Additional paid-in capital 12,651 13,132

Accumulated other comprehensive income (loss) (109) 27

Retained earnings 36,598 29,817

Total shareholders' equity 49,142 42,978

Total liabilities and shareholders' equity \$77,072 \$65,728

See accompanying Notes to Condensed Consolidated Financial Statements.

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**NVIDIA Corporation and Subsidiaries** 

Condensed Consolidated Statements of Shareholders' Equity

For the Three Months Ended April 28, 2024 and April 30, 2023

(Unaudited)

Common Stock

Outstanding Additional Paid-in Capital Accumulated Other Comprehensive Income

(Loss) Retained Earnings Total Shareholders' Equity

Shares Amount

(In millions, except per share data)

Balances, Jan 28, 2024 2,464 \$ 2 \$ 13,132 \$ 27 \$ 29,817 \$ 42,978

Net income 14,881 14,881

Other comprehensive loss (136) (136)

Issuance of common stock from stock plans 7 285 285

Tax withholding related to vesting of restricted stock units (2) (1,752)

Shares repurchased (10) (33) (8,002) (8,035)

Cash dividends declared and paid (\$0.04 per common share)

(98) (98)

Stock-based compensation 1,019 1,019

Balances, Apr 28, 2024 2,459 \$ 2 \$ 12,651 \$ (109) \$ 36,598 \$ 49,142

Balances, Jan 29, 2023 2,466 \$ 2 \$ 11,971 \$ (43) \$ 10,171 \$ 22,101

Net income 2.043 2.043

Other comprehensive loss (7)

Issuance of common stock from stock plans 9 246 246

Tax withholding related to vesting of restricted stock units (2) (507)

(7)

Cash dividends declared and paid (\$0.04 per common share)

(99) (99)

Stock-based compensation 743 743

Balances, Apr 30, 2023 2,473 \$ 2 \$ 12,453 \$ (50) \$ 12,115 \$ 24,520

See accompanying Notes to Condensed Consolidated Financial Statements.

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**NVIDIA Corporation and Subsidiaries** 

Condensed Consolidated Statements of Cash Flows

(In millions)

(Unaudited)

Three Months Ended

Apr 28, 2024 Apr 30, 2023

Cash flows from operating activities:

Net income \$ 14,881 \$ 2,043

Adjustments to reconcile net income to net cash provided by operating activities:

Stock-based compensation expense 1,011 735

Depreciation and amortization 410 384

Realized and unrealized (gains) losses on investments in non-affiliated entities, net (69) 14

Deferred income taxes (1,577) (1,135)

Other (145) (34)

Changes in operating assets and liabilities, net of acquisitions:

Accounts receivable (2,366) (252)

Inventories (577) 566

Prepaid expenses and other assets (726) (215)

Accounts payable (22) 11

Accrued and other current liabilities 4,202 689

Other long-term liabilities 323 105

Net cash provided by operating activities 15,345 2,911

Cash flows from investing activities:

Proceeds from maturities of marketable securities 4,004 2,512

Proceeds from sales of marketable securities 149

Purchases of marketable securities (9,303) (2,801)

Purchases related to property and equipment and intangible assets (369) (248)

Acquisitions, net of cash acquired (39) (83)

Investments in non-affiliated entities (135) (221)

Net cash used in investing activities (5,693) (841)

Cash flows from financing activities:

Proceeds related to employee stock plans 285 246

Payments related to repurchases of common stock (7,740)

Payments related to tax on restricted stock units (1,752) (507)

Dividends paid (98) (99)

Principal payments on property and equipment and intangible assets (40) (20)

Net cash used in financing activities (9,345) (380)

Change in cash and cash equivalents 307 1,690

Cash and cash equivalents at beginning of period 7,280 3,389

Cash and cash equivalents at end of period \$7,587 \$5,079

See accompanying Notes to Condensed Consolidated Financial Statements.

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**NVIDIA Corporation and Subsidiaries** 

Notes to Condensed Consolidated Financial Statements

(Unaudited)

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 28, 2024 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 28, 2024, 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 28, 2024.

Significant Accounting Policies

There have been no material changes to our significant accounting policies disclosed 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

28, 2024.

Fiscal Year

We operate on a 52- or 53-week year, ending on the last Sunday in January. Fiscal years 2025 and 2024 are both 52-week years. The first quarters of fiscal years 2025 and 2024 were both 13-week quarters.

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 and product purchase commitments, income taxes, goodwill, stock-based compensation, litigation, investigation and settlement costs, property, plant, and equipment, and other contingencies. These estimates are based on historical facts and various other assumptions that we believe are reasonable.

Recently Issued Accounting Pronouncements

Recent Accounting Pronouncements Not Yet Adopted

In November 2023, the Financial Accounting Standards Board, or FASB, issued a new accounting standard to provide for additional disclosures about significant expenses in operating segments. The standard is effective for our annual reporting starting with fiscal year 2025 and for interim period reporting starting in fiscal year 2026 retrospectively. We are currently evaluating the impact of this

standard on our Consolidated Financial Statements.

In December 2023, the FASB issued a new accounting standard which provides for new and

updated income tax disclosures, including disaggregation of rate reconciliation and income taxes

paid. The standard is effective for annual periods beginning after December 15, 2024. Early

adoption is permitted and should be applied prospectively, with retrospective application permitted.

We expect to adopt this standard in our annual reporting starting with fiscal year 2026. We are

currently evaluating the impact of this standard on our Consolidated Financial Statements.

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**NVIDIA Corporation and Subsidiaries** 

Notes to Condensed Consolidated Financial Statements (Continued)

(Unaudited)

Note 2 - Leases

Our lease obligations primarily consist of operating leases for our headquarters complex, domestic

and international office facilities, and data center space, with lease periods expiring between fiscal

years 2025 and 2035.

Future minimum lease payments under our non-cancelable operating leases as of April 28, 2024

were as follows:

**Operating Lease Obligations** 

(In millions)

Fiscal Year:

2025 (excluding first quarter of fiscal year 2025)

\$ 221

2026 306

2027 290

2028 270

2029 236

2030 and thereafter

410

Total 1,733

Less imputed interest 206

Present value of net future minimum lease payments 1,527

Less short-term operating lease liabilities 246

Long-term operating lease liabilities \$ 1,281

In addition, we have operating leases, primarily for our data centers, that are expected to commence during fiscal year 2025 with lease terms of 2 to 11 years for \$923 million.

Operating lease expenses were \$80 million and \$59 million for the first quarter of fiscal years 2025 and 2024, respectively. Short-term and variable lease expenses for the first quarter of fiscal years 2025 and 2024 were not significant.

Other information related to leases was as follows:

Three Months Ended

Apr 28, 2024 Apr 30, 2023

(In millions)

Supplemental cash flows information

Operating cash flows used for operating leases \$ 69 \$ 61

Operating lease assets obtained in exchange for lease obligations 250 106

As of April 28, 2024, our operating leases had a weighted average remaining lease term of 6.3 years and a weighted average discount rate of 3.89%. As of January 28, 2024, our operating leases

had a weighted average remaining lease term of 6.1 years and a weighted average discount rate of 3.76%.

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**NVIDIA Corporation and Subsidiaries** 

Notes to Condensed Consolidated Financial Statements (Continued)

(Unaudited)

Note 3 - 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 capitalized into inventory and subsequently recognized to cost of revenue, as follows:

Three Months Ended

Apr 28, 2024 Apr 30, 2023

(In millions)

Cost of revenue \$ 36 \$ 27

Research and development 727 524

Sales, general and administrative 248 184

Total \$ 1,011 \$ 735

**Equity Award Activity** 

The following is a summary of our 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, Jan 28, 2024 37 $ 245.94

Granted 7 $ 801.79

Vested (6) $ 176.59

Balances, Apr 28, 2024 38 $ 361.45
```

As of April 28, 2024, there was \$13.2 billion of aggregate unearned stock-based compensation expense. This amount is expected to be recognized over a weighted average period of 2.6 years for RSUs, PSUs, and market-based PSUs, and 0.8 years for ESPP.

Note 4 - 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:

```
# Create an instance of the OpenAlChat class

Ilm = OpenAlChat(
    api_key=os.getenv("OPENAI_API_KEY"),
    model_name="gpt-4o-mini",
    temperature=0.1,
)

# Initialize the director agent
# Initialize the director agent
director = Agent(
```

```
agent_name="Director",
  system_prompt="Directs the tasks for the accountants",
  Ilm=Ilm,
  max_loops=1,
  dashboard=False,
  state_save_file_type="json",
  saved_state_path="director.json",
)
# Initialize accountant 1
accountant1 = Agent(
  agent_name="Accountant1",
  system_prompt="Prepares financial statements",
  Ilm=Ilm,
  max_loops=1,
  dashboard=False,
  state_save_file_type="json",
  saved_state_path="accountant1.json",
)
# Initialize accountant 2
accountant2 = Agent(
  agent_name="Accountant2",
  system_prompt="Audits financial records",
  Ilm=Ilm,
  max_loops=1,
```

```
dashboard=False,
  state_save_file_type="json",
  saved_state_path="accountant2.json",
)
# Initialize 8 more specialized agents
balance_sheet_analyzer = Agent(
  agent_name="BalanceSheetAnalyzer",
  system_prompt="Analyzes balance sheets",
  Ilm=Ilm,
  max_loops=1,
  dashboard=False,
  state_save_file_type="json",
  saved_state_path="balance_sheet_analyzer.json",
)
income_statement_analyzer = Agent(
  agent_name="IncomeStatementAnalyzer",
  system_prompt="Analyzes income statements",
  Ilm=Ilm,
  max_loops=1,
  dashboard=False,
  state_save_file_type="json",
  saved_state_path="income_statement_analyzer.json",
)
```

```
cash_flow_analyzer = Agent(
  agent_name="CashFlowAnalyzer",
  system_prompt="Analyzes cash flow statements",
  Ilm=Ilm,
  max_loops=1,
  dashboard=False,
  state_save_file_type="json",
  saved_state_path="cash_flow_analyzer.json",
financial_ratio_calculator = Agent(
  agent_name="FinancialRatioCalculator",
  system_prompt="Calculates financial ratios",
  Ilm=Ilm,
  max_loops=1,
  dashboard=False,
  state_save_file_type="json",
  saved_state_path="financial_ratio_calculator.json",
)
tax_preparer = Agent(
  agent_name="TaxPreparer",
  system_prompt="Prepares tax returns",
  Ilm=Ilm,
  max_loops=1,
  dashboard=False,
```

```
state_save_file_type="json",
  saved_state_path="tax_preparer.json",
)
payroll_processor = Agent(
  agent_name="PayrollProcessor",
  system_prompt="Processes payroll",
  Ilm=Ilm,
  max_loops=1,
  dashboard=False,
  state_save_file_type="json",
  saved_state_path="payroll_processor.json",
)
inventory_manager = Agent(
  agent_name="InventoryManager",
  system_prompt="Manages inventory",
  Ilm=Ilm,
  max_loops=1,
  dashboard=False,
  state_save_file_type="json",
  saved_state_path="inventory_manager.json",
)
budget_planner = Agent(
  agent_name="BudgetPlanner",
```

```
system_prompt="Plans budgets",
  Ilm=Ilm,
  max_loops=1,
  dashboard=False,
  state_save_file_type="json",
  saved_state_path="budget_planner.json",
)
# Create a list of agents
agents = [
  director,
  balance_sheet_analyzer,
  income_statement_analyzer,
]
# Swarm
swarm = MixtureOfAgents(
  name="Mixture of Accountants",
  agents=agents,
  layers=3,
  final_agent=director,
  agents_per_layer=3,
)
```

# Run the swarm

```
out = swarm.run(
    f"Analyze the following Nvidia financial data and locate unnecessary expenditures: {SEC_DATA}"
)
print(out)
```