REFINITIV

DELTA REPORT

10-Q

SNPS - SYNOPSYS INC

10-Q - JANUARY 31, 2024 COMPARED TO 10-Q - JULY 31, 2023

The following comparison report has been automatically generated

TOTAL DELTAS	1580
CHANGES	155
DELETIONS	588
ADDITIONS	837

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

FORM 10-Q

(MARK ONE)

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

FOR THE QUARTERLY PERIOD ENDED JULY JANUARY 31, 2023 2024

OR

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

FOR THE TRANSITION PERIOD FROM TO
COMMISSION FILE NUMBER: 000-19807

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synopsyslogoa20.jpg

SYNOPSYS, INC.

(Exact name of registrant as specified in its charter)

Delaware	**56-1546236**
(State or other jurisdiction of incorporation or organization)	**(I.R.S. Employer Identification Number)**

675 ALMANOR AVE
SUNNYVALE, CA 94085
(Address of principal executive offices, including zip code)

(650) 584-5000
(Registrant's telephone number, including area code)

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 (par value of $0.01 per share)	SNPS	Nasdaq Global Select Market

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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 ý 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 ý 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 the 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	ý	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 ý

As of August 16, 2023 February 21, 2024, there were 152,083,817 152,543,690 shares of the registrant's common stock outstanding.

SYNOPSYS, INC.

QUARTERLY REPORT ON FORM 10-Q
FOR THE FISCAL QUARTER ENDED JULY JANUARY 31, 2023 2024

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PART I. FINANCIAL INFORMATION

Item 1. ***Financial Statements***

SYNOPSYS, INC.

CONDENSED CONSOLIDATED BALANCE SHEETS
(in thousands, except par value amounts)

	July 31, 2023	October 31, 2022
	(unaudited)	

	January 31, 2024	January 31, 2024	October 31, 2023
	(unaudited)		

ASSETS

ASSETS

ASSETS	**ASSETS**
Current assets:	Current assets:

Current assets:

Current assets:

Cash and cash equivalents

Cash and cash equivalents			
Cash and cash equivalents	Cash and cash equivalents	$1,686,144	$1,417,608
Short-term investments	Short-term investments	148,443	147,913
Total cash, cash equivalents and short-term investments	Total cash, cash equivalents and short-term investments	1,834,587	1,565,521
Accounts receivable, net	Accounts receivable, net	666,577	796,091
Inventories	Inventories	282,791	211,927
Prepaid and other current assets			
Prepaid and other current assets			
Prepaid and other current assets	Prepaid and other current assets	484,357	439,130
Total current assets	Total current assets	3,268,312	3,012,669
Property and equipment, net	Property and equipment, net	535,973	483,300
Operating lease right-of-use assets, net	Operating lease right-of-use assets, net	574,727	559,090
Goodwill	Goodwill	3,887,860	3,842,234
Intangible assets, net	Intangible assets, net	336,723	386,446
Deferred income taxes	Deferred income taxes	813,810	670,653
Deferred income taxes			
Deferred income taxes			
Other long-term assets	Other long-term assets	505,826	463,695
Total assets	Total assets	$9,923,231	$9,418,087
LIABILITIES, REDEEMABLE NON-CONTROLLING INTEREST AND STOCKHOLDERS' EQUITY	**LIABILITIES, REDEEMABLE NON-CONTROLLING INTEREST AND STOCKHOLDERS' EQUITY**		
Current liabilities:	Current liabilities:		
Current liabilities:			
Current liabilities:			
Accounts payable and accrued liabilities			
Accounts payable and accrued liabilities			
Accounts payable and accrued liabilities	Accounts payable and accrued liabilities	$ 905,464	$ 809,403
Operating lease liabilities	Operating lease liabilities	80,192	54,274
Deferred revenue	Deferred revenue	1,744,326	1,910,822
Deferred revenue			
Deferred revenue			

Total current liabilities			
Total current liabilities			
Total current liabilities	Total current liabilities	2,729,982	2,774,499
Long-term operating lease liabilities	Long-term operating lease liabilities	590,827	581,273
Long-term deferred revenue			
Long-term deferred revenue			
Long-term deferred revenue	Long-term deferred revenue	194,860	154,472
Long-term debt	Long-term debt	18,165	20,824
Other long-term liabilities	Other long-term liabilities	389,516	327,829
Total liabilities	Total liabilities	3,923,350	3,858,897
Redeemable non-controlling interest	Redeemable non-controlling interest	35,877	38,664
Stockholders’ equity:	Stockholders’ equity:		
Preferred stock, $0.01 par value: 2,000 shares authorized; none outstanding	Preferred stock, $0.01 par value: 2,000 shares authorized; none outstanding	—	—
Common stock, $0.01 par value: 400,000 shares authorized; 152,125 and 152,375 shares outstanding, respectively		1,521	1,524
Preferred stock, $0.01 par value: 2,000 shares authorized; none outstanding			
Preferred stock, $0.01 par value: 2,000 shares authorized; none outstanding			
Common stock, $0.01 par value: 400,000 shares authorized; 152,536 and 152,053 shares outstanding, respectively			
Capital in excess of par value	Capital in excess of par value	1,257,382	1,487,126
Retained earnings	Retained earnings	6,389,825	5,534,307
Treasury stock, at cost: 5,136 and 4,886 shares, respectively		(1,542,889)	(1,272,955)
Treasury stock, at cost: 4,725 and 5,207 shares, respectively			
Accumulated other comprehensive income (loss)	Accumulated other comprehensive income (loss)	(147,284)	(234,277)
Total Synopsys stockholders’ equity	Total Synopsys stockholders’ equity	5,958,555	5,515,725
Non-controlling interest	Non-controlling interest	5,449	4,801

Total stockholders’ equity	Total stockholders’ equity	5,964,004	5,520,526
Total liabilities, redeemable non-controlling interest and stockholders’ equity	Total liabilities, redeemable non-controlling interest and stockholders’ equity	$9,923,231	$9,418,087

See the accompanying *Notes to Condensed Consolidated Financial Statements (unaudited)*.

SYNOPSYS, INC.

CONDENSED CONSOLIDATED STATEMENTS OF INCOME
(Unaudited, in thousands, except per share amounts)

		Three Months Ended July 31,		Nine Months Ended July 31,	
		2023	2022	2023	2022
Revenue:	Revenue:				
Revenue:					
Revenue:					
Time-based products					
Time-based products					
Time-based products	Time-based products	$ 922,874	$ 754,322	$ 2,513,383	$ 2,185,626
Upfront products	Upfront products	297,967	268,584	980,149	973,483
Upfront products					
Upfront products					
Total products revenue					
Total products revenue					
Total products revenue	Total products revenue	1,220,841	1,022,906	3,493,532	3,159,109
Maintenance and service	Maintenance and service	266,447	224,860	749,959	638,141
Maintenance and service					
Maintenance and service					
Total revenue					
Total revenue					
Total revenue	Total revenue	1,487,288	1,247,766	4,243,491	3,797,250
Cost of revenue:	Cost of revenue:				
Cost of revenue:					
Cost of revenue:					
Products					
Products					
Products	Products	190,809	164,077	549,908	480,166
Maintenance and service	Maintenance and service	98,299	87,774	285,056	253,665
Amortization of intangible assets		18,374	19,330	54,886	47,145
Maintenance and service					
Maintenance and service					
Amortization of acquired intangible assets					
Amortization of acquired intangible assets					

Amortization of acquired intangible assets					
Total cost of revenue					
Total cost of revenue					
Total cost of revenue	Total cost of revenue	307,482	271,181	889,850	780,976
Gross margin	Gross margin	1,179,806	976,585	3,353,641	3,016,274
Gross margin					
Gross margin					
Operating expenses:					
Operating expenses:					
Operating expenses:	Operating expenses:				
Research and development	Research and development	507,402	444,826	1,458,328	1,218,761
Research and development					
Research and development					
Sales and marketing					
Sales and marketing					
Sales and marketing	Sales and marketing	227,134	199,246	660,034	571,329
General and administrative	General and administrative	109,714	91,461	298,161	246,426
Amortization of intangible assets		6,697	7,124	19,996	23,036
General and administrative					
General and administrative					
Amortization of acquired intangible assets					
Amortization of acquired intangible assets					
Amortization of acquired intangible assets					
Restructuring charges					
Restructuring charges					
Restructuring charges	Restructuring charges	33,385	—	78,384	12,057
Total operating expenses	Total operating expenses	884,332	742,657	2,514,903	2,071,609
Total operating expenses					
Total operating expenses					
Operating income	Operating income	295,474	233,928	838,738	944,665
Other income (expense), net		25,808	2,426	53,353	(41,280)
Operating income					
Operating income					
Interest and other income (expense), net					
Interest and other income (expense), net					
Interest and other income (expense), net					
Income before income taxes					
Income before income taxes					
Income before income taxes	Income before income taxes	321,282	236,354	892,091	903,385
Provision (benefit) for income taxes	Provision (benefit) for income taxes	(11,773)	16,708	20,461	76,506
Provision (benefit) for income taxes					
Provision (benefit) for income taxes					
Net income					
Net income					
Net income	Net income	$ 333,055	$ 219,646	$ 871,630	$ 826,879

Net income (loss) attributed to non-controlling interest and redeemable non-controlling interest	Net income (loss) attributed to non-controlling interest and redeemable non-controlling interest		(3,197)		(2,980)		(9,068)		(4,215)
Net income (loss) attributed to non-controlling interest and redeemable non-controlling interest									
Net income (loss) attributed to non-controlling interest and redeemable non-controlling interest									
Net income attributed to Synopsys									
Net income attributed to Synopsys									
Net income attributed to Synopsys	Net income attributed to Synopsys	$	336,252	$	222,626	$	880,698	$	831,094
Net income per share attributed to Synopsys:	Net income per share attributed to Synopsys:								
Net income per share attributed to Synopsys:									
Net income per share attributed to Synopsys:									
Basic									
Basic									
Basic	Basic	$	2.21	$	1.46	$	5.79	$	5.43
Diluted	Diluted	$	2.17	$	1.43	$	5.68	$	5.31
Diluted									
Diluted									
Shares used in computing per share amounts:									
Shares used in computing per share amounts:									
Shares used in computing per share amounts:	Shares used in computing per share amounts:								
Basic	Basic		152,023		152,938		152,204		153,082
Basic									
Basic									
Diluted	Diluted		154,947		155,806		155,119		156,545
Diluted									
Diluted									

See the accompanying *Notes to Condensed Consolidated Financial Statements (unaudited)*.

SYNOPSYS, INC.

CONDENSED CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME
(Unaudited, in thousands)

		Three Months Ended July 31,				Nine Months Ended July 31,			
		2023		2022		2023		2022	
Net income	Net income	$	333,055	$	219,646	$	871,630	$	826,879
Net income									
Net income									
Other comprehensive income (loss):									
Other comprehensive income (loss):									
Other comprehensive income (loss):	Other comprehensive income (loss):								

Change in foreign currency translation adjustment	Change in foreign currency translation adjustment	(12,232)	(23,378)	19,297	(63,989)
Changes in unrealized gains (losses) on available-for-sale securities, net of tax of $0 for periods presented		(212)	(1)	1,326	(1,674)
Change in foreign currency translation adjustment					
Change in foreign currency translation adjustment					
Change in unrealized gains (losses) on available-for-sale securities, net of tax of $0 for periods presented					
Change in unrealized gains (losses) on available-for-sale securities, net of tax of $0 for periods presented					
Change in unrealized gains (losses) on available-for-sale securities, net of tax of $0 for periods presented					
Cash flow hedges:	Cash flow hedges:				
Deferred gains (losses), net of tax $(2,147) and $(14,995) for the three and nine months ended July 31, 2023, respectively, and of $6,780 and $16,191 for each of the same periods in fiscal 2022, respectively.		5,907	(19,051)	43,489	(41,769)
Reclassification adjustment on deferred (gains) losses included in net income, net of tax of $(2,111) and $(8,707), for the three and nine months ended July 31, 2023, and of $(28) and $(499) for each of the same periods in fiscal 2022, respectively.		5,250	36	22,881	1,543
Cash flow hedges:					
Cash flow hedges:					
Deferred gains (losses), net of tax $(3,003) and $(14,807), respectively.					
Deferred gains (losses), net of tax $(3,003) and $(14,807), respectively.					
Deferred gains (losses), net of tax $(3,003) and $(14,807), respectively.					
Reclassification adjustment on deferred (gains) losses included in net income, net of tax of $(1,690) and $(3,099), respectively.					
Reclassification adjustment on deferred (gains) losses included in net income, net of tax of $(1,690) and $(3,099), respectively.					
Reclassification adjustment on deferred (gains) losses included in net income, net of tax of $(1,690) and $(3,099), respectively.					
Other comprehensive income (loss), net of tax effects					
Other comprehensive income (loss), net of tax effects					
Other comprehensive income (loss), net of tax effects	Other comprehensive income (loss), net of tax effects	(1,287)	(42,394)	86,993	(105,889)
Comprehensive income	Comprehensive income	331,768	177,252	958,623	720,990
Less: net income (loss) attributed to non-controlling interest and redeemable non-controlling interest		(3,197)	(2,980)	(9,068)	(4,215)
Comprehensive income					
Comprehensive income					

Less: Net income (loss) attributed to non-controlling interest and redeemable non-controlling interest
Less: Net income (loss) attributed to non-controlling interest and redeemable non-controlling interest
Less: Net income (loss) attributed to non-controlling interest and redeemable non-controlling interest

Comprehensive income attributed to Synopsys	$ 334,965	$ 180,232	$ 967,691	$ 725,205

Comprehensive income attributed to Synopsys
Comprehensive income attributed to Synopsys

See the accompanying *Notes to Condensed Consolidated Financial Statements (unaudited)*.

SYNOPSYS, INC.

CONDENSED CONSOLIDATED STATEMENTS OF STOCKHOLDERS' EQUITY
(Unaudited, in thousands)

Common Stock | Capital in Excess of Par Value | Retained Earnings | Treasury Stock | Accumulated Other Comprehensive Income (Loss) | Total Synopsys Stockholders' Equity

	Common Stock		Capital in Excess of Par Value	Retained Earnings	Treasury Stock	Accumulated Other Comprehensive Income (Loss)	Total Synopsys Stockholders' Equity	Non-controlling Interest	Stockholders' Equity
	Shares	Amount							
Balance at April 30, 2023	152,251	$ 1,523	$1,330,072	$6,075,009	$(1,428,748)	$ (145,997)	$ 5,831,859	$ 5,086	$ 5,836,945
Net income				336,252			336,252	(557)	335,695
Other comprehensive income (loss), net of tax effects						(1,287)	(1,287)		(1,287)
Purchases of treasury stock	(751)	(8)	8		(300,000)		(300,000)		(300,000)
Common stock issued, net of shares withheld for employee taxes	625	6	(215,666)	(18,796)	185,859		(48,597)		(48,597)
Stock-based compensation			142,968				142,968	1,496	144,464
Adjustments to redeemable non-controlling interest				(2,640)			(2,640)		(2,640)
Recognition of non-controlling interest upon issuance of subsidiary stock							—	(576)	(576)
Balance at July 31, 2023	152,125	$ 1,521	$1,257,382	$6,389,825	$(1,542,889)	$ (147,284)	$ 5,958,555	$ 5,449	$ 5,964,004
Balance at October 31, 2022	152,375	$ 1,524	$1,487,126	$5,534,307	$(1,272,955)	$ (234,277)	$ 5,515,725	$ 4,801	$ 5,520,526
Balance at October 31, 2023									
Net income				880,698			880,698	(1,217)	879,481
Other comprehensive income (loss), net of tax effects						86,993	86,993		86,993
Purchases of treasury stock	(2,382)	(24)	24		(860,724)		(860,724)		(860,724)
Equity forward contract, net			(45,000)				(45,000)		(45,000)

Balance at October 31, 2023
Balance at October 31, 2023

	Shares	Amount	Capital in Excess of Par Value	Retained Earnings	Treasury Stock	Accumulated Other Comprehensive Income (Loss)	Total Synopsys Stockholders' Equity	Non-controlling Interest	Stockholders' Equity
Common stock issued, net of shares withheld for employee taxes	2,132	21	(603,944)	(19,108)	590,790		(32,241)		(32,241)
Stock-based compensation			418,047				418,047	3,902	421,949
Adjustments to redeemable non-controlling interest				(6,072)			(6,072)		(6,072)
Recognition of non-controlling interest upon issuance of subsidiary stock			1,129				1,129	(2,037)	(908)
Balance at July 31, 2023	152,125	$ 1,521	$1,257,382	$6,389,825	$(1,542,889)	$ (147,284)	$ 5,958,555	$ 5,449	$ 5,964,004

Balance at January 31, 2024

	Common Stock		Capital in Excess of Par Value	Retained Earnings	Treasury Stock	Accumulated Other Comprehensive Income (Loss)	Total Synopsys Stockholders' Equity	Non-controlling Interest	Stockholders' Equity
	Shares	Amount							
Balance at April 30, 2022	152,955	$ 1,530	$1,517,481	$5,157,633	$ (999,234)	$ (113,099)	$ 5,564,311	$ 3,119	$ 5,567,430

Capital in Excess of Par Value

Capital in Excess of Par Value

	Common Stock	Capital in Excess of Par Value	Retained Earnings	Treasury Stock	Accumulated Other Comprehensive Income (Loss)	Total Synopsys Stockholders' Equity	Non-controlling Interest

Balance at October 31, 2022
Balance at October 31, 2022
Balance at October 31, 2022

	Shares	Amount	Capital in Excess of Par Value	Retained Earnings	Treasury Stock	Accumulated Other Comprehensive Income (Loss)	Total Synopsys Stockholders' Equity	Non-controlling Interest	Stockholders' Equity
Net income				222,626			222,626	(307)	222,319

Other comprehensive income (loss), net of tax effects
Other comprehensive income (loss), net of tax effects

	Shares	Amount	Capital in Excess of Par Value	Retained Earnings	Treasury Stock	Accumulated Other Comprehensive Income (Loss)	Total Synopsys Stockholders' Equity	Non-controlling Interest	Stockholders' Equity
Other comprehensive income (loss), net of tax effects						(42,394)	(42,394)		(42,394)
Purchases of treasury stock	(715)	(8)	8		(217,266)		(217,266)		(217,266)
Equity forward contract, net			(40,000)				(40,000)		(40,000)
Common stock issued, net of shares withheld for	764	8	(188,562)		181,659		(6,895)		(6,895)

employee employee									
taxes taxes									
Stock-based compensation Stock-based compensation			126,317				126,317	1,288	127,605
Adjustments to redeemable non-controlling interest				(2,673)			(2,673)		(2,673)
Balance at July 31, 2022	153,004	$ 1,530	$1,415,244	$5,377,586	$(1,034,841)	$ (155,493)	$ 5,604,026	$ 4,100	$ 5,608,126
Balance at October 31, 2021	153,062	$ 1,531	$1,576,363	$4,549,713	$ (782,866)	$ (49,604)	$ 5,295,137	$ 3,806	$ 5,298,943
Net income				831,094			831,094	(994)	830,100
Balance at January 31, 2023									
Balance at January 31, 2023									
Balance at January 31, 2023									
Other comprehensive income (loss), net of tax effects						(105,889)	(105,889)		(105,889)
Purchases of treasury stock	(2,400)	(24)	24		(752,266)		(752,266)		(752,266)
Equity forward contract, net			(5,000)				(5,000)		(5,000)
Common stock issued, net of shares withheld for employee taxes	2,342	23	(488,292)		500,291		12,022		12,022
Stock-based compensation			332,149				332,149	1,288	333,437
Adjustments to redeemable non-controlling interest				(3,221)			(3,221)		(3,221)
Balance at July 31, 2022	153,004	$ 1,530	$1,415,244	$5,377,586	$(1,034,841)	$ (155,493)	$ 5,604,026	$ 4,100	$ 5,608,126

See the accompanying *Notes to Condensed Consolidated Financial Statements (unaudited)*.

SYNOPSYS, INC.

CONDENSED CONSOLIDATED STATEMENTS OF CASH FLOWS
(Unaudited, in thousands)

	Nine Months Ended July 31,		Three Months Ended January 31,	
	2023	**2022**	**2024**	**2023**
Cash flows from operating activities: Cash flows from operating activities:				
Net income Net income	$ 871,630	$ 826,879		
Adjustments to reconcile net income to net cash provided by operating activities:				
Net income				
Net income				
Adjustments to reconcile net income to net cash provided by (used in) operating activities:				
Amortization and depreciation				
Amortization and depreciation				
Amortization and depreciation Amortization and depreciation	180,033	169,708		

Reduction of operating lease right-of-use assets	Reduction of operating lease right-of-use assets	72,647	65,980
Amortization of capitalized costs to obtain revenue contracts	Amortization of capitalized costs to obtain revenue contracts	61,677	54,438
Stock-based compensation	Stock-based compensation	421,949	333,437
Allowance for credit losses	Allowance for credit losses	11,937	(4,516)
Gain on sale of strategic investments			
Gain on sale of strategic investments			
Gain on sale of strategic investments			
Amortization of bridge financing costs			
Deferred income taxes	Deferred income taxes	(166,061)	5,843
Other non-cash	Other non-cash	8,649	10,356
Net changes in operating assets and liabilities, net of acquired assets and liabilities:			
Net changes in operating assets and liabilities, net of acquired assets and assumed liabilities:			
Accounts receivable			
Accounts receivable			
Accounts receivable	Accounts receivable	112,511	(121,786)
Inventories	Inventories	(77,919)	118
Prepaid and other current assets	Prepaid and other current assets	8,373	(56,075)
Other long-term assets	Other long-term assets	(116,487)	(20,058)
Accounts payable and accrued liabilities	Accounts payable and accrued liabilities	48,574	(46,356)
Operating lease liabilities	Operating lease liabilities	(52,914)	(66,187)

Income taxes	Income taxes	123,924	(60,739)
Deferred revenue	Deferred revenue	(131,310)	254,353
Net cash provided by operating activities		1,377,213	1,345,395
Net cash provided by (used in) operating activities			
Cash flows from investing activities:	Cash flows from investing activities:		
Proceeds from sales and maturities of short-term investments	Proceeds from sales and maturities of short-term investments	104,139	70,847
Proceeds from sales and maturities of short-term investments			
Proceeds from sales and maturities of short-term investments			
Purchases of short-term investments	Purchases of short-term investments	(102,457)	(73,330)
Proceeds from sales of long-term investments		7,248	582
Purchases of long-term investments		(435)	(7,000)
Proceeds from sales of strategic investments			
Purchases of strategic investments			
Purchases of property and equipment			
Purchases of property and equipment			
Purchases of property and equipment	Purchases of property and equipment	(136,520)	(102,934)
Acquisitions, net of cash acquired	Acquisitions, net of cash acquired	(51,324)	(416,323)
Capitalization of software development costs	Capitalization of software development costs	(2,204)	(1,970)
Other		—	(1,200)
Net cash used in investing activities			
Net cash used in investing activities			

Net cash used in investing activities	Net cash used in investing activities	(181,553)	(531,328)
Cash flows from financing activities:	Cash flows from financing activities:		
Repayment of debt	Repayment of debt	(2,603)	(76,838)
Repayment of debt			
Repayment of debt			
Payment of bridge financing costs			
Issuances of common stock	Issuances of common stock	164,841	161,416
Payments for taxes related to net share settlement of equity awards	Payments for taxes related to net share settlement of equity awards	(198,969)	(149,130)
Purchase of equity forward contract	Purchase of equity forward contract	(45,000)	(40,000)
Purchases of treasury stock	Purchases of treasury stock	(860,724)	(717,266)
Other		(122)	(3,413)
Net cash used in financing activities			
Net cash used in financing activities			
Net cash used in financing activities	Net cash used in financing activities	(942,577)	(825,231)
Effect of exchange rate changes on cash, cash equivalents and restricted cash	Effect of exchange rate changes on cash, cash equivalents and restricted cash	14,997	(38,155)
Net change in cash, cash equivalents and restricted cash	Net change in cash, cash equivalents and restricted cash	268,080	(49,319)
Cash, cash equivalents and restricted cash, beginning of year	Cash, cash equivalents and restricted cash, beginning of year	1,419,864	1,435,183
Cash, cash equivalents and restricted cash, end of period	Cash, cash equivalents and restricted cash, end of period	$1,687,944	$1,385,864

See the accompanying *Notes to Condensed Consolidated Financial Statements (unaudited)*.

SYNOPSYS, INC.

NOTES TO CONDENSED CONSOLIDATED FINANCIAL STATEMENTS

(Unaudited)

Note 1. Description of Business

Synopsys, Inc. (Synopsys, we, our or us) provides products and services used across the entire Silicon to Software spectrum from to bring Smart Everything to life. From engineers creating advanced semiconductors to product teams developing advanced electronic systems to software developers seeking to ensure the security and quality of their code. code, our customers trust that our technologies will enable them to meet new requirements for energy efficiency, reliability, mobility, security and more.

We are a global leader in supplying the electronic design automation (EDA) software that engineers use to design and test integrated circuits (ICs), also known as chips. chips or silicon. We provide software and hardware used to validate the electronic systems that incorporate chips and the software that runs on them. them, including cloud-based digital design flow to boost chip-design development productivity. We also provide technical services and support to help our customers develop advanced chips and electronic systems. These products and services are part of our Design Automation segment.

We also offer a broad and comprehensive portfolio of semiconductor intellectual property (IP) products, which are pre-designed circuits that engineers use as components of larger chip designs rather than designing those circuits themselves. These products and services are part of our Design IP segment.

We are also a leading provider of software tools and services that improve the security, quality and compliance of software in a wide variety of industries, including electronics, financial services, automotive, medicine, energy and industrials. These tools and services are part of our Software Integrity segment.

Note 2. Summary of Significant Accounting Policies and Basis of Presentation

We have prepared the accompanying condensed consolidated financial statements pursuant to the rules and regulations of the Securities and Exchange Commission (SEC). Pursuant to these rules and regulations, we have condensed or omitted certain information and footnote disclosures we normally include in our annual consolidated financial statements prepared in accordance with U.S. generally accepted accounting principles (U.S. GAAP). The condensed consolidated financial statements are unaudited but, in management's opinion, we have made all adjustments (consisting only of normal, recurring adjustments, except as otherwise indicated) necessary for a fair presentation of our quarterly results. Our interim period operating results do not necessarily indicate the results that may be expected for any other interim period or for the full fiscal year. These financial statements and accompanying notes should be read in conjunction with the consolidated financial statements and notes thereto in our Annual Report on Form 10-K for the fiscal year ended October 31, 2022 October 31, 2023 as filed with the SEC on December 12, 2022 December 12, 2023 (our Annual Report).

Use of Estimates. To prepare financial statements in conformity with U.S. GAAP, management must make estimates and assumptions that affect the amounts reported in the condensed consolidated financial statements and accompanying notes. Actual results could differ from these estimates and could have a material impact on our operating results and financial position.

Principles of Consolidation. The condensed consolidated financial statements include our accounts and the accounts of our wholly and majority-owned subsidiaries. All intercompany accounts and transactions have been eliminated in consolidation.

Fiscal Year and Fiscal Quarter End. Our fiscal year generally ends on the Saturday nearest to October 31 and consists of 52 weeks, with the exception that approximately every five years, we have a 53-week year. When a 53-week year occurs, we include the additional week in the first quarter to realign fiscal quarters with calendar quarters. Fiscal 2023 2024 is a 53-week year ending on November 2, 2024, which impacts our revenue, expenses and 2022 are both 52-week years. operating results. Fiscal 2023 will end was a 52-week year and ended on October 28, 2023. Fiscal 2022

Our results of operations for the first quarter of fiscal 2024 and 2023 included 14 weeks and 13 weeks, respectively, and ended on October 29, 2022. February 3, 2024 and January 28, 2023, respectively. For presentation purposes, the condensed consolidated financial statements and accompanying notes refer to the closest calendar month end.

Comparability. Certain reclassifications have been made to the prior period's condensed consolidated financial statements to conform to the current year presentation. The reclassifications did not have a material impact on the prior period's condensed consolidated balance sheets, statements of income, statements of comprehensive income and statements of cash flows.

Segment Reporting. Effective in the first quarter of fiscal 2023, we realigned our organizational structure to evaluate the results of our Design IP business separately. Our Chief Operating Decision Maker (CODM), our Chief

Executive Officer (CEO), now regularly reviews disaggregated segment information, assesses performance against our key growth strategies and allocates resources based on this new organizational structure. As a result, effective in the first quarter of fiscal 2023, we changed our reportable segments from two reportable segments to the following three reportable segments: (1) Design Automation, which includes EDA tools, system integration solutions and other associated revenue categories, (2) Design IP, which includes IP products, and (3) Software Integrity, which includes a comprehensive solution for building integrity—security, quality and compliance testing—into the customers' software development lifecycle and supply chain. As such, prior period reportable segment results and related disclosures have been reclassified to reflect our current reportable segments.

Goodwill. As a result of the change to our reportable segments, we reassessed our reporting units for the evaluation of goodwill during the first quarter of fiscal 2023. Prior to this change, our reporting units were determined to be the same as reportable segments for the purpose of goodwill impairment assessment. Our reassessment determined that we now have three reporting units, which are the same as our reportable segments.

Goodwill represents the excess of the aggregate purchase price over the fair value of the net tangible and identifiable intangible assets acquired by us. The carrying amount of goodwill at each reporting unit is tested for impairment annually on the first day of the fourth fiscal quarter, or more frequently if facts and circumstances warrant a review. We perform either a qualitative or quantitative assessment for goodwill impairment test. When a quantitative goodwill impairment assessment is performed, we use an income approach based on discounted cash flow analysis, a market approach based on market multiples, or a combination of both. If the fair value of a reporting unit is less than its carrying value, a goodwill impairment loss is recorded for the difference.

The change in reporting units was considered a triggering event, indicating a test for goodwill impairment was required before and after the change in reporting units. We performed those impairment tests, which did not result in the identification of an impairment loss as of January 31, 2023.

If assumptions or estimates with respect to our future performance vary from what is expected, including but not limited to those assumptions relating to inflationary pressure on costs and geopolitical uncertainties, this may impact the impairment analysis and could reduce the underlying cash flows used to estimate fair values and result in a decline in fair value that may trigger future impairment charges.

Assets Held for Sale. Assets are classified as held for sale when all of the following criteria for a plan of sale have been met: (i) management, having the authority to approve the action, commits to a plan to sell the assets; (ii) the assets are available for immediate sale in their present condition, subject only to terms that are usual and customary; (iii) an active program to locate a buyer and other actions required to complete the plan to sell have been initiated; (iv) the sale of the assets is probable and is expected to be completed within one year; (v) the assets are being actively marketed for sale at a price that is reasonable in relation to their current fair value; and (vi) actions necessary to complete the plan of sale indicate that it is unlikely that significant changes to the plan will be made or that the plan will be withdrawn.

Significant Accounting Policies. There have been no material changes to our significant accounting policies included in our Annual Report.

Recently Issued Accounting Pronouncements

In June 2022, the Financial Accounting Standards Board (FASB) issued Accounting Standards Update (ASU) 2022-03, Fair Value Measurement (Topic 820): Fair Value Measurement of Equity Securities Subject to Contractual Sale Restrictions (ASU 2022-03), which applies to all equity securities measured at fair value that are subject to contractual sale restrictions. This change prohibits entities from taking into account contractual restrictions on the sale of equity securities when estimating fair value and introduces required disclosures for such transactions. The standard will become effective for us beginning on November 1, 2024 and will be applied prospectively. Early adoption is permitted. Any future impact from the adoption of this guidance will depend on the facts and circumstances of future transactions.

In November 2023, the FASB issued ASU 2023-07, Segment Reporting (Topic 280): Improvements to Reportable Segment Disclosures (ASU 2023-07). The ASU expands public entities' segment disclosures by requiring disclosure of significant segment expenses that are regularly provided to the Chief Operating Decision Maker (CODM) and included within each reported measure of segment profit or loss, an amount and description of its composition for other segment items, and interim disclosures of a reportable segment's profit or loss and assets. The ASU is effective for our annual reports beginning in the fiscal year 2025, and interim period reports beginning in the first quarter of the fiscal year 2026 on a retrospective basis. Early adoption is permitted. We are currently evaluating the impact of adopting this ASU on our consolidated financial statements and disclosures.

In December 2023, the FASB issued ASU 2023-09, Income Taxes (Topic 740): Improvements to Income Tax Disclosures, which enhances the transparency and decision usefulness of income tax disclosures primarily through changes to the rate reconciliation and income taxes paid information. The standard will become effective for us beginning on November 1, 2025 and will be applied on a prospective basis, with a retrospective option. Early adoption is permitted. We are currently evaluating the impact of this standard on our consolidated financial statements and related disclosures.

Note 3. Pending Acquisition of Ansys

On January 15, 2024, we entered into an Agreement and Plan of Merger (the Merger Agreement) to acquire all of the outstanding shares of ANSYS, Inc. (Ansys), a provider of broad engineering simulation and analysis software and services, in a cash-and-stock transaction (the Ansys Merger) that values Ansys at approximately $35.0 billion, based on the closing price of Synopsys common stock on December 21, 2023.

Under the terms of the Merger Agreement, at the effective time of the Ansys Merger (the Effective Time), each share of Ansys common stock issued and outstanding immediately prior to the Effective Time (with certain exceptions set forth in the Merger Agreement) will be converted into the right to receive 0.3450 (the Exchange Ratio) of a share of Synopsys common stock and $197.00 in cash, without interest. The Merger Agreement also provides for Synopsys' assumption of certain outstanding Ansys options and other unvested Ansys equity awards held by continuing Ansys employees. If the stock consideration to be issued by Synopsys in connection with the Ansys Merger would exceed 19.9999% of the shares of Synopsys common stock issued and outstanding immediately prior to the Effective Time, the Exchange Ratio will be reduced to the minimum extent necessary to ensure that the aggregate number of shares of Synopsys common stock to be issued in connection with the Ansys Merger does not exceed such threshold, and the cash consideration will be correspondingly increased to offset such adjustment.

The Ansys Merger, which is anticipated to close in the first half of calendar year 2025, is subject to the satisfaction or waiver of customary closing conditions, including adoption of the Merger Agreement by holders of a majority of the outstanding shares of Ansys common stock, the expiration or termination of the waiting period under the Hart-Scott-Rodino Antitrust Improvement Act of 1976, as amended, the clearance of the Ansys Merger under certain other antitrust and foreign investment regimes and the effectiveness of a registration statement on Form S-4 to be filed by us. We and Ansys each have termination rights under the Merger Agreement. A fee of $1.5 billion may be payable by us to Ansys, or a fee of $950.0 million may be payable by Ansys to us, upon termination of the Merger Agreement under specified circumstances, each as more fully described in the Merger Agreement.

In connection with the execution of the Merger Agreement, we entered into a commitment letter on January 15, 2024 (the Bridge Commitment Letter) with certain financial institutions that committed to provide, subject to the satisfaction of customary closing conditions, a senior unsecured bridge facility (the Bridge Commitment) in an aggregate principal amount of up to $16.0 billion (which we subsequently reduced to $11.7 billion in connection with our entry into the Term Loan Agreement as further described below). On February 13, 2024, we entered into a term loan facility credit agreement (the Term Loan Agreement), which provides us with the ability to borrow up to $4.3 billion at the closing of the Ansys Merger, subject to the satisfaction of customary closing conditions for similar facilities, for the purpose of financing a portion of the cash consideration to be paid in the Ansys Merger and paying related fees and expenses in connection with the Ansys Merger and the other transactions contemplated by the Merger Agreement. Effective February 13, 2024, we terminated $4.3 billion of the original $16.0 billion of commitments under the Bridge Commitment, in lieu of which we expect to borrow the committed amounts available under the Term Loan Agreement. See Note 10. *Bridge Commitment Letter, Term Loan and Revolving Credit Facilities* of the *Notes to Condensed Consolidated Financial Statements* for more information on the Bridge Commitment and the Term Loan Agreement.

Note 4. Business Combination

During the three months ended January 31, 2024, we completed one acquisition for aggregate purchase consideration of $67.8 million, net of cash acquired. The purchase consideration was allocated as follows: $29.4 million to identifiable intangible assets, $48.0 million to goodwill, and $9.6 million to net tangible liabilities. The total purchase consideration is preliminary, and as additional information becomes available, we may further revise it during the remainder of the measurement period, which will not exceed 12 months from the closing of the acquisition. The goodwill recognized from this acquisition was assigned to the Design Automation reporting unit, and was not deductible for income tax purposes.

We have included the financial results of this acquisition in our condensed consolidated financial statements from the date of acquisition. These results were not material to our condensed consolidated financial statements.

Transaction costs were $31.9 million during the three months ended January 31, 2024. These costs mainly consisted of professional fees and administrative costs for closed and pending acquisitions and were expensed as incurred in our condensed consolidated statements of income.

Note 5. Revenue

Disaggregated Revenue

The following table showed shows the percentage of revenue by product groups:

		Three Months Ended July 31,				Nine Months Ended July 31,			
		2023		2022		2023		2022	
		Three Months Ended January 31,							
		Three Months Ended January 31,							
		Three Months Ended January 31,							
		2024							
		2024							
		2024							
EDA									
EDA									
EDA	EDA	65.5	%	63.8	%	64.7	%	62.2	%
Design IP	Design IP	23.5	%	25.1	%	24.3	%	26.9	%
Design IP									
Design IP									
Software Integrity									
Software Integrity									
Software Integrity	Software Integrity	8.9	%	9.5	%	9.3	%	8.9	%
Other	Other	2.1	%	1.6	%	1.7	%	2	%
Other									
Other									
Total	Total	100.0	%	100.0	%	100.0	%	100.0	%
Total									
Total									

Contract Balances

The contract assets indicated below are presented as prepaid and other current assets in the condensed consolidated balance sheets. The contract assets are transferred to receivables when the rights to invoice and receive payment become unconditional. Unbilled receivables are presented as accounts receivable, net, in the condensed consolidated balance sheets.

Contract balances were are as follows:

		As of	
		July 31, 2023	October 31, 2022
As of			
January 31, 2024		January 31, 2024	As of October 31, 2023
	(in thousands)	(in thousands)	

Contract assets, net	Contract assets, net	$ 270,105	$ 260,498
Unbilled receivables	Unbilled receivables	$ 49,261	$ 46,254
Deferred revenue	Deferred revenue	$1,939,186	$2,065,294

During the three and nine months ended July 31, 2023 January 31, 2024, we recognized revenue of $344.9 million and $1.6 billion $846.7 million that was included in the deferred revenue balance as of October 31, 2023, respectively, including previously unfulfilled contracts that have expired and are no longer subject to an implied promise to provide future services, that was included in the deferred revenue balance as of October 31, 2022. services.

Contracted but unsatisfied or partially unsatisfied performance obligations (backlog) were approximately $7.1 billion $8.2 billion as of July 31, 2023 January 31, 2024, which includes $1.4 billion $1.3 billion in non-cancellable Flexible Spending Account (FSA) commitments from customers where actual product selection and quantities of specific products or services are to be determined by customers at a later date. We have elected to exclude future sales-based royalty payments from the remaining performance obligations. Approximately 42% 40% of the contracted but unsatisfied or partially unsatisfied performance obligations backlog as of July 31, 2023 January 31, 2024, excluding non-cancellable FSA, are is expected to be recognized as revenue over the next 12 months, with the remainder recognized thereafter. The majority of the remaining backlog is expected to be recognized in the following three years.

During the three and nine months ended July 31, 2023, January 31, 2024 and 2023, we recognized $24.2 million $25.4 million and $75.8 million, respectively, from performance obligations satisfied from sales-based royalties earned during the periods. During the three and nine months ended July 31, 2022, we recognized $33.9 million and $103.5 million $24.7 million, respectively, from performance obligations satisfied from sales-based royalties earned during the periods.

Costs of Obtaining a Contract with Customer

Capitalized commission costs, net of accumulated amortization, as of July 31, 2023 January 31, 2024 were $96.7 million $88.5 million and are included in other long-term assets in our condensed consolidated balance sheets. Amortization of these assets was $22.1 million $18.7 million and $61.7 million $18.9 million during the three and nine months ended July 31, 2023, January 31, 2024 and 2023, respectively, and are included in sales and marketing expense in the condensed consolidated statements of income. Amortization of these assets was $19.9 million and $54.4 million during the three and nine months ended July 31, 2022, respectively, and included in sales and marketing expense in the our condensed consolidated statements of income.

Note 4. Business Combination

During the nine months ended July 31, 2023, we completed two acquisitions for aggregate purchase consideration of $48.6 million, net of cash acquired. The purchase consideration was allocated as follows: $24.6 million to identifiable intangible assets and $28.5 million to goodwill. The total purchase consideration is preliminary, and as additional information becomes available, we may further revise it during the remainder of the measurement period, which will not exceed 12 months from the closing of the acquisition. The goodwill recognized from both acquisitions was assigned to the Design Automation reporting unit, and $5.7 million was deductible for income tax purposes.

We have included the financial results of these acquisitions in our condensed consolidated financial statements from the date of acquisition. These results were not material to our condensed consolidated financial statements.

Transaction costs were $4.5 million and $9.8 million during the three and nine months ended July 31, 2023, respectively. Transaction costs were $5.2 million and $11.3 million during the three and nine months ended July 31, 2022, respectively. These costs mainly consisted of professional fees and administrative costs and were expensed as incurred in our condensed consolidated statements of income.

Note 5. 6. Goodwill and Intangible Assets

Goodwill

As a result of the change in reporting units effective in the first quarter of fiscal 2023, we estimated the fair value of our new reporting units and reallocated goodwill to the reporting units using a relative fair value method. No impairment of goodwill was identified for any period presented.

The changes in the carrying amount of goodwill during the nine three months ended July 31, 2023 were January 31, 2024 are as follows:

		(in thousands)
Balance at October 31, 2022 October 31, 2023	$	3,842,234 4,070,336
Additions		28,503 47,994
Adjustments		3,097 138
Effect of foreign currency translation		14,026 12,950
Balance at July 31, 2023 January 31, 2024	$	3,887,860 4,131,418

During the nine months ended July 31, 2023, we finalized certain estimates impacting total preliminary purchase consideration for certain acquisitions and recorded the resulting measurement period adjustments which increased goodwill.

Intangible Assets

Intangible assets as of July 31, 2023 consisted January 31, 2024 consist of the following:

	Gross Carrying Amount	Accumulated Amortization	Net Amount

	Gross Carrying Amount				Gross Carrying Amount	Accumulated Amortization	Net Amount
		(in thousands)			(in thousands)		
Core/developed technology	Core/developed technology	$1,101,118	$ 866,708	$234,410			
Customer relationships	Customer relationships	431,469	351,474	79,995			
Contract rights intangible	Contract rights intangible	193,120	190,036	3,084			
Trademarks and trade names	Trademarks and trade names	52,825	36,736	16,089			
Trademarks and trade names							
Trademarks and trade names							
Capitalized software development costs		50,795	47,650	3,145			
Total	Total	$1,829,327	$1,492,604	$336,723			
Total							
Total							

Intangible assets as of October 31, 2022 consisted October 31, 2023 consist of the following:

		Gross Carrying Amount	Accumulated Amortization	Net Amount			
	Gross Carrying Amount				Gross Carrying Amount	Accumulated Amortization	Net Amount
		(in thousands)			(in thousands)		
Core/developed technology	Core/developed technology	$1,083,703	$ 813,226	$270,477			
Customer relationships	Customer relationships	426,242	333,984	92,258			
Contract rights intangible	Contract rights intangible	190,666	188,262	2,404			
Trademarks and trade names	Trademarks and trade names	52,795	34,054	18,741			
Trademarks and trade names							
Trademarks and trade names							
Capitalized software development costs	Capitalized software development costs	48,591	46,025	2,566			
Capitalized software development costs							
Capitalized software development costs							
Total	Total	$1,801,997	$1,415,551	$386,446			

Amortization expense related to intangible assets consisted consists of the following:

	Three Months Ended July 31,		Nine Months Ended July 31,	
	2023	2022	2023	2022

		(in thousands)				(in thousands)
Core/developed technology	Core/developed technology	$17,816	$18,603	$53,566	$45,180	
Customer relationships	Customer relationships	5,801	6,322	17,314	20,819	
Customer relationships						
Customer relationships						
Contract rights intangible						
Contract rights intangible						
Contract rights intangible	Contract rights intangible	558	727	1,320	2,180	
Trademarks and trade names	Trademarks and trade names	896	802	2,682	2,002	
Trademarks and trade names						
Trademarks and trade names						
Capitalized software development costs(1)						
Capitalized software development costs(1)						
Capitalized software development costs(1)	Capitalized software development costs(1)	557	619	1,626	2,052	
Total	Total	$25,628	$27,073	$76,508	$72,233	
Total						
Total						

(1) Amortization of capitalized software development costs is included in cost of products revenue in the condensed consolidated statements of income.

The following table presented presents the estimated future amortization of acquired intangible assets as of July 31, 2023 January 31, 2024:

Fiscal year	(in thousands)
Remainder of fiscal 2023	$ 25,684
2024	93,465
2025	75,385
2026	61,840
2027	41,638
2028 and thereafter	38,711
Total	$ 336,723

Note 6. Balance Sheets Components

	As of	
	July 31, 2023	October 31, 2022
	(in thousands)	
Other long-term assets:		
Deferred compensation plan assets	$ 330,224	$ 279,096
Capitalized commission, net	96,723	96,509
Other	78,879	88,090
Total	$ 505,826	$ 463,695
Accounts payable and accrued liabilities:		
Payroll and related benefits	$ 554,751	$ 559,886
Accrued income taxes	165,514	35,290

Other accrued liabilities		118,649		176,647
Accounts payable		66,550		37,580
Total	$	905,464	$	809,403
Other long-term liabilities:				
Deferred compensation plan liabilities	$	330,224	$	279,096
Other		59,292		48,733
Total	$	389,516	$	327,829

Assets Held for Sale

During the three months ended July 31, 2023, we commenced a plan to sell two office buildings with approximately 226,000 square feet. As of July 31, 2023, the office buildings had a carrying value of approximately $9.5 million, which was included within property and equipment, net in the condensed consolidated balance sheets.

Fiscal year		(in thousands)
Remainder of fiscal 2024	$	79,696
2025		88,515
2026		75,333
2027		54,888
2028		29,467
2029 and thereafter		49,516
Total	$	377,415

Note 7. Balance Sheet Components

	As of			
	January 31, 2024		October 31, 2023	
	(in thousands)			
Other long-term assets:				
Deferred compensation plan assets	$	349,003	$	300,731
Capitalized commission, net		88,463		88,614
Other		131,047		81,628
Total	$	568,513	$	470,973
Accounts payable and accrued liabilities:				
Payroll and related benefits	$	370,626	$	583,854
Accrued income taxes		124,287		226,762
Other accrued liabilities		127,753		157,254
Accounts payable		76,808		155,891
Total	$	699,474	$	1,123,761
Other long-term liabilities:				
Deferred compensation plan liabilities	$	349,003	$	300,731
Other		87,525		85,407
Total	$	436,528	$	386,138

Note 8. Financial Assets and Liabilities

Cash Equivalents and Short-term Investments

As of July 31, 2023 January 31, 2024, the balances of our cash equivalents and short-term investments were are as follows:

	Amortized Cost	Gross Unrealized Gains	Gross Unrealized Losses Less Than 12 Continuous Months	Gross Unrealized Losses 12 Continuous Months or Longer	Estimated Fair Value(1)
Amortized Cost	Amortized Cost	Gross Unrealized Gains	Gross Unrealized Losses Less Than 12 Continuous Months	Gross Unrealized Losses 12 Continuous Months or Longer	Estimated Fair Value(1)
	(in thousands)				
Cash equivalents: Cash equivalents:					
Money market funds					
Money market funds					
Money market funds Money market funds	$200,288	$ —	$ —	$ —	$200,288
U.S. government agency securities	2,284	—	—	—	2,284
U.S. Treasury, agency & T-bills					
U.S. Treasury, agency & T-bills					
U.S. Treasury, agency & T-bills					
Total: Total:	$202,572	$ —	$ —	$ —	$202,572
Short-term investments: Short-term investments:					
U.S. government agency & T-bills	$ 20,595	$ —	$ (82)	$ (6)	$ 20,507
U.S. Treasury, agency & T-bills					
U.S. Treasury, agency & T-bills					
U.S. Treasury, agency & T-bills					
Municipal bonds Municipal bonds	1,535	—	—	(22)	1,513
Corporate debt securities					
Corporate debt securities					
Corporate debt securities Corporate debt securities	96,614	42	(462)	(529)	95,665
Asset-backed securities Asset-backed securities	30,971	12	(109)	(116)	30,758
Total: Total:	$149,715	$ 54	$ (653)	$ (673)	$148,443
Total:					
Total:					

(1) *See Note 8. 9. Fair Value Measurements for further discussion on fair values.*

The contractual maturities of our available-for-sale debt securities as of July 31, 2023 were January 31, 2024 are as follows:

		Amortized Cost	Fair Value
		(in thousands)	
	Amortized Cost	Amortized Cost	Fair Value
	(in thousands)		(in thousands)
less than 1 year	less than 1 year	$ 67,071	$ 66,422
1-5 years	1-5 years	78,935	78,386
5-10 years	5-10 years	1,863	1,853
>10 years	>10 years	1,846	1,782
Total	Total	$149,715	$148,443

As of October 31, 2022 October 31, 2023, the balances of our cash equivalents and short-term investments were are as follows:

	Amortized Cost	Gross Unrealized Gains	Gross Unrealized Losses Less Than 12 Continuous Months	Gross Unrealized Losses 12 Continuous Months or Longer	Estimated Fair Value(1)
Amortized Cost	Amortized Cost	Gross Unrealized Gains	Gross Unrealized Losses Less Than 12 Continuous Months	Gross Unrealized Losses 12 Continuous Months or Longer	Estimated Fair Value(1)
	(in thousands)				
	(in thousands)				
Cash equivalents: Cash equivalents:					
Money market funds Money market funds	$ 77,683	$ —	$ —	$ —	$ 77,683
Money market funds					
Money market funds					
U.S. Treasury, agency & T-bills					
Total: Total:	$ 77,683	$ —	$ —	$ —	$ 77,683
Total:					
Total:					
Short-term investments: Short-term investments:					
U.S. government agency & T-bills	$ 25,816	$ —	$ (174)	$ (39)	$ 25,603
U.S. Treasury, agency & T-bills					
U.S. Treasury, agency & T-bills					

U.S. Treasury, agency & T-bills						
Municipal bonds	Municipal bonds	2,970	—	(12)	(80)	2,878
Corporate debt securities	Corporate debt securities	95,899	7	(747)	(1,135)	94,024
Asset-backed securities	Asset-backed securities	25,826	—	(149)	(269)	25,408
Total:	Total:	$150,511	$ 7	$ (1,082)	$ (1,523)	$147,913
Total:						
Total:						

(1) *See Note 8. 9. Fair Value Measurements for further discussion on fair values.*

Restricted cash. We include amounts generally described as restricted cash in cash and cash equivalents when reconciling beginning-of-period and end-of-period total amounts shown on the condensed consolidated statements of cash flows. Restricted cash is primarily associated with office leases. leases and employee loan programs.

The following table provided provides a reconciliation of cash, cash equivalents and restricted cash included in the condensed consolidated balance sheets:

		As of July 31, 2023	As of October 31, 2022
		(in thousands)	
	As of January 31, 2024 (in thousands)	January 31, 2024	As of October 31, 2023 (in thousands)
Cash and cash equivalents	Cash and cash equivalents	$1,686,144	$1,417,608
Restricted cash included in prepaid and other current assets	Restricted cash included in prepaid and other current assets	1,055	1,566
Restricted cash included in other long-term assets	Restricted cash included in other long-term assets	745	690
Total cash, cash equivalents and restricted cash	Total cash, cash equivalents and restricted cash	$1,687,944	$1,419,864

Non-marketable equity securities. Our portfolio of non-marketable equity securities consists of strategic investments in privately held companies. In November 2023, we completed the sale of strategic investments in privately-held companies. The gain recognized from the sales was $55.1 million and included in interest and other income (expense), net, in our condensed consolidated statements of income. There was were no impairment material impairments of non-marketable equity securities during the three months ended July 31, 2023 January 31, 2024 and there was an immaterial impairment of a non-marketable equity security during the nine months ended July 31, 2023. There was no impairment of non-marketable equity securities during the three and nine months ended July 31, 2022. 2023.

Derivatives

We recognize derivative instruments as either assets or liabilities in the condensed consolidated balance sheets at fair value and provide qualitative and quantitative disclosures about such derivatives. We operate internationally and are exposed to potentially adverse movements in foreign currency exchange rates. We enter into hedges in the form of foreign currency forward contracts to reduce our exposure to foreign currency rate changes on non-functional currency denominated forecasted transactions and balance sheet positions including: (1) certain assets and liabilities, (2) shipments forecasted to occur within approximately one month, (3) future billings and revenue on previously shipped orders, and (4) certain future intercompany invoices denominated in foreign currencies.

The duration of forward contracts, the majority of which are short-term, ranges from approximately 1 month 3 months to 27 months at inception. We do not use foreign currency forward contracts for speculative or trading purposes. We enter into foreign exchange forward contracts with high credit quality financial institutions that are rated "A" or above and to date have not experienced nonperformance by counterparties. In addition, we mitigate credit risk in derivative transactions by permitting net settlement of transactions with the same counterparty and anticipate continued performance by all counterparties to such agreements.

The assets or liabilities associated with the forward contracts are recorded at fair value in other current assets or accrued liabilities in the condensed consolidated balance sheets. The accounting for gains and losses resulting from changes in fair value depends on the use of the foreign currency forward contract and whether it is designated and qualifies for hedge accounting. The cash flow impact upon settlement of the derivative contracts is included in "net net cash provided by operating activities" activities in the condensed consolidated statements of cash flows.

Cash Flow Hedging Activities

Certain foreign exchange forward contracts are designated and qualify as cash flow hedges. These contracts have durations of approximately 27 months or less. Certain forward contracts are rolled over periodically to capture the full length of exposure to our foreign currency risk, which can be up to three years. To receive hedge accounting treatment, all hedging relationships are formally documented at the inception of the hedge, and the hedges must be highly effective in offsetting changes to future cash flows on the hedged transactions. The related gains or losses resulting from changes in fair value of these hedges is initially reported, net of tax, as a component of other comprehensive income (loss) (OCI) in stockholders' equity and reclassified into revenue or operating expenses, as appropriate, at the time the hedged transactions affect earnings. We expect a majority of the hedge balance in OCI to be reclassified to the statements of income within the next 12 months.

We did not record any gains or losses related to discontinuation of cash flow hedges during the nine three months ended July 31, 2023 January 31, 2024 and 2022. 2023.

Non-designated Hedging Activities

Our foreign exchange forward contracts that are used to hedge non-functional currency denominated balance sheet assets and liabilities are not designated as hedging instruments. Accordingly, any gains or losses from changes in the fair value of the forward contracts are recorded in interest and other income (expense), net. The gains and losses on these forward contracts generally offset the gains and losses associated with the underlying assets and liabilities, which are also recorded in interest and other income (expense), net. The duration of the forward contracts for hedging our balance sheet exposure is approximately one month.

We also have certain foreign exchange forward contracts for hedging certain international revenues and expenses that are not designated as hedging instruments. Accordingly, any gains or losses from changes in the fair value of the forward contracts are recorded in interest and other income (expense), net. The gains and losses on these forward contracts generally offset the gains and losses associated with the foreign currency in operating income. The duration of these forward contracts is usually less than one year. The overall goal of our hedging program is to minimize the impact of currency fluctuations on the net income over the fiscal year.

The effects of the non-designated derivative instruments on the condensed consolidated statements of income were are summarized as follows:

	Three Months Ended July 31,		Nine Months Ended July 31,	
	2023	2022	2023	2022
	(in thousands)			
Gains (losses) recorded in other income (expense), net	$ (1,205)	$ (5,182)	$ 3,532	$ (10,443)

	Three Months Ended January 31,	
	2024	2023
	(in thousands)	
Gains (losses) recorded in Interest and other income (expense), net	$ 3,290	$ 8,221

The notional amounts in the table below for derivative instruments provided provide one measure of the transaction volume outstanding:

	As of	
	July 31, 2023	October 31, 2022
	(in thousands)	

As of	As of	
January 31, 2024	January 31, 2024	October 31, 2023
	(in thousands)	

Total gross notional amounts	Total gross notional amounts	$1,283,551	$1,386,140
Net fair value	Net fair value	$ 18,120	$ (50,080)

Our exposure to the market gains or losses will vary over time as a function of currency exchange rates. The amounts ultimately realized upon settlement of these financial instruments, together with the gains and losses on the underlying exposures, will depend on actual market conditions during the remaining life of the instruments.

The following table represented represents the condensed consolidated balance sheets location and amount of derivative instrument fair values segregated between designated and non-designated hedge instruments:

Fair values of derivative instruments designated as hedging instruments		Fair values of derivative instruments designated as hedging instruments	Fair values of derivative instruments not designated as hedging instruments
		Fair values of derivative instruments designated as hedging instruments	Fair values of derivative instruments not designated as hedging instruments
		(in thousands)	
		(in thousands)	
Balance at July 31, 2023			
Balance at January 31, 2024			
Other current assets			
Other current assets			
Other current assets	Other current assets	$ 22,487	$ 91
Accrued liabilities	Accrued liabilities	$ 4,124	$ 334
Balance at October 31, 2022			
Balance at October 31, 2023			
Other current assets			
Other current assets			
Other current assets	Other current assets	$ 2,315	$ 223
Accrued liabilities	Accrued liabilities	$ 52,171	$ 447

The following table represented represents the location of the amount of gains and losses on derivative instrument fair values for designated hedge instruments, net of tax in the condensed consolidated statements of income:

	Location of gains (losses) recognized in OCI on derivatives	Amount of gains (losses) recognized in OCI on derivatives (effective portion)	Location of gains (losses) reclassified from OCI	Amount of gains (losses) reclassified from OCI (effective portion)
	(in thousands)			
Three months ended January 31, 2024				
Foreign exchange contracts				
Foreign exchange contracts				
Foreign exchange contracts				
Foreign exchange contracts				
Total				
Three months ended January 31, 2023				
Foreign exchange contracts				
Foreign exchange contracts				
Foreign exchange contracts				
Foreign exchange contracts				
Total				

	Location of gains (losses) recognized in OCI on derivatives	Amount of gains (losses) recognized in OCI on derivatives (effective portion)	Location of gains (losses) reclassified from OCI	Amount of gains (losses) reclassified from OCI (effective portion)
	(in thousands)			
Three months ended July 31, 2023				
Foreign exchange contracts	Revenue	$ 899	Revenue	$ (1,352)

Foreign exchange contracts	Operating expenses	5,008	Operating expenses	(3,898)
Total		$ 5,907		$ (5,250)
Three months ended July 31, 2022				
Foreign exchange contracts	Revenue	$ (4,702)	Revenue	$ 3,651
Foreign exchange contracts	Operating expenses	(14,349)	Operating expenses	(3,687)
Total		$ (19,051)		$ (36)
Nine months ended July 31, 2023				
Foreign exchange contracts	Revenue	$ 7,315	Revenue	$ (10,856)
Foreign exchange contracts	Operating expenses	36,174	Operating expenses	(12,025)
Total		$ 43,489		$ (22,881)
Nine months ended July 31, 2022				
Foreign exchange contracts	Revenue	$ (12,527)	Revenue	$ 3,309
Foreign exchange contracts	Operating expenses	(29,242)	Operating expenses	(4,852)
Total		$ (41,769)		$ (1,543)

Note 8. 9. Fair Value Measurements

ASC 820-10, Fair Value Measurements and Disclosures, defines fair value, establishes guidelines and enhances disclosure requirements for fair value measurements. The accounting guidance requires an entity to maximize the use of observable inputs and minimize the use of unobservable inputs when measuring fair value. The accounting guidance also establishes a fair value hierarchy based on the independence of the source and objective evidence of the inputs used. There are three fair value hierarchies based upon the level of inputs that are significant to fair value measurement:

Level 1—Observable inputs that reflect quoted prices (unadjusted) for identical instruments in active markets;

Level 2—Observable inputs other than quoted prices included for identical instruments in Level 1 active markets, quoted prices for similar instruments in active markets, quoted prices for identical or similar instruments in inactive markets, that are not active, and model-driven valuations in which all significant inputs and significant value drivers are observable in active markets; and

Level 3—Unobservable inputs to the valuation derived from fair valuation techniques in which one or more significant inputs or significant value drivers are unobservable.

On a recurring basis, we measure the fair value of certain assets and liabilities, which include cash equivalents, short-term investments, non-qualified deferred compensation plan assets, and foreign currency derivative contracts.

Our cash equivalents and short-term investments are classified within Level 1 or Level 2 because they are valued using quoted market prices in an active market or alternative independent pricing sources and models utilizing market observable inputs.

Our non-qualified deferred compensation plan assets consist of money market and mutual funds invested in domestic and international marketable securities that are directly observable in active markets and are therefore classified within Level 1.

Our foreign currency derivative contracts are classified within Level 2 because these contracts are not actively traded, and the valuation inputs are based on quoted prices and market observable data of similar instruments.

Our borrowings under our credit and term loan facilities are classified within Level 2 because these borrowings are not actively traded and have a variable interest rate structure based upon market rates currently available to us for debt with similar terms and maturities. See Note 10. *Credit Bridge Commitment Letter, Term Loan* and *Term Loan Revolving Credit Facilities* of the *Notes to Condensed Consolidated Financial Statements* for more information on these borrowings.

Assets/Liabilities Measured at Fair Value on a Recurring Basis

Assets and liabilities measured at fair value on a recurring basis were are summarized below as of July 31, 2023 January 31, 2024:

Description	Description	Total	Fair Value Measurement Using Quoted Prices in Active Markets for Identical Assets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)	Description	Total	Fair Value Measurement Using Quoted Prices in Active Markets for Identical Assets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)
		(in thousands)					(in thousands)			
Assets	**Assets**									
Cash equivalents:	Cash equivalents:									
Cash equivalents:										
Cash equivalents:										
Money market funds										
Money market funds										
Money market funds	Money market funds	$200,288	200,288	$ —	$ —					
U.S. government agency securities		2,284	—	2,284	—					
U.S. Treasury, agency & T-bills										
U.S. Treasury, agency & T-bills										
U.S. Treasury, agency & T-bills										
Short-term investments:	Short-term investments:									
U.S. government agency & T-bills		20,507	—	20,507	—					
U.S. Treasury, agency & T-bills										
U.S. Treasury, agency & T-bills										
U.S. Treasury, agency & T-bills										
Municipal bonds	Municipal bonds	1,513	—	1,513	—					
Corporate debt securities										
Corporate debt securities										
Corporate debt securities	Corporate debt securities	95,665	—	95,665	—					
Asset-backed securities	Asset-backed securities	30,758	—	30,758	—					
Prepaid and other current assets:	Prepaid and other current assets:									
Prepaid and other current assets:										
Prepaid and other current assets:										

Foreign currency derivative contracts					
Foreign currency derivative contracts					
Foreign currency derivative contracts	Foreign currency derivative contracts	22,578	—	22,578	—
Other long-term assets:	Other long-term assets:				
Deferred compensation plan assets					
Deferred compensation plan assets					
Deferred compensation plan assets	Deferred compensation plan assets	330,224	330,224	—	—
Total assets	**Total assets**	$703,817	$ 530,512	$ 173,305	$ —
Liabilities	**Liabilities**				
Liabilities					
Liabilities					
Accounts payable and accrued liabilities:	Accounts payable and accrued liabilities:				
Accounts payable and accrued liabilities:					
Accounts payable and accrued liabilities:					
Foreign currency derivative contracts					
Foreign currency derivative contracts					
Foreign currency derivative contracts	Foreign currency derivative contracts	$ 4,458	$ —	$ 4,458	$ —
Other long-term liabilities:	Other long-term liabilities:				
Deferred compensation plan liabilities	Deferred compensation plan liabilities	330,224	330,224	—	—
Deferred compensation plan liabilities					
Deferred compensation plan liabilities					
Total liabilities	**Total liabilities**	$334,682	$ 330,224	$ 4,458	$ —

Assets and liabilities measured at fair value on a recurring basis were are summarized below as of October 31, 2022 October 31, 2023:

			Fair Value Measurement Using					Fair Value Measurement Using		
Description	Description	Total	Quoted Prices in Active Markets for Identical Assets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)	Description	Total	Quoted Prices in Active Markets for Identical Assets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)
			(in thousands)					(in thousands)		

Assets	**Assets**				
Cash equivalents:	Cash equivalents:				
Cash equivalents:					
Cash equivalents:					
Money market funds	Money market funds	$ 77,683	$ 77,683	$ —	$ —
Money market funds					
Money market funds					
U.S. Treasury, agency & T-bills					
Short-term investments:	Short-term investments:				
U.S. government agency & T-bills		25,603	—	25,603	—
Short-term investments:					
Short-term investments:					
U.S. Treasury, agency & T-bills					
U.S. Treasury, agency & T-bills					
U.S. Treasury, agency & T-bills					
Municipal bonds	Municipal bonds	2,878	—	2,878	—
Corporate debt securities	Corporate debt securities	94,024	—	94,024	—
Asset-backed securities	Asset-backed securities	25,408	—	25,408	—
Prepaid and other current assets:	Prepaid and other current assets:				
Prepaid and other current assets:					
Prepaid and other current assets:					
Foreign currency derivative contracts					
Foreign currency derivative contracts					
Foreign currency derivative contracts	Foreign currency derivative contracts	2,538	—	2,538	—
Other long-term assets:	Other long-term assets:				
Deferred compensation plan assets					
Deferred compensation plan assets					
Deferred compensation plan assets	Deferred compensation plan assets	279,096	279,096	—	—
Total assets	**Total assets**	$507,230	$ 356,779	$ 150,451	$ —
Liabilities	**Liabilities**				
Accounts payable and accrued liabilities:	Accounts payable and accrued liabilities:				

Accounts payable and accrued liabilities:					
Accounts payable and accrued liabilities:					
Foreign currency derivative contracts					
Foreign currency derivative contracts					
Foreign currency derivative contracts	Foreign currency derivative contracts	$ 52,618	$ —	$ 52,618	$ —
Other long-term liabilities:	Other long-term liabilities:				
Deferred compensation plan liabilities	Deferred compensation plan liabilities	279,096	279,096	—	—
Deferred compensation plan liabilities					
Deferred compensation plan liabilities					
Total liabilities	**Total liabilities**	$331,714	$ 279,096	$ 52,618	$ —

Assets/Liabilities Measured at Fair Value on a Non-Recurring Basis

Non-Marketable Equity Securities

Non-marketable equity securities are classified within Level 3 as they are valued using a combination of observable transaction price and unobservable inputs or data in an inactive market due to the absence of market price and inherent lack of liquidity.

Note 9. Restructuring Charges 10. Bridge Commitment Letter, Term Loan and Revolving Credit Facilities

On January 15, 2024, we entered into the Bridge Commitment Letter with certain financial institutions that committed to provide, subject to the satisfaction of customary closing conditions, the Bridge Commitment in an aggregate principal amount of up to $16.0 billion (which we subsequently reduced to $11.7 billion in connection with our entry into the Term Loan Agreement as further described below). The proceeds of any borrowing under the Bridge Commitment would be used for the purpose of financing a portion of the cash consideration to be paid in the Ansys Merger and paying related fees and expenses in connection with the Ansys Merger and the other transactions contemplated by the Merger Agreement.

The commitments to provide the Bridge Commitment may be terminated in whole or reduced in part, at our discretion. In addition, the Bridge Commitment Letter provides that net cash proceeds received from certain debt and equity issuances or the sale of certain businesses and assets, as well as term loan commitments under certain qualifying term loan facilities, will result in mandatory commitment reductions under the Bridge Commitment.

On February 13, 2024, we entered into the Term Loan Agreement, which provides us with the ability to borrow up to $4.3 billion at the closing of the Ansys Merger, subject to the satisfaction of customary closing conditions for similar facilities, for the purpose of financing a portion of the cash consideration to be paid in the Ansys Merger and paying related fees and expenses in connection with the Ansys Merger and the other transactions contemplated by the Merger Agreement. Effective February 13, 2024, we terminated $4.3 billion of the original $16.0 billion of commitments under the Bridge Commitment, in lieu of which Synopsys expects to borrow the committed amounts available under the Term Loan Agreement.

The Term Loan Agreement provides for two tranches of senior unsecured term loans: a $1.45 billion tranche (Tranche 1) that matures two years after funding and a $2.85 billion tranche (Tranche 2) that matures three years after funding.

The Term Loan Agreement contains a financial covenant requiring that Synopsys maintain a maximum consolidated leverage ratio commencing the last day of the first fiscal quarter ending on or after the completion of fiscal 2023, we initiated the Ansys Merger, as well as other non-financial covenants. Under the Term Loan Agreement, borrowings will bear interest on the principal amount outstanding at a restructuring plan for involuntary employee terminations as part of a business reorganization (the 2023 Plan). The 2023 Plan was substantially completed floating rate based on, at Synopsys' election, (i) the Adjusted Term SOFR Rate (as defined in the third quarter Term Loan Agreement) plus an applicable margin based on the credit ratings of fiscal 2023 and total charges Synopsys ranging from 0.875% to 1.375% (in the case of Tranche 1) or 1.000% to 1.500% (in the case of Tranche 2) or (ii) the ABR (as defined in the Term Loan Agreement) plus an applicable margin based on the credit ratings of Synopsys ranging from 0.000% to 0.375% (in the case of Tranche 1) or 0.000% to 0.500% (in the case of Tranche 2).

We will also pay a ticking fee under the 2023 Plan were $78.4 million consisting primarily Term Loan Agreement in an amount equal to a rate per annum equal to 0.10% times the actual daily undrawn portion of severance costs the commitments in respect of the term loan facility, from and facility exit costs.

During including May 14, 2024 to but excluding the three and nine months ended July 31, 2023, we recorded restructuring charges earlier of $33.4 million and $78.4 million, respectively, and made payments (i) termination or expiration of $12.6 million and $49.4 million, respectively, the commitments under the 2023 Plan. As term loan facility or (ii) the funding of July 31, 2023, the outstanding restructuring related liabilities were $29.0 million, with $24.3 million recorded in accounts payable and accrued liabilities and $4.7 million recorded in other long term liabilities in the condensed consolidated balance sheets.

Note 10. Credit and Term Loan Facilities commitments.

On December 14, 2022 February 13, 2024, we entered into a Fifth Extension and Sixth Amendment Agreement (the Fifth Sixth Amendment), which amended and restated our previous revolving credit agreement, dated as of January 22, 2021 December 14, 2022 (as amended and restated, the Revolving Credit Agreement).

The Fifth Amendment increased the existing senior Revolving Credit Agreement provides an unsecured $850.0 million committed multicurrency revolving credit facility (the Revolver) from $650.0 million to $850.0 million and extended the maturity date from January 22, 2024 to December 14, 2027, which could be further extended at our option. The Credit Agreement also provides an unsecured uncommitted incremental revolving loan facility of up to $150.0 million million. The maturity date of the revolving credit facility is December 14, 2027, which may be extended at our option.

Under the Sixth Amendment, certain amendments became effective on February 13, 2024 and certain additional amendments will become effective upon the completion of the Ansys Merger. Upon the effective date, the Sixth Amendment amended the financial covenant to allow netting of the cash proceeds of certain debt incurred to finance the Ansys Merger as well as certain other modifications set forth therein. Upon the completion of the Ansys Merger, the Sixth Amendment, among other things: (i) amends the applicable margin used to determine the interest that accrues on loans and the facility fee payable under the revolving credit facility to be based on our credit ratings, (ii) amends the financial covenant thresholds under the financial covenant in the aggregate principal amount. Revolving Credit Agreement requiring us to maintain a maximum consolidated leverage ratio and (iii) amends certain conditions to borrowing, other non-financial covenants and events of default.

The Revolving Credit Agreement contains a financial covenant requiring us to maintain a maximum consolidated leverage ratio, as well as other non-financial covenants. As of July 31, 2023 January 31, 2024, we were in compliance with the financial covenant.

Borrowings bear interest Interest accrues on dollar-denominated loans at a floating rate based on, at Synopsys' election, (i) the adjusted term Secured Overnight Financing Adjusted Term SOFR Rate (SOFR) (as defined in the Revolving Credit Agreement) plus an applicable margin between or (ii) the ABR (as defined in the Revolving Credit Agreement) plus an applicable margin. The applicable margin for Adjusted Term SOFR Rate based loans ranges from 0.785% and to 0.975%, based upon our Synopsys' consolidated leverage ratio. The applicable margin for ABR based loans is 0.000%. In addition to the interest on any outstanding loans, Synopsys is also required to pay a facility fees are payable fee on the Revolver entire portion of the revolving credit facility ranging from 0.09% to 0.15% based on Synopsys' consolidated leverage ratio on the daily amount of the revolving commitment.

Subject to the completion of the Ansys Merger, interest under the Revolving Credit Agreement will accrue on dollar-denominated loans at rates between 0.09% and 0.15% per year a floating rate based on, at Synopsys' election, (i) the Adjusted Term SOFR Rate plus an applicable margin based on our leverage ratio credit ratings ranging from 0.795% to 1.200% or (ii) the ABR plus an applicable margin based on our credit ratings ranging from 0.000% to 0.200%. In addition to the interest on any outstanding loans, Synopsys will also be required to pay a facility fee on the entire portion of the revolving credit facility ranging from 0.080% to 0.175% based on the credit ratings of Synopsys on the daily amount of the revolving commitment.

There was no outstanding balance under the Revolver Revolving Credit Agreement as of July 31, 2023 January 31, 2024 and October 31, 2022 October 31, 2023.

In July 2018, we entered into a 12-year 220.0 million Renminbi (approximately $33.0 million) credit agreement with a lender in China to support our facilities expansion. Borrowings bear interest at a floating rate based on the 5-year Loan Prime Rate plus 0.74%. As of July 31, 2023 January 31, 2024, we had $18.2 million $17.0 million outstanding balance under the agreement.

The carrying amount of the short-term and long-term debt approximates the estimated fair value.

Note 11. Leases

We have operating lease arrangements for office space, data center, equipment and other corporate assets. These leases have various expiration dates through December 31, 2042, some of which include options to extend the leases for up to 10 years. Because we are not reasonably certain to exercise these renewal options, the options are not considered in determining the lease term and associated potential option payments are excluded from lease payments.

The components of our lease expense during the period presented were are as follows:

		Three Months Ended July 31,		Nine Months Ended July 31,	
		2023	2022	2023	2022
		(in thousands)			
		Three Months Ended January 31,			
		Three Months Ended January 31,			
		Three Months Ended January 31,			
		2024			
		2024			
		2024			
		(in thousands)			
		(in thousands)			
		(in thousands)			
Operating lease expense (1)	Operating lease expense (1)	$ 23,379	$ 23,914	$ 72,207	$ 68,105
Variable lease expense (2)	Variable lease expense (2)	5,722	2,910	14,976	7,904
Variable lease expense (2)					

Variable lease expense (2)					
Total lease expense	Total lease expense	$ 29,101	$ 26,824	$ 87,183	$ 76,009
Total lease expense					
Total lease expense					

(1) *Operating lease expense includes immaterial amounts of short-term leases, net of sublease income.*

(2) *Variable lease expense includes payments to lessors that are not fixed or determinable at lease commencement date. These payments primarily consist of maintenance, property taxes, insurance and variable indexed based payments.*

Supplemental cash flow information during the period presented was is as follows:

		Nine Months Ended July 31,	
		2023	2022
		(in thousands)	
		Three Months Ended January 31,	
		Three Months Ended January 31,	
		Three Months Ended January 31,	
		2024	
		2024	
		2024	
		(in thousands)	
		(in thousands)	
		(in thousands)	
Cash paid for amounts included in the measurement of operating lease liabilities	Cash paid for amounts included in the measurement of operating lease liabilities	$ 66,556	$ 62,888
ROU assets obtained in exchange for operating lease liabilities	ROU assets obtained in exchange for operating lease liabilities	$ 81,027	$ 154,693
ROU assets obtained in exchange for operating lease liabilities			
ROU assets obtained in exchange for operating lease liabilities			

Lease term and discount rate information related to our operating leases as of the end of the period presented were are as follows:

	As of	
	July 31, 2023	October 31, 2022
Weighted-average remaining lease term (in years)	8.54	9.16
Weighted-average discount rate	2.44 %	2.19 %

	As of	
	January 31, 2024	October 31, 2023
Weighted-average remaining lease term (in years)	8.15	8.34
Weighted-average discount rate	2.52 %	2.50 %

The following table represented represents the maturities of our future lease payments due under operating leases as of July 31, 2023 January 31, 2024:

		Lease Payments		
	Lease Payments			Lease Payments
Fiscal year	Fiscal year	(in thousands)	Fiscal year	(in thousands)
Remainder of fiscal 2023		$ 11,763		

2024		108,819
Remainder of fiscal 2024		
2025	2025	99,178
2026	2026	88,680
2027	2027	87,185
2028 and thereafter		355,947
2028		
2029 and thereafter		
Total future minimum lease payments	Total future minimum lease payments	751,572
Less: Imputed interest	Less: Imputed interest	80,553
Total lease liabilities	Total lease liabilities	$671,019

In addition, certain facilities owned by us were leased to third parties under non-cancellable operating lease agreements. These leases have annual escalating payments and have expiration dates through March 31, 2031 in accordance with the terms and conditions of the existing agreement. The lease receipts from owned facilities, including sublease income from other facilities leased by us, due to us as of July 31, 2023 were January 31, 2024 are as follows:

		Lease Receipts
		Lease Receipts
		Lease Receipts
		Lease Receipts
Fiscal year	**Fiscal year**	**(in thousands)**
Remainder of fiscal 2023		$ 4,162
2024		24,697
Fiscal year		
Fiscal year		**(in thousands)**
Remainder of fiscal 2024		
2025		
2025		
2025	2025	25,350
2026	2026	26,231
2026		
2026		
2027	2027	27,377
2028 and thereafter		84,048
2027		
2027		

2028		
2028		
2028		
2029 and thereafter		
2029 and thereafter		
2029 and thereafter		
Total	Total	$191,865
Total		
Total		

Note 12. Redeemable Non-controlling Interest

During the second quarter of fiscal 2022, we acquired a 75% equity interest in OpenLight Photonics, Inc. (OpenLight) for cash consideration of $90.0 million. The remaining 25% equity interest in OpenLight is held by Juniper Networks, Inc. (the Minority Investor) from their contribution of IP and certain tangible assets.

The agreement with the Minority Investor contains redemption features whereby the interest held by the Minority Investor is redeemable either (1) at the option of the Minority Investor on or after the third anniversary of the acquisition or sooner in certain circumstances or (2) at our option beginning on the third anniversary of the acquisition. This option is exercisable at the greater of fair value at the time of redemption or $30.0 million and was valued at $10.1 million, resulting in a total consideration of $100.1 million.

During the nine three months ended July 31, 2023 January 31, 2024, our ownership interest in OpenLight was reduced to 73% 71% as a result of the recognition of non-controlling interest upon issuance of OpenLight stock.

During the nine three months ended July 31, 2023 January 31, 2024, OpenLight incurred a net loss of $32.0 $9.4 million, of which $7.9 $2.3 million was attributable to redeemable non-controlling interest. Other adjustments to redeemable non-controlling interest were not material during this period. As of July 31, 2023 January 31, 2024, the carrying value of the redeemable non-controlling interest was recorded at its estimated fair value of $35.9 $31.0 million in the condensed consolidated balance sheets.

Note 13. Accumulated Other Comprehensive Income (Loss)

The components of accumulated other comprehensive income (loss), on an after-tax basis where applicable, were are as follows:

		As of	
		July 31, 2023	October 31, 2022
	As of January 31, 2024	As of January 31, 2024	As of October 31, 2023
		(in thousands)	(in thousands)
Cumulative currency translation adjustments	Cumulative currency translation adjustments	$(136,895)	$(156,192)
Unrealized gains (losses) on derivative instruments, net of taxes	Unrealized gains (losses) on derivative instruments, net of taxes	(9,116)	(75,486)
Unrealized gains (losses) on available-for-sale securities, net of taxes	Unrealized gains (losses) on available-for-sale securities, net of taxes	(1,273)	(2,599)
Total	Total	$(147,284)	$(234,277)

The effect of amounts reclassified out of each component of accumulated other comprehensive income (loss) into net income was is as follows:

		Three Months Ended July 31,		Nine Months Ended July 31,		
		2023	2022	2023	2022	
		(in thousands)				(in thousands)
Reclassifications:	Reclassifications:					
Gains (losses) on cash flow hedges, net of taxes	Gains (losses) on cash flow hedges, net of taxes					
Gains (losses) on cash flow hedges, net of taxes						
Gains (losses) on cash flow hedges, net of taxes						
Revenues	Revenues	$(1,352)	$3,651	$(10,856)	$ 3,309	
Revenues						
Revenues						
Operating expenses						
Operating expenses						
Operating expenses	Operating expenses	(3,898)	(3,687)	(12,025)	(4,852)	
Total	Total	$(5,250)	$ (36)	$(22,881)	$(1,543)	
Total						
Total						

Amounts reclassified during the three months ended January 31, 2024 and 2023 primarily consisted of gains (losses) from our cash flow hedging activities. See *Note 8. Financial Assets and Liabilities* of the *Notes to Condensed Consolidated Financial Statements.*

Note 14. Stock Repurchase Program

In September fiscal 2022, our Board of Directors approved a replenishment of our stock repurchase program (the Program) with authorization to purchase up to $1.5 billion of our common stock.

In May 2023, we entered into an accelerated stock repurchase agreement (the May 2023 ASR) to repurchase an aggregate of $300.0 million of our common stock. Pursuant to the May 2023 ASR, we made a prepayment of $300.0 million to receive initial deliveries of shares valued at $255.0 million. The remaining balance of $45.0 million was settled in August 2023. Total shares purchased under the May 2023 ASR were approximately 0.7 million shares, at an average purchase price of $436.93 per share.

As of July 31, 2023 January 31, 2024, $494.3 million $194.3 million remained available for future repurchases under the Program.

Stock repurchase activities as well as the reissuance of treasury stock for employee stock-based compensation purposes were are as follows:

		Three Months Ended July 31,		Nine Months Ended July 31,		
		2023(1) (2)	2022(3)	2023(1)	2022(3)	
		(in thousands)				(in thousands)
Total shares repurchased	Total shares repurchased	751	715	2,382	2,400	
Total cost of the repurchased shares	Total cost of the repurchased shares	$300,000	$217,266	$860,724	$752,266	
Total cost of the repurchased shares						
Total cost of the repurchased shares						

Reissuance of treasury stock	Reissuance of treasury stock	625	764	2,132	2,342
Reissuance of treasury stock					
Reissuance of treasury stock					

(1) *Excluded Included the 41,682 73,903 shares and $45.0 million equity forward contract from the May August 2023 ASR Accelerated Share Repurchase (ASR) settled in August November 2023.*

(2) *Included Excluded the 105,792 107,020 shares and $45.0 million equity forward contract from the February 2023 ASR settled in May 2023.*

(3) *Excluded the 101,821 shares and $40.0 million equity forward contract from the May December 2022 ASR settled in August 2022. February 2023.*

Note 15. Stock-Based Compensation

The compensation cost recognized in the condensed consolidated statements of income for our stock compensation arrangements was is as follows:

		Three Months Ended July 31,		Nine Months Ended July 31,		
		2023	2022	2023	2022	
		(in thousands)				(in thousands)
Cost of products	Cost of products	$ 16,732	$ 15,318	$ 49,656	$ 39,603	
Cost of maintenance and service	Cost of maintenance and service	7,765	6,859	22,451	17,335	
Cost of maintenance and service						
Cost of maintenance and service						
Research and development expense						
Research and development expense						
Research and development expense	Research and development expense	75,754	68,243	220,340	175,892	
Sales and marketing expense	Sales and marketing expense	27,723	22,998	79,567	60,090	
Sales and marketing expense						
Sales and marketing expense						
General and administrative expense						
General and administrative expense						
General and administrative expense	General and administrative expense	16,490	14,187	49,935	40,517	
Stock-based compensation expense before taxes	Stock-based compensation expense before taxes	144,464	127,605	421,949	333,437	
Stock-based compensation expense before taxes						

Stock-based compensation expense before taxes					
Income tax benefit					
Income tax benefit					
Income tax benefit	Income tax benefit	(23,172)	(20,940)	(67,681)	(54,717)
Stock-based compensation expense after taxes	Stock-based compensation expense after taxes	$121,292	$106,665	$354,268	$278,720
Stock-based compensation expense after taxes					
Stock-based compensation expense after taxes					

During the three and nine months ended July 31, 2023, January 31, 2024 and 2023, we recognized stock-based compensation expense relating to restricted stock units (RSUs) granted to senior executives with certain market, performance and service conditions (market-based RSUs). The grant date fair value of the market-based RSUs and the assumptions used in the Monte Carlo simulation model to determine the grant date fair value during the periods were as follows:

		Three Months Ended July 31,		Nine Months Ended July 31,	
		2023	2022	2023	2022
Expected life (in years)	Expected life (in years)	—	1.41 years	0.90 years - 2.70 years	1.41 years - 1.69 years
Expected life (in years)					
Expected life (in years)					
Risk-free interest rate					
Risk-free interest rate					
Risk-free interest rate	Risk-free interest rate	—	2.25 %	4.36% - 4.63%	1.33% - 2.25%
Volatility	Volatility	—	37.27 %	35.84% - 42.86%	33.01% - 37.27%
Volatility					
Volatility					
Grant date fair value	Grant date fair value	—	$ 355.41	$357.29 - $408.55	$280.82 - $355.41
Grant date fair value					
Grant date fair value					

As of July 31, 2023 January 31, 2024, we had $1.1 billion $1.6 billion of total unrecognized stock-based compensation expense relating to options, RSUs and restricted stock awards, which is expected to be recognized over a weighted-average period of 2.4 2.7 years. As of July 31, 2023 January 31, 2024, we had $48.5 million $27.5 million of unrecognized stock-based compensation expense relating to our Employee Stock Purchase Plan, which is expected to be recognized over a period of approximately 2.0 years.

The intrinsic values of equity awards exercised during the periods were are as follows:

	Three Months Ended July 31,		Nine Months Ended July 31,	
	2023	2022	2023	2022
	(in thousands)			
Intrinsic value of awards exercised	$ 94,116	$ 86,080	$ 212,339	$ 245,468

	Three Months Ended January 31,	
	2024	2023
	(in thousands)	
Intrinsic value of awards exercised	$ 27,855	$ 54,776

Note 16. Net Income Per Share

We compute basic net income per share by dividing net income available to common stockholders by the weighted average number of common shares outstanding during the period. Diluted net income per share reflects the dilution from potential common shares outstanding such as stock options and unvested RSUs and awards during the period using the treasury stock method.

The table below reconciled reconciles the weighted average common shares used to calculate basic net income per share with the weighted average common shares used to calculate diluted net income per share:

		Three Months Ended July 31,		Nine Months Ended July 31,		
		2023	2022	2023	2022	
		(in thousands, except per share amounts)				(in thousands, except per share amounts)
Numerator:	Numerator:					
Net income attributed to Synopsys	Net income attributed to Synopsys	$336,252	$222,626	$880,698	$831,094	
Net income attributed to Synopsys						
Net income attributed to Synopsys						
Denominator:						
Denominator:						
Denominator:	Denominator:					
Weighted average common shares for basic net income per share	Weighted average common shares for basic net income per share	152,023	152,938	152,204	153,082	
Dilutive effect of common share equivalents		2,924	2,868	2,915	3,463	
Weighted average common shares for basic net income per share						
Weighted average common shares for basic net income per share						
Dilutive effect of common share equivalents from equity-based compensation						
Dilutive effect of common share equivalents from equity-based compensation						
Dilutive effect of common share equivalents from equity-based compensation						
Weighted average common shares for diluted net income per share						
Weighted average common shares for diluted net income per share						

Weighted average common shares for diluted net income per share	Weighted average common shares for diluted net income per share	154,947	155,806	155,119	156,545
Net income per share attributed to Synopsys:	Net income per share attributed to Synopsys:				
Net income per share attributed to Synopsys:					
Net income per share attributed to Synopsys:					
Basic					
Basic					
Basic	Basic	$ 2.21	$ 1.46	$ 5.79	$ 5.43
Diluted	Diluted	$ 2.17	$ 1.43	$ 5.68	$ 5.31
Diluted					
Diluted					
Anti-dilutive employee stock-based awards excluded	Anti-dilutive employee stock-based awards excluded	289	336	454	268
Anti-dilutive employee stock-based awards excluded					
Anti-dilutive employee stock-based awards excluded					

Note 17. Segment Disclosure

Segment reporting is based upon the “management approach,” i.e., how management organizes our operating segments for which separate financial information is (1) available and (2) evaluated regularly by the CODM in deciding how to allocate resources and in assessing performance. Our CODM is our CEO.

As described in Note 2. *Summary of Significant Accounting Policies and Basis of Presentation* of the *Notes to Condensed Consolidated Financial Statements,* effective in the first quarter of fiscal 2023, we realigned our organizational structure to evaluate the results of our Design IP business separately. Our CODM now regularly reviews disaggregated segment information, assesses performance against our key growth strategies and allocates resources based on this new organizational structure.

As a result, effective in the first quarter of fiscal 2023, we changed our reportable segments from two reportable segments to the following We have three reportable segments: (1) Design Automation, which includes EDA tools, our advanced silicon design, verification products and services, system integration solutions products and other associated revenue categories, services, digital, custom and field programmable gate array (FPGA) IC design software, verification software and hardware products, manufacturing software products and other; (2) Design IP, which includes our Design IP products, products; and (3) Software Integrity, which includes a comprehensive solution solutions that test software code for building integrity—security vulnerabilities and quality defects, as well as professional and compliance testing—into the customers' software development lifecycle and supply chain. As such, prior period reportable segment results and related disclosures have been reclassified to reflect our current reportable segments. managed services.

The financial information provided to and used by the CODM to assist in making operational decisions, allocating resources, and assessing performance includes consolidated financial information as well as revenue, adjusted operating income, and adjusted operating margin information for the Design Automation, Design IP and Software Integrity segments, accompanied by disaggregated information relating to revenue by geographic region.

Information by reportable segment was is as follows:

	Three Months Ended July 31,		Nine Months Ended July 31,		
	2023	2022	2023	2022	
	(in thousands)				(in thousands)

Total Segments:	**Total Segments:**				
Revenue	Revenue	$1,487,288	$1,247,766	$4,243,491	$3,797,250
Revenue					
Revenue					
Adjusted operating income					
Adjusted operating income					
Adjusted operating income	Adjusted operating income	524,750	392,127	1,468,644	1,321,671
Adjusted operating margin	Adjusted operating margin	35 %	31 %	35 %	35 %
Adjusted operating margin					
Adjusted operating margin					
Design Automation:					
Design Automation:					
Design Automation:	**Design Automation:**				
Revenue	Revenue	$1,004,156	$ 816,393	$2,821,570	$2,438,108
Revenue					
Revenue					
Adjusted operating income					
Adjusted operating income					
Adjusted operating income	Adjusted operating income	415,652	297,241	1,121,751	911,901
Adjusted operating margin	Adjusted operating margin	41 %	36 %	40 %	37 %
Adjusted operating margin					
Adjusted operating margin					
Design IP:					
Design IP:					
Design IP:	**Design IP:**				
Revenue	Revenue	$ 350,234	$ 313,034	$1,029,061	$1,020,391
Revenue					
Revenue					
Adjusted operating income					
Adjusted operating income					
Adjusted operating income	Adjusted operating income	86,665	83,630	290,611	373,490

Adjusted operating margin	Adjusted operating margin	25 %	27 %	28 %	37 %

Adjusted operating margin

Adjusted operating margin

Software Integrity:

Software Integrity:

Software Integrity:	**Software Integrity:**				
Revenue	Revenue	$ 132,898	$ 118,339	$ 392,860	$ 338,751

Revenue

Revenue

Adjusted operating income

Adjusted operating income

Adjusted operating income	Adjusted operating income	22,433	11,256	56,282	36,280
Adjusted operating margin	Adjusted operating margin	17 %	10 %	14 %	11 %

Adjusted operating margin

Adjusted operating margin

Certain operating expenses are not allocated to the segments and are managed at a consolidated level. The unallocated expenses managed at a consolidated level, including amortization of acquired intangible assets, stock-based compensation, changes in the fair value of deferred compensation plan, restructuring charges, and certain other operating expenses, were acquisition/divestiture related items, are presented in the table below to provide a reconciliation of the total adjusted operating income from segments to our consolidated operating income:

		Three Months Ended July 31,		Nine Months Ended July 31,		
		2023	2022	2023	2022	
		(in thousands)				(in thousands)
Total segment adjusted operating income	Total segment adjusted operating income	$524,750	$392,127	$1,468,644	$1,321,671	
Reconciling items:	Reconciling items:					
Amortization of intangible assets		(25,071)	(26,454)	(74,882)	(70,181)	

Reconciling items:

Reconciling items:

Amortization of acquired intangible assets

Amortization of acquired intangible assets

Amortization of acquired intangible assets

Stock-based compensation expense

Stock-based compensation expense

Stock-based compensation expense	Stock-based compensation expense	(144,464)	(127,605)	(421,949)	(333,437)
Deferred compensation plan	Deferred compensation plan	(21,816)	1,092	(44,845)	50,001
Deferred compensation plan					
Deferred compensation plan					
Restructuring charges	Restructuring charges	(33,385)	—	(78,384)	(12,057)
Other		(4,540)	(5,232)	(9,846)	(11,332)
Restructuring charges					
Restructuring charges					
Acquisition/divestiture related items					
Acquisition/divestiture related items					
Acquisition/divestiture related items					
Total operating income	Total operating income	$295,474	$233,928	$ 838,738	$ 944,665
Total operating income					
Total operating income					

The CODM does not use total assets by segment to evaluate segment performance or allocate resources. As a result, total assets by segment are not disclosed.

In allocating revenue to particular geographic areas, the CODM considers where individual “seats” or licenses to our products are located. Revenue is defined as revenue from external customers. Revenue related to operations in the United States and other geographic areas were: are:

		Three Months Ended July 31,		Nine Months Ended July 31,		
		2023	2022	2023	2022	
		(in thousands)				(in thousands)
Revenue:	Revenue:					
United States	United States	$ 640,147	$ 575,326	$1,973,342	$1,763,541	
United States						
United States						
Europe						
Europe						
Europe	Europe	145,626	127,288	437,589	376,195	
China	China	304,025	189,138	698,230	617,524	
China						
China						
Korea						
Korea						
Korea	Korea	163,938	125,307	466,546	358,871	
Other	Other	233,552	230,707	667,784	681,119	
Other						
Other						
Consolidated	Consolidated	$1,487,288	$1,247,766	$4,243,491	$3,797,250	
Consolidated						
Consolidated						

Geographic revenue data for multi-regional, multi-product transactions reflect internal allocations and are therefore subject to certain assumptions and to our allocation methodology.

Note 18. Interest and Other Income (Expense), Net

The following table presented presents the components of interest and other income (expense), net:

		Three Months Ended July 31,		Nine Months Ended July 31,		
		2023	2022	2023	2022	
		(in thousands)				(in thousands)
Interest income	Interest income	$11,877	$2,735	$26,875	$ 4,876	
Interest expense	Interest expense	(342)	(439)	(918)	(1,339)	
Interest expense						
Interest expense						
Gains (losses) on assets related to deferred compensation plan						
Gains (losses) on assets related to deferred compensation plan						
Gains (losses) on assets related to deferred compensation plan	Gains (losses) on assets related to deferred compensation plan	21,816	(1,092)	44,845	(50,001)	
Foreign currency exchange gains (losses)	Foreign currency exchange gains (losses)	26	(376)	352	3,452	
Foreign currency exchange gains (losses)						
Foreign currency exchange gains (losses)						
Gain on sale of strategic investments						
Gain on sale of strategic investments						
Gain on sale of strategic investments						
Other, net						
Other, net						
Other, net	Other, net	(7,569)	1,598	(17,801)	1,732	
Total	Total	$25,808	$2,426	$53,353	$(41,280)	
Total						
Total						

Note 19. Income Taxes

Effective Tax Rate

We estimate our annual effective tax rate at the end of each fiscal quarter. The effective tax rate takes into account our estimations of annual pre-tax income, the geographic mix of pre-tax income and interpretations of tax laws and possible outcomes of audits.

The following table presented presents the provision for income taxes and the effective tax rates:

	Three Months Ended July 31,		Nine Months Ended July 31,	
	2023	2022	2023	2022

		(in thousands)				(in thousands)
Income before income taxes	Income before income taxes	$321,282	$236,354	$892,091	$903,385	
Provision (benefit) for income taxes	Provision (benefit) for income taxes	$ (11,773)	$ 16,708	$ 20,461	$ 76,506	
Provision (benefit) for income taxes						
Provision (benefit) for income taxes						
Effective tax rate	Effective tax rate	(3.7)%	7.1 %	2.3 %	8.5 %	
Effective tax rate						
Effective tax rate						

Our effective tax rate for the nine three months ended July 31, 2023 January 31, 2024, is lower than the statutory federal corporate tax rate of 21% primarily due to U.S. federal research tax credits, foreign-derived intangible income deduction, excess tax benefits from stock-based compensation and U.S. foreign tax credits, and the tax benefit recorded as a result of concluding the Hungary tax litigation, partially offset by state taxes and the effect of non-deductible stock-based compensation, and higher taxes on certain foreign earnings.

On December 22, 2017, the Tax Cuts and Jobs Act (Tax Act) was enacted, which significantly changed prior U.S. tax law and includes numerous provisions that affect our business. Effective our fiscal 2023, the Tax Act requires that research and development expenditures are capitalized and amortized instead of being deducted when compensation.

incurred. Domestic research is capitalized over five years and foreign research is capitalized over fifteen years. For fiscal 2023, this will result in a significant increase to our cash tax liabilities and will also decrease our effective tax rate due to increasing the foreign derived intangible income deduction. The impact to our cash tax liabilities will decrease over time as the research and development expenditures are amortized.

Our effective tax rate decreased increased in the three months ended July 31, 2023 January 31, 2024, as compared to the same period in fiscal 2022, 2023, primarily due to higher foreign derived intangible income deduction, as a result of the Tax Act, higher excess reduced benefit from U.S. federal research tax benefits from stock-based compensation, and the tax benefit recorded as a result of concluding the Hungary tax litigation. Our effective tax rate decreased for the nine months ended July 31, 2023 as compared to the same period in fiscal 2022, primarily due to higher foreign derived intangible income deduction and the tax benefit recorded as a result of concluding the Hungary tax litigation, credits partially offset by lower increased excess tax benefits from stock-based compensation.

The timing of the resolution of income tax examinations, and the amounts and timing of various tax payments that are part of the settlement process, are highly uncertain. Variations in such amounts and/or timing could cause large fluctuations in the balance sheet classification of current and non-current assets and liabilities. We believe that in the coming 12 months, it is reasonably possible that either certain audits and ongoing tax litigation will conclude or the statute of limitations on certain state and foreign income and withholding taxes will expire, or both. Given the uncertainty as to ultimate settlement terms, the timing of payment and the impact of such settlements on other uncertain tax positions, the range of the estimated potential decrease in underlying unrecognized tax benefits is between $0 and $10 million $5.4 million.

Non-U.S. Examinations

Hungarian Tax Authority

In 2017, the Hungarian Tax Authority (the HTA) assessed withholding taxes of approximately $25.0 million and interest and penalties of $11.0 million against our Hungary subsidiary (Synopsys Hungary). Synopsys Hungary contested the assessment with the Hungarian Administrative Court (Administrative Court). In fiscal 2018, as required under Hungarian law, Synopsys Hungary paid the assessment and in fiscal 2019, recorded a tax expense due to an unrecognized tax benefit assessment. Following years of $17.4 million, which is net of estimated U.S. foreign tax credits. The Administrative Court found against Synopsys Hungary, and we appealed to litigation, the Hungarian Supreme Court. During 2021, the Hungarian Supreme Court heard our appeal and remanded the case to the Administrative Court for further proceedings. The Administrative Court once again ruled against Synopsys Hungary, and we filed another appeal with the Hungarian Supreme Court. The Hungarian Supreme Court heard our appeal on January 27, 2022, vacated the lower court's decision and remanded the case back to the Administrative Court for further proceedings. Hearings with the Administrative Court were held on June 30, 2022, September 22, 2022 and April 25, 2023. The Administrative Court issued its written decision in favor of Synopsys Hungary on May 17, 2023, and the HTA subsequently refunded Synopsys Hungary the tax, penalty and interest paid in fiscal 2018, as well as additional interest totaling $39.1 million (including foreign currency effects). The HTA had until July 14, 2023, to file an appeal with the Hungarian Supreme Court and the HTA did not appeal. This concludes the litigation. During the third quarter of fiscal 2023, Synopsys released its unrecognized tax benefit and offsetting U.S. foreign tax credits, resulting in a net benefit of $23.8 million.

We are also under examination by the tax authorities in certain other jurisdictions. No material assessments have been proposed in these examinations.

Legislative Developments

On August 16, 2022, Effective our fiscal 2024, we are subject to the new 15% corporate alternative minimum tax (CAMT) enacted as part of the Inflation Reduction Act of 2022 (the IR Act) was enacted 2022. The Company does not expect any impact of CAMT in fiscal 2024.

On January 31, 2024, the House of Representatives has passed the Tax Relief for American Families and Workers Act of 2024 (H.R. 7024) which would defer the requirement of capitalizing research and development, based in the United States. States, until tax years starting after December 31, 2025. The IR Act includes proposed legislation would have a 15% minimum beneficial impact on our cash tax based primarily on global consolidated U.S. GAAP profits with a $1 billion minimum threshold. The tax takes effect in fiscal 2024, with the $1 billion threshold measured as an average over three years commencing in the current fiscal year. Computation of the tax includes adjustments which, among others, provide for an offset of income taxes paid or accrued in non-U.S. jurisdictions. The details of the computation will be subject to regulations to be issued by the U.S. Department of the Treasury. liabilities, if enacted. Synopsys will monitor regulatory developments and will continue to evaluate monitor the impact, if any, status of the minimum tax. this legislation.

The IR Act includes provisions intended to mitigate climate change by, among others, providing tax credit incentives for reductions in greenhouse gas emissions. The details of the implementation of these incentives are subject to regulations to be released by the U.S. Department of the Treasury. Synopsys is monitoring these developments and will continue to evaluate opportunities to utilize these incentives in the future.

The IR Act imposes a 1% excise tax on the fair market value of stock repurchases made by covered corporations after December 31, 2022. The total taxable value of shares repurchased is reduced by the fair market value of any newly issued shares during the taxable year. We do not expect a material impact on our overall capital allocation strategy or our consolidated financial statements.

On August 9, 2022, the CHIPS and Science Act of 2022 (the CHIPS Act) was enacted in the United States. The CHIPS Act provides financial incentives to the semiconductor industry which are primarily directed at manufacturing activities within the United States. We are evaluating potential opportunities related to the CHIPS Act.

Note 20. Contingencies

Legal Proceedings

We are subject to routine legal proceedings, as well as demands, claims and threatened litigation that arise in the normal course of our business. The ultimate outcome of any litigation is often uncertain and unfavorable outcomes could have a negative impact on our results of operations and financial condition. We regularly review the status of each significant matter and assess our potential financial exposure. If the potential loss from any claim or legal proceeding is considered probable and the amount is estimable, we accrue a liability for the estimated loss. Legal proceedings are inherently uncertain and, as circumstances change, it is possible that the amount of any accrued liability may increase, decrease or be eliminated.

We have determined that, except as set forth below, no disclosure of estimated loss is required for a claim against us because: (1) there is not a reasonable possibility that a loss exceeding amounts already recognized (if any) may be incurred with respect to such claim; (2) a reasonably possible loss or range of loss cannot be estimated; or (3) such estimate is immaterial.

Legal Settlement

There have been no changes to the disclosure related to Mentor Graphics Corporation (now part of Siemens AG) since our Annual Report. See Note 10. *Contingencies* of the *Notes to Consolidated Financial Statements* in our Annual Report for further information.

Tax Matters

We undergo examination from time to time by U.S. and foreign authorities for non-income based taxes, such as sales, use and value-added taxes, and are currently under examination by tax authorities in certain jurisdictions. If the potential loss from such examinations is considered probable and the amount or the range of loss could be estimated, we would accrue a liability for the estimated expense.

In addition to the foregoing, we are, from time to time, party to various other claims and legal proceedings in the ordinary course of our business, including with tax and other governmental authorities. For a description of certain of these other matters, see Note 19. *Income Taxes* of the *Notes to Condensed Consolidated Financial Statements* in this Quarterly Report on Form 10-Q.

Item 2. *Management's Discussion and Analysis of Financial Condition and Results of Operations*

This Quarterly Report on Form 10-Q (this Quarterly Report) includes forward-looking statements, which involve risks, uncertainties and other factors that could cause Synopsys, Inc.'s (Synopsys, we, our or us) actual results, time frames or achievements to differ materially from those expressed or implied in such forward-looking statements. Readers are urged to carefully review and consider the various disclosures regarding these risks and uncertainties made in this Quarterly Report, on Form 10-Q, including those identified below in Part II, Item 1A, Risk Factors, and in other documents we file from time to time with the Securities and Exchange Commission (SEC). Forward-looking statements include any statements that are not statements of historical fact and include, but are not limited to, statements concerning strategies related to our products, technology and services; business and market outlook, opportunities, strategies and strategies; the technological trends, such as artificial intelligence (AI); planned acquisitions and their expected impact, such as our pending acquisition of U.S. and foreign government actions and regulatory changes, ANSYS, Inc. (Ansys), including, export control restrictions, on among other things, expectations regarding the financing of pending acquisitions; the exploration of strategic alternatives for our financial results; Software Integrity segment; the potential impact of the uncertain macroeconomic environment on our financial results, including, but not limited to, the effects of increased global inflationary pressures and interest rates, U.S. federal debt ceiling negotiations, bank failures, potential economic slowdowns or recessions, supply chain disruptions, and geopolitical pressures, including, among others, the unknown impact of current and future U.S. and Chinese trade regulations changes in China-Taiwan relations and the war in Ukraine, regional or global military conflicts, and fluctuations in foreign exchange rates, and associated global economic conditions; the expected impact of U.S. and foreign government actions and regulatory changes, including export control restrictions, on our financial results; customer demand and market expansion; our planned product releases and capabilities; industry growth rates; the expected realization of our contracted but unsatisfied or partially unsatisfied performance obligations (backlog); software trends; planned acquisitions and stock repurchases; our expected tax rate; and the impact and result of pending legal, administrative and tax proceedings. Forward-looking statements may be identified by words including, but not limited to, "may," "will," "could," "would," "can," "should," "anticipate," "expect," "intend," "believe," "estimate," "project," "continue," "forecast," "likely," "potential," "seek," or the negatives of such terms and similar expressions. The information included herein represents our estimates and assumptions as of the date of this filing. Unless required by law, we undertake no obligation to update publicly any forward-looking statements, 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 subsequent written or oral forward-looking statements attributable to Synopsys or persons acting on our behalf are expressly qualified in their entirety by these cautionary statements.*

The following summary and overview of our financial condition and results of operations are qualified in their entirety by the more complete discussions and should be read together with our condensed consolidated financial statements and the related notes thereto contained in Part I, Item 1 of this Quarterly Report, the risk factors set forth in Part II, Item 1A of this Quarterly Report, and with our audited consolidated financial statements and the related notes thereto contained in our Annual Report on Form 10-K for the fiscal year ended October 31, 2022 October 31, 2023, as filed with the SEC on December 12, 2022 December 12, 2023 (our Annual Report).

Overview

Financial Performance Summary

The following table sets forth some of our key quarterly unaudited financial information:

	Three Months Ended January 31,			
	2024		2023	
	(in millions, except per share amounts)			
Revenue	$	1,649.2	$	1,361.3
Cost of revenue	$	329.2	$	284.4
Operating expenses	$	960.4	$	821.1
Operating income	$	359.6	$	255.9
Net income attributed to Synopsys	$	449.1	$	271.5
Diluted net income per share attributed to Synopsys	$	2.89	$	1.75

First quarter of fiscal 2024 compared to the same period of fiscal 2023 financial performance summary

- Revenues were $1.6 billion, an increase of $287.9 million or 21%, primarily due to revenue growth across all products and geographies and the impact of the extra week in the first quarter of fiscal 2024.[1]
- Total cost of revenue and operating expenses was $1.3 billion, an increase of $184.2 million or 17%, primarily due to an increase of $135.9 million in employee-related costs resulting from headcount increases through organic growth and acquisitions, and the impact of the extra week in the first quarter of fiscal 2024.
- Operating income was $359.6 million, an increase of $103.7 million or 41%.

Business Summary

We are a global leader in electronic design automation (EDA) software that engineers use to design and test integrated circuits (ICs), also known as chips. We provide software and hardware used to validate the electronic systems that incorporate chips and the software that runs on them. We also provide technical services and support to help our customers develop advanced chips and electronic systems. TheseSynopsys provides products and services are part of our Design Automation segment.

We also offer semiconductor intellectual property (IP) products, which are pre-designed circuits that engineers use as components of larger chip designs rather than designing those circuits themselves. These products and services are part of our Design IP segment.

We are also a leading provider of software tools and services that improve the security, quality and compliance of software in a wide variety of industries, including electronics, financial services, automotive, medicine, energy and industrials. These tools and services are part of our Software Integrity segment.

Our Design Automation and Design IP customers are generally semiconductor and electronics systems companies. Our solutions help these companies overcome the challenges of developing increasingly advanced electronics products while also helping them reduce their design and manufacturing costs. While our products are an important part of our customers' development process, our sales could be affected based on their research and development budgets, and our customers' spending decisions may be affected by their business outlook and willingness to invest in new and increasingly complex chip designs.

Our Software Integrity segment delivers products and services that enable software developers to test their code—while it is being written—for known security vulnerabilities and quality defects, as well as testing for open source security vulnerabilities and license compliance. Our Software Integrity customers are software developers across many industries, including, but also well beyond, the semiconductor and systems industries. Our Software Integrity products and services form a platform that helps our customers build security into the software development lifecycle and used across the entire cyber supply chain. Silicon to Software spectrum to bring Smart Everything to life. From engineers creating advanced semiconductors to product teams developing advanced electronic systems to software developers seeking to ensure the security and quality of their code, our customers trust that our technologies will enable them to meet new requirements for energy efficiency, reliability, mobility, security and more. For more information about our business segments and product groups, see Part I, Item 1 *Business* in our Annual Report.

We have consistently grown our revenue since 2005, despite periods of global economic uncertainty. We achieved these results because of our solid execution, leading technologies and strong customer relationships, and because we generally recognize our revenue for software licenses over the arrangement period, which typically approximates three years. See Note 2. *Summary of Significant Accounting Policies and Basis of Presentation* of the *Notes to Consolidated Financial Statements* in our Annual Report for a discussion on our revenue recognition policy. The revenue we recognize in a particular period generally results from selling efforts in prior periods rather than the current period. As a result, decreases as well as increases in customer spending do not immediately affect our revenues in a significant way.

Our growth strategy is based on maintaining and building on our leadership in our Design Automation products, expanding and proliferating our Design IP offerings driving growth in the software security and quality market and continuing to expand our product portfolio and our total addressable market. Our revenue growth from period to period is expected to vary based on the mix of our time-based and upfront products. Based on our leading technologies, customer relationships, business model, diligent expense management, and acquisition strategy, we believe that we will continue to execute our strategies successfully.

Recent Developments

Pending Acquisition of Ansys

On January 15, 2024, we entered into an Agreement and Plan of Merger (the Merger Agreement) to acquire all of the outstanding shares of ANSYS, Inc. (Ansys), a provider of broad engineering simulation and analysis software and services, in a cash-and-stock transaction (the Ansys Merger) that values Ansys at approximately $35.0 billion, based on the closing price of Synopsys common stock on December 21, 2023.

Under the terms of the Merger Agreement, at the effective time of the Ansys Merger (the Effective Time) each share of Ansys common stock issued and outstanding immediately prior to the Effective Time (with certain exceptions set forth in the Merger Agreement) will be converted into the right to receive 0.3450 (the Exchange Ratio) of a share of Synopsys common stock and $197.00 in cash, without interest. The Exchange Ratio is expected to result in Ansys equityholders and Synopsys equityholders owning approximately 16.5% and 83.5%, respectively, of the combined company on a pro forma basis following the Effective Time. The Merger Agreement also provides for Synopsys' assumption of certain outstanding Ansys options and other unvested Ansys equity awards held by continuing Ansys employees. If the stock consideration to be issued by Synopsys in connection with the Ansys Merger would exceed 19.9999% of the shares of Synopsys common stock issued and outstanding immediately prior to the Effective Time, the Exchange Ratio will be reduced to the minimum extent necessary to ensure that the aggregate number of shares of Synopsys common stock to be issued in connection with the Ansys Merger does not exceed such threshold, and the cash consideration will be correspondingly increased to offset such adjustment.

Pursuant to the Merger Agreement, Synopsys and Ansys will mutually select two members of the board of directors of Ansys to become members of the board of directors of Synopsys at the Effective Time. If the closing occurs less

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[1] Refer to "Fiscal Year and Fiscal Quarter End" in Item 2 of this Quarterly Report, *Management's Discussion and Analysis of Financial Condition and Results of Operations* for the extra week discussion.

than six months prior to the next annual meeting of Synopsys' stockholders, Synopsys will nominate such directors for election at such meeting.

The Ansys Merger, which is anticipated to close in the first half of calendar year 2025, is subject to the satisfaction or waiver of customary closing conditions, including adoption of the Merger Agreement by the holders of a majority of the outstanding shares of Ansys common stock, the expiration or termination of the waiting period under the Hart-Scott-Rodino Antitrust Improvement Act of 1976, as amended (the HSR Act), the clearance of the Ansys Merger under certain other antitrust and foreign investment regimes and the effectiveness of a registration statement on Form S-4 to be filed by us. We and Ansys each have termination rights under the Merger Agreement. A fee of $1.5 billion may be payable by us to Ansys, or a fee of $950.0 million may be payable by Ansys to us, upon termination of the Merger Agreement under specified circumstances, each as more fully described in the Merger Agreement. The receipt of financing by us is not a condition to complete the Ansys Merger.

In connection with the execution of the Merger Agreement, we entered into a commitment letter on January 15, 2024 (the Bridge Commitment Letter) with certain financial institutions that committed to provide, subject to the satisfaction of customary closing conditions, a senior unsecured bridge facility (the Bridge Commitment) in an aggregate principal amount of up to $16.0 billion (which we subsequently reduced to $11.7 billion in connection with our entry into the Term Loan Agreement as further described below). On February 13, 2024, we entered into a term loan facility credit agreement (the Term Loan Agreement), which provides us with the ability to borrow up to $4.3 billion at the closing of the Ansys Merger, subject to the satisfaction of customary closing conditions for similar facilities, for the purpose of financing a portion of the cash consideration to be paid in the Ansys Merger and paying related fees and expenses in connection with the Ansys Merger and the other transactions contemplated by the Merger Agreement. Effective February 13, 2024, we terminated $4.3 billion of the original $16.0 billion of commitments under the Bridge Commitment, in lieu of which we expect to borrow the committed amounts available under the Term Loan Agreement. See Note 10. *Bridge Commitment Letter, Term Loan and Revolving Credit Facilities* of the *Notes to Condensed Consolidated Financial Statements* for more information on the Bridge Commitment and the Term Loan Agreement.

For more on risks related to the Ansys Merger, see Part II, Item 1A, *Risk Factors*, "*Risks Related to the Ansys Merger*" of this Quarterly Report.

Impact of the Current Macroeconomic and Geopolitical Environment

Uncertainty in the macroeconomic environment, including the effects of, among other things, increased global inflationary pressures and interest rates, potential economic slowdowns or recessions, supply chain disruptions, geopolitical pressures, fluctuations in foreign exchange rates, and associated global economic conditions, have resulted in volatility in credit, equity and foreign currency markets. We expect growth across our geographies in fiscal 2024; however, we are expecting a challenging near-term growth environment in China due to macroeconomic factors as well as, to a lesser degree, entity list and trade restrictions as further discussed below and in Part II, Item 1A, *Risk Factors* of this Quarterly Report.

The current uncertain macroeconomic environment could lead some of our customers to postpone their decision-making, decrease their spending and/or delay their payments to us. For more on risks related to the current macroeconomic and geopolitical environment, see Part II, Item 1A, *Risk Factors*, "*Uncertainty in the macroeconomic environment, and its potential impact on the semiconductor and electronics industries, may negatively affect our business, operating results and financial condition*" of this Quarterly Report. For example, we continue to experience an impact from the current macroeconomic environment in our Software Integrity segment as customers have applied elevated levels of scrutiny to purchasing decisions due in part to their own budget uncertainty, which has, in some cases, affected customer order size, pricing and/or contract duration. While the situation is dynamic, we expect customers to continue to scrutinize their budgets and negotiate orders for our Software Integrity segment products and solutions in light of the current macroeconomic environment. Further, following a strategic portfolio review, and in consultation with our Board of Directors, we have decided to explore strategic alternatives for our Software Integrity segment. As a part of this process, our management is considering a full range of strategic opportunities. At this time we cannot predict the impact that such strategic alternatives might have on our business, operations or financial condition.

We are also actively monitoring geopolitical pressures around the world, including, among others, changes in the China-Taiwan relations, the conflicts in Ukraine, the Middle East and other regional or global military conflicts. Any significant disruption caused by these or other geopolitical pressures or conflicts could materially affect our employees, business, operating results, financial condition or customers in those regions of the world. For example, Synopsys has employees, operations, customers and strategic partners in the Middle East and in Armenia, which are each experiencing geopolitical conflicts. While we are actively monitoring these conflicts, at this time, these geopolitical conflicts have not had a material impact on our business, operating results or financial condition.

While our time-based business model provides stability to our business, operating results and overall financial position, the broader implications of these macroeconomic or geopolitical events, particularly in the long term, remain uncertain. Further, the negative impact of these events or disruptions may be deferred due to our business model.

See Part II, Item 1A, *Risk Factors* of this Quarterly Report for further discussion of the impact of global economic and geopolitical uncertainty on our business, operations and financial condition.

Developments in Export Control Regulations

On October 7, 2022, the Bureau of Industry and Security (BIS) of the U.S. Department of Commerce published changes to U.S. export control regulations (U.S. Export Regulations), including new restrictions on Chinese entities' ability to obtain advanced computing chips, develop and maintain supercomputers, and manufacture advanced semiconductors. Further, on October 14, 2022, a new rule went into effect imposing U.S. export controls on additional technologies, including electronic computer-aided design software specially designed for the development of ICs with Gate-All-Around Field-Effect Transistor structures. On October 17, 2023, the Department of Commerce, Bureau of Industry and Security, published clarifications of and other adjustments to the regulations promulgated on October 7, 2022, pertaining, among other things, to China's access to certain semiconductor and advanced computing technology. Based on our current understanding, we believe these regulations will not have a material impact on our business. We anticipate additional changes to U.S. Export Regulations in the future, but we cannot forecast the scope or timing of such changes. We will continue to monitor such developments, including potential additional trade restrictions, and other regulatory or policy changes by the U.S. and foreign governments.

For more on risks related to government export and import restrictions such as the U.S. government's Entity List and other U.S. Export Regulations, see Part II, I, Item 1A, *Risk Factors*, "*Industry Risks – We are subject to governmental export and import requirements that could subject us to liability and restrict our ability to sell our products and services, which could impair our ability to compete in international markets*."

Impact of the Current Macroeconomic Environment

Uncertainty in the macroeconomic environment, including the effects of increased global inflationary pressures and interest rates, U.S. federal debt ceiling negotiations, bank failures, potential economic slowdowns or recessions, supply chain disruptions, geopolitical pressures, including the unknown impact of current and future U.S. and Chinese trade regulations, changes in China-Taiwan relations and the war in Ukraine, fluctuations in foreign exchange rates, and associated global economic conditions, have resulted in volatility in credit, equity and foreign currency markets.

In addition, these uncertain macroeconomic conditions could lead some of our customers to postpone their decision-making, decrease their spending and/or delay their payments to us. For example, we continued to experience a minor impact from the current macroeconomic environment in our Software Integrity segment as customers applied elevated levels of scrutiny to purchasing decisions, which has, in some cases, caused some customers to elect shorter term contracts due to their own budget uncertainty. Although we have not experienced a material adverse impact to date, if these uncertain macroeconomic conditions persist, they may have an adverse impact on certain aspects of our business.

While our time-based business model provides stability to our business, operating results and overall financial position, the broader implications of these macroeconomic events, particularly in the long term, remain uncertain. Further, the negative impact of these events or disruptions may be deferred due to our business model.

See Part II, Item 1A, *Risk Factors* in this Quarterly Report for further discussion of the impact of global macroeconomic uncertainty on our business, operations and financial condition.

Business Segments

Effective in the first quarter of fiscal 2023, we realigned our organizational structure to evaluate the results of our Design IP business separately. Our Chief Operating Decision Maker (CODM), our Chief Executive Officer, now regularly reviews disaggregated segment information, assesses performance against our key growth strategies and allocates resources based on this new organizational structure. As a result, effective in the first quarter of fiscal 2023, we changed our reportable segments from two reportable segments to the following three reportable segments: (1) Design Automation, which includes EDA tools, system integration solutions and other associated revenue categories, (2) Design IP, which includes IP products, and (3) Software Integrity, which includes a comprehensive solution for building integrity—security, quality and compliance testing—into the customers' software development lifecycle and supply chain. As such, prior period reportable segment results and related disclosures have been reclassified to reflect our current reportable segments.

As a result of the change in reporting structure, financial information provided to and used by the CODM to assist in making operational decisions, allocating resources and assessing performance reflects consolidated financial information as well as revenue, adjusted operating income, and adjusted operating margin for the Design Automation, Design IP, and Software Integrity segments, accompanied by disaggregated information relating to revenues by geographic region.

Design Automation. This segment includes our advanced silicon design, verification products and services and system integration products. This segment also includes digital, custom and field programmable gate array (FPGA) IC integrated circuit (IC) design software, verification software and hardware products, system integration products and services, and manufacturing software products. Designers use these products to automate the highly complex IC design process and to reduce defects that could lead to expensive design or manufacturing re-spins or suboptimal end products.

Design IP. This segment includes our Design IP products that serve companies primarily in the semiconductor and electronics industries. We are a leading provider of high-quality, silicon-proven IP solutions for system-on-chips (SoCs). This includes IP that has been optimized to address specific application requirements for the mobile, automotive, digital home, internet of things and cloud computing markets, enabling designers to quickly develop SoCs in these areas.

Software Integrity. This segment includes a broad portfolio of products and services to intelligently address software risks across the customer's portfolio and at all stages of the application lifecycle. The testing tools, services, and programs enable our customers to manage open source license compliance and detect, prioritize, and remediate security vulnerabilities and defects across their entire software development lifecycle. Our offerings include security and quality testing products, managed services, programs and professional services, and training.

Fiscal Year and Fiscal Quarter End

Our fiscal year ends on the Saturday nearest to October 31 and consists of 52 weeks, with the exception that approximately every five years, we have a 53-week year. When a 53-week year occurs, we include the additional week in the first quarter to realign fiscal quarters with calendar quarters. Fiscal 2023 and 2022 are 52-week years 2024 is a 53-week year ending on October 28, 2023 November 2, 2024, which impacts our revenue, expenses and October 29, 2022, respectively. operating results. Fiscal 2023 was a 52-week year and ended on October 28, 2023.

Our results of operations for the three and nine months first quarter of fiscal 2024 and 2023 included 14 weeks and 2022 13 weeks, respectively, and ended on July 29, 2023 February 3, 2024 and July 30, 2022 January 28, 2023, respectively. The extra week in the first quarter of fiscal 2024 resulted in approximately $70.5 million of additional revenue, and approximately $61.0 million of additional expenses, including approximately $11.0 million in stock-based compensation costs. For presentation purposes, this Form 10-Q refers to the closest calendar month end.

Russia-Ukraine Conflict

Due to the ongoing conflict between Russia and Ukraine and the related sanctions and other penalties imposed on Russia and Belarus by the United States, the European Union, the United Kingdom and other countries, we ceased all Synopsys business operations in Russia commencing in the second quarter of fiscal 2022. We do not have operations or employees in Ukraine. The cessation of our business operations in Russia has not had a material impact on our business, financial condition, or results of operations as our operations in Russia and our sales to

customers in Russia and Belarus do not constitute a material portion of our business. Further, unless and until the U.S. government lifts its sanctions on Russia and Belarus, which are restricting the export of a broad range of U.S. technologies to those countries, we will continue to be unable to ship such technologies or provide support to anyone in Russia or Belarus. We are actively monitoring the Russia-Ukraine conflict and the potential impact it could have on our business, employees and our ability to sell our products and services to our customers. See Part II, Item 1A, *Risk Factors* for further discussion of the possible impact of the Russia-Ukraine conflict on our business, operations and financial condition.

Critical Accounting Estimates

Our condensed consolidated financial statements have been prepared in accordance with U.S. generally accepted accounting principles (U.S. GAAP). In preparing these financial statements, we make assumptions, judgments and estimates that can affect the reported amounts of assets, liabilities, revenues and expenses, and net income. On an ongoing basis, we evaluate our estimates based on historical experience and various other assumptions we believe are reasonable under the circumstances. Our actual results may differ from these estimates. See Note 2. *Summary of Significant Accounting Principles and Basis of Presentation* of the *Notes to Condensed Consolidated Financial Statements* in this Quarterly Report for more information on our significant accounting policies.

The accounting policies that most frequently require us to make assumptions, judgments and estimates, and therefore are critical to understanding our results of operations, are:

- Revenue recognition; and
- Valuation of business Business combinations.

See Critical Accounting Estimates section of Part II, Item 7, *Management's Discussion and Analysis of Financial Condition and Results of Operations* in our Annual Report for more information.

Results of Operations

Revenue

Our revenues are generated from three business segments: the Design Automation segment, the Design IP segment and the Software Integrity segment. See Note 17. *Segment Disclosure* of the *Notes to Condensed Consolidated Financial Statements* in this Quarterly Report for more information about our reportable segments and revenue by geographic regions.

Further disaggregation of the revenues into various products and services within these three segments is summarized as follows:

Design Automation Segment

- EDA solutions include digital, custom and FPGA IC design software, verification software and hardware products, system integration products and services, and obligations to provide unspecified updates and support services. EDA products and services are typically sold through Technology Subscription License (TSL) arrangements that grant customers the right to access and use all of the licensed products at the outset of an arrangement; software updates are generally made available throughout the entire term of the arrangement. The duration of our TSL contracts is generally 3 three years, though it may vary for specific arrangements. We have concluded that the software licenses in TSL contracts are not distinct from the obligation to provide unspecified software updates to the licensed software throughout the license term, because the multiple software licenses and support represent inputs to a single, combined offering, and timely, relevant software updates are integral to maintaining the utility of the software licenses. We recognize revenue for the combined performance obligation under TSL contracts ratably over the term of the license.
- In the case of arrangements involving the sale of hardware products, we generally have two performance obligations. The first performance obligation is to transfer the hardware product, which includes software integral to the functionality of the hardware product. The second performance obligation is to provide maintenance on the hardware and its embedded software, which includes rights to technical support, hardware repairs and software updates that are all provided over the same term and have the same time-based pattern of transfer to the customer. The portion of the transaction price allocated to the hardware product is generally recognized as revenue at the time of shipment because

the customer obtains control of the product at that point in time. We have concluded that control generally transfers at that point in time because the customer has the ability to direct the use of the

asset and an obligation to pay for the hardware. The portion of the transaction price allocated to the maintenance obligation is recognized as revenue ratably over the maintenance term.

- Revenue from Professional Service contracts is recognized over time, generally using costs incurred or hours expended to measure progress. We have a history of reasonably estimating project status and the costs necessary to complete projects. A number of internal and external factors can affect these estimates, including labor rates, utilization and efficiency variances and specification and testing requirement changes.

Design IP Segment

- Design IP includes our Synopsys IP portfolio. These arrangements generally have two performance obligations which consist of transferring of the licensed IP and providing related support, which includes rights to technical support and software updates that are provided over the support term and are transferred to the customer over time. Revenue allocated to the IP licenses is recognized at a point in time upon the later of the delivery date or the beginning of the license period, and revenue allocated to support is recognized over the support term. Royalties are recognized as revenue in the quarter in which the applicable customer sells its products that incorporate our IP. Payments for IP contracts are generally received upon delivery of the IP. Revenue related to the customization of certain IP is recognized over time, generally using costs incurred or hours expended to measure progress.

Software Integrity Segment

- We sell Software Integrity products in arrangements that provide customers the right to software licenses, maintenance updates and technical support. Over the term of these arrangements, the customer expects us to provide integral maintenance updates to the software licenses, which help customers protect their own software from new critical quality defects and potential security vulnerabilities. The licenses and maintenance updates serve together to fulfill our commitment to the customer as both work together to provide functionality to the customer and represent a combined performance obligation. We recognize revenue for the combined performance obligation over the term of the arrangement.

Our customer arrangements can involve multiple products and various license rights, and our customers negotiate with us over many aspects of these arrangements. For example, they generally request a broader portfolio of solutions, support and services and seek more favorable terms such as expanded license usage, future purchase rights and other unique rights at an overall lower total cost. No single factor typically drives our customers' buying decisions, and we compete on all fronts to serve customers in highly competitive markets. Customers generally negotiate the total value of the arrangement rather than just unit pricing or volumes.

Total Revenue

		July 31,					January 31,						
		2023	2022	$ Change	% Change		2024		2023		$ Change		% Change
		(dollars in millions)					(dollars in millions)						
Three months ended	Three months ended												
Design Automation	Design Automation	$1,004.2	$ 816.5	$187.7	23 %								
Design IP		350.2	313.0	37.2	12 %								
Software Integrity		132.9	118.3	14.6	12 %								
Total		$1,487.3	$1,247.8	$239.5	19 %								
Nine months ended													
Design Automation													
Design Automation	Design Automation	$2,821.5	$2,438.1	$383.4	16 %		$ 985.3	$	$889.8	$	$95.5	11	11 %
Design IP	Design IP	1,029.1	1,020.4	8.7	1 %	Design IP	525.7	343.7	343.7	182.0	182.0	53	53 %
Software Integrity	Software Integrity	392.9	338.8	54.1	16 %	Software Integrity	138.2	127.8	127.8	10.4	10.4	8	8 %
Total	Total	$4,243.5	$3,797.3	$446.2	12 %	Total	$1,649.2	$	$1,361.3	$	$287.9	21	21 %

Our revenues are subject to fluctuations, primarily due to customer requirements including the timing and value of contract renewals. For example, we experience fluctuations in our revenues due to factors such as the timing of IP product sales, Flexible Spending Account (FSA) drawdowns, royalties, and hardware products sales. As revenues from IP products sales and hardware products sales are recognized upfront, customer demand and timing requirements for such IP products and hardware products could result in increased variability of our total revenues.

Contracted but unsatisfied or partially unsatisfied performance obligations (backlog) as of July 31, 2023 January 31, 2024 were $7.1 billion. $8.2 billion, which includes $1.3 billion in non-cancellable FSA commitments from customers where actual product selection and quantities of specific products or services are to be determined by customers at a later date. We have elected to exclude future sales-based royalty payments from the remaining performance obligations. Approximately 40% of the backlog as of January 31, 2024, excluding non-cancellable FSA, is expected to be recognized as revenue over the next 12 months, with the remainder recognized thereafter. The majority of the remaining backlog is expected to be recognized in the following three years.

The amount and composition of unsatisfied performance obligations will fluctuate period to period. We do not believe the amount of unsatisfied performance obligations is indicative of future sales or revenue, or that such obligations at the end of any given period correlates with actual sales performance of a particular geography or particular products and services. For more information regarding our revenue during the three and nine months ended July 31, 2023 January 31, 2024, including our contract balances as of such date, see Note 3. 5. *Revenue* of the *Notes to Condensed Consolidated Financial Statements* in this Quarterly Report.

The increase in total revenues for the three and nine months ended July 31, 2023 January 31, 2024 compared to the same periods period in fiscal 2022 2023 was due principally to the continued organic growth of our business across most all product groups and geographies. geographies, and the impact of the extra week in the first quarter of fiscal 2024 of approximately $70.5 million.

For a discussion of revenue by geographic areas, see Note 17. *Segment Disclosure* of the *Notes to Condensed Consolidated Financial Statements* in this Quarterly Report.

Time-Based Products Revenue

	July 31,			
	2023	2022	$ Change	% Change
	(dollars in millions)			
Three months ended	$ 922.9	$ 754.3	$ 168.6	22 %
Percentage of total revenue	62 %	60 %		
Nine months ended	$2,513.4	$2,185.6	$ 327.8	15 %
Percentage of total revenue	59 %	57 %		

	January 31,			
	2024	2023	$ Change	% Change
	(dollars in millions)			
Three months ended	$ 904.4	$ 782.3	$ 122.1	16 %

The increase in time-based products revenue for the three and nine months ended July 31, 2023 January 31, 2024 compared to the same periods period in fiscal 2022 2023 was primarily attributable to an increase in TSL license revenue from arrangements booked in prior periods. periods, and the impact of the extra week in the first quarter of fiscal 2024.

Upfront Products Revenue

	July 31,			
	2023	2022	$ Change	% Change
	(dollars in millions)			
Three months ended	$298.0	$268.6	$ 29.4	11 %
Percentage of total revenue	20 %	22 %		
Nine months ended	$980.1	$973.5	$ 6.6	1 %
Percentage of total revenue	23 %	26 %		

	January 31,			
	2024	2023	$ Change	% Change
	(dollars in millions)			
Three months ended	$ 447.9	$ 336.7	$ 111.2	33 %

Changes in upfront products revenue are generally attributable to normal fluctuations in the extent and timing of customer requirements, which can drive the amount of upfront orders and revenue in any particular period.

The increase in upfront products revenue for the three and nine months ended July 31, 2023 January 31, 2024 compared to the same periods period in fiscal 2022 2023 was primarily due to fluctuations an increase in the sale of IP and hardware products, driven by timing of customer demands. higher demand from customers.

Upfront products revenue as a percentage of total revenue will likely fluctuate based on the timing of IP products and hardware products product sales. Such fluctuations will continue to be impacted by the timing of shipments or and FSA drawdowns due to customer requirements.

Maintenance and Service Revenue

	July 31,			
	2023	2022	$ Change	% Change
	(dollars in millions)			
Three months ended				
Maintenance revenue	$112.3	$ 74.4	$ 37.9	51 %

	January 31,			
	2024	2023	$ Change	% Change
	(dollars in millions)			

Professional services and other revenue	154.1	150.5	3.6	2 %					
Maintenance revenue									
Maintenance revenue						$ 102.6	$ 81.4	$ 21.2	26 %
Professional service and other revenue					Professional service and other revenue	194.4	161.0	33.4	21 %
Total	$266.4	$224.9	$ 41.5	18 %	Total	$ 297.0 $	$ 242.4 $	$ 54.6 23	23 %
Percentage of total revenue	18 %	18 %							
Nine months ended									
Maintenance revenue	$273.9	$212.5	$ 61.4	29 %					
Professional services and other revenue	476.1	425.6	50.5	12 %					
Total	$750.0	$638.1	$111.9	18 %					
Percentage of total revenue	18 %	17 %							

The increase in maintenance revenue for the three and nine months ended July 31, 2023 January 31, 2024 compared to the same periods period in fiscal 2022 2023 was primarily due to an increase in the volume of arrangements that include maintenance. maintenance.

The increase in professional services service and other revenue for the three and nine months ended July 31, 2023 January 31, 2024 compared to the same periods period in fiscal 2022 2023 was primarily due to the timing of IP customization projects.

Cost of Revenue

	July 31,					January 31,			
	2023	2022	$ Change	% Change		2024	2023	$ Change	% Change
	(dollars in millions)					(dollars in millions)			
Three months ended									
Cost of products revenue	$190.8	$164.1	$ 26.7	16 %					
Cost of products revenue									
Cost of products revenue						$193.6	$174.4	$19.2	11 %
Cost of maintenance and service revenue	98.3	87.8	10.5	12 %	Cost of maintenance and service revenue	115.1 91.3	91.3	23.8 23.8	26 26 %
Amortization of intangible assets	18.4	19.3	(0.9)	(5) %					
Amortization of acquired intangible assets					Amortization of acquired intangible assets	20.5	18.6	1.9	10 %
Total	$307.5	$271.2	$ 36.3	13 %	Total	$329.2 $	$284.3 $	$44.9 16	16 %
Percentage of total revenue	21 %	22 %							
Nine months ended									
Cost of products revenue	$549.9	$480.2	$ 69.7	15 %					
Cost of maintenance and service revenue	285.1	253.7	31.4	12 %					
Amortization of intangible assets	54.9	47.1	7.8	17 %					

Total	$889.9	$781.0	$108.9	14 %
Percentage of total revenue	21 %	21 %		

We divide cost of revenue into three categories: cost of products revenue, cost of maintenance and service revenue, and amortization of acquired intangible assets.

Cost of products revenue. Cost of products revenue includes costs related to products sold and software licensed, hardware-related costs including inventory provisions, allocated operating costs related to product support and distribution, royalties paid to third-party vendors, and the amortization of capitalized software development costs.

Cost of maintenance and service revenue. Cost of maintenance and service revenue includes costs to deliver our maintenance services, such as hotline and on-site support, production services and documentation of maintenance updates.

Amortization of acquired intangible assets. Amortization of acquired intangible assets, included in cost of revenue, consists of the amortization of core/developed technology and certain contract rights intangible assets. assets related to acquisitions.

The increase in cost of revenue for the three months ended July 31, 2023 January 31, 2024 compared to the same period in fiscal 2022, 2023, was primarily due to increases of $19.7 million in hardware-related costs including inventory provisions, $13.2 million in employee-related costs as a result of headcount increases from hiring, $3.2 million $15.5 million in facility costs and $1.6 million in the fair value of our executive deferred compensation plan assets.

The increase in cost of revenue for the nine months ended July 31, 2023 compared to the same period in fiscal 2022, was primarily due to increases of $56.0 million in employee-related costs as a result of headcount increases from hiring, $21.1 million fulfill IP consulting arrangements, $5.7 million in hardware-related costs including inventory provisions, $11.9 million in facility costs, $7.8 million and $1.9 million in amortization of acquired technology-related intangible assets, and $6.5 million in the fair value of our executive deferred compensation plan assets.

Operating Expenses

Research and Development

	July 31, 2023	July 31, 2022	$ Change	% Change
	(dollars in millions)			
Three months ended	$ 507.4	$ 444.8	$ 62.6	14 %
Percentage of total revenue	34 %	36 %		
Nine months ended	$1,458.3	$1,218.8	$239.5	20 %
Percentage of total revenue	34 %	32 %		

	January 31, 2024	January 31, 2023	$ Change	% Change
	(dollars in millions)			
Three months ended	$ 552.1	$ 465.3	$ 86.8	19 19 %

The increase in research and development expenses for the three months ended July 31, 2023 January 31, 2024 compared to the same period in fiscal 2022 2023 was primarily due to increases of $31.0 million in employee-related costs as a result of headcount increases as we continue to expand and enhance our product portfolio, $14.1 million in the fair value of our executive deferred compensation plan assets, $7.4 million in facility costs, and $5.3 million in consultant and contractor costs.

The increase in research and development expenses for the nine months ended July 31, 2023 compared to the same period in fiscal 2022 was primarily due to increases of $124.1 million $66.7 million in employee-related costs as a result of headcount increases as we continue to expand and enhance our product portfolio, $60.0 million $8.5 million in the change in the fair value of our executive deferred compensation plan assets, $26.8 million in facility costs, and $7.6 million $3.3 million in consultant and contractor costs, and $2.5 million in facility costs.

Sales and Marketing

	July 31, 2023	July 31, 2022	$ Change	% Change
	(dollars in millions)			
Three months ended	$227.1	$199.2	$ 27.9	14 %
Percentage of total revenue	15 %	16 %		
Nine months ended	$660.0	$571.3	$ 88.7	16 %
Percentage of total revenue	16 %	15 %		

	January 31, 2024	January 31, 2023	$ Change	% Change
	(dollars in millions)			
Three months ended	$ 263.4	$ 210.8	$ 52.6	25 25 %

The increase in sales and marketing expenses for the three months ended July 31, 2023 January 31, 2024 compared to the same period in fiscal 2022 2023 was primarily due to increases of $17.5 million $39.2 million in employee-related costs due to headcount increases, $3.4 million $10.1 million in the change in the fair value of our executive deferred compensation plan assets, $2.8 million and $2.1 million in travel and marketing expenses costs due to an increased number of in-person meetings and events, and $2.4 million in facility costs. events.

The increase in sales and marketing expenses for the nine months ended July 31, 2023 compared to the same period in fiscal 2022 was primarily due to increases of $45.1 million in employee-related costs due to headcount increases, $14.2 million in the fair value of our executive deferred compensation plan assets, $13.1 million in travel and marketing expenses due to an increased number of in-person meetings and events, and $7.2 million in facility costs.

General and Administrative

	July 31, 2023	July 31, 2022	$ Change	% Change	January 31, 2024	January 31, 2023	$ Change	% Change
	(dollars in millions)				(dollars in millions)			
Three months ended	$109.7	$ 91.5	$ 18.2	20 %	$ 138.4	$ 97.4	$ 41.0	42 42 %
Percentage of total revenue	7 %	7 %						
Nine months ended	$298.2	$246.4	$ 51.8	21 %				
Percentage of total revenue	7 %	6 %						

The increase in general and administrative expenses for the three months ended July 31, 2023 January 31, 2024 compared to the same period in fiscal 2022 2023 was primarily due to increases of $5.3 million $25.9 million in legal, consulting and other professional fees mainly in connection with the Ansys Merger, $10.3 million in employee-related costs due to headcount increases from hiring, $4.3 million in legal, consulting and other professional fees, and $3.8 million in the fair value of our executive deferred compensation plan assets.

The increase in general depreciation and administrative expenses for the nine months ended July 31, 2023 compared to the same period in fiscal 2022 was primarily due to bad debt recoveries of $15.9 million in the second quarter of fiscal 2022, and increases of $21.5 million in employee-related costs due to headcount increases from hiring, $14.4 million in the fair value of our executive deferred compensation plan assets, and $2.9 million in legal, consulting and other professional fees.

maintenance expense.

Amortization of Acquired Intangible Assets

Amortization of acquired intangible assets, included in operating expenses, consists of the amortization of trademarks, trade names and customer relationships intangible assets related to acquisitions.

	July 31, 2023	July 31, 2022	$ Change	% Change	January 31, 2024	January 31, 2023	$ Change	% Change
	(dollars in millions)				(dollars in millions)			
Three months ended	6.7	7.1	(0.4)	(6) %				
Three months ended								
Three months ended					6.6	6.7	(0.1)	(1) %
Percentage of total revenue								
Percentage of total revenue								
Percentage of total revenue	— %	1 %						
Nine months ended	20.0	23.0	(3.0)	(13) %				
Percentage of total revenue	— %	1 %						

The decrease in amortization of acquired intangible assets for the three and nine months ended July 31, 2023 January 31, 2024 compared to the same periods period in fiscal 2022 2023 was primarily due to certain intangible assets becoming fully amortized, partially offset by amortization expense related to intangible assets acquired during the three and nine months ended July 31, 2023 January 31, 2024.

Restructuring Charges

In the first quarter of fiscal 2023, we initiated a restructuring plan for involuntary employee terminations as part of a business reorganization (the 2023 Plan). The 2023 Plan was substantially completed in the third quarter of fiscal 2023, Interest and total charges under the 2023 Plan were $78.4 million, consisting primarily of severance costs and facility exit costs. We recorded restructuring charges of $33.4 million and $78.4 million, respectively, during the three and nine months ended July 31, 2023.

See Note 9. *Restructuring Charges* of the *Notes to Condensed Consolidated Financial Statements* in this Quarterly Report for more information.

Other Income (Expense), Net

		July 31,					January 31,								
		2023	2022	$ Change	% Change		2024		2023		$ Change			% Change	
		(dollars in millions)					(dollars in millions)								
Three months ended	Three months ended														
Interest income	Interest income	$11.9	$ 2.7	$ 9.2	341 %										
Interest income Interest income							$ 13.2		$ 6.9		$ 6.3			91 %	
Interest expense	Interest expense	(0.3)	(0.4)	0.1	(25)%	Interest expense	(1.3)	(0.3)	(0.3)	(1.0)	(1.0)	333			333 %
Gains (losses) on assets related to executive deferred compensation plan		21.8	(1.1)	22.9	(2,082)%										
Gains (losses) on assets related to deferred compensation plan						Gains (losses) on assets related to deferred compensation plan	40.1		20.2		19.9			99 %	
Foreign currency exchange gains (losses)	Foreign currency exchange gains (losses)	—	(0.4)	0.4	(100)%	Foreign currency exchange gains (losses)	3.4	2.7	2.7	0.7	0.7	26			26 %
Gain on sale of strategic investments						Gain on sale of strategic investments	55.1		—		55.1			100 %	
Other, net	Other, net	(7.6)	1.6	(9.2)	(575)%	Other, net	(5.0)	(6.2)	(6.2)	1.2	1.2	(19)			(19)%
Total	Total	$25.8	$ 2.4	$ 23.4	975 %	Total	$105.5	$	$23.3	$	$82.2	353		353 %	
Nine months ended															
Interest income		$26.9	$ 4.9	$ 22.0	449 %										
Interest expense		(0.9)	(1.3)	0.4	(31)%										
Gains (losses) on assets related to executive deferred compensation plan		44.8	(50.0)	94.8	(190)%										
Foreign currency exchange gains (losses)		0.4	3.5	(3.1)	(89)%										
Other, net		(17.8)	1.6	(19.4)	(1,213)%										
Total		$53.4	$(41.3)	$ 94.7	(229)%										

The increase in interest and other income (expense) for the three and nine months ended July 31, 2023 January 31, 2024 as compared to the same periods period in fiscal 2022 2023 was primarily due to the increase change in the fair value of our executive deferred compensation plan assets. assets and the gain recognized from the sale of strategic investments.

Segment Operating Results

We do not allocate certain operating expenses managed at a consolidated level to our reportable segments. These unallocated expenses consist primarily of amortization of acquired intangible assets, stock-based compensation expense, amortization of intangible assets, changes in the fair value of deferred compensation plan, restructuring restructuring charges, and certain other operating expenses. acquisition/divestiture related items. See Note 17. *Segment Disclosure* of the *Notes to Condensed Consolidated Financial Statements* in this Quarterly Report for more information.

Design Automation Segment

July 31,				January 31,			
2023	2022	Change	% Change	2024	2023	Change	% Change

	(dollars in millions)				(dollars in millions)			
Three months ended								
Adjusted operating income	$ 415.7	$297.2	$118.5	40 %				
Adjusted operating margin	41 %	36 %	5 %	14 %				
Nine months ended								
Adjusted operating income	$1,121.8	$911.9	$209.9	23 %	$ 364.9	$ 346.0	$ 18.9	5 %
Adjusted operating margin	40 %	37 %	3 %	8 %	37 %	39 %	(2) %	(5) %

The increase in adjusted operating income for the three and nine months ended July 31, 2023 January 31, 2024 compared to the same periods period in fiscal 2022 2023 was primarily due to an increase in revenue from arrangements booked in prior periods.

Design IP Segment

	July 31, 2023	July 31, 2022	Change	% Change	January 31, 2024	January 31, 2023	Change	% Change
	(dollars in millions)				(dollars in millions)			
Three months ended								
Adjusted operating income	$ 86.7	$ 83.6	$ 3.1	4 %				
Adjusted operating margin	25 %	27 %	(2)%	(7) %				
Nine months ended								
Adjusted operating income	$290.6	$373.5	$(82.9)	(22) %	$ 249.5	$ 117.6	$ 131.9	112 %
Adjusted operating margin	28 %	37 %	(9)%	(24) %	47 %	34 %	13 %	38 %

The increase in adjusted operating income for the three months ended July 31, 2023 January 31, 2024 compared to the same period in fiscal 2022 2023 was primarily due to an increase in the revenue of IP products driven by timing of customer demands.

The decrease in adjusted operating income for the nine months ended July 31, 2023 compared to the same periods in fiscal 2022 was primarily due to an increase in employee-related costs due to headcount increases.

Software Integrity Segment

	July 31, 2023	July 31, 2022	Change	% Change	January 31, 2024	January 31, 2023	Change	% Change
	(dollars in millions)				(dollars in millions)			
Three months ended								

Adjusted operating income	Adjusted operating income	$22.4	$11.3	$11.1	98	%									
Adjusted operating margin		17 %	10 %	7 %	70	%									
Nine months ended															
Adjusted operating income															
Adjusted operating income	Adjusted operating income	$56.3	$36.3	$20.0	55	%	$	24.0	$	$	15.5	$	$	8.5	55 55 %
Adjusted operating margin	Adjusted operating margin	14 %	11 %	3 %	27	%	Adjusted operating margin	17 %		12 %		5 %			42 %

The increase in adjusted operating income for the three and nine months ended July 31, 2023 January 31, 2024 compared to the same periods period in fiscal 2022 2023 was primarily due to an increase in revenue from arrangements booked in prior periods.

Income Taxes

Our effective tax rate decreased increased in the three months ended July 31, 2023 January 31, 2024 as compared to the same period in fiscal 2022, 2023, primarily due to higher foreign derived intangible income deduction, as a result of the Tax Act, higher excess reduced benefit from U.S. federal research tax benefits from stock-based compensation, and the tax benefit recorded as a result of concluding the Hungary tax litigation. Our effective tax rate decreased for the nine months ended July 31, 2023 as compared to the same period in fiscal 2022, primarily due to higher foreign derived intangible income deduction and the tax benefit recorded as a result of concluding the Hungary tax litigation, credits partially offset by lower increased excess tax benefits from stock-based compensation.

See Note 19. *Income Taxes* of the *Notes to Condensed Consolidated Financial Statements* in this Quarterly Report for further discussion.

Liquidity and Capital Resources

Our principal sources of liquidity are funds generated from our business operations and funds that may be drawn down under our revolving credit and term loan facilities.

As of July 31, 2023 January 31, 2024, we held $1.8 billion $1.3 billion in cash, cash equivalents and short-term investments. We also held $1.8 million $2.2 million in restricted cash primarily associated with deposits for office leases. leases and employee loan programs. Our cash equivalents consisted primarily of taxable money market mutual funds, time deposits and highly liquid investments with maturities of three months or less. Our short-term investments include U.S. government and municipal obligations, investment-grade available-for-sale debt and asset backed securities with an overall weighted-average credit rating of approximately AA.

As of July 31, 2023 January 31, 2024, approximately $1.0 billion $678.1 million of our cash and cash equivalents were domiciled in various foreign jurisdictions. We have provided for foreign withholding taxes on the undistributed earnings of certain of our foreign subsidiaries to the extent such earnings are no longer considered to be indefinitely reinvested in the operations of those subsidiaries.

We believe expect that our existing cash, cash equivalents and short-term investments and sources of liquidity will be sufficient to satisfy our cash requirements and capital return program over the next 12 months and beyond. We are currently not aware of any trends or demands, commitments, events or uncertainties that will result in, or that are reasonably pending Ansys Merger is likely to result in a material increase in our debt and liquidity increasing or decreasing in any material way needs that will impact our capital needs during or as well as beyond the next 12 twelve months. We intend to fund our anticipated $19 billion cash consideration payment through a combination of cash and debt, and have fully-committed debt financing in place for $16.0 billion. See Note 10. *Bridge Commitment Letter, Term Loan and Revolving Credit Facilities* of the *Notes to Condensed Consolidated Financial Statements* in this Quarterly Report for further discussion. Our future cash requirements will depend on many factors, including our rate of revenue growth, the expansion of our sales and marketing activities, and the timing and extent of our spending to support our research and development efforts.

We also may invest in or acquire businesses, applications or technologies, or may further expand believe that our board-authorized stock repurchase program, which may require existing cash, cash equivalents and short-term investments and sources of liquidity, as well as the use of significant committed debt financing related to the pending Ansys Merger, will be sufficient to satisfy our cash resources and/or additional financing. requirements over the next 12 month period and beyond.

Effective fiscal 2023, our research and development expenditures are were required to be capitalized and amortized under the Tax Cuts and Jobs Act instead of being deducted when incurred for US tax purposes. This results in a significant increase to purposes, which significantly increases our federal cash tax liabilities for fiscal 2023. As liability. Additionally, as a result of the IRS tax relief for the California winter storms, the due date for our fiscal 2023 federal tax payment was November 16, 2023 and as such, we have deferred our fiscal 2023 federal cash tax payments until the fourth first quarter of fiscal 2023. See Note 19 *Income Taxes* of the *Notes* *2024. This results in a significant increase to* *Condensed Consolidated Financial Statements* our cash outflows beginning in this Quarterly Report for further discussion. fiscal 2024.

During the nine three months ended July 31, 2023 January 31, 2024, there were no other significant changes to our material cash requirements, including contractual and other obligations, as presented in Part II, Item 7, *Management's Discussion and Analysis of Financial Condition and Results of Operations* included in our Annual Report.

The following sections discuss changes in our condensed consolidated statements of cash flows and other commitments of our liquidity and capital resources during the nine three months ended July 31, 2023 January 31, 2024.

Cash Flows

		Nine Months Ended July 31, 2023	2022	$ Change	Three Months Ended January 31, 2024	2023	$ Change
		(dollars in millions)			(dollars in millions)		
Cash provided by operating activities		$1,377.2	$1,345.4	$ 31.8			
Cash provided by (used in) operating activities							
Cash used in investing activities	Cash used in investing activities	(181.6)	(531.3)	349.7			
Cash used in financing activities	Cash used in financing activities	(942.6)	(825.2)	(117.4)			

Cash Provided by (Used in) Operating Activities

We expect cash from our operating activities to fluctuate as a result of a number of factors, including the timing of our billings and collections, our operating results, and the timing and amount of tax and other liability payments. Cash provided by our operations is dependent primarily upon the payment terms of our license agreements. We generally receive cash from upfront arrangements much sooner than from time-based products revenue, in which the license fee is typically paid either quarterly or annually over the term of the license.

The increase Cash used in operating activities was $87.8 million for the three months ended January 31, 2024, compared to cash provided by operating activities of $114.8 million for the nine months ended July 31, 2023 compared to the same period in fiscal 2022 2023. The change was primarily due to higher net income, lower disbursements for operations, including vendor and tax payments, partially offset by higher net income and higher accounts receivable collections, partially offset by timing of customer billings. collections.

Cash Used in Investing Activities

The decrease increase in cash used in investing activities for the nine three months ended July 31, 2023 January 31, 2024 compared to the same period in fiscal 2022 2023 was primarily due to lower higher cash paid for acquisitions of $365.0 million $67.8 million, and partially offset by higher proceeds from the sales and maturities of investments of $40.0 million, partially offset by higher purchases of property and equipment of $33.6 million, and higher purchases of investments of $22.6 million $43.5 million.

Cash Used in Financing Activities

The increase decrease in cash used in financing activities for the nine three months ended July 31, 2023 January 31, 2024 compared to the same period in fiscal 2022 2023 was primarily due to higher lower stock repurchases of $148.5 million, and $305.7 million as we are suspending our stock repurchase program in connection with the Ansys Merger, partially offset by higher income taxes paid for net share settlements of $49.8 million, partially offset by lower debt repayments $55.2 million and the payment of $74.2 million.bridge financing costs of $48.0 million in connection with the Ansys Merger.

Credit Bridge Commitment Letter, Term Loan and Term Loan Revolving Credit Facilities

On December 14, 2022 January 15, 2024, we entered into the Bridge Commitment Letter with certain financial institutions that committed to provide, subject to the satisfaction of customary closing conditions, the Bridge Commitment in an aggregate principal amount of up to $16.0 billion (which we subsequently reduced to $11.7 billion in connection with our entry into the Term Loan Agreement as further described below). The proceeds of any borrowing under the Bridge Commitment would be used for the purpose of financing a portion of the cash consideration to be paid in the

Ansys Merger and paying related fees and expenses in connection with the Ansys Merger and the other transactions contemplated by the Merger Agreement.

The commitments to provide the Bridge Commitment may be terminated in whole or reduced in part, at our discretion. In addition, the Bridge Commitment Letter provides that net cash proceeds received from certain debt and equity issuances or the sale of certain businesses and assets, as well as term loan commitments under certain qualifying term loan facilities, will result in mandatory commitment reductions under the Bridge Commitment.

On February 13, 2024, we entered into the Term Loan Agreement in connection with the financing of the pending Ansys Merger. The Term Loan Agreement provides us with the ability to borrow up to $4.3 billion at the closing of the Ansys Merger, subject to the satisfaction of customary closing conditions for similar facilities, for the purpose of financing a portion of the cash consideration to be paid in the Ansys Merger and paying related fees and expenses in connection with the Ansys Merger and the other transactions contemplated by the Merger Agreement. Effective February 13, 2024, we terminated $4.3 billion of the original $16.0 billion of commitments under the Bridge Commitment, in lieu of which Synopsys expects to borrow the committed amounts available under the Term Loan Agreement.

The Term Loan Agreement provides for two tranches of senior unsecured term loans: a $1.45 billion tranche (Tranche 1) that matures two years after funding and a $2.85 billion tranche (Tranche 2) that matures three years after funding.

Under the Term Loan Agreement, borrowings will bear interest on the principal amount outstanding at a floating rate based on, at Synopsys' election, (i) the Adjusted Term SOFR Rate (as defined in the Term Loan Agreement) plus an applicable margin based on the credit ratings of Synopsys ranging from 0.875% to 1.375% (in the case of Tranche 1) or 1.000% to 1.500% (in the case of Tranche 2) or (ii) the ABR (as defined in the Term Loan Agreement) plus an applicable margin based on the credit ratings of Synopsys ranging from 0.000% to 0.375% (in the case of Tranche 1) or 0.000% to 0.500% (in the case of Tranche 2).

We will also pay a ticking fee under the Term Loan Agreement in an amount equal to a rate per annum equal to 0.10% times the actual daily undrawn portion of the commitments in respect of the term loan facility, from and including May 14, 2024 to but excluding the earlier of (i) termination or expiration of the commitments under the term loan facility or (ii) the funding of the commitments.

The Term Loan Agreement contains a financial covenant requiring that Synopsys maintain a maximum consolidated leverage ratio commencing the last day of the first fiscal quarter ending on or after the completion of the Ansys Merger, as well as other non-financial covenants.

On February 13, 2024, we entered into a Fifth Extension and Sixth Amendment Agreement (the Fifth Sixth Amendment), which amended and restated our previous revolving credit agreement, dated as of January 22, 2021 December 14, 2022 (as amended and restated, the Revolving Credit Agreement).

The Fifth Under the Sixth Amendment, increased certain amendments became effective on February 13, 2024 and certain additional amendments will become effective upon the existing senior unsecured completion of the Ansys Merger. Upon the effective date, the Sixth Amendment amended the financial covenant to allow netting of the cash proceeds of certain debt incurred to finance the Ansys Merger as well as certain other modifications set forth therein. Upon the completion of the Ansys Merger, the Sixth Amendment, among other things:

- amends the applicable margin used to determine the interest that accrues on loans and the facility fee payable under the revolving credit facility (the Revolver) from $650.0 million to be based on our credit ratings;
- amends the financial covenant thresholds under the financial covenant in the Revolving Credit Agreement requiring us to maintain a maximum consolidated leverage ratio; and
- amends certain conditions to borrowing, other non-financial covenants and events of default.

The Revolving Credit Agreement provides an unsecured $850.0 million committed multicurrency revolving credit facility and extended the maturity date from January 22, 2024 to December 14, 2027, which could be further extended at our option. The Credit Agreement also provides an unsecured uncommitted incremental revolving loan facility of up to $150.0 million million. The maturity date of the revolving loan facility is December 14, 2027, which may be extended at Synopsys' option. There was no outstanding balance under the Revolving Credit Agreement as of January 31, 2024.

Interest accrues on dollar-denominated loans at a floating rate based on, at Synopsys' election, (i) the Adjusted Term SOFR Rate (as defined in the aggregate principal amount. Revolving Credit Agreement) plus an applicable margin or (ii) the ABR (as defined in the Revolving Credit Agreement) plus an applicable margin. The applicable margin for Adjusted Term SOFR Rate based loans ranges from 0.785% to 0.975%, based upon Synopsys' consolidated leverage ratio. The applicable margin for ABR based loans is 0.000%. In addition to the interest on any outstanding loans, Synopsys is also required to pay a facility fee on the entire portion of the revolving credit facility ranging from 0.09% to 0.15% based on Synopsys' consolidated leverage ratio on the daily amount of the revolving commitment.

Subject to the completion of the Ansys Merger, interest under the Revolving Credit Agreement will accrue on dollar-denominated loans at a floating rate based on, at Synopsys' election, (i) the Adjusted Term SOFR Rate plus an applicable margin based on our credit ratings ranging from 0.795% to 1.200% or (ii) the ABR plus an applicable margin based on our credit ratings ranging from 0.000% to 0.200%. In addition to the interest on any outstanding loans, Synopsys will also be required to pay a facility fee on the entire portion of the revolving credit facility ranging from 0.080% to 0.175% based on the credit ratings of Synopsys on the daily amount of the revolving commitment.

The Revolving Credit Agreement contains a financial covenant requiring us to maintain a maximum consolidated leverage ratio, as well as other non-financial covenants. There was no outstanding balance under As of January 31, 2024, we were in compliance with the Revolver as of July 31, 2023. financial covenant.

In July 2018, we entered into a 12-year 220.0 million Renminbi (approximately $33.0 million) credit agreement with a lender in China to support our facilities expansion. Borrowings bear interest at a floating rate based on the 5 year Loan Prime Rate plus 0.74%. As of July 31, 2023 January 31, 2024, we had $18.2 million $17.0 million outstanding balance under the agreement.

See Note 10. *Credit Bridge Commitment Letter, Term Loan and Term Loan Revolving Credit Facilities* of the *Notes to Condensed Consolidated Financial Statements* in this Quarterly Report for more information.

Stock Repurchase Program

In September fiscal 2022, our Board of Directors (the Board) approved a replenishment of our stock repurchase program (the Program) with authorization to purchase up to $1.5 billion of our common stock.

In May 2023, we entered into an accelerated stock repurchase agreement (the May 2023 ASR) to repurchase an aggregate of $300.0 million of our common stock. Pursuant to the May 2023 ASR, we made a prepayment of

$300.0 million to receive initial deliveries of shares valued at $255.0 million. The remaining balance of $45.0 million was settled in August 2023. Total shares purchased under the May 2023 ASR were approximately 0.7 million shares, at an average purchase price of $436.93 per share.

As of July 31, 2023 January 31, 2024, $494.3 million $194.3 million remained available for future stock repurchases under the Program. The pace of our repurchase activity will depend on factors such as our working capital needs, our cash requirements for acquisitions, our debt repayment obligations, our stock price, and economic and market conditions.

The IR Act was enacted in In connection with the United States on August 16, 2022. The IR Act imposes a 1% excise tax on the fair market value of pending Ansys Merger, we are suspending our stock repurchases made by covered corporations after December 31, 2022. The total taxable value of shares repurchased is reduced by the fair market value of any newly issued shares during the taxable year. We do not expect a material impact on repurchase program until we are able to reduce our overall capital allocation strategy or our consolidated financial statements. Risks related to the IR Act are described in Part II, Item 1A, *Risk Factors*.expected debt levels.

Item 3. *Quantitative and Qualitative Disclosures About Market Risk*

See Other Commitments — Credit and Note 10. *Bridge Commitment Letter, Term Loan and Revolving Credit Facilities* of the *Notes to Condensed Consolidated Financial Statements* and Item 7, 2, *Management's Discussion and Analysis of Financial Condition and Results of Operations* contained in Part II I of our Annual this Quarterly Report regarding borrowings under our senior unsecured revolving credit facility. Term Loan Agreement and Revolving Credit Agreement.

As of July 29, 2023 February 3, 2024, our exposure to market risk had not changed materially since October 29, 2022 October 28, 2023. For more information on financial market risks related to changes in interest rates and foreign currency rates, reference is made to Item 7A, *Quantitative and Qualitative Disclosures About Market Risk* contained in Part II of our Annual Report.

Item 4. *Controls and Procedures*

(a) *Evaluation of Disclosure Controls and Procedures.* As of July 29, 2023 February 3, 2024, Synopsys carried out an evaluation under the supervision and with the participation of Synopsys' management, including the Chief Executive Officer (CEO) and Chief Financial Officer (CFO), of the effectiveness of the design and operation of Synopsys' disclosure controls and procedures (as such term is defined in Rules 13a-15(e) and 15d-15(e) under the Securities Exchange Act of 1934, as amended (the Exchange Act)). There are inherent limitations to the effectiveness of any system of disclosure controls and procedures. Accordingly, even effective disclosure controls and procedures can only provide reasonable, not absolute, assurance of achieving their control objectives. Our CEO and CFO have concluded that, as of July 29, 2023 February 3, 2024, Synopsys' disclosure controls and procedures were effective to provide reasonable assurance that information required to be disclosed in the reports Synopsys files and submits under the Exchange Act is recorded, processed, summarized and reported as and when required, and that such information is accumulated and communicated to Synopsys' management, including the CEO and CFO, to allow timely decisions regarding its required disclosure.

(b) *Changes in Internal Control over Financial Reporting.* There were no changes in Synopsys' internal control over financial reporting during the fiscal quarter ended July 29, 2023 February 3, 2024 that have materially affected, or are reasonably likely to materially affect, Synopsys' internal control over financial reporting.

PART II. OTHER INFORMATION

Item 1. *Legal Proceedings*

We are subject to routine legal proceedings, as well as demands, claims and threatened litigation that arise in the normal course of our business. The ultimate outcome of any litigation is often uncertain and unfavorable outcomes could have a negative impact on our results of operations and financial condition. Regardless of outcome, litigation can have an adverse impact on Synopsys because of the defense costs, diversion of management resources and other factors.

We regularly review the status of each significant matter and assess its potential financial exposure. If the potential loss from any claim or legal proceeding is considered probable and the amount is estimable, we accrue a liability for the estimated loss. Legal proceedings are inherently uncertain and as circumstances change, it is possible that the amount of any accrued liability may increase, decrease or be eliminated.

Hungarian Tax Matter

See Note 19. *Income Taxes* of the *Notes to Condensed Consolidated Financial Statements* in this Quarterly Report for a discussion of our Hungary auditunder the heading "Non-U.S. Examinations."

Bell Semic Actions

On April 27, 2022, Bell Semiconductor LLC (Bell Semic), a patent monetization entity, began filing a series of patent infringement lawsuits and complaints with the U.S. International Trade Commission (ITC) against certain technology companies alleging that certain semiconductor devices designed using certain design tools offered by electronic design automation (EDA) vendors, including Synopsys, infringe upon one or more patents held by Bell Semic. Bell Semic seeks sought money damages, attorneys' fees and costs, and a permanent injunction prohibiting the defendants from using allegedly infringing EDA design tools.

On April 29, 2022, In the ITC investigations, Bell Semic also began filing a series of complaints with the U.S. International Trade Commission (ITC) alleging violations of Section 337 of the Tariff Act of 1930 and seeking sought limited exclusion orders preventing the respondents from importing into the United States semiconductor devices designed using certain design tools offered by EDA vendors, including Synopsys, and cease-and-desist orders prohibiting respondents from importing, selling, offering for sale, advertising, or transferring products made using certain design tools offered by EDA vendors, including Synopsys.On November 8, 2022,the ITC instituted the investigations. On May 8, 2023, In May 2023, Bell Semic filed motions to voluntarily withdraw the pending ITC investigations.

Synopsys is was not named as a respondent or defendant in any of the aforementioned actions; however, certain of the respondents and defendants are Synopsys customers and have sought defense and indemnity from Synopsys under their End User License Agreements in response to Bell Semic's allegations. Synopsys is defending defended some of its customers consistent with the terms of its End User License Agreement.

In November and December 2022, Synopsys and other EDA vendors filed actions for Declaratory Judgment of invalidity and/or non-infringement as to each of the six patents asserted by Bell Semic in the aforementioned actions. In December 2023, the Court granted Synopsys' Motion for Summary Judgment of No Indirect Infringement of the Asserted Claims and stated it would entertain a motion for attorney fees. After the Court's ruling, Bell Semic's motion Semic agreed to dismiss provide Synopsys with a license to the six patents at issue in the Declaratory Judgment actions was denied on April 27, 2023. Synopsys and other EDA vendors also filed Motions for Preliminary Injunction seeking case, as well as a license to enjoin additional patents in Bell Semic's patent portfolio, at no cost to Synopsys. Bell Semic from proceeding with the ITC investigations and patent infringement lawsuits. The Motions for Preliminary Injunction were denied without prejudice on April 27, 2023. Bell Semic responded also agreed to dismiss its counterclaims in the Declaratory Judgment complaint on May 11, 2023, asserting counterclaims for patent action, and its infringement claims against the EDA vendors. The customers Synopsys was defending, with prejudice. Those dismissals with prejudice have been entered by the various courts overseeing those actions, for Declaratory Judgment are set for trial on January 16, 2024 concluding the Bell Semic actions.

Item 1A. *Risk Factors*

Risk Factor Summary

Our business is subject to numerous risks and uncertainties. These risks include, but are not limited to, the following:

Industry Risks

- *Uncertainty in the macroeconomic environment, and its potential impact on the semiconductor and electronics industries, may negatively affect our business, operating results and financial condition.*
- *The growth of our business depends primarily on the semiconductor and electronics industries.*
- *We operate in highly competitive industries, and if we do not continue to meet our customers' demand for innovative technology at lower costs, our products may not be competitive or may become obsolete.*
- *We are subject to governmental export and import requirements that could subject us to liability and restrict our ability to sell our products and services, which could impair our ability to compete in international markets.*
- *Consolidation among our customers and within the industries in which we operate, as well as our dependence on a relatively small number of large customers, may negatively impact our operating results.*

Business Operations Risks

- *The global nature of our operations exposes us to increased risks and compliance obligations.*
- *Our operating results may fluctuate in the future, which may adversely affect our stock price.*
- *Cybersecurity threats or other security breaches could compromise sensitive information belonging to us or our customers and could harm our business and our reputation, particularly that of our security testing solutions.*
- *If we fail to protect our proprietary technology, our business will be harmed.*
- *We may not be able to realize the potential financial or strategic benefits of the transactions we complete, or find suitable target businesses and technology to acquire.*
- *If we fail to timely recruit and/or retain senior management and key employees globally, our business may be harmed.*
- *We may pursue new product and technology initiatives, and if we fail to successfully carry out these initiatives, we could be adversely impacted.*
- *We may have to invest more resources in research and development than anticipated, which could increase our operating expenses and negatively affect our operating results.*
- *Product errors or defects could expose us to liability and harm our reputation and we could lose market share.*
- *Our hardware products, which primarily consist of prototyping and emulation systems, subject us to distinct risks.*
- *From time to time, we are subject to claims that our products infringe on third-party intellectual property rights.*
- *We may not be able to continue to obtain licenses to third-party software and intellectual property on reasonable terms or at all, which may disrupt our business and harm our financial results.*
- *In preparing our financial statements we make certain assumptions, judgments and estimates that affect amounts reported in our consolidated financial statements, which, if not accurate, may significantly impact our financial results.*
- *Liquidity requirements in our U.S. operations may require us to raise cash in uncertain capital markets, which could negatively affect our financial condition.*

Risks Related to the Ansys Merger

- *We may fail to complete the Ansys Merger or may not complete it on the terms described herein or in our other filings with the SEC.*
- *The Ansys Merger is subject to the receipt of governmental approvals that may impose conditions that could have an adverse effect on us or, if not obtained, could prevent completion of the Ansys Merger.*
- *Failure to realize the benefits expected from the Ansys Merger could adversely affect our business, operating results and financial condition.*
- *As a result of the Ansys Merger, we anticipate that the scope and size of our operations and business will substantially change and will result in certain incremental risks to us, including increased competition. We may not realize the full expected benefits of the Ansys Merger.*
- *Our significant debt may limit our financial flexibility following the Ansys Merger.*
- *The covenants contained in the agreements governing our indebtedness following the Ansys Merger may impose restrictions on us and certain of our subsidiaries that may affect our ability to operate our businesses.*

Legal and Regulatory Risks

- *Our results could be adversely affected by a change in our effective tax rate, changes in our geographical earnings mix, unfavorable government reviews of our tax returns, material differences between our forecasted and actual annual effective tax rates, or future changes to our tax structure.*
- *Our business is subject to evolving corporate governance and public disclosure regulations and expectations, including with respect to environmental, social and governance matters,that could expose us to numerous risks.*
- *Changes in the U.S. generally accepted accounting principles (U.S. GAAP) could adversely affect our financial results and may require significant changes to our internal accounting systems and processes.*

- *We may be subject to litigation proceedings that could harm our business.*
- *There are inherent limitations on the effectiveness of our controls and compliance programs.*

General Risks

- *Our investment portfolio may be impaired by any deterioration of capital markets.*
- *Catastrophic events and the effects of climate change, pandemics or other unexpected events may disrupt our business and harm our operating results.*

Factors that May Affect Future Results

A description of the risk factors associated with our business is set forth below. Some of these risks are highlighted in the following discussion and in *Management's Discussion and Analysis of Financial Condition* and *Results of Operations*, *Legal Proceedings*, and *Quantitative and Qualitative Disclosures About Market Risk. Risk* of this Quarterly Report. The occurrence of any of these risks or additional risks and uncertainties not presently known to us or that we currently believe to be immaterial could materially and adversely affect our business, financial condition, operating results and stock price. These risks and uncertainties could cause our actual results to differ materially from the results contemplated by the forward-looking statements contained in this Quarterly Report on Form 10-Q. Report. Investors should carefully consider all relevant risks and uncertainties before investing in our common stock.

Industry Risks

Uncertainty in the macroeconomic environment, and its potential impact on the semiconductor and electronics industries, may negatively affect our business, operating results and financial condition.

Uncertainty in the macroeconomic environment, including the effects of, among other things, increased global inflationary pressures and interest rates, U.S. federal debt ceiling negotiations, bank failures, potential economic slowdowns or recessions, supply chain disruptions, geopolitical pressures, fluctuations in foreign exchange rates and associated global economic conditions have resulted in volatility in credit, equity and foreign currency markets. This uncertain macroeconomic environment could lead some of our customers to postpone their decision-making, decrease their spending and/or delay their payments to us. Such caution by customers could, among other things, limit our ability to maintain or increase our sales or recognize revenue from committed contracts.

For example, we continued continue to experience a minor an impact from the current macroeconomic environment in our Software Integrity segment as customers have applied elevated levels of scrutiny to purchasing decisions due in part to their own budget uncertainty, which has, in some cases, caused some customers affected customer order size, pricing and/or contract duration. In November 2023, we announced that we decided to elect shorter term contracts due explore strategic alternatives for our Software Integrity segment. As a part of this process, our management is considering a full range of strategic opportunities. At this time we cannot predict the impact that such strategic alternatives might have on our business, operations or financial condition.This announcement and resulting uncertainty could have a number of negative effects on our current business, including potentially disrupting our regular operations, diverting the attention of our workforce and management team and increasing undesired workforce turnover. It could also disrupt existing business relationships, make it harder to their own budget uncertainty. develop new business relationships, or otherwise negatively impact the way that we operate our business, which could negatively impact our business, operating results or financial condition.

If these macroeconomic uncertainties persist and economic conditions continue to deteriorate, then the semiconductor and electronics industries could fail to grow. Additionally, uncertain macroeconomic conditions could also have the effect of increasing other risks and uncertainties facing our business, which could have a material

adverse effect on our operating results and financial condition. Such risks that may be heightened by uncertain macroeconomic conditions include China's stated policy of becoming a global leader in the semiconductor industry, which may lead to increased competition and or further disruption of international trade relationships, including, but not limited to, additional government trade restrictions. For more on risks related to government export and import restrictions such as the U.S. government's Entity List and Export Regulations (as defined below), see "*Industry Risks – We are subject to governmental export and import requirements that could subject us to liability and restrict our ability to sell our products and services, which could impair our ability to compete in international markets.*"

Adverse economic conditions affect demand for devices that our products help create, such as the ICs incorporated in personal computers, smartphones, automobiles and servers. Longer-term reduced demand for these or other products could result in reduced demand for design solutions and significant decreases in our average selling prices and product sales over time. Future economic downturns could also adversely affect our business. business, operating results and financial condition. In addition, if our customers or distributors build elevated inventory levels, we could experience a decrease in short-term and/or long-term demand for our products. If any of these events or disruptions were to occur, the demand for our products and services could be adversely affected along with our business, operating results and financial condition. Further, the The negative impact of these events or disruptions may also be deferred due to our business model.

Further economic instability could also adversely affect the banking and financial services industry and result in bank failures or credit downgrades of the banks we rely on for foreign currency forward contracts, credit and banking transactions, and deposit services, or cause them to default on their obligations. Additionally, the banking and financial services industries are subject to complex laws and are heavily regulated. There is uncertainty regarding how proposed, contemplated or future changes to the laws, policies and regulations governing our industry, the banking and financial services industry and the economy could affect our business, including rising increased global interest rates and increased global inflationary pressure. A deterioration of conditions in worldwide credit markets could limit our ability to obtain external financing to fund our operations, and capital expenditures. expenditures or pending acquisitions, such as the Ansys Merger. In addition, difficult economic conditions may also result in a higher rate of losses on our accounts receivable due to credit defaults. Any of the foregoing could cause adverse effects on our business, operating results and financial condition, and could cause our stock price to decline.

The growth of our business depends primarily on the semiconductor and electronics industries.

The growth of the EDA industry as a whole, sales in our Design Automation and Design IP segments, and, to some extent, our Software Integrity segment sales are dependent on the semiconductor and electronics industries. A substantial portion of our business and revenue depends upon the commencement of new design projects by semiconductor manufacturers, systems companies and their customers. The increasing complexity of designs of SoCs, ICs, electronic systems and customers' concerns about managing costs have previously led to, and in the future could lead to, a decrease in design starts and design activity in general. For example, in response to this increasing complexity, some customers may choose to focus on one discrete phase of the design process or opt for less advanced, but less risky, manufacturing processes that may not require the most advanced EDA products. Demand for our products and services could decrease and our business, operating results and financial condition and results of operations could be adversely affected if growth in the semiconductor and electronics industries slows or stalls, including, among other things, due to increased global inflationary pressures and interest rates, U.S. federal debt ceiling negotiations, bank failures or a continued or worsening global supply chain disruption, geopolitical pressures or from economic slowdowns or recessions. Additionally, as the EDA industry has matured, consolidation stronger competition has resulted in stronger competition emerged from companies better able to compete as sole source vendors. This increased competition may cause our revenue growth rate to decline and exert downward pressure on our operating margins, which would have an adverse effect on our business and financial condition.

Furthermore, the semiconductor and electronics industries have become increasingly complex and interconnected ecosystems. Many of our customers outsource the manufacturing of their semiconductor designs to foundries. Our customers also frequently incorporate third-party IP, whether provided by us or other vendors, into their designs to improve the efficiency of their design process. We work closely with major foundries to ensure that our EDA, IP and manufacturing solutions are compatible with their manufacturing processes. Similarly, we work closely with other major providers of semiconductor IP, particularly microprocessor IP, to optimize our EDA tools for use with their IP designs and to assure that their IP and our own IP products work effectively together, as we may each provide for the design of separate components on the same chip. If we fail to optimize our EDA and IP solutions for use with major foundries' manufacturing processes or major IP providers' products, or if our access to such foundry processes or third-party IP products is hampered, then our solutions may become less desirable to our customers, resulting in an adverse effect on our business and financial condition.

We operate in highly competitive industries, and if we do not continue to meet our customers' demand for innovative technology at lower costs, our products may not be competitive or may become obsolete.

In our Design Automation segment, we compete against EDA vendors that offer a variety of products and services, such as Cadence Design Systems, Inc. and Siemens EDA. We also compete with other EDA vendors, including new entrants to the marketplace, that offer products focused on one or more discrete phases of the IC design process. Moreover, our customers internally develop design tools and capabilities that compete with our products. In our Design IP segment, we compete against a growing number of silicon IP providers as well as our customers' internally developed IP. In our Software Integrity segment, we compete with other solution providers, many of which focus on specific aspects of software security or quality analysis. We also compete with frequent new entrants, which include start-up companies and more established software companies.

The industries in which we operate are highly competitive, with new competitors entering these markets both domestically and internationally. For example, China has implemented national policies favoring Chinese companies and has formed government-backed investment funds as it seeks to build independent EDA capabilities and compete internationally in the semiconductor industry. The demand for our products and services is dynamic and depends on a number of factors, including, among other things, demand for our customers' products, design starts and our customers' budgetary constraints. Technology in these industries evolves rapidly and is characterized by frequent product introductions and improvements as well as changes in industry standards and customer requirements. For example, the adoption of cloud computing and artificial intelligence AI technologies can bring new demands demand and also challenges in terms of disruption to both business models and our existing technology offerings. Our efforts in developing such new technology solutions, including, for example, our current efforts in creating cloud computing and AI solutions, may not succeed. Semiconductor device functionality requirements continually increase while feature widths decrease, which substantially increasing increases the complexity, cost and risk of chip design and manufacturing. At the same time, our customers and potential customers continue to demand a lower total cost of design, which can lead to the consolidation of their purchases from one vendor. In order to succeed in this environment, we must successfully meet our customers' technology requirements and increase the value of our products, while also striving to reduce their overall costs and our own operating costs.

We compete principally on the basis of technology, product quality and features (including (such as ease-of-use), license or usage terms, post-contract customer support, interoperability among products, and price and payment terms. Specifically, we believe the following competitive factors affect our success:

- Our ability to anticipate and lead critical development cycles and technological shifts, innovate rapidly and efficiently, improve our existing software and hardware products, and successfully develop or acquire such new products;
- Our ability to offer products that provide both a high level of integration into a comprehensive platform and a high level of individual product performance;
- Our ability to enhance the value of our offerings through more favorable terms such as expanded license usage, future purchase rights, price discounts and other differentiating rights, such as multiple tool copies, post-contract customer support, "re-mix" rights that allow customers to exchange the software they initially licensed for other Synopsys products, and the ability to purchase pools of technology; terms;
- Our ability to manage an efficient supply chain to ensure availability of hardware products; product availability;
- Our ability to compete on the basis of payment terms; and
- Our ability to provide engineering and design consulting for our products.

If we fail to successfully manage any of these competitive factors, fail to successfully balance the conflicting demands for innovative technology and lower overall costs, or fail to address new competitive forces, our business, operating results and financial condition will be adversely affected.

We are subject to governmental export and import requirements that could subject us to liability and restrict our ability to sell our products and services, which could impair our ability to compete in international markets.

We are subject to export controls, laws and regulations that restrict selling, shipping or transmitting certain of our products and services and transferring certain of our technology outside the United States. These requirements also restrict domestic release of software and technology to certain foreign nationals. In addition, we are subject to customs and other import requirements that regulate imports that may be important for our business.

If we fail to comply with the U.S. Export Administration Regulations or other U.S. or non-U.S. export requirements (collectively, the Export Regulations), we could be subject to substantial civil and criminal penalties, including fines for the company and the possible loss of the ability to engage in exporting and other international transactions. Due to the nature of our business and technology, the Export Regulations may also subject us to governmental inquiries regarding transactions between us and certain foreign entities. For example, we have received administrative subpoenas from the U.S. Bureau of Industry and Security (the BIS) requesting production of information and documentation relating to transactions with certain Chinese entities. We believe that we are in full compliance with all applicable regulations and are working with the BIS to respond to its subpoenas. However, we cannot predict the outcome of the inquiries or their potential effect on our operations or financial condition.

We believe that the Export Regulations do not materially impact our business at this time, but we cannot predict the impact that additional regulatory changes may have on our business in the future. The United States has published significant changes to the Export Regulations with respect to Russia and China, and we anticipate additional changes to the Export Regulations in the future. For example, the United States government has implemented controls on advanced computing ICs, computer commodities that contain such ICs, and certain semiconductor manufacturing items, as well as controls on transactions involving items for supercomputer and semiconductor manufacturing end-users. The new controls expand the scope of foreign-produced items subject to license requirements for certain entities on the U.S. government's Entity List. Future changes to the Export Regulations, including changes in the enforcement and scope of such regulations, may create delays in the introduction of our products or services in international markets or could prevent our customers with international operations from deploying our products or services globally. In some cases, such changes could prevent the export or import of our products.

Consolidation among our customers and within the industries in which we operate, as well as our dependence on a relatively small number of large customers, may negatively impact our operating results.

A number of business combinations and strategic partnerships among our customers in the semiconductor and electronics industries have occurred over the last several years, and more could occur in the future. Consolidation among our customers could lead to fewer customers or the loss of customers, increased customer bargaining power or reduced customer spending on software and services. Further, we depend on a relatively small number of large customers, and on such customers continuing to renew licenses and purchase additional products from us, for a large portion of our revenues. Consolidation among our customers could also reduce demand for our products and services if customers streamline research and development or operations, or reduce or delay purchasing decisions.

Reduced customer spending or the loss of customers, particularly our large customers, could adversely affect our business, operating results and financial condition.

In addition, we and our competitors may acquire businesses and technologies to complement and expand our respective product offerings. Consolidated competitors could have considerable financial resources and channel influence as well as broad geographic reach, which would may enable them to be more competitive in, among other things, product differentiation, breadth of technology portfolio, pricing, marketing, services support and more. If our competitors consolidate or acquire businesses and technologies that we do not offer, they may be able to offer a larger technology portfolio, additional support and service capability support. Such consolidations or lower prices, which acquisitions could negatively impact our business, operating results and operating results. financial condition.

Business Operations Risks

The global nature of our operations exposes us to increased risks and compliance obligations that may adversely affect our business. obligations.

We derive roughly half of our revenue from sales outside the United States, and we expect our orders and revenue to continue to depend on sales to customers outside the U.S. We have also continually expanded our non-U.S. operations. This strategy requires us to recruit and retain qualified technical and managerial employees, manage multiple remote locations performing complex software development projects, and ensure intellectual property protection outside of the U.S. Our international operations and sales subject us to a number of increased risks, including:

- Ineffective or weaker legal protection of intellectual property rights; including, among others:
- Economic slowdowns, recessions or uncertainty in financial markets, including, among other things, the impact of increased global inflationary pressures rising and interest rates, U.S. federal debt ceiling negotiations and bank failures; rates;
- Uncertain economic, legal and political conditions in China, Europe and other regions where we do business, including, for example, the unknown impact of current and future U.S. and Chinese trade regulations, changes in China-Taiwan relations, the regional or global military conflict between Russia conflicts, and Ukraine and the related sanctions and other financial penalties imposed on Russia by the United States, the European Union, the United Kingdom and other countries; participants in such conflicts;
- Government trade restrictions, including tariffs, export controls or other trade barriers, and changes to existing trade arrangements, between various countries such as China; including the unknown impact of current and future U.S. and Chinese trade regulations;
- Ineffective or weaker legal protection of intellectual property rights;
- Difficulties in adapting to cultural differences in the conduct of business, which may include business practices in which we are prohibited from engaging by the Foreign Corrupt Practices Act or other anti-corruption laws; and
- Financial risks such as longer payment cycles, changes in currency exchange rates and difficulty in collecting accounts receivable; receivable.
- Inadequate local infrastructure that could result in business disruptions;
- Additional taxes, interest and potential penalties and uncertainty around changes in tax laws of various countries; and
- Other factors beyond our control such as natural disasters, terrorism, civil unrest, war and infectious diseases and pandemics.

Furthermore, if any of the foreign economies in which we do business deteriorate or if we fail to effectively manage our global operations, our business and operating results of operations will be harmed.

There is inherent risk, based on the complex relationships between certain Asian countries such as China, where we derive a growing percentage of our revenue, and the United States, that political, diplomatic or military events could result in trade disruptions, including tariffs, trade embargoes, export restrictions and other trade barriers. A significant trade disruption, export restriction, or the establishment or increase of any trade barrier in any area where we do business could reduce customer demand and cause customers to search for substitute products and services, make our products and services more expensive or unavailable for customers, increase the cost of our products and services, have a negative impact on customer confidence and spending, make our products less competitive, or otherwise have a materially adverse impact on our backlog, future revenue and profits, our customers' and suppliers' businesses, business, operating results and our results of operations. financial condition. For example and as described above, the ongoing geopolitical and economic uncertainty between the U.S. and China, the unknown impact of current and future U.S. and Chinese trade regulations, and other geopolitical risks with respect to

China and Taiwan may cause disruptions in the markets and industries we serve and our supply chain, decreased demand from customers for products using our solutions or other disruptions, which could, directly or indirectly, materially harm our business, operating results and financial condition and results of operations. condition. For more on risks related to government export and import restrictions such as the U.S. government's Entity List and the Export Regulations see "*Industry Risks – We are subject to governmental export and import requirements that could subject us to liability and restrict our ability to sell our products and services, which could impair our ability to compete in international markets.*"

In response to the U.S. adopting tariffs and trade barriers or taking other actions, other countries may also adopt tariffs and trade barriers that could limit our ability to offer our products and services. Current and potential customers who are concerned or affected by such tariffs or restrictions may respond by developing their own products or replacing our solutions, which would have an adverse effect on our business. In addition, government or customer efforts, attitudes, laws or policies regarding technology independence may lead to non-U.S. customers favoring their domestic technology solutions that could compete with or replace our products, which would also have an adverse effect on our business.

In addition to tariffs and other trade barriers, our global operations are subject to numerous U.S. and foreign laws and regulations such as those related to anti-corruption, tax, corporate governance, imports and exports, financial and other disclosures, privacy and labor relations. These laws and regulations are complex and may have differing or conflicting legal standards, making compliance difficult and costly. In addition, there is uncertainty regarding how proposed, contemplated or future changes to these complex laws and regulations could affect our business. We may incur substantial expense in complying with the new obligations to be imposed by these laws and regulations, and we may be required to make significant changes in our business operations, all of which may adversely affect our revenues and our business overall. If we violate these laws and regulations, we could be subject to fines, penalties or criminal sanctions, and may be prohibited from conducting business in one or more countries. Any violation individually or in the aggregate could have a material adverse effect on our operations and financial condition.

Our financial results are also affected by fluctuations in foreign currency exchange rates. A weakening U.S. dollar relative to other currencies increases expenses of our foreign subsidiaries when they are translated into U.S. dollars in our consolidated statements of income. Likewise, a strengthening U.S. dollar relative to other currencies, including the renminbi or Yen, reduces revenue of our foreign subsidiaries upon translation and consolidation. Exchange rates are subject to significant and rapid fluctuations due to a number of factors, including interest rate changes and political and economic uncertainty. Therefore, we cannot predict the prospective impact of exchange rate fluctuations. We may be unable to hedge all of our foreign currency risk, which could have a negative impact on our results of operations.

The ongoing COVID-19 pandemic could have a material adverse effect on our business, operations and financial condition.

The ongoing COVID-19 pandemic has caused minor disruptions to our business operations to date, but could have a material adverse effect on our business, operations and financial condition in the future. For example, we have previously experienced limited hardware supply chain and logistical challenges as well as a slowdown in customer commitments in our Software Integrity segment. In response to the COVID-19 pandemic, governments and businesses imposed restrictions, which significantly curtailed global, regional and national economic activity and have caused substantial volatility and disruption in global financial markets.

The extent to which the COVID-19 pandemic impacts our business operations in future periods will depend on multiple uncertain factors, including, among other things, the duration and scope of the pandemic, its overall negative impact on the global economy, the ability to secure adequate and timely supply of equipment and materials from suppliers for our hardware products, and the ability to develop and deliver our products. In addition, continued weak or worsening economic conditions may result in impairment in value of our tangible and intangible assets. The impact of the ongoing COVID-19 pandemic may also have the effect of heightening many of the other risks and uncertainties described in this *Risk Factors* section.operating results.

Our operating results may fluctuate in the future, which may adversely affect our stock price.

Our operating results are subject to quarterly and annual fluctuations, which may adversely affect our stock price. Our historical results should not be viewed as indicative of our future performance due to these periodic fluctuations.

Many factors may cause our backlog, revenue or earnings to fluctuate, including: including, among other things:

- Changes in demand for our products—especially products, such as hardware, generating upfront revenue—due to fluctuations in demand for our customers' products and due to constraints in our customers' budgets for research and development and EDA products and services;
- Changes in demand for our products due to customers reducing their expenditures, whether as a cost-cutting measure or a result of their insolvency or bankruptcy, and whether due to increased global inflationary pressures and interest rates and a sustained global semiconductor shortage or other reasons;
- Product competition in the EDA industry, which can change rapidly due to industry or customer consolidation and technological innovation;
- Our ability to innovate and introduce new products and services or effectively integrate products and technologies that we acquire;
- Failures or delays in completing sales due to our lengthy sales cycle, which often includes a substantial customer evaluation and approval process because of the complexity of our products and services;
- Our ability to implement effective cost control measures;
- Our dependence on a relatively small number of large customers, and on such customers continuing to renew licenses and purchase additional products from us, for a large portion of our revenue;
- Changes to the amount, composition and valuation of, and any impairments to or write-offs of, our assets or strategic investments;
- Changes in the mix of our products sold, as increased sales of our products with lower gross margins, such as our hardware products, may reduce our overall margins;
- Expenses related to our acquisition and integration of businesses and technologies; technologies, including our expenses related to the Ansys Merger;
- Changes in tax rules, as well as changes to our effective tax rate, including the tax effects of infrequent or unusual transactions and tax audit settlements;
- Delays, increased costs or quality issues resulting from our reliance on third parties to manufacture our hardware products, which includes a sole supplier for certain hardware components;
- Natural variability in the timing of IP drawdowns, which can be difficult to predict;

- General economic and political conditions that affect the semiconductor and electronics industries, such as disruptions to international trade relationships, including tariffs, export licenses, or other trade barriers affecting our or our suppliers' products; and
- Changes in accounting standards, which may impact the way we recognize our revenue and costs and impact our earnings.

The timing of revenue recognition may also cause our revenue and earnings to fluctuate. The timing of revenue recognition is affected by factors that include:

- Cancellations or changes in levels of orders or the mix between upfront products revenue and time-based products revenue;
- Delay of one or more orders for a particular period, particularly orders generating upfront products revenue, such as hardware;
- Delay in the completion of professional services projects that require significant modification or customization and are accounted for using the percentage of completion method;
- Delay in the completion and delivery of IP products in development as to which customers have paid for early access;
- Customer contract amendments or renewals that provide discounts or defer revenue to later periods; and
- The levels of our hardware and IP revenues, which are recognized upfront and are primarily dependent upon our ability to provide the latest technology and meet customer requirements.

These factors, or any other factors or risks discussed herein, could negatively impact our backlog, revenue or earnings and cause our stock price to decline. Additionally, our results may fail to meet or exceed the expectations of securities analysts and investors, or such analysts may change their recommendation regarding our stock, which could cause our stock price to decline. Our stock price has been, and may continue to be, volatile, which may make it more difficult for our stockholders to sell their shares at a time or a price that is favorable to them.

Cybersecurity threats or other security breaches could compromise sensitive information belonging to us or our customers and could harm our business and our reputation, particularly that of our security testing solutions.

We store sensitive data, including intellectual property, our proprietary business information and that of our customers, and confidential employee personal information, in our data centers, on our networks or on the cloud. These In addition, our operations depend upon our information technology (IT) systems. We maintain a variety of information security policies, procedures, and controls to protect our business and proprietary information, prevent data loss and other security breaches and incidents, keep our IT systems operational and reduce the impact of a security breach or incident, but these securities measures cannot provide and have not provided absolute security. In the normal course of business, our systems are and have been the target of malicious cyberattack attempts and have been and may be vulnerable subject to attacks by hackers or compromised compromise due to employee error, malfeasance or other disruptions that have and could result in unauthorized disclosure or loss of sensitive information. Many employees continue to work remotely based on a hybrid work model, which magnifies the importance of maintaining the integrity of our remote access To date, we have not identified material cyber security measures.

For example, we discovered unauthorized third-party access to our products and product license files hosted on our SolvNet Plus customer license and product delivery system in 2015. It is possible that our security measures may be circumvented again in the future, and incidents or incurred any such material expenses with any incidents. However, any breach or compromise could adversely impact our business and operations, expose us or our customers to litigation, investigations, loss of data, increase costs, or result in loss of customer confidence and reputation. The techniques used damage to obtain unauthorized access to networks or to sabotage systems change frequently and generally are not recognized until launched against a target. We may be unable to anticipate these techniques, react in a timely manner or implement adequate preventative measures. Furthermore, in the operation our reputation, any of which could adversely affect our business we and our ability to sell our products and services.

Industry incidences of cyberattacks and other cybersecurity breaches have increased and are likely to continue to increase. We are using an increasing number of third-party software solutions, including cloud-based solutions, which increase potential threat vectors, such as by exploitation of misconfigurations or vulnerabilities. We also use third-party vendors that provide software or hardware, have access to our network, and and/or store certain sensitive data, including confidential information about our employees, and these third parties are subject to their own cybersecurity threats. Our standard vendor terms and conditions include provisions requiring the use of appropriate security measures to prevent unauthorized use or disclosure of our data, as well as other safeguards. However, that Despite these measures, there is no guarantee that a breach compromise of our third-party vendors will not still occur. occur and in turn result in a compromise of our own IT systems or data. In addition, if we select a vendor that uses cloud storage of information as part of their service or product offerings, or if we are selected as a vendor for our cloud-based solutions, our proprietary information could be misappropriated by third parties despite our attempts to validate the security of such services. Many employees continue to work remotely based on a hybrid work model, which magnifies the importance of maintaining the integrity of our remote access security measures. We also periodically acquire new businesses with less mature security programs, and it takes time to align their security practices to meet our information security policies, procedures and controls.

The techniques used to obtain unauthorized access to networks or to sabotage systems of companies such as ours change frequently and generally are not recognized until launched against a target. We may be unable to anticipate these emerging techniques, react in a timely manner, or implement adequate preventative measures, or we may not have sufficient logging available to fully investigate the incident. Our security measures vary in maturity across the business and may be and have been circumvented. For example, we have identified instances where employees have used non-approved applications for business purposes, some of which do not meet our security standards. In addition, we discovered unauthorized third-party access to our products and product license files hosted on our SolvNet Plus customer license and product delivery system in 2015. Any security breach of our own or a third-party vendor's systems could cause us to be non-compliant with applicable laws or regulations, subject us to legal claims or proceedings, disrupt our operations, damage our reputation, and cause a loss of confidence in our products and services, any of which could adversely affect our business and our ability to sell our products and services.

Our software products, hosted solutions and software security and quality testing solutions are also targeted by hackers and may also be vulnerable to attacks, including compromised by, among other things, phishing, exploits of our code or our system configurations, malicious code (such as viruses and worms), distributed denial-of-service attacks, sophisticated attacks conducted or sponsored by nation-states, advanced persistent threat intrusions, ransomware and other malware. We leverage many security best practices throughout the software development lifecycle, but our security development practices vary in maturity across the business and may not be effective against all cybersecurity threats. Furthermore, the risk of due to geopolitical incidents, including regional military conflicts, state-supported and geopolitical-related cybersecurity incidents may increase due to geopolitical incidents, against companies such as the Russia-Ukraine

conflict. An attack ours may increase. Attacks on our products could potentially disrupt the proper functioning of our software, cause errors in the output of our customers' work, allow unauthorized access to our or our customers' proprietary information or cause other destructive outcomes.

We also offer software security and quality testing solutions. If we fail to identify new and increasingly sophisticated methods of cyber attacks cyberattacks or fail to invest sufficient resources in research and development regarding new threat vectors, our security testing products and services may fail to not detect vulnerabilities in our customers' software code. An actual or perceived failure to identify detect security flaws may harm negatively impact the perceived reliability of our security testing products and services, and could result in a loss of customers or sales, or an increased cost to remedy a problem. Furthermore, our growth and recent acquisitions in the software security and quality testing space may increase our visibility as a security-focused company and may make us a more attractive target for attacks on our own information technology IT infrastructure. If any of the foregoing were to occur, As a result, we could experience negative publicity and our reputation could suffer, customers could stop buying our products, we could face lawsuits and potential liability, and our business, operating results and financial performance condition could be negatively impacted.

If we fail to protect our proprietary technology, our business will be harmed.

Our success depends in part upon protecting our proprietary technology. Our efforts to protect our technology may be costly and unsuccessful. We rely on agreements with customers, employees and other third-parties third parties as well as intellectual property laws worldwide to protect our proprietary technology. These agreements may be breached, and we may not have adequate remedies for any breach. Additionally, despite our measures to prevent piracy, other parties may attempt to illegally copy or use our products, which could result in lost revenue if their efforts are successful. Some foreign countries do not currently provide effective legal protection for intellectual property and our ability to prevent the unauthorized use of our products in those countries is therefore limited. Our trade secrets may also be stolen, otherwise become known, or be independently developed by competitors.

From time to time, we may need to commence litigation or other legal proceedings in order to:

- Assert to assert claims of infringement of our intellectual property;
- Defend defend our products from piracy;
- Protect protect our trade secrets or know-how; or
- Determine determine the enforceability, scope and validity of the propriety rights of others.

If we do not obtain or maintain appropriate patent, copyright or trade secret protection for any reason, or cannot fully defend our intellectual property rights in certain jurisdictions, our business and operating results would be harmed. In addition, intellectual property litigation is lengthy, expensive and uncertain. Legal fees related to such litigation will increase our operating expenses and may reduce our net income.

We may not be able to realize the potential financial or strategic benefits of the acquisitions transactions we complete, or find suitable target businesses and technology to acquire, which could hurt our ability to grow our business, develop new products or sell our products. acquire.

Acquisitions and strategic investments are an important part of our growth strategy. We have completed a significant number of acquisitions in recent years. years and are currently anticipating the closing of the Ansys Merger in the first half of calendar year 2025. We expect to make additional acquisitions and strategic investments in the future, but we may not find suitable acquisition or investment targets, or we may not be able to consummate desired acquisitions or investments due to unfavorable credit markets, commercially unacceptable terms, failure to obtain regulatory approvals, competitive bid dynamics or other risks, which could harm our operating results.

Acquisitions Any acquisitions and strategic investments we may undertake, including the Ansys Merger, are difficult, time-consuming, and pose a number of risks, including, but not limited to:

- Potential negative impact on our earnings per share;
- Failure of acquired products to achieve projected sales;
- Problems in integrating the acquired products with our products;
- Difficulties entering into new markets in which we are not experienced or where competitors may have stronger positions;
- Potential downward pressure on operating margins due to lower operating margins of acquired businesses, increased headcount costs, and other expenses associated with adding and supporting new products;
- Difficulties in retaining and integrating key employees;
- Substantial reductions of our cash resources and/or the incurrence of debt, which may be at higher than anticipated interest rates;
- Failure to realize expected synergies or cost savings;
- Difficulties in integrating or expanding sales, marketing and distribution functions and administrative systems, including information technology IT and human resources systems;
- Dilution of our current stockholders through the issuance of common stock as a part of the merger transaction consideration;
- Difficulties in negotiating, governing and realizing value from strategic investments;
- Assumption of unknown liabilities, including tax, litigation, cybersecurity and commercial-related risks, and the related expenses and diversion of resources;
- Incurrence of costs and use of additional resources to remedy issues identified prior to or after an acquisition;
- Disruption of ongoing business operations, including diversion of management's attention and uncertainty for employees and customers, particularly during the post-acquisition integration process;
- Potential negative impacts on our relationships with customers, distributors and business partners;
- Exposure to new operational risks, regulations and business customs to the extent acquired businesses are located in regions where we are not currently conducting business;

- The need to implement controls, processes and policies appropriate for a public company at acquired companies that may have previously lacked such controls, processes and policies in areas such as cybersecurity, information technology, IT, privacy and more;
- Negative impact on our net income resulting from acquisition or investment-related costs; and
- Requirements imposed by government regulators in connection with their review of an acquisition, including required divestitures or restrictions on the conduct of our business or the acquired business.

In addition, current and future changes to the U.S. and foreign regulatory approval processes and requirements related to acquisitions, including the Ansys Merger, may cause approvals to take longer than anticipated, not be forthcoming or contain burdensome conditions, which may prevent our planned transactions or jeopardize, delay or reduce the anticipated benefits of such transactions, and impede the execution of our business strategy.

We have also divested and may in the future divest certain product lines or technologies that no longer fit our long-term strategies. For example, following a strategic portfolio review, and in consultation with our Board of Directors, we have decided to explore strategic alternatives for our Software Integrity segment. As a part of this process, our management is considering a full range of strategic opportunities. At this time we cannot predict the impact that such strategic alternatives might have on our business, operations or financial condition. Divestitures may adversely impact our business, operating results and financial condition if we are unable to achieve the anticipated benefits or cost savings from such divestitures, or if we are unable to offset impacts from the loss of revenue associated with the divested product lines or technologies. For example, if we decide to sell or otherwise dispose of certain product lines or assets, we may be unable to do so on satisfactory terms within our anticipated timeframe or at all. Further, whether such divestitures are ultimately consummated or not, their pendency could have a number of negative effects on our current business, including potentially disrupting our regular operations, diverting the attention of our workforce and management team and increasing undesired workforce turnover. It could also disrupt existing business relationships, make it harder to develop new business relationships, or otherwise negatively impact the way that we operate our business.

If we do not manage the foregoing risks, the acquisitions or strategic investments transactions that we complete or are unable to complete, including the Ansys Merger, may have an adverse effect on our business, operating results and financial condition.

If we fail to timely recruit and/or retain senior management and key employees globally, our business may be harmed.

We depend in large part upon the services of our senior management team and key employees to drive our future success, and certain of such personnel depart our company from time to time, with the frequency and number of such departures varying widely. For example, we have recently experienced significant changes to our executive leadership team due to planned succession and other departures. The departure of key employees could result in significant disruptions to our operations, including, among other things, adversely affecting the timeliness of our product releases, the successful implementation and completion of our initiatives, the adequacy of our internal control over financial reporting, and our business, operating results and financial condition.

To be successful, we must also attract senior management and key employees who join us organically and through acquisitions, such as the Ansys Merger. There are a limited number of qualified engineers. Competition for these individuals and other qualified employees is intense and has increased globally, including in major markets such as Asia. Our employees are often recruited aggressively by our competitors and our customers worldwide. Any failure to recruit and/or retain senior management and key employees could harm our business, operating results and financial condition. Additionally, efforts to recruit such employees could be costly and negatively impact our operating expenses.

We issue equity awards from employee equity plans as a key component of our overall compensation. We face pressure to limit the use of such equity-based compensation due to dilutive effects on stockholders. If we are unable to offer attractive compensation packages in the future, it could limit our ability to attract and retain key employees.

We may pursue new product and technology initiatives, and if we fail to successfully carry out these initiatives, we could be adversely impacted.

As part of the evolution of our business, we have made substantial investments to develop new products and enhancements to existing products through our acquisitions and research and development efforts. If we are unable to anticipate technological changes in our industry by introducing new or enhanced products in a timely and cost-effective manner, or if we fail to introduce products that meet market demand, we may lose our competitive position, our products may become obsolete, and our business, operating results or financial condition or results of operations could be adversely affected.

Additionally, from time to time, we may invest in efforts to expand into adjacent markets, including, for example, software security, and quality testing solutions. solutions and/or AI. Although we believe these solutions are complementary to our EDA tools, we have less experience and a more limited operating history in offering software quality testing and security products and services, and our efforts in this area creating AI technology solutions such as Synopsys.ai may not be successful. Our success in these and other new markets depends on a variety of factors, including, but not limited to, the following:

- Our ability to attract a new customer base, including in industries in which we have less experience;
- Our successful development of new sales and marketing strategies to meet customer requirements;
- Our ability to accurately predict, prepare for and promptly respond to technological developments in new fields, including, in the case of our software quality testing and security tools and services, identifying new security vulnerabilities in software code and ensuring support for a growing number of programming languages;
- Our ability to compete with new and existing competitors in these new industries, many of which may have more financial resources, industry experience, brand recognition, relevant intellectual property rights or established customer relationships than we currently do, and could include free and open source solutions that provide similar software quality testing, and security tools or AI solutions without fees;
- Our ability to skillfully balance our investment in adjacent markets with investment in our existing products and services;
- Our ability to attract and retain employees with expertise in new fields;
- Our ability to sell and support consulting services at profitable margins; and
- Our ability to manage our revenue model in connection with hybrid sales of licensed products and consulting services.

Difficulties in any of our new product development efforts or our efforts to enter adjacent markets, including as a result of delays or disruptions, or export control restrictions, could adversely affect our business, operating results and financial condition.

We may have to invest more resources in research and development than anticipated, which could increase our operating expenses and negatively affect our operating results.

We devote substantial resources to research and development. New competitors, technological advances in the semiconductor industry or by competitors, our acquisitions, our entry into new markets or other competitive factors may require us to invest significantly greater resources than we anticipate. If we are required to invest significantly greater resources than anticipated without a corresponding increase in revenue, our operating results could decline. If customers reduce or slow the need to upgrade or enhance their product offerings, our revenue and operating results may be adversely affected. Additionally, our periodic research and development expenses may be independent of our level of revenue, which could negatively impact our financial results. New products may not adequately address the changing needs of the marketplace. New software products may contain undetected errors, defects or vulnerabilities. The occurrence of any defects or errors in our products could result in lost or delayed market acceptance and sales of our products, delays in payment by customers, loss of customers or market share, product returns, damage to our reputation, diversion of our resources, increased service and warranty expenses or financial concessions, increased insurance costs and potential liability for damages. Finally, there can be no guarantee that our research and development investments will result in products that create additional revenue.

Product errors or defects could expose us to liability and harm our reputation and we could lose market share.

Software products frequently contain errors or defects, especially when first introduced, when new versions are released, or when integrated with technologies developed by acquired companies. Product errors, including those resulting from third-party suppliers, could affect the performance or interoperability of our products, could delay the development or release of new products or new versions of products and could adversely affect market acceptance or perception of our products. In addition, any allegations of manufacturability issues resulting from use of our IP products could, even if untrue, adversely affect our reputation and our customers' willingness to license IP products from us. Any such errors or delays in releasing new products or new versions of products or allegations of unsatisfactory performance could cause us to lose customers, increase our service costs, subject us to liability for damages and divert our resources from other tasks, any one of which could materially and adversely affect our business, operating results and operating results.

financial condition.

Our hardware products, which primarily consist of prototyping and emulation systems, subject us to distinct risks.

The growth in sales of our hardware products subjects us to several risks, including, but not limited to:

- Increased dependence on a sole supplier for certain hardware components, which may reduce our control over product quality and pricing and may lead to delays in production and delivery of our hardware products, should our supplier fail to deliver sufficient quantities of acceptable components in a timely fashion;
- Increasingly variable revenue and less predictable revenue forecasts, due to fluctuations in hardware revenue, which is recognized upfront upon shipment, as opposed to most sales of software products for which revenue is recognized over time;
- Potential reductions in overall margins, as the gross margin for our hardware products, is typically lower than those of our software products;
- Longer sales cycles, which create risks of insufficient, excess or obsolete inventory and variations in inventory valuation, which can adversely affect our business, operating results; results and financial condition;
- Decreases or delays in customer purchases in favor of next-generation releases or competitive products, which may lead to excess or obsolete inventory or require us to discount our older hardware products;
- Longer warranty periods than those of our software products, which may require us to replace hardware components under warranty, thus increasing our costs; and
- Potential impacts on our supply chain, including the effects of increased global inflationary pressures and interest rates, and a sustained global semiconductor shortage.

If we fail to timely recruit and/or retain senior management and key employees globally, our business may be harmed.

We depend in large part upon the services of our senior management team to drive our future success, and certain team members depart our company from time to time. If we were to lose the services of any member of our senior management team without adequate notice, our business could be adversely affected.

To be successful, we must also attract and retain key employees who join us organically and through acquisitions. There are a limited number of qualified engineers. Competition for these individuals and other qualified employees is intense and has increased globally, including in major markets such as Asia. Our employees are often recruited aggressively by our competitors and our customers worldwide. Any failure to recruit and retain key employees could harm our business, results of operations and financial condition. Additionally, efforts to recruit and retain qualified employees could be costly and negatively impact our operating expenses.

We issue equity awards from employee equity plans as a key component of our overall compensation. We face pressure to limit the use of such equity-based compensation due to its dilutive effect on stockholders. If we are unable to grant attractive equity-based packages in the future, it could limit our ability to attract and retain key employees.

From time to time, we are subject to claims that our products infringe on third-party intellectual property rights.

We are from time to time subject to claims alleging our infringement of third-party intellectual property rights, including patent rights. Under our customer agreements and other license agreements, we agree in many cases to indemnify our customers if our products are alleged to infringe on a third party's intellectual property rights. Infringement claims can have in the past and could in the future result in costly and time-consuming litigation, require us to enter into royalty arrangements, subject us to damages or injunctions restricting our sale of products, invalidate a patent or family of patents, require us to refund license fees to our customers or to forgo future payments, or require us to redesign certain of our products, any one of which could harm our business and operating results. For example, some customers have requested we defend and indemnify them against claims for patent infringement asserted in various district courts and at the U.S. International Trade Commission by Bell Semiconductor LLC (Bell Semic), a patent monetization entity, based on Bell Semic's allegation that the customers' use of one or more features of certain of our products infringes one or more of six patents held by Bell Semic. We are defending some of our customers consistent with the terms of our End User License Agreement. Further information regarding Bell Semic is contained in Part II, Item 1, *Legal Proceedings* of this Quarterly Report.

We may not be able to continue to obtain licenses to third-party software and intellectual property on reasonable terms or at all, which may disrupt our business and harm our financial results.

We license third-party software and other intellectual property for use in product research and development and, in several instances, for inclusion in our products. We also license third-party software, including the software of our competitors, to test the interoperability of our products with other industry products and in connection with our professional services. These licenses may need to be renegotiated or renewed from time to time, or we may need to obtain new licenses in the future. Third parties may stop adequately supporting or maintaining their technology, or they or their technology may be acquired by our competitors. If we are unable to obtain licenses to these third-party software and intellectual property on reasonable terms or at all, we may not be able to sell the affected products, our customers' use of the products may be interrupted, or our product development processes and professional services offerings may be disrupted, which could in turn harm our financial results, our customers, and our reputation.

The inclusion of third-party intellectual property in our products can also subject us and our customers to infringement claims. We may not be able to sufficiently limit our potential liability contractually. Regardless of outcome, infringement claims may require us to use significant resources and may divert management's attention from the operation of our business.

Some of our products and technology, including those we acquire, may include software licensed under open source licenses. Some open source licenses could require us, under certain circumstances, to make available or grant licenses to any modifications or derivative works we create based on the open source software. The risks associated with open source usage may not be eliminated despite our best efforts and may, if not properly addressed, result in unanticipated obligations that harm our business.

In preparing our financial statements we make certain assumptions, judgments and estimates that affect amounts reported in our consolidated financial statements, which, if not accurate, may significantly impact our financial results.

We make assumptions, judgments and estimates for a number of items, including the fair value of financial instruments, goodwill, long-lived assets and other intangible assets, the realizability of deferred tax assets, the recognition of revenue and the fair value of stock awards. We also make assumptions, judgments and estimates in determining the accruals for employee-related liabilities, including commissions and variable compensation, and in determining the accruals for uncertain tax positions, valuation allowances on deferred tax assets, allowances for credit losses, and legal contingencies. These assumptions, judgments and estimates are drawn from historical experience and various other factors that we believe are reasonable under the circumstances as of the date of the consolidated financial statements. Actual results could differ materially from our estimates, and such differences could significantly impact our financial results.

Liquidity requirements in our U.S. operations may require us to raise cash in uncertain capital markets, which could negatively affect our financial condition.

We expect that the pending Ansys Merger is likely to result in a material increase in our debt and liquidity needs that will impact our capital needs. We anticipate that the funds needed to fund the cash portion of the Ansys Merger consideration and to pay related transaction fees and expenses will be derived from a combination of available cash on hand and third-party debt financing. As of July 31, 2023 January 31, 2024, approximately 56% 61% of our worldwide cash and cash equivalents balance is held by our international subsidiaries. We intend to fund the Ansys Merger, pay related transaction fees and expenses and meet our U.S. cash spending needs primarily through our existing U.S. cash balances, ongoing U.S. cash flows and third-party debt financing, which will include a combination of available credit under our term loan Term Loan Agreement, Revolving Credit Agreement, the Bridge Commitment and/or one or more issuances of senior unsecured notes. Our ability to obtain any such new debt financing will depend on, among other factors, prevailing market conditions and revolving credit facilities. Should other factors beyond our cash spending needs in the U.S. rise and exceed these liquidity sources, we control. We may be required to incur additional debt at higher than anticipated interest rates, or access other funding sources or repatriate cash, any of which could negatively affect our operating results, of operations, capital structure or the market price of our common stock.

Risks Related to the Ansys Merger

We may fail to complete the Ansys Merger or may not complete it on the terms described herein or in our other filings with the SEC.

It is currently anticipated that we will complete the Ansys Merger in the first half of calendar year 2025. The Ansys Merger is subject to the satisfaction or waiver of customary closing conditions, including, among other things, adoption of the Merger Agreement by the holders of a majority of the outstanding shares of Ansys common stock, the expiration or termination of the waiting period under the HSR Act, the clearance of the Ansys Merger under certain other antitrust and foreign investment regimes and the effectiveness of a registration statement on Form S-4 to be filed by us. As a result, the possible timing and likelihood of completion are uncertain and, accordingly, there can be no assurance that the Ansys Merger will be completed on the anticipated schedule, if at all.

Any delay in completing the acquisition could cause us not to realize some or all of the anticipated benefits when expected, if at all. If the Ansys Merger is not completed, we could be subject to a number of risks that may adversely affect our business and operating results, including, among other things:

- our stock price could decline to the extent it reflects an assumption that we will complete the Ansys Merger;
- our incurrence of significant acquisition costs that we would be unable to recoup;
- under certain specified circumstances we could be required to pay Ansys a termination fee of $1.5 billion; and
- negative publicity and other negative impacts resulting from failure to complete the Ansys Merger.

The Ansys Merger is subject to the receipt of governmental approvals that may impose conditions that could have an adverse effect on us or, if not obtained, could prevent completion of the Ansys Merger.

Completion of the Ansys Merger is conditioned upon the receipt of governmental approvals, including certain antitrust and foreign investment approvals. There can be no assurance that these approvals will be obtained and that the other conditions to completing the Ansys Merger will be satisfied. In addition, the governmental authorities from which these approvals are required may impose conditions on the completion of the Ansys Merger or require changes to the terms of the Ansys Merger or agreements to be entered into in connection with the Ansys Merger. Such conditions or changes and the process of obtaining these approvals could have the effect of delaying or impeding completion of the Ansys Merger or of imposing additional costs or limitations on us following completion of the Ansys Merger, any of which might have an adverse effect on our business, operating results and financial condition.

Failure to realize the benefits expected from the Ansys Merger could adversely affect our business, operating results and financial condition.

The anticipated benefits we expect from the Ansys Merger are based on projections and assumptions about our combined business with Ansys, which may not materialize as expected or which may prove to be inaccurate. Our business, operating results and financial condition could be adversely affected if we are unable to realize the anticipated benefits from the Ansys Merger on a timely basis, if at all, including, among other things, realizing the anticipated synergies from the Ansys Merger in the anticipated amounts or within the anticipated timeframes or cost expectations, if at all. Achieving the benefits of the Ansys Merger will depend, in part, on our ability to integrate the business and operations of Ansys successfully and efficiently with our business. The challenges involved in this integration, which may be complex and time-consuming, include, among others, the following:

- preserving customer and other important relationships of Ansys and attracting new business and operational relationships;
- coordinating and integrating independent research and development and engineering teams across technologies and product platforms to enhance product development while reducing costs;
- integrating financial forecasting and controls, procedures and reporting cycles;
- consolidating and integrating corporate, IT, finance and administrative infrastructures;
- coordinating sales and marketing efforts to effectively position the combined company's capabilities and the direction of product development;
- integrating Ansys' operations and product lines;
- obligations that we will have to counterparties of Ansys that arise as a result of the change in control of Ansys; and
- integrating employees and related HR systems and benefits, maintaining employee productivity and retaining key employees.

If we do not successfully manage these issues and the other challenges inherent in integrating an acquired business, then we may not achieve the anticipated benefits of the Ansys Merger on our anticipated timeframe, if at all, and our business, revenue, expenses, operating results, financial condition and stock price could be materially adversely affected. The successful completion of the Ansys Merger and the integration of the Ansys business will require significant management attention both before and after the completion of the Ansys Merger, and may divert the attention of management from our normal business operations.

As a result of the Ansys Merger, we anticipate that the scope and size of our operations and business will substantially change and will result in certain incremental risks to us, including increased competition. We may not realize the full expected benefits of the Ansys Merger.

We anticipate that the Ansys Merger will substantially expand the scope and size of our business by adding substantial assets and operations to our existing business. The anticipated future growth of our business will impose significant added responsibilities on management, including, among other things, the need to identify, recruit, train and integrate additional employees. Our senior management's attention may be diverted from the management of our business and its daily operations to the completion of the Ansys Merger and the integration of the assets acquired in the Ansys Merger. Further, the Ansys Merger could also create uncertainty for our or Ansys' employees and customers, particularly during the post-acquisition integration process. It could also disrupt existing business relationships, make it more difficult to develop new business relationships, or otherwise negatively impact the way that we operate our business.

We also anticipate that the Ansys Merger will result in increased competition. Ansys operates in a highly competitive industry, and is facing increasing competition for its products and services, in particular in simulation and analysis. Additionally, both Ansys and Synopsys compete with companies that increasingly provide integrated EDA and simulation and analysis offerings. These competitive pressures may result in decreased sales volumes, price reductions and/or increased operating costs, and could result in lower revenues, margins and net income for the combined company. These impacts could also result in our failure to realize expected synergies or cost savings as a result of the Ansys Merger. For more on risks relating to competition in the EDA industry and other industries, see "*The growth of our business depends primarily on the semiconductor and electronics industries*" and "*We operate in highly competitive industries, and if we do not continue to meet our customers' demand for innovative technology at lower costs, our products may not be competitive or may become obsolete*."

Our ability to manage our business and growth will require us to continue to improve our operational, financial and management controls, reporting systems and procedures. We may also encounter risks, costs and expenses associated with any undisclosed or other unanticipated liabilities and use more cash and other financial resources on integration and implementation activities than we expect. We may not be able to integrate the Ansys business into our existing operations on our anticipated timelines or realize the full expected economic benefits of the Ansys Merger, which may have a material adverse effect on our business, operating results and financial condition.

In addition, the completion of the Ansys Merger may heighten the potential adverse effects on our business, operating results or financial condition described elsewhere in the Risk Factors in this Quarterly Report.

Our significant debt may limit our financial flexibility following the Ansys Merger.

We expect to incur a substantial amount of debt in connection with the Ansys Merger and have entered into the Bridge Commitment Letter and the Term Loan Agreement for the purpose of financing a portion of the cash consideration to be paid in the Ansys Merger and paying related fees and expenses in connection with the Ansys Merger and the other transactions contemplated by the Merger Agreement. We expect to use a portion of the proceeds from the facilities to repay Ansys' existing credit facility substantially concurrently with the completion of the Ansys Merger.

Our ability to obtain any such new debt financing will depend on, among other factors, prevailing market conditions and other factors beyond our control. We cannot assure you that we will be able to obtain new debt financing on terms acceptable to us or at all, and any such failure could materially adversely affect our operations and financial condition. Our obligation to complete the Ansys Merger is not conditioned upon the receipt of any financing.

Following the Ansys Merger, the substantial indebtedness incurred in connection with the Ansys Merger could have adverse effects on our business, operating results and financial condition, including, among other things:

- increasing our vulnerability to changing economic, regulatory and industry conditions;
- limiting our ability to compete and our flexibility in planning for, or reacting to, changes in our business and the industry;
- placing us at a competitive disadvantage compared to our competitors with less indebtedness;

- increasing our interest expense and potentially requiring us to dedicate a substantial portion of its cash flow from operations to payments on our debt, thereby reducing the availability of cash to fund our business needs;
- limiting our ability to return equity through our stock repurchase program or pay dividends to our stockholders; and
- limiting our ability to borrow additional funds in the future to fund growth, acquisitions, working capital, capital expenditures or other purposes.

Our ability to make scheduled payments of the principal of, to pay interest on, or to refinance our indebtedness following the Ansys Merger will depend on, among other factors, our financial position and performance as well as prevailing market conditions and other factors beyond our control. Our combined business may not continue to generate cash flow from operations in the future sufficient to service our debt and make necessary capital expenditures and meet other liquidity needs. If we are unable to generate such cash flow, we may be required to adopt one or more alternatives, such as selling assets, restructuring debt or obtaining additional equity capital or debt refinancing on terms that may be onerous. We may not be able to engage in any of these activities or engage in these activities on desirable terms, which could result in a default on our debt obligations which, if not cured or waived, could accelerate the repayment obligations under all of our outstanding debt, which could have a material adverse effect on our business, operating results or financial condition.

In addition, the level and quality of our earnings, operations, business and management, among other things, will impact the determination of our credit ratings by credit rating agencies. A decrease in the ratings assigned to us may negatively impact our access to the debt capital markets and increase our cost of borrowing. There can be no assurance that we will be able to obtain any future required financing on acceptable terms, if at all. In addition, there can be no assurance that we will be able to maintain the current credit worthiness or prospective credit rating of the combined company. Any actual or anticipated changes, or adverse conditions in the debt capital markets, could:

- adversely affect the trading price of, or market for, our debt securities;
- increase interest expense under our credit facilities;
- increase the cost of, and adversely affect our ability to refinance, our existing debt; and
- adversely affect our ability to raise additional debt.

The covenants contained in the agreements governing our indebtedness following the Ansys Merger may impose restrictions on us and certain of our subsidiaries that may affect our ability to operate our businesses.

The agreements that will govern our indebtedness following the Ansys Merger, including any indebtedness to be incurred pursuant to the Bridge Commitment Letter (or any indebtedness that may refinance or replace the Bridge Commitment as set forth in the Bridge Commitment Letter) and the Term Loan Agreement, will contain various affirmative and negative covenants. Such covenants may, subject to certain significant exceptions, restrict our ability and the ability of certain of our subsidiaries after the Ansys Merger to, among other things, engage in mergers, consolidations and acquisitions, grant liens and incur debt at subsidiaries. In addition, such agreements also contain financial covenants that will require us to maintain certain financial ratios. Our ability to comply with these provisions after the Ansys Merger may be affected by events beyond our control. Failure to comply with these covenants could result in an event of default, which, if not cured or waived, could accelerate repayment obligations under all of our outstanding debt which could have a material adverse effect on our business, operating results or financial condition.

Legal and Regulatory Risks

Our results could be adversely affected by a change in our effective tax rate, changes in our geographical earnings mix, unfavorable government reviews of our tax returns, material differences between our forecasted and actual annual effective tax rates, or future changes to our tax structure.

Our operations are subject to income and transaction taxes in the United States U.S. and in multiple foreign jurisdictions. Because we have a wide range of statutory tax rates in the multiple jurisdictions in which we operate, any changes in our geographical earnings mix, including those resulting from our intercompany transfer pricing or from changes in the rules governing transfer pricing, could materially impact our effective tax rate. Furthermore, a change in the tax law of the jurisdictions where we do business, including an increase in tax rates, an adverse change in the treatment of an item of income or expense, or limitations on our ability to utilize tax credits, could result in a material increase in our tax expense and impact our financial position and cash flows. For example, in response to the fiscal impact of the COVID-19 pandemic, the State of California enacted legislation on June 29, 2020 that suspended the use of certain corporate research and development tax credits for a three-year period that began in our fiscal 2021, which resulted in an increase to our tax expense. On February 9, 2022, California Governor Newsom signed into law 2022 CA SB 113, which shortened the previously enacted suspension on the use of research and development tax credits to a two-year period covering our fiscal 2021 and 2022.

On December 22, 2017, the Tax Cuts and Jobs Act (the Tax Act) was enacted, which significantly changed prior U.S. tax law and includes numerous provisions that affect our business. The Tax Act includes certain provisions that began to affect our income in the first quarter of fiscal 2019, while other sections of the Tax Act and related regulations will begin began to affect our business in the first quarter of fiscal 2023. One of these provisions includes the requirement to capitalize and amortize research and development expenditures instead of expensing such expenditures as incurred. This results in a significant increase to our cash tax liability, and also decreases but our effective tax rate decreases due to increasing the foreign derived intangible income deduction. The state Future regulatory guidance pertaining to the capitalization of future research and development expenditures, including potential legislation remains uncertain and if enacted, may materially affect our financial position.

On August 16, 2022, the Inflation Reduction Act of 2022 (IR (the IR Act) was enacted in the United States. U.S. The IR Act includes a 15% minimum tax rate, effective in our fiscal 2024, as well as tax credit incentives for reductions in greenhouse gas emissions. The details of the computation of the tax and implementation of the incentives will be subject to regulations to be issued by the U.S. Department of the Treasury. On August 9, 2022, the CHIPS and Science Act of 2022 (CHIPS Act) was enacted in the United States U.S. to provide certain financial incentives to the semiconductor industry, primarily for manufacturing activities within the United States. U.S. We are continuing to monitor the IR Act and CHIPS Act and related regulatory developments to evaluate their potential impact on our business and operating results.

On October 8, 2021, the Organization for Economic Co-operation and Development (OECD) announced the OECD/G20 Inclusive Framework on Base Erosion and Profit Shifting (Framework) which agreed to a two-pillar solution to address tax challenges arising from digitalization of the economy. On December 20, 2021, the OECD released Pillar Two Model Rules (Pillar Two) defining the global minimum tax rules, which contemplate a 15% minimum tax rate. The OECD continues to release additional guidance, including Administrative Guidance on these how the Pillar Two rules should be interpreted and the applied and many countries are passing legislation to comply with Pillar Two. The Framework calls for law enactment by OECD and G20 members to take effect in 2024 or and 2025. These changes, when enacted by various countries in which we do business, may increase our taxes in these countries. Various countries have started to enact new laws related to Pillar Two, including certain new laws effective beginning in our fiscal year 2025. Changes to these and other areas in relation to international tax reform, including future actions taken by foreign governments, in response to the Tax Act, could increase uncertainty and may adversely affect our tax rate and cash flow in future years.

Our income and non-income tax filings are subject to review or audit by the Internal Revenue Service and state, local and foreign taxing authorities. We exercise significant judgment in determining our worldwide provision for income taxes and, in the ordinary course of our business, there may be transactions and calculations where the ultimate tax determination is uncertain. We may also be liable for potential tax liabilities of businesses we acquire, including future taxes payable related to the transition tax on earnings from their foreign operations, if any, under the Tax Act. acquire. The final determination in an audit may be materially different than the treatment reflected in our historical income tax provisions and accruals. An assessment of additional taxes because of an audit could adversely affect our income tax provision and net income in the periods for which that determination is made. For further discussion on any our ongoing audits, see Note 19. *Income Taxes* of the *Notes to Condensed Consolidated Financial Statements* in this Quarterly Report under the heading "Non-U.S. Examinations."

We maintain significant deferred tax assets related to certain tax credits and capitalized research and development expenditures. Our ability to use these deferred tax assets is dependent upon having sufficient future taxable income in the relevant jurisdiction and in the case of foreign tax credits, how such credits are treated under current and potential future tax law. Changes to tax laws and regulations, and changes in our forecasts of future income could result in an adjustment to the deferred tax asset and a related charge to earnings that could materially affect our financial results.

Our business is subject to evolving corporate governance and public disclosure regulations and expectations, including with respect to environmental, social and governance matters, that could expose us to numerous risks.

We are subject to changing rules and regulations promulgated by a number of governmental and self-regulatory organizations, including, among others, the SEC, the Nasdaq Stock Market and the Financial Accounting Standards Board (FASB). These rules and regulations continue to evolve in scope and complexity and many new requirements have been created in response to laws enacted by Congress, making compliance difficult and uncertain. In addition, regulators, customers, investors, employees and other stakeholders are increasingly focused on environmental, social and governance (ESG) matters and related disclosures. These changing rules, regulations and stakeholder expectations have resulted in, and are likely to continue to result in, increased general and administrative expenses and increased management time and attention spent complying with or meeting such regulations and expectations. For example, developing and acting on ESG initiatives, and collecting, measuring, and reporting ESG information and metrics can be costly, difficult and time consuming and is subject to evolving reporting standards, including the SEC's proposed climate-related reporting requirements. requirements and the EU's Corporate Sustainability Reporting Directive. We may also communicate certain initiatives and goals regarding environmental matters, diversity, responsible sourcing, social investments and other ESG matters in our SEC filings or in other public disclosures. These initiatives and goals could be difficult and expensive to implement, the technologies needed to implement them may not be cost effective and may not advance at a sufficient pace, and ensuring the accuracy, adequacy, or completeness of the disclosure of our ESG initiatives can be costly, difficult and time-consuming. time consuming. Further, statements about our ESG initiatives and goals, and progress against those goals, may be based on standards for measuring progress that are still developing, internal controls and processes that continue to evolve, and assumptions that are subject to change. We could also face scrutiny from certain stakeholders for the scope or nature of such initiatives or goals, or for any revisions to these goals. If our ESG-related data, processes and reporting are incomplete or inaccurate, or if we fail to achieve progress with respect to our ESG goals on a timely basis, or at all, our business, financial performance and growth could be adversely affected.

Changes in the U.S. generally accepted accounting principles (U.S. GAAP) could adversely affect our financial results and may require significant changes to our internal accounting systems and processes.

We prepare our consolidated financial statements in conformity with U.S. GAAP. These principles are subject to interpretation by the FASB, the SEC and various bodies formed to interpret and create appropriate accounting principles and guidance. The FASB periodically issues new accounting standards on a variety of topics, including, for example, revenue recognition and accounting for leases. These and other such standards generally result in different accounting principles, which may significantly impact our reported results or could result in variability of our financial results.

We may be subject to litigation proceedings that could harm our business.

We may be subject to legal claims or regulatory matters involving stockholder, consumer, employment, customer, supplier, competition and other issues on a global basis. Litigation is subject to inherent uncertainties, and unfavorable rulings could occur. An unfavorable ruling could include monetary damages or, in cases for which injunctive relief is sought, an injunction prohibiting us from manufacturing or selling one or more products. If we were to receive an unfavorable ruling on a matter, our business and operating results of operations could be materially harmed. Further information regarding certain of these matters is contained in Part II, Item 1, *Legal Proceedings* of this Quarterly Report.

There are inherent limitations on the effectiveness of our controls and compliance programs.

Regardless of how well designed and operated it is, a control system can provide only reasonable assurance that its objectives will be 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, have been detected. Our compliance programs and compliance training for employees may not prevent our employees, contractors or agents from breaching or circumventing our policies or violating applicable laws and regulations. Failure of our control systems and compliance programs to prevent error, fraud or violations of law could have a material adverse impact on our business.

General Risks

Our investment portfolio may be impaired by any deterioration of capital markets.

From time to time, our cash equivalent and short-term investment portfolio consists of investment-grade U.S. government agency securities, asset-backed securities, corporate debt securities, commercial paper, certificates of deposit, money market funds, municipal securities and other securities and bank deposits. Our investment portfolio carries both interest rate risk and credit risk and may be negatively impacted by deteriorating economic conditions, rising increased global inflationary pressures and interest rates and bank failures. Fixed rate debt securities may have their market value adversely impacted due to a credit downgrade or a rise in interest rates, while floating rate securities may produce less income than expected if interest rates fall or a credit downgrade occurs.

Our future investment income may fall short of expectations due to changes in interest rates or if the decline in fair value of investments held by us is judged to be other-than-temporary. In addition, we may suffer losses in principal if we are forced to sell securities that decline in market value due to changes in the issuer's credit quality or changes in interest rates.

Catastrophic events and the effects of climate change, pandemics or other unexpected events may disrupt our business and harm our operating results.

Due to the global nature of our business, our operating results may be negatively impacted by catastrophic events and the effects of climate change, pandemics, such as the recent COVID-19 pandemic, or other unexpected events throughout the world. We rely on a global network of infrastructure applications, enterprise applications and technology systems for our development, marketing, operational, support and sales activities. A disruption or failure of these systems in the event of a major earthquake, fire, extreme temperatures, drought, flood, telecommunications failure, cybersecurity attack, terrorist attack, epidemic or pandemic, or other catastrophic events or climate change-related events could cause system interruptions, delays in our product development and loss of critical data and could prevent us from fulfilling our customers' orders. In particular, our sales and infrastructure are vulnerable to regional or worldwide health conditions, including the effects of the outbreak of contagious diseases. diseases, such as the government-imposed restrictions that curtailed global economic activity and caused substantial volatility in global financial markets during the COVID-19 pandemic. Moreover, our corporate headquarters, a significant portion of our research and development activities, our data centers, and certain other critical business operations are located in California, near major earthquake faults and sites of recent wildfires, which may become more frequent, along with other extreme weather events, due to climate change. A catastrophic event or other extreme weather event that results in the destruction or disruption of our data centers or our critical business or information technology IT systems would severely affect our ability to conduct normal business operations and, as a result, our operating results would be adversely affected.

Item 2. *Unregistered Sales of Equity Securities and Use of Proceeds*

In May 2023, we entered into an accelerated stock repurchase agreement (the May 2023 ASR) to repurchase an aggregate of $300.0 million of our common stock. Pursuant to the May 2023 ASR, we made a prepayment of $300.0 million to receive initial deliveries of shares valued at $255.0 million. The remaining balance of $45.0 million was settled in August 2023. Total shares purchased under the May 2023 ASR were approximately 0.7 million shares, at an average purchase price of $436.93 per share.

The table below sets forth information regarding our repurchases of our common stock during the three months ended July 29, 2023 February 3, 2024:

Period (1)	Period (1)	Total number of shares purchased (2)	Average price paid per share (2)	Total number of shares purchased as part of publicly announced programs (2)	Maximum approximate dollar value of shares that may yet be purchased under the programs(1)	Period (1)	Total number of shares purchased (2)	Average price paid per share (2)	Total number of shares purchased as part of publicly announced programs (2)	Maximum approximate dollar value of shares that may yet be purchased under the programs(1)
Month #1	Month #1									
April 30, 2023 through June 3, 2023		750,724	$399.61	750,724	$494,276,393					
October 29, 2023 through December 2, 2023										
October 29, 2023 through December 2, 2023										
October 29, 2023 through December 2, 2023										
Month #2	Month #2									
June 4, 2023 through July 1, 2023		—	$ —	—	$494,276,393					

December 3, 2023 through January 6, 2023						
December 3, 2023 through January 6, 2023						
December 3, 2023 through January 6, 2023						
Month #3	Month #3					
July 2, 2023 through July 29, 2023		—	$ —	—	$494,276,393	
January 7, 2023 through February 3, 2023						
January 7, 2023 through February 3, 2023						
January 7, 2023 through February 3, 2023						
Total	Total	750,724	$399.61	750,724	$494,276,393	

(1) *As of July 29, 2023 February 3, 2024, $494.3 194.3 million remained available for future repurchases under the Program. our stock repurchase program (the Program).*

(2) *Amounts are calculated based on the settlement date.*

See Note 14. *Stock Repurchase Program* of the *Notes to Condensed Consolidated Financial Statements* in this Quarterly Report for more information on the Program.

Item 5. *Other Information*

Insider Adoption or Termination of Trading Arrangements

None of our directors or officers adopted or terminated a Rule 10b5-1 trading arrangement or a non-Rule 10b5-1 trading arrangement (as defined in Item 408(c) of Regulation S-K) during the quarterly period covered by this report.

Item 6. *Exhibits*

Exhibit Number	Exhibit Description	Incorporated By Reference				Filed Herewith
		Form	File No.	Exhibit	Filing Date	
3.1	Amended and Restated Certificate of Incorporation	10-Q	000-19807	3.1	9/15/2003	
3.2	Amended and Restated Bylaws	10-K	000-19807	3.2	12/15/2020	
4.1	Specimen Common Stock Certificate	S-1	33-45138	4.3	2/24/1992 (effective date)	

31.1	Certification of Chief Executive Officer pursuant to Rule 13a-14(a) or Rule 15d-14(a) of the Exchange Act					X
31.2	Certification of Chief Financial Officer pursuant to Rule 13a-14(a) or Rule 15d-14(a) of the Exchange Act					X
32.1*	Certification of Chief Executive Officer and Chief Financial Officer furnished pursuant to Rule 13a-14(b) or Rule 15d-14(b) of the Exchange Act and Section 1350 of Chapter 63 of Title 18 of the United States Code					X
101	The following financial statements from the Company's Quarterly Report on Form 10-Q for the quarter ended July 29, 2023, formatted in Inline XBRL: (i) Condensed Consolidated Balance Sheets as of July 29, 2023 and October 29, 2022, (ii) Condensed Consolidated Statements of Income for the Three Months Ended July 29, 2023 and July 30, 2022 and Nine Months Ended July 29, 2023 and July 30, 2022, (iii) Condensed Consolidated Statements of Comprehensive Income for the Three Months Ended July 29, 2023 and July 30, 2022 and Nine Months Ended July 29, 2023 and July 30, 2022, (iv) Consolidated Statements of Stockholders' Equity at July 29, 2023 and July 30, 2022, (v) Consolidated Statements of Cash Flows for the Nine Months Ended July 29, 2023 and July 30, 2022 and (vi) the Notes to Consolidated Financial Statements, tagged as blocks of text and including detailed tags					X
104	Cover Page Interactive Data File (formatted as Inline XBRL and contained in Exhibit 101)					

Exhibit Number	Exhibit Description	Incorporated By Reference				Filed Herewith
		Form	**File No.**	**Exhibit**	**Filing Date**	
2.1	Agreement and Plan of Merger, dated as of January 15, 2024, by and among Synopsys, Inc., ANSYS, Inc. and ALTA Acquisition Corp.	8-K	000-19807	2.1	1/16/2024	
3.1	Amended and Restated Certificate of Incorporation	10-Q	000-19807	3.1	9/15/2003	
3.2	Amended and Restated Bylaws	8-K	000-19807	3.1	12/13/2023	
4.1	Specimen Common Stock Certificate	S-1	33-45138	4.3	2/24/1992 (effective date)	
10.1	Sixth Amendment Agreement, dated February 13, 2024, by and among Synopsys, as borrower, the lenders party thereto and JPMorgan Chase Bank, N.A., as administrative agent for the lenders.	8-K	000-19807	2.1	2/14/2024	
10.2	Term Loan Facility Credit Agreement, dated February 13, 2024, by and among Synopsys, as borrower, the lenders party thereto, HSBC Securities (USA) Inc., and Bank of America, N.A., as co-syndication agents, Mizuho Bank, LTD., The Bank of Nova Scotia, TD Bank, N.A., Truist Bank, and Wells Fargo Bank, National Association, as co-documentation agents, and JPMorgan Chase Bank, N.A., as administrative agent for the lenders.	8-K	000-19807	2.2	2/14/2024	
10.3	Employment Agreement, dated December 20, 2023 between Synopsys, Inc. and Mr. Sassine Ghazi	8-K/A	000-19807	10.1	12/21/2023	
10.4	Executive Chairperson Agreement, dated December 20, 2023 between Synopsys, Inc. and Dr. Aart J. de Geus	8-K/A	000-19807	10.2	12/21/2023	

31.1	Certification of Chief Executive Officer pursuant to Rule 13a-14(a) or Rule 15d-14(a) of the Exchange Act	X
31.2	Certification of Chief Financial Officer pursuant to Rule 13a-14(a) or Rule 15d-14(a) of the Exchange Act	X
32.1*	Certification of Chief Executive Officer and Chief Financial Officer furnished pursuant to Rule 13a-14(b) or Rule 15d-14(b) of the Exchange Act and Section 1350 of Chapter 63 of Title 18 of the United States Code	X

Exhibit Number	Exhibit Description	Incorporated By Reference				Filed Herewith
		Form	File No.	Exhibit	Filing Date	
101	The following financial statements from the Company's Quarterly Report on Form 10-Q for the quarter ended February 3, 2024, formatted in Inline XBRL: (i) Condensed Consolidated Balance Sheets as of February 3, 2024 and October 28, 2023, (ii) Condensed Consolidated Statements of Income for the Three Months Ended February 3, 2024 and January 28, 2023, (iii) Condensed Consolidated Statements of Comprehensive Income for the Three Months Ended February 3, 2024 and January 28, 2023, (iv) Condensed Consolidated Statements of Stockholders' Equity at February 3, 2024 and January 28, 2023, (v) Condensed Consolidated Statements of Cash Flows for the Three Months Ended February 3, 2024 and January 28, 2023 and (vi) the Notes to Condensed Consolidated Financial Statements, tagged as blocks of text and including detailed tags					X
104	Cover Page Interactive Data File (formatted as Inline XBRL and contained in Exhibit 101)					

* This exhibit is furnished with this Quarterly Report on Form 10-Q and is not deemed filed with the Securities and Exchange Commission and is not incorporated by reference in any filing of Synopsys, Inc. under the Securities Act of 1933, as amended, or the Securities Exchange Act of 1934, as amended, whether made before or after the date hereof and irrespective of any general incorporation language contained in such filing.

SIGNATURES

Pursuant to the requirements of the Securities Exchange Act of 1934, the registrant has duly caused this Quarterly Report on Form 10-Q to be signed on its behalf by the undersigned thereunto duly authorized.

SYNOPSYS, INC.

Date: August 18, 2023 February 23, 2024

By: /s/ SHELAGH GLASER

Shelagh Glaser
Chief Financial Officer
(Principal Financial Officer)

Exhibit 31.1

CERTIFICATION

I, Aart J. de Geus, Sassine Ghazi, certify that:

1. I have reviewed this Quarterly Report on Form 10-Q of Synopsys, Inc.;

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 officers 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 officers 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 18, 2023 February 23, 2024

/s/ Aart J. de Geus Sassine Ghazi

Aart J. de Geus Sassine Ghazi
President and Chief Executive Officer and Chairperson
(Principal Executive Officer)

Exhibit 31.2

CERTIFICATION

I, Shelagh Glaser, certify that:

1. I have reviewed this Quarterly Report on Form 10-Q of Synopsys, Inc.;

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 officers 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 officers 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 18, 2023 February 23, 2024

/s/ Shelagh Glaser

Shelagh Glaser
Chief Financial Officer
(Principal Financial Officer)

Exhibit 32.1

Certification Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002 (Subsections (a) and (b) of Section 1350, Chapter 63 of Title 18, United States Code)

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, Chapter 63 of Title 18 of the United States Code (18 U.S.C-§1350), each of Aart J. de Geus, Sassine Ghazi, President and Chief Executive Officer and Chairperson of Synopsys, Inc., a Delaware corporation (the "Company") and Shelagh Glaser, Chief Financial Officer of the Company, does hereby certify, to such officer's knowledge that:

The Quarterly Report on Form 10-Q for the fiscal quarter ended July 29, 2023 February 3, 2024 (the "Form 10-Q") to which this Certification is attached as Exhibit 32.1 fully complies with the requirements of Section 13(a) or 15(d) of the Exchange Act. The information contained in the Form 10-Q fairly presents, in all material respects, the financial condition and results of operations of the Company.

IN WITNESS WHEREOF, the undersigned have set their hands hereto as of August 18, 2023 February 23, 2024.

/s/ Aart J. de Geus Sassine Ghazi

Aart J. de Geus Sassine Ghazi
President and Chief Executive Officer and Chairperson

/s/ Shelagh Glaser

Shelagh Glaser
Chief Financial Officer

The foregoing certification is being furnished solely pursuant to Section 906 of the Sarbanes-Oxley Act of 2002 (subsections (a) and (b) of Section 1350, Chapter 63 of Title 18, United States Code) and is not deemed filed with the Securities and Exchange Commission as part of the Form 10-Q or as a separate disclosure document and is not to be incorporated by reference into any filing of the Company under the Securities Act of 1933, as amended, or the Securities Exchange Act of 1934, as amended (whether made before or after the date of the Form 10-Q), irrespective of any general incorporation language contained in such filing.

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