

Condensed Interim Consolidated Financial Statements of Canada Pension Plan Investment Board

DECEMBER 31, 2022



Condensed Interim Consolidated Balance Sheet

(Unaudited)

		As at	As at
(CAD millions)	De	cember 31, 2022	March 31, 2022 ¹
Assets			
Investments (note 2)	\$	674,109	\$ 679,115
Pending trades receivable		1,816	7,964
Premises and equipment		502	447
Other assets		321	390
Total assets		676,748	687,916
Liabilities			
Investment liabilities (note 2)		136,899	123,545
Pending trades payable		3,212	24,168
Accounts payable and accrued liabilities		872	892
Total liabilities		140,983	148,605
Net assets	\$	535,765	\$ 539,311
Net assets, represented by:			
Share capital	\$	- 9	\$-
Accumulated net income and comprehensive income		365,960	378,080
Accumulated net transfers from the Canada Pension Plan		169,805	161,231
Net assets	\$	535,765	\$ 539,311

¹ Certain comparatives have been reclassified to conform to the current period's presentation.

Condensed Interim Consolidated Statement of Comprehensive Income (Loss)

(Unaudited)

		months ended nber 31,	For the nine months ended December 31,					
(CAD millions)	2022	2021 ¹	2022	2021 ¹				
Income (loss):								
Interest, dividends, and other income	\$ 2,437	\$ 2,216	\$ 9,040	\$ 7,747				
Net gains (losses) on private investments	(1,845)	(1,646)	(1,011)	384				
Net gains (losses) on public and other investments	8,053	6,487	(25,397)	14,169				
Net gains on investment holding subsidiaries (note 4)	2,320	6,413	7,814	29,838				
	10,965	13,470	(9,554)	52,138				
Expenses:								
Personnel	263	212	776	742				
General and administrative	107	113	345	298				
Management fees	4	4	18	15				
Performance fees	-	1	66	30				
Transaction-related	73	66	221	244				
Taxes	42	(55)	121	119				
Financing	697	99	1,019	138				
	1,186	440	2,566	1,586				
Net income (loss) and comprehensive income (loss)	\$ 9,779	\$ 13,030	\$ (12,120)	\$ 50,552				

¹ Certain comparatives have been reclassified to conform to the current period's presentation.

Condensed Interim Consolidated Statement of Changes in Net Assets

(Unaudited)

	For the three months ended													
	Number of shares				Accumulated net transfers from the Canada	Accumulated			Total net					
(CAD millions)	outstanding		capital		Pension Plan		net income		assets					
As at October 1, 2022	10	\$		\$	172,795	\$	356,181	\$	528,976					
Total net income and comprehensive income			-				9,779		9,779					
Canada Pension Plan transfers:														
Transfers from the Canada Pension Plan					7,913		-		7,913					
Transfers to the Canada Pension Plan			-		(10,903)		-		(10,903)					
As at December 31, 2022	10	\$	-	\$	169,805	\$	365,960	\$	535,765					

		For the nine months ended												
(CAD millions)	Number of shares outstanding		Share capital	Accumulated net transfers from the Canada Pension Plan		Accumulated net income (loss)		Total net assets						
As at April 1, 2021	10	\$	- \$	153,522	\$	343,665	\$	497,187						
Total net income and comprehensive income			-	-		50,552		50,552						
Canada Pension Plan transfers:														
Transfers from the Canada Pension Plan			-	34,432		-		34,432						
Transfers to the Canada Pension Plan			-	(31,796)		-		(31,796)						
As at December 31, 2021	10	\$	- \$	156,158	\$	394,217	\$	550,375						
As at April 1, 2022	10	\$	- \$	161,231	\$	378,080	\$	539,311						
Total net (loss) and comprehensive (loss)			-	-		(12,120)		(12,120)						
Canada Pension Plan transfers:														
Transfers from the Canada Pension Plan			-	39,848		-		39,848						
Transfers to the Canada Pension Plan			-	(31,274)		-		(31,274)						
As at December 31, 2022	10	\$	- \$	169,805	\$	365,960	\$	535,765						

Condensed Interim Consolidated Statement of Cash Flows

(Unaudited)

	Fo	or the nine months	ended De	cember 31,	
(CAD millions)		2022		2021 ³	
Cash flows from operating activities					
Net income (loss) and comprehensive income (loss)	\$	(12,120)	\$	50,552	
Adjustments for non-cash items:					
Amortization of premises and equipment		54		42	
(Gains) on debt financing liabilities (note 10)		(1,870)		(729	
Adjustments for net changes in operating assets and liabilities:					
Decrease (increase) in investments		12,219		(88,313	
Decrease (increase) in pending trades receivable		6,148		(797	
Decrease in other assets		2		10	
Increase in investment liabilities		9,765		26,451	
(Decrease) increase in pending trades payable		(20,956)		1,203	
(Decrease) in accounts payable and accrued liabilities		(20)		(108)	
Net cash flows (used in) operating activities		(6,778)		(11,689	
Cash flows from financing activities					
Transfers from the Canada Pension Plan		39,848		34,432	
Transfers to the Canada Pension Plan		(31,274)		(31,796)	
Proceeds from debt financing liabilities (note 10)		8,198		10,038	
Repayment of debt financing liabilities (note 10)		(2,739)		(2,856)	
Net cash flows provided by financing activities		14,033		9,818	
Cash flows from investing activities					
Acquisitions of premises and equipment		(109)		(35)	
Net cash flows (used in) investing activities		(109)		(35)	
Effect of exchange rate changes on cash and cash equivalents		584		(7)	
Net increase in cash and cash equivalents		7,730		(1,913)	
Cash and cash equivalents at the beginning of the period		13,595		13,969	
Cash and cash equivalents at the end of the period		21,325		12,056	
Cash and cash equivalents at the end of the period are comprised of:					
Cash and cash equivalents held for operating purposes ¹		236		226	
Cash and cash equivalents held for investment purposes ²					
	*	21,089	<u> </u>	11,830	
Total	\$	21,325	\$	12,056	

¹ Presented as a component of Other assets on the Condensed Interim Consolidated Balance Sheet.

² Presented as a component of Investments on the Condensed Interim Consolidated Balance Sheet.

³ Certain comparatives have been reclassified to conform to the current period's presentation.

Condensed Interim Consolidated Schedule of Investment Portfolio

(Unaudited)

The schedule below provides information on investments and investment liabilities held by Canada Pension Plan Investment Board and its investment holding subsidiaries on a combined basis.

		As at	As at
(CAD millions)	Dece	mber 31, 2022	March 31, 2022 ²
Cash and cash equivalents	\$	23,353	\$ 15,341
Equities			
Private equities		182,450	173,767
Public equities		149,792	159,564
Total equities		332,242	333,331
Fixed income			
Bonds		121,961	108,311
Other debt		44,430	40,956
Money market securities		988	1,368
Total fixed income		167,379	150,635
Absolute return strategies		41,558	34,681
Infrastructure		45,774	46,481
Real estate		46,199	42,336
Investment receivables			
Securities purchased under reverse repurchase agreements and			
cash collateral pledged on securities borrowed		17,237	56,809
Derivative assets		4,378	2,933
Other		4,084	5,986
Total investment receivables		25,699	65,728
Total investments ¹	\$	682,204	\$ 688,533
Investment liabilities			
Securities and loans sold under repurchase agreements and cash			
collateral received on securities lent		62,068	43,629
Debt financing liabilities		53,438	49,507
Securities sold short		21,082	29,003
Derivative liabilities		3,832	4,775
Short-term secured debt		990	1,196
Other		3,713	2,775
Total investment liabilities ¹		145,123	130,885
Pending trades receivable ¹		1,966	8,525
Pending trades payable ¹		3,233	 26,807
Net investments	\$	535,814	\$ 539,366

¹ Consists of all the financial assets and liabilities held by both Canada Pension Plan Investment Board and its investment holding subsidiaries. In contrast, the Condensed Interim Consolidated Balance Sheet presents all financial assets and liabilities held by investment holding subsidiaries as investments. This results in a difference of \$8,095 million (March 31, 2022 - \$9,418 million), \$8,224 million (March 31, 2022 - \$7,340 million), \$150 million (March 31, 2022 - \$561 million) and \$21 million (March 31, 2022 - \$2,639 million) as compared to Investments, Investment liabilities, Pending trades receivable and Pending trades payable, respectively, as presented in the Condensed Interim Consolidated Balance Sheet. Refer to note 1.2, 2.1 and 2.2 for further details.

² Certain comparatives have been reclassified to conform to the current period's presentation.

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(Unaudited)

General information

Canada Pension Plan Investment Board (CPP Investments) was established in December 1997 pursuant to the *Canada Pension Plan Investment Board Act* (CPPIB Act). CPP Investments is responsible for assisting the Canada Pension Plan (CPP) in meeting its obligations to contributors and beneficiaries under the legislation *Canada Pension Plan* (CPP Act).

In December 2016, Royal Assent was given to Bill C-26 titled *An Act to Amend the Canada Pension Plan, the Canada Pension Plan Investment Board Act* and the *Income Tax Act*. The CPP Act now defines two separate parts of the CPP. The "base CPP" refers to the benefits and contributions established before 2019. The "additional CPP" refers to the additional benefits and additional contributions that began on January 1, 2019. All references to "CPP Investments" mean base CPP and additional CPP together.

The Condensed Interim Consolidated Financial Statements (Interim Financial Statements) provide information on the net assets managed by CPP Investments and do not include the liabilities and other assets of the CPP.

The Interim Financial Statements for the three and nine months ended December 31, 2022 were approved by the Board of Directors and authorized for issue on February 9, 2023.

1. Summary of significant accounting policies

1.1 Basis of presentation

The Interim Financial Statements have been prepared in compliance with International Accounting Standard (IAS) 34 *Interim Financial Reporting* and do not include all of the information and disclosures required in the Annual Consolidated Financial Statements. The Interim Financial Statements should be read in conjunction with CPP Investments' 2022 Annual Consolidated Financial Statements included on pages 86 to 131 of CPP Investments' 2022 Annual Report. The Interim Financial Statements follow the same accounting policies and methods as the most recent Annual Consolidated Financial Statements.

1.2 Subsidiaries

CPP Investments qualifies as an investment entity and reports the results of its operations in accordance with International Financial Reporting Standard (IFRS) 10 *Consolidated Financial Statements*. As a consequence, the Interim Financial Statements represent the results of operations of CPP Investments and its wholly owned subsidiaries that were created to provide investment-related services to support its operations. Operating subsidiaries of this nature include those that provide investment advisory services or subsidiaries that were created to CPP Investments.

Wholly owned subsidiaries that are managed by CPP Investments to hold investments are referred to herein as investment holding subsidiaries. Such subsidiaries are not consolidated in these Interim Financial Statements but instead are measured and reported at fair value through profit and loss in accordance with IFRS9 *Financial Instruments* (IFRS9). Fair value for unconsolidated investment holding subsidiaries is based on the fair value of the underlying investments, investment liabilities and pending trades held by the investment holding subsidiary together with its accumulated net income less dividends paid.

1.3 Interbank Offered Rates (IBORs) reform

The transition from IBORs to alternative reference rates impacts financial instruments referencing United States (U.S.) dollar London Interbank Offered Rates (LIBOR) with a maturity date beyond June 30, 2023. As at December 31, 2022, CPP Investments and its investment holding subsidiaries' exposure to financial instruments subject to U.S. dollar LIBOR reform that have yet to transition to Secured Overnight Financing Rate with a maturity date beyond June 30, 2023 was \$10 billion relating to non-derivative investments (fair value), \$1 billion relating to non-derivative investment liabilities (fair value), and nil relating to derivatives (notional).

In May 2022, Refinitiv Benchmark Services (UK) Limited, the administrator of the Canadian Dollar Offered Rate (CDOR), published a CDOR cessation notice stating that the publication for all tenors of CDOR will cease in June 2024. As at December 31, 2022, CPP Investments and its investment holding subsidiaries' exposure to financial instruments subject to CDOR reform that have yet to transition to alternative benchmark interest rates with a maturity date beyond June 28, 2024 was \$1 billion and \$10 billion relating to nonderivative investments (fair value) and derivatives (notional), respectively. The non-derivative financial instruments are recognized in Other debt.

2. Fair value measurement

This note categorizes the fair value of investments and investment liabilities into the following hierarchy based on the level of significant inputs used in the fair value measurement:

- Level 1 Quoted prices in active markets for identical assets or liabilities; •
- Level 2 Inputs other than quoted prices included in Level 1 that are observable for the asset or liability, either directly (as prices) or indirectly (derived from prices); and
- Level 3 Inputs for the asset or liability that are not based on observable market data (unobservable inputs).

2.1 Fair value hierarchy of investments and investment liabilities held directly by CPP Investments

	A	s at Dec	ember 31, 202	22			
(CAD millions)	Level 1		Level 2		Level 3		Total
Investments							
Cash and cash equivalents ¹	\$ -	\$	21,089	\$	-	\$	21,089
Equities							
Private equities ²			1,958		5,525		7,483
Public equities ²	130,460		3,378		-		133,838
Total equities	130,460		5,336		5,525		141,321
Fixed income							
Bonds	81,871		36,696		-		118,567
Other debt ²			466		6,479		6,945
Money market securities	-		988		-		988
Total fixed income	81,871		38,150		6,479		126,500
Absolute return strategies ²	-		21,031		771		21,802
Infrastructure ²	-		-		9,988		9,988
Real estate ²	-		-		9,835		9,835
Investment receivables							
Securities purchased under reverse	-						
repurchase agreements and cash collateral							
pledged on securities borrowed			17,107		-		17,107
Derivative assets	-		4,362		-		4,362
Other ³			2,933		-		2,933
Total investment receivables	-		24,402		-		24,402
Investments in investment holding							
subsidiaries (note 2.2)					319,172		319,172
Total investments	\$ 212,331	\$	110,008	\$	351,770	\$	674,109
Investment liabilities							
Securities sold under repurchase							
agreements and cash collateral received							
on securities lent	-		61,858		-		61,858
Debt financing liabilities	47,345		410		-		47,755
Securities sold short	21,082				-		21,082
Derivative liabilities	62		3,770		-		3,832
Short-term secured debt	-		990		-		990
Other ³	-		1,156		226		1,382
Total investment liabilities	68,489		68,184		226		136,899
Pending trades receivable ¹	-		1,816		-		1,816
Pending trades payable ¹	-		3,212		-		3,212
Net investments	\$ 143,842	\$	40,428	Ś	351,544	Ś	535,814

(Unaudited)

	As at March 31, 2022 ⁴												
(CAD millions)	Level 1		Level 2		Level 3		Total						
Investments													
Cash and cash equivalents ¹	\$-	\$	13,292	\$	-	\$	13,292						
Equities													
Private equities ²	-		1,683		6,479		8,162						
Public equities ²	139,496		3,519		-		143,015						
Total equities	139,496		5,202		6,479		151,177						
Fixed income													
Bonds	56,027		48,343		-		104,370						
Other debt ²	-		713		4,163		4,876						
Money market securities	-		1,368		-		1,368						
Total fixed income	56,027		50,424		4,163		110,614						
Absolute return strategies ²	-		17,723		809		18,532						
Infrastructure ²	-		-		10,550		10,550						
Real estate ²	-		-		10,336		10,336						
Investment receivables													
Securities purchased under reverse													
repurchase agreements and cash collateral													
pledged on securities borrowed	-		56,809		-		56,809						
Derivative assets	-		2,852		-		2,852						
Other ³	-		5,375		22		5,397						
Total investment receivables	-		65,036		22		65,058						
Investments in investment holding													
subsidiaries (note 2.2)	-		-		299,556		299,556						
Total investments	\$ 195,523	\$	151,677	\$	331,915	\$	679,115						
Investment liabilities													
Securities sold under repurchase													
agreements and cash collateral received													
on securities lent	-		43,461		-		43,461						
Debt financing liabilities	43,916		250		-		44,166						
Securities sold short	29,003		-		-		29,003						
Derivative liabilities	102		4,673		-		4,775						
Short-term secured debt	-		1,196		-		1,196						
Other ³	-		677		267		944						
Total investment liabilities	73,021		50,257		267		123,545						
Pending trades receivable ¹	-		7,964		-		7,964						
Pending trades payable ¹	-		24,168		-		24,168						
Net investments	\$ 122,502	\$	85,216	\$	331,648	\$	539,366						

¹ Cash and cash equivalents, Pending trades receivable and Pending trades payable are measured at amortized cost, which approximates fair value.

² Includes investments in funds.

³ Included in other investment receivables and other investment liabilities is cash pledged as collateral of \$1,461 million (March 31, 2022 - \$4,052 million) and cash held as collateral of \$1,010 million (March 31, 2022 - \$538 million) on derivative transactions, respectively.

⁴ Certain comparatives have been reclassified to conform to the current period's presentation.

2.2 Supplemental information on fair value hierarchy relating to investment holding subsidiaries

The following table presents the fair value hierarchy of the underlying investments and investment liabilities held by investment holding subsidiaries. For further details on the nature and purpose of investment holding subsidiaries, refer to note 1.2.

	As at December 31, 2022													
(CAD millions)		Level 1		Level 2		Level 3		Total						
Investments														
Cash and cash equivalents ¹	\$	-	\$	2,264	\$		\$	2,264						
Equities														
Private equities ²				708		174,259		174,967						
Public equities ²		11,074		4,854		26		15,954						
Total equities		11,074		5,562		174,285		190,921						
Fixed income														
Bonds		-		3,340		54		3,394						
Other debt ²				6,604		30,881		37,485						
Total fixed income				9,944		30,935		40,879						
Absolute return strategies ²				17,646		2,110		19,756						
Infrastructure ²				-		35,786		35,786						
Real estate ²		-		-		36,364		36,364						
Investment receivables														
Securities purchased under reverse repurchase				130		-		130						
agreements														
Derivative assets		-		16		-		16						
Other				1,138		13		1,151						
Total investment receivables		-		1,284		13		1,297						
Total investments held by investment holding														
subsidiaries	\$	11,074	\$	36,700	\$	279,493	\$	327,267						
Investment liabilities														
Loans sold under repurchase agreements				210		-		210						
Debt financing liabilities				5,622		61		5,683						
Other				431		1,900		2,331						
Total investment liabilities held by investment														
holding subsidiaries				6,263		1,961		8,224						
Pending trades receivable ¹		-		150		-		150						
Pending trades payable ¹		-		21		-		21						
Investments in investment holding subsidiaries	\$	11,074	\$	30,566	\$	277,532	\$	319,172						

(Unaudited)

			As at	March 31, 20)22 ³		
(CAD millions)		Level 1		Level 2		Level 3	Total
Investments							
Cash and cash equivalents ¹	\$	-	\$	2,049	\$	-	\$ 2,049
Equities							
Private equities ²		-		2,816		162,789	165,605
Public equities ²		11,104		5,413		32	16,549
Total equities		11,104		8,229		162,821	182,154
Fixed income							
Bonds		-		3,941		-	3,941
Other debt ²		-		7,965		28,115	36,080
Total fixed income		-		11,906		28,115	40,021
Absolute return strategies ²		-		14,203		1,946	16,149
Infrastructure ²		-		-		35,931	35,931
Real estate ²		-		-		32,000	32,000
Investment receivables							
Securities purchased under reverse							
repurchase agreements		-		-		-	-
Derivative assets		-		81		-	81
Other		-		540		49	589
Total investment receivables		-		621		49	670
Total investments held by investment holding							
subsidiaries	\$	11,104	\$	37,008	\$	260,862	\$ 308,974
Investment liabilities							
Loans sold under repurchase agreements		-		168		-	168
Debt financing liabilities		-		5,191		150	5,341
Other		-		16		1,815	1,831
Total investment liabilities held by investment							
holding subsidiaries		-		5,375		1,965	7,340
Pending trades receivable ¹		-		561		-	561
Pending trades payable ¹		-		2,639		-	2,639
Investments in investment holding subsidiaries	;\$	11,104	\$	29,555	\$	258,897	\$ 299,556

¹ Cash and cash equivalents, Pending trades receivable and Pending trades payable are measured at amortized cost, which approximates fair value.

² Includes investments in funds.

³ Certain comparatives have been reclassified to conform to the current period's presentation.

2.3 Transfers between Level 1 and Level 2

Transfers between levels in the fair value hierarchy are deemed to have occurred at the end of the reporting period. During the nine months ended December 31, 2022, there were no transfers from Level 1 to Level 2 of investments or of investment liabilities held directly by CPP Investments (during the year ended March 31, 2022 - \$106 million and \$24 million, respectively). During the nine months ended December 31, 2022, transfers from Level 2 to Level 1 included \$238 million of investments and nil of investment liabilities held directly by CPP Investments and nil of investment liabilities held directly by CPP Investments (during the year ended March 31, 2022 - \$587 million and \$24 million, respectively). Transfers between Level 1 and Level 2 depend on the availability of quoted market prices in active markets and valuation techniques using inputs other than quoted prices that are observable.

2.4 Level 3 reconciliation

The following table presents the reconciliations for investments included in Level 3 of the fair value hierarchy:

				For th	e n	ine month	s e	nded Dece	mbe	r 31, 2()22					
(CAD millions)		Fair value as at ril 1, 2022	i n	Gain (loss) ncluded in et income (loss)		Purchases		Sales ²		nsfers into evel 3	Т	ransfers out of Level 3	Dee	Fair value as at cember 31, 2022	on	Change in ealized gains (losses) investments still held at ecember 31, 2022 ³
Investments				(_							
Equities																
Private equities	\$	6.479	\$	(842)	Ś	162	Ś	_	Ś	1	Ś	(274)	Ś	5,525	\$	(1,084)
Public equities		-	1	-	1		1	_	÷.		1	1	1	-	1	-
Total equities		6,479		(842)		162		-		-		(274)		5,525		(1,084)
Fixed income														<u> </u>		
Other debt		4,163		231		3,148		(1,063)		-				6,479		216
Absolute return																
strategies		809		14				(52)				-		771		2
Infrastructure		10,550		(8)		1,996		(2,550)		-				9,988		(221)
Real estate		10,336		688		275		(1,464)				-		9,835		645
Investment receivables																
Other		22		7				-				(29)				-
Investments in investment holding subsidiaries ¹	5	299,556		7,814		13,242		(1,440)						319,172		7,814
Total investments	Ś	331,915	Ś	· · ·	Ś		Ś	(6,569)	\$		\$	(303)	Ś	351,770	\$	7,814
	\$	331,915	<u> </u>	7,504	ې	10,025	\$	(0,505)	,		Ş	(303)		331,770	Ş	7,372
Investment liabilities																
Other		267		3				-		-		(44)		226		3
Net investments	\$	331,648	\$	7,901	\$	18,823	\$	(6,569)	\$	-	\$	(259)	\$	351,544	\$	7,369

(Unaudited)

		For	the year e	nded Marc	h 31, 2022	4		
								Change in unrealized
		Gain (loss)						gains (losses)
	Fair value	included in			Transfers	Transfers	Fair value	on investments
	as at	net income			into	out of	as at	t still held at
(CAD millions)	April 1, 2021	(loss)	Purchases	Sales ²	Level 3	Level 3	March 31, 2022	2 March 31, 2022 ³
Investments								
Equities								
Private equities	\$ 11,541	\$ 238	\$ 824	\$ (1 <i>,</i> 887)	\$ 54	\$ (4,291)	\$ 6,479	\$ 45
Public equities	45	(3)	-	(42)	-	-	-	-
Total equities	11,586	235	824	(1 <i>,</i> 929)	54	(4,291)	6,479	45
Fixed income								
Other debt	2,709	16	2,780	(1 <i>,</i> 534)	192	-	4,163	(58)
Absolute return								
strategies	1,012	15	-	(218)	-	-	809	(27)
Infrastructure	8,037	1,179	2,201	(867)	-	-	10,550	710
Real estate	9,565	876	508	(613)	-	-	10,336	809
Investment								
receivables								
Other	17	(2)	7	-	-	-	22	(2)
Investments in								
investment holding								
subsidiaries ¹	265,706	32,476	2,704	(1,330)	-	-	299,556	32,476
Total investments	\$ 298,632	\$ 34,795	\$ 9,024	\$ (6,491)	\$ 246	\$ (4,291)	\$ 331,915	\$ 33,953
Investment liabilities	;							
Other	228	-	40	(93)	148	(56)	267	-
Net investments	\$ 298,404	\$ 34,795	\$ 8,984	\$ (6 <i>,</i> 398)	\$ 98	\$ (4,235)	\$ 331,648	\$ 33,953

¹ Purchases relating to investment holding subsidiaries represent capital contributions or net loan funding provided to these subsidiaries. Sales relating to investment holding subsidiaries represent return of capital or payment of dividends from these subsidiaries.

² Includes return of capital.

³ Included in income (loss). Includes or excludes investments transferred into or out of Level 3, respectively.

⁴ Certain comparatives have been reclassified to conform to the current period's presentation.

Transfers into and out of Level 3 were primarily due to changes in the availability of market observable inputs used to determine fair value and are deemed to have occurred at the end of the reporting period.

2.5 Level 3 – Significant unobservable inputs

The table below presents the fair value of investments directly held by CPP Investments, valuation techniques used to determine their fair values, and the ranges and weighted averages of unobservable inputs.

Investment holding subsidiaries are also classified as Level 3 in the fair value hierarchy. The fair value is largely driven by Level 3 investments, for which the valuation techniques, ranges and weighted averages of unobservable inputs are included below. However, certain investments held by the investment holding subsidiaries are based on quoted prices in active markets (Level 1) or valued using observable inputs (Level 2). These amount to \$11,074 million (March 31, 2022 - \$11,104 million) and \$30,566 million (March 31, 2022 - \$29,555 million), respectively. Refer to note 2.2 for further details on Level 1 and Level 2 investments relating to investment holding subsidiaries. As each investment holding subsidiary is largely composed of Level 3 investments, the entire subsidiary is classified as Level 3.

(Unaudited)

			As at December 31,	2022		
	Fair value of	f investments				
	hel	d by:				
		Investment		Significant		
	СРР	holding	Primary valuation	Unobservable	Range of	Weighted
(CAD millions)	Investments	subsidiaries	techniques used ²	inputs	input values ³	average ³
Cash and cash equivalents	\$ -	\$ 2,264	Cost with accrued interest	-	-	-
Private equities						
Direct			Earnings multiples of	EBITDA multiple	6.9X-26.0X	15.6X
	5,512	77,002	comparable companies			
			Discounted cash flow	Discount rate	6.7%-25.0%	11.2%
			Net asset value provided	-	-	-
	11	20,299	by investment manager			
Fund investments			Net asset value provided	-	-	-
	2	77,666	by investment manager			
Public equities						
Direct	-	11,074	Quoted market price	-	-	-
Fund investments			Net asset value provided	-	-	-
	-	4,880	by investment manager			
Bonds			Quoted market prices or	-	-	-
			discounted cash flow			
	-	3,394	using observable inputs			
Other debt		-,				
Direct private debt	524	29,776	Discounted cash flow	Discount rate	1.4%-33.7%	12.8%
			Net asset value provided	-		-
		2,983	by investment manager			
Asset-backed securities	5,742	570	Comparable pricing	Price 6	54.8%-101.7%	95.8%
Fund investments	3,742	5,0	Net asset value provided			
i una investinents	213	4,156	by investment manager			
Absolute return strategies	213	4,130	by investment manager			
Fund investments			Net asset value provided			
i unu investinents	771	19,756	by investment manager			
Infrastructure	//1	15,750	by investment manager			
Direct	9,988	35,722	Discounted cash flow	Discount rate	7.4%-13.3%	9.1%
Fund investments	5,500	33,722	Net asset value provided	Discountrate	7.4/0-13.3/0	9.170
Fund investments		64	by investment manager	-		
Real estate		04	by investment manager			
Direct	7,751	5,936	Discounted cash flow	Discount rate	5.3%-15.7%	7.4%
Direct	7,751	3,330	Discounced cash now	Terminal	4.3%-11.5%	5.7%
				capitalization rate	4.5/0-11.5/0	J.1/0
			Net asset value provided	capitalization rate		_
	2,063	28,674	by investment partner	-		
Fund investments	2,005	20,074	Net asset value provided			
Fund investments	21	1,754	by investment manager	-		-
Investment receivables		1,734	by investment manager			
Securities purchased			Discounted cash flow			
•			Discounced cash now	-		
under reverse repurchase agreements		130				
0		130	Ontion model			
Derivative assets			Option model Cost with accrued interest			-
Other		1,151	cost with accrued interest		-	-
Investment liabilities		E 693	Discounted cash flow	Discount rate		E 20/
Debt financing liabilities		5,683		Discountrate	5.0%-6.6%	5.3%
المعموم ومالية المعام ومعموم			Cost with accrued interest			
Loans sold under						
repurchase agreements	-	210	Cost with accrued interest	-	-	-
Other ¹	226	2,331	Amortized cost	-	-	-
Pending trades net			Amortized cost	-	-	-
receivable/(payable)		129				
Total	\$ 32,372	\$ 319,172				

				As at March 31,	2022 ⁴		
	Fair valu	e of in	vestments				
		held b	oy:				
		li	nvestment		Significant		
	CPP		holding	Primary valuation	unobservable		Weighted
(CAD millions)	Investmer		ubsidiaries	techniques used ²	inputs	input values ³	average ³
Cash and cash equivalents	\$	- \$	2,049	Cost with accrued interest	-	-	-
Private equities							
Direct	6,4	56	73,818	Earnings multiples of	EBITDA multiple	8.9X-22.0X	15.4X
				comparable companies	Discount asta	C 70/ 1C 40/	10 70/
			16 261	Discounted cash flow	Discount rate	6.7%-16.4%	10.7%
		11	16,361	Net asset value provided	-	-	-
Fund investments		r	75,426	by investment manager Net asset value provided			
Fund investments		2	75,420	by investment manager	-	-	-
Public equities				by investment manager			
Direct		_	11,451	Quoted market price	-	-	-
Fund investments		-	5,098	Net asset value provided	-	-	-
			-,	by investment manager			
Bonds		-	3,941	Quoted market prices or	-	-	-
			,	discounted cash flow			
				using observable inputs			
Other debt							
Direct private debt	1	87	29,879	Discounted cash flow	Discount rate	4.0%-31.5%	8.3%
		-	1,401	Net asset value provided	-	-	-
				by investment manager			
Asset-backed securities	3,7	66	538	Comparable pricing	Price	74.5%-103.4%	98.3%
Fund investments	2	10	4,262	Net asset value provided	-	-	-
				by investment manager			
Absolute return strategies							
Fund investments	8	09	16,149	Net asset value provided	-	-	-
				by investment manager			
Infrastructure	10 5	- 0	25 070		.	7 404 40 004	0 70/
Direct	10,5	50	35,878	Discounted cash flow	Discount rate	7.1%-13.3%	8.7%
Fund investments		-	53	Net asset value provided	-	-	-
Real estate				by investment manager			
Direct	8,7	1 5	5,047	Discounted cash flow	Discount rate	4.8%-14.3%	6.7%
Direct	0,7	15	5,047	Discounted cash now	Terminal	4.8%-14.5% 3.8%-11.5%	5.3%
					capitalization rate	5.8/0-11.5/0	5.5%
	1,5	45	25,438	Net asset value provided	capitalization rate	-	-
	_,0		20)100	by investment partner			
Fund investments		76	1,515	Net asset value provided	-	-	-
			_,	by investment manager			
Investment receivables				, 3			
Derivative assets		-	81	Option model	-	-	-
Other		22	589	Cost with accrued interest	-	-	-
Investment liabilities							
Debt financing liabilities		-	5,341	Cost with accrued interest	-	-	-
				Discounted cash flow	Discount rate	3.1%-3.7%	3.3%
Loans sold under							
repurchase agreements		-		Cost with accrued interest	-	-	-
Other ¹	2	67	1,831	Amortized cost	-	-	-
Pending trades net		-	(2,078)	Amortized cost	-	-	-
receivable/(payable)							
Total	\$ 32,0	92 \$	299,556				

1 Primarily includes contingent considerations and deferred tax liabilities related to investments.

2 May include certain recently acquired investments held at cost, which approximates fair value.

3 The range of input values represents the highest and lowest inputs used to value the investments in a particular asset class. The weighted average of the input values is calculated based on the relative fair values of the investments within the asset class. The diversity of investments reported within each asset class, such as the geographic location and industry sector of the investments, may result in certain ranges of inputs being wide and unevenly distributed across the range.

⁴ Certain comparatives have been reclassified to conform to the current period's presentation.

2.6 Sensitivity analysis of valuations using unobservable inputs

Significant changes in any of the above unobservable inputs would result in a significantly higher or lower fair value measurement. The interrelationship of significant unobservable inputs and fair value measurement for the most significant key inputs identified in the table above is as follows:

- An increase (decrease) in the EBITDA multiple will result in a higher (lower) fair value.
- An increase (decrease) in the discount rate and terminal capitalization rate will result in a lower (higher) fair value.

The fair values of the investments classified within Level 3 of the fair value hierarchy in note 2.1 and 2.2 are based on accepted industry valuation methods that may include the use of estimates made by Management, appraisers or both where significant judgment is required. The use of valuation methods based on reasonable alternative assumptions could have a significant impact on the resulting fair values. With all other variables held constant, the use of reasonable alternative assumptions would result in a decrease of \$7,600 million (March 31, 2022 - \$8,600 million) or an increase of \$10,400 million (March 31, 2022 - \$10,100 million) in net assets. This sensitivity analysis is subject to the exercise of judgment and excludes investments where fair values are provided by investment managers as the underlying assumptions used are not available to CPP Investments.

(endanced)

3. Derivatives

The fair value of derivative contracts held by CPP Investments and its investment holding subsidiaries is as follows:

	As at Dece	mber 31, 2022	As at Ma	rch 31, 2022
	Positive	e Negative	Positive	Negative
(CAD millions)	fair value	e fair value	fair value	fair value
Equity contracts				
Swaps	\$ 2,929	\$ (1,578)	\$ 1,722	\$ (3,741)
Options:				
Over-the-counter – purchased	2		19	-
Over-the-counter – written		- (89)	-	(122)
Warrants	12		80	-
Total equity contracts	2,943	(1,667)	1,821	(3,863)
Foreign exchange contracts				
Forwards	939) (1,221)	729	(307)
Options:				
Over-the-counter – purchased	113	-	80	-
Over-the-counter – written		- (74)	-	(44)
Total foreign exchange contracts	1,052	. (1,295)	809	(351)
Interest rate contracts				
Swaps	(633)	43	(257)
Options:				
Over-the-counter – purchased	349	- (224	-
Over-the-counter – written		- (141)	-	(175)
Total interest rate contracts	355	i (774)	267	(432)
Credit contracts				
Credit default swaps:				
Over-the-counter – purchased	2	. (2)	1	(3)
Over-the-counter – written	24	l (20)	32	(6)
Options:				
Over-the-counter – purchased	2		3	-
Over-the-counter – written		- (12)	-	(18)
Total credit contracts	28	3 (34)	36	(27)
Commodity contracts				
Options:				
Exchange-traded – written		- (62)	-	(102)
Total commodity contracts		- (62)	-	(102)
Total ¹	\$ 4,378	3 \$ (3,832)	\$ 2,933	\$ (4,775)

¹ Includes \$12 million (March 31, 2022 - \$80 million) relating to warrants and \$4 million (March 31, 2022 - \$1 million) relating to interest rate swaps transacted by investment holding subsidiaries.

4. Net gains on investment holding subsidiaries

	For	the three r Decem	 	Fo	r the nine n Decem	
(CAD millions)		2022	2021 ¹		2022	2021 ¹
Income:						
Interest, dividends, and other income	\$	2,104	\$ 2,604	\$	6,034	\$ 6,114
Net gains on private investments		103	3,204		5,821	23,688
Net gains (losses) on public and other investments		596	1,437		(472)	3,695
		2,803	7,245		11,383	33,497
Expenses:						
Transaction-related		45	72		86	138
Taxes		48	84		104	223
Financing		68	32		140	87
		161	188		330	448
Net gains before dividends paid to CPP Investments		2,642	7,057		11,053	33,049
Dividends paid to CPP Investments		322	644		3,239	3,211
Net gains on investment holding subsidiaries	\$	2,320	\$ 6,413	\$	7,814	\$ 29,838

¹ Certain comparatives have been reclassified to conform to the current period's presentation.

5. Segment information

5.1 Net income (loss) by investment segment

The table below presents the income (loss) and expenses incurred by each investment department.

			For the th	ree months	ended Decen	nber	31, 2022			
(CAD millions)	Ma	Total Fund nagement	Capital Markets and Factor Investing	Active Equities	Credit		Private Equity	Real	Adjustment	Total
Income (loss):	Ś	11,644	· · · · · · · · · · · · · · · · · · ·	\$ (488)		Ś	(582) \$	1,319		10,965
Expenses ¹ :	-			+ ()	+ 010	- T	(554) +	_,	+ (-,010) +	
Personnel		33	31	31	34		65	69	-	263
General and										
administrative		19	12	17	14		21	24	-	107
Management fees ²		-	137		12		195	47	(387)	4
Performance fees ³		-	312		-		147		(459)	-
Transaction-related ⁴		22	8	9	22		1	56	(45)	73
Taxes ⁴		21	4	(22)	5		(4)	86	(48)	42
Financing ⁵		1,505	-		42		21	6	(877)	697
		1,600	504	35	129		446	288	(1,816)	1,186
Net income (loss)	\$	10,044	\$ (486)	\$ (523)	\$ 741	\$	(1,028) \$	1,031	\$-\$	9,779

(Unaudited)

			For the	thre	ee months	s ended Dec	embe	er 31, 2021 ⁶			
			Capita	I							
		Total	Market	S							
		Fund	and Facto	r	Active	Credit		Private	Real		
(CAD millions)	Man	agement	Investing	3	Equities	Investments		Equity	Assets	Adjustment	Tota
Income (loss):	\$	6,890	\$ 477	\$	(820)	\$ 735	\$	3,723 \$	3,922 \$	\$ (1,457) \$	13,470
Expenses ¹ :											
Personnel		20	25		35	32		44	56	-	212
General and											
administrative		21	17		21	13		19	22	-	113
Management fees ²		-	127		1	11		159	37	(331)	4
Performance fees ³		-	261		-	-		604	2	(866)	1
Transaction-related ⁴		26	6		18	13		20	55	(72)	66
Taxes ⁴		1	5		(59)	3		37	42	(84)	(55)
Financing ⁵		172	-		-	12		14	5	(104)	99
		240	441		16	84		897	219	(1,457)	440
Net income (loss)	\$	6,650	\$ 36	\$	(836)	\$ 651	\$	2,826 \$	3,703 \$	5 - \$	13,030

¹ Includes expenses borne by CPP Investments and its investment holding subsidiaries in relation to the respective departments.

² Includes costs incurred within funds of \$387 million (December 31, 2021 - \$331 million).

³ Includes costs incurred within funds of \$459 million (December 31, 2021 - \$866 million).

⁴ Adjustments consist of expenses borne by investment holding subsidiaries, which are reclassified into income (loss).

⁵ Includes financing expenses borne by CPP Investments and its investment holding subsidiaries of \$765 million (December 31, 2021 - \$131 million), as well as the notional interest expense from derivatives (primarily swaps and futures) used to generate additional leverage for CPP Investments of \$809 million (December 31, 2021 - \$72 million). Together these amounts reflect the total leverage-related expenses used by Management to monitor the cost of Total Fund Leverage, as described in note 9.2.

⁶ Certain comparatives have been reclassified to conform to the current period's presentation.

			For the n Capital	emonths	ended Decen	۱b	ber 3	31, 2022			
(CAD millions)	Ma	Total Fund nagement	Markets and Factor Investing	Active Equities	Credit Investments			Private Equity	Real Assets	djustment	Total
Income (loss):	\$	(16,813) \$	\$ 4,100	\$ (2,391)	\$ 2,187		\$	3,061	\$ 4,728	\$ (4,426)	\$ (9,554)
Expenses ¹ :											
Personnel		85	94	104	103			186	204	-	776
General and											
administrative		65	47	56	43			60	74	-	345
Management fees ²		-	404	8	51			518	119	(1,082)	18
Performance fees ³		-	975		-			560	5	(1,474)	66
Transaction-related ⁴		52	15	42	48			46	104	(86)	221
Taxes ⁴		42	7	36	32			42	66	(104)	121
Financing ⁵		2,559	-	-	86			37	17	(1,680)	1,019
		2,803	1,542	246	363			1,449	589	(4,426)	2,566
Net income (loss)	\$	(19,616)	\$ 2,558	\$ (2,637)	\$ 1,824		\$	1,612	\$ 4,139	\$ -	\$ (12,120)

(Unaudited)

			F	or the i	nin	e months ei	nded Dece	mbe	er 31, 2021 ⁶			
				Capital								
		Total	1	Markets								
		Fund	and	d Factor		Active	Credit		Private	Real		
(CAD millions)	Mai	nagement	In	vesting		Equities In	vestments		Equity	Assets	Adjustment	Tota
Income (loss):	\$	18,129	\$	2,314	\$	(1,356) \$	3,586	\$	23,965 \$	9,032	\$ (3,532)	\$ 52,138
Expenses ¹ :												
Personnel		79		95		119	100		163	186	-	742
General and administrative		55		47		55	35		49	57	-	298
Management fees ²		-		364		17	28		469	111	(974)	15
Performance fees ³		-		794		4	2		1,085	44	(1,899)	30
Transaction-related ⁴		59		20		67	33		46	157	(138)	244
Taxes ⁴		24		6		87	11		54	160	(223)	119
Financing ⁵		352		-		-	27		41	16	(298)	138
		569		1,326		349	236		1,907	731	(3,532)	1,586
Net income (loss)	\$	17,560	\$	988	\$	(1,705) \$	3,350	\$	22,058 \$	8,301	\$-:	\$ 50,552

¹ Includes expenses borne by CPP Investments and its investment holding subsidiaries in relation to the respective departments.

² Includes costs incurred within funds of \$1,082 million (December 31, 2021 - \$974 million).

³ Includes costs incurred within funds of \$1,474 million (December 31, 2021 - \$1,899 million).

⁴ Adjustments consist of expenses borne by investment holding subsidiaries, which are reclassified into income (loss).

⁵ Includes financing expenses borne by CPP Investments and its investment holding subsidiaries of \$1,159 million (December 31, 2021 - \$225 million), as well as the notional interest expense from derivatives (primarily swaps and futures) used to generate additional leverage for CPP Investments of \$1,540 million (December 31, 2021 - \$211 million). Together these amounts reflect the total leverage-related expenses used by Management to monitor the cost of Total Fund Leverage, as described in note 9.2.

⁶ Certain comparatives have been reclassified to conform to the current period's presentation.

5.2 Net investments by investment segment

				Net invest	men	its ¹				
			Capital Markets							
(CAD millions)	м	Total Fund anagement	nd Factor Investing	Active Equities	In	Credit vestments	Private Equity	R	eal Assets	Total
As at: December 31, 2022	\$	205,889	\$ 2,342	\$ (368)	\$	54,028	\$ 141,615	\$	132,308	\$ 535,814
March 31, 2022		228,176	3,413	(2,705)		53,672	134,170		122,640	539,366

¹ Net investments excludes net corporate liabilities of \$49 million (March 31, 2022 - \$55 million).

5.3 Geographic information

Net investments are presented in the table below based on the region to which they have primary economic exposure:

			Ne	et investments			
(CAD millions)	Canada	U.S.		Asia Pacific	Europe	Latin America	Total
As at:							
December 31, 2022	\$ 76,851	\$ 187,229	\$	144,746	\$ 95,587	\$ 31,401	\$ 535,814
March 31, 2022	85,183	196,199		141,199	86,427	30 <i>,</i> 358	539,366

6. Risk management

CPP Investments manages risks in accordance with the Risk Policy (Policy). This Policy establishes accountability of the Board of Directors, the various committees, including the Risk Committee, and departments to manage the key risks of CPP Investments. The Policy is updated and approved by the Board of Directors at least once every fiscal year, and contains risk appetite (in the form of limits, statements and targets) and risk management provisions that govern investment decisions in accordance with the mandate of CPP Investments.

6.1 Total Fund risk

A suite of risk measures is used within CPP Investments to monitor and assess the risk profile of the base CPP Investment Portfolio and the additional CPP Investment Portfolio (collectively the Investment Portfolios). Regular risk reports are provided to Senior Management and the Board of Directors to support the governance of the various dimensions of risk to which the Investment Portfolios are exposed. The target level of market risk, expressed in terms of an equity/debt risk equivalence ratio, of the base CPP Investment Portfolio is currently set at 85%/15%, while the additional CPP Investment Portfolio target level is set at 55%/45%.

Plan adjustment risk is a central concept in CPP Investments' portfolio design and risk governance activities. It is defined as the risk of an increase to the Minimum Contribution Rate (applicable to CPP contributors) primarily due to adverse investment experience. It is an overarching risk that is impacted by any key risk that could materially impact CPP Investments' long-term returns. These key risks are denoted in the risk notes below.

Other key investment risk measures include:

- Market risk: The equity/debt risk equivalence ratio, which is the proportion of equity (versus debt) in a simple two-asset reference portfolio that would give the same market risk and credit risk as that of the applicable Investment Portfolio.
- Potential investment losses: The loss of the Investment Portfolios over a one-year horizon is not expected to exceed the established limit 19 times out of 20. The potential loss of the Investment Portfolios over a five-year horizon is also measured and monitored by Management.
- Liquidity and leverage risk measures, which are further described in note 9.

The monitoring of adherence to investment risk limits is conducted independent of the investment departments by the internal risk department using both industry standard and internally developed risk models. The tables below provide a summary of the key investment risk measures of the Investment Portfolios.

(Unaudited)

			A December 31, 20	s at 022		As a 2022
	Lim	nit	base	CPP	ba	se CPI
Plan adjustment risk	n/a		16	%	16	%
Market risk	80 - 90	%	87	%	85	%
Potential investment loss:						
One-year horizon ^{1,2}	21	%	19	%	18	%
Five-year horizon ¹	n/a		24	%	19	%
			A December 31, 20	s at	March 31	As a

		March 31, 2022				
	Limit	t	additional C	PP	additional	СРР
Plan adjustment risk	n/a		18	%	18	%
Market risk	50-60 %	%	56	%	55	%
Potential investment loss:						
One-year horizon ^{1,2}	15 %	%	13	%	13	%
Five-year horizon ¹	n/a		17	%	15	%

¹ Percentage of investment value.

² Effective November 10, 2022, the Board approved an increase to the one-year potential investment loss risk limit from 20% to 21% for the base CPP, and from 14% to 15% for the additional CPP.

7. Market risk

Market risk is the risk that the fair value of an investment or investment liability will fluctuate because of changes in market prices and rates. Market risk includes equity risk, interest rate risk, credit spread risk and currency risk.

7.1 Equity risk

Equity risk is the risk that the fair value of an investment or investment liability will fluctuate because of changes in equity prices, which is a significant source of risk of the Investment Portfolios.

7.2 Interest rate risk

Interest rate risk is the risk that the fair value of an investment or investment liability will fluctuate because of changes in market interest rates. The Investment Portfolios are exposed to interest rate risk primarily through holdings of fixed income securities, certain investment liabilities and interest rate derivatives.

7.3 Credit spread risk

Credit spread risk is the difference in yield on certain securities compared to a comparable risk-free security (i.e., government issued) with the same maturity date. Credit spread risk is the risk that the fair value of these securities will fluctuate because of changes in credit spread. With all other variables held constant, an increase in credit spread rates would result in a decrease in net investments.

7.4 Currency risk

The Investment Portfolios are exposed to currency risk through holdings of investments or investment liabilities in various foreign currencies. Fluctuations in the relative value of foreign currencies against the Canadian dollar can result in a positive or negative effect on the fair value or future cash flows of these investments and investment liabilities.

7.4.1 Currency risk exposures

The net currency exposures after allocating foreign currency derivatives, in Canadian dollars, are as follows:

(CAD millions)	As at Decembe	er 31, 2022	As at March 31, 2022 ¹				
Currency	Net exposure	% of total ²		Net exposure	% oftotal ²		
U.S. dollar	\$ 265,396	50	%	\$ 296,341	55	%	
Euro	38,167	7		39,127	7		
Chinese renminbi	20,131	4		25,953	5		
Japanese Yen	17,783	3		5,799	1		
Other	85,163	16		84,956	16		
Total foreign exposure	426,640	80		452,176	84		
Canadian dollar	109,174	20		87,190	16		
Total	\$ 535,814	100	%	\$ 539,366	100	%	

¹ Certain comparatives have been reclassified to conform to the current period's presentation.

² May not reflect actual percentage of total due to rounding.

Credit risk 8.

Credit risk represents the potential permanent loss of investment value due to direct or indirect counterparty exposure to a defaulted entity and/or financial losses due to deterioration of an entity's credit quality. The Investment Portfolios' credit risk arises primarily through its investments in non-investment grade entities. The carrying amounts of these investments as presented in the Condensed Interim Consolidated Schedule of Investment Portfolio represent the maximum direct credit risk exposure at the Condensed Interim Consolidated Balance Sheet date. Credit risk is also incorporated as a component of potential investment loss measures in note 6.1.

8.1 Credit value-at-risk

In addition to incorporating credit risk within the potential investment loss measures as described in note 6.1, a standalone measure for losses due to defaults and credit rating migration is also monitored. A Monte Carlo simulation that incorporates likelihood of default, credit rating migration and recovery in the event of default for underlying investments is adopted to quantify this dimension of risk. Credit value-atrisk, at a 95% confidence level, implies there is a 5% chance that the underlying investments in the Investment Portfolios will lose more than the amounts shown below, expressed as a percentage of each Investment Portfolio, in any given year due to default and credit migration risk.

	As at	December 31, 2022	As at March 31, 2022				
	base CPP	additional CPP	base CPP	additional CPP			
Credit value-at-risk	3.6 %	2.3 %	3.4 %	2.3 %			

9. Liquidity and leverage risk

9.1 Liquidity risk

Liquidity risk is defined as the risk of incurring unacceptable losses while obtaining the funds needed to (i) meet payment obligations as they become due, (ii) fund new investments or (iii) rebalance the portfolio in periods of stress.

The liquidity coverage ratio measures the amount of available liquid securities relative to CPP Investments' investment obligations and obligations to transfer funds to CPP over various time horizons including any 10-day period.

	Limit	As at December 31, 2022	As at March 31, 2022
Liquidity coverage ratio	1.0x	2.3x	2.9x

(Unaudited)

Liquidity risk is impacted by the use of various forms of leverage which CPP Investments uses to manage certain other risks and enhance fund returns. The use of leverage is governed directly through leverage measures as outlined in note 9.2.

Liquidity risk is managed by investing certain assets in a liquid portfolio of publicly traded equities, money market securities and marketable bonds. It is supplemented by the ability to raise funds through activities such as the issuance of unsecured debt, including term debt, as well as transacting in securities sold under repurchase agreements. CPP Investments also maintains unsecured credit facilities to meet potential liquidity requirements. There were no credit facilities drawn as at December 31, 2022 and March 31, 2022.

(CAD millions)	As at Dece	ember 31, 2022	As at March 31, 2022				
Unsecured credit facilities held	\$	1,500	\$	1,500			

9.2 Leverage risk

Leverage risk is the risk that excessive financial obligations heighten market and liquidity risks during periods of stress. Leverage risk is monitored by recourse and non-recourse measures. Recourse leverage is a notional-based measure of leverage with direct recourse to CPP Investments which represents the net amount of financing used by CPP Investments to increase its investment exposure. Non-recourse leverage generally represents the debt issued through CPP Investments' investment holding subsidiaries that limit recourse to specific investments held within these subsidiaries. Together, recourse leverage and nonrecourse leverage constitute 'Total Fund Leverage'.

	Limit	As at December 31, 2022	As at March 31, 2022
Recourse leverage ^{1:}			
Base CPP	45 %	30.8 %	22.8 %
Additional CPP	30	18.5	14.7

¹ Effective April 1, 2022 the Board approved these recourse leverage limits.

As at December 31, 2022, recourse and non-recourse leverage amounted to \$162,868 million and \$6,039 million, respectively (December 31, 2021 – \$129,546 million and \$5,596 million, respectively). Together, these balances comprise CPP Investments' Total Fund Leverage. The tables below present total leverage related expenses incurred on Total Fund Leverage (as disclosed in note 5.1).

	For	the three i Decem		For the nine months ended December 31,				
(CAD millions)		2022		2021		2022		2021
Leverage-related expenses incurred on:								
Recourse leverage	\$	1,501	\$	171	\$	2,547	\$	349
Non-recourse leverage		73		32		152		87
Total	\$	1,574	\$	203	\$	2,699	\$	436

9.3 Terms to maturity

9.3.1 Terms to maturity of non-derivative investment liabilities held directly by CPP Investments

			Terms	to maturit	y					
As at December 31, 2022 As at March 31, 20										
	Within	1 to 5	6 to 10	Over 10	Total contractual	Weighted average	Total contractual	Weighted average		
(CAD millions)	1 year	years	years	years	amount	interest rate	amount	interest rate		
Securities sold under repurchase agreements	\$ 54,848	\$ - 3	\$-\$	- \$	54,848	2.6 %	\$ 35,740	(0.1) %		
Cash collateral received on securities lent	7.407				7.407	n/a	7.714	n/a		
Debt financing liabilities	5,139	28,542	12,404	7,710	53,795	1.7	46,170	1.2		
Securities sold short ^{1,2}	21,082		-		21,082	n/a	29,003	n/a		
Short-term secured debt	990	-	-		990	4.6	1,196	0.6		
Total	\$ 89,466	\$28,542	\$ 12,404 \$	7,710 \$	138,122	n/a	\$ 119,823	n/a		

¹ Considered repayable within one year based on the earliest period in which the counterparty could request payment under certain conditions.

² Includes equities sold short for which the average interest rate is not applicable.

9.3.2 Terms to maturity of non-derivative investment liabilities held by investment holding subsidiaries

The following table presents supplemental information relating to the terms to maturity of investment liabilities held by investment holding subsidiaries.

						Terms	to matur	it	у						
As at December 31, 2022 As at March 31, 2022									2022						
									Total	Weigh	ted		Total	Weig	ghted
		Within		1 to 5		6 to 10	Over 10	C	contractual	aver	rage	со	ontractual	av	erage
(CAD millions)		1 yeai	•	years	;	years	years		amount	interest	rate		amount	interes	t rate
Loans sold under															
repurchase agreements	\$	-	\$	209	\$	- \$		\$	209	6.8	%	\$	168	2.9) %
Debt financing liabilities		149		4,697		578	207		5,631	4.2			5,298	2.6	5
Total	\$	149	\$	4,906	\$	578 \$	207	\$	5,840	n/a		\$	5,466	n/a	a

10. Reconciliation of debt financing liabilities

The following table provides a reconciliation of debt financing liabilities issued by CPP Investments arising from financing activities:

	For the nine months ended December 31,							
(CAD millions)		2022						
Balance, beginning of period	\$	44,166	\$	36,449				
Proceeds		8,198		10,038				
Repayments		(2,739)		(2 <i>,</i> 856)				
Non-cash changes in fair value ¹		(1,870)		(729)				
Balance, end of period	\$	47,755	\$	42,902				

¹ Includes foreign exchange loss of \$2,158 million (December 31, 2021 - \$337 million).

(Unaudited)

11. Collateral

11.1 Collateral held and pledged directly by CPP Investments

The net fair value of collateral held and pledged directly by CPP Investments was as follows:

		As at		As at
(CAD millions)	Dec	March 31, 2022		
Third-party assets held as collateral on ¹ :				
Reverse repurchase agreements	\$	16,921	\$	55,897
Derivative transactions		1,010		538
Securities lent ^{2,3}		10,063		8,935
Own and third-party assets pledged as collateral on:				
Repurchase agreements		(54,233)		(35,518)
Securities borrowed ^{3,4}		(25,763)		(32,298)
Short-term secured debt ⁵		(1,259)		(1,429)
Derivative transactions		(11,534)		(10,634)
Debt financing liabilities		(866)		(535)
Total	\$	(65,661)	\$	(15,044)

¹ The fair value of collateral sold or repledged as at December 31, 2022 was \$6,601 million (March 31, 2022 - \$16,233 million).

² The fair value of securities lent as at December 31, 2022 was \$10,364 million (March 31, 2022 - \$9,054 million).

³ Cash collateral payable on the Balance Sheet of \$7,407 million (March 31, 2022 - \$7,714 million) consists of collateral receivable of \$111 million and collateral payable of \$7,518 million that qualify for netting (March 31, 2022 - \$140 million and \$7,854 million, respectively).

⁴ The fair value of securities borrowed as at December 31, 2022 was \$20,047 million (March 31, 2022 - \$21,888 million) of which \$17,681 million (March 31, 2022 - \$21,752 million) was used for short selling activity.

⁵ Represents securities pledged as collateral on short-term cash borrowings from prime brokers.

11.2 Supplemental information on collateral relating to investment holding subsidiaries

The net fair value of collateral held and pledged directly by investment holding subsidiaries was as follows:

(CAD millions)	Dece	As at March 31, 2022	
Third-party assets held as collateral on ¹ :			
Reverse repurchase agreements	\$	130	\$ -
Own and third-party assets pledged as collateral on:			
Repurchase agreements		(349)	(292)
Securities borrowed ^{2,3}		(12,259)	(8,469)
Derivative transactions ³		(663)	(574)
Private equities ⁴		(10,852)	(10,156)
Debt financing liabilities		(10,111)	(10,037)
Total	\$	(34,104)	\$ (29,528)

¹ The fair value of collateral sold or repledged as at December 31, 2022 was nil (March 31, 2022 - nil).

² The fair value of securities borrowed as at December 31, 2022 was \$7,534 million (March 31, 2022 - \$4,967 million), which were all used for short selling activity.

³ The cash collateral at the prime brokers may be used for securities borrowed and derivatives transacted by brokers.

⁴ Represents securities pledged as collateral on loan borrowings of the investees.

12. Commitments

CPP Investments and its investment holding subsidiaries have entered into commitments related to the funding of investments. These commitments are generally payable on demand based on the funding needs of the investment subject to the terms and conditions of each agreement. As at December 31, 2022, the unfunded commitments for CPP Investments and its investment holding subsidiaries totalled \$1,323 million (March 31, 2022 - \$1,083 million) and \$58,067 million (March 31, 2022 - \$54,064 million), respectively.

(Unaudited)

13. Guarantees

As part of certain investment transactions, CPP Investments and its investment holding subsidiaries agreed to guarantee, as at December 31, 2022, up to \$226 million (March 31, 2022 - \$228 million) and \$6,775 million (March 31, 2022 - \$7,006 million), respectively, to other counterparties in the event certain investee entities default under the terms of loan and other related agreements, or fail to perform under specified non-financial contractual obligations.

14. Base CPP and additional CPP

The following note discloses the net assets, net investments and net income (loss) of CPP Investments' base CPP account and additional CPP account.

14.1 Changes in net assets

The accumulated transfers from/to the CPP and its two parts, the base CPP and additional CPP, as well as their accumulated net income (loss) since inception, are as follows:

					For the	thre	ee months	ende	d			
	Accumulate	d ne	t transfers	s fro	m CPP		Accu	mulat	ed net inc	on	ne (loss)	
(CAD millions)	base CPP	ad	ditional CPP		Total		base CPP	add	itional CPP		Total	 Total net assets
As at October 1, 2022	\$ 155,807	\$	16,988	\$	172,795	\$	356,220	\$	(39)	\$	356,181	\$ 528,976
Total net income and												
comprehensive income			-				9,570		209		9,779	9,779
Transfers from CPP	6,552		1,361		7,913		-		-			7,913
Transfers to CPP	(10,903)		-		(10,903)		-		-		-	(10,903)
As at December 31, 2022	\$ 151,456	\$	18,349	\$	169,805	\$	365,790	\$	170	\$	365,960	\$ 535,765

						For th	ne ni	ine months	ende	ed			
		Accumulate	ed r	net transfe	rs fr	om CPP		Accu	mula	ited net i	ncor	ne (loss)	
		base	a	ditional				base	ad	ditional			Total net
(CAD millions)		СРР		СРР		Total		СРР		СРР		Total	assets
As at April 1, 2021	\$	147,665	\$	5 <i>,</i> 857	\$	153,522	\$	343,242	\$	423	\$	343,665	\$ 497,187
Total net income and comprehensive													
income		-		-		-		49,911		641		50,552	50,552
Transfers from CPP		30,660		3,772		34,432		-		-		-	34,432
Transfers to CPP		(31,796)		-		(31,796)		-		-		-	(31,796)
As at December 31, 2021	\$	146,529	\$	9,629	\$	156,158	\$	393,153	\$	1,064	\$	394,217	\$ 550,375
As at April 1, 2022	S	149,184	\$	12,047	\$	161,231	\$	377,510	\$	570	\$	378,080	\$ 539,311
Total net (loss) and comprehensive (loss)								(11,720)		(400)		(12,120)	(12,120)
Transfers from CPP		33,546		6,302		39,848				- 1 - <u>1</u>		- 1 - 1 -	39,848
Transfers to CPP		(31,274)				(31,274)				-		-	(31,274)
As at December 31, 2022	\$	151,456	\$	18,349	\$	169,805	\$	365,790	\$	170	\$	365,960	\$ 535,765

(Unaudited)

14.2 Net assets of base CPP and additional CPP

The net assets of CPP Investments' base CPP and additional CPP accounts are as follows:

	As at	t De	cember 3	1, 2	022	As at March 31, 2022					
(CAD millions)	base CPP	a	ditional CPP		Total		base CPP	a	dditional CPP		Total
Cash and cash equivalents held for investment purposes Net investments other than cash and cash	\$ 20,418	\$	671	\$	21,089	\$	13,123	\$	169	\$	13,292
equivalents	496,755		17,970		514,725		513,629		12,445		526,074
Net investments	517,173		18,641		535,814		526,752		12,614		539,366
Premises and equipment	489		13		502		436		11		447
Other assets ¹	314		7		321		383		7		390
Accounts payable and accrued liabilities	730		142		872		877		15		892
Net assets	\$ 517,246	\$	18,519	\$	535,765	\$	526,694	\$	12,617	\$	539,311

¹ Includes cash held for operating purposes.

14.3 Schedule of investment portfolio for base CPP and additional CPP

The table below provides details of the investments and investment liabilities for CPP Investments' base CPP and additional CPP accounts:

	As at December 31, 2022 ¹										
		base		additional							
(CAD millions)		СРР		СРР		Total					
Cash and cash equivalents	\$	22,632	\$	721	\$	23,353					
Equities											
Private equities		178,359		4,091		182,450					
Public equities		146,434		3,358		149,792					
Total equities		324,793		7,449		332,242					
Fixed income											
Bonds		112,849		9,112		121,961					
Other debt		43,434		996		44,430					
Money market securities		946		42		988					
Total fixed income		157,229		10,150		167,379					
Absolute return strategies		40,626		932		41,558					
Infrastructure		44,748		1,026		45,774					
Real estate		45,163		1,036		46,199					
Investment receivables											
Securities purchased under reverse repurchase agreements											
and cash collateral pledged on securities borrowed		16,734		503		17,237					
Derivative assets		4,280		98		4,378					
Other		3,964		120		4,084					
Total investment receivables		24,978		721		25,699					
Total investments	\$	660,169	\$	22,035	\$	682,204					
Investment liabilities											
Securities and loans sold under repurchase agreements and											
cash collateral received on securities lent		60,564		1,504		62,068					
Debt financing liabilities		52,240		1,198		53,438					
Securities sold short		20,609		473		21,082					
Derivative liabilities		3,746		86		3,832					
Short-term secured debt		968		22		990					
Other		3,630		83		3,713					
Total investment liabilities		141,757		3,366		145,123					
Pending trades receivable		1,922		44		1,966					
Pending trades payable		3,161		72		3,233					
Net investments	\$	517,173	\$	18,641	\$	535,814					

(Unaudited)

		As at	t March 31, 202	2 ^{1,2}	
	base		additional		
(CAD millions)	СРР		CPP		Total
Cash and cash equivalents	\$ 15,140	\$	201	\$	15,341
Equities					
Private equities	171,126		2,641		173,767
Public equities	157,138		2,426		159,564
Total equities	328,264		5,067		333,331
Fixed income					
Bonds	102,306		6,005		108,311
Other debt	40,333		623		40,956
Money market securities	1,287		81		1,368
Total fixed income	143,926		6,709		150,635
Absolute return strategies	34,154		527		34,681
Infrastructure	45,775		706		46,481
Real estate	41,693		643		42,336
Investment receivables					
Securities purchased under reverse repurchase agreements					
and cash collateral pledged on securities borrowed	55 <i>,</i> 945		864		56,809
Derivative assets	2,888		45		2,933
Other	5,867		119		5,986
Total investment receivables	64,700		1,028		65,728
Total investments	\$ 673,652	\$	14,881	\$	688,533
Investment liabilities					
Securities sold under repurchase agreements and cash					
collateral received on securities lent	42,965		664		43,629
Debt financing liabilities	48,754		753		49,507
Securities sold short	28,562		441		29,003
Derivative liabilities	4,702		73		4,775
Short-term secured debt	1,178		18		1,196
Other	2,734		41		2,775
Total investment liabilities	128,895		1,990		130,885
Pending trades receivable	8,395		130		8,525
Pending trades payable	26,400		407		26,807
Net investments	\$ 526,752	\$	12,614	\$	539,366

¹ Presented using the same basis as the Condensed Interim Consolidated Schedule of Investment Portfolio, which is different from that of the Condensed Interim Consolidated Balance Sheet. Refer to the Condensed Interim Consolidated Schedule of Investment Portfolio for further details.

 2 $\,$ Certain comparatives have been reclassified to conform to the current period's presentation.

(Unaudited)

14.4 Net income (loss) of base CPP and additional CPP

Details of net income (loss) of CPP Investments' base CPP and additional CPP accounts are as follows:

			F	or the	thre	ee month	s ende	d Decemb	er 31,		
						2022					2021 ¹
	k	ase	additi	onal				base	addi	tional	
(CAD millions)		СРР		CPP		Total		СРР		СРР	Total
ncome:											
Interest, dividends, and other income	\$2,	351	\$	86	\$	2,437	\$	2,186	\$	30	\$ 2,216
Net (losses) on private investments	(1,	804)		(41)		(1,845)		(1,626)		(20)	(1,646
Net gains on public and other											
investments	7,	912		141		8,053		6,361		126	6,487
Net gains on investment holding											
subsidiaries	2,	268		52		2,320		6,321		92	6,413
	10,	727		238		10,965		13,242		228	13,470
Expenses:											
Personnel		257		6		263		209		3	212
General and administrative		104		3		107		111		2	113
Management fees		4				4		4		-	4
Performance fees		-		-				1		-	1
Transaction-related		71		2		73		65		1	66
Taxes		41		1		42		(54)		(1)	(55
Financing		6 80		17		697		98		1	99
	1,	157		29		1,186		434		6	440
Net income and comprehensive income	\$9,	570	\$	209	\$	9,779	\$	12,808	\$	222	\$ 13,030

¹ Certain comparatives have been reclassified to conform to the current period's presentation.

		For t	he nine month	s ended Decemb	er 31,	
			2022			2021 ¹
	base	additional		base	additional	
(CAD millions)	СРР	СРР	Total	СРР	CPP	Total
Income (loss):						
Interest, dividends, and other income	\$ 8,833	\$ 207	\$ 9,040	\$ 7,667	\$ 80	\$ 7,747
Net gains (losses) on private						
investments	(988)	(23) (1,011) 381	3	384
Net gains (losses) on public and other						
investments	(24,609)	(788) (25,397)	13,974	195	14,169
Net gains on investment holding						
subsidiaries	7,554	260	7,814	29,455	383	29,838
	(9,210)	(344) (9,554	51,477	661	52,138
Expenses:						
Personnel	760	16	776	733	9	742
General and administrative	336	9	345	293	5	298
Management fees	18	-	18	15	-	15
Performance fees	65	1	66	30	-	30
Transaction-related	218	3	221	242	2	244
Taxes	118	3	121	117	2	119
Financing	995	24	1,019	136	2	138
	2,510	56	2,566	1,566	20	1,586
Net income (loss) and comprehensive						
income (loss)	\$ (11,720)	\$ (400) \$ (12,120	\$ 49,911	\$ 641	\$ 50,552

¹ Certain comparatives have been reclassified to conform to the current period's presentation.