

TMX GROUP LIMITED

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INDEPENDENT AUDITORS' REPORT

To the Shareholders of TMX Group Limited

Opinion

We have audited the consolidated financial statements of TMX Group Limited (the Entity), which comprise:

- the consolidated balance sheets as at December 31, 2021 and 2020;
- the consolidated income statements for the years then ended;
- the consolidated statements of comprehensive income for the years then ended;
- the consolidated statements of changes in equity for the years then ended;
- the consolidated statements of cash flows for the years then ended; and
- notes to the consolidated financial statements, including a summary of significant accounting policies

(Hereinafter referred to as the “financial statements”).

In our opinion, the accompanying financial statements present fairly, in all material respects, the consolidated financial position of the Entity as at December 31, 2021 and 2020, and its consolidated financial performance and its consolidated cash flows for the years then ended in accordance with International Financial Reporting Standards (IFRS).

Basis for Opinion

We conducted our audit in accordance with Canadian generally accepted auditing standards. Our responsibilities under those standards are further described in the

“Auditors’ Responsibilities for the Audit of the Financial Statements” section of our auditors’ report.

We are independent of the Entity in accordance with the ethical requirements that are relevant to our audit of the financial statements in Canada and we have fulfilled our other ethical responsibilities in accordance with these requirements.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

Key Audit Matters

Key audit matters are those matters that, in our professional judgment, were of most significance in our audit of the financial statements for the year ended December 31, 2021. These matters were addressed in the context of our audit of the financial statements as a whole, and in forming our opinion thereon, and we do not provide a separate opinion on these matters.

We have determined the matters described below to be the key audit matters to be communicated in our auditors’ report.

Evaluation of the impairment analysis for goodwill and indefinite life intangible assets

Description of the matter

We draw attention to Note 2(c) and Note 16(c) to the financial statements. The Entity has recorded goodwill and indefinite life intangible assets of \$1,695.8 million and \$2,322.4 million respectively as of December 31, 2021. The Entity performs impairment testing for goodwill and indefinite life intangible assets on an annual basis or more frequently when there is an indication of impairment. An impairment is recognized if the carrying amount of an asset, or its cash generating unit (CGU), exceeds its estimated recoverable amount. The recoverable amount of an asset is the greater of its value-in-use and its fair value less costs of disposal. In determining the estimated recoverable amounts using a discounted cash flow model, the Entity’s assumptions include future cash flows, long-term growth rates and pre-tax discount rates.

Why the matter is a key audit matter

We identified the evaluation of the impairment analysis for goodwill and indefinite life intangible assets as a key audit matter. This matter represented an area of significant risk of material misstatement requiring specialized skills and knowledge to evaluate the Entity’s estimated recoverable amounts for goodwill and indefinite life intangible assets. Significant auditor judgment was required in evaluating the results of our audit procedures due to the high degree of sensitivity of the estimated recoverable amounts to changes in assumptions.

How the matter was addressed in the audit

The primary procedures we performed to address this key audit matter included the following:

We evaluated the appropriateness of future cash flows by:

- Comparing the Entity's prior year expected future cash flows to the actual results to assess the Entity's budgeting process.
- Assessing future cash flows by comparing them to historical performance and against key new initiatives in the Board-approved plan.

We assessed the long-term growth rates by comparing them to available market information and historical performance.

We involved valuation professionals with specialized skills and knowledge, who assisted in evaluating the appropriateness of the pre-tax discount rates by:

- Comparing the Entity's Weighted Average Cost of Capital (WACC) against publicly available market data.
- Assessing the CGU-specific risk adjustments applied by the Entity to the WACC by considering the historic, current and future financial performance of each CGU.

Measurement of the BOX purchase consideration and the customer relationships acquired in the AST Canada and BOX business combinations

Description of the matter

We draw attention to Notes 2(c), 3(a) and 17 to the financial statements.

On August 12, 2021, the Entity completed the AST Canada acquisition which is accounted for as a business combination. The Entity's identified acquired intangible assets include customer relationships, for which the provisional amount estimated by the Entity is \$79.0 million.

On January 3, 2022, the Entity obtained control of BOX Holdings ("BOX") which shall be accounted for as a business combination. As this is a subsequent event, the Entity will commence consolidating BOX in the 2022 financial statements. The Entity's ownership interest in BOX is accounted for as an equity-method investment in the 2021 financial statements. Upon obtaining control, the Entity remeasured its previously held ownership interest at \$207.5 million and this comprises the purchase consideration in this business combination. The Entity's identified acquired intangible assets include customer relationships, for which the provisional amount estimated by the Entity is \$305.9 million.

The Entity estimates the fair value of customer relationships acquired in a business combination based on the income approach. The income approach is a valuation technique that calculates the fair value of an intangible asset based on the present value of future cash flows that the asset can be expected to generate over its remaining useful life. This valuation involves significant subjectivity and estimation uncertainty, including assumptions related to the future revenues attributable to acquired customer relationships, customer attrition rate, and discount rates.

The Entity estimates the fair value of its ownership interest in BOX (i.e. the purchase consideration) using the income approach. The income approach is a valuation technique that calculates the fair value of a business based on the present value of future expected cash flows. This valuation involves significant subjectivity and estimation uncertainty, including assumptions related to the future revenues of the acquired business and the discount rate.

Why the matter is a key audit matter

We identified the assessment of the measurement of the BOX purchase consideration and the customer relationships acquired in the AST Canada and BOX business combinations as a key audit matter. Significant auditor judgment was required due to the high degree of subjectivity and estimation uncertainty in the assumptions used to determine the fair values. Significant auditor attention and complex auditor judgment was required to evaluate the results of audit procedures. Further, specialized skills, knowledge, and experience were required to apply audit procedures and evaluate the results of those procedures.

How the matter was addressed in the audit

The primary procedures we performed to address this key audit matter included the following:

We evaluated the appropriateness of the future revenues of the acquired business, future revenues attributable to acquired customer relationships, and customer attrition rates by considering past performance of the acquired businesses.

We involved valuation professionals with specialized skills, knowledge and experience, who assisted in assessing the appropriateness of the discount rates by assessing against comparable entities and industry data.

Other Information

Management is responsible for the other information. Other information comprises:

- the information included in Management's Discussion and Analysis filed with the relevant Canadian Securities Commissions; and

- the information, other than the financial statements and the auditors' report thereon, included in a document likely to be entitled "Annual Report".

Our opinion on the financial statements does not cover the other information and we do not and will not express any form of assurance conclusion thereon.

In connection with our audit of the financial statements, our responsibility is to read the other information identified above and, in doing so, consider whether the other information is materially inconsistent with the financial statements or our knowledge obtained in the audit and remain alert for indications that the other information appears to be materially misstated.

We obtained the information included in Management's Discussion and Analysis filed with the relevant Canadian Securities Commissions as at the date of this auditors' report. If, based on the work we have performed on this other information, we conclude that there is a material misstatement of this other information, we are required to report that fact in the auditors' report.

We have nothing to report in this regard.

The information, other than the financial statements and the auditors' report thereon, included in a document likely to be entitled "Annual Report" is expected to be made available to us after the date of this auditors' report. If, based on the work we will perform on this other information, we conclude that there is a material misstatement of this other information, we are required to report that fact to those charged with governance.

Responsibilities of Management and Those Charged with Governance for the Financial Statements

Management is responsible for the preparation and fair presentation of the financial statements in accordance with IFRS, and for such internal control as management determines is necessary to enable the preparation of financial statements that are free from material misstatement, whether due to fraud or error.

In preparing the financial statements, management is responsible for assessing the Entity's ability to continue as a going concern, disclosing as applicable, matters related to going concern and using the going concern basis of accounting unless management either intends to liquidate the Entity or to cease operations, or has no realistic alternative but to do so.

Those charged with governance are responsible for overseeing the Entity's financial reporting process.

Auditors' Responsibilities for the Audit of the Financial Statements

Our objectives are to obtain reasonable assurance about whether the financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditors' report that includes our opinion.

Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with Canadian generally accepted auditing standards will always detect a material misstatement when it exists.

Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of the financial statements.

As part of an audit in accordance with Canadian generally accepted auditing standards, we exercise professional judgment and maintain professional skepticism throughout the audit.

We also:

- Identify and assess the risks of material misstatement of the financial statements, whether due to fraud or error, design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for our opinion.

The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control.

- Obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Entity's internal control.
- Evaluate the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by management.
- Conclude on the appropriateness of management's use of the going concern basis of accounting and, based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the Entity's ability to continue as a going concern. If we conclude that a material uncertainty exists, we are required to draw attention in our auditors' report to the related disclosures in the financial statements or, if such disclosures are inadequate, to modify our opinion. Our conclusions are based on the audit evidence obtained up to the date of our auditors' report. However, future events or conditions may cause the Entity to cease to continue as a going concern.



Independent Auditors' Report

- Evaluate the overall presentation, structure and content of the financial statements, including the disclosures, and whether the financial statements represent the underlying transactions and events in a manner that achieves fair presentation.
- Communicate with those charged with governance regarding, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant deficiencies in internal control that we identify during our audit.
- Provide those charged with governance with a statement that we have complied with relevant ethical requirements regarding independence and communicate with them all relationships and other matters that may reasonably be thought to bear on our independence, and where applicable, related safeguards.
- Obtain sufficient appropriate audit evidence regarding the financial information of the entities or business activities within the group Entity to express an opinion on the financial statements. We are responsible for the direction, supervision and performance of the group audit. We remain solely responsible for our audit opinion.
- Determine, from the matters communicated with those charged with governance, those matters that were of most significance in the audit of the financial statements of the current period and are therefore the key audit matters. We describe these matters in our auditors' report unless law or regulation precludes public disclosure about the matter or when, in extremely rare circumstances, we determine that a matter should not be communicated in our auditors' report because the adverse consequences of doing so would reasonably be expected to outweigh the public interest benefits of such communication.

KPMG LLP

Chartered Professional Accountants, Licensed Public Accountants

The engagement partner on the audit resulting in this auditors' report is Abhimanyu Verma.

Toronto, Canada

February 7, 2022

TMX GROUP LIMITED

Consolidated Balance Sheets

(In millions of Canadian dollars)		Note	December 31, 2021	December 31, 2020
Assets				
Current Assets:				
Cash and cash equivalents	14	\$	264.3	\$ 222.1
Restricted cash and cash equivalents	14		180.0	153.3
Marketable securities	14		77.3	55.8
Trade and other receivables	15		132.6	108.0
Balances of Participants and Clearing Members	9		57,113.5	30,270.4
Other current assets	22		32.6	29.9
Total Current Assets			57,800.3	30,839.5
Non-Current Assets:				
Goodwill and intangible assets	16		5,156.9	5,047.7
Right-of-use assets	21		84.3	82.1
Deferred income tax assets	8		24.7	22.5
Other non-current assets	22		133.2	106.8
Total Non-Current Assets			5,399.1	5,259.1
Total Assets		\$	63,199.4	\$ 36,098.6
Liabilities and Equity				
Current Liabilities:				
Trade and other payables	18	\$	152.8	\$ 132.4
Participants' tax withholdings	14		180.0	153.3
Balances of Participants and Clearing Members	9		57,113.5	30,270.4
Debt	11		—	160.0
Credit and liquidity facilities drawn	11		2.0	4.3
Other current liabilities	22		70.7	60.7
Total Current Liabilities			57,519.0	30,781.1
Non-Current Liabilities:				
Debt	11		997.1	747.5
Lease liabilities	21		88.3	86.2
Deferred income tax liabilities	8		844.9	805.1
Other non-current liabilities	22		44.0	67.2
Total Non-Current Liabilities			1,974.3	1,706.0
Total Liabilities			59,493.3	32,487.1
Equity:				
Share capital	25		2,875.8	2,943.6
Contributed surplus	23		11.8	11.1
Retained earnings			817.1	636.2
Accumulated other comprehensive income			1.4	20.6
Total Equity			3,706.1	3,611.5
Total Liabilities and Equity		\$	63,199.4	\$ 36,098.6

See accompanying notes which form an integral part of these consolidated financial statements.

Approved on behalf of the Board of Directors on February 7, 2022:

/s/ Charles Winograd _____ Chair

/s/ William Linton _____ Director

TMX GROUP LIMITED

Consolidated Income Statements

(In millions of Canadian dollars, except per share amounts)

	Note	For the year ended December 31	
		2021	2020
Revenue	4	\$ 980.7	\$ 865.1
REPO and collateral interest:			
Interest income		53.9	160.6
Interest expense		(53.9)	(160.6)
Net REPO and collateral interest		—	—
Total revenue		980.7	865.1
Compensation and benefits		253.5	226.6
Information and trading systems		64.6	57.6
Selling, general and administration		84.3	84.7
Depreciation and amortization	16 & 21	87.1	80.3
Total operating expenses		489.5	449.2
Income from operations		491.2	415.9
Share of income from equity accounted investees	17	24.2	5.7
Net finance costs	6	(36.1)	(32.8)
Income before income tax expense		479.3	388.8
Income tax expense	8	140.8	109.1
Net income		\$ 338.5	\$ 279.7
Earnings per share:			
Basic	7	\$ 6.03	\$ 4.96
Diluted	7	\$ 5.99	\$ 4.91

See accompanying notes which form an integral part of these consolidated financial statements.

TMX GROUP LIMITED**Consolidated Statements of Comprehensive Income***(In millions of Canadian dollars)*

	Note	For the year ended December 31	
		2021	2020
Net income		\$ 338.5	\$ 279.7
Other comprehensive income (loss):			
Items that will not be reclassified to the consolidated income statements:			
Actuarial gain (loss) on defined benefit pension and other post-retirement benefit plans (net of tax expense of \$4.0, 2020 - tax benefit of \$0.9)	24	11.3	(2.8)
Total items that will not be reclassified to the consolidated income statements		11.3	(2.8)
Items that may be reclassified subsequently to the consolidated income statements:			
Unrealized (loss) gain on translating financial statements of foreign operations		(19.2)	11.6
Total items that may be reclassified subsequently to the consolidated income statements		(19.2)	11.6
Total comprehensive income		\$ 330.6	\$ 288.5

See accompanying notes which form an integral part of these consolidated financial statements.

TMX GROUP LIMITED**Consolidated Statements of Changes in Equity***(In millions of Canadian dollars)*

	Note	For the year ended December 31, 2021				
		Share capital	Contributed surplus	Accumulated other comprehensive income (loss)	Retained earnings	Total equity
Balance at January 1, 2021		\$ 2,943.6	\$ 11.1	\$ 20.6	\$ 636.2	\$3,611.5
Net income		—	—	—	338.5	338.5
Other comprehensive (loss) income:						
Unrealized loss on translating financial statements of foreign operations		—	—	(19.2)	—	(19.2)
Actuarial gain on defined benefit pension and other post-retirement benefit plans, net of taxes	24	—	—	—	11.3	11.3
Total comprehensive (loss) income		—	—	(19.2)	349.8	330.6
Dividends to equity holders	27	—	—	—	(168.9)	(168.9)
Proceeds from exercised share options		15.1	—	—	—	15.1
Cost of exercised share options		1.5	(1.5)	—	—	—
Cost of share option plan	23	—	2.2	—	—	2.2
Shares repurchased under normal course issuer bid	25	(84.4)	—	—	—	(84.4)
Balance at December 31, 2021		\$ 2,875.8	\$ 11.8	\$ 1.4	\$ 817.1	\$3,706.1

See accompanying notes which form an integral part of these consolidated financial statements.

TMX GROUP LIMITED**Consolidated Statements of Changes in Equity***(In millions of Canadian dollars)*

For the year ended December 31, 2020						
	Note	Share capital	Contributed surplus	Accumulated other comprehensive income	Retained earnings	Total equity
Balance at January 1, 2020		\$ 2,965.1	\$ 12.1	\$ 9.0	\$ 512.9	\$ 3,499.1
Net income		—	—	—	279.7	279.7
Other comprehensive income (loss):						
Unrealized gain on translating financial statements of foreign operations		—	—	11.6	—	11.6
Actuarial loss on defined benefit pension and other post-retirement benefit plans, net of taxes	24	—	—	—	(2.8)	(2.8)
Total comprehensive income (loss)		—	—	11.6	276.9	288.5
Dividends to equity holders	27	—	—	—	(153.6)	(153.6)
Proceeds from exercised share options		31.7	—	—	—	31.7
Cost of exercised share options		3.6	(3.6)	—	—	—
Cost of share option plan	23	—	2.6	—	—	2.6
Shares repurchased under normal course issuer bid	25	(56.8)	—	—	—	(56.8)
Balance at December 31, 2020		\$ 2,943.6	\$ 11.1	\$ 20.6	\$ 636.2	\$ 3,611.5

See accompanying notes which form an integral part of these consolidated financial statements.

TMX GROUP LIMITED

Consolidated Statements of Cash Flows

(In millions of Canadian dollars)

		For the year ended December 31	
	Note	2021	2020
Cash flows from (used in) operating activities:			
Income before income taxes		\$ 479.3	\$ 388.8
Adjustments to determine net cash flows:			
Depreciation and amortization	16 & 21	87.1	80.3
Net finance costs		36.1	32.8
Share of income from equity accounted investees	17	(24.2)	(5.7)
Cost of share option plan	23	2.2	2.6
Unrealized foreign exchange (gain) loss		(0.4)	0.9
Changes in:			
Trade and other receivables, and prepaid expenses		(19.7)	(4.0)
Trade and other payables		4.8	17.4
Provisions		(0.6)	(6.9)
Deferred revenue		7.6	1.4
Other assets and liabilities		(16.2)	3.1
Income taxes paid		(114.6)	(98.5)
		441.4	412.2
Cash flows from (used in) financing activities:			
Interest paid	6	(34.6)	(33.9)
Repayment of lease liabilities	21	(8.4)	(8.3)
Proceeds from exercised options		15.1	31.7
Shares repurchased under normal course issuer bid	25	(84.4)	(56.8)
Dividends paid to equity holders	27	(168.9)	(153.6)
Proceeds from issuance of debentures	11	250.0	—
Credit facility and debt financing fees	11	(1.3)	—
Net movement of Commercial Paper	11	(160.0)	(79.6)
Credit and liquidity facilities drawn, net	11	(2.3)	(3.9)
		(194.8)	(304.4)
Cash flows from (used in) investing activities:			
Interest received		1.5	2.3
Dividends received		5.7	5.4
Additions to premises and equipment and intangible assets		(51.2)	(67.1)
Acquisition of subsidiaries, net of cash acquired	3	(138.4)	—
Marketable securities, net		(21.5)	24.6
		(203.9)	(34.8)
Increase (decrease) in cash and cash equivalents		42.7	73.0
Cash and cash equivalents, beginning of the period	14	222.1	149.0
Unrealized foreign exchange (loss) gain on cash and cash equivalents held in foreign currencies		(0.5)	0.1
Cash and cash equivalents, end of the period	14	\$ 264.3	\$ 222.1

See accompanying notes which form an integral part of these consolidated financial statements.

TMX GROUP LIMITED

Notes to the Consolidated Financial Statements

(In millions of Canadian dollars, except per share amounts)

NOTE 1 – GENERAL INFORMATION

TMX Group Limited is a company domiciled in Canada and incorporated under the Business Corporations Act (Ontario). The registered office is located at 100 Adelaide Street West, Toronto, Ontario, Canada.

The audited annual consolidated financial statements as at and for the year ended December 31, 2021 and 2020 (the “financial statements”), comprise the accounts of TMX Group Limited and its subsidiaries (collectively referred to as the “Company”), and the Company’s interests in equity accounted investees.

TMX Group Limited controls, directly or indirectly, a number of entities which operate exchanges, markets, and clearinghouses primarily for capital markets in Canada and provides select services globally, including:

- TSX Inc. (“TSX”), which operates Toronto Stock Exchange, a national stock exchange serving the senior equities market; TSX Venture Exchange Inc. (“TSX Venture Exchange”), which operates TSX Venture Exchange, a national stock exchange serving the public venture equity market; and Alpha Exchange Inc. (“Alpha”), which also operates an exchange for the trading of securities;
- Montréal Exchange Inc. (“MX”), which operates the Montréal Exchange, Canada’s national derivatives exchange, and its subsidiaries, including Canadian Derivatives Clearing Corporation (“CDCC”), the clearing house for options and futures contracts traded at MX and certain over-the-counter (“OTC”) products and fixed income repurchase (“REPO”) agreements. MX also holds an investment in BOX Holdings Group LLC (“BOX Holdings”), which wholly-owns BOX Options Market LLC (“BOX”). BOX provides a market for the trading of United States (“US”) equity options. The Company accounts for its investment in BOX Holdings using the equity method (note 17);
- The Canadian Depository for Securities Limited and its subsidiaries (“CDS”), including CDS Clearing and Depository Services Inc. (“CDS Clearing”), which operates the automated facilities for the clearing and settlement of equities and fixed income transactions and custody of securities in Canada;
- Trayport Holdings Limited and its subsidiaries (collectively “Trayport”), a provider of technology solutions for energy traders, brokers and exchanges based in London, UK. On June 1, 2021, Trayport Limited completed the acquisition of German-based Tradesignal GmbH (“Tradesignal”), a provider of rule-based trading and technical chart analysis software (note 3);
- Shorcan Brokers Limited (“Shorcan”), a fixed income inter-dealer broker and registered exempt market dealer; and
- TSX Trust Company (“TSX Trust”), a provider of corporate trust, registrar, transfer agency and foreign exchange services. On August 12, 2021, the Company completed the acquisition of AST Investor Services Inc. (Canada) (“ASTIS”) and its subsidiary AST Trust Company (Canada) (“AST Trust”) (collectively, “AST Canada”), a provider of transfer agency, corporate trust, and related services (the “AST Canada Acquisition”) (note 3).

NOTE 2 – BASIS OF PREPARATION

(A) BASIS OF ACCOUNTING

The financial statements have been prepared by management in accordance with International Financial Reporting Standards (“IFRS”) and IFRS Interpretations Committee (“IFRIC”) interpretations, as issued by the International Accounting Standards Board (“IASB”). The financial statements were approved by the Company’s Board of Directors on February 7, 2022.

The Company’s significant accounting policies have been applied consistently to all periods presented in the financial statements, unless otherwise indicated. The Company has applied its judgement in presenting its significant accounting policies together with related information in the notes to the consolidated financial statements. The Company has also ordered its notes to the financial statements to emphasize the areas that are most relevant to the Company’s financial performance and financial position, as viewed by management.

(B) BASIS OF MEASUREMENT

The financial statements have been prepared on the historical cost basis except for the following items which are measured at fair value:

- Certain financial instruments (note 13); and

- Liabilities arising from share-based payment plans (note 23).

The Company uses a fair value hierarchy to determine disclosure and to categorize the inputs used in its valuation of assets and liabilities carried at fair value. Fair values are categorized into: Level 1 – to the extent of the Company's use of unadjusted quoted market prices; Level 2 – valuation using observable market information as inputs; and Level 3 – valuation using unobservable market information.

(C) JUDGEMENTS AND ESTIMATES

The preparation of the financial statements in conformity with IFRS requires management to make judgements, estimates and assumptions that affect the reported amounts of assets, liabilities and contingent liabilities at the date of the financial statements and the reported amounts of revenue and expenses during the reporting period. The estimates and associated assumptions are based on historical experience and other factors that management considers to be relevant. Actual results could differ from these estimates and assumptions.

Judgements, estimates and underlying assumptions are reviewed on an ongoing basis, and revisions to accounting estimates are recognized in the period in which the estimates are revised and in any future periods affected.

Judgements made in applying accounting policies that have the most significant effects on the amounts recognized in these financial statements are included in the following notes:

- Revenue recognition - Identification of performance obligations and determination of the timing of when performance obligations are satisfied, either at a point in time or over time, requires judgement (note 4).
- Valuation of goodwill and indefinite life intangible assets - Purchased intangibles are valued as at the acquisition date using established methodologies and amortized over their estimated useful economic lives, except in those cases where intangibles are determined to have indefinite lives, where there is no foreseeable limit over which these intangibles would generate net cash flows. These valuations and lives are based on management's best estimates of future performance and periods over which value from the intangible assets will be derived (note 16).
- Classification of financial assets - Management has exercised judgment in the assessment of the business model within which the assets are held and in the assessment of whether the contractual terms of the financial asset are solely payments of principal and interest on the principal amounts outstanding to determine the classification of financial assets (note 13).

Information about assumptions and estimate uncertainties that have a significant risk of resulting in a material adjustment in these financial statements is included in the following notes:

- Fair values of purchase consideration, assets acquired, and liabilities assumed in business combinations – for the acquisitions of subsidiaries, the fair values under the acquisition method are based on management's best estimates using established methodologies of the fair value of the assets and liabilities acquired and disposed (notes 3 and 17).

For acquired customer relationships, trade names, and technology in particular, the Company estimates the fair value based on the income approach. The income approach is a valuation technique that calculates the fair value of an intangible asset based on the present value of future cash flows that the asset can be expected to generate over its remaining useful life. This valuation involves significant subjectivity and estimation uncertainty, including assumptions related to the future revenues attributable to acquired customer relationships, trade names, or technology, customer attrition rates, royalty-free rate, future expenses, and discount rates.

- Impairment of goodwill and indefinite life intangible assets – impairment tests are completed using the higher of fair value less costs of disposal, where available, and value-in-use calculations, determined using management's best estimates of future cash flows, long-term growth rates and appropriate discount rates (note 16);
- Measurement of defined benefit obligations for pensions, other post-retirement and post-employment benefits – the valuations of the defined benefit assets and liabilities are based on actuarial assumptions made by management with advice from the Company's external actuary (note 24);
- Provisions and contingencies – management judgement is required to assess whether provisions and/or contingencies should be recognized or disclosed, and at what amount. Management bases its decisions on past experience and other factors it considers to be relevant on a case by case basis (note 20);
- Leases – management uses judgment to determine whether the Company is reasonably certain to exercise extension options (note 21);

- Share-based payments – the liabilities associated with the Company’s share-based payment plans are measured at fair value using a recognized option pricing model based on management’s assumptions. Management’s assumptions are based on historical share price movements, dividend policy and past experience for the Company (note 23); and
- Income taxes – the accounting for income taxes requires estimates to be made, such as the recoverability of deferred tax assets and assessment of tax uncertainties. Where differences arise between estimated income tax provisions and final income tax liabilities, an adjustment is made when the difference is identified (note 8).

(D) BASIS OF CONSOLIDATION

Subsidiaries are entities controlled by the Company, and they are consolidated from the date on which control is transferred to the Company until the date that control ceases. Balances and transactions between the Company’s subsidiaries have been eliminated on consolidation. On loss of control of a subsidiary, the Company derecognizes the assets and liabilities of the entity. Any gain or loss is recognized in the consolidated income statement and any retained interests measured at fair value at the date of loss of control. Changes in the Company’s interest that do not result in a loss of control are accounted for as equity transactions.

Equity accounted investees are entities in which the Company has determined it has significant influence, but not control, over the financial and operating policies. Investments in these entities are recognized initially at cost and subsequently accounted for using the equity method of accounting.

(E) FUNCTIONAL AND PRESENTATION CURRENCY

Items included in the financial statements of each of the Company’s entities are measured using the currency of the primary economic environment in which the entity operates (the “functional currency”). The financial statements are presented in Canadian dollars, which is the Company’s functional and presentation currency.

The assets and liabilities of the Company’s foreign operations for which the Canadian dollar is not the functional currency are translated at the rate of exchange in effect at the balance sheet date. Revenue and expenses are translated at the relevant daily exchange rates. The resulting unrealized exchange gain or loss is included in accumulated other comprehensive income within equity.

Revenues earned, expenses incurred and assets purchased in foreign currencies are translated into the functional currency at the prevailing exchange rate on the transaction date. Monetary assets and liabilities denominated in foreign currencies are translated at the period end rate or at the transaction rate when settled. Resulting unrealized and realized foreign exchange gains and losses are recognized within other revenue in the consolidated income statement for the period.

NOTE 3 – ACQUISITIONS OF SUBSIDIARIES

(A) AST CANADA

On August 12, 2021, the Company completed the AST Canada Acquisition for \$165.0, adjusted for certain items (see below). The AST Canada Acquisition is accounted for as a business combination in accordance with IFRS 3, *Business Combinations*.

On August 31, 2021, through a series of post-closing legal and tax steps, ASTIS distributed its shares of AST Trust to its parent, TMX Group Limited, and on September 1, 2021, AST Trust and TSX Trust amalgamated to form a newly amalgamated corporation continued as TSX Trust. ASTIS was renamed TMX Investor Solutions Inc.

The following table summarizes the estimated fair values of the assets acquired and liabilities assumed. In determining the preliminary purchase price allocation, the Company considered, among other factors, the intended future use of acquired assets, analysis of historical financial performance and estimates of future performance of AST Canada. The Company has not yet obtained all the information necessary to finalize the purchase price allocation, including the valuation of identifiable intangible assets, income taxes, certain other assets and liabilities, and final working capital adjustments. The Company will finalize these amounts within twelve months following the acquisition date. Any changes resulting from facts and circumstances that existed as of the acquisition date will result in retrospective adjustments to the provisional amounts below, recognized at the acquisition date. AST Canada is included in the Capital Formation operating segment, under TSX Trust (note 5).

Purchase consideration:	
Base purchase price	\$ 165.0
Working capital adjustments	2.2
Closing debt	(0.5)
Company transaction expense and other adjustments	(2.1)
Total purchase consideration	\$ 164.6
Fair value of identifiable assets acquired and liabilities assumed:	
Cash and cash equivalents	\$ 30.9
Trade and other receivables	10.2
Intangible assets	94.7
Goodwill	45.8
Deferred tax liabilities, net	(12.6)
Other assets and liabilities, net	(4.4)
Fair value of net assets acquired	\$ 164.6

The goodwill recorded on acquisition is largely reflective of the synergies resulting from combining AST Canada's complementary portfolio of services with those of TSX Trust business to enhance and broaden the scope and scale of TSX Trust's business. None of the goodwill recognized is deductible for income tax purposes.

Intangible assets	Acquisition date fair value	Accumulated amortization	Net book value	Useful life
Customer relationships	79.0	1.6	77.4	19 years
Technology	15.7	0.4	15.3	15 years
Total	94.7	2.0	92.7	

For the year ended December 31, 2021, the Company incurred \$3.1 in acquisition and related costs (2020 - \$1.7). These costs are included in 'Selling, general and administration' and 'Compensation and benefits' in the consolidated income statements.

For the year ended December 31, 2021, AST Canada contributed revenue of \$13.7 and net loss of \$1.8 in the post-combination period. Had the acquisition of AST Canada occurred as of January 1, 2021, the Company's consolidated income statement for the year ended December 31, 2021 would have included revenue of \$39.2 and net loss of \$4.8, inclusive of pre-acquisition revenue of \$25.5, and net loss of \$3.0. In determining these amounts, management has assumed that the fair value adjustments, determined provisionally, that arose on the acquisition date, would have been the same if the AST Canada Acquisition had occurred on January 1, 2021. The pre-acquisition results include transaction expenses borne by AST Canada prior to being acquired by the Company.

(B) TRADESIGNAL

On June 1, 2021, the Company completed the acquisition of Tradesignal for €6.5 (\$9.6), subject to working capital adjustments. The acquisition has been accounted for as a business combination with the Company consolidating 100% of the results of Tradesignal's operations and its assets and liabilities from the date of acquisition. The allocation of the purchase price will be finalized within twelve months following the acquisition date. The Company estimates that the majority of the purchase price relates to goodwill and intangible assets. Tradesignal is included in the Global Solutions, Insights & Analytics operating segment, under Trayport (note 5).

For the year ended December 31, 2021, the Company incurred \$0.3 in acquisition and related costs (2020 - nil). These costs are included in 'Selling, general and administration' in the consolidated income statements.

On July 22, 2021, Tradesignal was renamed Trayport Germany GmbH.

NOTE 4 – REVENUE

Revenue is recognized when performance obligations have been satisfied. The identification of performance obligations and the determination of the timing of when performance obligations are satisfied, either at a point in time or over time, require judgement.

Substantially all of the Company's revenues are considered to be revenues from contracts with customers. The related accounts receivable balances are recorded in the balance sheets as trade receivables and generally have terms of 30 days. The majority of deferred revenue represents contract liabilities related to listing fees (note 19).

The majority of the Company's contracts are short-term in nature and therefore the Company has elected to apply the practical expedient to not disclose the remaining performance obligations in contracts with an expected duration of 12 months or less. Contracts that have an expected duration of 12 months or longer are recognized on an 'as-invoiced' basis and the Company has chosen to apply the practical expedient to not disclose revenue related to the remaining performance obligations in these contracts. These contracts also include variable consideration related to usage that are constrained and not included in the transaction price and thus not included in the remaining performance obligation disclosure.

The Company's primary contracts from customers are disaggregated by major products and service lines below, and categorized by operating segments as identified and disclosed in note 5.

	For the year ended December 31,	
	2021	2020
Global Solutions, Insights & Analytics		
Trayport	\$ 150.6	\$ 136.7
Subscribers and usage	104.9	98.9
Other GSIA	89.1	88.1
	344.6	323.7
Capital Formation		
Initial listing fees	21.7	10.1
Additional listing fees	108.2	81.8
Sustaining fees	77.0	69.3
Other issuer services	50.8	27.8
	257.7	189.0
Derivatives Trading & Clearing	142.5	126.2
Equities and Fixed Income Trading & Clearing		
Equities and fixed income trading	125.6	127.0
Equities and fixed income clearing, settlement, depository and other services (CDS)	110.3	99.2
	235.9	226.2
Total Revenue	\$ 980.7	\$ 865.1

(A) GLOBAL SOLUTIONS, INSIGHTS AND ANALYTICS

Global solutions, insights and analytics ("GSIA") revenue includes real time data, other market data products, data delivery solutions and technology solutions.

Real time market data revenue is recognized at the point in time the performance obligation is satisfied, based on estimated usage as reported by customers and vendors. The Company conducts periodic audits of the information provided to determine any adjustments to estimated revenue. However, the amounts owing from the audits cannot be estimated as they are dependent on factors outside of the Company's control, and the results of each audit have limited predictive value for future audits.

Trayport revenue includes subscriber fees, which are paid on a monthly basis for access to the platform. Subscriber revenue is recognized over time as the performance obligation is satisfied.

Performance obligations for other global solutions, insights and analytics contracts are satisfied, and revenue is recognized, when the services are provided.

(B) CAPITAL FORMATION

Capital formation revenue includes revenue from listings services and other issuer services. Listings services revenue includes revenue generated from initial listings, additional listings and sustaining services.

Revenue from new issuers include the initial listing fee and the first-year sustaining fee. These fees, either billed upfront or when the listing occurs, contain a single performance obligation. When the initial fee creates a material right, it is deferred and recognized over 12 months. Sustaining services for new issuers are recognized on a straight-line basis over the remainder of the year as those services are provided. Performance obligations for additional listings are satisfied at a point in time, and revenue is recognized when the additional listing occurs, which is also when the fee is billed. Sustaining services for existing issuers are billed during the first quarter of the year and the related performance obligation is satisfied on a straight-line basis over the year.

Other issuer services include revenue from registrar and transfer agency services and corporate trust services which is recognized as the services are provided. Margin income from funds held and administered on behalf of clients is also included in other issuer services revenue. Other issuer services have separate performance obligations that are satisfied at a point in time, which is when the services are provided to the customer.

(C) DERIVATIVES TRADING AND CLEARING

Derivatives trading and clearing revenue includes revenue from trading and clearing activities.

Trading and related revenues for derivatives markets contain one performance obligation related to trade execution, which mostly occurs instantaneously. Revenue is recognized in the month in which the trades are executed or when the related services are provided. Performance obligations associated with derivatives clearing are satisfied within a short period of time. Trade execution and novation occur either instantaneously, or within a short period of time.

Rebates are allocated and recorded as a reduction in revenue in the consolidated income statement in the period to which they relate.

As part of its REPO clearing service, CDCC earns interest income and incurs interest expense on all REPO transactions that clear through CDCC. The interest income and interest expense are equal; however as CDCC does not have a legal right to offset these amounts, they are recognized separately on the consolidated income statement. The interest income is earned, and the interest expense incurred, over the term of the REPO agreements.

(D) EQUITIES AND FIXED INCOME TRADING AND CLEARING

Equities and fixed income trading and clearing revenue includes revenue from equities and fixed income trading, clearing, settlement, and depository services.

Trading and related revenues for equities and fixed income contain one performance obligation related to trade execution, which occurs instantaneously. Revenue is recognized in the month in which the trades are executed or when the related services are provided.

Revenues related to equities and fixed income clearing, settlement and depository services are recognized as follows:

- Clearing services include the reporting and confirmation of all trade types within the multilateral clearing and settlement system referred to as CDSX. Clearing services also include the netting and novation of exchange trades through CDS's Continuous Net Settlement ("CNS") service prior to settlement. The Company has identified two performance obligations related to clearing and settlement and allocates the transaction price on the basis of relative stand-alone selling prices. These are generally satisfied at a point in time and recognized in the month in which the services are provided. Clearing services and the related settlement occur within a short period of time. Other clearing related fees are recognized when services are performed.
- Depository fees are charged for custody of securities, depository related activities and processing of entitlement and corporate actions and are recognized when the services are performed.
- Under the CDS recognition orders granted by the Ontario Securities Commission ("OSC") and the Autorité des marchés financiers ("AMF"), CDS is required to share any annual revenue increases on clearing and other core CDS Clearing services, as compared to revenues for the twelve-month period ended October 31, 2012, on a 50:50 basis with Participants. Beginning January 1, 2015 and prior to August 1, 2021, CDS also shares with Participants, on a 50:50 basis, any annual increases in revenue applicable to the New York Link/Depository Trust Company Direct Link Liquidity Premium. Effective August 1, 2021, as a result of New York Link fee change, the pass through liquidity facility fees are no longer subject to 50:50 rebate. These amounts are calculated and recorded on a monthly basis as a reduction of revenue, which results in the recognition of revenue at the amount to which the Company is entitled.
- On behalf of Participants, CDS Clearing incurs certain facility fees, which are reimbursed by the Participants. Since CDS acts as the principal, offsetting revenue and expense amounts related to these facility fees are recognized upon satisfaction of performance obligations.

- The Company records an equal amount of interest income and interest expense on Participant cash collateral balances. As the Company does not have a legal right to offset these amounts, they are recognized separately on the consolidated income statement.
- Rebates are allocated and recorded as a reduction in revenue in the consolidated income statement in the period to which they relate.

NOTE 5 – SEGMENT INFORMATION

The Company has four operating segments. An operating segment is a component of the Company that engages in business activities from which it may earn revenues and incur expenses, including revenues and expenses that relate to transactions with any of the Company's other components and for which discrete financial information is available. Operating segments are reported in a manner consistent with the internal reporting provided to the Chief Operating Decision Maker ("CODM"). The CODM, who is responsible for allocating resources and assessing performance of the operating segments, has been identified as the Chief Executive Officer.

(A) INFORMATION ABOUT REPORTABLE SEGMENTS

The Company has four reportable segments:

- **Global Solutions, Insights & Analytics:** We deliver equities data, index data as well as integrated data sets to fuel high-value proprietary and third party analytics which help clients make better trading and investment decisions. We also provide solutions to European and global wholesale energy markets for price discovery, trade execution, post-trade transparency and straight through processing. The Company's operations included in the Global Solutions, Insights & Analytics segment are TMX Datalinx, Co-Location, and Trayport.
- **Capital Formation:** Our exchanges are integral to the efficient operation of the capital markets. We continually support the capital markets community by providing companies of all types and at all stages of development with access to equity capital, while also providing market oversight to ensure market integrity. The Company's operations included in the Capital Formation segment are: Toronto Stock Exchange, a national stock exchange serving the senior equities market; TSX Venture Exchange, a national stock exchange serving the public venture equity market, and TSX Trust, a provider of corporate trust, registrar, transfer agency and foreign exchange services.
- **Derivatives Trading & Clearing:** We are accelerating new product creation and leverage our unique market position to benefit from increasing demand for derivatives products both in Canada and globally. The Company's operations included in the Derivatives Trading and Clearing segment are Montréal Exchange, a national derivatives exchange; and Canadian Derivatives Clearing Corporation ("CDCC"), a clearinghouse for options and futures contracts and certain over-the-counter products and fixed income repurchase agreements.
- **Equities and Fixed Income Trading & Clearing:** We operate fair and transparent markets, with innovative, efficient, and reliable platforms for equities and fixed income trading and clearing. The Company's operations included in the Equities and Fixed Income Trading & Clearing segment are the trading operations of Toronto Stock Exchange, TSX Venture Exchange, and TSX Alpha Exchange; CDS Clearing and Depository Services Inc. ("CDS Clearing"), an automated facility for the clearing and settlement of equities and fixed income transactions and custody of securities in Canada and Shorcan Brokers Limited, a fixed income inter-dealer broker.

The Company has certain revenue and corporate costs not allocated to the operating segments. Revenue related to foreign exchange gains and losses and other services are presented in the other segment. Costs and expenses related to the amortization of purchased intangibles, along with certain consolidation and elimination adjustments, are also presented in the other segment.

Information related to each reportable segment is as follows:

For the year ended							December 31, 2021				
		Global Solutions Insights & Analytics		Capital Formation		Derivatives Trading & Clearing		Equities and Fixed Income Trading & Clearing		Other	Total
Revenue (external)	\$	344.6	\$	257.7	\$	142.5	\$	235.9	\$	—	\$ 980.7
Inter-segment revenue		0.3		0.2		—		2.3		(2.8)	—
Total revenue	\$	344.9	\$	257.9	\$	142.5	\$	238.2	\$	(2.8)	\$ 980.7
Income from operations	\$	219.7	\$	144.6	\$	65.2	\$	123.2	\$	(61.5)	\$ 491.2
Selected items:											
Depreciation and amortization	\$	9.7	\$	0.6	\$	1.5	\$	0.4	\$	74.9	\$ 87.1

For the year ended						December 31, 2020						
		Global Solutions Insights & Analytics		Capital Formation		Derivatives Trading & Clearing		Equities and Fixed Income Trading & Clearing		Other		Total
Revenue (external)	\$	323.7	\$	189.0	\$	126.2	\$	226.2	\$	—	\$	865.1
Inter-segment revenue		0.3		0.2		—		1.9		(2.4)		—
Total revenue	\$	324.0	\$	189.2	\$	126.2	\$	228.1	\$	(2.4)	\$	865.1
Income from operations	\$	207.8	\$	100.0	\$	60.0	\$	119.0	\$	(70.9)	\$	415.9
Selected items:												
Depreciation and amortization	\$	7.7	\$	0.1	\$	1.1	\$	0.5	\$	70.9	\$	80.3

The CODM assesses the performance of the operating segments based on income from operations, which is not a term defined within IFRS. This measure of profit excludes share of income from equity accounted investees, impairment charges, and other costs and expenses that relate to individual events of an infrequent nature.

Income from operations is an important indicator of the Company's ability to generate liquidity through operating cash flow to fund future working capital needs, service outstanding debts, and fund future capital expenditures. Impairment charges includes impairment of goodwill and intangibles originating from acquisitions and is not considered an operating item. The intent of this performance measure is to provide additional useful information to investors and analysts; however, it should not be considered in isolation.

(B) INFORMATION ABOUT GEOGRAPHICAL AREAS

The Company's revenue by geography is as follows:

For the year ended	December 31, 2021		December 31, 2020	
Canada	\$	681.1	\$	582.6
US		116.2		112.6
UK		69.1		67.7
Germany		27.2		25.1
Other countries		87.1		77.1
	\$	980.7	\$	865.1

Revenue is allocated based on the country to which customer invoices are addressed.

No single customer generates revenues greater than ten percent of the Company's total revenues.

The Company's non-current assets by geography is as follows:

As at	December 31, 2021	December 31, 2020
Canada	\$ 4,299.7	\$ 4,168.7
UK	1,002.0	1,021.3
US	50.5	39.4
Other countries	0.2	0.8
	\$ 5,352.4	\$ 5,230.2

Non-current assets above are primarily comprised of goodwill and intangible assets, investments in equity accounted investees, right-of-use assets and other assets and excludes both accrued employee benefit assets and deferred income tax assets.

NOTE 6 – FINANCE INCOME AND FINANCE COSTS

Finance income comprises interest income on funds invested and changes in the fair value of marketable securities. Finance costs comprise interest expense on borrowings and lease liabilities.

Net finance costs for the year is as follows:

For the year ended	December 31, 2021	December 31, 2020
Finance income		
Interest income on funds invested	\$ 1.6	\$ 2.1
	1.6	2.1
Finance costs		
Interest expense on borrowings, including foreign exchange and amortization of financing fees (note 11)	(34.4)	(31.4)
Interest expense on lease liabilities (note 21)	(3.2)	(3.3)
Other expenses	(0.1)	(0.2)
	(37.7)	(34.9)
Net finance costs	\$ (36.1)	\$ (32.8)

NOTE 7 – EARNINGS PER SHARE

Basic earnings per share is determined by dividing net income by the weighted average number of common shares outstanding during the reporting period. Diluted earnings per share is determined by dividing the net income by the weighted average number of common shares outstanding during the reporting period, adjusted for the effects of all potential dilutive common shares arising from share options granted to employees.

Basic and diluted earnings per share for the period are as follows:

For the year ended	December 31, 2021	December 31, 2020
Net income	\$ 338.5	\$ 279.7
Weighted average number of common shares outstanding – basic	56,098,460	56,425,302
Effect of dilutive share options	376,485	524,988
Weighted average number of common shares outstanding – diluted	56,474,945	56,950,290
Basic earnings per share	\$ 6.03	\$ 4.96
Diluted earnings per share	\$ 5.99	\$ 4.91

NOTE 8 – INCOME TAXES

(A) INCOME TAX EXPENSE RECOGNIZED IN THE CONSOLIDATED INCOME STATEMENT

Income tax expense comprises current and deferred income tax. Income tax expense is recognized in the consolidated income statement except to the extent that it relates to items recognized directly in equity or in other comprehensive income.

Income tax expense recognized in the consolidated income statement for the period is as follows:

For the year ended	December 31, 2021	December 31, 2020
Current income tax expense:		
Income tax for the current period	\$ 119.4	\$ 105.5
Adjustments in respect of prior years	(0.8)	(0.4)
Deferred income tax expense:		
Origination and reversal of temporary differences	\$ 6.8	\$ (3.0)
Adjustments in respect of prior years	(0.3)	(0.4)
Changes in substantively enacted income tax rates	19.6	7.4
Previously unrecognized tax losses of a prior period	(3.9)	—
Total income tax expense	\$ 140.8	\$ 109.1

Current income tax is the expected income tax payable or receivable on the taxable income or loss for the period using income tax rates enacted or substantively enacted at the reporting date in the countries where the Company operates and any adjustments to income tax payable in respect of previous years.

The Company maintains provisions for uncertain tax positions that it believes appropriately reflect the risk of the tax positions and the probability of acceptance of the tax treatment by the relevant authorities. Uncertain income tax positions are recognized in the financial statements using management's best estimate of the amount expected to be paid.

Deferred income tax is recognized in respect of certain temporary differences between the carrying amounts of assets and liabilities for financial reporting purposes and the amounts used for taxation purposes. Deferred income tax is measured at the income tax rates that are expected to be applied to temporary differences when they reverse, based on the laws that have been enacted or substantively enacted at the reporting date.

Income tax expense attributable to income differs from the amounts computed by applying the combined federal and provincial income tax rate of 26.5% (2020 – 26.5%) to income before income taxes as a result of the following:

For the year ended	December 31, 2021	December 31, 2020
Income before income tax expense	\$ 479.3	\$ 388.8
Computed expected income tax expense	\$ 127.0	\$ 103.0
Non-deductible expenses	0.8	1.1
Rate differential due to various jurisdictions	(5.5)	(4.4)
Adjustments in respect of prior years	(1.1)	(0.8)
Changes in substantively enacted income tax rates	19.6	7.4
AST Canada acquisition costs (note 3)	0.5	0.4
Share of net income from equity accounted investees	2.3	1.5
Previously unrecognized tax losses of a prior period	(3.9)	—
Other	1.1	0.9
Income tax expense	\$ 140.8	\$ 109.1

During the year ended December 31, 2021, the UK corporate income tax rate increase from 19% to 25% (effective April 1, 2023) was substantively enacted. Net deferred income tax liabilities were increased by \$19.6 as a result, with a corresponding increase in deferred income tax expense of \$19.6.

During the year ended December 31, 2020, it was substantively enacted that the previously expected UK corporate income tax rate decrease from 19% to 17% (to be effective April 1, 2020) would not occur. As a result, net deferred income tax liabilities increased by \$7.4, with a corresponding increase in deferred income tax expense of \$7.4.

(B) DEFERRED INCOME TAX ASSETS AND LIABILITIES

The Company recognizes a deferred income tax asset only to the extent that it is probable that future taxable income will be available against which it can be utilized. Deferred income tax assets are reviewed at each reporting date and are reduced to the extent that it is no longer probable that the related tax benefit will be realized.

Deferred income tax assets (liabilities) as of December 31 are attributable to the following:

	Assets		Liabilities		Net
	2021	2020	2021	2020	2020
Premises and equipment	\$ 1.4	\$ 2.7	\$ (1.3)	\$ (0.8)	\$ 0.1
Cumulative eligible capital / intangible assets	13.6	14.1	(872.0)	(841.5)	(858.4)
Tax loss carry-forwards	23.3	16.6	—	—	23.3
Employee future benefits	5.0	5.3	(5.7)	(1.6)	(0.7)
Share-based payments	8.9	16.6	—	—	8.9
Other	7.2	6.5	(0.6)	(0.5)	6.6
Deferred income tax assets (liabilities)	\$ 59.4	\$ 61.8	\$ (879.6)	\$ (844.4)	\$ (820.2)
Set off of tax	(34.7)	(39.3)	34.7	39.3	—
Net deferred income tax assets (liabilities)	\$ 24.7	\$ 22.5	\$ (844.9)	\$ (805.1)	\$ (820.2)

Income tax assets and liabilities are offset in the financial statements if there is a legally enforceable right to offset them and they relate to income taxes levied by the same taxation authority on the same taxable entity, or on different taxable entities but the Company intends to settle them on a net basis or where the income tax assets and liabilities will be realized simultaneously.

Movements in the deferred income tax balances in the year are as follows:

	Premises and equipment	Cumulative eligible capital / intangible assets	Tax loss carry-forwards	Employee future benefits	Share-based payments	Other	Total
Balance at January 1, 2020	\$ 3.5	\$ (822.9)	\$ 17.5	\$ 3.7	\$ 13.5	\$ 7.3	\$ (777.4)
Recognized in net income	(1.6)	(2.3)	(0.8)	(1.0)	3.1	(1.4)	(4.0)
Recognized through acquisition of VisoTech	—	(1.5)	—	—	—	—	(1.5)
Recognized in other comprehensive loss	—	—	—	0.9	—	—	0.9
Effect of movements in exchange rates	—	(0.6)	(0.1)	—	—	0.1	(0.6)
Balance at December 31, 2020	1.9	(827.3)	16.6	3.6	16.6	6.0	(782.6)
Recognized in net income	(1.5)	(13.6)	0.5	(0.3)	(7.7)	0.4	(22.2)
Recognized through acquisition of AST Canada	(0.3)	(18.8)	6.2	—	—	0.3	(12.6)
Recognized in other comprehensive income	—	—	—	(4.0)	—	—	(4.0)
Effect of movements in exchange rates	—	1.3	—	—	—	(0.1)	1.2
Balance at December 31, 2021	\$ 0.1	\$ (858.4)	\$ 23.3	\$ (0.7)	\$ 8.9	\$ 6.6	\$ (820.2)

As at December 31, 2021, \$18.5 and \$4.8 of the above deferred income tax assets related to tax losses and credits incurred in Canada and the US, respectively (2020 – \$12.5 and \$4.1, respectively). Recoverability of these assets is dependent upon the availability of future taxable profits within these legal entities. The Company believes that these losses will be recoverable.

Deferred income tax assets have not been recognized in respect of the following temporary differences:

As at	December 31, 2021	December 31, 2020
Tax losses	\$ 20.2	\$ 37.2
Other deductible temporary differences	207.9	172.4
	\$ 228.1	\$ 209.6

At December 31, 2021, \$8.6 (2020 – \$27.1) of the above income tax losses will expire by 2037 with the remainder not subject to expiry. Deferred income tax assets have not been recognized in respect of these items as it is not probable that future taxable profit will be available against which the Company can utilize the tax losses. The Company will however continue to pursue tax planning strategies to utilize the tax losses where possible.

At December 31, 2021, deferred income tax liabilities for temporary differences of \$0.1 (2020 - \$0.7) relating to investments in certain foreign subsidiaries were not recognized as the Company is able to control the timing of the reversal of the temporary differences and it is probable that the temporary differences will not reverse in the foreseeable future. Temporary differences relating to the remaining domestic subsidiaries have not been recognized as the temporary difference can be settled without tax consequences.

NOTE 9 – BALANCES OF PARTICIPANTS AND CLEARING MEMBERS

Balances of Participants and Clearing Members on the consolidated balance sheets are comprised of:

As at	December 31, 2021	December 31, 2020
Balances of Participants	\$ 11,168.8	\$ 5,218.1
Balances of Clearing Members	40,407.5	19,050.3
Clearing Members cash collateral	5,537.2	6,002.0
Balances of Participants and Clearing Members	\$ 57,113.5	\$ 30,270.4

There is no net impact on the consolidated net assets as an equivalent amount is recognized in both assets and liabilities.

(A) CDS CLEARING, SETTLEMENT AND PARTICIPANT BALANCES

Balances of Participants includes the cash collateral pledged and deposited with CDS Clearing and cash dividends, interest and other cash distributions awaiting distribution ("entitlements and other funds") on securities held under custody in the depository. Cash collateral is held by CDS Clearing at the Bank of Canada, with commercial banks with a minimum credit rating of A/R1-low or better, and National Securities Clearing Corporation ("NSCC")/Depository Trust Company ("DTC") and is recognized as an asset and an equivalent and offsetting liability is recognized as these amounts are ultimately owed to the Participants.

	December 31, 2021	December 31, 2020
Entitlements and other funds	\$ 11.7	\$ 10.1
Participants cash collateral	11,157.1	5,208.0
Balances of Participants	\$ 11,168.8	\$ 5,218.1

During 2021, the increase in above participants' cash collateral is driven by Participants' trading market activity requiring Participants to post substantially more collateral.

The margin deposits of CDS Clearing are held in liquid instruments. CDS Clearing's New York Link ("NYL") service does not apply strict limits to a Participant's end-of-day payment obligation, creating the potential for unlimited liquidity risk exposure if a user of the service were to default on its obligation. CDS Clearing manages this risk through active monitoring of payment obligations and a committed liquidity facility which covers the vast majority of potential Participant default scenarios. Residual liquidity risk in excess of CDS Clearing's liquidity facility is transferred to surviving Participant users of the NYL service and as a result CDS Clearing's liquidity risk exposure is limited to a maximum of its available liquidity facility.

At December 31, 2021, as a result of calculations of Participants' exposure, the total amount of collateral required by CDS Clearing was \$14,404.1 (2020 – \$8,835.2). The actual collateral pledged to CDS Clearing at December 31 is summarized below:

	December 31, 2021	December 31, 2020
Cash (included within Balances of Participants on the consolidated balance sheets)	\$ 11,157.1	\$ 5,208.0
Treasury bills and fixed income securities	4,687.8	5,814.8
Total collateral pledged	\$ 15,844.9	\$ 11,022.8

Treasury bills and fixed income securities collateral are not included in the Company's consolidated balance sheets.

(B) CDCC CLEARING, SETTLEMENT AND CLEARING MEMBER BALANCES

Balances of Clearing Members includes balances of clearing members of CDCC ("Clearing Members") as follows:

- Daily settlements due from, and to, Clearing Members – These balances result from marking open futures positions to market and settling option transactions each day. These amounts are required to be collected from and paid to Clearing Members prior to the commencement of trading the next day. There is no net impact on the consolidated net assets as an equivalent amount is recognized in both assets and liabilities.

At December 31, 2021, the gross amount of daily settlements due from, and to, Clearing Members was \$188.8 and \$188.8, respectively (2020 – \$235.5 and \$235.5). These balances are then netted by Clearing Member at the balance sheet date, for cash to be paid or received on mark-to-market on futures, options premium and cash margin shortage or excess.

- Net amounts receivable/payable on open REPO agreements – OTC REPO agreements between buying and selling Clearing Members are novated to CDCC whereby the rights and obligations of the Clearing Members under the REPO agreements are cancelled and replaced by new agreements with CDCC. Once novation occurs, CDCC becomes the counterparty to both the buying and selling Clearing Member. As a result, the contractual right to receive and return the principal amount of the REPO as well as the contractual right to receive and pay interest on the REPO is thus transferred to CDCC.

These balances represent outstanding balances on open REPO agreements. At December 31, 2021, the gross amount of open REPO contracts receivable and payable was \$85,212.1 and \$85,212.1 (2020 – \$66,217.2 and \$66,217.2). These contracts when broken down by Clearing Member give rise to gross receivable and gross payable positions. As allowed under CDCC rules, receivable and payable balances outstanding with the same Clearing Member are offset when they are in the same currency and are to be settled on the same day, as CDCC has a legally enforceable right to offset and the intention to net settle. The balances include both the original principal amount of the REPO and the accrued interest, both of which are carried at amortized cost. As CDCC is the central counterparty, an equivalent amount is recognized in both the Company's assets and liabilities.

The following table sets out the carrying amounts of Balances of Clearing Members that are subject to offsetting, enforceable master netting arrangements and similar arrangements:

				December 31, 2021
As at				
Asset/(Liability)		Gross asset or (liability) for counterparties in a net asset / (net liability) position	Liabilities / (assets) offset against net assets/(net liabilities) by counterparties	Net amounts presented in the consolidated balance sheet
Financial assets				
Daily settlements due from Clearing Members	\$	164.8	\$ (6.9)	\$ 157.9
Net amounts receivable on open REPO agreements		59,309.7	(19,060.1)	40,249.6
		59,474.5	(19,067.0)	40,407.5
Financial liabilities				
Daily settlements due to Clearing Members		(182.0)	24.1	(157.9)
Net amounts payable on open REPO agreements		(66,152.0)	25,902.4	(40,249.6)
		(66,334.0)	25,926.5	(40,407.5)
Net amount	\$	(6,859.5)	\$ 6,859.5	\$ —
As at				December 31, 2020
Asset/(Liability)		Gross asset or (liability) for counterparties in a net asset / (net liability) position	Liabilities / (assets) offset against net assets/(net liabilities) by counterparties	Net amounts presented in the consolidated balance sheet
Financial assets				
Daily settlements due from Clearing Members	\$	233.7	\$ (0.4)	\$ 233.3
Net amounts receivable on open REPO agreements		42,080.6	(23,263.6)	18,817.0
		42,314.3	(23,264.0)	19,050.3
Financial liabilities				
Daily settlements due to Clearing Members		(235.2)	1.9	(233.3)
Net amounts payable on open REPO agreements		(42,953.6)	24,136.6	(18,817.0)
		(43,188.8)	24,138.5	(19,050.3)
Net amount	\$	(874.5)	\$ 874.5	\$ —

For the year ended December 31, 2021, the largest daily settlement amount due from a Clearing Member was \$360.4 (2020 – \$1,651.0), and the largest daily settlement amount due to a Clearing Member was \$392.3 (2020 – \$1,240.8). These settlement amounts do not reflect net amounts from open REPO agreements, which are also due from Clearing Members.

Clearing Members' cash collateral are comprised of cash margin deposits and cash clearing fund deposits from Clearing Members which are held by CDCC with the Bank of Canada or with commercial banks with a minimum credit rating of A/R1-low or better. Cash collateral, either as margin against open positions or as part of the clearing fund, are held by CDCC and are recognized as an asset and an equivalent and offsetting liability is recognized as these amounts are ultimately owed to the

Clearing Members. There is no net impact on the consolidated net assets as an equivalent amount is recognized in both assets and liabilities.

The actual collateral pledged to CDCC at December 31 is summarized below:

	December 31, 2021	December 31, 2020
Cash collateral held:		
Clearing Members' cash margin deposits	\$ 3,121.3	\$ 3,624.3
Clearing fund cash deposits	2,415.9	2,377.7
	\$ 5,537.2	\$ 6,002.0

Non-cash margin deposit and non-cash clearing fund deposit collateral pledged to CDCC under irrevocable agreements is held in government securities, put letters of guarantee and equity securities with approved depositories. Clearing Members may also pledge escrow receipts directly with CDCC. The non-cash collateral pledged to CDCC at December 31 is summarized below:

	December 31, 2021	December 31, 2020
Non-cash collateral pledged:		
Non-cash margin deposits	\$ 13,762.4	\$ 12,680.8
	\$ 13,762.4	\$ 12,680.8

Non-cash collateral is not included in the Company's consolidated balance sheets.

(C) TSX TRUST ASSETS UNDER ADMINISTRATION

TSX Trust administers various segregated funds, representing amounts held on behalf of clients in connection with corporate trust and similar services. The actual assets under administration by TSX Trust at December 31 are summarized below:

	December 31, 2021	December 31, 2020
Cash	\$ 1,560.2	\$ 676.8
Treasury bills and fixed income securities	362.8	804.8
Total assets under administration	\$ 1,923.0	\$ 1,481.6

Since these amounts are not controlled by TSX Trust or by the Company, assets under administration are not included in the consolidated balance sheet.

NOTE 10 – FINANCIAL RISK MANAGEMENT

The Company is exposed to a number of financial risks as a result of its operations, which are discussed below. It seeks to monitor and minimize adverse effects from these risks through its risk management policies and processes.

(A) GENERAL BUSINESS RISK

General business risk refers to the risks and potential losses arising from the Company's administration and operation as a business enterprise that are unrelated to participant default. General business risk includes any potential impairment of the Company's financial position (as a business concern) as a consequence of a decline in its revenues or an increase in its expenses. Such impairment can be caused by a variety of business factors, including poor execution of business strategy, negative cash flows, or unexpected and excessively large operating expenses.

(B) CREDIT RISK

Credit risk is the risk of loss due to the failure of a borrower, counterparty, Clearing Member, or Participant to honour their financial obligations. It arises principally from the Company's clearing operations of CDS Clearing and CDCC, the brokerage operations of Shorcan, cash and cash equivalents, restricted cash and cash equivalents, marketable securities, trade receivables, and total return swaps ("TRSs").

(i) Clearing and/or brokerage operations

The Company is exposed to credit risk in the event that Participants, in the case of CDS Clearing; Clearing Members, in the case of CDCC; and clients, in the case of TSX Trust and Shorcan, fail to fulfill their financial obligations.

CDS Clearing

CDS Clearing is exposed to the risk of loss due to the failure of a Participant in CDS Clearing's clearing and settlement services to honour its financial obligations. To a lesser extent, CDS Clearing is exposed to credit risk through the performance of services in advance of payment.

Through the clearing and settlement services operated by CDS Clearing, credit risk exposures are created. During the course of each business day, transaction settlements can result in a net payment obligation of a Participant to CDS Clearing or the obligation of CDS Clearing to pay a Participant. The potential failure of the Participant to meet its payment obligation to CDS Clearing results in payment risk, a specific form of credit risk. Payment risk is a form of credit risk in securities settlement whereby a seller will deliver securities and not receive payment, or that a buyer will make payment and not receive the purchased securities. Payment risk is mitigated by delivery payment finality in CDSX, CDS Clearing's multilateral clearing and settlement system, as set out in the CDS Clearing Participant Rules.

In the settlement services offered by CDS Clearing, payment risk is transferred entirely from CDS Clearing to Participants who accept this risk pursuant to the contractual rules for the settlement services. This transfer of payment risk occurs primarily by means of Participants acting as extenders of credit to other Participants through lines of credit managed within the settlement system or, alternatively, by means of risk-sharing arrangements whereby groups of Participants cross-guarantee the payment obligations of other members of the group. Should a Participant be unable to meet its payment obligations to CDS Clearing, these surviving Participants are required to make the payment. Payment risk is mitigated on behalf of Participants through the enforcement of limits on the magnitude of payment obligations of each Participant and the requirement of each Participant to collateralize their payment obligation. Both of these mitigants are enforced in real time in the settlement system.

Through NYL and DTC Direct Link ("DDL"), credit risk exposures at CDS Clearing are created. During the course of each business day, settlement transactions by the NSCC/DTC can result in a net payment obligation from NSCC/DTC to CDS Clearing or the obligation of CDS Clearing to make a payment to NSCC/DTC. As a corollary result, CDS Clearing has a legal right to receive the funds from sponsored Participants in a debit position or has an obligation to pay the funds to sponsored Participants in a credit position.

The potential failure of a Participant to meet its payment obligation to CDS Clearing in the NYL or DDL services results in a payment risk. To mitigate the risk of default, CDS Clearing has in place default risk mitigation mechanisms to minimize losses to the surviving Participants as set out in the CDS Clearing Participant Rules. The process includes Participants posting collateral with CDS Clearing and NSCC/DTC (note 9).

The risk exposure of CDS Clearing in these central counterparty services is mitigated through a daily mark-to-market of each Participant's obligations as well as risk-based collateral requirements calculated daily. These mitigants are intended to cover the vast majority of market changes and are tested against actual price changes on a regular basis. This testing is supplemented with analysis of the effects of extreme market conditions on a collateral valuation and market risk measurements which are used to determine additional collateral requirements of Participants to a default fund established in 2015. Should the collateral of a defaulter in a central counterparty service be insufficient, either because the value of the collateral has declined or the loss to be covered by the collateral exceeded the collateral requirement, the surviving Participants in the service are required to cover any residual losses. Cash collateral is held by CDS Clearing at the Bank of Canada, with commercial banks with a minimum credit rating of A/R1-low or better, and NSCC/DTC and non-cash collateral pledged by Participants under Participant Rules is held by CDS Clearing (note 9).

CDS Clearing also holds \$1.0 of its cash and cash equivalents and marketable securities to contribute pre-funded resources to its CNS default waterfall. This default fund of \$1.0 would be accessed following the exhaustion of a suspended Participant's CNS participant fund and default fund contribution.

CDS Clearing may receive payment from securities issuers for entitlements, for example, maturity or interest payments, prior to the date of payment to the Participants holding those securities. In rare circumstances, due to the timing of receipt of these payments or due to market conditions, these funds may be held with a major Canadian chartered bank. As a result, CDS Clearing could be exposed to the credit risk associated with the potential failure of the bank.

CDCC

CDCC is exposed to risk of loss in the event that Clearing Members fail to satisfy any of the contractual obligations as stipulated within CDCC's rules.

CDCC is exposed to the credit risk of its Clearing Members since it acts as the central counterparty for all transactions carried out on MX's markets and on certain OTC markets which are serviced by CDCC. As such, in the event of a Clearing Member default, the obligations of those defaulting counterparties would become the responsibility of CDCC.

The first line of defence in CDCC's credit risk management process is the adoption of strict membership criteria which include both financial and regulatory requirements. In addition, CDCC performs on-going monitoring of the financial viability of its Clearing Members against the relevant criteria as a means of ensuring the on-going compliance of its Clearing Members. In the event that a Clearing Member fails to continue to satisfy any of its membership criteria, CDCC has the right through its rules, to impose various sanctions on such Clearing Members.

One of CDCC's principal risk management practices with regard to counterparty credit risk is the collection of risk-based margin deposits in the form of cash, equities, liquid government securities and escrow receipts. Should a Clearing Member fail to meet settlements and/or daily margin calls or otherwise not honour its obligations under open future contracts, option contracts, and REPO agreements, margin deposits would be seized and would then be available to apply against the potential losses incurred through the liquidation of the Clearing Member's positions.

CDCC's margining system is complemented by a Daily Capital Margin Monitoring (DCMM) process that evaluates the financial strength of a Clearing Member against its margin requirements. CDCC monitors the margin requirement of a Clearing Member as a percentage of its capital (net allowable assets). CDCC will make additional margin calls when the ratio of margin requirement/net allowable assets exceeds 100%. The additional margin is equal to the excess of the ratio over 100% and is meant to ensure that Clearing Member leverage in the clearing activities does not exceed the value of the firm. CDCC also has additional margin surcharges to manage the risk exposures associated with specific business related risks. These include: concentration charges for Clearing Members that are overly concentrated in certain positions, wrong-way risk charges for those Clearing Members holding positions which are highly correlated with their own credit risk profile, mismatched settlement surcharges which are meant to mitigate the risk of cherry-picking by a potential defaulter in the settlement process.

Global regulatory requirements for central-counterparties (CCPs), like CDCC, have highlighted the need for CCPs to have a component of their capital at risk in the default management process. CDCC holds \$10.0 of its cash and cash equivalents and marketable securities to cover the potential loss incurred due to Clearing Member defaults. This \$10.0 would be accessed in the event that a defaulting Clearing Member's margin and clearing fund deposits are insufficient to cover the loss incurred by CDCC. The \$10.0 is allocated into two separate tranches. The first tranche of \$5.0 is intended to cover the loss resulting from the first defaulting Clearing Member. If the loss incurred is greater than \$5.0, and as such the first tranche is fully depleted, CDCC will fully replenish the first tranche using the second tranche of \$5.0. This second tranche is in place to ensure there is \$5.0 available in the event of an additional Clearing Member default.

CDCC's cash margin deposits and cash clearing fund deposits are held at the Bank of Canada or with commercial banks with a minimum credit rating of A/R1-low or better, thereby alleviating the credit risk CDCC would face with deposits held at commercial banks. CDCC's non-cash margin deposits and non-cash clearing fund deposits are pledged to CDCC under irrevocable agreements and are held by approved depositories (note 9). This collateral may be seized by CDCC in the event of default by a Clearing Member.

Shorcan

Shorcan is exposed to credit risk in the event that customers fail to settle on the contracted settlement date. This risk is limited by their status as agents, in that they do not purchase or sell securities for their own account. As agents, in the event of a failed trade, Shorcan has the right to withdraw its normal policy of anonymity and advise the two counterparties to settle directly.

(ii) Cash and cash equivalents and restricted cash and cash equivalents

The Company manages its exposure to credit risk on its cash and cash equivalents and restricted cash and cash equivalents by holding the majority of its cash and cash equivalents with major Canadian chartered banks or in Government of Canada and provincial treasury bills and US treasury bills.

(iii) Marketable securities

The Company manages its exposure to credit risk arising from investments in marketable securities by holding high-grade individual fixed income securities or term deposits with credit ratings of A/R1-low or better. In addition, when holding individual fixed income securities, the Company will limit its exposure to any non-government security. The investment policy of the Company will only allow excess cash to be invested in money market securities or fixed income securities;

however the majority of the portfolio is held within bank deposits, notes, Government of Canada and provincial treasury bills, and US treasury bills.

(iv) Trade receivables

The Company's exposure to credit risk resulting from uncollectable accounts is influenced by the individual characteristics of its customers, many of whom are banks and financial institutions. The Company invoices its customers on a regular basis and maintains a collections team to monitor customer accounts and minimize the amount of overdue receivables. There is no concentration of credit risk arising from trade receivables from a single customer. In addition, customers that fail to maintain their account in good standing risk loss of listing, trading, clearing, or data access privileges and other services.

(v) Total return swaps

The Company limits its exposure to counterparty credit risk on its total return swaps by contracting with major Canadian chartered banks.

(C) INVESTMENT RISK

In the clearing operations of its business, the Company manages both securities and cash collateral and uses custody banks for the latter. The investment management process governing the investable cash follows industry practice and is in line with the Company's regulatory obligations. However, as with all investment strategies, the risk of loss on participant assets remains a possibility. The potential for these adverse outcomes is accounted for in the contractual framework embedded in the CDS Rules, which ensure that if investment losses are realized, they are transferred to participants, thereby eliminating any possible impacts to the Company's financial position.

(D) MARKET RISK

Market risk is the risk of loss due to changes in market prices and rates, such as foreign exchange rates, interest rates, commodity prices and equity prices.

(i) Foreign currency risk

The Company is exposed to foreign currency risk on revenue and expenses where it invoices or procures in a foreign currency. It is also exposed to foreign currency risk on cash and cash equivalents, trade receivables and trade payables denominated in foreign currencies, principally in US dollars. As at December 31, 2021, cash and cash equivalents and trade receivables, net of current liabilities, include US\$8.1, which are exposed to changes in the US-Canadian dollar exchange rate, £0.3, which are exposed to changes in the British Pound Sterling-Canadian dollar exchange rate, and less than €0.1, which are exposed to changes in the Euro-Canadian dollar exchange rate (2020 – US\$10.0, £0.8 and less than €0.1). In addition, net assets related to Trayport and other foreign operations are denominated in US dollars, Euros ("EUR") and British Pound Sterling ("GBP"), and the effect of foreign exchange rate movements on the Company's share of these net assets is included in accumulated other comprehensive income in the consolidated balance sheet.

The Company does not currently employ currency hedging strategies with respect to its operating activities, and therefore significant moves in exchange rates, specifically a strengthening of the Canadian dollar against the US dollar could have an adverse effect on the value of the Company's net income or net assets in Canadian dollars.

Settlements in the clearing and settlement services offered by CDS Clearing occur in both Canadian and US dollars. Foreign exchange risk could be created if there is a default and the currency of the payment obligation is different from the currency of the collateral supporting that payment obligation. This risk is mitigated by discounting the collateral value of securities where these mismatches occur.

(ii) Interest rate risk

The Company is exposed to interest rate risk on its marketable securities, credit and liquidity facilities, debentures and Commercial Paper.

At December 31, 2021, the Company held \$77.3 in marketable securities, all of which were held in treasury bills (2020 – \$55.8, all of which were held in treasury bills).

The Company also has nil of Commercial Paper (note 11) outstanding at December 31, 2021.

(iii) Equity price risk

The Company is exposed to equity price risk arising from its share-based payments, as the Company's obligation under these arrangements are partly based on the price of the Company's shares. The Company has entered into TRSs as a partial economic hedge to the share appreciation rights of these share-based payments.

(iv) Other market price risk

The Company is exposed to market risk factors from the activities of CDCC, CDS Clearing, TSX, TSX Venture Exchange, and Shorcan, if a Clearing Member, Participant or client, as the case may be, fails to take or deliver either derivative products or securities on the contracted settlement date where the contracted price is less favourable than the current market price.

CDCC

CDCC is exposed to market risk through its CCP function in the event of a Clearing Member default as it becomes the legal counterparty to all of the defaulters' novated transactions and must honor the financial obligations that arise from those novated transactions.

The principal mitigation of the market risk exposure post default is the default management process. CDCC has developed detailed default management processes that would enable it to neutralize the market exposures through either its auction process or via open markets operations within prescribed time periods. Any losses from such operations would be set-off against the margin and clearing fund (if necessary) collateral that are pre-funded by all Clearing Members for these purposes.

CDS Clearing

CDS Clearing is exposed to market risk through its CCP function in the event of a Participant default as it becomes the legal counterparty to all of the defaulters' novated transactions and must honor the financial obligations that arise from those novated transactions.

The principal mitigation of the market risk exposure post default is the default management process. CDS Clearing has developed detailed default management processes that would enable it to neutralize the market exposures via open market operations within prescribed time periods. Any losses from such operations would be set-off against the collateral contributions of the defaulting participant to the participant fund and default fund for the CCP service.

Replacement cost risk exposure of CDS Clearing in these central counterparty services is mitigated through a daily mark-to-market of each participant's obligations as well as risk-based collateral requirements calculated daily. These mitigants are intended to cover the vast majority of market changes and are tested against actual price changes on a regular basis. This testing is supplemented with analysis of the effects of extreme market conditions on collateral valuation and market risk measurements which are used to determine additional collateral requirements of Participants to a default fund established in 2015. Should the collateral of a defaulter in a central counterparty service be insufficient, either because the value of the collateral has declined or the loss to be covered by the collateral exceeded the collateral requirement, the surviving participants in the service are required to cover any residual losses.

Settlements in the clearing and settlement services occur in both Canadian and US dollars. Foreign exchange risk is created when the currency of the payment obligation is different from the valuation currency of the collateral supporting that payment obligation. This risk is mitigated by discounting the collateral value of securities where these mismatches occur.

TSX and TSX Venture Exchange

The Company is exposed to market price risk on its sustaining services revenue, which is based on quoted market values of listed issuers as at December 31 of the previous year.

Shorcan

Shorcan's risk is limited by their status as an agent, in that they do not purchase or sell securities for their own account, the short period of time between trade date and settlement date, and the defaulting customer's liability for any difference between the amounts received upon sale of, and the amount paid to acquire, the securities.

(v) Market risk sensitivity summary

	Change in underlying factor	Impact on income before income taxes	Impact on equity
Foreign currency			
USD, EUR and GBP currency	+10%	\$ 1.1	\$ 90.4
USD, EUR and GBP currency	-10%	(1.1)	(90.4)
Interest rates			
Marketable securities	+1%	\$ (0.1)	n/a
Marketable securities	-1%	(0.1)	n/a
Commercial Paper	+1%	n/a	n/a
Commercial Paper	-1%	n/a	n/a
Debentures	+1%	n/a	n/a
Debentures	-1%	n/a	n/a
Equity price			
PSUs, RSUs and DSUs	+25%	\$ (13.8)	n/a
PSUs, RSUs and DSUs	-25%	12.3	n/a
TRS	+25%	7.3	n/a
TRS	-25%	(7.3)	n/a

(E) LIQUIDITY RISK

Liquidity risk is the risk of loss due to the inability of the Company to meet its, or of the Company's borrowers, counterparties, Clearing Members, or Participants to meet their obligations in a timely manner or at reasonable prices. The Company manages liquidity risk through the management of its cash and cash equivalents and marketable securities, all of which are held in short-term instruments, and its debentures, credit and liquidity facilities and Commercial Paper (note 11) and capital (note 12).

The contractual maturities of the Company's financial liabilities are as follows:

As at	December 31, 2021		
	Less than 1 year	Between 1 and 5 years	Greater than 5 years
Participants' tax withholdings*	\$ 180.0	\$ —	\$ —
Accrued interest payable	5.7	—	—
Other trade and other payables	89.4	—	—
Provisions	0.4	1.2	0.5
Lease liabilities	9.3	34.1	54.2
Balances of Participants and Clearing Members*	57,113.5	—	—
Total return swaps	0.4	—	—
Commercial Paper	—	—	—
Debentures	—	549.1	448.0

*The above financial liabilities are covered by assets that are restricted from use in the ordinary course of business.

(F) COVID-19 RISK

The COVID-19 pandemic has created significant volatility, uncertainty and economic disruption, which may adversely affect our business, financial condition, liquidity, results of operations and long-term financial objectives. Economic, political and market conditions can impact the level of initial public offerings, secondary financings, market capitalization of our issuers, transfer agent and trustee services, trading volumes, energy data and network connectivity, client hosting revenue, and sales of market data across our markets.

The Company has witnessed high levels of volatility which, when coupled with prolonged negative economic conditions, can cause dramatic fluctuations in trading volumes, equity financings and demand for market data. This can lead to slower collections of accounts receivable as well as increased counterparty risk which, in turn, could adversely affect our business. Additionally, if the Company is required to suspend trading for a prolonged period of time or shorten trading hours, our business, operating results, long term financial objectives, cash flows, or financial condition could be materially adversely affected.

While key initiatives continue, some could be delayed or postponed indefinitely due to lack of client availability for effective engagement and business development. Although the Company continues to plan and engage with new and prospective clients, their level of readiness and commitment is outside of our control; therefore, revenues could be lower than anticipated.

NOTE 11 – DEBT, CREDIT AND LIQUIDITY FACILITIES

The Company is exposed to liquidity risk through its clearing operations and capital structure (note 10). To manage this risk, the Company has arranged various liquidity and credit facilities, Commercial Paper and debentures as a source of financing. If the Company is unable to meet its covenants under the trust indentures, the terms of the Commercial Paper program or the credit facilities, the Company may be required to seek potentially less favourable sources of financing.

(A) DEBT

The Company has the following debt outstanding as at December 31:

				2021	2020
	Interest rate	Maturity date(s)	Principal/ Authorized amount	Carrying amount	Carrying amount
Series B Debentures	4.461%	October 3, 2023	250.0	\$ 249.8	\$ 249.8
Series D Debentures	2.997%	December 11, 2024	300.0	299.3	298.7
Series E Debentures	3.779%	June 5, 2028	200.0	199.2	199.0
Series F Debentures	2.016%	February 12, 2031	250.0	248.8	—
Debentures				997.1	747.5
Commercial Paper	n/a	n/a	400.0	—	160.0
Commercial Paper				—	160.0
TMX Group Limited credit facility	1 month B.A./ LIBOR + 107.5 bps	May 2, 2024	400.0	—	—
Credit facility				—	—
Total debt				997.1	907.5
Less: current portion of debt				—	(160.0)
Non-current debt				\$ 997.1	\$ 747.5

(i) Debentures

The Company maintains debentures, which are direct, senior, unsecured and unsubordinated obligations of the Company and rank equally with all other senior unsecured and unsubordinated indebtedness. The debentures have received a rating of A (high) with Positive trend from DBRS Morningstar ("DBRS").

On February 12, 2021, the Company completed a Canadian private placement offering of \$250.0 aggregate principal amount of senior unsecured debentures ("Series F Debentures") to accredited investors in Canada. The Series F

Debentures are direct senior unsecured and unsubordinated obligations of the Company and rank pari passu with all other senior unsecured and unsubordinated indebtedness of the Company. The Company incurred financing costs of \$1.3 on the issuance of the Series F Debentures, and these costs are recognized in the carrying value of the Debentures in the Debt caption of the condensed consolidated balance sheet under non-current liabilities and amortized over the term of the debt.

The Company has the right, at its option, to redeem, in whole or in part, each of the Series B, Series D, Series E and Series F Debentures at any time prior to their respective maturities. The redemption price is equal to the greater of the applicable Canada Yield Price (as defined in the relevant Indenture) and 100% of the principal amount of the debentures being redeemed, together with accrued and unpaid interest to the date fixed for redemption. If redeemed on or after the date that is three months prior to the maturity date for the Series B, Series E and Series F, or two months prior to the maturity date for the Series D Debentures, the redemption price is equal to 100% of the aggregate principal amount outstanding on the series being redeemed, together with accrued and unpaid interest to the date fixed for redemption.

The debentures are carried at amortized cost and are measured using the effective interest rate method.

For the year ended December 31, 2021, the Company recognized interest expense on its Series B, Series D, Series E and Series F debentures of \$11.2, \$9.5, \$7.8 and \$4.6, respectively (2020 – \$11.3, \$9.1, \$7.6 and nil, respectively).

(ii) Commercial paper

The Company has a commercial paper program to offer potential investors up to \$400.0, or the US dollar equivalent (reduced from \$500.0, or the US dollar equivalent, on April 28, 2021) of Commercial Paper to be issued in various maturities of no more than one year and bearing interest rates based on the prevailing market conditions at the time of issuance.

The Commercial Paper issued are unsecured obligations of TMX Group Limited and rank equally with all other senior unsecured obligations of the Company. The Commercial Paper has been assigned a rating of R-1 (low) with Positive trend by DBRS.

The Commercial Paper is carried at amortized cost and measured using the effective interest rate method.

During the year ended December 31, 2021, the Company issued Commercial Paper with a cumulative amount of \$1,592.0 at interest rates ranging from 0.17% to 0.24% (2020 – \$2,007.8 at interest rates ranging from 0.24% to 2.00%). During the same period, the Company repaid Commercial Paper with a cumulative amount of \$1,752.0 at interest rates ranging from 0.17% to 0.25% (2020 – \$2,087.8 at interest rates ranging from 0.25% to 2.00%).

(iii) TMX Group Limited credit facility

The Company has entered into a credit agreement (the “TMX Group Limited credit facility”) with a syndicate of lenders to provide 100% backstop to the commercial paper program as well as for general corporate purposes. The credit agreement is to mitigate the Company's exposure to specific liquidity risk should it be unable to borrow under a new Commercial Paper issuance in order to pay for Commercial Paper that is coming due because of a lack of liquidity or demand for the Company's Commercial Paper in the market.

The amount available to be drawn under the TMX Group Limited credit facility is limited to \$400.0 (decreased from \$500.0 on April 28, 2021) less the aggregate amount of: (i) Commercial Paper outstanding (December 31, 2021 – nil); and (ii) inter-company notes payable to CDS Clearing, CDCC, CDS Limited and Shorcan Brokers Limited (December 31, 2021 – \$58.7). The facility expires on May 2, 2024.

MX has an outstanding letter of guarantee for \$0.4 issued against the TMX Group Limited credit facility. This letter of guarantee has been issued as a guarantee to the trustee under the MX supplementary pension plan in respect of accrued future employee benefits (note 24).

(B) OTHER CREDIT AND LIQUIDITY FACILITIES

The Company has the following other credit and liquidity facilities drawn and outstanding at December 31:

	Interest rate [†]	Maturity date(s)	Authorized	2021 Carrying amount	2020 Carrying amount
CDS Limited operating demand loan	—	n/a	5.0	—	—
CDS Clearing unsecured overdraft	—	n/a	5.0	—	—
CDS Clearing operating demand loan	—	n/a	15.0	—	—
CDS Clearing secured standby liquidity facility	—	March 22, 2022	2,000.0	—	—
CDS Clearing overnight loan facility	—	n/a	US\$5.5	—	—
CDS Clearing secured standby liquidity facility	—	March 22, 2022	US\$720.0	—	—
CDCC syndicated revolving standby liquidity facility	—	February 25, 2022	100.0	2.0	4.3
CDCC daylight liquidity facilities	—	n/a	975.0	—	—
CDCC syndicated REPO facility	—	February 25, 2022	27,012.0	—	—
Shorcan overdraft facility	—	n/a	50.0	—	—
Total credit and liquidity facilities			\$	2.0	\$ 4.3

[†]The interest rate charged on borrowings under the credit and liquidity facilities vary as the actual rate will be based on the prevailing market rates at the time of draw.

(i) CDS facilities

CDS maintains unsecured operating demand loans totaling \$5.0 to support short-term operating requirements. To support processing and settlement activities of Participants, an unsecured overdraft facility of \$5.0, demand loan of \$15.0 and an overnight facility of US\$5.5 are available. The borrowing rates for these facilities, if drawn, are the Canadian prime or the US base rate, depending on the currency drawn.

CDS Clearing maintains a secured standby liquidity facility of US\$720.0, or Canadian dollar equivalent, that can be drawn in either United States or Canadian currency. On March 23, 2021, CDS Clearing extended the maturity date to March 22, 2022. The facility is available to support processing and settlement activities in the event of a Participant default with the New York Link Service and The Depository Trust Company Direct Link Service. The facility will allow the Company to increase the amount available by an additional US\$600, or Canadian equivalent, with approval of the lenders. Borrowings under the secured facility are obtained by pledging or providing collateral pledged by Participants primarily in the form of debt instruments issued or guaranteed by federal, provincial and/or municipal governments in Canada, or US treasury instruments and equity instruments. Depending upon the currency drawn, the borrowing rate for the secured standby liquidity facility is the US base rate plus 150 bps or the Canadian prime rate plus 150 bps.

CDS Clearing also has a secured standby liquidity facility of \$2,000, or US equivalent, that can be drawn in either Canadian or US currency. On March 23, 2021, CDS Clearing extended the maturity date to March 22, 2022. This arrangement is available to support settlement activities in the event of a Participant default with CDS Clearing's Continuous Net Settlement service. The facility will allow the Company to increase the amount available by an additional \$500, or US equivalent, with approval of the lenders. Borrowings under the secured facility are obtained by pledging or providing collateral pledged by Participants primarily in the form of debt and equity instruments. Depending upon the currency drawn, the borrowing rate for the secured standby liquidity facility is the Canadian prime rate plus 150 bps or the US base rate plus 150 bps.

In addition, CDS has signed agreements that would allow the Bank of Canada to provide emergency last-resort liquidity to CDS at the discretion of the Bank of Canada. This liquidity facility is intended to provide end of day liquidity for payment obligations arising from CDSX, and only in the event that CDS Clearing is unable to access liquidity from its standby liquidity facility or in the event that the liquidity under such facilities is insufficient. Use of this facility would be on a fully collateralized basis.

(ii) CDCC facilities

CDCC maintains daylight liquidity facilities for a total of \$975.0 to provide liquidity on the basis of collateral in the form of securities that have been received by, or pledged to, CDCC. The daylight liquidity facilities must be cleared to zero at the end of each day.

CDCC maintains a \$27,012.0 REPO uncommitted facility (December 31, 2020 - \$27,012.0) that is in place to provide end of day liquidity in the event that CDCC is unable to clear the daylight liquidity facilities to zero. On February 26, 2021, CDCC extended this facility to February 25, 2022. The facility would provide liquidity in exchange for securities that have been received by, or pledged to, CDCC.

CDCC also maintains a \$100.0 syndicated revolving standby liquidity facility (December 31, 2020 - \$320.0) to provide end of day liquidity in the event that CDCC is unable to clear the daylight liquidity facilities to zero. Advances under the facility are secured by collateral in the form of securities that have been received by, or pledged to, CDCC. The borrowing rate on this facility is prime rate less 1.75%. On February 26, 2021, CDCC extended this facility to February 25, 2022 and on June 4, 2021, CDCC reduced this facility from \$320.0 to \$100.0.

As at December 31, 2021, CDCC had drawn \$2.0 to facilitate a failed REPO settlement. The amount is fully collateralized by liquid securities included in cash and cash equivalents and was fully repaid subsequent to the reporting date.

In addition, CDCC has signed an agreement that would allow the Bank of Canada to provide emergency last-resort liquidity to CDCC at the discretion of the Bank of Canada. This liquidity facility is intended to provide end of day liquidity only in the event that CDCC is unable to access liquidity from the revolving standby liquidity facility and the syndicated REPO facility or in the event that the liquidity under such facilities is insufficient. Use of this facility would be on a fully collateralized basis.

(iii) Shorcan facility

Shorcan maintains an overdraft facility with a major chartered bank to provide end of day liquidity to cover any shortfalls due to timing of payments and receipts associated with the brokerage of trades. Use of this facility is secured by collateral in the form of securities.

(iv) TMX Group Limited Support Agreement

In compliance with the Principles for Financial Market Infrastructures and additional Canadian regulatory and oversight guidance, CDS Clearing and CDCC each have adopted a recovery plan, to be applied in the event that the entity is unable to provide defined critical operations and services as a going concern. These recovery plans were filed with their respective Canadian regulators. In connection with the recovery plans, and if certain funding conditions are met, TMX Group Limited is to provide certain limited financial support to CDS Clearing and CDCC, if necessary, in the context of a recovery.

(C) RECONCILIATION OF LIABILITIES ARISING FROM FINANCING ACTIVITIES

The table below details changes in the Company's liabilities arising from financing activities, including both cash and non-cash changes. Liabilities arising from financing activities are those for which cash flows were, or future cash flows will be, classified in the Company's consolidated statement of cash flows from financing activities.

		Debtentures	Commercial Paper	CDCC syndicated revolving standby liquid facility	Lease liabilities	Total
Balance at January 1, 2020	\$	747.1	\$ 239.6	\$ 8.2	\$ 103.7	\$ 1,098.6
Financing cash flows		—	(79.6)	(3.9)	(11.4)	(94.9)
Other (non-cash)		0.4	—	—	2.0	2.4
Balance at December 31, 2020	\$	747.5	\$ 160.0	\$ 4.3	\$ 94.3	\$ 1,006.1
Financing cash flows		248.7	(160.0)	(2.3)	(11.5)	74.9
Other (non-cash)		0.9	—	—	14.8	15.7
Balance at December 31, 2021	\$	997.1	\$ —	\$ 2.0	\$ 97.6	\$ 1,096.7

NOTE 12 – CAPITAL MAINTENANCE

The Company's primary objectives in managing capital, which it defines as including its cash and cash equivalents, marketable securities, share capital, debentures, commercial paper, and various credit facilities, include:

- Maintaining sufficient capital for operations to ensure market confidence and to meet regulatory requirements and various facility requirements. Currently, the Company targets to retain a minimum of \$205.0 in cash, cash equivalents and marketable securities. This amount is subject to change;
- Maintaining a credit rating in a range consistent with the Company's current A (high) and R1-low credit ratings from DBRS;
- Using excess cash to invest in and continue to grow the business;
- Returning capital to shareholders through methods such as dividends paid to shareholders and purchasing shares for cancellation pursuant to normal course issuer bids; and
- Reducing the debt levels to be below the total leverage ratios as discussed in (a) below, which decrease over time.

The Company aims to achieve the above objectives while managing its capital subject to capital maintenance requirements imposed on the Company and certain subsidiaries as follows:

- a. In respect of the TMX Group Limited credit facility (note 11) that require the Company to maintain:
 - i. an interest coverage ratio of more than 4.0:1;
 - ii. a total leverage ratio of not more than 3.50:1.
- b. In respect of each of TSX and Alpha Exchange Inc., to maintain the following requirements, on both a consolidated and non-consolidated basis, as set out in the amended and restated recognition order issued by the Ontario Securities Commission ("OSC") effective September 2020:
 - i. maintain sufficient financial resources for the proper performance of its functions and to meet its responsibilities; and
 - ii. calculate on a monthly basis:
 - a current ratio;
 - a debt to cash flow ratio; and
 - a financial leverage ratio.
- c. In respect of TSX Venture Exchange Inc., as required by certain provincial securities commissions, to maintain sufficient financial resources to perform its functions.
- d. In respect of MX, to maintain the following financial ratios as set out in the recognition order issued by the AMF:
 - i. a working capital ratio of more than 1.5:1;
 - ii. a cash flow to total debt outstanding ratio of more than 20%; and
 - iii. a financial leverage ratio of less than 4.0.
- e. In respect of CDCC, to maintain certain amounts, as follows:
 - i. maintain sufficient financial resources as required by the OSC and AMF;
 - ii. \$5.0 cash and cash equivalents or marketable securities as part of the Clearing Member default recovery process plus an additional \$5.0 in the event that the initial \$5.0 is fully utilized during a default;
 - iii. sufficient cash, cash equivalents and marketable securities to cover 12 months of operating expenses, excluding amortization and depreciation; and
 - iv. \$30.0 total shareholder's equity.
- f. In respect of CDS and CDS Clearing, as required by the OSC and the AMF to maintain certain financial ratios as defined in the OSC recognition order, as follows:
 - i. a debt to cash flow ratio of less than or equal to 4:1; and
 - ii. a financial leverage ratio of less than or equal to 4:1.

In addition, the OSC requires CDS and CDS Clearing to maintain working capital to cover 6 months of operating expenses (excluding, in the case of CDS, the amount of shared services fees charged to CDS Clearing).

CDS is required to dedicate a portion of its own resources in the CNS default waterfall for the CNS function. CDS maintains \$1.0 in cash and cash equivalents or marketable securities to cover potential losses incurred as a result of a Participant default.

- g. In respect of Shorcan:
- i. by IIROC which requires Shorcan to maintain a minimum level of shareholders' equity of \$0.5;
 - ii. by the National Futures Association which requires Shorcan to maintain a minimum level of net capital; and
 - iii. by applicable Canadian securities commissions, which require Shorcan to maintain a minimum level of excess working capital.
- h. In respect of TSX Trust:
- i. as required by the Office of the Superintendent of Financial Institutions, to maintain the following minimum capital ratios:
 1. common equity tier 1 capital ratio of 7%;
 2. tier 1 capital ratio of 8.5%; and
 3. total capital ratio of 10.5%.
 - ii. as required by IIROC, to maintain in excess of \$100.0 of paid up capital and surplus on the last audited balance sheet for the acceptable institution designation.

As at December 31, 2021 and 2020, the Company complied with each of the externally imposed capital requirements in effect at the applicable period-end.

NOTE 13 – FINANCIAL INSTRUMENTS

Financial assets are recognized on the trade date at which the Company becomes a party to the contractual provisions of the instrument. Financial assets are generally derecognized when the contractual rights to the cash flows from the assets expire, or when the Company transfers the rights to receive the contractual cash flows on the financial assets to another party without retaining substantially all the risks and rewards of ownership of the financial assets.

Financial liabilities are initially recognized on the trade date at which the Company becomes a party to the contractual provisions of the instrument. The Company derecognizes a financial liability when its contractual obligations are discharged, cancelled or expired. Financial liabilities are recognized initially at fair value plus any directly attributable transaction costs. Subsequent to initial recognition these financial liabilities are measured at amortized cost using the effective interest method. Financial assets and liabilities are offset and the net amount presented in the consolidated balance sheet only when the Company has a current legal right to offset the amounts and intends either to settle on a net basis or to realize the asset and settle the liability simultaneously.

Derivatives are recognized initially at fair value. Subsequent to initial recognition, derivatives are measured at fair value, and changes therein are accounted for as described below.

The Company holds total return swaps which, while providing a partial economic hedge against its share price exposure on its cash-settled share-based compensation plans (note 23), are not designated as hedges for accounting purposes. As such, these derivatives are recognized at fair value both initially and subsequently, with changes in the fair value recognized in the consolidated income statement.

(A) CLASSIFICATION AND MEASUREMENT

Financial assets and liabilities are classified as fair value through profit and loss ("FVTPL"), amortized cost, or fair value through other comprehensive income ("FVTOCI"). The Company has exercised judgement in its assessment of the business model within which the assets are held and in its assessment of whether the contractual terms of the financial assets are solely payments of principal and interest on the principal amounts outstanding to determine the classification of financial assets.

The Company classifies its non-derivative financial assets in the following categories, depending on the purpose for which they were acquired:

- Financial assets at FVTPL are measured at fair value at the end of each reporting period, with any fair value gains or losses recognized in profit or loss. The net gain or loss recognized in profit or loss includes any dividend or interest earned on the financial asset and is presented as finance income or cost in the consolidated income statement.
- Financial assets carried at amortized cost. Amortized cost is the amount at which the financial asset is measured at initial recognition minus the principal repayments, adjusted for the cumulative amortization using the effective interest method of any difference between that initial amount and the maturity amount, adjusted for any loss allowance. On the other

hand, the gross carrying amount of a financial asset is the amortized cost of a financial asset before adjusting for any loss allowance.

The classification of the Company's financial instruments, along with their carrying amounts and fair values are as follows:

	December 31, 2021		December 31, 2020	
	Carrying amount	Fair value	Carrying amount	Fair value
Assets at fair value through profit or loss				
Marketable securities	\$ 77.3	\$ 77.3	\$ 55.8	\$ 55.8
	77.3	77.3	55.8	55.8
Assets at amortized cost				
Cash and cash equivalents	264.3	264.3	222.1	222.1
Restricted cash and cash equivalents	180.0	180.0	153.3	153.3
Trade and other receivables	132.6	132.6	108.0	108.0
Promissory note	—	—	4.7	4.7
Clearing Members cash collateral	5,537.2	5,537.2	6,002.0	6,002.0
Balances of Clearing Members	40,407.5	40,407.5	19,050.3	19,050.3
Balances of Participants	11,168.8	11,168.8	5,218.1	5,218.1
	57,690.4	57,690.4	30,758.5	30,758.5
Liabilities at fair value through profit or loss				
Total return swaps	(0.4)	(0.4)	(2.4)	(2.4)
	(0.4)	(0.4)	(2.4)	(2.4)
Liabilities at amortized cost				
Other trade and other payables	(89.4)	(89.4)	(71.8)	(71.8)
Accrued interest payable	(5.7)	(5.7)	(3.8)	(3.8)
Participants' tax withholdings	(180.0)	(180.0)	(153.3)	(153.3)
Clearing Members cash collateral	(5,537.2)	(5,537.2)	(6,002.0)	(6,002.0)
Balances of Clearing Members	(40,407.5)	(40,407.5)	(19,050.3)	(19,050.3)
Balances of Participants	(11,168.8)	(11,168.8)	(5,218.1)	(5,218.1)
Credit and liquidity facilities drawn	(2.0)	(2.0)	(4.3)	(4.3)
Commercial Paper	—	—	(160.0)	(160.0)
Debentures	(997.1)	(1,033.1)	(747.5)	(830.7)
	\$ (58,387.7)	\$ (58,423.7)	\$ (31,411.1)	\$ (31,494.3)

The carrying amount of the Company's financial instruments approximate their fair values at each reporting date, with the exception of the debentures. The fair values of the debentures were obtained using Level 2 observable market prices as inputs.

(B) FAIR VALUE MEASUREMENT

The categories within the fair value hierarchy of the Company's financial instruments carried at fair value are as follows:

As at Asset/(Liability)				December 31, 2021
	Level 1	Level 2	Level 3	Total
Marketable securities	\$ 77.3	\$ —	\$ —	\$ 77.3
Total return swaps	—	(0.4)	—	(0.4)
As at Asset/(Liability)				December 31, 2020
	Level 1	Level 2	Level 3	Total
Marketable securities	\$ 55.8	\$ —	\$ —	\$ 55.8
Total return swaps	—	(2.4)	—	(2.4)

There were no transfers during the periods between any of the levels.

NOTE 14 – CASH AND CASH EQUIVALENTS, RESTRICTED CASH AND CASH EQUIVALENTS AND MARKETABLE SECURITIES

(A) CASH AND CASH EQUIVALENTS AND RESTRICTED CASH AND CASH EQUIVALENTS

Cash and cash equivalents, and restricted cash and cash equivalents are comprised of:

As at	December 31, 2021	December 31, 2020
Cash	\$ 176.4	\$ 117.7
Term and other deposits	17.6	28.6
Treasury bills	67.7	72.7
Regulatory surplus	2.6	3.1
Cash and cash equivalents	\$ 264.3	\$ 222.1
Restricted cash and cash equivalents – CDS Clearing	180.0	153.3
Restricted cash and cash equivalents	\$ 180.0	\$ 153.3

Cash and cash equivalents consist of cash and highly liquid investments having an original maturity of three months or less and also include restricted cash. MX operates a separate regulatory division, responsible for the approval of participants and market regulation, which operates on a cost recovery basis. The surplus of this regulatory division has an equivalent and off-setting amount included in trade and other payables.

Restricted cash and cash equivalents contains tax withheld by CDS Clearing on entitlement payments made by CDS Clearing on behalf of CDS Clearing Participants. The restricted cash and cash equivalents related to this withheld tax is ultimately under the control of CDS Clearing; however, the amount is payable to various taxation authorities within a relatively short period of time and so is restricted from use in normal operations. An equivalent and off-setting amount is included in the consolidated balance sheet as a current liability under the caption Participants' tax withholdings.

(B) MARKETABLE SECURITIES

Marketable securities are comprised of:

As at	December 31, 2021	December 31, 2020
Treasury bills	\$ 77.3	\$ 55.8
Marketable securities	\$ 77.3	\$ 55.8

The Company has designated its marketable securities as fair value through profit and loss, with changes in fair value being recorded within finance income in the consolidated income statement in the period in which they occur. Fair values have been determined based on quoted market prices or are based on observable market information.

NOTE 15 – TRADE AND OTHER RECEIVABLES

Trade and other receivables are comprised of:

As at	December 31, 2021	December 31, 2020
Trade receivables, gross	\$ 102.8	\$ 100.2
Less: Allowance for impairment	(3.2)	(2.7)
Trade receivables, net	99.6	97.5
Other receivables	33.0	10.5
Trade and other receivables	\$ 132.6	\$ 108.0

Loss allowances for trade and other receivables are measured at an amount equal to lifetime expected credit losses. The expected credit losses on trade and other receivables are calculated using historical credit loss experience taking into account current observable data at the reporting date to reflect the effects of any relevant current and forecasts of future conditions.

Trade receivables generally have terms of 30 days. Loss allowances for trade receivables are measured at an amount equal to lifetime expected credit losses ("ECL"). Trade receivables that are more than three months past due are considered to be impaired and the impairment is the lifetime ECL. Allowances for ECL are recorded within selling, general and administration costs in the consolidated income statement. Other specific trade receivables are also provided against as considered necessary.

The aging of the trade receivables was as follows:

As at	December 31, 2021				December 31, 2020	
	Gross		Allowance		Gross	Allowance
Not past due	\$	72.9	\$	—	\$	69.4
Past due 1-90 days		24.3		—		26.0
More than 90 days past due		5.6		3.2		4.8
Trade receivables	\$	102.8	\$	3.2	\$	100.2
						2.7

The movement in the Company's allowance for impairment is as follows:

	December 31, 2021		December 31, 2020	
Balance at January 1	\$	2.7	\$	2.8
Allowance recognized in the year, net of allowance released		1.6		1.4
Receivables written off as uncollectible		(1.1)		(1.5)
Balance at December 31	\$	3.2	\$	2.7

No allowance for impairment is considered necessary for other receivables.

NOTE 16 – GOODWILL AND INTANGIBLE ASSETS

(A) GOODWILL AND INDEFINITE LIFE INTANGIBLE ASSETS

Goodwill is recognized at cost on acquisition less any subsequent impairment in value. Intangible assets such as trade names, derivative products, regulatory designations and structured products are considered to have indefinite lives as management believes that there is no foreseeable limit to the period over which these assets are expected to generate net cash flows.

A summary of the Company's goodwill and indefinite life intangible assets is as follows:

	Goodwill		Trade names		Derivative products		Regulatory designations		Total
Balance at January 1, 2020	\$	1,649.7	\$	283.4	\$	632.0	\$	1,407.3	\$ 3,972.4
Adjustment for VisoTech		(4.5)		—		—		—	(4.5)
Effect of movements in exchange rates		8.5		0.4		—		—	8.9
Balance at December 31, 2020		1,653.7		283.8		632.0		1,407.3	3,976.8
Acquisition of AST Canada (note 3)		45.8		—		—		—	45.8
Acquisition of TradeSignal (note 3)		9.3		—		—		—	9.3
Effect of movements in exchange rates		(13.0)		(0.7)		—		—	(13.7)
Balance at December 31, 2021	\$	1,695.8	\$	283.1	\$	632.0	\$	1,407.3	\$ 4,018.2

The Company measures goodwill arising on a business combination as the fair value of the consideration transferred less the fair value of the identifiable assets acquired and liabilities assumed, all measured as of the acquisition date. The Company elects on a transaction by transaction basis whether to measure non-controlling interests at fair value or at their proportionate share of the recognized amount of the identifiable net assets acquired, at the acquisition date. Transaction costs, other than those associated with the issue of debt or equity securities as consideration, that the Company incurs in connection with a business combination are expensed as incurred.

(B) DEFINITE LIFE INTANGIBLE ASSETS

Definite life intangible assets are recognized at cost less accumulated amortization, where applicable, and any impairment in value. Cost includes any expenditure that is directly attributable to the acquisition of the asset. The cost of internally developed assets includes the cost of materials and direct labour, and any other costs directly attributable to bringing the assets to a working condition for their intended use.

Costs incurred in research activities, undertaken with the prospect of gaining new technical knowledge, are recognized in the consolidated income statement as incurred. Costs incurred in development activities are capitalized when all of the following criteria are met:

- It is technically feasible to complete the work such that the asset will be available for use or sale,
- The Company intends to complete the asset for use or sale,

- The Company will be able to use the asset once completed,
- The asset will be useful and is expected to generate future economic benefits for the Company,
- The Company has adequate resources available to complete the development of and to use the asset, and
- The Company is able to reliably measure the costs attributable to the asset during development.

Definite life intangible assets are amortized from the date of acquisition or, for internally developed intangible assets, from the time the asset is available for use. Amortization is recognized in the consolidated income statement on a straight-line basis over the estimated useful life of the asset. Residual values and the useful lives of the assets are reviewed at each year end, and revised as necessary.

Amortization is provided over the following useful lives of definite life intangible assets:

Asset	Basis	Rate
Customer relationships	Straight-line	17 – 34 years
Technology	Straight-line	1 – 15 years

A summary of the Company's definite life intangible assets is as follows:

	Technology	Customer relationships	Open interest	Total
Cost:				
Balance at January 1, 2020	\$ 195.9	\$ 1,204.9	\$ 2.0	\$ 1,402.8
Additions through general operations	53.1	—	—	53.1
Adjustment for VisoTech	1.9	3.9	—	5.8
Other adjustments	(1.1)	—	—	(1.1)
Effect of movements in exchange rates	0.7	3.8	—	4.5
Balance at December 31, 2020	250.5	1,212.6	2.0	1,465.1
Additions through general operations	43.7	—	—	43.7
Acquisition of AST Canada (note 3)	15.7	79.0	—	94.7
Other adjustments	6.6	(2.3)	—	4.3
Effect of movements in exchange rates	(1.4)	(6.3)	—	(7.7)
Balance at December 31, 2021	\$ 315.1	\$ 1,283.0	\$ 2.0	\$ 1,600.1
Accumulated amortization:				
Balance at January 1, 2020	\$ 76.6	\$ 255.4	\$ 2.0	\$ 334.0
Charge for the year	16.6	44.2	—	60.8
Adjustments	(1.3)	—	—	(1.3)
Effect of movements in exchange rates	0.3	0.4	—	0.7
Balance at December 31, 2020	92.2	300.0	2.0	394.2
Charge for the year	17.6	45.8	—	63.4
Adjustments	6.6	(1.2)	—	5.4
Effect of movements in exchange rates	(0.7)	(0.9)	—	(1.6)
Balance at December 31, 2021	\$ 115.7	\$ 343.7	\$ 2.0	\$ 461.4
Net book values:				
At December 31, 2020	\$ 158.3	\$ 912.6	\$ —	\$ 1,070.9
At December 31, 2021	\$ 199.4	\$ 939.3	\$ —	\$ 1,138.7

(C) IMPAIRMENT OF ASSETS

The carrying amounts of the Company's non-financial assets, other than deferred income tax assets and employee future benefit assets, are reviewed at each reporting date to determine whether there is any indication of impairment. If any such indication exists, then the asset's recoverable amount is estimated. Goodwill and intangible assets that have indefinite useful lives, or that are not yet available for use, are tested for impairment at least annually even if there is no indication of impairment, and the recoverable amount is estimated each year at the same time.

The recoverable amount of an asset is the greater of its value-in-use and its fair value less costs of disposal. In assessing value-in-use, the estimated future cash flows are discounted to their present value using a pre-tax discount rate that reflects current market assessments of the time value of money and the risks specific to the asset. For the purpose of impairment testing,

assets that cannot be tested individually are grouped together into the smallest group of assets that generates cash inflows from continuing use that are largely independent of the cash inflows of other assets or groups of assets (the “cash-generating unit”, or “CGU”). For the purposes of goodwill impairment testing, goodwill acquired in a business combination is allocated to the CGU, or the group of CGUs, that is expected to benefit from the synergies of the combination and reflects the lowest level at which that goodwill is monitored for internal reporting purposes.

An impairment loss is recognized if the carrying amount of an asset, or its CGU, exceeds its estimated recoverable amount, which is the higher of the asset’s fair value less costs of disposal and its value-in-use. Impairment losses recognized in respect of a CGU are allocated first to reduce the carrying amount of any goodwill allocated to the CGUs, and then to reduce the carrying amounts of the other assets in the CGU on a pro rata basis. Impairment losses are recognized in the consolidated income statement.

An impairment loss in respect of goodwill cannot be reversed. In respect of other non-financial assets, impairment losses recognized in prior periods are assessed at each reporting date for any indications that the loss has decreased or no longer exists. An impairment loss is reversed if there has been a change in the estimates used to determine the recoverable amount. An impairment loss is reversed only to the extent that the asset’s carrying amount does not exceed the carrying amount that would have been determined, net of depreciation or amortization, if no impairment loss had been recognized.

The Company recognized no impairment in 2020 and 2021.

At December 31, the carrying values of goodwill and indefinite life intangible assets allocated to each CGU, after the impairment charges described above, are as follows:

As at	December 31, 2021		December 31, 2020	
	Goodwill	Indefinite life intangibles	Goodwill	Indefinite life intangibles
Listings	\$ 13.3	\$ 1,197.9	\$ 13.3	\$ 1,227.9
TMX Datalinx	707.7	79.6	707.7	82.9
Trayport	628.2	39.0	631.9	39.7
Equities Trading	5.1	316.8	5.1	283.3
MX/CDCC	159.4	663.5	159.4	663.7
CDS	89.5	22.0	89.5	22.0
TSX Trust	90.8	2.0	45.0	2.0
Shorcan Brokers	1.8	1.6	1.8	1.6
	\$ 1,695.8	\$ 2,322.4	\$ 1,653.7	\$ 2,323.1

The recoverable amounts of the above CGUs were determined based on value-in-use calculations, using management’s discounted cash flow projections over periods of 5 to 8 years, depending on the CGU, along with a terminal value. The terminal value is the value attributed to the CGUs’ operations beyond the projected time period. The terminal value for the CGUs is determined using estimated long-term growth rates of 2.0% for all significant CGUs, except for MX/CDCC and Trayport, which used 4.5%. The estimated long-term growth rate is based on the Company’s estimates of expected future operating results, future business plans, economic conditions and a general outlook for the industry in which the CGU operates. In calculating the recoverable amount of these CGUs, a pre-tax discount rate is used. The pre-tax discount rate applied was 9.8% to 12.8%, which was set considering the weighted average cost of capital of the Company and certain risk premiums, based on management’s past experience.

These assumptions are subjective judgements based on the Company’s experience, knowledge of operations and knowledge of the economic environment in which it operates. If future cash flow projections, long-term growth rates or pre-tax discount rates are different to those used, it is possible that the outcome of future impairment tests could result in a different outcome with a CGU’s goodwill and/or intangible assets being impaired.

NOTE 17 – INVESTMENTS IN EQUITY ACCOUNTED INVESTEEES

Investments in equity accounted investees are comprised of:

As at	December 31, 2021	December 31, 2020
Investment in BOX Holdings	\$ 40.3	\$ 21.9
Other	5.5	5.4
Investments in equity accounted investees	\$ 45.8	\$ 27.3

For the year ended December 31, 2021, the Company recognized \$24.2 from its share of income from equity-accounted investees (2020 – \$5.7). Also for the year ended December 31, 2021, the Company earned nil from services rendered to equity accounted investees (2020 – \$1.4).

BOX HOLDINGS

As of December 31, 2021, the Company holds an economic and voting interest of 42.62% and 45.5%, respectively, in BOX Holdings (2020 - 42.62% and 45.5%). The investment in BOX Holdings is accounted for using the equity method.

Summary financial information for BOX Holdings is as follows:

As at	December 31, 2021	December 31, 2020
Current assets	\$ 101.0	\$ 38.8
Non-current assets	13.1	5.9
Current liabilities	(25.3)	(4.0)
Non-current liabilities	(5.9)	(12.3)
Net assets (100%)	\$ 82.9	\$ 28.4

	For the year ended December 31, 2021	For the year ended December 31, 2020
Revenue	\$ 102.7	\$ 50.9
Net income and comprehensive income (100%)	56.6	13.0
Share of income and comprehensive income (42.62%)	\$ 24.1	\$ 5.6

For the year ended December 31, 2021, the Company recognized \$24.1 from its share of income in the consolidated income statements and a gain of less than \$0.1 from translation of the foreign operation in the consolidated statements of comprehensive income (for the year ended December 31, 2020 – income of \$5.6 and loss of \$0.4, respectively).

Subsequent event

In February 2021, BOX Holdings commenced a unit buy-back with certain members that was concluded on January 3, 2022, which resulted in the Company's economic and voting interests increasing to 47.89% and 51.43%, respectively. As a result, effective January 3, 2022, the Company obtained control over BOX Holdings and commenced consolidating the entity. The transaction shall be accounted for as a business combination in accordance with IFRS 3, *Business Combinations*. Thus, upon obtaining control, the Company remeasured its previously held interest, resulting in a gain currently estimated to be approximately \$180.2, which will be recognized in our first quarter 2022 results.

The Company estimates the fair value of its ownership interest in BOX Holdings (i.e. the purchase consideration) using the income approach. The income approach is a valuation technique that calculates the fair value of a business based on the present value of future expected cash flows. This valuation involves significant subjectivity and estimation uncertainty, including assumptions related to the future revenues of the acquired business and the discount rate.

The following table summarizes the estimated fair values of the assets and liabilities acquired. The Company will finalize the measurement of the values below as it obtains the information necessary to complete the measurement process. Any changes resulting from facts and circumstances that existed as of the date of acquisition of control will result in retrospective adjustments to the provisional amounts below, recognized at the acquisition dates.

Consideration:		
Fair value of previously held interest in BOX Holdings	\$	207.5
Non-controlling interest, based on the proportionate interest in the recognized amounts of BOX Holdings' identifiable net assets		178.0
Total consideration	\$	385.5
Identifiable assets acquired and liabilities assumed:		
Cash and cash equivalents	\$	77.4
Trade and other receivables		12.7
Intangible assets		317.4
Goodwill		43.9
Deferred tax liabilities		(43.5)
Other assets and liabilities, net		(22.4)
Fair value of net assets acquired	\$	385.5

Intangible assets comprise customer relationships of \$305.9, trade name of \$6.4, and technology of \$5.1.

The goodwill recorded on acquisition is attributable to the expected growth in the customer base. None of the goodwill recognized is deductible for income tax purposes.

NOTE 18 – TRADE AND OTHER PAYABLES

Trade and other payables are comprised of:

As at	December 31, 2021	December 31, 2020
Trade payables and accrued expenses	\$ 68.2	\$ 51.6
Sales taxes payable	3.9	4.6
Employee and director costs payable	70.3	68.0
Accrued interest payable	5.7	3.8
Regulatory surplus	2.6	3.1
Other	2.1	1.3
Trade and other payables	\$ 152.8	\$ 132.4

The fair value of trade and other payables is approximately equal to their carrying amount given their short term until settlement.

Short-term payables with no stated interest rate are measured at the original transaction amounts where the effect of discounting is immaterial. Short-term employee benefit obligations, such as wages, salaries and annual vacation entitlements, are measured on an undiscounted basis and are expensed as the related service is provided. A liability is recognized for the Company's annual short-term incentive plan if a present legal or constructive obligation to pay an amount exists as a result of past service provided by the employee, and the obligation can be estimated reliably.

NOTE 19 – DEFERRED REVENUE

Deferred revenue is comprised of:

As at	December 31, 2021	December 31, 2020
Listings	\$ 15.9	\$ 10.8
Trayport	5.8	4.7
Other	4.3	2.5
Current deferred revenue	\$ 26.0	\$ 18.0
Trayport	\$ 1.2	—
Other	1.5	0.4
Non-current deferred revenue	\$ 2.7	\$ 0.4

Listings deferred revenue is mainly comprised of initial and additional listings fees for TSX Venture Exchange, which are paid in advance for the services being provided, and initial listings fees for TSX. Initial listings are deferred over a 12-month period from the date of listing, while additional listings are recognized when the additional listing occurs.

Trayport deferred revenue includes quarterly, annual, and multi-year subscriptions billed in advance.

Other includes deferred revenue related to Other issuer services (TSX Trust), Derivatives trading and clearing (MX and CDCC), and CDS.

NOTE 20 – PROVISIONS AND CONTINGENCIES

(A) PROVISIONS

A provision has been recognized if, as a result of a past event, the Company has a present legal or constructive obligation that can be estimated reliably, and it is probable that an outflow of economic benefits will be required to settle the obligation. If the effect is material, provisions are determined by discounting the expected future cash flows at a pre-tax discount rate that reflects current market assessments of the time value of money and the risks specific to the liability. The unwinding of the discount is recognized as a finance cost.

A summary of the Company's provisions is as follows:

	Decommissioning liabilities	Commodity tax	Other	Total
Balance at January 1, 2020	\$ 8.2	\$ 4.7	\$ 3.2	\$ 16.1
Provisions recognized during the period	0.2	(0.1)	13.4	13.5
Provisions used or reversed during the period	(0.4)	(4.0)	(16.1)	(20.5)
Balance at December 31, 2020	\$ 8.0	\$ 0.6	\$ 0.5	\$ 9.1
Current	\$ —	\$ 0.6	\$ 0.5	\$ 1.1
Non-current	8.0	—	—	8.0
Balance at December 31, 2020	\$ 8.0	\$ 0.6	\$ 0.5	\$ 9.1
Provisions recognized during the period	0.2	0.2	—	0.4
Provisions used or reversed during the period	(6.5)	(0.4)	(0.5)	(7.4)
Balance at December 31, 2021	\$ 1.7	\$ 0.4	\$ —	\$ 2.1
Current	\$ —	\$ 0.4	\$ —	\$ 0.4
Non-current	1.7	—	—	1.7
Balance at December 31, 2021	\$ 1.7	\$ 0.4	\$ —	\$ 2.1

(B) CONTINGENT LIABILITIES

From time to time in connection with its operations, the Company or its subsidiaries are named as a defendant in actions, including those for damages and costs sustained by plaintiffs, or as a respondent in proceedings challenging the Company's or its subsidiaries' regulatory or other actions, decisions or jurisdiction. The outcomes of such matters are subject to future resolution that includes uncertainties of litigation or other proceedings. Based on information currently known to the Company, management believes that any material payment or other obligation in respect of any such action or proceeding is remote.

NOTE 21 – LEASE OBLIGATIONS AND OTHER COMMITMENTS

(A) LEASES

At inception of a contract, the Company assesses whether a contract is, or contains, a lease. A contract is, or contains, a lease if the contract conveys the right to control the use of an identified asset for a period of time in exchange for consideration. The Company allocates the consideration in the contract to each lease and non-lease component on the basis of their relative stand-alone prices.

As a lessee, the Company recognizes a right-of-use asset and a lease liability at the lease commencement date. The right-of-use asset is initially measured at cost, which comprises the initial amount of the lease liability adjusted for any lease payments made at or before the commencement date, plus any initial direct costs incurred and any estimated costs to dismantle and remove the underlying asset or to restore the underlying asset or the site on which it is located, less any lease incentives received. The right-of-use asset is subsequently depreciated using the straight-line method from the commencement date to the end of the lease term and is reduced for any impairment losses and adjusted for certain remeasurements of the lease liability.

The lease liability is initially measured at the present value of the lease payments that are not paid at the commencement date, discounted using the interest rate implicit in the lease or, if that rate cannot be readily determined, the Company's incremental borrowing rate. The Company applies judgement in determining the lease term for some lease contracts in which there is a renewal option.

Lease payments included in the measurement of the lease liability comprise the following:

- Fixed payments, including in-substance fixed payments which may contain variability but are unavoidable; and
- Variable payments that depend on an index or a rate, are initially measured using the index or rate as at the commencement date. Variable payments based on usage or performance are not included in the measurement of the lease liability.

The lease liability is measured at amortized cost using the effective interest method. The lease liability is subsequently increased by the interest cost and decreased by lease payments made, over the term of the lease. It is remeasured when there is a change in future lease payments arising from a change in an index or rate, a change in the estimate of the amount expected to be payable under a residual value guarantee, or as appropriate, changes in the assessment of whether a purchase or extension option is reasonably certain to be exercised or a termination option is reasonably certain not to be exercised. When a lease liability is remeasured, a corresponding adjustment is also made to the carrying amount of the right-of-use asset.

Short-term leases and leases of low-value assets

The Company has elected to not recognize right-of-use assets and lease liabilities for short-term leases that have a lease term of 12 months or less, and leases of low-value assets. The Company continues to recognize the lease payments associated with these leases as an expense over the term of the lease on a straight-line basis.

For the year ended December 31, 2021, the Company recognized \$9.5 and \$3.2 of depreciation expense on right-of-use assets and interest expense on lease liabilities, respectively (2020 - \$9.4 and \$3.3). As at December 31, 2021, \$9.3 of lease liabilities were classified as current lease liabilities and recorded in "Other current liabilities" (2020 - \$8.1) while non-current lease liabilities were \$88.3 (2020 - \$86.2).

	Right-of use assets
Cost:	
Balance at January 1, 2020	\$ 102.8
Lease modifications	(1.5)
Balance at December 31, 2020	101.3
Additions	5.1
Lease modifications	6.6
Balance at December 31, 2021	\$ 113.0
Accumulated amortization:	
Balance at January 1, 2020	\$ 9.8
Charge for the year	9.4
Balance at December 31, 2020	19.2
Charge for the year	9.5
Balance at December 31, 2021	\$ 28.7
Net book value:	
At December 31, 2020	\$ 82.1
At December 31, 2021	84.3

The Company leases several premises. The average lease term is 7 years.

The Company is also responsible for additional taxes, maintenance and other direct charges with respect to its leases. The additional amount was \$11.7 for 2021 (2020 – \$11.7).

The figures above do not include the Company's obligations to restore certain leased premises to their original condition (note 20).

The Company agreed to a premise lease contract that will commence in January 2022. The future lease payments for the non-cancellable lease contract are \$0.3 within one year, \$1.4 within five years, and \$1.6 thereafter.

AMENDMENT TO IFRS 16

In March 2021, the IASB amended IFRS 16, *Leases*, to extend the practical expedient introduced in May 2020 in response to the COVID-19 pandemic, in order to permit lessees to apply it to rent concessions for which reductions in lease payments affect payments due on or before June 30, 2022 (extended from June 30, 2021). The Company early adopted this amendment from January 1, 2021. This amendment did not have a significant impact on the Company's financial statements.

(B) CDS FEE COMMITMENTS AND REBATES

Under the CDS recognition orders granted by the OSC and the AMF, fees for services and products offered by CDS Clearing will be those fees in effect on November 1, 2011 ("2012 base fees"). CDS Clearing cannot adjust fees without the approval of the OSC, AMF and the British Columbia Securities Commission ("BCSC"). In addition, CDS Clearing may only seek approval for fee increases on clearing and other core CDS Clearing services (which services are outlined in the OSC and AMF recognition orders) where there has been a significant change from circumstances existing as at August 1, 2012, the effective date of the recognition orders.

Under the CDS recognition orders granted by the OSC and AMF, CDS will share any annual revenue increases on clearing and other core CDS Clearing services, as compared to revenues in fiscal year 2012 for the 12-month period ending October 31, 2012, on a 50:50 basis with Participants.

For the year ended December 31, 2021, the rebate payable amounted to \$14.3 (2020 – \$10.3).

In addition, the Company is mandated to rebate an additional amount to Participants in respect of exchange clearing services for trades conducted on an exchange or Alternative Trading System ("ATS"). This rebate gradually increased over the years to reach its maximum of \$4.0 annually in October 2016.

These rebates are accrued and recorded as a reduction against revenue in the year to which they relate.

(C) OTHER COMMITMENTS

The Company has other commitments in the form of long term contracts related to technology in the amount of \$33.1 of which \$20.7 is payable in one year.

NOTE 22 – OTHER ASSETS AND OTHER LIABILITIES

(A) OTHER ASSETS

Other current and non-current assets are comprised of:

As at	December 31, 2021	December 31, 2020
Prepaid expenses	\$ 30.6	\$ 25.1
Current income tax assets	2.0	4.8
Other current assets	\$ 32.6	\$ 29.9
Investments in equity accounted investees (note 17)	\$ 45.8	\$ 27.3
Accrued employee benefit assets (note 24)	21.7	6.2
Premises and equipment	64.3	67.9
Promissory note	—	4.7
Other	1.4	0.7
Other non-current assets	\$ 133.2	\$ 106.8

(B) OTHER LIABILITIES

Other current and non-current liabilities are comprised of:

As at	December 31, 2021	December 31, 2020
Deferred revenue (note 19)	\$ 26.0	\$ 18.0
Provisions (note 20)	0.4	1.1
Current lease liabilities (note 21)	9.3	8.1
Total return swaps (note 23)	0.4	2.4
Current income tax liabilities	32.1	31.1
Other	2.5	—
Other current liabilities	\$ 70.7	\$ 60.7
Deferred revenue (note 19)	\$ 2.7	\$ 0.4
Provisions (note 20)	1.7	8.0
Long-term incentive plan and director compensation obligations (note 23)	20.0	38.6
Accrued employee benefits payable (note 24)	19.0	20.2
Other	0.6	—
Other non-current liabilities	\$ 44.0	\$ 67.2

NOTE 23 – SHARE-BASED PAYMENTS

Under the long-term incentive plan ("LTIP"), certain employees and officers of the Company will receive a mix of LTIP awards consisting of share options, time-based restricted share units ("RSUs"), and performance-based restricted share units (referred to as "PSUs"). For the year ended December 31, 2021, the Company recognized compensation and benefits expense under the following share-based payment arrangements:

- Share option plan;
- Restricted share unit, performance-based restricted share unit and deferred share unit plans; and
- Employee share purchase plan.

(A) SHARE OPTION PLAN

The share option plan has options that vest in quarters over 4 years and have a maximum term of 10 years. Under the share option plan, the fair value of share options granted was estimated on the date of grant using the Black-Scholes option pricing model with the following assumptions: a share price of between \$122.60 and \$128.04 dollars (2020 – \$117.51 dollars); a

dividend yield of 2.19% (2020 – 2.25%); an expected life of between 2 and 5 years (2020 – 2 and 5 years); an expected volatility of between 19.41% and 19.46% (2020 – 13.9% and 14.5%); a risk-free interest rate of between 0.5% and 1.2% (2020 – 1.6% and 1.7%); and expected forfeiture rates of between 9.4% and 22.1% (2020 – 9.4% and 22.0%). The assumptions are based on the Company's historical share price movements and historical dividend policy and the expected life is based on the Company's past experience. The resulting weighted average fair value calculated for share options granted in 2021 was \$14.63 dollars (2020 – \$10.37 dollars).

Options outstanding at December 31, 2021 will expire in 2024, 2025, 2026, 2027, 2028, 2029, 2030 and 2031.

Movements in the number of share options outstanding are as follows:

For the year ended	December 31, 2021		December 31, 2020	
	Number of share options	Weighted average exercise price (in dollars)	Number of share options	Weighted average exercise price (in dollars)
Outstanding, beginning of the period	1,205,874	\$ 79.27	1,538,160	\$ 66.18
Granted	210,162	127.95	240,183	117.51
Forfeited	(54,438)	103.34	(31,879)	75.28
Exercised	(227,615)	66.41	(540,590)	58.65
Outstanding as at December 31	1,133,983	\$ 89.71	1,205,874	\$ 79.27
Vested and exercisable as at December 31	539,455	\$ 71.19	458,615	\$ 59.60

The range of exercise prices and weighted average remaining contractual life of options outstanding are as follows:

As at	December 31, 2021		December 31, 2020	
	Number of share options	Weighted average remaining contractual life	Number of share options	Weighted average remaining contractual life
Exercise price range (in dollars)				
\$40.00 - \$49.99	95,890	3.5	185,389	4.4
\$50.00 - \$59.99	67,500	2.9	73,027	3.6
\$70.00 - \$79.99	329,050	5.7	413,439	6.7
\$80.00 - \$99.99	238,918	7.2	300,902	8.2
\$100.00 - \$119.99	201,216	8.1	233,117	9.1
\$120.00 - \$129.99	201,409	9.1	—	—
	1,133,983	6.7	1,205,874	7.0

The Company accounts for its share option plan to eligible employees which calls for settlement by the issuance of equity instruments using the fair value based method. Under the fair value based method, compensation cost attributable to options to employees is measured at fair value at the grant date, using a recognized option pricing model, and amortized over the vesting period. The amount recognized as an expense is adjusted to reflect the actual number of options expected to vest. For the year ended December 31, 2021, the Company recognized compensation and benefits expense of \$2.2 in relation to its share option plan (2020 – \$2.6).

According to the terms of the Company's plan, under no circumstances may any one person's share options and all other share compensation arrangements exceed 5% of the outstanding common shares issued of the Company. At December 31, 2021, 3,400,833 common shares of the Company remain reserved for issuance upon exercise of share options granted under the plan, representing approximately 6% of the outstanding common shares of the Company.

(B) RESTRICTED SHARE UNIT ("RSU"), PERFORMANCE-BASED RESTRICTED SHARE UNIT ("PSU") AND DEFERRED SHARE UNIT ("DSU") PLANS

RSUs and PSUs vest over a maximum of 35 months and generally are payable provided the employee is still employed by the Company at the end of the second calendar year following the calendar year in which the RSUs and PSUs were granted. In the case of the PSUs, the amount of the award payable at the end of this vesting period will be determined by a factor of total shareholder return versus the total gross return of the S&P/TSX Composite Index over the period. Total shareholder return represents the appreciation in share price of the Company plus dividends paid on a common share of the Company, measured at the time the PSUs vest.

The Company has a plan that, among other things, gives executives who have not met their equity ownership requirements the opportunity to convert all or part of their short-term incentive award into deferred share units ("DSUs"). In addition, members of the Board of Directors who do not waive their compensation or direct that it be paid to their employer are granted DSUs annually and are also given the opportunity to convert some of their annual remuneration into DSUs. The DSUs vest immediately. The amount of the award payable is based on the number of units outstanding multiplied by the 30-day volume weighted average price of the Company's common shares at the date of the payout. The DSUs will only be paid out when the DSU holder retires or otherwise ceases to hold any position with the Company or such of its subsidiaries as are designated from time to time.

The Company records its obligation for the RSUs and PSUs, if any, over the service period in which the award is earned. The liability is measured at fair value on the date of grant and at each subsequent reporting date. As at December 31, 2021, the total accrual for the Company's RSUs, PSUs and DSUs was \$33.5, which includes \$13.5 in trade and other payables and \$20.0 in other non-current liabilities (2020 – \$57.5, \$18.9 and \$38.6, respectively).

The maximum amount to be paid is not known until the awards become payable and will be based on total shareholder return from the date of grant to the time of payout. The accrual is based on the 30-day volume weighted average price of the Company's common shares at the end of the reporting period.

Compensation cost attributable to these employee awards which call for settlement in cash is measured at fair value at each reporting date. Changes in fair value between the grant date and the measurement date are recognized in the consolidated income statement over the vesting period, with a corresponding change in either current or non-current liabilities, depending on the period in which the award is expected to be paid. For the year ended December 31, 2021, the Company recognized compensation and benefits expense and selling, general and administration expense of \$5.4 and \$3.7, respectively, in relation to its RSUs, PSUs and DSUs (2020 – \$14.0 and \$6.7, respectively).

The Company has entered into a series of TRSs which synthetically replicate the economics of the Company purchasing its shares as a partial economic hedge to the share appreciation rights of RSUs, PSUs, and DSUs.

The Company has classified its series of TRSs as fair value through profit and loss and marks to market the fair value of the TRSs as an adjustment to income. The Company also simultaneously marks to market the liability to holders of the units as an adjustment to income. Fair value is based on the share price of the Company's common shares at the end of the reporting period. The fair value of the TRSs and the obligation to unit holders are reflected on the consolidated balance sheet. The contracts are settled in cash upon maturity.

For the year ended December 31, 2021, unrealized gains of \$2.1 and realized losses of \$0.4 related to TRSs, respectively have been reflected in the consolidated income statement (2020 – unrealized losses of \$1.4 and realized gains of \$8.7, respectively).

(C) EMPLOYEE SHARE PURCHASE PLAN

The Company has an employee share purchase plan for eligible employees of the Company. Under the employee share purchase plan, contributions by the Company and by eligible employees will be used by the plan administrator, to make purchases of common shares of the Company on the open market. Effective May 31, 2020, each eligible employee may contribute up to 15% (previously 10%) of the employee's salary to the employee share purchase plan. The Company will contribute to the plan administrator the funds required to purchase one common share of the Company for each two common shares purchased on behalf of the eligible employee, up to a maximum annual contribution of \$3,500 dollars per year.

The Company accounts for its contributions as compensation and benefits expense when the amounts are contributed to the plan. For the year ended December 31, 2021, compensation and benefits expense related to this plan was \$3.2 (2020 – \$2.7).

NOTE 24 – EMPLOYEE FUTURE BENEFITS

The Company has registered pension plans with both a defined contribution tier and a defined benefit tier covering substantially all employees, as well as supplementary income plans ("SIP") for senior management. The costs of these programs are being funded currently, except for the MX SIP, where a portion is guaranteed by a letter of guarantee. The Company also provides other post-retirement and post-employment benefits, such as supplementary medical and dental coverage, which are funded on a cash basis by the Company, and contributions from plan members in some circumstances.

(A) DEFINED CONTRIBUTION PLANS

For defined contribution plans, the expense is charged to compensation and benefits expense in the consolidated income statement as it is incurred. The total expense recognized in respect of the Company's defined contribution plans for the year ended December 31, 2021, was \$8.0, which represents the employer contributions for the period (2020 – \$7.5).

(B) DEFINED BENEFIT PLANS

The Company measures the present value of its defined benefit obligations and the fair value of plan assets for accounting purposes as at the balance sheet date of each fiscal year. The most recent actuarial valuation of the registered pension plan for funding purposes was as at December 31, 2019, and the next required valuation is as at December 31, 2022. For the TMX supplementary income plan, the most recent actuarial valuation for funding purposes was as at December 31, 2020, and the next scheduled valuation is as at December 31, 2021. For the CDS and MX SIP plans, the funding valuations are performed annually with the most recent actuarial funding valuations completed as of January 1, 2021 and the next scheduled valuations are at January 1, 2022. Lastly, for the non-pension post-retirement plan, the valuation date was May 1, 2021 and the next scheduled valuation is at May 1, 2024.

The accrued benefit assets and accrued benefit obligations related to the Company's defined benefit pension and non-pension post-retirement plans are included in the Company's consolidated balance sheet at December 31 as follows:

	Pension and SIP plans		Other post-retirement benefit plans	
	2021	2020	2021	2020
Accrued employee benefit assets	\$ 21.7	\$ 6.2	\$ —	\$ —
Accrued employee benefits payable	(0.4)	(0.5)	(17.3)	(18.5)
	\$ 21.3	\$ 5.7	\$ (17.3)	\$ (18.5)

Accrued employee benefits payable on the consolidated balance sheet also includes the obligation under the post-employment benefit plan of \$1.3 (2020 – \$1.2).

The Company's net obligation in respect of pension and SIP plans is calculated separately for each plan by estimating the amount of future benefit that employees have earned in return for their service in the current and prior periods, and that benefit is discounted to determine its present value and the fair value of any plan assets are then deducted. The benefits are based upon earnings and years of service. The Company's net obligation in respect of the post-retirement and post-employment benefit plans is the amount of future benefit that employees have earned in return for their service in the current and prior periods, discounted to determine its present value. Under all these plans, the discount rates used are based on Canadian AA-rated corporate bond yields.

The calculation is performed annually by an actuary based on management's best estimates using the projected benefit method pro-rated on service. If the calculation results in a surplus, accounting standards require that a limit is placed on the amount of this surplus that can be recognized as an asset. The total amount of defined benefit asset that can be recognized by the Company is limited to the present value of economic benefits available by way of future refunds of plan surplus and/or reductions in future contributions to the plan. In the determination of the economic benefit, minimum funding requirements resulting from the most recent actuarial funding valuations are also taken into consideration. An economic benefit is considered available to the Company if it is realizable during the life of the plan or on settlement of the plan obligations.

The accrued benefit assets and accrued benefit liabilities are comprised of:

	Pension and SIP plans		Other post-retirement benefit plans	
	2021	2020	2021	2020
Accrued benefit obligation:				
Balance, beginning of the year	\$ 126.3	\$ 116.0	\$ 18.5	\$ 16.4
Service (recovery) cost	1.3	(0.9)	0.8	0.7
Interest cost	3.1	3.5	0.5	0.5
Benefits paid	(5.7)	(5.3)	(0.7)	(0.5)
Employee contributions	0.1	0.1	—	—
Actuarial (gains) losses	(10.8)	12.9	(1.8)	1.4
Balance at December 31	\$ 114.3	\$ 126.3	\$ 17.3	\$ 18.5
Plan assets:				
Fair value, beginning of the year	\$ 132.0	\$ 119.6	\$ —	\$ —
Interest income	3.3	3.6	—	—
Employer contributions	3.5	3.7	0.7	0.5
Employee contributions	0.1	0.1	—	—
Benefits paid	(5.7)	(5.3)	(0.7)	(0.5)
Plan administration cost	(0.3)	(0.3)	—	—
Actuarial gains	2.7	10.6	—	—
Fair value at December 31	\$ 135.6	\$ 132.0	\$ —	\$ —
Accrued benefit asset (liability) at December 31	\$ 21.3	\$ 5.7	\$ (17.3)	\$ (18.5)

Plan assets consist of:

	Percentage of plan assets	
Asset category	2021	2020
Equity securities	46.7 %	48.7 %
Debt securities	39.2 %	37.8 %
Other	14.1 %	13.5 %
	100.0 %	100.0 %

MX has provided a letter of guarantee in the amount of \$0.4 to the benefit of the trustee of the MX SIP (2020 – \$0.5), using a part of the TMX Group Limited credit facility (note 11).

The service cost, which represents the benefits accruing to the employees, along with the interest cost, is recognized in the compensation and benefits expense in the consolidated income statement.

The elements of the Company's defined benefit plan costs recognized in the year ended December 31 are as follows:

	Pension and SIP plans		Other post-retirement benefit plans	
	2021	2020	2021	2020
Service (recovery) cost	\$ 1.3	\$ (0.9)	\$ 0.8	\$ 0.7
Net interest (income) cost	(0.2)	(0.1)	0.5	0.5
Plan administration cost	0.3	0.3	—	—
Net benefit plan expense (income) recognized in the income statement	\$ 1.4	\$ (0.7)	\$ 1.3	\$ 1.2

The Company recognizes all actuarial gains and losses arising from defined benefit plans and post-retirement plans immediately in other comprehensive income along with the expected return on plan assets. For the post-employment plans, actuarial gains and losses are recognized within compensation and benefits expense in the consolidated income statement. When the benefits of a plan are amended, the portion of the change in benefit relating to past service by employees is recognized immediately in the compensation and benefits expense in the consolidated income statement.

The aggregate actuarial gains and losses and effects of asset limits recognized in other comprehensive income for the year ended December 31, are as follows:

	Pension and SIP plans		Other post-retirement benefit plans	
	2021	2020	2021	2020
Effect due to demographics	\$ —	\$ —	\$ (0.3)	\$ —
Effect due to financial assumptions	(10.1)	10.0	(1.4)	1.4
Effect due to experience adjustments	(0.7)	2.9	(0.1)	—
Return on plan assets (excluding interest income)	(2.7)	(10.6)	—	—
Actuarial losses (gains) recognized in other comprehensive income	\$ (13.5)	\$ 2.3	\$ (1.8)	\$ 1.4

The significant actuarial assumptions adopted in measuring the obligation as at December 31 are as follows:

	Pension and SIP plans		Other post-retirement benefit plans	
	2021	2020	2021	2020
Discount rate (weighted average)	3.10 %	2.50 %	3.10 %	2.50 %
Inflation rate (consumer price index)	1.75 %	1.50 %	n/a	n/a
Commuted value	2.90 %	2.30 %	n/a	n/a
Rate of compensation increase	3.00 %	3.00 %	n/a	n/a

Assumptions regarding mortality rates are based on published statistics and mortality tables. The mortality tables used in 2020 and 2021 for the pension, SIP and other post-retirement plans was the Canadian Pensioner Mortality (CPM) 2014 private sector table with projection scale CPM-B and CPM2014 table with projection scale CPM-B for lump sum payments. The assumed health care cost trend rate at December 31, 2021 was 5.50% decreasing to 4.00% over 19 years (2020 – 5.60% decreasing to 4.00% over 20 years).

At December 31, 2021, the weighted-average duration of the defined benefit obligation was approximately 12 years (2020 - 13 years).

Reasonably possible changes to one of the relevant actuarial assumptions, holding other assumptions constant, would impact the accrued benefit obligations as follows:

	Pension and SIP plans		Other post-retirement benefit plans	
(Increase)/Decrease	2021	2020	2021	2020
50 bps decrease in the discount rate	\$ (7.2)	\$ (8.5)	\$ (1.2)	\$ (1.4)
50 bps increase in the discount rate	6.4	7.5	1.1	1.2
1 year increase in mortality rates	(2.6)	(2.7)	(0.7)	(0.8)
100 bps decrease in initial and ultimate trend rates	n/a	n/a	0.5	0.7
100 bps increase in initial and ultimate trend rates	n/a	n/a	(0.5)	(0.8)

In 2022, the Company expects to contribute approximately \$1.6 to its pension and other post-retirement benefit plans. Additional amounts to be contributed to the Company's SIP plans will be determined by management once the valuations have been prepared.

NOTE 25 – SHARE CAPITAL

The authorized capital of the Company consists of an unlimited number of common shares and an unlimited number of preference shares, issuable in series. No preference shares have been issued.

Each common share of the Company entitles its holder to one vote at all meetings of shareholders subject to certain restrictions with respect to the voting rights and the transferability of the shares. No person or combination of persons acting jointly or in concert is permitted to beneficially own or exercise control or direction over more than 10% of any class or series of voting shares of the Company without the prior approval of the OSC and the AMF.

Each common share of the Company is also entitled to receive dividends if, as and when declared by the Board of Directors of the Company. All dividends that the Board of Directors of the Company may declare and pay will be declared and paid in equal amounts per share on all common shares, subject to the rights of holders of the preference shares. Holders of common

shares will participate in any distribution of the net assets of the Company upon liquidation, dissolution or winding-up on an equal basis per share, but subject to the rights of the holders of the preference shares.

There are no preemptive, redemption, purchase or conversion rights attaching to the common shares, except for the compulsory sale of shares or redemption provision described in connection with enforcing the restriction on ownership of voting shares of the Company.

On February 26, 2021, the Company announced that the TSX accepted its new normal course issuer bid ("NCIB 2021") under which it can purchase for cancellation up to a maximum number of 560,000 of its common shares. Purchases under the NCIB 2021 commenced on March 8, 2021 and were made at prevailing market prices at the time of acquisition and in accordance with the rules and policies of the TSX. On November 29, 2021, the Company reached the maximum number of shares available for repurchase.

During the year ended December 31, 2021, the Company purchased 560,000 common shares for cancellation under NCIB 2021, at an average price of \$131.13 dollars, and for a total amount of \$73.4 (2020 - no common shares purchases for cancellation under NCIB 2021).

On January 8, 2021, the Company completed the purchase of its common shares under its previous normal course issuer bid ("NCIB 2020"), which commenced on March 4, 2020, as the Company reached the maximum number of 560,000 shares available for repurchase.

During the year ended December 31, 2021, the Company purchased 86,600 common shares for cancellation under NCIB 2020, at an average price of \$126.88 dollars, and for a total amount of \$11.0 (2020 - 473,400 common shares purchased at an average price of \$120.09 dollars and for a total amount of \$56.8).

The following transactions occurred with respect to the Company's common shares during the period:

	Number of common shares issued and fully paid		Share capital	
	2021	2020	2021	2020
Balance, beginning of the period	56,301,119	56,233,929	\$ 2,943.6	\$ 2,965.1
Options exercised	227,615	540,590	16.6	35.3
Shares repurchased under normal course issuer bid	(646,600)	(473,400)	(84.4)	(56.8)
Balance as at December 31	55,882,134	56,301,119	\$ 2,875.8	\$ 2,943.6

The Company's shares trade on Toronto Stock Exchange under the symbol "X".

NOTE 26 – RELATED PARTY RELATIONSHIPS AND TRANSACTIONS

(A) PARENT

The shares of the Company are widely held and as such there is no ultimate controlling party of the Company. Under the OSC and AMF recognition orders, no person or combination of persons acting jointly or in concert is permitted to beneficially own or exercise control of direction over more than 10% of any class or series of voting shares of the Company without prior approval of the OSC and the AMF.

(B) KEY MANAGEMENT PERSONNEL COMPENSATION

Compensation for key management personnel, including the Company's Board of Directors, was as follows:

For the year ended	December 31, 2021		December 31, 2020
Salaries and other short-term employee benefits, and termination benefits	\$ 11.8	\$	10.4
Post-employment benefits	0.7		0.6
Share-based payments	6.8		12.9
	\$ 19.3	\$	23.9

NOTE 27 – DIVIDENDS

Dividends recognized and paid in the period are as follows:

For the year ended	December 31, 2021				December 31, 2020	
		Dividend per share	Total paid		Dividend per share	Total paid
Dividend paid in March	\$	0.70	\$ 39.4	\$	0.66	\$ 37.2
Dividend paid in June	\$	0.77	\$ 43.3	\$	0.66	\$ 37.2
Dividend paid in September	\$	0.77	\$ 43.1	\$	0.70	\$ 39.6
Dividend paid in December	\$	0.77	\$ 43.1	\$	0.70	\$ 39.6
Total dividends paid		\$	168.9		\$	153.6

On February 7, 2022, the Company's Board of Directors declared a dividend of 83 cents per share. This dividend will be paid on March 11, 2022 to shareholders of record on February 25, 2022 and is estimated to amount to \$46.4.

NOTE 28 – FUTURE ACCOUNTING DEVELOPMENTS

The following new standards and amendments to standards and interpretations are not yet effective for the year ending December 31, 2021, and have not been applied in the preparation of the financial statements. These new and amended standards and interpretations are required to be implemented for financial years beginning on or after January 1, 2022:

- IAS 37, *Provisions, Contingent Liabilities and Contingent Assets* – Amendments clarify that the direct costs of fulfilling a contract include both the incremental costs of fulfilling the contract and an allocation of other costs directly related to fulfilling contracts. Before recognizing a separate provision for an onerous contract, the entity recognizes any impairment loss that has occurred on assets used in fulfilling the contract. The amendments apply to contracts existing at the date when the amendments are first applied. The Company does not expect the amendments to have a material impact on its financial statements.
- Reference to the Conceptual Framework – Amendments to IFRS 3, *Business Combinations* – Minor amendments were made to IFRS 3 to update the references to the Conceptual Framework for Financial Reporting and add an exception for the recognition of liabilities and contingent liabilities within the scope of IAS 37, *Provisions, Contingent Liabilities and Contingent Assets* and Interpretation 21, *Levies*. The amendments also confirm that contingent assets should not be recognized at the acquisition date. The Company does not expect the amendments to have a material impact on its financial statements.

Accounting standards effective beyond 2022

The following accounting standards are required to be implemented for financial years beginning on or after January 1, 2023 and are not expected to have a significant impact on the Company's financial statements:

- Classification of liabilities as current or non-current (Amendments to IAS 1, *Presentation of Financial Statements*)
- Disclosure of Accounting Policies (Amendments to IAS 1)
- Definition of Accounting Estimate (Amendments to IAS 8, *Accounting Policies, Changes in Accounting Estimates and Errors*)
- Deferred Tax Related to Assets and Liabilities Arising from a Single Transaction (Amendments to IAS 12, *Income Taxes*)