CONSTELLATION SOFTWARE INC.

MANAGEMENT'S DISCUSSION AND ANALYSIS ("MD&A")

The following discussion and analysis should be read in conjunction with the Annual Consolidated Financial Statements for the year ended December 31, 2020, which we prepared in accordance with International Financial Reporting Standards ("IFRS"). Certain information included herein is forward-looking and based upon assumptions and anticipated results that are subject to uncertainties. Should one or more of these uncertainties materialize or should the underlying assumptions prove incorrect, actual results may vary significantly from those expected. See "Forward-Looking Statements" and "Risks and Uncertainties".

Unless otherwise indicated, all dollar amounts are expressed in U.S. dollars. All references to "$" are to U.S. dollars and all references to "C$" are to Canadian dollars. Due to rounding, certain totals and subtotals may not foot and certain percentages may not reconcile.

Additional information about Constellation Software Inc. (the "Company" or "Constellation"), including our most recently filed Annual Information Form ("AIF"), is available on SEDAR at www.sedar.com.

Forward Looking Statements

Certain statements in this report may contain "forward looking" statements that involve risks, uncertainties and other factors that may cause the actual results, performance or achievements of the Company or industry to be materially different from any future results, performance or achievements expressed or implied by such forward-looking statements. Words such as "may", "will", "expect", "believe", "plan", "intend", "should", "anticipate" and other similar terminology are intended to identify forward looking statements. These statements reflect current assumptions and expectations regarding future events and operating performance as of the date of this MD&A, February 12, 2021. Forward looking statements involve significant risks and uncertainties, should not be read as guarantees of future performance or results, and will not necessarily be accurate indications of whether or not such results will be achieved. A number of factors could cause actual results to vary significantly from the results discussed in the forward looking statements, including, but not limited to, the factors discussed under "Risks and Uncertainties". Although the forward looking statements contained in this MD&A are based upon what management of the Company believes are reasonable assumptions, the Company cannot assure investors that actual results will be consistent with these forward looking statements. These forward looking statements are made as of the date of this MD&A and the Company assumes no obligation, except as required by law, to update any forward looking statements to reflect new events or circumstances. This report should be viewed in conjunction with the Company's other publicly available filings, copies of which can be obtained electronically on SEDAR at www.sedar.com.

Non-IFRS Measures

This MD&A includes certain measures which have not been prepared in accordance with IFRS such as Free cash flow available to shareholders.

Free cash flow available to shareholders ''FCFA2S'' refers to net cash flows from operating activities less interest paid on lease obligations, interest paid on other facilities, credit facility transaction costs, repayments of lease obligations, the TSS membership liability revaluation charge, and property and equipment purchased, and includes interest and dividends received. We believe that FCFA2S is useful supplemental information as it provides an indication of the uncommitted cash flow that is available to shareholders if we do not make any acquisitions, or investments, and do not repay any debts. While we could use the FCFA2S to pay dividends or repurchase shares, our objective is to invest all of our FCFA2S in acquisitions which meet our hurdle rate.

FCFA2S is not a recognized measure under IFRS and, accordingly, readers are cautioned that FCFA2S should not be construed as an alternative to net cash flows from operating activities. See ''Results of Operations

—Free cash flow available to shareholders" for a reconciliation of FCFA2S to net cash flows from operating activities.

Overview

We acquire, manage and build vertical market software ("VMS") businesses. Generally, these businesses provide mission critical software solutions that address the specific needs of our customers in particular markets. Our focus on acquiring businesses with growth potential, managing them well and then building them, has allowed us to generate significant cash flows and revenue growth during the past several years.

Our revenue consists primarily of software license fees, maintenance and other recurring fees, professional service fees and hardware sales. Software license revenue is comprised of license fees charged for the use of our software products generally licensed under multiple-year or perpetual arrangements. Maintenance and other recurring revenue primarily consists of fees charged for customer support on our software products post-delivery and also includes, to a lesser extent, recurring fees derived from software as a service, subscriptions, combined software/support contracts, transaction-related revenues, and hosted products. Maintenance and other recurring fee arrangements generally include rights to certain product updates "when and if available". Professional service revenue consists of fees charged for implementation and integration services, customized programming, product training and consulting. Hardware sales include the resale of third party hardware that forms part of our customer solutions, as well as sales of customized hardware assembled internally. Our customers typically purchase a combination of software, maintenance, professional services and hardware, although the type, mix and quantity of each vary by customer and by product.

Expenses consist primarily of staff costs, the cost of hardware, third party licenses, maintenance and professional services to fulfill our customer arrangements, travel and occupancy costs, depreciation, and other general operating expenses.

Results of Operations

(In millions of dollars, except percentages and per share amounts)

Unaudited

	Three months ended December 31,		Period-Over-Period Change		Year ended December 31,		Period-Over-Period Change	
	2020	2019	$	%	2020	2019	$	%
Revenue	**1,091**	**956**	**135**	**14%**	**3,969**	**3,490**	**479**	**14%**
Expenses	774	724	49	7%	2,843	2,648	195	7%
Amortization of intangible assets	110	96	14	14%	403	331	73	22%
Foreign exchange (gain) loss	(3)	(9)	6	-63%	2	11	(10)	-84%
TSS membership liability revaluation charge	10	22	(12)	-55%	65	52	13	25%
Finance and other income	0	(2)	2	NM	(4)	(4)	1	-16%
Bargain purchase gain	(1)	(10)	8	NM	(2)	(45)	44	-97%
Impairment of intangible and other non-financial assets	1	(0)	1	NM	12	0	12	NM
Finance costs	12	12	(0)	-4%	46	42	5	11%
Income before income taxes	189	121	67	55%	603	456	147	32%
Income tax expense (recovery)								
Current income tax expense (recovery)	44	43	1	3%	221	164	57	35%
Deferred income tax expense (recovery)	(4)	(13)	9	-69%	(55)	(41)	(13)	32%
Income tax expense (recovery)	40	29	10	36%	167	123	44	35%
Net income	**149**	**92**	**57**	**62%**	**436**	**333**	**103**	**31%**
Net cash flows from operating activities	**355**	**255**	**100**	**39%**	**1,186**	**767**	**419**	**55%**
Free cash flow available to shareholders	**307**	**193**	**113**	**59%**	**989**	**590**	**399**	**68%**
Weighted average number of shares outstanding								
Basic and diluted	21.2	21.2			21.2	21.2		
Net income per share								
Basic and diluted	$ 7.02	$ 4.34	$ 2.68	62%	$ 20.59	$ 15.73	$ 4.86	31%
Net cash flows from operating activities per share								
Basic and diluted	$ 16.73	$ 12.02	$ 4.71	39%	$ 55.96	$ 36.17	$ 19.79	55%
Free cash flow available to shareholders per share								
Basic and diluted	$ 14.47	$ 9.12	$ 5.35	59%	$ 46.68	$ 27.86	$ 18.81	68%
Cash dividends declared per share								
Basic and diluted	$ 1.00	$ 1.00	$ -	0%	$ 4.00	$ 24.00	$ (20.00)	-83%
Total assets					4,375	3,488	888	25%
Total long-term liabilities					1,288	1,069	219	21%

NM - Not meaningful

Due to rounding, certain totals may not foot and certain percentages may not reconcile.

Comparison of the three and twelve month periods ended December 31, 2020 and 2019

Revenue:

Total revenue for the quarter ended December 31, 2020 was $1,091 million, an increase of 14%, or $135 million, compared to $956 million for the comparable period in 2019. For the 2020 fiscal year total revenues were $3,969 million, an increase of 14%, or $479 million, compared to $3,490 million for the 2019 fiscal year. The increase for both the three and twelve month periods compared to the same periods in the prior year is primarily attributable to growth from acquisitions as the Company experienced organic growth of 1% and negative 3% respectively, negative 1% and negative 3% respectively after adjusting for the impact of changes in the valuation of the US dollar against most major currencies in which the Company transacts business. For acquired companies, organic growth is calculated as the difference between actual revenues achieved by each company in the financial period following acquisition compared to the estimated revenues they achieved in the corresponding financial period preceding the date of acquisition by Constellation. The primary reason for the foreign exchange adjusted negative organic growth for the three and twelve months ended December 31, 2020 was the impact of COVID-19. Travel restrictions have negatively impacted the ability to implement software and many customers have put buying decisions on hold.

The following table displays the breakdown of our revenue according to revenue type:

	Three months ended December 31,		Period-Over-Period Change		Q419 Proforma Adj. (Note 1)	Organic Growth	Year ended December 31,		Period-Over-Period Change		FY19 Proforma Adj. (Note 2)	Organic Growth
	2020	2019	$	%	$	%	2020	2019	$	%	$	%
	($ in millions, except percentages)						($ in millions, except percentages)					
Licenses	68	62	6	10%	11	-6%	234	226	7	3%	45	-14%
Professional services	217	188	29	16%	37	-4%	751	673	78	12%	152	-9%
Hardware and other	47	51	(4)	-9%	2	-13%	169	173	(5)	-3%	15	-10%
Maintenance and other recurring	759	655	104	16%	76	4%	2,815	2,417	398	16%	376	1%
	1,091	956	135	14%	126	1%	3,969	3,490	479	14%	587	-3%

$M - Millions of dollars

Due to rounding, certain totals may not foot and certain percentages may not reconcile.

Note 1: Estimated pre-acquisition revenues for the three months ended December 31, 2019 from companies acquired after September 30, 2019. (Obtained from unaudited vendor financial information.)

Note 2: Estimated pre-acquisition revenues for the twelve months ended December 31, 2019 from companies acquired after December 31, 2018. (Obtained from unaudited vendor financial information.)

For comparative purposes the table below shows the quarterly organic growth as compared to the same period in the prior year by revenue type since Q4 2018.

	Quarter Ended								
	Dec. 31 2018	Mar. 31 2019	Jun. 30 2019	Sep. 30 2019	Dec. 31 2019	Mar. 31 2020	Jun. 30 2020	Sep. 30 2020	Dec. 31 2020
Licenses	-3%	-3%	5%	-14%	-10%	-8%	-30%	-10%	-6%
Professional services	1%	-5%	-7%	-8%	-8%	-8%	-17%	-8%	-4%
Hardware and other	4%	-4%	-15%	-2%	-22%	3%	-23%	-7%	-13%
Maintenance and other recurring	2%	1%	2%	1%	2%	0%	-3%	2%	4%
Revenue	**2%**	**-1%**	**-1%**	**-2%**	**-3%**	**-2%**	**-8%**	**-1%**	**1%**

The following table shows the same information adjusting for the impact of foreign exchange movements.

	Quarter Ended								
	Dec. 31 2018	Mar. 31 2019	Jun. 30 2019	Sep. 30 2019	Dec. 31 2019	Mar. 31 2020	Jun. 30 2020	Sep. 30 2020	Dec. 31 2020
Licenses	-1%	1%	8%	-12%	-9%	-7%	-28%	-11%	-8%
Professional services	3%	-1%	-4%	-5%	-7%	-6%	-16%	-10%	-6%
Hardware and other	5%	-1%	-14%	0%	-21%	4%	-22%	-10%	-15%
Maintenance and other recurring	4%	5%	4%	3%	3%	2%	-1%	1%	2%
Revenue	**3%**	**3%**	**2%**	**0%**	**-2%**	**0%**	**-7%**	**-3%**	**-1%**

For fiscal 2019 and earlier periods, we aggregated our business into two distinct segments for financial reporting purposes: (i) the public sector reportable segment, which included business units focused primarily on government and government-related customers, and (ii) the private sector reportable segment, which included business units focused primarily on commercial customers. Following the guidance set out by IFRS 8, Operating Segments ("IFRS 8"), the public sector reportable segment was derived by combining our Volaris, Harris and TSS operating segments, and the private sector reportable segment was derived by combining our Vela, Jonas and Perseus operating segments. While the operating segments in the public sector were comprised of businesses that primarily serve government and government-related customers, they also included businesses that serve commercial customers, and similarly the operating groups in the private sector were comprised of businesses that primarily serve commercial customers but also included businesses that serve government and government-related customers. For the fiscal years ended December 31, 2019 and 2018 approximately 35% and 30% respectively of the revenue in the public sector reportable segment was generated from commercial customers, and 15% and 16% respectively of revenue in the private sector reportable segment was generated from government and government-related customers. Each of our operating segments operate essentially as mini Constellations, conglomerates of small vertical market software companies with similar economic characteristics. Each operating segment CEO is focused on investing capital that generates returns at or above the investment hurdle rates set by CSI's head office (primarily the President) and the Board of Directors, irrespective of whether the acquired business operates primarily in the public or private sector. Accordingly presenting information on a public and private sector basis is no longer meaningful and we now aggregate our six operating segments into one reportable segment, consistent with the objective and basic principles of IFRS 8.

Expenses:

The following table displays the breakdown of our expenses:

	Three months ended December 31,		Period-Over-Period Change		Year ended December 31,		Period-Over-Period Change	
	2020	2019	$	%	2020	2019	$	%
	($ in millions, except percentages)				($ in millions, except percentages)			
Expenses								
Staff	557	481	76	16%	2,050	1,797	253	14%
Hardware	27	33	(6)	-19%	97	101	(4)	-4%
Third party license, maintenance and professional services	93	82	11	13%	330	300	30	10%
Occupancy	9	9	0	4%	35	35	0	1%
Travel, Telecommunications, Supplies & Software and equipment	38	58	(20)	-34%	152	201	(49)	-24%
Professional fees	19	15	4	26%	60	49	11	22%
Other, net	3	19	(16)	-83%	13	73	(60)	-82%
Depreciation	28	27	1	3%	105	92	13	14%
	774	724	49	7%	2,843	2,648	195	7%

Due to rounding, certain totals may not foot and certain percentages may not reconcile.

Overall expenses for the quarter ended December 31, 2020 increased 7%, or $49 million to $774 million, compared to $724 million during the same period in 2019. As a percentage of total revenue, expenses equalled 71% for the quarter ended December 31, 2020 and 76% for the same period in 2019. During the fiscal year ended December 31, 2020, expenses increased 7%, or $195 million to $2,843 million, compared to $2,648 million during the 2019 fiscal year. As a percentage of total revenue, expenses were 72% for the fiscal year ended December 31, 2020 and 76% for the same period in 2019. For the three and twelve months ended December 31, 2020 the change in valuation of the US dollar against most major currencies in which the Company transacts business resulted in an approximate 2% and 0% increase in expenses respectively compared to the comparable periods of 2019.

Staff expense – Staff expenses increased 16% or $76 million for the quarter ended December 31, 2020 and 14% or $253 million for the fiscal year ended December 31, 2020 over the same periods in 2019. The Company has taken appropriate measures to manage staff expense in conjunction with the negative organic growth resulting from COVID-19. Staff expense can be broken down into five key operating departments: Professional Services, Maintenance, Research and Development, Sales and Marketing, and General and Administrative. Included within staff expenses for each of the above five departments are personnel and related costs associated with providing the necessary services. The table below compares the period over period variances.

	Three months ended December 31,		Period-Over-Period Change		Year ended December 31,		Period-Over-Period Change	
	2020	2019	$	%	2020	2019	$	%
	($ in millions, except percentages)				($ in millions, except percentages)			
Professional services	113	103	10	10%	431	385	47	12%
Maintenance	107	97	10	10%	402	371	31	8%
Research and development	154	132	22	17%	579	491	88	18%
Sales and marketing	78	69	10	14%	283	254	29	11%
General and administrative	105	81	24	30%	355	297	58	20%
	557	481	76	16%	2,050	1,797	253	14%

Due to rounding, certain totals may not foot and certain percentages may not reconcile.

The increase in staff expenses for the three and twelve months ended December 31, 2020 was primarily due to the growth in the number of employees compared to the same periods in 2019 primarily due to acquisitions.

Hardware expenses – Hardware expenses decreased 19% or $6 million for the quarter ended December 31, 2020 and decreased 4% or $4 million for the fiscal year ended December 31, 2020 over the same periods in 2019 as compared with the 9% and 3% decrease in hardware and other revenue for the three and twelve month periods ended December 31, 2020 respectively over the comparable periods in 2019. Hardware margins for both the three and twelve months ended December 31, 2020 were 43% as compared to 36% and 42% respectively for the comparable periods in 2019.

Third party license, maintenance and professional services expenses – Third party license, maintenance and professional services expenses increased 13% or $11 million for the quarter ended December 31, 2020 and 10% or $30 million for the fiscal year ended December 31, 2020 over the same periods in 2019. The increase is primarily due to third party license, maintenance and professional services expenses of acquired businesses.

Occupancy expenses – Occupancy expenses decreased 4% or $0.3 million for the quarter ended December 31, 2020 and increased 1% or $0.4 million for the fiscal year ended December 31, 2020 over the same periods in 2019. The increase for the fiscal year is primarily due to the occupancy expenses of acquired businesses.

Travel, Telecommunications, Supplies & Software and equipment expenses – Travel, Telecommunications, Supplies & Software and equipment expenses decreased 34% or $20 million for the quarter ended December 31, 2020 and 24% or $49 million for the fiscal year ended December 31, 2020 over the same periods in 2019. The decrease in these expenses is primarily due to travel restrictions related to COVID-19.

Professional fees – Professional fees increased 26% or $4 million for the quarter ended December 31, 2020 and 22% or $11 million for the fiscal year ended December 31, 2020 over the same periods in 2019. There are no individually material reasons contributing to this variance.

Other, net – Other expenses decreased 83% or $16 million for the quarter ended December 31, 2020 and decreased 82% or $60 million for the fiscal year ended December 31, 2020 over the same periods in 2019. The following table provides a further breakdown of expenses within this category.

	Three months ended December 31,		Period-Over-Period Change		Year ended December 31,		Period-Over-Period Change	
	2020	2019	$	%	2020	2019	$	%
	($ in millions, except percentages)				($ in millions, except percentages)			
Advertising and promotion	10	13	(3)	-21%	38	46	(8)	-17%
Recruitment and training	4	5	(1)	-20%	12	19	(7)	-37%
Bad debt expense	1	1	0	18%	9	4	5	104%
R&D tax credits	(11)	(10)	(1)	15%	(28)	(24)	(4)	16%
Contingent consideration	5	1	3	261%	5	9	(4)	-42%
Government assistance	(11)	-	(11)	NM	(41)	-	(41)	NM
Other expense, net	6	9	(3)	-38%	17	18	(1)	-4%
	3	19	(16)	-83%	13	73	(60)	-82%

NM - Not meaningful

Due to rounding, certain totals may not foot and certain percentages may not reconcile.

The governments of various jurisdictions in which we have operations have approved legislation and taken administrative actions intended to aid businesses that have been adversely impacted by COVID-19, including making grants or credits available to eligible entities to subsidize or offset qualifying expenses, including employee wages, or to lower payroll taxes or required social insurance programs (in certain countries), in each case subject to limits and other specified criteria. During the fiscal year ended December 31, 2020, we determined that we qualify for an estimated aggregate amount of $41 million of grants from various government authorities, including the Canadian Emergency Wage Subsidy (CEWS) announced by the Government of Canada in April 2020, and recognized such amounts as a reduction in expenses during the 2020 fiscal year. We have either submitted, or expect to submit, claims for such grants. As at December 31, 2020, the amount of grants receivable totaled $9 million. We will continue to evaluate all applicable government relief programs and intend to apply for subsequent application periods, if we meet the qualification criteria. There can be no assurance that COVID-19-related governmental assistance to offset our costs will be available in Q1 2021 (or thereafter), and if so, whether we will qualify for or receive any such assistance.

The contingent consideration expense amount recorded for the three months ended December 31, 2020 relates to an increase in anticipated acquisition earnout payment accruals primarily as a result of increases to revenue forecasts for the associated acquisitions. In Q1 2020 a reversal of $13 million was recorded as revenue forecasts were decreased as a result of the COVID-19 pandemic. Revenue forecasts are updated on a quarterly basis and the related anticipated acquisition earnout payment accruals are updated accordingly. There are no individually material reasons contributing to the remaining variances.

Depreciation – Depreciation of property and equipment and right of use assets increased 3% or $1 million for the quarter ended December 31, 2020 and 14% or $13 million for the fiscal year ended December 31, 2020 over the same periods in 2019. The increases are primarily due to the depreciation expense associated with acquired businesses.

Other Income and Expenses:

The following table displays the breakdown of our other income and expenses:

	Three months ended December 31,		Period-Over-Period Change		Year ended December 31,		Period-Over-Period Change	
	2020	2019	$	%	2020	2019	$	%
	($ in millions, except percentages)				($ in millions, except percentages)			
Amortization of intangible assets	110	96	14	14%	403	331	73	22%
Foreign exchange (gain) loss	(3)	(9)	6	-63%	2	11	(10)	-84%
TSS membership liability revaluation charge	10	22	(12)	-55%	65	52	13	25%
Finance and other expense (income)	0	(2)	2	NM	(4)	(4)	1	-16%
Bargain purchase gain	(1)	(10)	8	NM	(2)	(45)	44	-97%
Impairment of intangible and other non-financial assets	1	(0)	1	NM	12	0	12	NM
Finance costs	12	12	(0)	-4%	46	42	5	11%
Income tax expense (recovery)	40	29	10	36%	167	123	44	35%
	169	140	29	21%	690	509	181	36%

NM - Not meaningful

Due to rounding, certain totals may not foot and certain percentages may not reconcile.

Amortization of intangible assets – Amortization of intangible assets increased 14% or $14 million for the quarter ended December 31, 2020 and 22% or $73 million for the fiscal year ended December 31, 2020 over the same periods in 2019. The increase in amortization expense for the three and twelve months ended December 31, 2020 is primarily attributable to an increase in the carrying amount of our intangible asset balance over the twelve-month period ended December 31, 2020 as a result of acquisitions completed during this twelve-month period.

Foreign exchange – Most of our businesses are organized geographically so many of our expenses are incurred in the same currency as our revenues, which mitigates some of our exposure to currency fluctuations. For the three and twelve months ended December 31, 2020, we realized a foreign exchange gain of $3 million and loss of $2 million respectively compared to a gain of $9 million and loss of $11 million for the same periods in 2019. The following table provides a breakdown of these amounts.

	Three months ended December 31,		Period-Over-Period Change		Year ended December 31,		Period-Over-Period Change	
	2020	2019	$	%	2020	2019	$	%
	($ in millions, except percentages)				($ in millions, except percentages)			
Unrealized foreign exchange (gain) loss related to:								
- revaluation of intercompany loans between entities with differing functional currencies (1)	(18)	(16)	(2)	12%	(12)	(7)	(5)	63%
- revaulation of the Company's unsecured subordinated floating rate debentures as a result of the appreciation (depreciation) of the Canadian dollar against the US dollar.	10	4	7	177%	5	10	(5)	-55%
Remaining foreign exchange (gain) loss	4	4	1	25%	9	9	0	5%
	(3)	(9)	6	-63%	2	11	(10)	-84%

NM - Not meaningful

Due to rounding, certain totals may not foot and certain percentages may not reconcile.

(1) Offsetting amounts recorded in other comprehensive income. Net impact to Total comprehensive income for each period is nil.

The remaining foreign exchange gains and losses per the table above are primarily related to the unrealized foreign exchange translation gains and losses of certain non-US dollar denominated working capital balances to US dollars as a result of the depreciation or appreciation of the US dollar.

Total Specific Solutions ("TSS") membership liability revaluation charge – The valuation of the TSS membership liability that was put in place in Q4 2014 increased by approximately 3% or $10 million from Q3 2020, and approximately 29% or $65 million from Q4 2019. The increases are primarily the result of the growth in TSS' reported trailing twelve month maintenance revenue (primarily due to acquisitions). Maintenance revenue and net tangible assets are the two main drivers in the calculation of the liability. The liability recorded on the balance sheet increased by 41% or $90 million over the fiscal year ended December 31, 2020 from $221 million to $311 million as a result of the revaluation charge of $65 million plus a $25 million foreign exchange expense that was recorded through other comprehensive income. The TSS membership liability is denominated in Euros and the Euro appreciated versus the US dollar during the 2020 fiscal year.

Finance and other expense (income) – Finance and other expense (income) for the three and twelve months ended December 31, 2020 was a $0.3 million expense and income of $4 million respectively, compared to income of $2 million and income of $4 million respectively for the same periods in 2019. Interest earned on cash balances for the three and twelve months ended December 31, 2020 was $0.5 million and $1 million respectively, compared to $0.02 million and $3 million respectively for the same periods in 2019.

Bargain purchase gain – Bargain purchase gain adjustments totalling $1 million and $2 million were recorded in the three and twelve month periods ended December 31, 2020 respectively relating to multiple acquisitions made during 2020 compared to $10 million and $45 million for the same periods in 2019. A bargain purchase gain adjustment totalling $45 million was recorded in the twelve month period ended December 31, 2019 relating to multiple acquisitions made during 2018 and 2019. In Q4 2018 the Company acquired a business that was undergoing an extensive restructuring. The seller of that business capitalized the balance sheet on closing with cash in the amount of €47 million ($53 million) that was to be utilized to fund expected losses generated by the business, contributing to a bargain purchase gain of $63 million being recorded in Q4 2018. Revisions to the restructuring cost expectations resulted in a further bargain purchase gain of $4 million being recorded in Q1 2019. An additional payment from the seller relating to revisions to the acquired net tangible asset balance resulted in a further $7 million bargain purchase gain being recorded in Q3 2019. Bargain purchase gain adjustments totalling $6 million and $30 million were recorded in the three and twelve month periods ended December 31, 2019 respectively relating to an acquisition made in Q1 2019 where the seller will continue as a minority partner in the acquired business. The seller contributed $17 million into the partnership.

Impairment of intangible and other non-financial assets – An impairment expense of $1 million was recorded in the three months ended December 31, 2020 relating to three businesses acquired in 2018 and 2019. An additional $11 million was recorded in the nine month period ended September 30, 2020, relating to ten businesses primarily acquired during 2018 and 2019. Primarily due to the near-term impact, as well as the yet uncertain but probable longer-term impact of the COVID-19 pandemic, the forecasted cash flows for these businesses have declined significantly from the forecasted cash flows at the time of acquisition. See "Risks and Uncertainties". There was no similar expense recorded for the same period in 2019.

Finance costs – Finance costs for the quarter ended December 31, 2020 decreased $0.5 million to $12 million, compared to $12 million for the same period in 2019. During the fiscal year ended December 31, 2020, finance costs increased $5 million to $46 million, from $42 million during the 2019 fiscal year. There are no individually material reasons contributing to the variances.

Income taxes – We operate globally and we calculate our tax provision in each of the jurisdictions in which we conduct business. Our effective tax rate on a consolidated basis is, therefore, affected by the realization and anticipated relative profitability of our operations in those various jurisdictions, as well as different tax rates that apply and our ability to utilize tax losses and other credits. For the quarter ended December 31, 2020, income tax expense increased $10 million to $40 million compared to $29 million for the same period in 2019. During the fiscal year ended December 31, 2020, income tax expense increased $44 million to $167 million compared to $123 million in the 2019 fiscal year. Current tax expense has historically approximated our cash tax rate however the quarterly expense can sometimes fall outside of the annual range due to out of period adjustments. Current tax expense reflects gross taxes before the application of R&D tax credits which are classified as part of "other, net" expenses in the statement of income.

Constellation is subject to tax audits in the countries in which the Company carries on business globally. These tax audits could result in additional tax expense in future periods relating to historical filings. Reviews by tax authorities generally focus on, but are not limited to, the validity of the Company's inter-company transactions, including financing and transfer pricing policies which generally involve subjective areas of taxation and a significant degree of judgment. If any of these tax authorities are successful with their challenges, the Company's income tax expense may be adversely affected and Constellation could also be subject to interest and penalty charges.

Net Income and Earnings per Share:

Net income for the quarter ended December 31, 2020 was $149 million compared to net income of $92 million for the same period in 2019. On a per share basis, this translated into a net income per diluted share of $7.02 in the quarter ended December 31, 2020 compared to net income per diluted share of $4.34 for the same period in 2019. For the fiscal year ended December 31, 2020, net income was $436 million or $20.59 per diluted share compared to $333 million or $15.73 per diluted share for the 2019 fiscal year. There was no change in the number of shares outstanding.

Net cash flows from operating activities ("CFO"):

For the quarter ended December 31, 2020, CFO increased $100 million to $355 million compared to $255 million for the same period in 2019 representing an increase of 39%. For the fiscal year ended December 31, 2020, CFO increased $419 million to $1,186 million compared to $767 million for the 2019 fiscal year representing an increase of 55%.

Free cash flow available to shareholders ("FCFA2S"):

For the quarter ended December 31, 2020, FCFA2S increased $113 million to $307 million compared to $193 million for the same period in 2019. For the fiscal year ended December 31, 2020, FCFA2S increased $399 million to $989 million compared to $590 million for the 2019 fiscal year representing an increase of 68%.

Cash generated from working capital improvements was approximately $145 million more in the fiscal year ended December 31, 2020 compared to the fiscal year ended December 31, 2019. Material improvements in working capital were experienced in the Company's public transit vertical as well as the two companies associated with the bargain purchase gain described above.

The following table reconciles FCFA2S to net cash flows from operating activities:

	Three months ended December 31, 2020	Three months ended December 31, 2019	Year ended December 31, 2020	Year ended December 31, 2019
	($ in millions, except percentages)		($ in millions, except percentages)	
Net cash flows from operating activities	355	255	1,186	767
Adjusted for:				
Interest paid on lease obligations	(2)	(2)	(8)	(7)
Interest paid on other facilities	(10)	(8)	(32)	(31)
Credit facility transaction costs	(1)	(2)	(2)	(3)
Payments of lease obligations	(19)	(17)	(66)	(51)
TSS membership liability revaluation charge	(10)	(22)	(65)	(52)
Property and equipment purchased	(6)	(10)	(25)	(34)
Interest and dividends received	0	0	1	3
Free cash flow available to shareholders	307	193	989	590

Due to rounding, certain totals may not foot.

Quarterly Results

	Quarter Ended								
	Dec. 31 2018	Mar. 31 2019	Jun. 30 2019	Sep. 30 2019	Dec. 31 2019	Mar. 31 2020	Jun. 30 2020	Sep. 30 2020	Dec. 31 2020
Revenue	831	819	846	870	956	953	922	1,003	1,091
Net income	179	87	73	82	92	83	83	122	149
CFO	208	284	50	177	255	361	237	234	355
FCFA2S	178	250	12	134	193	311	190	181	307
Net income per share									
Basic & diluted	8.46	4.09	3.45	3.85	4.34	3.91	3.90	5.78	7.02
CFO per share									
Basic & diluted	9.84	13.40	2.36	8.37	12.02	17.01	11.17	11.05	16.73
FCFA2S per share									
Basic & diluted	8.39	11.81	0.58	6.35	9.12	14.66	8.99	8.56	14.47

We experience seasonality in our operating results in that CFO and FCFA2S in the first quarter of every year is typically the highest and CFO and FCFA2S in the second quarter of every year is the lowest. The key driver impacting this seasonality is the timing of annual maintenance contract renewals. Our quarterly results may also fluctuate as a result of the various acquisitions which may be completed by the Company in any given quarter. We may experience variations in our net income on a quarterly basis depending upon the timing of certain expenses or gains, which may include changes in provisions, acquired contract liabilities, foreign exchange gains and losses, bargain purchase gains, and gains or losses on the sale of financial and other assets.

Supplemental Financial Information

We are no longer including the non-IFRS and IFRS tables that were historically included in the annual letter to shareholders. However, the Average Invested Capital figure will be provided for purposes of calculating a return on invested capital metric. It will be left to the discretion of shareholders to determine what profitability metric to include in the numerator of such a calculation. The Average Invested Capital for 2020 was $2,826 million.

"Average Invested Capital" represents the average equity capital of Constellation, and is based on the Company's estimate of the amount of money that its common shareholders had invested in Constellation. Subsequent to that estimate, each period the Company has kept a running tally, adding a proxy for cash earnings, subtracting any dividends, adding any amounts related to share issuances and making some minor adjustments, including adjustments relating to our use of certain incentive programs and the amortization of impaired intangibles. The Company believes that Average Invested Capital is a useful measure as it approximates the retained earnings of the Company prior to taking into consideration amortization of intangible assets, deferred income taxes, and certain other non-cash expenses (income) incurred or recognized by the Company from time to time.

Spin-Out of Topicus.com Inc.

Constellation (TSX:CSU) and Topicus.com Inc. ("Topicus.com") (TSXV:TOI) announced on January 5, 2021 that Constellation, acting through its Total Specific Solutions ("TSS") operating group and its subsidiary TPCS Holding B.V., completed the purchase of 100% of the shares of Topicus.com B.V. ("Topicus"), a Netherlands-based diversified vertical market software provider, from IJssel B.V. and that in connection with the closing of the acquisition, TSS has been spun out of Constellation and now operates, together with Topicus, as a separate public company, Topicus.com Inc. (collectively, the "Spin-Out Transactions").

In connection with the completion of the Spin-Out Transactions, on January 4, 2021, all of Constellation's common shareholders of record on December 28, 2020 received, by way of a dividend-in-kind, 1.859817814 subordinate voting shares of Topicus.com (the "Spin-Out Shares") for each common share of Constellation held.

Constellation's equity interest in TSS prior to the Spin-Out Transactions was 66.7%. Constellation's equity interest in Topicus.com after completion of the Spin-Out Transactions on a fully diluted basis is approximately 30.4%. In addition, Constellation as the holder of a super voting share is entitled to that number of votes that equals 50.1% of the aggregate number of votes attached to all of the outstanding voting shares at such time. As a result of the super voting share Constellation will consolidate Topicus.com. (See "Subsequent Events" below for additional details.)

The tables below provide certain supplemental balance sheet, statement of income, and net operating cash flow information of TSS for the year ended December 31, 2020. TSS is not considered a reportable operating segment of Constellation, however, management has chosen to provide certain supplemental financial information to provide greater clarity into the operating performance and cash flow from operations of TSS considering Constellation's equity ownership.

Selected Balance Sheet Information
As at December 31, 2020

(Unaudited)	Constellation Software Inc. (excluding TSS)	TSS	Consolidated
Cash	690	68	758
Bank debt	161	66	227

Statement of Income
For the year-ended December 31, 2020
(Excluding intercompany activity)

(Unaudited)	Constellation Software Inc. (excluding TSS)	TSS	Consolidated
Revenue	**3,409**	**560**	**3,969**
Expenses	2,440	403	2,843
Amortization of intangible assets	346	58	403
Foreign exchange (gain) loss	2	(0)	2
TSS membership liability revaluation charge	65	0	65
Finance and other income	(3)	(0)	(4)
Bargain purchase gain	(2)	(0)	(2)
Impairment of intangible and other non-financial assets	12	-	12
Finance costs	39	8	46
Income before income taxes	511	92	603
Income tax expense (recovery)			
Current income tax expense (recovery)	188	33	221
Deferred income tax expense (recovery)	(46)	(8)	(55)
Income tax expense (recovery)	142	25	166
Net income	**369**	**67**	**436**
Net cash flows from operating activities	**1,014**	**172**	**1,186**

Foreign Exchange Adjusted Organic Revenue Growth
For the year-ended December 31, 2020
(Excluding intercompany activity)

	Constellation Software Inc. (excluding TSS)	TSS	Consolidated
Licenses	-14%	-12%	-14%
Professional services	-10%	-7%	-9%
Hardware and other	-12%	5%	-11%
Maintenance and other recurring	0%	6%	1%
Revenue	-3%	2%	-3%

Liquidity

Our net cash position (cash less bank indebtedness excluding capitalized transaction costs) increased by $489 million to $525 million in the fiscal year ended December 31, 2020 resulting from cash flows from operations exceeding the net capital deployed on acquisitions plus dividends. Cash increased by $442 million to $758 million at December 31, 2020 compared to $316 million at December 31, 2019 and bank indebtedness decreased by $47 million to $233 million at December 31, 2020 compared to $280 million at December 31, 2019.

Total assets increased $888 million, from $3,488 million at December 31, 2019 to $4,375 million at December 31, 2020. The increase is primarily due to the $442 million increase in cash noted above and a $328 million increase in intangible assets. At December 31, 2020 six subsidiaries holding cash totalling $101 million maintained debt facilities, which facilities are without recourse to Constellation. As explained in the "Capital Resources and Commitments" section below, there are limitations on the ability of these subsidiaries to distribute funds to Constellation.

Current liabilities increased $308 million, from $1,732 million at December 31, 2019 to $2,040 million at December 31, 2020. The increase is primarily due to an increase in deferred revenue of $174 million mainly due to acquisitions made since December 31, 2019 and the timing of maintenance and other billings versus performance and delivery under those customer arrangements, an increase in accounts payable and accrued liabilities of $137 million and an increase in taxes payable of $43 million, offset by a decrease in bank indebtedness of $92 million.

Net Changes in Cash Flows ($ in millions)	**Year ended December 31, 2020**	**Year ended December 31, 2019**
Net cash provided by operating activities	1,186	767
Net cash from (used in) financing activities	(247)	(496)
Cash used in the acquisition of businesses	(582)	(622)
Cash obtained with acquired businesses	97	118
Net cash from (used in) other investing activities	(26)	(39)
Net cash from (used in) investing activities	(512)	(544)
Effect of foreign currency	15	1
Net increase (decrease) in cash and cash equivalents	**442**	**(273)**

The net cash flows from operating activities were $1,186 million for the fiscal year ended December 31, 2020. The $1,186 million provided by operating activities resulted from $436 million in net income plus $795 million of non-cash adjustments to net income and $117 million of cash from non-cash operating working capital, offset by $162 million in taxes paid.

The net cash flows used in financing activities for the fiscal year ended December 31, 2020 were $247 million, which is mainly a result of dividends paid of $85 million, a net decrease in bank indebtedness of $54 million, lease obligation payments of $66 million, and interest paid on bank indebtedness and the Company's unsecured subordinated floating rate debentures in the period of $32 million.

The net cash flows used in investing activities in the fiscal year ended December 31, 2020 were $512 million. The cash used in investing activities was primarily due to acquisitions for an aggregate of $582 million (including payments for holdbacks relating to prior acquisitions) offset by $97 million of acquired cash.

We believe we have sufficient cash and available credit capacity to continue to operate for the foreseeable future. Generally our VMS businesses operate with negative working capital as a result of the collection of maintenance payments and other revenues in advance of the performance of the related services. As such, management anticipates that it can continue to grow the business organically without any additional funding. If we continue to acquire VMS businesses we may need additional external funding depending upon the size and timing of the potential acquisitions.

Capital Resources and Commitments

CSI Facility

On December 13, 2019, Constellation completed an amendment and restatement of its revolving credit facility agreement (the "CSI Facility"), with a syndicate of Canadian chartered banks, U.S. banks, and a Japanese bank in the amount of $700 million, extending its maturity date to December 2024. The CSI Facility bears a variable interest rate with no fixed repayments required over the term to maturity. Interest rates are calculated at standard U.S. and Canadian reference rates plus interest rate spreads based on a leverage table. The CSI Facility is currently collateralized by the majority of the Company's assets including the assets of certain material subsidiaries. The CSI Facility contains standard events of default which if not remedied within a cure period would trigger the repayment of any outstanding balance. As at December 31, 2020, $nil million had been drawn from this credit facility, and letters of credit totaling $19 million were issued, which limits the borrowing capacity on a dollar-for-dollar basis.

Debt without recourse to CSI

Certain of CSI's subsidiaries have entered into term debt facilities and revolving credit facilities with various financial institutions. CSI does not guarantee the debt of its subsidiaries, nor are there any cross-guarantees between subsidiaries. The credit facilities are collateralized by substantially all of the assets of the borrowing entity and its subsidiaries. The credit facilities typically bear interest at a rate calculated using an interest rate index plus a margin. The financing arrangements for each subsidiary typically contain certain restrictive covenants, which may include limitations or prohibitions on additional indebtedness, payment of cash dividends, redemption of capital, capital spending, making of acquisitions and sales of assets. In addition, certain financial covenants must be met by those subsidiaries that have outstanding debt.

Debt without recourse to CSI comprises the following ($ in millions):

	Revolving Credit Facilities	Term Debt Facilities	Total
Principal outstanding at December 31, 2020 (and equal to fair value)	$ 25	$ 209	$ 233
Deduct: Carrying value of transaction costs included in debt balance	(1)	(5)	(6)
Carrying value at December 31, 2020	24	203	227
Current portion	24	4	28
Non-current portion	-	199	199

Debentures

On October 1, 2014 and November 19, 2014, the Company issued unsecured subordinated debentures (the "Debentures") with a total principal value of C$96 million for total proceeds of C$91 million. The proceeds were used by the Company to pay down $81 million of outstanding bank indebtedness.

On September 30, 2015, the Company issued an additional tranche of Debentures with a total principal value of C$186 million for total proceeds of C$214 million. The proceeds were used by the Company to pay down $130 million of outstanding bank indebtedness. The September 30, 2015 issuance formed a single series with the outstanding C$96 million aggregate principal amount of Debentures, Series 1 of the Company. The Debentures have a maturity date of March 31, 2040.

TSS Membership Liability

On December 23, 2014, in accordance with the terms of the purchase and sale agreement for the TSS acquisition, and on the basis of the term sheets attached thereto, Constellation and the sellers of TSS along with members of TSS' executive management team (collectively, the "minority owners") entered into a Members Agreement pursuant to which the minority owners acquired 33.29% of the voting interests in Constellation Software Netherlands Holding Cooperatief U.A. ("CNH"), a subsidiary of Constellation and the indirect owner of 100% of TSS. Proceeds from this transaction in the amount of $49 million (€39 million) were utilized to repay, in part, outstanding bank indebtedness of Constellation. In accordance with IFRS, 100% of the financial results for TSS are included in the consolidated financial results of the Company.

Each of the minority owners may, at any time, exercise a put option to sell all or a portion of their interests in CNH back to Constellation for an amount calculated in accordance with a valuation methodology described within the Members Agreement. Accordingly, the Company classified the proceeds from the Members Agreement as a liability. The main valuation driver in such calculation is the maintenance and other recurring revenue of CNH. Upon the exercise of a put option, Constellation would be obligated to redeem up to 33.33% of the minority owners' interests put, no later than 30 business days from the date notice is received (classified as a current liability), and up to 33.33% on each of the first and second anniversary of the date the first redemption payment is made.

The seller of TSS also has an option available to it to sell approximately 68% of its interests in CNH, for an amount calculated in accordance with a valuation methodology described within the Members Agreement, in the event that Robin Van Poelje, TSS' CEO, is no longer employed by TSS. The approximately 32% remaining interest can be sold via the put option described above.

In the event of a change of control in Constellation, the minority owners would have the option to sell 100% of their interests in CNH for an amount calculated in accordance with a valuation methodology described within the Members Agreement. Constellation would be obligated to remit payment in respect thereof no later than 30 business days from the date notice is given by the minority owners.

Commencing at any time after December 31, 2023, Constellation may exercise a call option to purchase all of the minority owners' interests in CNH, for an amount calculated in accordance with a valuation methodology described within the Members Agreement. Upon exercise of the call option, the full purchase price will be paid within 30 business days of the notice date, following which the minority owners' membership in CNH will be terminated. There is a valuation premium if the call option is exercised versus the put option.

If any of TSS' executive management team that participate in the Members Agreement are terminated for urgent cause as defined in Section 7:678 of the Dutch Civil Code, Constellation shall have the right to purchase all of the interests beneficially owned by the terminated executive for an amount calculated in accordance with the valuation methodology described within the Members Agreement. The full purchase price will be paid within 30 business days from the date notice is given, following which the terminated executive's membership in CNH will be terminated. An option does exist for the terminated executive to elect to be paid in annual installments of 33.33%

of his interests in CNH over a 3 year period. The valuation of the interests being purchased will be calculated at each annual payment date.

<u>Other commitments</u>

Commitments include operating leases for office equipment and facilities, letters of credit and performance bonds issued on our behalf by financial institutions in connection with facility leases and contracts with public sector customers. Also, occasionally we structure some of our acquisitions with contingent consideration based on the future performance of the acquired business. The fair value of contingent consideration recorded in our statement of financial position was $88 million at December 31, 2020. Aside from the aforementioned, we do not have any other business arrangements, derivative financial instruments, or any equity interests in non-consolidated entities that would have a significant effect on our assets and liabilities as at December 31, 2020.

($ in millions)

	Total	< 1 yr	1-5 yrs	> 5 yrs
Lease obligations	298	77	172	50
Holdbacks	121	85	37	-
TSS membership liability	311	113	198	-
Debentures	222	-	-	222
CSI facility	-	-	-	-
Debt without recourse to Constellation Software Inc.	233	29	197	7
Total outstanding commitments	1,185	303	604	278

The TSS membership liability commitment assumes that the minority owners have exercised their put option to sell 100% of their interests back to Constellation. This option however has not been exercised as at February 12, 2021. See the "Use of estimates and judgements" section of the Company's 2020 Annual Consolidated Financial Statements for a discussion on the valuation methodology utilized.

Foreign Currency Exposure

We operate internationally and have foreign currency risks related to our revenue, operating expenses, assets and liabilities denominated in currencies other than the U.S. dollar. Consequently, we believe movements in the foreign currencies in which we transact will impact future revenue and net income. The impact to organic revenue growth for the three and twelve months ended December 31, 2020 was approximately positive 2% and 0% respectively. We cannot predict the effect of foreign exchange gains or losses in the future; however, if significant foreign exchange losses are experienced, they could have a material adverse effect on our business, revenues, results of operations, and financial condition. The Company enters into forward foreign exchange contracts from time to time with the objective of mitigating volatility in profit or loss in respect of financial liabilities. In entering into these forward exchange contracts, the Company is exposed to the credit risk of the counterparties to such contracts and the possibility that the counterparties will default on their payment obligations under these contracts. However, given that the counterparties are Schedule 1 banks or affiliates thereof, the Company believes these risks are not material. During the fiscal year ended December 31, 2020, the Company did not purchase any contracts of this nature.

The following table provides an approximate breakdown of our revenue and expenses by currency, expressed as a percentage of total revenue and expenses, as applicable, for the three and twelve months ended December 31, 2020:

	Three Months Ended December 31, 2020		Year Ended December 31, 2020	
Currencies	% of Revenue	% of Expenses	% of Revenue	% of Expenses
USD	48%	43%	50%	46%
CAD	7%	10%	7%	10%
GBP	8%	9%	8%	8%
EURO	23%	24%	22%	22%
CHF	1%	2%	1%	3%
Others	12%	12%	11%	11%
Total	100%	100%	100%	100%

Due to rounding, certain totals may not foot.

Off-Balance Sheet Arrangements

As a general practice, we have not entered into off-balance sheet financing arrangements. Except for insignificant and short-term operating leases and letters of credit, all of our liabilities and commitments are reflected as part of our statement of financial position.

Proposed Transactions

We seek potential acquisition targets on an ongoing basis and may complete several acquisitions in any given fiscal year.

See "Spin-Out of Topicus.com Inc." above.

Critical Accounting Estimates

General

The preparation of our consolidated financial statements requires management to make estimates and assumptions that affect the reported amounts of assets, liabilities, revenue and expenses, and related disclosure of contingent assets and liabilities. Our estimates are based on historical experience and on various other assumptions that are believed to be reasonable under the circumstances. Our ongoing evaluation of these estimates forms the basis for making judgments about the carrying values of assets and liabilities and the reported amount of revenues and expenses, in cases where they are not readily ascertainable from other sources. Actual amounts may differ from these estimates under different assumptions or conditions.

Our significant accounting policies are fully described in Note 3 to our annual consolidated financial statements which are available on SEDAR (www.sedar.com). Certain accounting policies are particularly important to the reporting of our financial position and results of operations, and require the application of significant judgment by our management. An accounting policy is deemed to be critical if it requires an accounting estimate to be made based on assumptions about matters that are highly uncertain at the time the estimate is made, and if different, estimates that reasonably could have been used, or changes in the accounting estimates that are reasonably likely to occur periodically, could have a material impact on the financial statements. Management believes the following critical accounting policies reflect the more significant estimates and assumptions used in the preparation of our consolidated financial statements. We believe that there have been no significant changes in our critical accounting estimates for the years presented in our consolidated financial statements.

Revenue Recognition

Revenue represents the amount the Company expects to receive for products and services in its contracts with customers, net of discounts and sales taxes. The Company reports revenue under four revenue categories being, License, Hardware and other, Professional services, and Maintenance and other recurring revenue. Software license revenue is comprised of non-recurring license fees charged for the use of software products licensed under multiple-year or perpetual arrangements. Professional service revenue consists of fees charged for implementation services, custom programming, product training and consulting. Hardware and other revenue includes the resale of third party hardware as part of customized solutions, as well as sales of hardware assembled internally and the reimbursement of travel costs. Maintenance and other recurring revenue primarily consists of fees charged for customer support on software products post-delivery and also includes recurring fees derived from combined software/support contracts, transaction revenues, managed services, and hosted products.

Contracts with multiple products or services

Typically, the Company enters into contracts that contain multiple products and services such as software licenses, hosted software-as-a-service, maintenance, professional services, and hardware. The Company evaluates these arrangements to determine the appropriate unit of accounting (performance obligation) for revenue recognition purposes based on whether the product or service is distinct from some or all of the other products or services in the arrangement. A product or service is distinct if the customer can benefit from it on its own or together with other readily available resources and Constellation's promise to transfer the good or service is separately identifiable from other promises in the contractual arrangement with the customer. Non-distinct products and services are combined with other goods or services until they are distinct as a bundle and therefore form a single performance obligation.

Where a contract consists of more than one performance obligation, revenue is allocated to each based on their estimated standalone selling price.

Nature of products and services

The Company sells on-premise software licenses on both a perpetual and specified-term basis. Revenue from the license of distinct software is recognized at the time that both the right-to-use the software has commenced and the software has been made available to the customer. Certain of the Company's contracts with customers contain provisions that require the customer to renew optional support and maintenance in order to maintain the active right to use a perpetual or term license. The renewal payments after the initial bundled support and maintenance term in these cases apply to both the continued right-to-use the license and the support and maintenance renewal. Where the fees payable for the initial term are incremental to the fees for the renewal terms, the excess is treated as a prepayment for expected renewals and allocated (amortized) evenly over the expected customer renewals, up to the estimated life of the software that is typically 4-6 years.

Revenue from the license of software that involves complex implementation or customization that is not distinct, and/or includes sales of hardware that is not distinct, is recognized as a combined performance obligation using the percentage-of-completion method based primarily on labour hours. The percentage-of-completion method based on labour hours requires the Company to make significant judgments to determine the estimated hours to completion which affects the timing of revenue recognized.

A portion of the Company's sales, categorized as hardware and other revenue, are accounted for as product revenue. Product revenue is recognized when control of the product has transferred under the terms of an enforceable contract.

Revenue related to the customer reimbursement of travel related expenses incurred during a project implementation where the Company is the principal in the arrangement is included in the hardware and other revenue category. Revenue is recognized as costs are incurred which is consistent with the period in which the costs are invoiced. Reimbursable travel expenses incurred for which an invoice has not been issued, are recorded as part of unbilled revenue on the statement of financial position.

Maintenance and other recurring revenue primarily consists of fees charged for customer support on software products post-delivery and also includes, to a lesser extent, recurring fees derived from software licenses that are not distinct from maintenance, transaction revenues, managed services, and hosted products.

Revenue from software-as-a-service (SaaS) arrangements, which allows customers to use hosted software over a term without taking possession of the software, are provided on a subscription basis. Revenue from the SaaS subscription, which includes the hosted software and maintenance is recognized rateably over the term of the subscription. Significant incremental payments for SaaS in an initial term are recognized rateably over the expected renewal periods, up to the estimated life of the software.

Professional services revenue including installation, implementation, training and customization of software is recognized by the stage of completion of the performance obligation determined using the percentage of completion method noted above or as such services are performed as appropriate in the circumstances. The revenue and profit of fixed price contracts is recognized on a percentage of completion basis when the outcome of a contract can be estimated reliably. When the outcome of the contract cannot be estimated reliably but the Company expects to recover its costs, the amount of expected costs is treated as variable consideration and the transaction price is updated as more information becomes known.

The timing of revenue recognition often differs from contract payment schedules, resulting in revenue that has been earned but not billed. These amounts are included in unbilled revenue. Amounts billed in accordance with customer contracts, but not yet earned, are recorded and presented as part of deferred revenue.

Valuation of Identifiable Goodwill and Other Intangible Assets

Acquisitions have been accounted for using the acquisition method required by IFRS 3. Goodwill arising on acquisitions is measured as the fair value of the consideration transferred including the recognized amount of any non-controlling interest in the acquiree, if any, less the net recognized amount of the estimated fair value of identifiable assets acquired and liabilities assumed (subject to certain exemptions to fair value measurement principles such as deferred tax assets or liabilities), all measured as of the acquisition date. When the excess of the consideration transferred less the assets and liabilities acquired is negative, a bargain purchase gain is recognized immediately in profit or loss. Transaction costs that the Company incurs in connection with a business combination are expensed as incurred.

We use the income approach to value acquired technology and customer related intangible assets, which are the two material intangible asset categories reported in our financial statements.

The income approach is a valuation technique that calculates the fair value of an intangible asset based on the cash flows that the asset can be expected to generate over its remaining useful life. We utilize the discounted cash flow ("DCF") methodology which is a form of the income approach that begins with a forecast of the annual cash flows a market participant would expect the subject intangible asset to generate over a discrete projection period. The forecasted cash flows for each of the years in the discrete projection period are then converted to their present value equivalent using a rate of return appropriate for the risk of achieving the intangible assets' projected cash flows, again, from a market participant perspective. The present value of the forecasted cash flows are then added to the present value of the residual value of the intangible asset (if any) at the end of the discrete projection period to arrive at a conclusion with respect to the estimated fair value of the subject intangible asset.

Specifically, we rely on the relief-from-royalty method to value the acquired technology and the multiple-period excess earnings method ("MEEM") to value customer relationship assets.

The underlying premise of the relief-from-royalty method is that the fair value of the technology is equal to the costs savings (or the "royalty avoided") resulting from the ownership of the asset by the avoidance of paying royalties to license the use of the technology from another owner. Accordingly the income forecast reflects an estimate of a fair royalty that a licensee would pay, on a percentage of revenue basis, to obtain a license to utilize the technology.

The MEEM method isolates the cash flows attributable to the subject asset by utilizing a forecast of expected cash flows less the returns attributable to other enabling assets, both tangible and intangible.

Goodwill is initially recorded when the purchase price paid for an acquisition exceeds the fair value assigned to the net identifiable tangible and intangible assets acquired. Goodwill is not amortized but rather it is periodically assessed for impairment.

After initial recognition, goodwill is measured at cost less any accumulated impairment losses, with the carrying value being reviewed for impairment at least annually and whenever events or changes in circumstances indicate that the carrying value may be impaired. We perform an annual review in the fourth quarter of each fiscal year, or more frequently if indicators of potential impairment exist, to determine if the recorded goodwill is impaired. In respect of equity accounted investees, the carrying amount of goodwill is included in the carrying amount of the investment, and an impairment loss on such an investment is not allocated to any asset, including goodwill, that forms part of the carrying amount of the equity accounted investee. No such losses have been recognized during the year.

The impairment test methodology is based on a comparison between the higher of fair value less costs to sell and value-in-use of each of the Company's cash generating units ("CGU") and the net asset carrying values (including goodwill). Within the Company's reporting structure, business units generally reflect the CGU and are one level below the six operating segments (Volaris, Harris, Total Specific Solutions, Jonas, Perseus, and Vela Operating Groups). In determining the recoverable amount, the Company applies an estimated market valuation multiple to the business unit's most recent annual recurring revenues, which are generally derived from post-contract customer support revenues, transactional revenues, and hosted products revenues. Valuation multiples applied by the Company for this purpose reflect current market conditions specific to the business unit and are assessed for reasonability by comparison to the Company's current and past acquisition experience involving ranges of revenue-based multiples required to acquire representative software companies and the Company's overall revenue based-trading multiple. In addition, in certain instances, the recoverable amount is determined using a value-in-use approach which follows the same valuation process that is undertaken for the Company's business acquisitions. An impairment is recognized if the carrying amount of a CGU exceeds its estimated recoverable amount. The recoverable amount of goodwill is estimated annually on December 31 of each year or whenever events or changes in circumstances indicate that the carrying value may be impaired.

We also review the carrying value of amortizable intangible assets for impairment whenever events and circumstances indicate that the carrying value of an asset may not be recoverable from the estimated future cash flows expected to result from its use and eventual disposition. Any change in estimate which causes the undiscounted expected future cash flows to be less than the carrying value, would result in an impairment loss being recognized equal to the amount by which the carrying value of the asset exceeds the fair value of the asset.

TSS Membership Liability

Commencing any time after December 31, 2014, each of the minority owners may exercise a put option to sell all or a portion of their interests in CNH back to Constellation for an amount calculated in accordance with a valuation methodology described within the Members Agreement. Accordingly, the Company classified the proceeds from the membership agreement as a liability. The main valuation driver in such calculation is the maintenance and other recurring revenue of CNH. Upon the exercise of a put option, Constellation would be obligated to redeem up to 33.33% of the minority owners' interests put, no later than 30 business days from the date notice is received, and up to 33.33% on each of the first and second anniversary of the date the first redemption payment is made.

In determining the valuation of the liability at December 31, 2020 we assumed the minority owners exercised their put option on December 31, 2020, and redeemed 33.33% of their interests on exercise, and will redeem 33.33% on each of the first and second anniversary dates. Maintenance and recurring revenue of CNH for the fiscal year ended December 31, 2020 was used as the basis for valuing the interests at each redemption date. A similar approach will be utilized to value any interests that have not been put or called at the end of each subsequent reporting period. However, the actual maintenance and recurring revenue of CNH for the trailing twelve months from the date of the related reporting period end will be utilized in the calculation. Any increase or decrease in the value of the membership liability will be recorded as an expense or income respectively in the Consolidated Statements of Income for the period.

Accounting for Income Taxes

Significant management judgment is required in determining our provision for income taxes, our income tax assets and liabilities, and any valuation allowance recorded against our net income tax assets. We operate in multiple geographic jurisdictions, and to the extent that we have profits in each jurisdiction, these profits are taxed pursuant to the tax laws of their jurisdiction. Our effective tax rate may be affected by changes in, or interpretations of, tax laws in any given jurisdiction, the level of profitability, utilization of net operating losses and tax credit carry forwards, changes in geographical mix of income and expense, and changes in management's assessment of matters, such as the ability to realize future tax assets. As a result of these considerations, we must estimate our income taxes in each of the jurisdictions in which we operate on a quarterly basis. This process involves estimating our actual current tax exposures, together with assessing temporary differences resulting from differing treatment of items for tax and accounting purposes. These differences result in future tax assets and liabilities, which are included in our consolidated balance sheet.

Current tax is the expected taxes payable or receivable on the taxable income or loss for the period, using tax rates enacted or substantively enacted at the reporting date, and any adjustment to taxes payable in respect of previous years.

Deferred tax is recognized in respect of temporary differences between the carrying amounts of assets and liabilities for financial reporting purposes and the amounts used for taxation purposes. Deferred tax is not recognized for temporary differences relating to investments in subsidiaries to the extent that it is probable that they will not reverse in the foreseeable future. In addition, deferred tax is not recognized for taxable temporary differences arising on the initial recognition of goodwill.

Deferred tax is measured at 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 by the reporting date. Deferred tax assets and liabilities are offset if there is a legally enforceable right to offset current tax liabilities and assets, and they relate to income taxes levied by the same tax authority on the same taxable entity, or on different tax entities, but we intend to settle current tax liabilities and assets on a net basis or their tax assets and liabilities will be realized simultaneously.

A deferred tax asset is recognized for unused tax losses, tax credits, difference in tax bases in the purchaser's tax jurisdiction and its cost as reported in the consolidated financial statements as a result of an intra-group transfer of assets and deductible temporary differences, to the extent that it is probable that future taxable profits will be available against which they can be utilized. Deferred 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.

We are subject to income tax audits by various authorities in respect of prior periods that could result in additional tax expense in future periods. While the outcome of current outstanding actions and claims remains uncertain, it is expected that they will be resolved without a material impact to our financial position. However, there can be no assurances as to the final resolution of these matters and, if the final outcome is adverse to us, the amounts we will be required to pay and the loss of certain future tax deductions could be material to our financial statements.

Accounts Receivable

We evaluate the collectability of our trade receivables at both a specific and collective level. All individually significant receivables are assessed for specific impairment. All individually significant receivables found not to be specifically impaired, together with receivables that are not individually significant are collectively assessed for impairment by grouping together receivables with similar risk characteristics.

Work In Progress

For revenue arrangements that are accounted for under the percentage of completion method as well as other arrangements and contracts which limit our ability to invoice at certain milestones that do not match the timing of the actual provision of the services, we record such revenue and the related unbilled receivable in work in process. Similar to accounts receivable, we constantly have to evaluate our ability to bill and subsequently collect any amounts contained in the work in progress accounts. We review these balances on a periodic basis to ensure customer balances are prudent based upon a variety of factors, such as the financial health of the customer, macroeconomic considerations and historical experience. If circumstances related to specific customers change, our estimates of the recoverability of work in progress may be further adjusted.

Provisions

A provision is 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. Provisions are measured at the estimated future cash flows required to settle the present obligation, based on the most reliable evidence available at the reporting date. The estimated cash flows are discounted at a pre-tax rate that reflects current market assessments of the time value of money and the risks specific to the liability. The amortization of the discount is recognized as part of finance costs.

We are currently involved in various claims and legal proceedings. Quarterly, we review the status of each significant matter and assess our potential financial exposure. Because of the uncertainties related to these matters, provisions are based only on the best information available at the time. As additional information becomes available, we reassess the potential liability related to our pending claims and litigation and, if necessary, revise our provisions. Such revisions in the estimates of the potential liabilities could have a material impact on our results of operations and financial position.

Share Capital

As at February 12, 2021, there were 21,191,530 common shares outstanding.

Risks and Uncertainties

The Company's business is subject to a number of risk factors which are described in our most recently filed AIF. Additional risks and uncertainties not presently known to us or that we currently consider immaterial also may impair our business and operations and cause the price of the common shares to decline. If any of the noted risks actually occur, our business may be harmed and the financial condition and results of operation may suffer significantly. In that event, the trading price of the common shares could decline, and shareholders may lose all or part of their investment.

The Company is closely monitoring the impact of COVID-19 on all aspects of its business. COVID-19 was declared a global pandemic by the World Health Organization on March 11, 2020. The COVID-19 pandemic has had disruptive effects in countries in which the Company operates and has adversely impacted many of its business units' operations to date, including through the cancellation by certain customers of their ongoing software maintenance contracts and the suspension or cancellation of new software purchases. The pandemic may also have an adverse impact on many of the Company's customers, including their ability to satisfy ongoing payment obligations to the Company, which could increase the Company's bad debt exposure. The future impacts of the pandemic and any resulting economic impact are largely unknown and rapidly evolving. It is possible that the COVID-19 pandemic, the measures taken by the governments of countries affected and the resulting economic impact may continue to adversely affect the Company's results of operations, cash flows and financial position as well as its customers in future periods, and this impact could be material.

Controls and Procedures

Evaluation of disclosure controls and procedures:

Management is responsible for establishing and maintaining disclosure controls and procedures as defined under National Instrument 52-109. At December 31, 2020, the President and Chief Financial Officer, based on the investigation and advice of those under their supervision, have concluded that the design and operation of these disclosure controls and procedures were effective and that material information relating to the Company, including its subsidiaries, was made known to them and was recorded, processed, summarized and reported within the time periods specified under applicable securities legislation.

Internal controls over financial reporting:

The President and Chief Financial Officer have designed or caused to be designed by those under their supervision, disclosure controls and procedures which provide reasonable assurance that material information regarding the Company is accumulated and communicated to the Company's management, including its President and Chief Financial Officer in a timely manner.

In addition, the President and Chief Financial Officer have designed or caused it to be designed by those under their supervision internal controls over financial reporting ("ICFR") to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements. The President and Chief Financial Officer have been advised that the control framework the President and the Chief Financial Officer used to design the Company's ICFR is recognized by the Committee of Sponsoring Organizations of the Treadway Commission.

The President and the Chief Financial Officer have evaluated, or caused to be evaluated by those under their supervision, whether or not there were changes to its ICFR during the period ended December 31, 2020 that have materially affected, or are reasonably likely to materially affect the Company's ICFR. No such changes were identified through their evaluation.

A control system, no matter how well conceived and operated, can provide only reasonable, not absolute, assurance that its objectives are met. Due to inherent limitations in all such systems, no evaluations of controls can provide absolute assurance that all control issues, if any, within a company have been detected. Accordingly, our disclosure controls and procedures and our internal controls over financial reporting are effective in providing reasonable, not absolute, assurance that the objectives of our control systems have been met.

Subsequent Events

On December 18, 2020, the Company declared a special dividend pursuant to which all common shareholders of record on December 28, 2020 of the Company were entitled to receive, by way of a dividend-in-kind, 1.859817814 subordinate voting shares of Topicus.com Inc. (a newly created company) for each Constellation Software share held. The dividend was distributed on January 4, 2021.

On January 4, 2021 (in anticipation of the acquisition of Topicus.com B.V. described further below), the Company's subsidiary, Constellation Software Netherlands Holding Coöperatief U.A., which principally holds the TSS Operating Group, completed a corporate reorganization. In conjunction with the reorganization, the following steps were completed on January 4, 2021:

- CNH changed its name to Topicus.com Coöperatief U.A. ("Topicus Coop").
- The Company exchanged its existing equity interest in Topicus Coop for an equity interest in Topicus.com Inc. and Topicus.com Inc. became the new parent company of Topicus Coop. Constellation received 39,412,385 preferred shares and 39,412,385 subordinate voting shares of Topicus.com Inc. The preferred shares are convertible into subordinate voting shares of Topicus.com Inc. at a rate of 1:1.
- Topicus.com Inc. has 39,412,385 subordinate voting shares outstanding. The Company distributed 39,412,364 of the subordinate voting shares to its common shareholders pursuant to the dividend-in-kind and continues to hold 21 subordinate voting shares. The subordinate voting shares held by 3rd parties will comprise a non-controlling interest in subsequent reporting periods for the Company.
- Constellation holds 1 super voting share of Topicus.com Inc. The super voting share entitles that number of votes that equals 50.1% of the aggregate number of votes attached to all the outstanding super voting shares and subordinate voting shares of Topicus.com Inc. As a result, Constellation Software controls Topicus.com Inc.

On May 20, 2020, the Company entered into a binding agreement, subject to certain closing conditions, with IJssel B.V. (the "Seller") to purchase 100% of the shares of Topicus.com B.V. ("Topicus B.V."), a Netherlands-based diversified vertical market software provider. On January 5, 2021, the Company completed this transaction. Annual gross revenues of Topicus B.V. for 2019 were approximately €101 million and total tangible assets at December 31, 2019 were approximately €7 million. In connection with the acquisition the Company paid cash of €133.6 million. Furthermore, Topicus Coop issued 5,842,882 preferred units of Topicus Coop to the Seller for an initial subscription price of €83.8 million plus an additional subscription amount of €27.589 million which will be owed by the selling shareholders to the Company and will be repayable to the Company under certain conditions. Topicus Coop also issued the Seller 5,842,882 ordinary units of Topicus Coop. The aggregate estimated total consideration is €217.400 million. The preferred units are retractable at the option of the holder for a retraction price of €19.06 per unit and will be classified as a liability on the balance sheet of Topicus.com Inc. and the Company. The preferred units are also convertible into ordinary units of Topicus Coop at a conversion ratio of 1:1 and the ordinary units are exchangeable for Topicus.com Inc. subordinate voting shares at a conversion ratio of 1:1. The preferred unit holders will also be entitled to a fixed annual cumulative dividend of 5% per annum.

On January 5, 2021, the Company cancelled the existing Members Agreement, and it was replaced by the Investor Rights and Governance Agreement ("IRGA"). Under the IRGA, commencing any time after January 5, 2021, each of the Minority Owners may exercise a put option to sell all or a portion of their interests in Topicus Coop back to Constellation for an amount calculated in accordance with a valuation methodology described within the IRGA. At any time after December 31, 2043, CSI has the right, at its option, to buy most of the Coop Units. Similar to the Member's Agreement, the main valuation driver in such calculation is the maintenance and other recurring revenue of Topicus Coop.