

2019 Annual
Management's
Discussion and Analysis

Nanalysis Scientific Corp.

(formerly Canvass Ventures Ltd.)



READER ADVISORY

The Management's Discussion and Analysis ("MD&A") of the financial condition and results of operations of Nanalysis Scientific Corp. ("Nanalysis" or the "Company" or the "Corporation"), is prepared as at April 22, 2020. This discussion should be read in conjunction with the Corporation's audited Annual Consolidated Financial Statements for the year ended December 31, 2019 and 2018 and notes thereto, other information on Nanalysis is available on SEDAR at www.sedar.com and on the Corporation's website at www.nanalysis.com. This discussion should not be considered all-inclusive as it does not include all changes regarding general economic, political, governmental and environmental events.

This MD&A contains certain statements that constitute forward-looking statements under the meaning of applicable securities laws. Please see "*Forward-Looking Information, Assumptions and Risk Factors*" on page 14 for a discussion regarding Nanalysis' use of such information. For the reader's reference, the definition, calculation and reconciliation of non-GAAP terms are provided in "Non-GAAP Terms" on page 14. Readers are cautioned that these non-GAAP terms should not replace net earnings (loss), earnings (loss) per share, purchases and proceeds on sale of property, plant and equipment and debt as indicators of GAAP performance.

This MD&A and the consolidated financial statements were reviewed by the Audit Committee of the Company's Board of Directors and approved by Nanalysis' Board of Directors on April 22, 2020.

All dollar figures are in Canadian dollars ("\$/000's"), except per share amounts or unless otherwise stated.

OVERVIEW OF THE BUSINESS

Nanalysis is a patent-protected technology company with a proven track record in the development, manufacturing, and global sales of compact nuclear magnetic resonance spectrometers (NMR spectrometer) for the pharmaceutical, biotech, chemical, security, food, materials, and education industries. Customers include BASF, Oxford University, Lubrizol, Johnson & Johnson, Harvard University, US Department of Agriculture, Aramco Services, SABIC, Hitachi Chemical, and many other Fortune 500 organizations.

Nanalysis Corp., a subsidiary of the Company was founded in January 2009 with the specific intent to develop the world's first portable NMR spectrometer. Nanalysis Corp. spent roughly four years developing the first product and began shipping this product commercially in Q4 2012. The technology platform upon which the product is based has been developed 100% by Nanalysis Corp. and is comprised of patented and proprietary hardware, software, algorithms, and manufacturing processes further secured by technical know-how and an extensive suite of trade secrets. Today, Nanalysis Corp. has multiple products based on this technology platform and continues to innovate at a rate that is more accelerated today than ever before. The Company receives government grants and interest free loans to support research and development (R&D), and therefore investor money is used primarily to support expansion of the Company's global marketing, sales, and distribution network.

The Company is headquartered in Calgary, Alberta, Canada, and performs all product development and manufacturing in its Calgary facility. The Company's global customer support, marketing, sales, and distribution are also managed from Calgary. Nanalysis Corp. in 2018 incorporated a wholly owned subsidiary in Germany, at which it conducts direct sales, marketing, technical support, and channel management activities. The Company plans to open other international subsidiaries in the coming years that will conduct similar activities in their respective regions. In June 2019, Nanalysis Corp. completed an amalgamation with Canvass Ventures in a reverse takeover ("RTO") and obtained a listing on the TSX-V as Nanalysis Scientific Corp. (NSCI). Subsequent to year end, the Company acquired all of the outstanding shares of RS2D S.A.S. ("RS2D"), a technology company based in Strasbourg, France that designs and builds cutting-edge electronics components for precision analytical instruments.

The broader market space the Company operates in is referred to as analytical instrumentation or scientific instrumentation, which is a mature and well understood space. The size of this market is currently at over US\$63B per year. The following table provides a breakdown of this market by type of analytical instrument:

Demand by Analytical Instrument Segments, 2013 - 2018

	2013		2018		'13 - '18 CAGR
	Percent	\$ Mil	Percent	\$ Mil	
Chromatography	17%	8,657	16%	10,349	3.6%
Mass Spectrometry	6%	3,071	7%	4,345	7.2%
Atomic Spectroscopy	7%	3,592	7%	4,200	3.2%
Molecular Spectroscopy	7%	3,735	7%	4,587	4.2%
Life Science Instrumentation	25%	12,446	26%	16,594	5.9%
Surface Science	11%	5,472	11%	7,177	5.6%
Materials Characterization	5%	2,460	5%	3,056	4.4%
General Analytical Techniques	5%	2,384	4%	2,567	1.5%
Lab Automation & Software	9%	4,705	9%	5,526	3.3%
Lab Equipment	8%	4,239	8%	4,927	3.1%
Total	100%	50,761	100%	63,328	4.5%

Nanalysis' family of product would be classified as 'Molecular Spectroscopy' but compete for displacement of market share in several categories including chromatography and materials characterization. There are many different types of analytical or scientific instruments in widespread use in a variety of verticals to identify or quantify samples. Each type of instrument provides different information regarding the atomic, molecular, and bulk properties of the substance being analyzed: for example, how much hydrogen is

in the substance, how much fat content exists, or whether an illegal drug is present within a sample. Examples of such types of instruments include mass spectrometers, gas chromatographers, infrared spectrometers, high performance liquid chromatography (HPLC), and so on.

In industry, there is often a traditional way of analyzing a particular sample, based on a technique or instrument(s). Often these methods have excluded NMR-based products, such as those Nanalysis offers, because of limited access to this powerful technique. Depending on the industry, and the process within it - R&D, QA/QC, commodity trades, manufacturing process automation – there are different requirements. Pharmaceuticals, food, chemicals, new materials, oil & gas, nutraceuticals, and many other substances are analyzed extensively at various stages of discovery, production, and use. Over the last three decades, the majority of analytical instruments have gone from large, expensive, complex, unsafe, and often environmentally unfriendly to compact, inexpensive, simple to use, as safe to use as a laptop computer, and environmentally friendly, see figure 1a. One of the last types of major analytical instrument to undergo this transformation is the NMR spectrometer. Pioneering this disruptive innovation, Nanalysis is a global leader in this area, with only three other direct competitors, Magritek, Thermo Scientific, and Oxford Instruments; allowing the expansion of this powerful technique from shared, often remote, centralized facilities to the point of need, whether that refer to the laboratory, glovebox or process line as depicted in the figure b-d below. In other types of analytical instruments that have already undergone the miniaturization transformation, there are dozens of vendors, and sales volumes are in thousands units per year globally.



Figure 1: (a) traditional NMR technology located offline in a centralized facility with Nanalysis compact products offset for comparison; (b) Nanalysis products being used at line in a laboratory environment; (c) use of Nanalysis product in a glovebox for air-sensitive products; (d) Nanalysis products in pilot process plant at BASF Ludwigshafen.

Management of Nanalysis believes there is an opportunity for Nanalysis and its competitors to establish a global installed base of roughly 200,000 portable/compact NMR spectrometers, along with associated hardware replacements, software updates, consumables, service, and finance, which constitutes a multi-billion dollar opportunity from the current installed base of roughly 1,500 compact/portable NMR spectrometers.

Additionally, Nanalysis believes that, along with its eco-systems of solution partners, it is leading the creation of demand for portable NMR spectrometers that will be in the thousands per year in the not too distant future. As a portable NMR spectrometer cannot be made with off-the-shelf parts (such as an infrared spectrometer for example), relatively few competitors will share this market opportunity for the next 10 years, making gross margins relatively strong, and after that period of time, Nanalysis will have diversified away from an NMR-only company, as is natural for successful analytical instrumentation companies after penetrating the market with first type of product or service. During the next 10 years, the Company intends to acquire other technologies and companies, as part of this diversification.

OUTLOOK

Nanalysis is addressing the recent outbreak of the novel coronavirus ("COVID-19") and the related economic and social disruption, volatility in financial markets, potential disruption to global supply chains, and the ability to directly and indirectly staff the Corporation's day to day operations. The governments of Canada and France have significant COVID-19 related payroll support programs available, and Nanalysis, where applicable, will take full advantage of these programs. Despite macro forces presenting new challenges, Nanalysis continues to have confidence that the market for compact NMR spectrometers and related accessories and services will grow for the next two decades. The nascent nature of the opportunity coupled with the value proposition to customers will continue to see demand for compact NMR grow. Nanalysis expects to continue to be a leader in the market, currently Nanalysis actively manages a pipeline of existing and new customers via its sales and international distribution organization, that continues to expand.

2019 was a transformative year for Nanalysis, several key objectives were completed as Nanalysis continues to execute its strategic plan. These accomplishments in 2019 and early 2020 include:

- Completed RTO of Canvass Ventures, providing a public platform for Nanalysis
- Completed financing of 8.3 million units at 0.60 cents, for gross proceeds of \$5,000k
- Completed private place 2.5 million units at 0.60 cents, for gross proceeds of \$1,250k
- The marketing launch of the 100MHz compact NMR device, the worlds first
- Listed on the Frankfurt exchange under ticker symbol ('1N1')
- Nanalysis acquired all of the outstanding shares of RS2D S.A.S. ("RS2D"), a technology company based in Strasbourg, France that designs and builds electronics components for precision analytical instruments. The technology acquired will further set Nanalysis products apart from its competitors
- Listed on the OTCQXB under ticker ('NSCIF'), providing access to the US market, Nanalysis will continue to increase its investor base

Nanalysis enters 2020 with a well-structured balance sheet, strong working capital position, untouched borrowings, and significant cash on hand. Nanalysis will use our financial position to pursue acquisition opportunities that fit our strategic objectives and meet our financial expectations.

SELECTED FINANCIAL INFORMATION

(\$000's except share information amounts)	Twelve months ended December 31		
	2019	2018	2017
Financial results			
Revenue	8,364	8,381	7,668
Gross profit ⁽¹⁾	6,060	5,398	4,895
Total comprehensive earnings (loss)	(1,660)	74	1,242
Share Information			
Earnings (loss) per share (basic and diluted)	(0.03)	-	0.02
Share Price (December 31)	0.48	N/A	N/A
Other Information			
Capitalized property plant and equipment	545	804	131
Capitalized development expenditures	2,594	1,444	750

(\$ 000's)	December 31, 2019	December 31, 2018	December 31, 2017
Financial Position			
Total assets	18,306	10,948	8,271
Total debt obligations (includes current portion)	1,507	997	1,114
Total liabilities	3,187	2,557	3,045
Net assets ⁽²⁾	15,119	8,391	5,226

⁽¹⁾ Gross profit is a non-IFRS term and is defined as revenue less cost of products sold, see reconciliation on page 14 of this document.

⁽²⁾ Net assets is a non-IFRS term and is defined as total assets less total liabilities.

FINANCIAL POSITION

At December 31, 2019, Nanalysis had \$8,534k (December 31, 201 - \$3,802k) in working capital, including \$6,619k (December 31, 2018 - \$779k) in cash. In addition, the Corporation has an undrawn line of credit of \$2,000k and \$1,772k of available borrowing on the Western Economic Diversification Canada interest free loan.

OVERALL PERFORMANCE

During the year ended December 31, 2019, Nanalysis recognized revenue of \$8,364k, a marginal decrease over the \$8,381k recognized for the comparable year ended December 31, 2018. Nanalysis experienced flat growth year over year as new competitors entered the marketplace, coupled with the anticipation of customers waiting for the release of the 100MHz product. As at December 31, 2019 Nanalysis saw a large increase to unearned revenue to \$616k as compared to \$316k as at December 31, 2018. The increase is due to an increase in extended warranty sales to customers which is then recognized on a straight-line basis over up to five years. Deposits on pre-orders of the 100MHz product also formed part of the increase in unearned revenue.

Gross profit for 2019 was \$6,060k (a margin of 72%) compared to gross profit of \$5,398k (a margin of 64%) for 2018.

The Company's comprehensive loss for the year ended December 31, 2019 was \$1,660k as compared to comprehensive income of \$74k in 2018. The majority of the loss was due to RTO transaction costs, increased depreciation and amortization, foreign exchange loss and deferred income tax expense partially offset by increased gross margin.

DISCUSSION OF OPERATIONS

(\$000's)	Three months ended December 31			Twelve months ended December 31		
	2019	2018	(\$ Change)	2019	2018	(\$ Change)
Revenue	2,123	2,786	(663)	8,364	8,381	(17)
Cost of products sold	430	884	(454)	2,304	2,983	(679)
Gross profit ⁽¹⁾	1,693	1,902	(209)	6,060	5,398	662
Expenses						
Sales and marketing	865	626	239	2,453	2,515	(62)
General and administration	411	205	206	2,562	1,965	597
Earnings (loss) before other items	417	1,071	(654)	1,045	918	127
Other items						
Depreciation and amortization expense	168	57	111	775	339	436
RTO transaction costs	(118)	-	(118)	1,303	-	1,303
Stock-based compensation	63	203	(140)	212	291	(79)
Finance expense (income)	(79)	(34)	(45)	(59)	117	(176)
Foreign exchange loss	67	39	28	213	35	178
Earnings (loss) before tax	316	806	(490)	(1,399)	136	(1,535)
Deferred tax expense	297	62	235	261	62	199
Earnings (loss) and comprehensive earnings (loss)	19	744	(725)	(1,660)	74	(1,734)

(1) Gross profit is a non-IFRS term and is defined as revenue less cost of products sold, see reconciliation on page 14 of this document.

Revenue

The business of the Company has been the development, manufacturing, and sales of NMR spectrometers from inception in 2009. As such, all revenue is related to product sales and extended warranties. The Company does not engage in consulting services or any other revenue generating activity unrelated to product sales.

For the three months ended December 31, 2019 Nanalysis recognized revenue of \$2,123k, a 24% decrease from the \$2,786k recognized from the comparable period December 31, 2018. The decrease in revenue is partially due to cannibalization of existing sales as customers wait for the release of the 100MHz product in 2020, coupled with increased competition in the marketplace. For the twelve-month period revenue was \$8,364k as compared to \$8,381k for 2018. The first two quarters of revenue were strong, these months were partially offset by a weaker half of the year due to the aforementioned anticipation of the 100MHz release and increased competition.

Cost of products sold

Cost of sales for the Company includes the costs of manufacturing its products as well as the costs of servicing those products. The cost of sales for products comprises of raw materials, direct costs, direct labor, an allocation of overhead, freight charges, warranty and depreciation.

Cost of products sold for the three months ended December 31, 2019 was \$430k or 20 percent of revenue as compared to \$884k or 32 percent of revenue for the same period of the prior year. The large decrease to cost of products sold is due to an adjustment in warranty provision in 2019, warranty expenses have been historically lower than anticipated resulting in a reduction to the provision. For the twelve month period ended December 31, 2019, cost of products sold was \$2,304k or 28 percent of revenue as compared to \$2,983k or 36 percent of revenue for the same period of the prior year. The year over year decrease in cost of products sold is due the aforementioned warranty expense recovery, coupled with a recovery of expenses for finished goods previously recognized as an expense in 2019 that were on hand as at December 31, 2019, these finished goods have been capitalized to property plant and equipment and will be amortized over their expected useful lives as they're utilized in the day to day operations of the Company.

Sales and marketing (“S&M”)

S&M expenses include the salaries, benefits and expense of the sales, marketing, business development, travel costs, selling and marketing expenses.

S&M for the three months ended December 31, 2019 was \$865k as compared to \$626k for the same period of the prior year. The increase is due to increased advertising and trade show expense as the Company continues to expand sales efforts. For the year ended December 31, 2019, S&M was \$2,453k as compared to \$2,515k for the same period of the prior year. The decrease for the year ended is due to a change of personnel’s duties, partially offset by increased advertising and trade show expenses.

General and administrative expenses (“G&A”)

G&A includes the cost of maintaining a corporate office, all publicly traded company-related expenses as well as the G&A incurred with respect to the day to day operation of the Company. For the three months ended December 31, 2019, G&A was \$411k as compared to \$205k for the same period of the prior year. The increase is due to the redistribution of salaries to administrative and general expenses, increased head count and increased expenses with respect to being public. For the year ended December 31, 2019, G&A was \$2,562k as compared to \$1,965k for the same period of the prior year. The increase for the year is due to the aforementioned increase to salaries, headcount and public entity expenses.

Amortization of property, plant, equipment and intangibles

For the three months and year ended December 31, 2019 amortization was \$168k and \$775k respectively, as compared to \$57k and \$339k for the three months and year ended December 31, 2018. The increase for both the three and twelve month periods is due to property plant and equipment and intangibles additions in the year, coupled with the office and shop asset recognized with respect to the Company’s facility that now is depreciated due to the adoption of IFRS 16 as at January 1, 2019.

Finance income (expense)

For the three months ended December 31, 2019 interest and finance income was \$79k as compared to \$34k for the three months ended December 31, 2018. For the year ended December 31, 2019 finance income was \$59k as compared to finance expense of \$117k for the comparative period in 2018. The increased finance income for both three month and twelve months is a result of interest income stemming from the large cash balance on hand coupled with the accounting treatment of interest free government grants and the resulting income.

Foreign exchange

Foreign exchange gains or losses typically occur when the exchange rate changes between the time revenue is recognized and when the resulting receivable is collected. Nanalysis conducts the vast majority of its business in US dollars, but also in Euros and GBP. Roughly 10% of the Company’s revenue is in Canadian dollars.

SUMMARY OF QUARTERLY RESULTS

The following table highlights revenue, cash used in operating activities, total comprehensive income (loss) before tax and earnings (loss) per share for the eight most recently completed quarters ended December 31, 2019.

(\$000's) except per share information	2019				2018			
	Q4	Q3	Q2	Q1	Q4	Q3	Q2	Q1
Revenue	2,123	1,641	2,535	2,065	2,784	1,799	2,179	1,619
Cash (used) generated in operating activities	5	204	225	347	164	177	(1,028)	518
Total comprehensive earnings (loss) for the period	19	(298)	(1,177)	(204)	463	(553)	335	(171)
Earnings (loss) per share basic and diluted	0.00	(0.00)	(0.03)	(0.00)	0.01	(0.01)	0.00	0.00

- Q4 2019 saw a reduction in revenue compared to Q4 2018 as customers await the release of the new 100MHz product.
- Q3 2019 experienced a slight reduction in revenue compared to Q3 2018. Despite reduced demand the Company saw improved net comprehensive income due to recovery on previously expensed inventory.
- Q2 2019 revenue was 16% higher than Q2 2018. Total comprehensive loss for the period was primarily due to RTO transaction costs.
- Q1 2019 saw significant revenue was 28% higher than Q1 2018. US sales were 38% higher than in the comparable period in 2018, while overseas sales were 13% higher.
- Q4 2018 revenue was 21% higher than the comparative quarter in the previous year, which is representative of management’s belief that the market opportunity is nascent and that the company continues to improve execution as it penetrates the opportunity. Total comprehensive income for Q4 2018 had increased from the previous year by 135%.
- Q3 2018 revenues were 19% lower than the previous years comparable quarter. This was primarily due to a reduction in sales to academic institutions.
- Q2 2018 saw revenue increase by 26% compared to the previous years comparable quarter with an increase in sales of both 60e and 60 Pro spectrometers.

- Q1 2018 revenues were 17% higher than the previous comparable quarter. Operating expenses were 77% primarily as a result of hiring in manufacturing and product development.

INVESTMENT IN INTANGIBLES AND DEVELOPMENT COSTS

(#000'S)	December 31, 2019	December 31, 2018
Net development costs	3,380	3,300
Less: government grants	(963)	(1,862)
Additions to intangibles	2,417	1,438

The Company is engaged in research and development activities and has internally generated intangible assets. Total development costs are reduced by government grants with the net difference being capitalized. Government grants consist of federal grants received under the Industrial Research Assistance Program ("IRAP") and scientific research and experimental development ("SRED") tax credits, as well as provincial assistance through the Alberta Innovates ("AI") Voucher Program and the Alberta Economic Development and Trade ("AEDT") Alberta-Germany Collaboration Fund for Product Development and Commercialization and the Alberta-Canada-France Joint Industrial R&D Projects Program.

As at June 04, 2019 the Company ceased being a Canadian Controlled Private Corporation (CCPC) and is no longer eligible for a cash refund from the federal government on SRED credits. The reduced SRED credits has resulted in increased additions to intangible assets.

The development costs in 2019 were associated with the new 100 MHz product, as well as on the evolution of our technology platform for solutions being developed in publicly announced partnerships with Bosch, Sartec, and others.

LIQUIDITY & CAPITAL RESOURCES

The Company's primary requirements for capital are to fund the development of enhanced product offerings and for general working capital requirements. The Company finances these activities primarily through cash flows from operations, funds from equity financing, and government assistance in the form of repayable debt and non repayable grants.

As at December 31, 2019 the Company had the following debt instruments outstanding:

(\$000's)	December 31, 2019	December 31, 2018
Shareholders Loans: original amount of \$223k repayable in monthly blended installments of \$6k commencing June 15, 2016 until May 15, 2020. Interest payable at 11.99% per annum. Secured with Makino machinery (F5).	28	91
Shareholders Loans: original amount of \$500k repayable in monthly blended installments of \$13k beginning December 15, 2017 until November 15, 2021. Following conversion of \$100k to common shares in November 2018 monthly installments are \$10k. Interest payable at 11% per annum. Secured with Essemtec machinery (SMT). On July 12, 2019 the shareholder loans were repaid in full.	-	288
Western Economic Diversification Canada (WINN #1) interest free loan \$496k repayable in monthly installments of \$8k commencing June 30, 2017, and maturing May 31, 2022. Any amounts in default will incur interest at the Bank of Canada's interest rate plus 3% compounded monthly. The obligation is recorded at its present value using a 7.04% discount rate. This loan is unsecured.	220	300
Western Economic Diversification Canada (WINN #2) interest free loan \$376k drawn in 2018 and \$625k drawn in 2019 repayable in monthly installments of \$46k commencing February 1, 2022, and maturing January 31, 2027. Total value of this loan will be up to \$2,773k. Any amounts in default will incur interest at the Bank of Canada's interest rate plus 3% compounded monthly. The obligation is recorded at its present value using a 6.0% discount rate. This loan is unsecured.	884	313
\$6k loan for the purchase of equipment repayable in equal monthly installments of \$109 over 56 months commencing April 28, 2018.	4	5
	1,136	997
Less: Current Portion	116	233
	1,020	764

During the year the Company entered into a line of credit agreement with Scotiabank, pursuant to which it may borrow up to maximum of \$2,000k ("the Credit Facility"). The borrowing base is calculated using the aggregate of 75% of eligible USD receivables, 85% of eligible CND receivables, 90% of secured receivables and 50% of eligible inventory. As of December 31, 2019 the Company had no drawings on the facility, the facility bears interest at prime plus 0.75 percent.

WORKING CAPITAL

(\$ 000's)	December 31, 2019	December 31, 2018	\$ Change
Cash	6,619	779	5,840
Loans and leases	1,507	997	510
Net Cash	5,112	(218)	5,330
Working capital ⁽¹⁾	8,534	3,802	4,732

(1) Working capital is calculated as current assets less current liabilities.

At December 31, 2019, Nanalysis had \$8,534k (December 31, 2018 - \$3,802k) in working capital, including \$6,619k (December 31, 2018 - \$779k) in cash and cash equivalents. Working capital has significantly increased period over period due to an influx of cash stemming from the RTO and corresponding equity raises. The increase in cash has been partially offset by the current portion of lease obligations, specifically \$132k stemming from IFRS 16 adjustments resulting in lease obligation being recognized for the Company's office and shop that did not exist at December 31, 2018.

The Company's objectives when managing capital are to safeguard the Company's ability to continue as a going concern, and manage capital so that it can continue to provide returns for shareholders and benefits for other stakeholders through the development and sales of its spectrometers. The Company attempts to maximize return to shareholders by minimizing shareholder dilution.

The Company defines its capital as share capital and contributed surplus. The Company manages the capital structure and makes adjustments to it in light of changes in economic conditions and the risk characteristics of the underlying assets. The Company's liquidity needs in short term and long term can be sourced multiple ways including: funds from operations, available cash balances, new debt instruments, equity issuances and government funding. The Company monitors its financing requirements through regular forecasting of its cash position. Financing decisions are based on the timing and extent of expected operating and capital cash outlays. The Company has financed its capital requirements primarily through loans and share issuances since inception.

The Company may issue new securities. The Company is not subject to any externally imposed capital requirements. There were no changes to the Company's approach to capital management during the twelve months ended December 31, 2019.

FINANCIAL MANAGEMENT

(\$ 000's)	December 31, 2019	December 31, 2018	\$ Change
Cash generated provided by (used in):			
Operating activities	781	(171)	952
Investing activities	(3,139)	(2,248)	(891)
Financing activities	8,198	2,093	6,105
Increase (decrease) in cash	5,840	(326)	6,166

Cash flows from operating activities increased in the year ended December 31, 2019 from the same period in 2018 by \$952k. This is due to increased collection of payments, specifically the federal SRED claim, this has been partially offset by increased trade receivables.

Cash flows used in investing activities increased for the year ended December 31, 2019 increased from the same period in 2018 by \$891k, this is due to increased intangible asset additions stemming from the change in the Company's status from a Canadian Controlled Private Corporation to a public entity resulting in reduced Scientific Research and Experimental Development credits that previously offset additions to intangibles.

Cash flows used in financing activities increased in the year ended December 31, 2019 from the same period in 2018 by \$6,105k. The substantial increase is due to the proceeds from the equity raise done in conjunction with the RTO, proceeds from a private placement, and proceeds from long term debt, specifically the WINN loan, this was partially offset by repayment of higher interest debt.

SHARE CAPITAL

[a] Authorized

Unlimited number of common shares, without nominal or par value
 Unlimited number of Class A voting preferred shares without par value
 Unlimited number of Class B non-voting preferred shares without par value

[b] Issued

At December 31, 2019, the Company had 62,361,000 common shares outstanding. At December 31, 2019 there were 13,489,000 shares in escrow with scheduled release over 15 months completing on December 11, 2020.

- [i] During the twelve-month period ended December 31, 2019 the Company issued the following common shares (shares were converted at the exchange ratio of .55 for each previous share):
- 187,000 shares at \$0.60 to directors as payment of director fees
 - 110,000 shares at \$0.60 for advisory services
 - 71,500 shares at \$0.60 to compensate certain employees as an incentive grant
 - 8,333,000 units were issued, each unit gave the acquirer one share at \$0.60 and a half warrant with an exercise price of \$0.75, share issuance costs with respect to the financing were \$324k, share purchase warrants are valued at \$543k
 - 2,500,000 units were issued in a private placement, each unit gave the acquirer one share at \$0.60 and a half warrant with an exercise price of \$0.75, the share purchase warrants are valued at \$250k
 - 2,277,500 shares at \$0.60 to original Canvass shareholders
 - 45,500 shares upon the exercise of warrants
 - 1,391,500 shares upon the exercise of options
- [ii] During the year ended December 31, 2018, Nanalysis Corp. issued the following common shares (shares were converted at the exchange ratio of .55 for each previous common share).
- 57,750 shares at \$0.27 for the exercise of stock options.
 - 27,500 shares at \$0.22 for the exercise of stock options.
 - 176,000 shares at \$0.45 to directors as payment of director fees.
 - 71,500 shares at \$0.45 to compensate certain employees as an incentive grant.
 - 166,667 shares at \$0.60 in debt to equity conversion associated with equipment-backed machine loan.

- 921,489 shares at \$0.42 for the conversion of Shareholder 2016 SR&ED Loans in the amount of \$385,350 and 184,784 shares at \$0.42 issued for payment of financing fees.
- 2,200,000 shares at \$0.45 in a private placement. The company paid share issue costs of \$18k.
- 2,029,996 shares at \$0.60 in a private placement.

[c] Stock options

Stock option transactions and the number of stock options outstanding are summarized below:

The Company has a stock option plan that provides for the issuance of options to eligible persons. The option price under each option granted must be no less than the discount market price defined by the TSX-V. The term of the options must be no longer than 5 years and the directors determine the vesting period, vesting period is typically 3 years. The maximum number of outstanding options must be no more than 10% of the issued and outstanding at any point in time. The maximum number of outstanding options issued for investor relations must be no more than 2% of the issued and outstanding shares and the options issued to investor relations must vest in stages over a 12 month period with no more than one quarter of the options vesting in any three month period.

	Number	Weighted Average Exercise Price \$
Balance, December 31, 2017⁽¹⁾	3,247,750	0.29
Granted ⁽¹⁾	618,750	0.45
Exercised ⁽¹⁾	(85,250)	(0.25)
Expired ⁽¹⁾	(77,000)	(0.14)
Balance, December 31, 2018	3,704,250	0.29
Granted Q1 2019 ⁽¹⁾	27,500	0.60
Granted Q3 2019	530,000	0.66
Granted Q4 2019	640,000	0.60
Granted on the RTO date	675,000	0.60
Canvass options ⁽²⁾	112,500	0.47
Exercised	(1,392,000)	(0.20)
Forfeitures	(404,250)	(0.40)
Balance, December 31, 2019	3,893,500	0.46

(1) Converted at an exchange ratio of 0.55, pursuant to the RTO

(2) Converted at an exchange ratio of 0.25, pursuant to the RTO

During the year ended December 31, 2019 and 2018, the Company recorded stock based compensation of \$212K and \$291K, respectively, for stock options granted. As at December 31, 2019, the weighted average remaining life for outstanding options was 2.89 years (December 31, 2018 – 2.57). As the Company is in a loss positions, the weighted average number of shares used in the calculation of earnings per share is the same for both basic and diluted.

The fair values of stock options granted were estimated using the Black-Scholes option pricing model with the following weighted-average assumptions:

	2019	2018
Risk-free interest rate	1.1%-1.9%	2.1%
Estimated annualized volatility based on comparables	67%-78%	78%
Expected life	5.0 years	5.0 years
Expected dividend yield	0%	0%
Exercise price	\$0.60-\$0.75	\$0.44
Share price on date of grant	\$0.40 to \$0.60	\$0.40

[d] Warrants

As at December 31, 2019 the Company has 5,773,900 warrants outstanding. In conjunction with the financing 4,523,900 warrants were issued at an exercise price of \$0.75 and which expire on June 4, 2020. In conjunction with the private placement 1,250,000 warrants were issued with an exercise price of \$0.75 and an expiry of June 6, 2021. In the second quarter of 2019 45,500 warrants were exercised for proceeds of \$18K with 4,500 warrants expiring. The Company calculated the fair value of the share purchase warrants using the Black-Scholes pricing model to estimate the fair value of the warrants issued at the date of grant. The warrants were valued using a risk-free interest rate of 1.33% and volatility of 71%. The fair value of warrants issued is \$793k.

[e] Restricted Share Units (“RSU”)

During the fiscal year ended December 31, 2018 the Company granted 71,500 RSU. The RSU vested on October 31, 2018 and may be redeemed by the holder as one RSU in exchange for one Class ‘A’ common share in the capital of the Company. These RSU were redeemed in January 2019 and 71,500 Class ‘A’ common shares were issued.

BUSINESS RISK AND UNCERTAINTIES

The Company has exposure to the following risks from its use of financial instruments:

- Credit risk;
- Liquidity risk;

- Market risk; and
- Interest rate risk

This information presents information about the Company's exposure to each of the above risks, the Company's objectives, policies and processes for measuring and managing risk.

Risk management framework

The Board of Directors has overall responsibility for the establishment and oversight of the Company's risk management framework. The Company's risk management policies are established to identify and analyze the risks faced by the Company, to set appropriate risk limits and controls, and to monitor risks and adherence to limits. Risk management policies and systems are reviewed regularly to reflect changes in market conditions and the Company's activities.

Credit risk

Credit risk is the risk of a financial loss to the Company if a counterparty to a financial instrument fails to meet its contractual obligations. The Company is exposed to credit risk in the event of non-performance by counterparties in connection with its cash, accounts receivable, and other receivables. The Company's maximum exposure to credit risk at December 31, 2019 is the carrying amount of cash, accounts receivable, and other receivables on the consolidated statements of financial position. The Company mitigates this risk by holding its cash in major Canadian financial institutions and performing credit enquiries on its customers.

Management regularly assesses the Company's exposure to credit risk and provides allowances for potentially uncollectible accounts receivable as they become known. Although collection of these receivables could be influenced by economic factors, management considers the risk of significant loss to be mitigated by the number, reputation and nature of the companies with which the Company does business. Trade accounts receivable are written off when there is no reasonable expectation of recovery. Indicators that there is no reasonable expectation of recovery include, amongst others, the failure of the counterparty to engage in a repayment plan with the Company, and a failure to make contractual payments for a period of greater than 180 days past due. During the 12 months ended December 31, 2019, a bad debt of \$8K was recognized as an expense (2018 - \$Nil).

Liquidity risk

Liquidity risk is the risk that the Company will not be able to meet its obligations as they come due. As of December 31, 2019, the Company had working capital of \$8,534K (December 31, 2018 - \$3,802K). The Company's exposure to liquidity risk is dependent on the sale of inventory, collection of accounts receivable and other receivables, and the raising of funds to meet commitments and sustain operations and research and development. The Company manages liquidity risk by management of working capital, cash flows, availability of borrowing facilities and share issuances.

Market risk

Market risk is the risk of loss that results from changes in market prices, market risk is comprised of foreign currency risk, interest rate risk and other price risks. The level of market risk to which the Company is exposed to depends on market condition, expectations of future price or market rate movements and the composition of the Company's financial assets and liabilities. The Company regularly monitors market risk exposure, tolerance, and control processes in order to manage the exposure related to changes in market risk and to stay within acceptable market risk limits.

[i] Currency risk

The Company is exposed to the financial risk related to the fluctuation of foreign exchanges rates. The majority of the Company's sales are in U.S. dollars. The Company has not entered into foreign exchange derivative contracts.

As at December 31, 2019 and 2018, the Company had the following assets and liabilities denominated in U.S. dollars:

(\$000's)	December 31, 2019	December 31, 2018
	US\$	US\$
Cash	1,338	521
Accounts receivable	776	1,469
Accounts payable and accrued liabilities	(37)	(180)
Total	2,077	1,810

The above assets and liabilities were translated at 1.2988 at December 31, 2019 (2018 – 1.3642). Based on the above net exposure as at December 31, 2019 and 2018, assuming that all other variables remain constant, a 10% appreciation or deterioration of the Canadian dollar against the U.S. dollar would result in a change of approximately \$269K (December 31, 2018 - \$247K) in the Company's net income/loss. Total sales in USD for December 31, 2019 was \$5.2 million (December 31, 2018 - \$5.4 million), a 10% appreciation or deterioration of the Canadian dollar against the U.S dollar would result in a change of approximately \$711k (December 31, 2018 -\$696k).

[ii] Interest rate risk

Interest rate risk is the risk that the future cash flows of a financial instrument will fluctuate because of changes in the market interest rates. During the year ended December 31, 2019 and 2018, fluctuations in the market interest rates had no significant impact on its interest expense.

OPERATING SEGMENT

The Company has a single operating segment, the manufacture of spectrometers. Substantially all of the Company's operations, assets, and employees are in Canada. The Company's sales are concentrated in universities and the technology industry. At December 31, 2019 one customer accounted for 13% of accounts receivable (2018 – 2 customers – 25%).

The Company's revenues are allocated to geographic segments for the year ended December 31, 2019 and 2018 as follows:

(\$000's)	December 31, 2019	December 31, 2018
United States of America	5,099	4,736
Europe	915	1,521
Canada	734	586
Asia	725	944
Other (Brazil, Chile, India, Mexico, Morocco, Nigeria)	891	594
	<u>8,364</u>	<u>8,381</u>

TRANSACTIONS BETWEEN RELATED PARTIES

Related parties include members of the Board of Directors and officers of the Company, and enterprises controlled by these individuals. The following fees and expenses were incurred in the normal course of business:

(\$000's)	December 31,2019	December 31, 2018
Interest and finance fees on shareholder loans:		
Makino loan (F5) (note 8)	8	15
Essemtec loan (SMT) (note 8)	15	7
	<u>23</u>	<u>22</u>

For the year ended December 31, 2019 \$79K was paid in advisory services fees to directors (December 31, 2018, \$NIL).

(\$000's)	December 31,2019	December 31, 2018
Management fees, General & administration	386	255
Share-based payments, General & administration	178	80
	<u>564</u>	<u>335</u>

REVERSE TAKEOVER

Upon completion of the amalgamation, the shareholders of Nanalysis Corp. ("the Accounting Acquirer") owned approximately 76.68% of the issued and outstanding common shares of the Company. For accounting purposes the Transaction is considered as a "reverse takeover". A reverse takeover transaction involving a non-public operating entity and non-operating public company is in substance a capital transaction, rather than a business combination.

These consolidated financial statements are presented as a continuation of the Accounting Acquirer but are issued in the name of the Company as a legal parent. The Transaction has been measured at the fair value of the shares and other equity instruments that are deemed to have been issued to the Company's historical shareholders. Accordingly, the transaction has been recorded in these consolidated financial statements using a basis of accounting as summarized below:

- The historical equity of the Company has been eliminated and the excess of the fair value of deemed issuance of the equity instruments over the fair value of the net assets acquired has been recorded as RTO Transaction cost in the statement of earnings (loss) for the period;
- The accumulated deficit and other equity balances presented in these consolidated financial statements are those of the Accounting Acquirer;
- The assets and liabilities of the Accounting Acquirer are included in these consolidated financial statements on pre-transaction basis of accounting;
- The net assets of the Company were measured at their estimated fair value on the date of the RTO; and

e) Comparative information presented in these consolidated financial statements is that of the Accounting Acquirer.

The following summarizes the basis of accounting for the reverse takeover described above:

Fair value of equity instruments deemed to be issued pursuant to the RTO

Issuance of 2,275,500 Canvass common shares	\$ 1,367
Fair value of existing Canvass options and warrants	\$ 37
Total amount recorded in equity in these financial statements	\$ 1,404
Transaction expenses	\$ 319
	\$ 1,723
Less: Net assets of Canvass immediately before the transaction	
Cash \$ 545	\$ (420)
Accounts Payable \$(125)	
	\$ 1,303

SUBSEQUENT EVENTS

On March 3, 2020, the Company acquired all of the outstanding shares of RS2D S.A.S. ("RS2D"), a technology company based in Strasbourg, France that designs and builds cutting-edge electronics components for precision analytical instruments. The base consideration paid for RS2D is €1.2 million in cash and the issuance of 2.9 million Nanalysis shares, which are subject to a three-year lock-up period. The former shareholders of RS2D may also receive an earnout over the three years to December 31, 2022, based on future revenue growth objectives. The fair value of the assets and liabilities is still being determined, delays caused from the novel coronavirus ("COVID-19") have impacted timing.

The Company is addressing the recent outbreak of COVID-19 and the related economic and social disruption, volatility in financial markets, potential disruption to global supply chains, and the ability to directly and indirectly staff the Company's day to day operations. The current challenging economic climate may lead to further adverse changes in cash flows, working capital levels and/or debt balances, which may also have a direct impact on the Company's operating results and financial position. These and other factors may adversely affect the Company's liquidity and ability to generate income and cash flows in the future.

Additionally, subsequent to year end the Company received \$0.4 million with respect to 2018 SRED claim for the Provincial portion.

RECENT ACCOUNTING PRONOUNCEMENTS

The company adopted the following accounting policies effective January 1, 2019:

On January 13, 2016, the IASB issued IFRS 16 Leases ("IFRS 16"), which replaces the existing IFRS guidance on leases: IAS 17 Leases ("IAS 17"). Under IAS 17, lessees were required to determine if the lease is a finance or operating lease, based on specified criteria of whether the lease transferred significantly all the risks and rewards associated with ownership of the underlying asset. Finance leases were recognized on the balance sheet while operating leases were recognized in the Consolidated Statements of Income when the expense is incurred. IFRS 16 introduced a single lease accounting model for lessees which require a Right-of-Use (ROU) asset and lease liability to be recognized on the balance sheet for contracts that are, or contain, a lease. The Company's leases under IFRS 16 consist of office space and equipment which were previously classified as operating leases.

The Company has adopted IFRS 16 on January 1, 2019 using the modified retrospective approach. The modified retrospective approach does not require restatement of prior period financial information as it applies the standard prospectively. Accordingly, comparative information in the Company's financial statements are not restated.

For leases that were previously classified as finance leases under IAS 17, the carrying amount of the ROU asset and lease liability remain unchanged upon transition and were determined at the carrying amount immediately before the adoption date.

For leases that were previously classified as operating leases under IAS 17, lease liabilities were measured at the present value of the remaining lease payments discounted using the Company's incremental borrowing rate on January 1, 2019. ROU assets were measured at an amount equal to the lease liability. The recognition of the present value of minimum lease payments, as at January 1, 2019, resulted in additional \$460K of ROU assets and associated lease liabilities. When measuring the present value of lease obligations, the Company discounted remaining lease payments using its incremental borrowing rate at January 1, 2019.

The adoption of IFRS 16 included the following elections:

- Elected to not recognize ROU assets and liabilities for leases term of less than 12 months, or for leases of low value.
- Elected to exclude initial direct costs from measuring the ROU asset at the date of initial application.
- Elected to apply a single discount rate to portfolio of leases with similar characteristics.
- Elected to use hindsight in determining lease term.

The Company leases assets including office space and equipment. Information about leases for which the Company is a lessee is presented below.

Right of-use assets

(\$000'S)	Office Space	Equipment	Total
Balance January 1, 2019	451	9	460
Additions	21	-	21
Depreciation charge for the period	(119)	(2)	(121)
Balance December 31, 2019	354	7	361

Total lease liability at December 31, 2019 was \$371K, current portion \$132k. Lease interest expense for the year ended December 31, 2019 was \$25k.

OFF-BALANCE SHEET ARRANGMENTS

The Corporation does not have any off-balance sheet financing arrangements.

NON - GAAP TERMS

The Company reports on certain key financial performance measures that are used by management to evaluate the performance of Nanalysis. These key financial performance measures are not recognized financial terms ("Non-GAAP Terms") under Canadian generally accepted accounting principles (Canadian "GAAP"). For publicly accountable enterprises, such as Nanalysis, Canadian GAAP is governed by principles based on International Financial Reporting Standards ("IFRS") and interpretations of the International Financial Reporting Interpretation Committee ("IFRIC"). Management believes these Non-GAAP Terms are useful supplemental measures.

Gross profit

Gross profit is defined as revenue less cost of products sold, cost of products sold includes direct cost of manufacturing, overhead and warranty expenses. The Corporation's method of calculating gross profit may differ from that of other companies and accordingly, may not be comparable to measures used by other companies.

Non-GAAP Term (\$000's)	Year ended December 31	
	2019	2018
Revenue	8,364	8,381
Deduct:		
Cost of products sold	(2,304)	(2,983)
Gross profit	6,060	5,398

CRITICAL ACCOUNTING POLICIES AND ESTIMATES

The Company prepares its consolidated financial statements in accordance with IFRS. In preparing its financial statements, management is required to make various estimates and judgments in determining the reported amounts of assets and liabilities, revenues and expenses, as well as the disclosure of commitments and contingencies. Management bases its estimates and judgments on its own experience and various other assumptions believed to be reasonable at the time and under the circumstances in existence when the financial statements were prepared. Anticipating future events cannot be done with certainty; therefore, these estimates may change as new events occur, more experience is acquired or the Company's operating environment changes. More detailed information regarding the accounting estimates believed by management to require the most difficult, subjective or complex judgments and which are material to the Company's financial reporting results are discussed in the Company's Annual Financial Statements for the year ended December 31, 2019, Company's profile on SEDAR at www.sedar.com.

FORWARD LOOKING STATEMENTS

This Management's Discussion and Analysis ("MD&A") contains certain forward looking statements and forward looking information (collectively referred to herein as "forward looking statements") within the meaning of applicable Canadian securities laws. All statements other than statements of present or historical fact are forward looking statements. Forward looking information is often, but not always, identified by the use of words such as "could", "should", "can", "anticipate", "expect", "believe", "will", "may", "projected", "sustain", "continues", "strategy", "potential", "projects", "grow", "take advantage", "estimate", "well positioned" or similar words suggesting future outcomes. In particular, this MD&A may contain forward looking statements relating to future opportunities, business strategies, development and production plans and competitive advantages.

The forward looking statements regarding the Company are based on certain key expectations and assumptions of the Company concerning anticipated financial performance, business prospects, strategies, regulatory developments, exchange rates, tax laws, the sufficiency of budgeted capital expenditures in carrying out planned activities, the availability and cost of labour and services and the ability to obtain financing on acceptable terms and future costs and expenses being based on historical costs and expenses,

adjusted for inflation, all of which are subject to change based on market conditions and potential timing delays. Although management of the Company consider these assumptions to be reasonable based on information currently available to them, they may prove to be incorrect.

By their very nature, forward looking statements involve inherent risks and uncertainties (both general and specific) and risks that forward looking statements will not be achieved. Undue reliance should not be placed on forward looking statements, as a number of important factors could cause the actual results to differ materially from the beliefs, plans, objectives, expectations and anticipations, estimates and intentions expressed in the forward looking statements, including among other things: general economic and market factors, including business competition, changes in government regulations or in tax laws; component prices; technology development or operational activities; inability to scale manufacturing; changes in market demand; changes in international trade regulations, affecting the Company; timing and availability of external financing on acceptable terms; and lack of qualified, skilled labour or loss of key individuals; as well as those factors detailed from time to time in the Company's interim and annual financial statements and management's discussion and analysis of those statements. Readers are cautioned that the foregoing list is not exhaustive.

The forward looking statements contained herein are expressly qualified in their entirety by this cautionary statement. The forward looking statements included in this MD&A are made as of the date of this MD&A and the Company does not undertake and is not obligated to publicly update such forward looking statements to reflect new information, subsequent events or otherwise unless so required by applicable securities laws.