Semler Scientific, Inc.
Form 10-Q
November 01, 2018

UNITED STATES

SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

FORM 10-Q

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

For the Quarterly Period Ended September 30, 2018

OR

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

For the Transition Period from ___ to ___

Commission File Number 001-36305

SEMLER SCIENTIFIC, INC.

(Exact name of registrant as specified in its charter)

Delaware	**26-1367393**

(State or other jurisdiction of incorporation or organization) (I.R.S. Employer Identification Number)

911 Bern Court, Suite 110

San Jose, CA 95112

(Address of principal executive offices) (Zip Code)

(877) 774-4211

(Registrant's telephone number, including area code)

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. Yes x No ¨

Indicate by check mark whether the registrant has submitted electronically every Interactive Data File required to be submitted pursuant to Rule 405 of Regulation S-T during the preceding 12 months (or for such shorter period that the registrant was required to submit and post such files). Yes x No ¨

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, a smaller reporting company, or an emerging growth company. See the definitions of “large accelerated filer,” “accelerated filer,” “smaller reporting company,” and “emerging growth company” in Rule 12b-2 of the Exchange Act.

Large Accelerated Filer ¨ Accelerated Filer ¨

Non-Accelerated Filer x Smaller Reporting Company x

Emerging growth company x

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 13(a) of the Exchange Act. ¨

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act). Yes ¨ No x

As of October 31, 2018, there were 6,318,897 shares of the issuer’s common stock, $0.001 par value per share, outstanding.

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CAUTIONARY NOTE REGARDING FORWARD-LOOKING STATEMENTS

This quarterly report on Form 10-Q contains forward-looking statements. Such forward-looking statements include those that express plans, anticipation, intent, contingency, goals, targets or future development and/or otherwise are not statements of historical fact. These forward-looking statements are based on our current expectations and projections about future events and they are subject to risks and uncertainties known and unknown that could cause actual results and developments to differ materially from those expressed or implied in such statements.

In some cases, you can identify forward-looking statements by terminology, such as “expects,” “anticipates,” “intends,” “estimates,” “plans,” “believes,” “seeks,” “may,” “should,” “continue,” “could” or the negative of such terms or other similar expressions. Accordingly, these statements involve estimates, assumptions and uncertainties that could cause actual results to differ materially from those expressed in them. Any forward-looking statements are qualified in their entirety by reference to the factors discussed throughout this report.

You should read this quarterly report and the documents that we reference herein and therein and have filed as exhibits to this report, completely and with the understanding that our actual future results may be materially different from what we expect. You should assume that the information appearing in this quarterly report is accurate as of the date of this report only. Because the risk factors referred to above could cause actual results or outcomes to differ materially from those expressed in any forward-looking statements made by us or on our behalf, you should not place undue reliance on any forward-looking statements. These risks and uncertainties, along with others, are described above under the heading “Risk Factors” in our annual report on Form 10-K filed with the Securities and Exchange Commission, or SEC, on March 8, 2018. Further, any forward-looking statement speaks only as of the date on which it is made, and we undertake no obligation to update any forward-looking statement to reflect events or circumstances after the date on which the statement is made or to reflect the occurrence of unanticipated events. New factors emerge from time to time, and it is not possible for us to predict which factors will arise. In addition, we cannot assess the impact of each factor on our business or the extent to which any factor, or combination of factors, may cause actual results to differ materially from those contained in any forward-looking statements. We qualify all of the information presented in this quarterly report, and particularly our forward-looking statements, by these cautionary statements.

PART I—FINANCIAL INFORMATION

Item 1. Financial Statements.

Semler Scientific, Inc.

Condensed Statements of Operations

(In thousands of U.S. Dollars, except share and per share data)

	(Unaudited) **For the three months ended September 30**		*(Unaudited)* **For the nine months ended September 30**	
	2018	2017	2018	2017
Revenues	$ 5,579	$ 3,607	$ 15,526	$ 8,239
Operating expenses:				
Cost of revenues	615	724	1,999	1,855
Engineering and product development	587	432	1,443	1,345
Sales and marketing	1,798	1,350	5,283	3,502
General and administrative	1,033	1,025	2,908	2,765
Total operating expenses	4,033	3,531	11,633	9,467
Income (loss) from operations	1,546	76	3,893	(1,228)
Interest expense	(1)	(42)	(57)	(190)
Related party interest expense	(74)	(75)	(206)	(158)
Loss on extinguishment of loans	-	-	-	(179)
Other expense	(3)	-	(4)	(8)
Other expense	(78)	(117)	(267)	(535)
Net income (loss)	$ 1,468	$ (41)	$ 3,626	$ (1,763)
Net income (loss) per share:				
Basic	$ 0.24	$ (0.01)	$ 0.60	$ (0.33)
Diluted	$ 0.19	$ (0.01)	$ 0.48	$ (0.33)
Weighted average number of shares used in computing: basic and diluted loss per share				
Basic	6,086,489	5,463,568	5,998,460	5,346,178

Diluted	7,927,788	5,463,568	7,611,961	5,346,178

See accompanying notes to unaudited condensed financial statements.

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Semler Scientific, Inc.

Condensed Balance Sheets

(In thousands of U.S. Dollars, except share and per share data)

	(*Unaudited*) **September 30,** 2018	December 31, 2017
Assets		
Current Assets:		
Cash	$ 3,087	$ 1,457
Trade accounts receivable, net of allowance for doubtful accounts of $52 and $35, respectively	2,480	1,315
Prepaid expenses and other current assets	171	111
Total current assets	5,738	2,883
Assets for lease, net	1,045	1,147
Property and equipment, net	245	193
Long-term deposits	15	15
Total assets	$ 7,043	$ 4,238
Liabilities and Stockholders' Equity (Deficit)		
Current liabilities:		
Accounts payable	$ 251	$ 488
Accrued expenses	2,259	2,670
Deferred revenue	371	531
Accrued interest	-	168
Accrued interest – related party	-	28
Loans payable net of debt discount of $0 and $9, respectively	-	1,018
Related party loans payable net of debt discount of $0 and $13, respectively	1,838	237
Total current liabilities	4,719	5,140
Long-term liabilities:		
Deferred rent	12	13
Loans payable, less current portion	-	26
Related party loans payable, less current portion	-	1,642
Total long-term liabilities	12	1,681

Stockholders' equity (deficit):		
Common stock, $0.001 par value; 50,000,000 shares authorized; 6,198,294 and 5,902,244 shares issued, and 6,173,294 and 5,877,244 outstanding (treasury shares of 25,000 and 25,000), respectively	6	6
Additional paid-in capital	25,112	23,843
Accumulated deficit	(22,806)	(26,432)
Total stockholders' equity (deficit)	2,312	(2,583)
Total liabilities and stockholders' equity (deficit)	$ 7,043	$ 4,238

See accompanying notes to unaudited condensed financial statements.

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Semler Scientific, Inc.

Condensed Statements of Cash Flows

(In thousands of U.S. Dollars)

	(*Unaudited*)	
	Nine months ended September 30	
	2018	2017
CASH FLOWS FROM OPERATING ACTIVITIES:		
Net income (loss)	$ 3,626	$ (1,763)
Reconciliation of Net Income (Loss) to Net Cash Provided by Operating Activities:		
Amortization of debt discount	22	138
Accretion of non-cash interest	200	109
Loss on extinguishment of debt	-	179
Depreciation	373	409
Loss on disposal of property and equipment	2	(1)
Loss on disposal of assets for lease	150	200
Allowance for doubtful accounts	39	7
Stock-based compensation expense	470	253
Changes in Operating Assets and Liabilities:		
Trade accounts receivable	(1,165)	(607)
Prepaid expenses and other current assets	(60)	(65)
Accounts payable	(237)	197
Accrued expenses	(609)	763
Deferred revenue	(160)	362
Net Cash Provided By Operating Activities	2,651	181
CASH FLOWS FROM INVESTING ACTIVITIES:		
Additions to property and equipment	(131)	(24)
Proceeds from disposal of property and equipment	1	2
Purchase of assets for lease	(323)	(764)
Net Cash Used in Investing Activities	(453)	(786)
CASH FLOWS FROM FINANCING ACTIVITIES:		
Proceeds from issuance of common stock	-	475
Exercise of warrants	64	-
Exercise of stock options	440	78
Proceeds from loans payable	-	114
Payments of loans payable	(1,072)	(106)

Net Cash (Used in) Provided by Financing Activities		(568)		561
INCREASE (DECREASE) IN CASH		1,630		(44)
CASH, BEGINNING OF PERIOD		1,457		622
CASH, END OF PERIOD	$	3,087	$	578
Cash paid for interest	$	192	$	10
Supplemental disclosure of noncash financing activity:				
Retirement of related party loans payable through common stock issuance	$	294	$	-
Reclassification of accrued interest to debt upon extinguishment	$	-	$	162
Fair value of warrants issued to lenders	$	-	$	288

See accompanying notes to unaudited condensed financial statements

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Semler Scientific, Inc.

Notes to Condensed Financial Statements

Unaudited

(In thousands of U.S. Dollars, except share and per share data)

1. Basis of Presentation

Semler Scientific, Inc., a Delaware corporation ("Semler" or "the Company"), prepared the unaudited interim financial statements included in this report in accordance with United States generally accepted accounting principles ("GAAP") and applicable rules and regulations of the Securities and Exchange Commission ("SEC") for interim financial reporting. Certain information and note disclosures normally included in the financial statements prepared in accordance with GAAP have been condensed or omitted pursuant to such rules and regulations. As such, the information included in this quarterly report on Form 10-Q should be read in conjunction with the audited financial statements and notes thereto included in the Company's annual report on Form 10-K for the year ended December 31, 2017 filed with the SEC on March 8, 2018 (the "Annual Report"). In the opinion of management, these financial statements include all adjustments (consisting of normal recurring adjustments) necessary for a fair statement of the financial position, results of operations and cash flows for the periods presented. The results of operations for the interim periods shown in this report are not necessarily indicative of the results that may be expected for any future period, including the full year.

Recently Issued Accounting Pronouncements

Accounting Pronouncements Recently Adopted

In November 2015, the Financial Accounting Standards Board ("FASB") issued Accounting Standard Update ("ASU") No. 2015-17, Balance Sheet Classification of Deferred Taxes, to reduce complexity and simplify the reporting of deferred income tax liabilities and assets. The amendments in this update require that all deferred tax liabilities and assets be classified as noncurrent in a classified balance sheet. The current requirement that deferred tax liabilities and assets of a tax-paying component of an entity be offset and presented as a single amount is not affected by the amendment of this update. This standard is effective for the Company's annual periods beginning after December 15, 2017 and interim periods within annual periods beginning after December 15, 2018, with earlier application permitted. The Company adopted the new standard in the first quarter of 2018. The Company maintains full valuation allowances on all deferred tax balances, and therefore, the adoption of this standard did not have a material impact on its financial statements.

In May 2017, the FASB issued ASU No. 2017-09, Compensation—Stock Compensation (Topic 718) — Scope of Modification Accounting. This ASU requires modification accounting for a change in terms or conditions of a share-based payment award only if the fair value, the vesting condition, or the classification of the award (as liability or equity) changes as a result of the changes in terms or conditions. The amendments, which are to be applied prospectively to modifications after adoption, are effective for the Company's annual periods beginning after December 15, 2017, with early adoption permitted. The Company adopted the new standard in the first quarter of 2018 and it did not have a material effect on the Company's financial position or results of operations.

Accounting Pronouncements Not Yet Adopted

In May 2014, the FASB issued ASU No. 2014-09, Revenue from Contracts with Customers (“ASU No. 2014-09”). The amendment in this ASU provides guidance on the revenue recognition to depict the transfer of promised goods or services to customers in an amount that reflects the consideration to which the entity expects to be entitled in exchange for those goods or services. The core principle of this update provides guidance to identify the performance obligations under the contract(s) with a customer and how to allocate the transaction price to the performance obligations in the contract. It further provides guidance to recognize revenue when (or as) the entity satisfies a performance obligation. This standard will replace most existing revenue recognition guidance. On August 8, 2015, the FASB issued ASU 2015-14, which defers the effective date of ASU No. 2014-09 by one year, and permits early adoption as long as the adoption date is not before the original public entity effective date. This standard is effective for the Company’s year ending December 31, 2019 with early adoption permitted for the year ended December 31, 2017. Since the issuance of ASU 2014-09, the FASB has issued several amendments that clarify certain points, including ASU 2016-08, Principal versus Agent Considerations (Reporting Revenue Gross versus Net), ASU 2016-10, Identifying Performance Obligations and Licensing, ASU 2016-11, Rescission of SEC Guidance Because of Accounting Standards Updates 2014-09 and 2014-16 Pursuant to Staff Announcements at the March 3, 2016 Emerging Issues Task Force Meeting, and ASU 2016-12, Narrow-Scope Improvements and Practical Expedients, and ASU No. 2016-20, Technical Corrections and Improvements to Topic 606. The updated revenue standard allows two methods of adoption: (1) retrospectively to each prior period presented (“full retrospective method”), or (2) retrospectively with the cumulative effect recognized in retained earnings as of the date of adoption (“modified retrospective method”). The new standard further requires new disclosures about contracts with customers, including the significant judgments the company has made when applying the guidance. The Company will adopt the new standard effective January 1, 2019, using the modified retrospective transition method. The Company is currently evaluating the impact that this new standard will have on its financial statements.

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Notes to Condensed Financial Statements

Unaudited

(In thousands of U.S. Dollars, except share and per share data)

In January 2016, the FASB issued ASU No. 2016-02, Leases (Topic 842) ("ASU No. 2016-02"). Under the new guidance in ASU No. 2016-02, lessees will be required to recognize the following for all leases (with the exception of short-term leases) at the commencement date: 1) A lease liability, which is a lessee‘s obligation to make lease payments arising from a lease, measured on a discounted basis; and 2) A right-of-use asset, which is an asset that represents the lessee’s right to use, or control the use of, a specified asset for the lease term. Under the new guidance, lessor accounting is largely unchanged, however, certain targeted improvements were made. ASU No. 2016-02 also simplifies the accounting for sale and leaseback transactions. Lessees (for capital and operating leases) and lessors (for sales-type, direct financing, and operating leases) must apply a modified retrospective transition approach for leases existing at, or entered into after, the beginning of the earliest comparative period presented in the financial statements. Lessees and lessors may not apply a full retrospective transition approach. The new standard also requires expanded disclosures regarding leasing arrangements. In July 2018, the FASB issued ASU No. 2018-11, Leases (Topic 842): Targeted Improvements. This ASU provides another transition method in addition to the existing transition method by allowing entities to initially apply the new leases standard at the adoption date and recognize a cumulative effect adjustment to the opening balance of retained earnings in the period of adoption. This ASU also provides further guidance on lessors accounting policy election to not separate non-lease components from the associated lease components and limits this to circumstances in which the non-lease component or components otherwise would be accounted for under the new revenue guidance and both (1) the timing and pattern of transfer are the same for the non-lease component(s) and associated lease component, and (2) the lease component, if accounted for separately, would be classified as a an operating lease. This update is effective for the Company’s annual periods beginning after December 15, 2019, including interim periods within those fiscal years. The Company will adopt the new standard in the first quarter of fiscal year 2020. The Company is currently evaluating the impact that this new standard will have on its financial statements.

In June 2016, the FASB issued ASU No. 2016-13, Financial Instruments – Credit Losses (Topic 326): Measurement of Credit Losses on Financial Instruments (“ASU 2016-13”). This ASU requires timelier recording of credit losses on loans and other financial instruments held. Instead of reserves based on a current probability analysis, ASU 2016-13 requires the measurement of all expected credit losses for financial assets held at the reporting date based on historical experience, current conditions, and reasonable and supportable forecasts. All organizations will now use forward-looking information to better inform their credit loss estimates. ASU 2016-13 requires enhanced disclosures regarding significant estimates and judgments used in estimating credit losses, as well as the credit quality and underwriting standards of an organization’s portfolio. These disclosures include qualitative and quantitative requirements that provide information about the amounts recorded in the financial statements. In addition, ASU 2016-13 amends the accounting for credit losses on available-for-sale debt securities and purchased financial assets with credit deterioration. This standard is effective for the Company’s fiscal years beginning after December 15, 2020. The Company will adopt the new standard in fiscal year 2021. The Company is currently evaluating the effect the new standard will have on its financial statements.

In June 2018, the FASB issued ASU No. 2018-07, Compensation – Stock Compensation (Topic 718): Improvements to Nonemployee Share-Based Payment Accounting (“ASU 2018-07”). This ASU expands the scope of Topic 718 to include share-based payment transactions for acquiring goods and services from nonemployees. An entity should apply the requirements of Topic 718 to nonemployee awards except for specific guidance on inputs to an option pricing model and the attribution of costs. The ASU specifies that Topic 718 applies to all share-based payment transactions in which a grantor acquires goods or services to be used or consumed in a grantor’s own operations by issuing share-based payment awards. This standard is effective for the Company’s annual periods beginning after December 15, 2019, including interim periods within those fiscal years. The Company will adopt the new standard in the first quarter of fiscal year 2020. The Company is currently evaluating the impact that this new standard will have on its financial statements.

In August 2018, the FASB issued ASU No. 2018-13, Fair Value Measurement (Topic 820): Disclosure Framework – Changes to the Disclosure Requirements for Fair Value Measurement. The amendments in this ASU modify the disclosure requirements on fair value measurements removing the requirements to disclosure amount of and reasons for transfers between Level 1 and Level 2 of the fair value hierarchy, the policy for timing of transfers between levels, and the valuation processes for Level 3 fair value measurements. In addition, it modified certain disclosures related to Level 3 fair value measurements and added additional disclosures regarding the range and weighted average of significant unobservable inputs used to develop Level 3 fair value measurements and the changes in unrealized gains and losses for the period included in other comprehensive income for recurring Level 3 fair value measurements held at the end of the reporting period. This update is effective for the Company’s annual periods beginning after December 15, 2019, including interim periods within those fiscal years. The Company will adopt the new standard in the first quarter of fiscal year 2020. The Company does not anticipate this update to have a material impact on its financial statements.

2. Going Concern

From inception through the third quarter of 2017, the Company incurred recurring losses as a result of costs and expenses related to the Company’s marketing and other promotional activities, and continued research and development of its products. The Company generated a net profit for the nine months ended September 30, 2018. As of September 30, 2018, the Company has working capital of $1,019, cash of $3,087 and stockholders’ equity of $2,312. The Company’s principal sources of cash have included the issuance of equity securities, to a lesser extent, borrowings under loan agreements and revenues from leasing its products. To increase revenues, the Company’s operating expenses will continue to grow and, as a result, the Company will need to generate significant additional revenues to maintain profitability.

Semler Scientific, Inc.

Notes to Condensed Financial Statements

Unaudited

(In thousands of U.S. Dollars, except share and per share data)

The Company’s financial statements as of September 30, 2018 have been prepared under the assumption that the Company will continue as a going concern. The Company’s ability to continue as a going concern is dependent upon its ability to attain further operating efficiencies and, ultimately, to generate additional revenues or raise additional capital. The financial statements do not include any adjustments that might result from the outcome of this uncertainty. The Company can give no assurances that additional revenues that the Company may be able to generate nor any additional capital that the Company is able to obtain, if any, will be sufficient to meet the Company’s needs. The foregoing conditions raise substantial doubt about the Company’s ability to continue as a going concern.

3. Assets for Lease, net

Assets for lease consist of the following:

	September 30, 2018	December 31, 2017
Assets for lease	$ 1,956	$ 1,847
Less: accumulated depreciation	(911)	(700)
Assets for lease, net	$ 1,045	$ 1,147

Depreciation expense amounted to $97 and $81 for the three months ended September 30, 2018 and 2017, respectively. Depreciation expense amounted to $296 and $266 for the nine months ended September 30, 2018 and 2017, respectively. Reduction to accumulated depreciation for returned items was $24 and $30 for the three months ended September 30, 2018 and 2017, respectively. Reduction to accumulated depreciation for returned items was $85 and $121 for the nine months ended September 30, 2018 and 2017, respectively. The Company recognized a loss on disposal of assets for lease in the amount of $43 and $58 for the three months ended September 30, 2018 and 2017, respectively. The Company recognized a loss on disposal of assets for lease in the amount of $150 and $200 for the nine months ended September 30, 2018 and 2017, respectively.

4. Property and Equipment, net

Capital assets consist of the following:

	September 30, 2018	December 31, 2017
Capital assets	$ 448	$ 322
Less: accumulated depreciation	(203)	(129)
Capital assets, net	$ 245	$ 193

Depreciation expense amounted to $27 and $47 for the three months ended September 30, 2018 and 2017, respectively. Depreciation expense amounted to $77 and $143 for the nine months ended September 30, 2018 and 2017, respectively.

Semler Scientific, Inc.

Notes to Condensed Financial Statements

Unaudited

(In thousands of U.S. Dollars, except share and per share data)

5. Accrued Expenses

Accrued expenses consist of the following:

Barrier Booster Notes
Linked to the EURO STOXX 50® Index,
Due March 1, 2022

STRUCTURING THE NOTES

The Notes are our debt securities, the return on which is linked to the performance of the Reference Asset. As is the case for all of our debt securities, including our structured notes, the economic terms of the Notes reflect our actual or perceived creditworthiness at the time of pricing. In addition, because structured notes result in increased operational, funding and liability management costs to us, we typically borrow the funds under these Notes at a rate that is more favorable to us than the rate that we might pay for a conventional fixed or floating rate debt security of comparable maturity. Using this relatively lower implied borrowing rate rather than the secondary market rate, is a factor that reduced the initial estimated value of the Notes at the time their terms were set. Unlike the estimated value included in this pricing supplement, any value of the Notes determined for purposes of a secondary market transaction may be based on a different funding rate, which may result in a lower value for the Notes than if our initial internal funding rate were used.

In order to satisfy our payment obligations under the Notes, we may choose to enter into certain hedging arrangements (which may include call options, put options or other derivatives) on the issue date with RBCCM or one of our other subsidiaries. The terms of these hedging arrangements take into account a number of factors, including our creditworthiness, interest rate movements, the volatility of the Reference Asset, and the tenor of the Notes. The economic terms of the Notes and their initial estimated value depend in part on the terms of these hedging arrangements.

The lower implied borrowing rate is a factor that reduces the economic terms of the Notes to you. The initial offering price of the Notes also reflects the underwriting commission and our estimated hedging costs. These factors result in the initial estimated value for the Notes on the Pricing Date being less than their public offering price. See “Selected Risk Considerations—The Initial Estimated Value of the Notes Is Less than the Price to the Public” above.

VALIDITY OF THE NOTES

In the opinion of Norton Rose Fulbright Canada LLP, the issue and sale of the Notes has been duly authorized by all necessary corporate action of the Bank in conformity with the Indenture, and when the Notes have been duly executed, authenticated and issued in accordance with the Indenture and delivered against payment therefor, the Notes will be validly issued and, to the extent validity of the Notes is a matter governed by the laws of the Province of Ontario or Québec, or the laws of Canada applicable therein, and will be valid obligations of the Bank, subject to equitable remedies which may only be granted at the discretion of a court of competent authority, subject to applicable bankruptcy, to rights to indemnity and contribution under the Notes or the Indenture which may be limited by applicable law; to insolvency and other laws of general application affecting creditors’ rights, to limitations under applicable limitations statutes, and to limitations as to the currency in which judgments in Canada may be rendered, as prescribed by the Currency Act (Canada). This opinion is given as of the date hereof and is limited to the laws of the Provinces of Ontario and Québec and the federal laws of Canada applicable thereto. In addition, this opinion is subject to customary assumptions about the Trustee’s authorization, execution and delivery of the Indenture and the genuineness of signatures and certain factual matters, all as stated in the letter of such counsel dated January 8, 2016, which has been filed as Exhibit 5.1 to Royal Bank’s Form 6-K dated January 8, 2016.

In the opinion of Morrison & Foerster LLP, when the Notes have been duly completed in accordance with the Indenture and issued and sold as contemplated by the prospectus supplement and the prospectus, the Notes will be valid, binding and enforceable obligations of Royal Bank, entitled to the benefits of the Indenture, subject to applicable bankruptcy, insolvency and similar laws affecting creditors’ rights generally, concepts of reasonableness and equitable principles of general applicability (including, without limitation, concepts of good faith, fair dealing and the lack of bad faith). This opinion is given as of the date hereof and is limited to the laws of the State of New York. This opinion is subject to customary assumptions about the Trustee's authorization, execution and delivery of the Indenture and the genuineness of signatures and to such counsel's reliance on the Bank and other sources as to certain factual matters, all as stated in the legal opinion dated January 8, 2016, which has been filed as Exhibit 5.2 to the Bank's Form 6-K dated January 8, 2016.

P-12 RBC Capital Markets, LLC