

OLYMPIC STEEL INC
Form 4
January 04, 2008

FORM 4

UNITED STATES SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549

OMB APPROVAL

OMB Number: 3235-0287
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Check this box if no longer subject to Section 16. Form 4 or Form 5 obligations may continue. See Instruction 1(b).

STATEMENT OF CHANGES IN BENEFICIAL OWNERSHIP OF SECURITIES

Filed pursuant to Section 16(a) of the Securities Exchange Act of 1934, Section 17(a) of the Public Utility Holding Company Act of 1935 or Section 30(h) of the Investment Company Act of 1940

(Print or Type Responses)

1. Name and Address of Reporting Person *
GOLDSTEIN HOWARD

(Last) (First) (Middle)

5096 RICHMOND ROAD

(Street)

BEDFORD HEIGHTS, OH 44146

(City) (State) (Zip)

2. Issuer Name and Ticker or Trading Symbol
OLYMPIC STEEL INC [ZEUS]

3. Date of Earliest Transaction
(Month/Day/Year)
01/02/2008

4. If Amendment, Date Original Filed(Month/Day/Year)

5. Relationship of Reporting Person(s) to Issuer

(Check all applicable)

Director 10% Owner
 Officer (give title below) Other (specify below)

6. Individual or Joint/Group Filing(Check Applicable Line)
 Form filed by One Reporting Person
 Form filed by More than One Reporting Person

Table I - Non-Derivative Securities Acquired, Disposed of, or Beneficially Owned

1. Title of Security (Instr. 3)	2. Transaction Date (Month/Day/Year)	2A. Deemed Execution Date, if any (Month/Day/Year)	3. Transaction Code (Instr. 8)	4. Securities Acquired (A) or Disposed of (D) (Instr. 3, 4 and 5)	5. Amount of Securities Beneficially Owned Following Reported Transaction(s) (Instr. 3 and 4)	6. Ownership Form: Direct (D) or Indirect (I) (Instr. 4)	7. Nature of Ownership Indirect Beneficial Ownership (Instr. 4)		
				(A) or (D)	Code	V	Amount	(D)	Price

Reminder: Report on a separate line for each class of securities beneficially owned directly or indirectly.

Persons who respond to the collection of information contained in this form are not required to respond unless the form displays a currently valid OMB control number.

SEC 1474
(9-02)

Table II - Derivative Securities Acquired, Disposed of, or Beneficially Owned (e.g., puts, calls, warrants, options, convertible securities)

1. Title of Derivative Security (Instr. 3)	2. Conversion or Exercise Price of	3. Transaction Date (Month/Day/Year)	3A. Deemed Execution Date, if any (Month/Day/Year)	4. Transaction Code (Instr. 8)	5. Number of Derivative Securities Acquired	6. Date Exercisable and Expiration Date (Month/Day/Year)	7. Title and Amount of Underlying Securities (Instr. 3 and 4)	8. Price of Underlying Securities (Instr. 3 and 4)
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Derivative Security			(A) or Disposed of (D) (Instr. 3, 4, and 5)		Date Exercisable	Expiration Date	Title	Amount or Number of Shares
			Code	V				
Restricted Share Units	(1)	01/02/2008	A	1,800	(2)	(2)	Common Stock	1,800

Reporting Owners

Reporting Owner Name / Address	Relationships			
	Director	10% Owner	Officer	Other
GOLDSTEIN HOWARD 5096 RICHMOND ROAD BEDFORD HEIGHTS, OH 44146			X	

Signatures

/s/ Howard Goldstein 01/04/2008

**Signature of Reporting Person Date

Explanation of Responses:

- * If the form is filed by more than one reporting person, see Instruction 4(b)(v).
- ** Intentional misstatements or omissions of facts constitute Federal Criminal Violations. See 18 U.S.C. 1001 and 15 U.S.C. 78ff(a).
- (1) Each restricted share unit represents a right to receive one share of Olympic Steel, Inc. common stock.
- (2) The restricted share units are fully vested, but will not be delivered to the reporting person until the reporting person ceases to be a member of the Board of Directors.

Note: File three copies of this Form, one of which must be manually signed. If space is insufficient, see Instruction 6 for procedure. Potential persons who are to respond to the collection of information contained in this form are not required to respond unless the form displays a currently valid OMB number. for the period from January 1, 2008 through June 27, 2018.

Period-Start Date	Period-End Date	High Intra-Day Price of this Reference Stock (\$)	Low Intra-Day Price of this Reference Stock (\$)	Period-End Closing Price of this Reference Stock (\$)
1/1/2008	3/31/2008	97.43	61.20	71.30
4/1/2008	6/30/2008	84.88	70.65	73.33
7/1/2008	9/30/2008	91.75	61.33	72.76
10/1/2008	12/30/2008	71.95	34.68	50.76
1/1/2009	3/31/2009	75.61	47.64	73.44
4/1/2009	6/30/2009	88.56	71.71	83.66
7/1/2009	9/30/2009	94.50	75.41	93.36
10/1/2009	12/30/2009	145.91	88.27	136.50
1/1/2010	3/31/2010	138.19	113.83	135.73
4/1/2010	6/30/2010	151.09	106.01	109.26

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7/1/2010	9/30/2010	161.75	105.80	157.06
10/1/2010	12/30/2010	185.65	151.42	182.75
1/1/2011	3/31/2011	191.60	160.59	180.13
4/1/2011	6/30/2011	206.39	175.39	204.49
7/1/2011	9/30/2011	243.99	177.12	216.23
10/1/2011	12/30/2011	246.71	167.00	173.10
1/1/2012	3/30/2012	209.85	172.00	202.51
4/1/2012	6/29/2012	233.84	183.66	228.35
7/1/2012	9/28/2012	264.08	212.62	254.32
10/1/2012	12/31/2012	263.08	218.23	251.14
1/1/2013	3/31/2013	284.68	252.07	266.49
4/1/2013	6/30/2013	283.31	245.78	277.69
7/1/2013	9/30/2013	320.50	277.18	312.64
10/1/2013	12/31/2013	405.50	296.56	398.79
1/1/2014	3/31/2014	408.06	330.89	336.52
4/1/2014	6/30/2014	348.17	284.38	324.78
7/1/2014	9/30/2014	364.84	304.60	322.44
10/1/2014	12/31/2014	341.15	284.00	310.35
1/1/2015	3/31/2015	389.37	285.26	372.10
4/1/2015	6/30/2015	452.64	368.34	434.09
7/1/2015	9/30/2015	580.57	425.68	511.89
10/1/2015	12/31/2015	696.38	506.14	675.89
1/1/2016	3/31/2016	657.09	474.02	593.64
4/1/2016	6/30/2016	731.41	585.25	715.62
7/1/2016	9/30/2016	839.95	716.59	837.31
10/1/2016	12/31/2016	847.06	710.25	749.87
1/1/2017	3/31/2017	890.22	747.76	886.54
4/1/2017	6/30/2017	1,016.50	884.59	968.00
7/1/2017	9/30/2017	1,083.15	931.75	961.35
10/1/2017	12/31/2017	1,213.38	950.50	1,169.47
1/1/2018	3/31/2018	1,617.54	1,171.00	1,447.34
4/1/2018	6/27/2018	1,763.00	1,352.88	1,660.51

PAST PERFORMANCE IS NOT INDICATIVE OF FUTURE RESULTS.

P-13 RBC Capital Markets, LLC

Auto-Callable Contingent Coupon Barrier Notes
Linked to the Lesser Performing of Four
Equity Securities
Royal Bank of Canada

The graph below illustrates the performance of this Reference Stock from January 1, 2008 to June 27, 2018, reflecting its Initial Stock Price of \$1,660.51. The red line represents the Coupon Barrier and Trigger Price of \$830.26, which is equal to 50.00% of its Initial Stock Price, rounded to two decimal places.

P-14 RBC Capital Markets, LLC

Auto-Callable Contingent Coupon Barrier Notes
 Linked to the Lesser Performing of Four
 Equity Securities
 Royal Bank of Canada

Historical Information for Facebook, Inc. ("FB")

Below is a table setting forth the intra-day high, intra-day low and period-end closing prices of this Reference Stock. The information provided in the table is for the period from May 18, 2012 through June 27, 2018.

Period-Start Date	Period-End Date	High Intra-Day Price of this Reference Stock (\$)	Low Intra-Day Price of this Reference Stock (\$)	Period-End Closing Price of this Reference Stock (\$)
5/18/2012	6/30/2012	43.00	25.52	31.12
7/1/2012	9/30/2012	32.88	17.55	21.65
10/1/2012	12/31/2012	28.87	18.80	26.63
1/1/2013	3/31/2013	32.50	24.73	25.58
4/1/2013	6/30/2013	29.07	22.67	24.86
7/1/2013	9/30/2013	51.59	24.15	50.24
10/1/2013	12/31/2013	58.57	43.56	54.66
1/1/2014	3/31/2014	72.58	51.85	60.24
4/1/2014	6/30/2014	67.99	54.67	67.29
7/1/2014	9/30/2014	79.69	62.22	79.04
10/1/2014	12/31/2014	82.16	70.32	78.02
1/1/2015	3/31/2015	86.06	73.45	82.22
4/1/2015	6/30/2015	89.40	76.79	85.77
7/1/2015	9/30/2015	99.24	72.00	89.90
10/1/2015	12/31/2015	110.64	88.36	104.66
1/1/2016	3/31/2016	117.59	89.38	114.10
4/1/2016	6/30/2016	121.07	106.32	114.28
7/1/2016	9/30/2016	131.97	112.97	128.27
10/1/2016	12/31/2016	133.50	113.56	115.05
1/1/2017	3/31/2017	142.94	115.51	142.05
4/1/2017	6/30/2017	156.50	138.82	150.98
7/1/2017	9/30/2017	175.45	147.80	170.87
10/1/2017	12/31/2017	184.23	168.30	176.46
1/1/2018	3/31/2018	195.31	149.02	159.79
4/1/2018	6/27/2018	203.55	150.51	195.84

PAST PERFORMANCE IS NOT INDICATIVE OF FUTURE RESULTS.

The graph below illustrates the performance of this Reference Stock from May 18, 2012 to June 27, 2018, reflecting its Initial Stock Price of \$195.84. The red line represents the Coupon Barrier and Trigger Price of \$97.92, which is equal to 50.00% of its Initial Stock Price.

P-15 RBC Capital Markets, LLC

Auto-Callable Contingent Coupon Barrier Notes
 Linked to the Lesser Performing of Four
 Equity Securities
 Royal Bank of Canada

Historical Information for Alphabet Inc. (“GOOGL”)

Below is a table setting forth the intra-day high, intra-day low and period-end closing prices of this Reference Stock. The information provided in the table is for the period from January 1, 2008 through June 27, 2018. Prior to the completion of the issuer’s formation and subsequent stock split in April 2014, information below represents Google’s Class A common stock which traded under on the Nasdaq Global Market under the symbol “GOOGL.”

Period-Start Date	Period-End Date	High Intra-Day Price of this Reference Stock (\$)	Low Intra-Day Price of this Reference Stock (\$)	Period-End Closing Price of this Reference Stock (\$)
1/1/2008	3/31/2008	349.02	206.25	220.45
4/1/2008	6/30/2008	301.52	220.71	263.47
7/1/2008	9/30/2008	278.07	190.57	200.45
10/1/2008	12/30/2008	208.60	123.77	151.70
1/1/2009	3/31/2009	190.68	141.51	174.20
4/1/2009	6/30/2009	223.89	170.47	211.00
7/1/2009	9/30/2009	253.75	198.19	248.17
10/1/2009	12/30/2009	313.25	241.53	311.67
1/1/2010	3/31/2010	315.06	260.25	283.78
4/1/2010	6/30/2010	299.20	222.58	222.69
7/1/2010	9/30/2010	268.64	217.03	263.15
10/1/2010	12/30/2010	315.71	259.68	299.72
1/1/2011	3/31/2011	321.65	275.94	293.39
4/1/2011	6/30/2011	297.88	236.74	253.44
7/1/2011	9/30/2011	314.00	245.67	257.44
10/1/2011	12/30/2011	323.69	240.62	323.26
1/1/2012	3/30/2012	335.45	282.60	320.93
4/1/2012	6/29/2012	326.89	278.54	290.32
7/1/2012	9/28/2012	382.79	281.37	377.62
10/1/2012	12/31/2012	387.54	318.33	355.03
1/1/2013	3/31/2013	422.41	348.10	397.40
4/1/2013	6/30/2013	460.70	381.04	440.61
7/1/2013	9/30/2013	464.45	423.19	438.38
10/1/2013	12/31/2013	561.04	421.90	560.90
1/1/2014	3/31/2014	615.04	542.03	557.80
4/1/2014	6/30/2014	589.60	511.04	584.67
7/1/2014	9/30/2014	608.85	567.60	588.41
10/1/2014	12/31/2014	592.40	497.22	530.66
1/1/2015	3/31/2015	583.12	491.00	554.70
4/1/2015	6/30/2015	584.60	529.01	540.04
7/1/2015	9/30/2015	713.30	539.80	638.37
10/1/2015	12/31/2015	798.69	631.24	778.01
1/1/2016	3/31/2016	810.21	682.20	762.90
4/1/2016	6/30/2016	790.95	672.71	703.53
7/1/2016	9/30/2016	818.97	699.00	804.06
10/1/2016	12/31/2016	839.00	744.03	792.45

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1/1/2017	3/31/2017	874.35	796.89	847.80
4/1/2017	6/30/2017	1,008.46	834.78	929.68
7/1/2017	9/30/2017	1,006.05	915.52	973.72
10/1/2017	12/31/2017	1,086.32	962.11	1,053.40
1/1/2018	3/31/2018	1,197.99	984.00	1,037.14
4/1/2018	6/27/2018	1,201.30	994.82	1,116.94

PAST PERFORMANCE IS NOT INDICATIVE OF FUTURE RESULTS.

P-16 RBC Capital Markets, LLC

Auto-Callable Contingent Coupon Barrier Notes
Linked to the Lesser Performing of Four
Equity Securities
Royal Bank of Canada

The graph below illustrates the performance of this Reference Stock from January 1, 2008 to June 27, 2018, reflecting its Initial Stock Price of \$1,116.94. The red line represents the Coupon Barrier and Trigger Price of \$558.47, which is equal to 50.00% of its Initial Stock Price.

P-17 RBC Capital Markets, LLC

Auto-Callable Contingent Coupon Barrier Notes
 Linked to the Lesser Performing of Four
 Equity Securities
 Royal Bank of Canada

Historical Information for Netflix Inc. (“NFLX”)

Below is a table setting forth the intra-day high, intra-day low and period-end closing prices of this Reference Stock. The information provided in the table is for the period from January 1, 2008 through June 27, 2018.

Period-Start Date	Period-End Date	High Intra-Day Price of this Reference Stock (\$)	Low Intra-Day Price of this Reference Stock (\$)	Period-End Closing Price of this Reference Stock (\$)
1/1/2008	3/31/2008	5.66	2.91	4.95
4/1/2008	6/30/2008	5.84	3.72	3.72
7/1/2008	9/30/2008	4.85	3.77	4.41
10/1/2008	12/30/2008	4.38	2.56	4.09
1/1/2009	3/31/2009	6.34	4.11	6.13
4/1/2009	6/30/2009	7.18	5.18	5.91
7/1/2009	9/30/2009	6.89	5.42	6.60
10/1/2009	12/30/2009	8.81	6.33	7.94
1/1/2010	3/31/2010	10.81	6.93	10.53
4/1/2010	6/30/2010	18.28	10.52	15.52
7/1/2010	9/30/2010	24.91	13.62	23.17
10/1/2010	12/30/2010	29.89	21.06	25.69
1/1/2011	3/31/2011	35.36	24.79	33.90
4/1/2011	6/30/2011	39.67	32.07	37.53
7/1/2011	9/30/2011	43.54	15.38	16.17
10/1/2011	12/30/2011	18.36	8.91	9.90
1/1/2012	3/30/2012	19.06	10.03	16.43
4/1/2012	6/29/2012	16.40	8.67	9.78
7/1/2012	9/28/2012	12.38	7.54	7.78
10/1/2012	12/31/2012	13.96	7.76	13.25
1/1/2013	3/31/2013	28.23	12.96	27.06
4/1/2013	6/30/2013	35.55	22.72	30.16
7/1/2013	9/30/2013	45.71	30.30	44.17
10/1/2013	12/31/2013	55.59	40.42	52.60
1/1/2014	3/31/2014	65.43	45.58	50.29
4/1/2014	6/30/2014	64.40	42.79	62.94
7/1/2014	9/30/2014	69.89	58.94	64.45
10/1/2014	12/31/2014	66.83	45.10	48.80
1/1/2015	3/31/2015	69.50	45.27	59.53
4/1/2015	6/30/2015	100.88	58.47	93.85
7/1/2015	9/30/2015	129.28	85.50	103.26
10/1/2015	12/31/2015	133.26	96.26	114.38
1/1/2016	3/31/2016	122.17	80.07	102.23
4/1/2016	6/30/2016	111.84	84.81	91.48
7/1/2016	9/30/2016	101.27	84.50	98.55
10/1/2016	12/31/2016	129.29	97.63	123.80
1/1/2017	3/31/2017	148.27	124.37	147.81
4/1/2017	6/30/2017	166.80	138.67	149.41

Explanation of Responses:

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7/1/2017	9/30/2017	190.25	144.25	181.35
10/1/2017	12/31/2017	204.38	176.58	191.96
1/1/2018	3/31/2018	333.98	195.44	295.35
4/1/2018	6/27/2018	423.15	271.42	390.39

PAST PERFORMANCE IS NOT INDICATIVE OF FUTURE RESULTS.

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Auto-Callable Contingent Coupon Barrier Notes
Linked to the Lesser Performing of Four
Equity Securities
Royal Bank of Canada

The graph below illustrates the performance of this Reference Stock from January 1, 2008 to June 27, 2018, reflecting its Initial Stock Price of \$390.39. The red line represents the Coupon Barrier and Trigger Price of \$195.20, which is equal to 50.00% of its Initial Stock Price, rounded to two decimal places.

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Auto-Callable Contingent Coupon Barrier Notes
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Royal Bank of Canada

SUPPLEMENTAL DISCUSSION OF U.S. FEDERAL INCOME TAX CONSEQUENCES

The following disclosure supplements, and to the extent inconsistent supersedes, the discussion in the product prospectus supplement dated January 8, 2016 under “Supplemental Discussion of U.S. Federal Income Tax Consequences.” The discussions below and in the accompanying product prospectus supplement do not address the tax consequences applicable to holders subject to Section 451(b) of the Code.

Under Section 871(m) of the Code, a “dividend equivalent” payment is treated as a dividend from sources within the United States. Such payments generally would be subject to a 30% U.S. withholding tax if paid to a non-U.S. holder. Under U.S. Treasury Department regulations, payments (including deemed payments) with respect to equity-linked instruments (“ELIs”) that are “specified ELIs” may be treated as dividend equivalents if such specified ELIs reference an interest in an “underlying security,” which is generally any interest in an entity taxable as a corporation for U.S. federal income tax purposes if a payment with respect to such interest could give rise to a U.S. source dividend. However, the IRS has issued guidance that states that the U.S. Treasury Department and the IRS intend to amend the effective dates of the U.S. Treasury Department regulations to provide that withholding on dividend equivalent payments will not apply to specified ELIs that are not delta-one instruments and that are issued before January 1, 2019. Based on our determination that the Notes are not delta-one instruments, non-U.S. holders should not be subject to withholding on dividend equivalent payments, if any, under the Notes. However, it is possible that the Notes could be treated as deemed reissued for U.S. federal income tax purposes upon the occurrence of certain events affecting the Reference Stocks or the Notes, and following such occurrence the Notes could be treated as subject to withholding on dividend equivalent payments. Non-U.S. holders that enter, or have entered, into other transactions in respect of the Reference Stocks or the Notes should consult their tax advisors as to the application of the dividend equivalent withholding tax in the context of the Notes and their other transactions. If any payments are treated as dividend equivalents subject to withholding, we (or the applicable withholding agent) would be entitled to withhold taxes without being required to pay any additional amounts with respect to amounts so withheld.

SUPPLEMENTAL PLAN OF DISTRIBUTION (CONFLICTS OF INTEREST)

Delivery of the Notes will be made against payment for the Notes on June 29, 2018, which is the second (2nd) business day following the Trade Date (this settlement cycle being referred to as “T+2”). See “Plan of Distribution” in the prospectus dated January 8, 2016. For additional information as to the relationship between us and RBCCM, please see the section “Plan of Distribution—Conflicts of Interest” in the prospectus dated January 8, 2016.

In the initial offering of the Notes, they will be offered to investors at a purchase price equal to par, except with respect to certain accounts as indicated on the cover page of this document.

The value of the Notes shown on your account statement may be based on RBCCM’s estimate of the value of the Notes if RBCCM or another of our affiliates were to make a market in the Notes (which it is not obligated to do). That estimate will be based upon the price that RBCCM may pay for the Notes in light of then prevailing market conditions, our creditworthiness and transaction costs. For a period of approximately three months after the issue date of the Notes, the value of the Notes that may be shown on your account statement may be higher than RBCCM’s estimated value of the Notes at that time. This is because the estimated value of the Notes will not include the underwriting discount and our hedging costs and profits; however, the value of the Notes shown on your account statement during that period may initially be a higher amount, reflecting the addition of RBCCM’s underwriting discount and our estimated costs and profits from hedging the Notes. This excess is expected to decrease over time until the end of this period. After this period, if RBCCM repurchases your Notes, it expects to do so at prices that reflect their estimated value.

We may use this pricing supplement in the initial sale of the Notes. In addition, RBCCM or another of our affiliates may use this pricing supplement in a market-making transaction in the Notes after their initial sale. Unless we or our agent informs the purchaser otherwise in the confirmation of sale, this pricing supplement is being used in a market-making transaction.

No Prospectus (as defined in Directive 2003/71/EC (as amended, the “Prospectus Directive”)) will be prepared in connection with the Notes. Accordingly, the Notes may not be offered to the public in any member state of the European Economic Area (the “EEA”), and any purchaser of the Notes who subsequently sells any of the Notes in any EEA member state must do so only in accordance with the requirements of the Prospectus Directive, as implemented in that member state.

The Notes are not intended to be offered, sold or otherwise made available to, and should not be offered, sold or otherwise made available to, any retail investor in the EEA. For these purposes, the expression “offer” includes the communication in any form and by any means of sufficient information on the terms of the offer and the Notes to be offered so as to enable an investor to decide to purchase or subscribe the Notes, and a “retail investor” means a person who is one (or more) of: (a) a retail client, as defined in point

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Auto-Callable Contingent Coupon Barrier Notes
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(11) of Article 4(1) of Directive 2014/65/EU (as amended, “MiFID II”); or (b) a customer, within the meaning of Insurance Distribution Directive 2016/97/EU, as amended, where that customer would not qualify as a professional client as defined in point (10) of Article 4(1) of MiFID II; or (c) not a qualified investor as defined in the Prospectus Directive. Consequently, no key information document required by Regulation (EU) No 1286/2014 (as amended, the “PRIIPs Regulation”) for offering or selling the Notes or otherwise making them available to retail investors in the EEA has been prepared, and therefore, offering or selling the Notes or otherwise making them available to any retail investor in the EEA may be unlawful under the PRIIPs Regulation.

STRUCTURING THE NOTES

The Notes are our debt securities, the return on which is linked to the performance of the Reference Stocks. 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 Stocks, 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 reduced 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 resulted in the initial estimated value for the Notes on the Trade 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.

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Auto-Callable Contingent Coupon Barrier Notes
Linked to the Lesser Performing of Four
Equity Securities, Due August 7, 2020
Royal Bank of Canada

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 filed with the SEC 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.

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