RBC Capital Markets

Barrier Notes

An overview of Barrier Notes

What are Barrier Notes?

Barrier Notes allow investors to express a view on whether a particular reference rate will be greater than a set reference barrier strike rate at a specified time in the future. If the reference rate observed at maturity is greater than the reference barrier strike rate, the investor receives their original principal plus coupons paid, if any. If the reference rate observed at maturity is less than the reference barrier strike rate, the investor will lose some or all of their principal but will receive coupons paid, if any.

Why would an investor purchase Barrier Notes?

An investor would purchase Barrier Notes in order to take a view on whether a reference rate will be above a predetermined barrier at maturity while potentially earning a coupon during the term of the note. The most commonly linked reference interest rates are 3 Month LIBOR and the 10 Year US Dollar Swap Rate. Barrier Notes can be structured to pay contingent or non-contingent coupons.

What are the risks of investing in Barrier Notes?

An investor can lose a substantial portion or all of their principal and their maximum gain is capped at the rate of interest that determines the coupons paid, if any. All payments on a Barrier Note are subject to the creditworthiness of the issuer. A trading market for the Barrier Notes may not develop and, if trading does develop, the market price that investors may receive or be quoted for the Barrier Notes on a date prior to the maturity date will be affected by many important factors, including the costs of developing, hedging and distributing the Barrier Notes. The price paid for the Barrier Notes in the secondary market may be higher or lower than the original purchase price. Many factors affect the trading value of the Barrier Notes; these factors interrelate in complex ways and the effect of any one factor may offset or magnify the effect of another factor. The return on the Barrier Notes may be lower than the return on other Royal Bank of Canada debt securities of comparable maturity. Potential conflicts of interest between RBC Capital Markets and investors may arise. Significant aspects of the tax treatment of the Barrier Notes are uncertain. You should consult with your own tax advisor about your own tax situation.

HYPOTHETICAL EXAMPLES OF AMOUNTS PAYABLE AT MATURITY

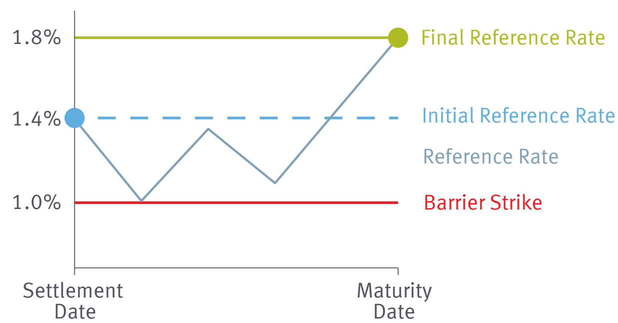
We demonstrate returns based on four scenarios, where:

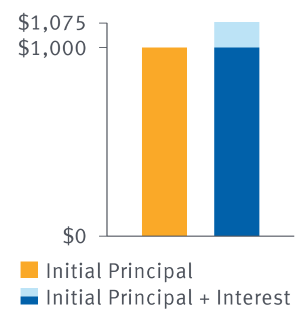
1) the Final Reference Rate is above the Barrier Strike at Maturity, 2) the Final Reference Rate is equal to the Barrier Strike at Maturity, 3) the Final Reference Rate is lower than the Barrier Strike at maturity and 4) the Final Reference Rate is significantly lower than the Barrier Strike at Maturity. For this example we assume: a one year term, an Initial Reference Rate of 1.40%, a Barrier Strike of 1.00% (approximately 71.5% of the Initial Reference Rate), and a non-contingent Coupon of 7.50% per annum. The Final Reference Rate is described in each example and determines the final return of principal.

The following examples are provided for purposes of illustration only. They should not be taken as an indication or prediction of future investment results and are intended merely to illustrate the impact that various hypothetical Final Reference Rates could have on the amount received at maturity, assuming all other variables remain constant. The actual performance of the note may bear little relation to the examples shown.

Example 1: Final Reference Rate is above Barrier Strike

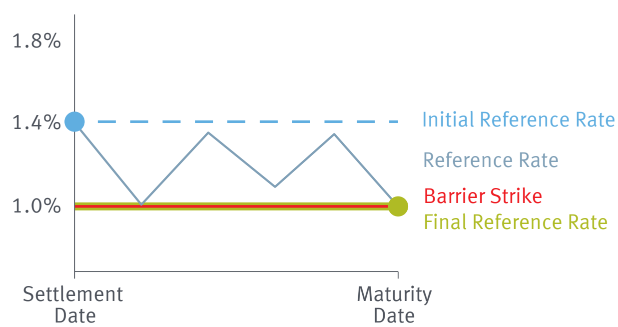
On the relevant observation date, the Final Reference Rate is 1.80%. Because the Final Reference Rate is greater than 1.00%, the investor receives a payment at maturity of $1,000. When added to the coupon payments received over the entire term of the Notes, the investor will have received a total of $1,075, which is the maximum amount an investor could have received.

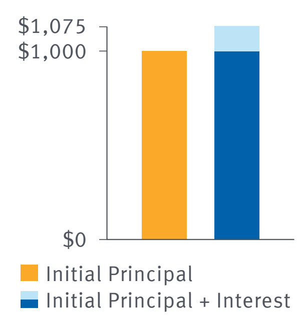




Example 2: Final Reference is at Barrier Strike

On the relevant observation date, the Final Reference Rate is 1.00%. Because the Final Reference Rate is equal to 1.00%, the investor receives a payment at maturity of $1,000. When added to the coupon payments received over the entire term of the Notes, the investor will have received a total of $1,075.



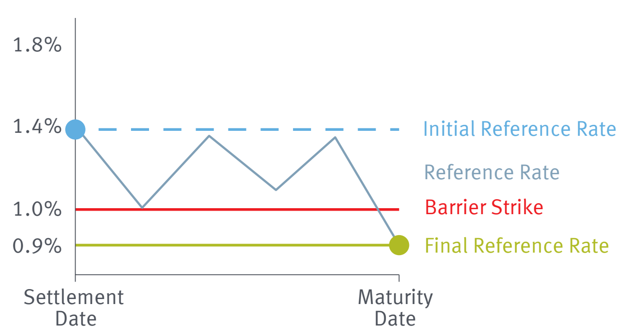


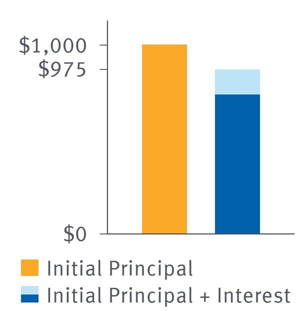
Example 3: Final Reference Rate is below Barrier Strike

On the relevant observation date, the Final Reference Rate is 0.90%. Because the Final Reference Rate is less than 1.00%, the investor will receive a payment at maturity equal to $900.00, calculated as follows:

$1,000 x (0.90% ÷ 1.00%) = $900.00

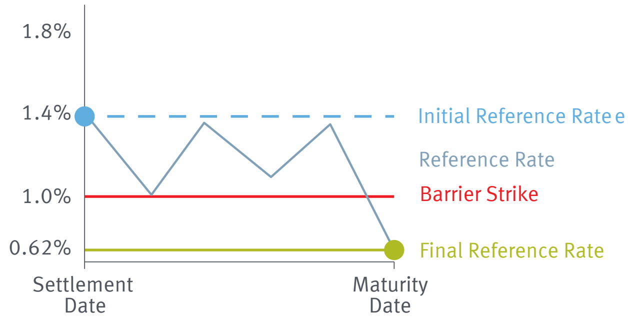
When added to the coupon payments received over the entire term of the Notes, the investor will have received a total of $975.

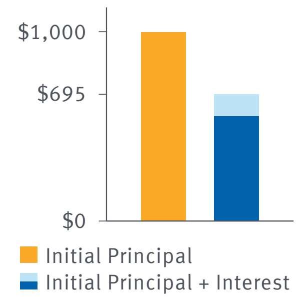




Example 4: Final Reference Rate is below Barrier Strike

On the relevant observation date, the Final Reference Rate is 0.62%. Because the Final Reference Rate is less than 1.00%, the investor will receive a payment at maturity equal to $620.00, calculated as follows:
$1,000 x (0.62% ÷ 1.00%) = $620.00
When added to the coupon payments received over the entire term of the Notes, the investor will have received a total of $695.00.





RBC Capital Markets

RBC Capital Markets is a premier investment bank that provides a focused set of products and services to corporations, institutional investors and governments around the world. With more than 7,200 professionals, we operate out of 70 offices in 15 countries across North America, the U.K., Europe, and the Asia-Pacific region.

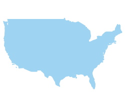
We work with clients in over 100 countries around the globe to deliver the expertise and execution required to raise capital, access markets, mitigate risk and acquire or dispose of assets. According to Bloomberg and Dealogic, we are consistently ranked among the largest global investment banks.

Royal Bank of Canada

RBC Capital Markets is part of a leading provider of financial services, Royal Bank of Canada (RBC). Operating since 1869, RBC is one of the top 15 largest banks in the world and the fifth largest in North America, as measured by market capitalisation. With a strong capital base and consistent financial performance, RBC is among a small group of highly rated global banks.

ROYAL BANK OF CANADA (AS OF OCTOBER 21 , 2017)[1]

Market capitalization[2]	US$114 billion			
	Q4 2017		**Fiscal 2017**	
Total revenue	C$10.5 billion		C$40.7 billion	
Net income	C$2.8 billion		C$11.5 billion	
Total assets	C$1.20 trillion			
Assets under administration (AUA)	C$5.47 trillion			
Assets under management (AUM)	C$639.9 billion			
	Moody's	**S&P**	**Fitch**	**DBRS**
Credit ratings[3]	A1	AA-	AA	AA
Clients worldwide	Over 16 million			
Employees worldwide	Approximately 80,000			
Common Equity Tier 1 Ratio	10.9%			



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○ Chicago	○ Montreal	○ Lausanne	● Hong Kong	● Sydney	○ New Providence
○ Denver	● Toronto	● London	○ Mumbai		○ St. Michael
○ Houston	○ Vancouver	○ Madrid	○ Singapore		
○ Los Angeles		○ Paris	○ Tokyo		
● New York					
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(1) Latest three months ended October 21, 2017 unless otherwise noted. Excludes Corporate Support. The se are non-GAAP measures. For additional information, refer to the Royal Bank of Canada Q4 2017 Investor Presentation.
(2) Bloomberg, as at October 31, 2017.
(3) Based on senior long-term debt ratings, as of November 28, 2017. A credit rating reflects the creditworthiness of RBC, is not a recommendation to buy, sell or hold the notes, and may be subject to revision or withdrawal at any time by the assigning rating organization. The ratings do not provide an indication of the expected performance of the notes. The notes themselves will not be independently rated. Each rating should be evaluated independently of any other rating.