



# Floating Rate Notes

## An overview of Floating Rate Notes

### What are Floating Rate Notes?

Floating Rate Notes (FRNs) are fixed income securities that pay a coupon determined by a reference rate which resets periodically. As the reference rate resets, the payment received is not fixed and fluctuates overtime. FRNs are in demand among investors when it is expected that interest rates will increase.

### What are the benefits of investing in Floating Rate Notes?

FRNs can be beneficial as they offer investors an opportunity to earn higher coupon payments should the reference rate rise. FRNs also offer lower duration than fixed rate notes which protects value in a rising rate environment.

### What are the risks of investing in Floating Rate Notes?

FRNs present risk if interest rates decrease, which would result in lower coupon payments. All payments on FRNs are subject to the creditworthiness of the issuer.

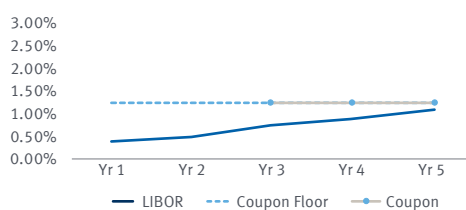
### What are some different types of Floating Rate Notes?

**Floored Floating Rate Notes** provide a minimum payment to the note holder if yields stay low. With a Floored Rate, an investor receives coupon payments that are the greater of the reference rate and the minimum yield. If the reference rate is below the coupon floor, the investor would receive a coupon equal to the coupon floor. If the reference rate is above the coupon floor, the investor would receive the reference rate.

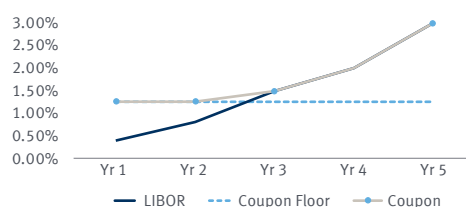
#### Example

Issuer: Royal Bank of Canada  
Term: 5 Years  
Coupon: Quarterly  
Coupon: 3 Mo. LIBOR, subject to  
Coupon Floor  
Coupon Floor: 1.25%

#### Scenario #1: LIBOR stays below Coupon Floor



#### Scenario #2: LIBOR increases above Coupon Floor

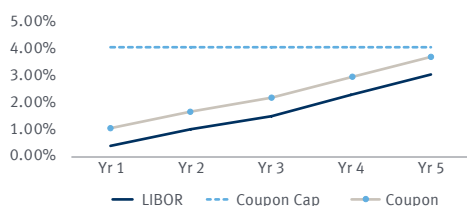


**Capped Floating Rate Notes** pay the holder the reference rate up until a defined, capped rate. When the reference rate rises above the cap, the investor receives the agreed upon maximum yield, and not the reference rate.

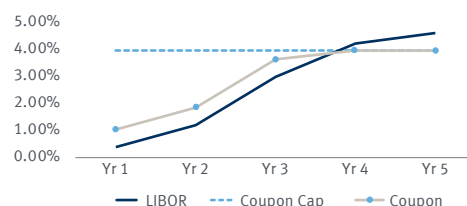
#### Example

Issuer: Royal Bank of Canada  
 Term: 5 Years  
 Coupon: Quarterly  
 Coupon: 3 Mo. LIBOR +0.65%,  
 subject to Coupon Cap  
 Coupon Cap: 4.00%

#### Scenario #1: LIBOR remains below Coupon Cap



#### Scenario #2: LIBOR increases above Coupon Cap

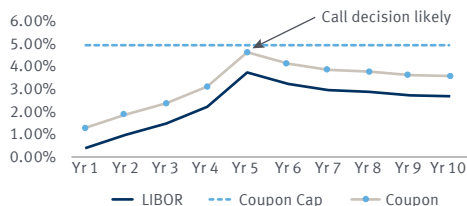


**Callable Capped Floating Rate Notes** allow the issuer to redeem the notes at par at a predetermined time. Callable Capped Floating Rate Notes outperform non-callable Capped Floating Rate Notes if the reference rate remains below the cap and the note is not called.

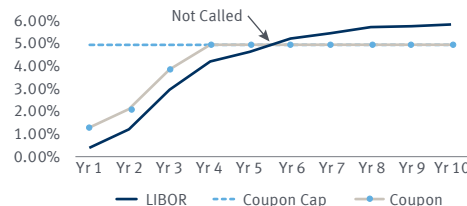
#### Example

Issuer: Royal Bank of Canada  
 Term: 10 Years  
 Calls: Callable by the Issuer in Y5  
 Coupon: Quarterly  
 Coupon: 3 Mo. LIBOR +0.90%,  
 subject to Coupon Cap  
 Coupon Cap: 5.00%

#### Scenario #1: LIBOR remains below Coupon Cap



#### Scenario #2: LIBOR increases above Coupon Cap

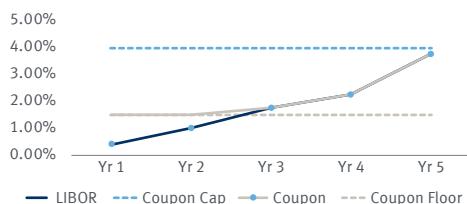


**Collared Floating Rate Notes** offer a minimum and a maximum coupon payment throughout the term of the notes. When the reference rate is below the "floor" rate, the investor receives that floored coupon payment. If the reference rate rises above the capped rate for that period, the investor receives the capped rate. When the reference rate is between that cap and floor, the investor receives the reference rate.

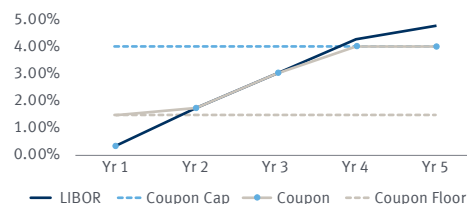
#### Example

Issuer: Royal Bank of Canada  
 Term: 5 Years  
 Coupon: Quarterly  
 Coupon: 3 Mo. LIBOR,  
 subject to Coupon Cap  
 Coupon Floor: 1.50%  
 Coupon Cap: 4.00%

#### Scenario #1: LIBOR remains below Coupon Cap



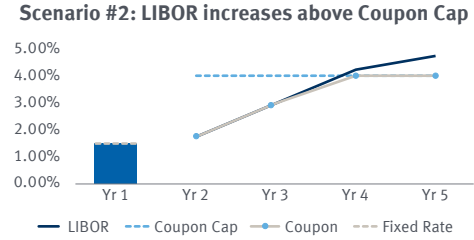
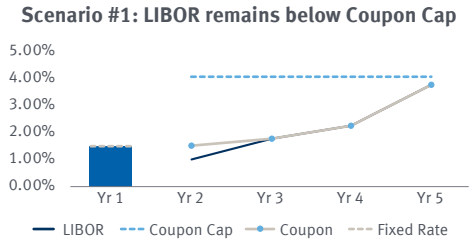
#### Scenario #2: LIBOR increases above Coupon Cap



**Fixed to Floating Rate Notes** pay a fixed rate for the initial period, then switches to a floating rate for the remaining term of the note. The coupon payments on the note are structured to pay an enhanced coupon as long as the reference rate does not rise above the coupon cap.

Example

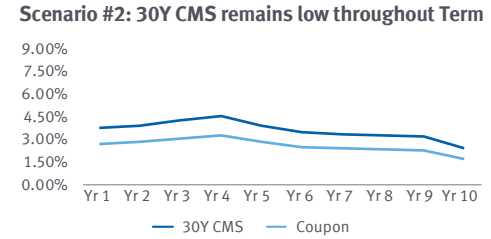
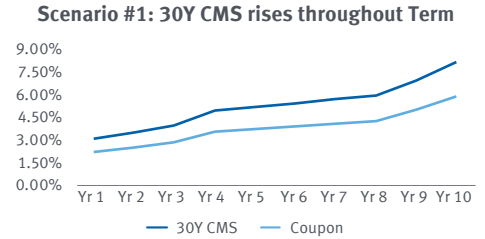
Issuer: Royal Bank of Canada  
Term: 5 Years  
Coupon: Quarterly  
Coupon: Y1: 1.5% ; Y2-5: 3 Mo LIBOR + 0.40%, subject to Coupon Cap  
Coupon Cap: 4.00%



**CMS Participation Notes** are securities where the coupon is based upon a term swap reference rate called a Constant Maturity Swap. The coupon rate is determined by the current level of the reference rate multiplied by a percentage. The rate is reset periodically and therefore the coupon will reflect changes in the term swap rate.

Example

Issuer: Royal Bank of Canada  
Term: 10 Years  
Coupon: Quarterly  
Coupon: 72% x 30 Year CMS





US	Canada	UK & Europe	Asia	Australia	Caribbean
○ Boston	○ Calgary	○ Frankfurt	○ Beijing	○ Melbourne	○ Nassau
○ Chicago	○ Montreal	○ Lausanne	● Hong Kong	● Sydney	○ New Providence
○ Denver	● Toronto	● London	○ Mumbai		○ St. Michael
○ Houston	○ Vancouver	○ Madrid	○ Singapore		
○ Los Angeles		○ Paris	○ Tokyo		
● New York					
○ San Francisco					
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## ROYAL BANK OF CANADA (AS OF OCTOBER 21, 2017)<sup>1</sup>

Market capitalization <sup>2</sup>	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 <sup>3</sup>	A1	AA-	AA	AA
Clients worldwide	Over 16 million			
Employees worldwide	Approximately 80,000			
Common Equity Tier 1 Ratio	10.9%			

(1) Latest three months ended October 21, 2017 unless otherwise noted. Excludes Corporate Support. These 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.

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