# Strategies for a Rising Interest Rate Environment

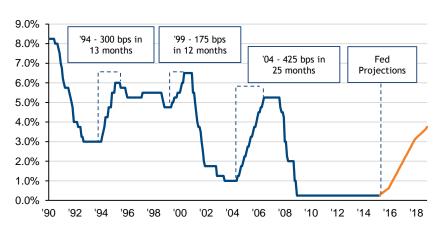
**Current Rate Environment** 

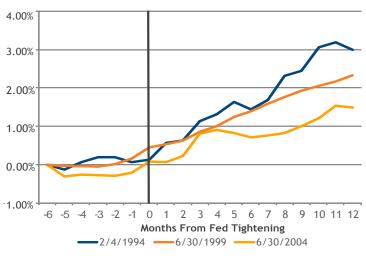
Hedging Tools in the Toolkit

Application of the Tools - Case Study

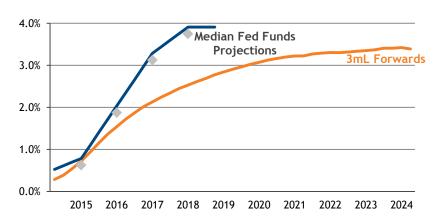
#### **Current Interest Rate Environment**

#### Fed Funds Target Rate with Last Three Tightening Campaigns 10-Yr Swap Rates During the Previous 3 Fed Tightening Cycles

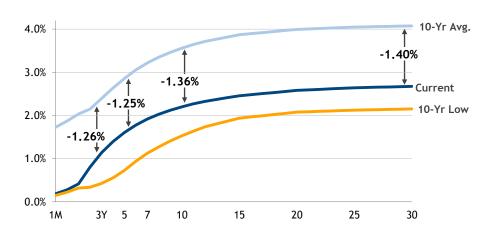




#### Fed Projections versus LIBOR forward Curve<sup>1</sup>



#### Current Swap Curve vs. 10-Year Historical Low



Source: Bloomberg, Federal Reserve

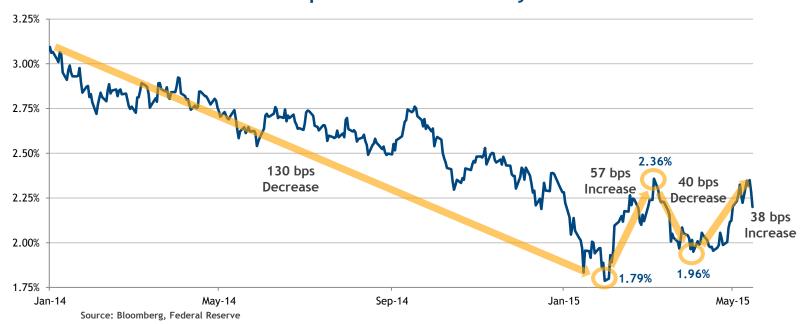
<sup>1</sup>Follows the median of the Fed's Projections. Implied 1mL forward curve is for approximately four years from start date. Assumes 1mL trades 16 bps above the Fed Funds Rate (historical average since December 1984). Source: Bloomberg, Federal Reserve



#### We are at the beginning of an interest rate tightening cycle

- The Federal Reserve is approaching the start of a tightening cycle. It is not a question of if but a question of when it will begin . . .
- The previous three cycles have been steady, without much pause, ending at 5% to 6%
- There currently exists a "gap" between projections from the Fed and market-implied forwards
- Volatility has increased as markets gauge the timing and pace of rate increases

### 10-Year Swap Rates Since January 2014



Indicative only - not a recommendation or an offer to deal. Rates are subject to change. The Counterparty in all financial risk management transactions arranged by SunTrust Robinson Humphrey is

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# STRATEGIES FOR A RISING INTEREST RATE ENVIRONMENT - TOOLS IN THE TOOLKIT

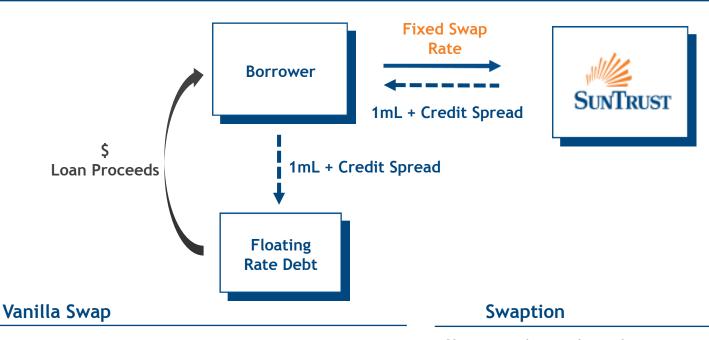


## **Summary of Different Interest Rate Hedging Tools**

Tools	Description	Cost?	
Swaps	Hedge floating interest rate risk by creating a set of cashflows that result	Bank return paid over	
Swaps	in a fixed borrowing rate	time	
Bullet Swap	Swap with a constant outstanding balance	Bank return paid over	
Bullet Swap	Swap with a constant outstanding balance	time	
Step-up Swap	Swap with a notional amount that increases over time	Bank return paid over	
эсер-ир эжар	Swap with a notional amount that increases over time	time	
Forward Start	Swap that begins in the future with an outstanding amount that decreases	Bank return paid over	
Amortizing Swap	over time. No cashflows until the loan begins	time	
Forward Start	Swap that begins in the future and offers the ability to terminate the	Bank return paid over	
Cancellable Swap	swap contract at or after specified dates at a known or zero cost	time	
	Creates a maximum interest rate nor poried. Allows participation in		
LIBOR Cap	Creates a maximum interest rate per period. Allows participation in	Paid upfront	
	current low LIBORs with a known worst-case	<u> </u>	
Deffered Premum Cap	effered Premum Cap Cap where premium is paid over the term of the loan		
	Creates a maximum interest rate per period in exchange for giving up	Paid for by giving away	
LIBOR Collar	ability to participate in current low LIBORS	upside	
Variable Rate Forward	Forward starting swap no each flows until loan basing. Data is set at a	Daid for by giving array	
	Forward starting swap, no cash flows until loan begins. Rate is set at a	Paid for by giving away	
Swap	later date between upper and lower bound	upside	
-	Borrower purchases the right to pay a fixed rate at a certain level at the	Paid upfront or over	
Swaption	start of the loan. Offers ability to fix rate at a lower level if available	time	



#### **Basic Swap Mechanics**



#### Loan:

• Borrower receives loan proceeds and pays variable interest

#### Swap:

- Borrower receives floating leg of swap, which matches the variable interest payment of the loan
- Borrower pays fixed leg of the swap, which is a fixed payment

#### **Net Cash flows**

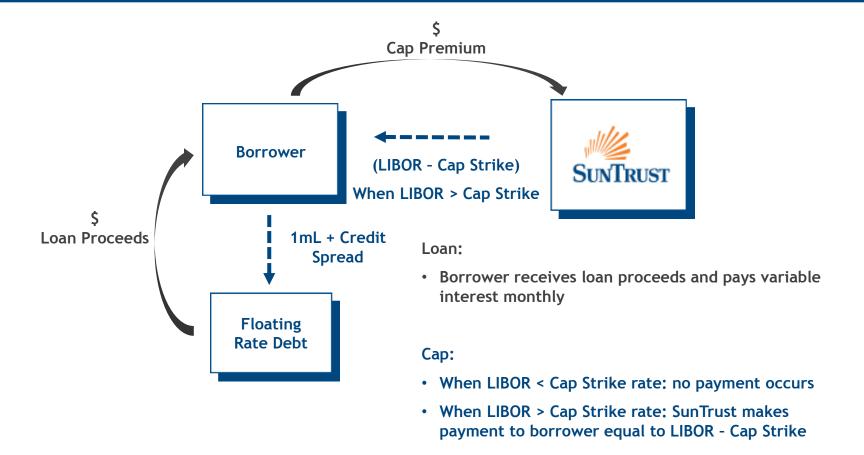
- The result is that borrower would be left with one payment
  - the fixed rate associated with the swap

Client purchases the right to enter into a swap at a future date

- Borrower locks in worst case swap rate
- Borrower can enter into a lower swap rate if market swap rates have fallen



#### **Basic Cap Mechanics**

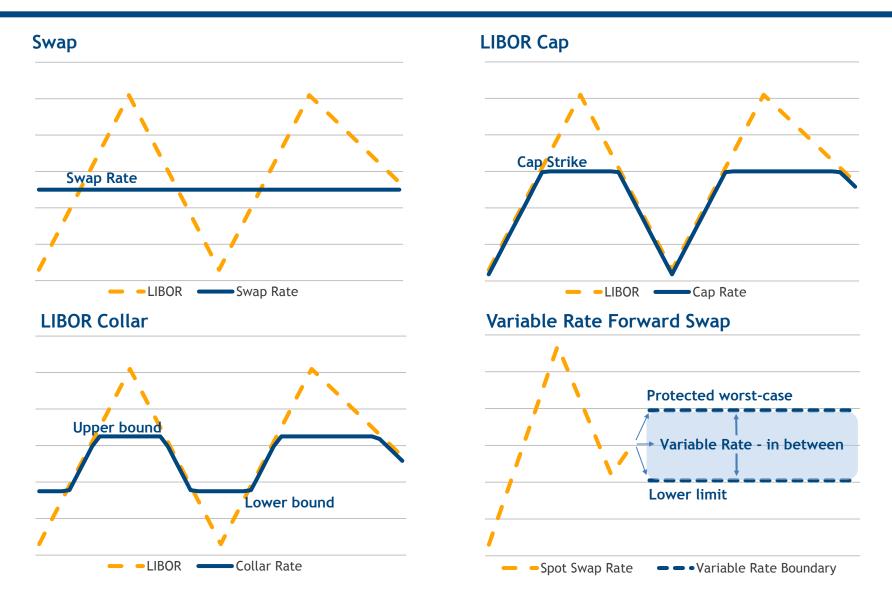


#### **Net Cash flows**

 The result is that the borrower's interest rate will not exceed the cap strike even when LIBOR increases above the cap strike



#### **Interest Expense Profiles for Different Hedging Tools**



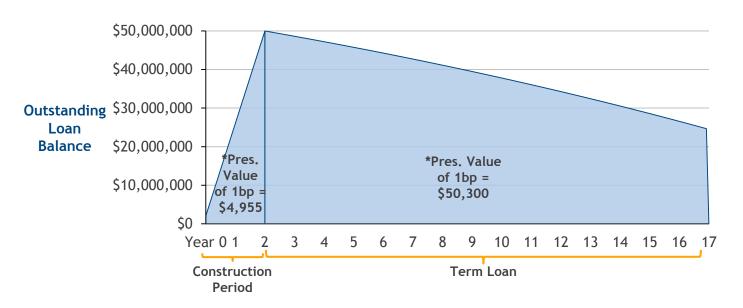


# Section 3 APPLICATION OF THE TOOLS - CASE STUDY



### Consider a hypothetical Real Estate construction project . . .

Assumptions						
Notional	Accreting up to \$50 million					
Term	17 years: 2 year construction period					
	followed by 15 year term loan period					
Amortization	I/O during construction period, 25 years during term loan period					
Floating Interest Rate	1-month LIBOR					



# A company is financing the construction of a new property

There will be a line of credit which will be drawn upon during the construction period of 2 years

At the end of the construction period, the total amount drawn will be refinanced by a term loan which has a 15 year term and a 25 year amortization schedule

# The interest rate for both the LOC and the TL changes for each interest period based on 1-month LIBOR

This floating interest rate subjects the borrower to the risk that a rise in interest rates will have a negative impact on their bottom-line

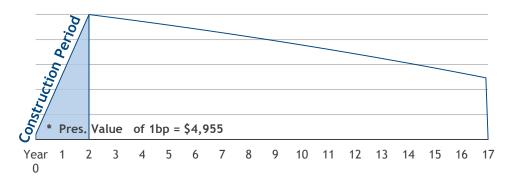
The borrower would like to manage the risk of floating interest rates in both the initial construction period and the back-end term loan period



### Hypothetical Application of Tools - Construction Period

Swap		LIBOR Cap Standard		Deferred Prem.	LIBOR Collar	
Swap Rate	1.04%	Strike Rate Cap Premium	1.25% \$131,700		Strike Rates (lower-upper)	0.75% - 1.25%
		bp/ann equiv cost <sup>1</sup>	0.27%	0.33%		
At Curr Mkt / I	LIBOR	L+0.27	7% = <b>0.45</b> %	L+0.33% = 0.51%		0.75%
All-in Protected Rate	<b>a</b>		1.52%	1.58%		1.25%
Best Case	<del>-</del>		unlimited	unlimited		<i>0.75</i> %
Breakeven Rate	$e^2$		0.77%	0.71%		1.04%

<sup>&</sup>lt;sup>1</sup> Bp/ann equiv = the cost of the premium if paid for over time via a higher interest rate during the period in which the cap is in effect





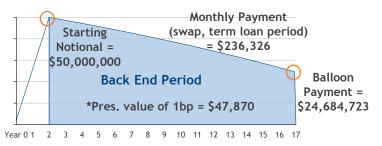
<sup>&</sup>lt;sup>2</sup> Breakeven Rate = the avg LIBOR which would result in a lower interest rate under the hedged scenario compared to a vanilla swap during the period

### Hypothetical Application of Tools - Permanent Financing / Take-out

Swap	Cancellable Swap		Variable Rate Forward Swap		Swaption (Buy right to pay fixed in 2 yrs)		Deferred Premium LIBOR Cap		
Swap Rate 2.97	Cancellable Swap Rate  *Option to Cancel	3.25% Year 10 (2027)	3.58% Year 5 (2022)	Swap Rate	2.75% - 3.45%		3.45% \$1,720,000	Strike Rate	3.20% \$4,534,200 0.95%
At Curr Mkt/LIBO	2				2.97%	swap+0.	36% = 3.33%	L+0.	95%= 1.13%
All-in									
Protected 2.97 Rate	%	3.25%	3.58%		3.45%		3.81%		4.15%
Best Case					2.75%		unlimited		unlimited
Breakeven Rate <sup>2</sup>					2.97%		2.61%		2.02%

<sup>&</sup>lt;sup>1</sup> Bp/ann equiv = the cost of the premium if paid for over time via a higher interest rate during the period in which the cap/swaption is in effect

<sup>\*</sup>The option provides the borrower the ability to cancel the swap at a known or zero cost



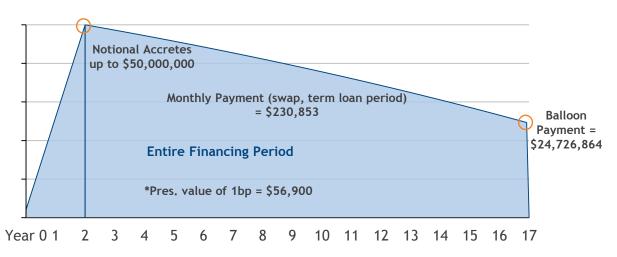


<sup>&</sup>lt;sup>2</sup> Breakeven Rate = the avg LIBOR or swap rate below which the borrower would pay a lower interest rate under the given scenario compared to a vanilla swap

### Hypothetical Application of Tools - Life of Financing

Construction Per	riod Swap	Permanent Fina	ncing Swap	Blended Swap*	
Swap Rate	1.04%	Swap Rate	2.97%	Swap Rate	2.79%
All-in Protected Rate	1.04%		2.97%		2.79%

<sup>\*</sup>The blended swap is a swap contract that covers the entire seventeen-year financing period (Construction and Permanent Periods). The blended swap rate would be the fixed rate during both the Construction and Permanent financing periods





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