



# Chatham Financial

ADVISORY | TECHNOLOGY | SOLUTIONS

## Interest Rate Risk: Changing the Game

*May 8, 2018*

*Philadelphia AFP Conference*



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# Today's Speaker



*Kevin is a member of Chatham's Corporate Risk Management Advisory Team where he regularly provides strategic risk analysis and derivative transaction execution for Chatham's clients; Kevin serves Chatham's clients in the areas of interest rate risk, foreign currency risk, and commodity risk. Prior to joining Chatham, Kevin spent seven years working for the Federal Reserve Bank of New York, where he focused on foreign central bank FX reserve activity and U.S. Treasury markets. He earned his Bachelor's degree in international business from James Madison University and his Master's degree in Economics from Virginia Commonwealth University.*

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# Chatham Financial at a Glance



## Corporates

- Caterpillar
- GE
- Comcast
- GM
- Dow
- HP
- FedEx
- Nike



## Financial Institutions

- Deutsche Bank
- Mizuho
- Morgan Stanley
- Discover
- Santander
- Manulife
- Sallie Mae



## Private Equity

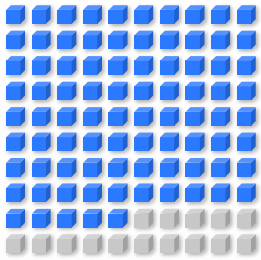
- Bain
- JPM Asset Mgt
- Blackstone
- KKR
- Carlyle
- Oaktree



## Real Estate

- Brookfield
- Hilton Hotels
- Forest City
- Simon Property Group
- Hines
- Starwood Capital

## Expertise



~550 Employees

## Scale

Half trillion

\$ of hedges executed per year

50 million

Valuations per year



# Chatham Financial Overview




 Strategic Risk Assessment

 Hedging Strategy & Execution

 Hedge Accounting

 Derivative & Debt Valuation

Derivative Regulatory Compliance 

Legal (ISDA) 

Defeasance & Yield Maintenance 

ChathamDirect SaaS Application for Risk Management 

Supported by Chatham's robust technology platform:

**ChathamDirect**  
by Chatham Financial

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# Today's Agenda

1

*Current Market Landscape*

2

*Interest Rate Hedging Strategies*

3

*Case Study*

4

*Q&A*

# The Current Market Landscape

## U.S. Government Bonds Surge on Tariffs

Investors said president's move could curb economic growth

THE WALL STREET JOURNAL.

10-year Treasury yield tops 3% for first time since 2014, a key interest rate milestone that should ripple through the financial markets



## Fed's Williams Says Inverted Yield Curve Powerful Recession Sign



## The Fed's favorite inflation gauges are spiking ahead of their May meeting

BUSINESS INSIDER

# Market Landscape: 10-year Treasury Reaches 3%

US 10-year Treasury Yield





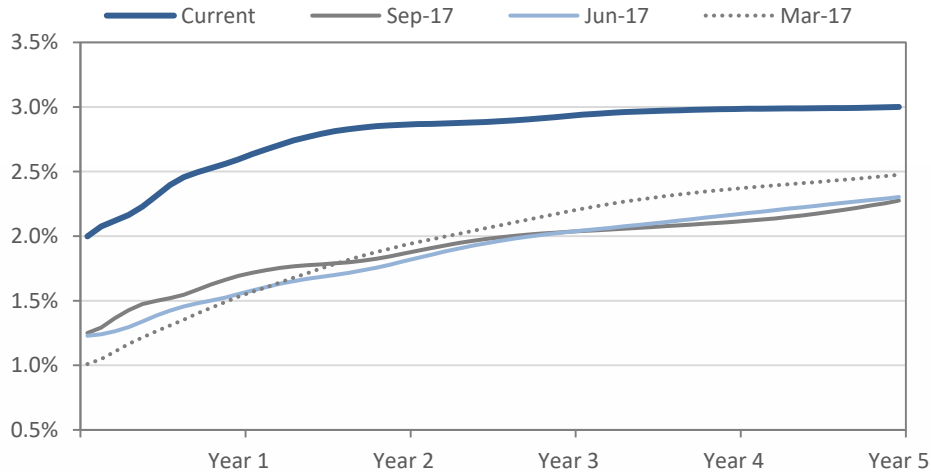
# Market Landscape: 10-year Treasury Reaches 3%

US 10-year Treasury Yield



# Market Landscape: Flattening (and rising) Yield Curve

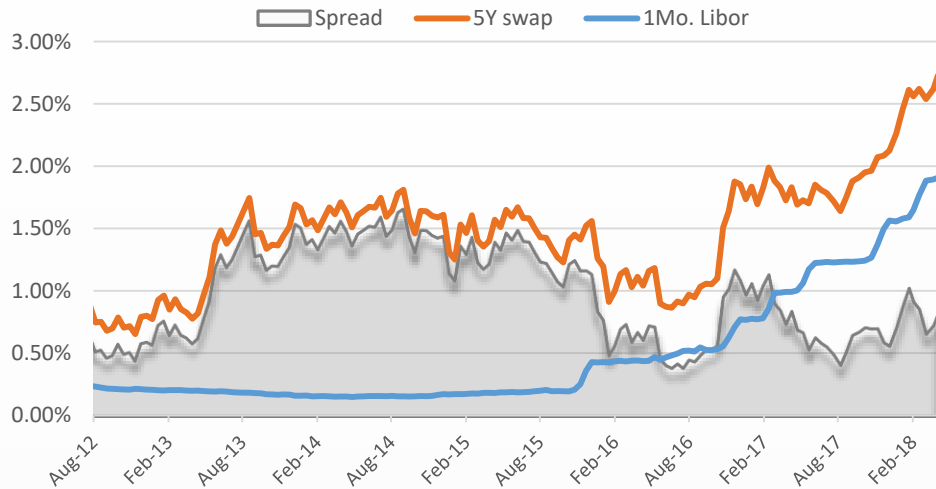
## Recent Historical 1Mo. Libor Forward Curves



### 1M Libor Curve Over Time

- Short-term interest rates have gone up on Fed rate hikes, while the longer end of the curve has increased at a slower pace, and in some cases has fallen

## 5 Year Swap vs. 1 Mo. Libor

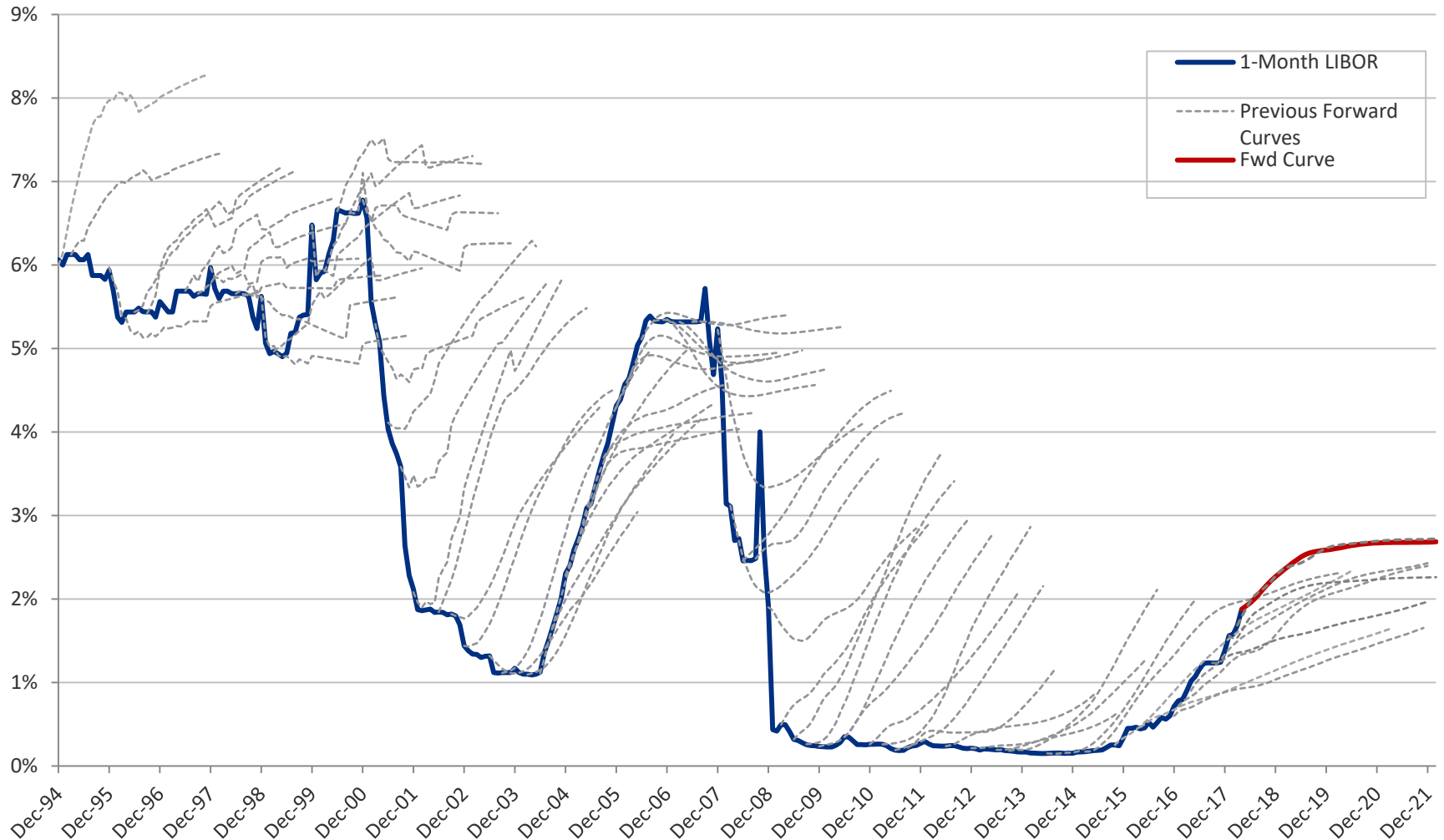


### Spread Between ST and LT Rates

- A relatively flat forward curve results in a significant decrease of the “opportunity cost” of hedging, making the cost of certainty much cheaper in the current rate environment.

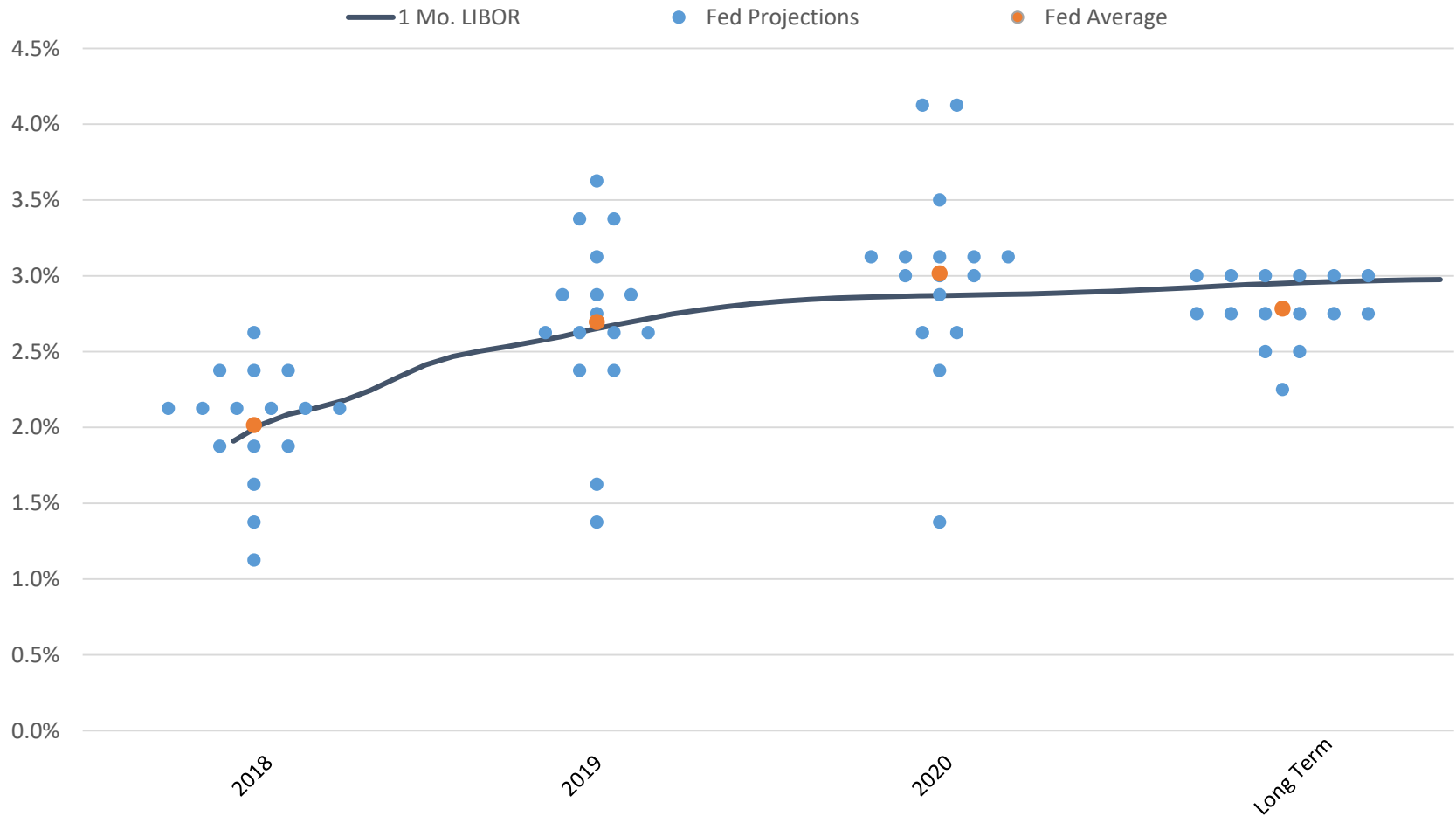
# Market Landscape: 1M LIBOR Hairy Chart

## Actual 1m Libor vs. Historical Forward Curves



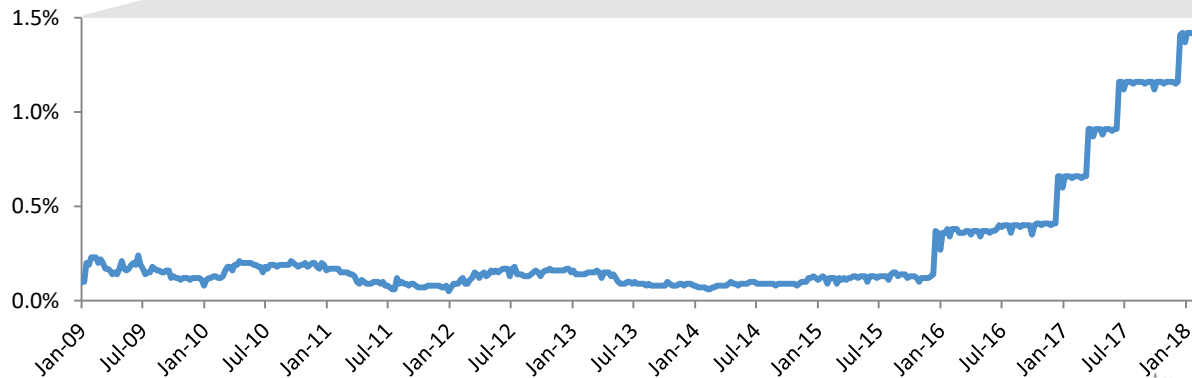
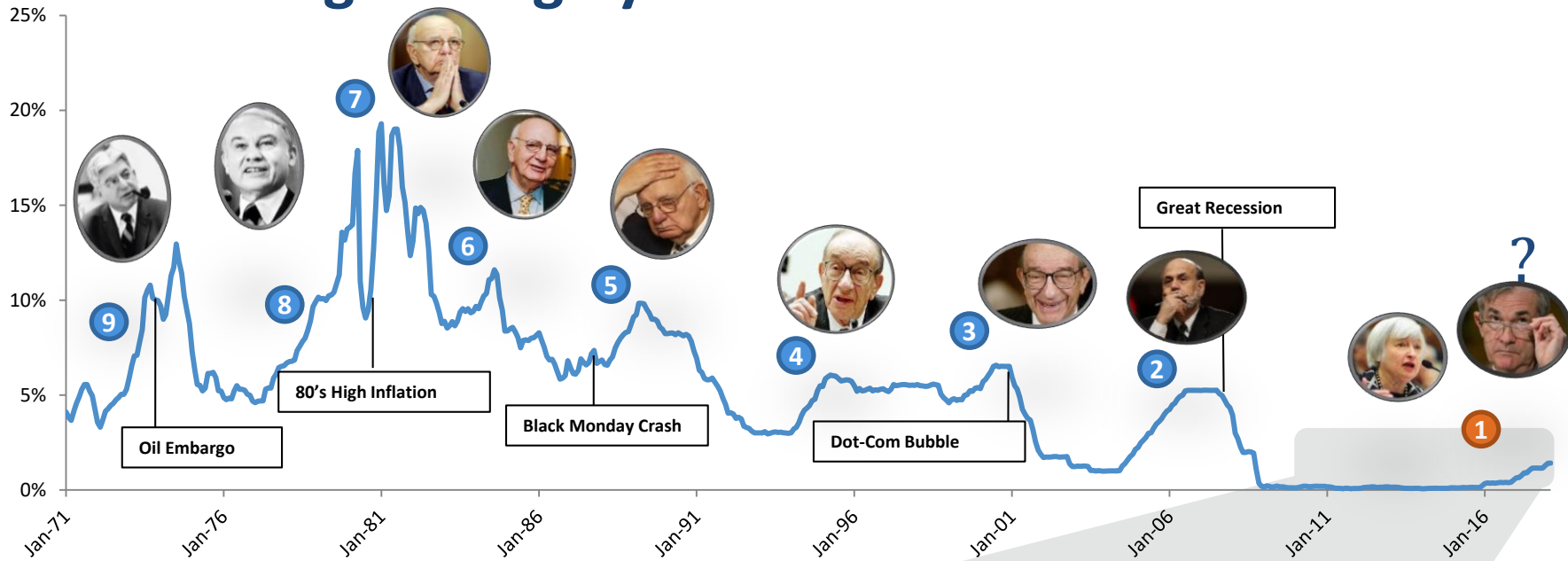
# Market Landscape: Fed Dot Plot

## Fed Projections and 1 Mo. LIBOR



*Note: Dot Plot released Mid-March; updated quarterly, next update is in June*

# The Last 9 Tightening Cycles



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***Interest Rate Hedging Strategies***

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*Case Study*

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**Q&A**

# Interest Rate Hedging Strategies

*Balancing Strategic and Operational Needs*



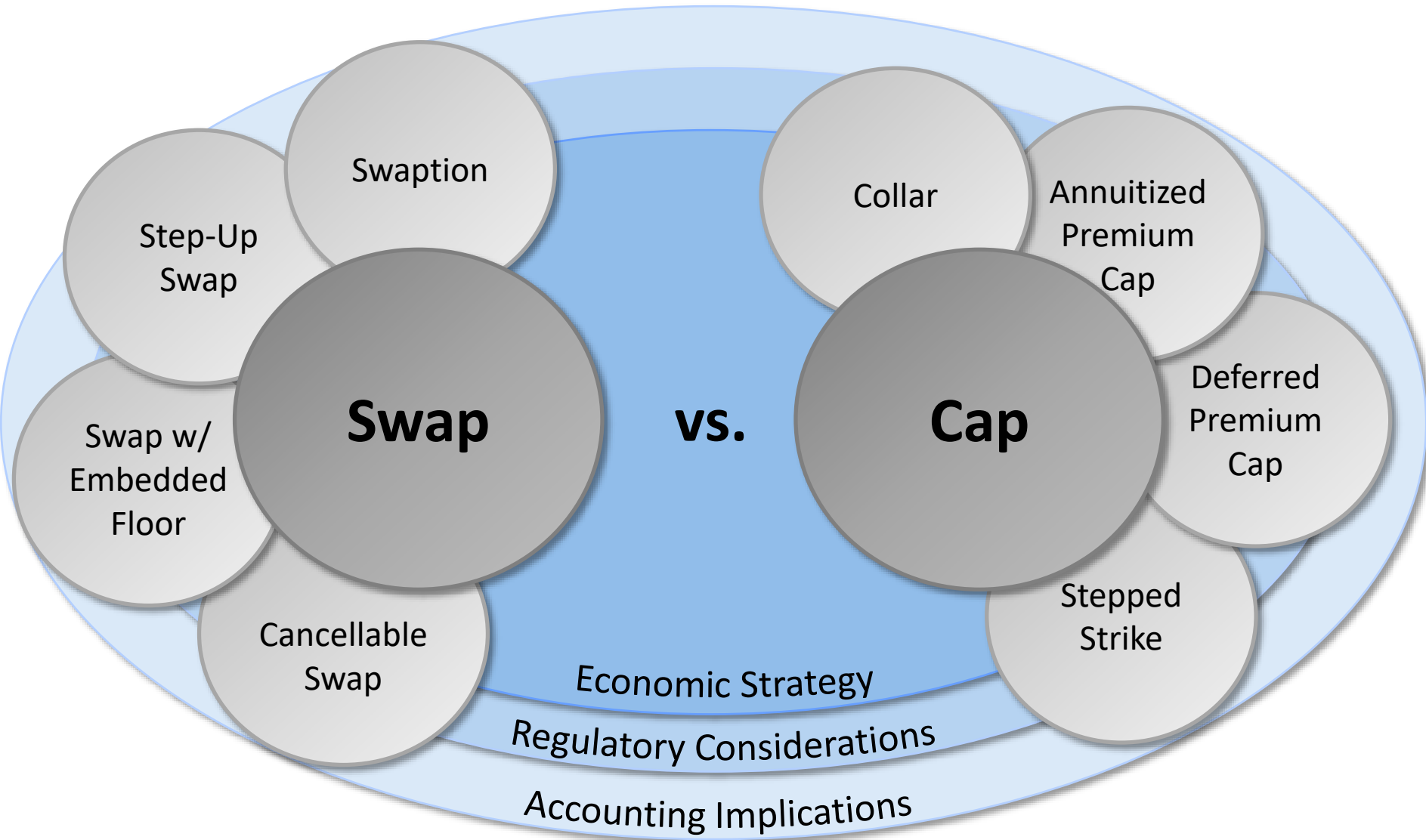
# Interest Rate Hedging Strategies

## *Balancing Strategic and Operational Needs*





# Product Choice Considerations



# Product Choice Considerations

## What are the tradeoffs?

	Swap	Cap
<b>Economic Structure</b>	Synthetic Fixed rate	Sets an upper bound on floating rate
<b>Risk Profile</b>	Creates predictability	Defines a worst case outcome
<b>Additional Considerations</b>	Requires credit Potential liability	Upfront Cash Premium
<b>Best when</b>	Rates increase above swap rate	Rates stay below swap rate
<b>Worst when</b>	Rates remain below swap rate, worse if rates fall below loan floor	Rates increase, but don't exceed strike

# Product Choice Considerations

## What are the tradeoffs?

	Swap	Swap w/Floor	Cap
<b>Economic Structure</b>	Synthetic Fixed rate	Synthetic Fixed rate (increased by floor purchase)	Sets an upper bound on floating rate
<b>Risk Profile</b>	Creates predictability	Creates greatest predictability, inclusive of debt floor	Defines a worst case outcome
<b>Additional Considerations</b>	Requires credit Potential liability	Requires credit Potential liability	Upfront Cash Premium
<b>Best when</b>	Rates increase above swap rate	Rates increase above swap rate	Rates stay below swap rate
<b>Worst when</b>	Rates remain below swap rate, worse if rates fall below loan floor	Rates remain below swap rate	Rates increase, but don't exceed strike

# Interest Rate Hedging Strategies

## *Balancing Strategic and Operational Needs*



# Hedge Accounting

## Interest Rate Swaps

	Revenue
-	Expenses
<hr/>	
=	Operating Income
±	Other Income/Expense
-	Interest Expense
<hr/>	
=	Net Income
±	OCI (CTA)
<hr/>	
=	Comprehensive Income

### Mark to Market

Change in derivative value will flow through earnings in other income or expense (by policy election). Additionally, interest expense line is purely variable as payments on the debt are not offset by payments on the swap through interest expense.

### Hedge Accounting

Amounts paid or accrued relating to the swap are recognized through interest expense therefore resulting in a fixed interest expense (debt and swap together). All other changes in value go to OCI on the balance sheet.

# Impact of New Hedge Accounting Guidance

## Definition of Benchmark

- Any contractually specified rate for variable rate instruments
- Expansion of benchmark rates to include Secured Overnight Financing Rate (SOFR) in addition to SIFMA, OIS, US Treasury and LIBOR Swap Rate

## Partial Term

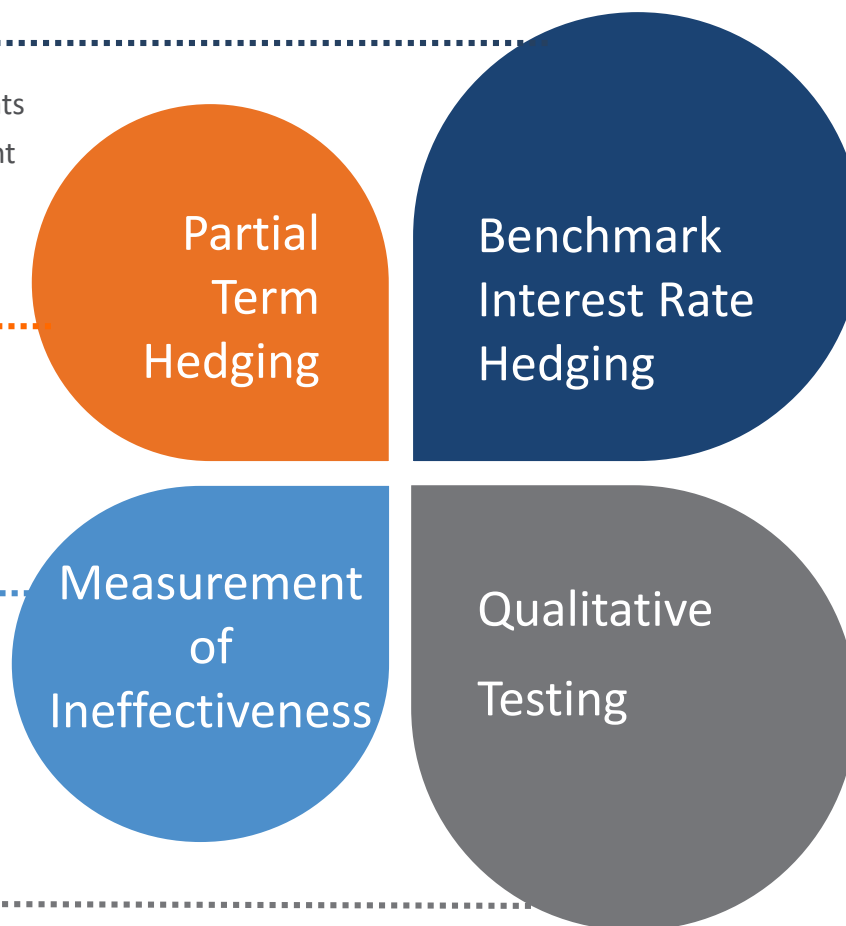
- Designate any sequential fixed-rate cash flows of the hedged item's contractual term, aligning economic objectives for hedge term with application of hedge accounting

## Measurement of Ineffectiveness

- Eliminates the requirement to separately measure and report hedge ineffectiveness and generally requires the entire change in the fair value of a hedging instrument to be presented in the same income statement line as the hedged item.

## Qualitative Testing

- While quantitative effectiveness testing is still required at inception, companies can now choose to qualitatively assess the ongoing effectiveness relationship



# What Happens When LIBOR Goes Away?

## *A \$350 Trillion Question*

### Why is LIBOR being phased out?

- The transactions that LIBOR is meant to represent have become much less common since the financial crisis, making the **rate less market driven**
- Recent scandals and billions of dollars in fines demonstrate that **LIBOR is susceptible to manipulation**
- In July, the UK agency responsible for regulating submission of LIBOR rates stated that the index **would be phased out by 2021**








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### What is going to replace LIBOR?

- In the US the likely replacement is a **new benchmark rate based on overnight Treasury general collateral repurchase agreements (SOFR) – Secured Overnight Funding Rate**
- This new rate is intended to solve many of the issues surrounding LIBOR: to be **based on hundreds of billions of dollars in daily transactions** and **be difficult to manipulate**
- The Federal Reserve Bank of New York is planning to begin publishing the rate in the first half of 2018, the **new benchmark will be phased in over several years to develop a liquid market**

# Proposed LIBOR Alternatives

## OVERVIEW OF PREFERRED ALTERNATIVE RATES

CURRENCY LIBOR	PREFERRED ALTERNATIVE RATE	ADMINISTRATOR	NATURE	DATA/ TRANSACTIONS SOURCE	O/N RATE AVAILABLE	TERM RATE AVAILABLE <sup>7</sup>	WORKING GROUP
 >	SOFR <sup>1</sup>	Federal Reserve Bank of New York	Secured	Tri-party repo, FICC GCF repo, FICC bilateral treasury repo	✗ Target 2018	✗ Planned 2021	Alternative Reference Rates Committee (ARRC)
 >	Reformed SONIA <sup>2</sup>	Wholesale Markets Brokers' Association (WMBA) Transitioning to Bank of England	Unsecured	Unsecured overnight sterling transactions negotiated bilaterally and brokered in London by WMBA	✓	✗ Under consideration	Working Group on Sterling Risk-Free Rates
 >	SARON <sup>3</sup>	SIX Exchange	Secured	CHF repo transactions in the interbank market <sup>6</sup>	✓	✗ Under consideration	National Working Group on Swiss Franc Reference Rates
 >	TONAR <sup>4</sup>	Bank of Japan	Unsecured	Data provided by money market brokers	✓	✗ Under consideration	Study Group on Risk- Free Reference Rates
 >	Under discussion <sup>5</sup>	European Central Bank	TBD	TBD	–	–	Newly established

1. Secured Overnight Financing Rate; 2. Sterling Overnight Index Average; Reformed SONIA will not be available until April 2018; 3. Swiss Average Rate Overnight; 4. Tokyo Overnight Average Rate; 5. EMMI concluded in Feb 2018 that EONIA's compliance with European Regulation by Jan 2020 "cannot be warranted"; 6. As well as indicative quotes posted on SIX Repo trading platform; 7. As of February 2018

Source: Working Groups, Oliver Wyman analysis



# How does LIBOR going away affect me?

- ❑ **Potential for Higher Interest Payments:** depending on the terms of your credit agreement language, if LIBOR goes away you may revert to a fallback rate above the initially agreed upon rate
- ❑ **Economic Mismatch:** If LIBOR is replaced in both the credit agreement and interest rate swap but the updated reference rate does not match, an economic mismatch will exist
- ❑ **Re-designation Considerations:** Today, a change in index in an interest rate swap would be considered a change in “critical terms”, requiring re-designation. If LIBOR is replaced in the swap with the updated reference rate, will re-designation be required?
- ❑ **Ongoing Hedging:** as market participants begin adopting the new reference rate, liquidity will take time to develop. Additionally, understanding a new index creates an administrative burden for all parties involved

## Notable Articles:

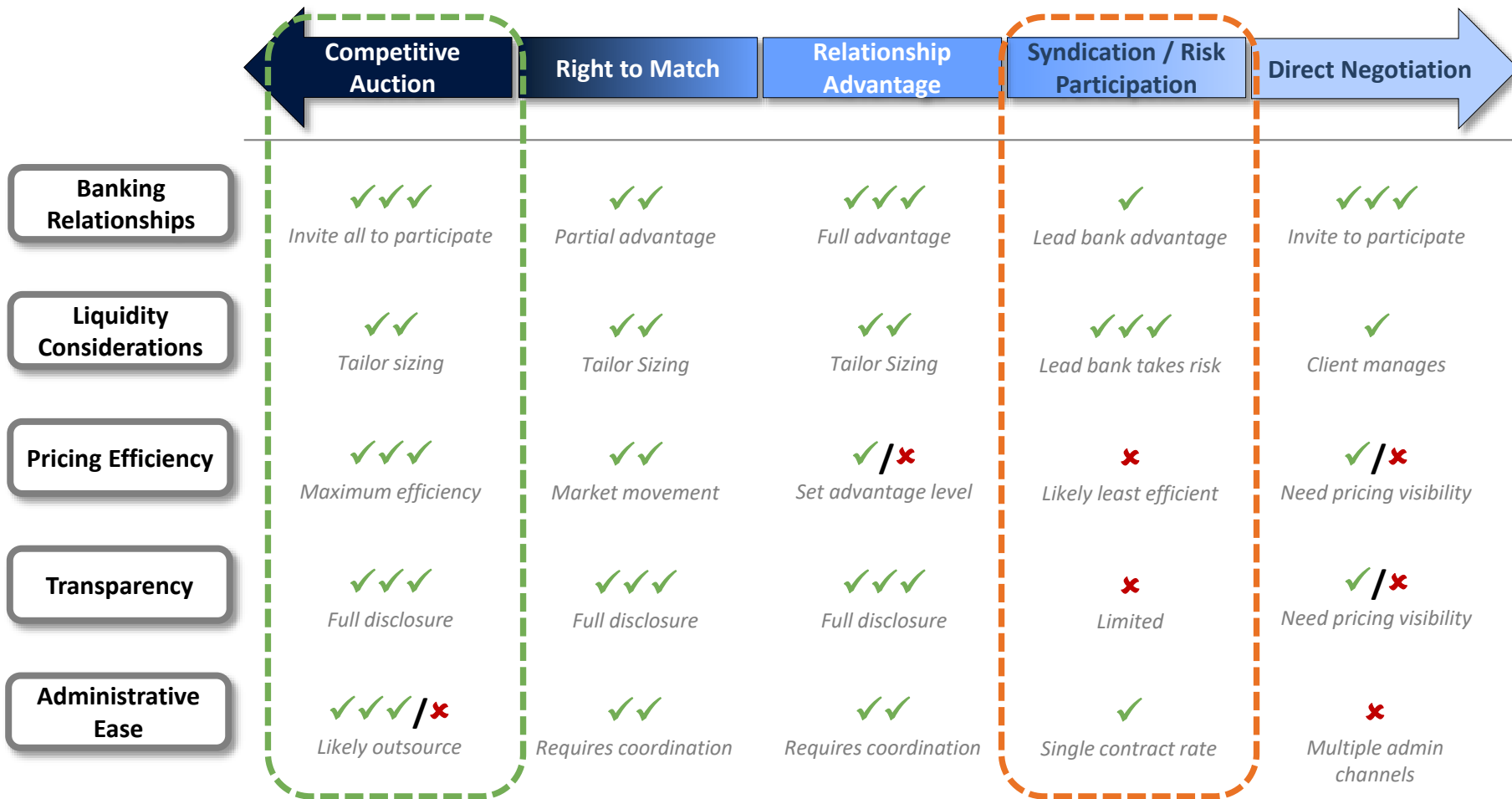
- [Chatham’s Newsletter to Clients – Life after LIBOR](#)
- [The Alternative Reference Rate Committee’s Rate Evaluation Process and Phased Transition Plan](#)
- [UK Financial Conduct Authority – The Future of LIBOR](#)

# Interest Rate Hedging Strategies

## *Balancing Strategic and Operational Needs*



# Execution Strategies



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*Q&A*

# Case Study

## PROBLEM:

A publicly traded services firm was concerned about its ability to meet debt service obligations on floating debt in a rising rate environment. Their Board was concerned about the exposure to rates, but equally concerned with the use of derivatives and auditor scrutiny on the associated accounting treatment.

## SOLUTION:

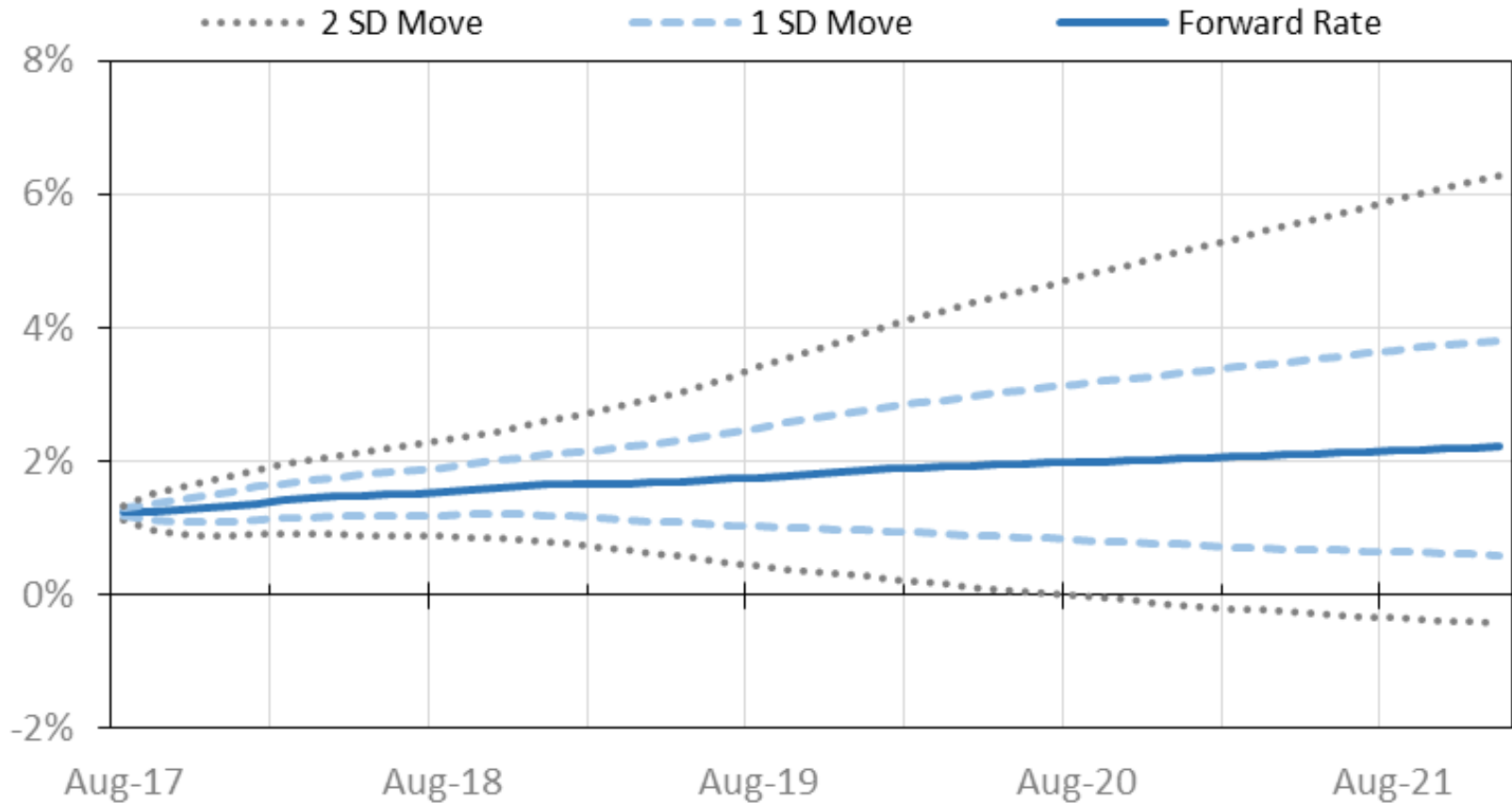
The company identified risk metrics and constraints to apply to their current debt profile, along with anticipated acquisition activity. We worked with the company to determine an appropriate planning horizon, and evaluated different hedging profiles with respect to remaining risk, accounting treatment, and flexibility.



# Case Study

## Applying Scenario Analysis

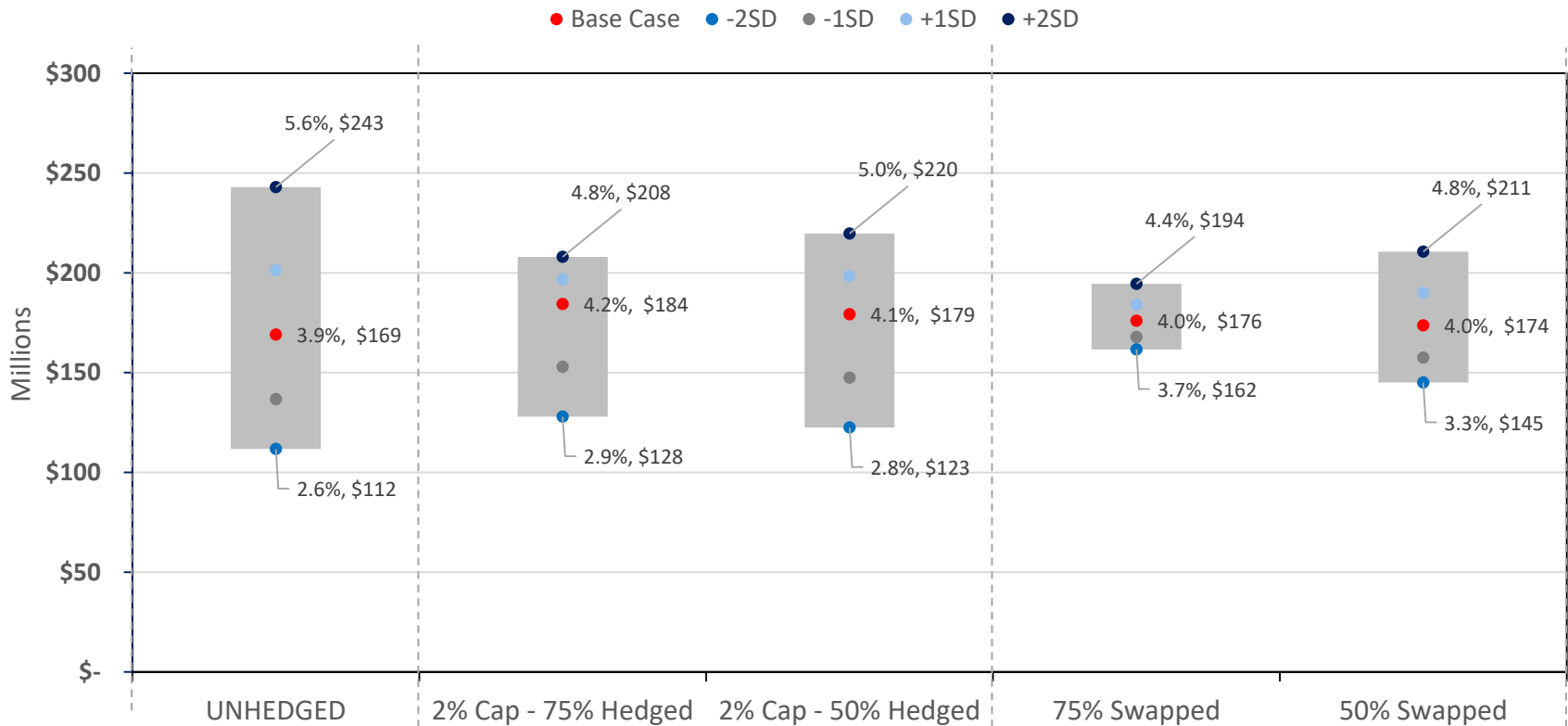
### 1M Libor Forward Curve (With 1 and 2 Standard Deviation Bands)



# Case Study

## Evaluating Potential Interest Expense

### Total Interest Expense Forward Curve w/ $\pm 1$ & 2 Standard Deviation Bands



# Case Study

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## SOLUTION:

The company identified risk metrics and constraints to apply to their current debt profile, along with anticipated acquisition activity. We worked with the company to determine an appropriate planning horizon, and evaluated different hedging profiles with respect to remaining risk, accounting treatment, and flexibility.



## HOW?

### Our Role

Quantification of Risk  
Hedge Accounting  
Formalized Risk Policy  
Execute Transactions

## ISDAs

### NEGOTIATED

Established  
Trading Lines with  
Counterparties

## RISK

### REDUCTION

50%

## \$\$

### SAVINGS

\$300k  
in savings





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# Questions?

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