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Today’s speakers

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Mike Burns is a Director on the Corporate’s Treasury Advisory practice providing financial risk management services to Chatham clients. Mike works with management teams from family firms to the Fortune 500 to design, implement, and operate commodity and foreign currency hedging programs. His clients span industries including information technology, healthcare, consumer discretionary and staples, industrials, energy and materials. Prior to Chatham, he served in the U.S. Navy as a Nuclear Surface Warfare Officer where he deployed five times during OIF/OEF. Mike earned his B.S. in applied mathematics from the United States Naval Academy and his MBA from the Wharton School at the University of Pennsylvania. He also holds a Master of Engineering Management from Old Dominion University.

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Sean Marcellus is a Director on the Corporates Hedge Accounting Advisory team. He provides risk management solutions for corporate clients by helping them achieve and maintain hedge accounting for interest rate, foreign currency, and commodity risk. Previously, Sean worked in public accounting at RKL, LLP auditing financial institutions. He graduated cum laude from West Chester University with a B.S. in Accounting.
Your success is our mission
Financial risk management solutions that take your organization further

Chatham Financial delivers financial risk management advisory and technology solutions to organizations across industries and around the world — helping companies maximize value in the capital markets.

- **$6.6 trillion** hedged notional since 1991
- **3,000+ clients** around the world
- **200,000** end-of-day valuations run nightly
- **3,000+ ISDAs** reviewed annually
- **Seven** global offices
- **600+ employees**
Access unequalled expertise that spans industries

Unlike most financial risk management companies, we offer advisory and technology services across a wide range of industries. This provides us with a broader perspective and allows us to see the marketplace on a macro-scale.

**Services:**
- Interest rate, foreign currency, and commodity hedging
- Hedging execution and processing
- Hedge accounting
- Derivative and debt valuation
- Derivatives regulatory compliance
- ISDA review and negotiation
- Defeasance and yield maintenance
- Debt and derivatives analytics
- Financial risk management technology
Access advantage
Integrated advisory, operations, and technology for financial risk

Partnership that propels you forward - Chatham partners with your team, leveraging a unique mix of advisory, operational capabilities and technology so you can manage risk better and take advantage of opportunities.

Solutions for FX, Interest Rate, and Commodity Risk:
- Hedging advisory
- Hedge execution
- Hedge accounting & valuations
- CHATHAMDIRECT™ for treasury risk management
- Derivatives compliance
- ISDA advisory
Agenda

Learning objectives:
- Understand how recent fiscal and monetary changes are driving the interest rate landscape
- Discuss trends in current interest rate hedging strategies
- Define key strategic questions that will inform managers of the appropriate risk decisions and trade-offs

Quick LIBOR-SOFR update

Questions
Economic and market update
Poll question 1

What areas are getting the most attention in your organization related to the following policy actions or financial markets?

Select all that apply:
A. US and global fiscal stimulus
B. US and global monetary policy
C. Equity and corporate credit markets
D. Interest rate markets
E. Foreign exchange markets
F. Commodity markets
Economic and market update

New COVID-19 cases, 7-day rolling average

- US
- UK
- EU

Source: World Health Organization

TSA checkpoint travelers

- 2020
- 2019

Source: TSA.gov

Revenue/projected revenue in cinema tickets segment

- Millions

Source: Statista

Year over year change in seated diners

- United States
- Pennsylvania
- Florida
- Michigan
- Minnesota
- Wisconsin

Source: Open Table
Economic and market update

US Job Market

Global interest rates

Inflation

Consumer Sentiment Index and Personal Savings Rate
List of monetary and fiscal policies taken
United States

Monetary policy

Mar. 15
Fed cuts interest rates by 100 basis point, bringing Fed Funds Rate to 0-0.25%

Mar. 23
Fed promises unlimited QE, including purchases of corporate bonds

Apr. 9
Fed announces $2.3 trillion effort to bolster local government and mid-sized businesses

Fiscal policy

Apr. 23
Congress passes additional $484bn stimulus package.

Jun. 8
Fed expands Main Street Lending Program.

Aug. 8
POTUS signs order to extend pandemic relief after Congress fails to reach stimulus deal.

Executive order

Mar. 3
Fed cuts interest rates by 50 basis points

Mar. 15
Fed pledges $700 billion in asset purchases.

Mar. 27
Congress passes a $2.2 trillion aid package

Apr. 16
Paycheck Protection Program runs out of funding

Jul. 4
999 extended through August 8, 2020.

Jul. 28
Fed extends all emergency lending programs through 2020.

Aug. 27
Fed announces it will target 2% as an average rate of inflation

Source: Reuters, Peterson Institute for International Economics, FRED
The Federal Reserve
What’s next?

Actions taken by the Fed

- Dropped fed funds target rate to 0-0.25% in March
- Continuation of 9 different lending programs
- Provided a new consensus statement on the interpretation of their congressional mandate in August

Topics of interest going forward

Negative rates

- “The committee’s view on negative rates really has not changed. This is not something we’re looking at” – Chairman Powell
- Europe and Japan continued to struggle (pre-COVID19) since implementing negative yields across the duration curve of their government bonds.

Average inflation targeting

- On August 27th Chairman Powell announced the Fed unanimously agreed to target an average of 2% inflation, rather than the standard 2%
- This change implies that the Fed will allow inflation to “moderately” exceed 2% “for some time” after periods of weakness
- The goal of the new approach is to raise longer term expectations and allow inflation to float higher even as rates remain low

Employment mandate approach

- “Our revised statement says that our policy decision will be informed by our ‘assessments of the shortfalls of employment from its maximum level’ rather than by ‘deviations from its maximum level’ as in our previous statement.” – Chairman Powell

Fed projections

Latest dot plot from June 10th FOMC meeting
Hedging in the current interest rate environment

Overview

- Recent COVID-19 related events have resulted in lower base rates, countered by increased credit spreads
- Over the past three months both 1m and 3m Libor have continued to drop and remain at relatively low levels

Strategies for current economic environment

- Increasing fixed-to-float ratios
- Forward hedging to renew maturing swaps/extend-and-blend trades if applicable
- Forward hedging with cash settled swaps in anticipation of further debt issuance
- Locking-in the benefit of lower interest rate payments

Corporate Bond Spreads over US Treasuries

<table>
<thead>
<tr>
<th>Date</th>
<th>Investment Grade</th>
<th>High Yield</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sep-19</td>
<td>0%</td>
<td>2%</td>
</tr>
<tr>
<td>Nov-19</td>
<td>2%</td>
<td>4%</td>
</tr>
<tr>
<td>Jan-20</td>
<td>4%</td>
<td>6%</td>
</tr>
<tr>
<td>Mar-20</td>
<td>6%</td>
<td>8%</td>
</tr>
<tr>
<td>May-20</td>
<td>8%</td>
<td>10%</td>
</tr>
<tr>
<td>Jul-20</td>
<td>10%</td>
<td>12%</td>
</tr>
<tr>
<td>Sep-20</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Historical 1m LIBOR and 10-year swap rates

- Spread (right)
- 10-y swap rates (left)
- 1m Libor (left)
Current trends in interest rate hedging
Poll question 2

Which of the following topics have generated discussion in your organizations in the current market environment?

Select all that apply:

A. Cash-management / liquidity planning
B. Restructuring existing hedge portfolios
C. Floors in debt or derivatives
D. Bond issuances / pre-issuance hedging
E. Changes in policy (products, target fixed-floating mix, risk tolerance)
Locking in lower interest-expenses
Extend-and-blend strategy

Corporates with existing pay-fixed swaps could potentially benefit from hedges that are currently liabilities by adopting an extend and blend approach. This hedging strategy allows companies to extend the liability over a longer period than the original term. The overall value of the swap remains the same, but cash flows are spread out over the new time period.

### Advantages

- For swaps that are liabilities, cash payments immediately decrease
- Liability on current swap is effectively reduced to near zero
- The long-term swap rate provides protection through the end of the new term
- Lower swap payments over time provide companies with increasing liquidity, freeing up cash for other financial activities

### Additional considerations

- Extend and blend is considered a hedge accounting de-designation/re-designation event
- Offers less visibility into pricing and costs than entering a new swap
- The decline in payments will not be recognized in the income statement at the same time they occur

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**Extend and blend example – 3y swap in 2018 vs 2020**

**Original market conditions**

- Fwd Curve
- Old Swap Rate

**Current market conditions**

- Fwd Curve
- Old Swap Rate
- New Swap Rate
- Blended Rate

Market data as of 9/02/2020
Locking in lower interest-expenses

Cross-currency strategy

Falling global interest rates, especially those in the US, have marginally decreased the benefit of cross-currency swaps. However, despite the current market environment, savings still exist in major currencies. Business should exercise caution when considering such derivative instruments for the first time and when re-structuring an existing portfolio.

**Motivations for strategy**

- Allows corporates financing foreign acquisitions with USD debt to align their capital structure and mitigate FX risk associated with the foreign entity’s sale
- Swapping to synthetic debt enables corporates to take advantage of the interest rate differential between currency pairs, resulting in a lower effective interest rate
- With liquidity becoming a concern for many global corporates, companies could unwind their cross-currency swap assets and pull out cash from trades in order to meet other financial needs

**Additional considerations**

- Although they’ve fallen from their peak, credit spreads are wider than pre-pandemic levels, resulting in higher credit charges
- Inefficiencies in pricing due to increased volatility in FX and interest rate markets, adding a further layer of pricing complexity
Locking in lower interest-expenses
Accounting considerations

Extend and blend
• Change in the critical terms of the original derivative will stop the current hedge accounting relationship
• Amended trade can then be designated as an off-market hedge
• Watch out for embedded loans!

Cross-currency swaps
• Need to have enough net asset capacity to designate as a net investment hedge
• Coupon settlements can be taken to the P&L, providing a pickup
• Instrument needs to be FX only (fixed-fixed or float-float)
Hedging in the current interest rate environment
Economic and accounting considerations with respect to floored swaps

While it has become standard market practice for lenders to insert 0% - 1% floors on Libor into credit agreements, companies should consider the economic and accounting implications of including (or excluding) floors from their derivative relationships in the current market environment.

**Market overview**

- Over the past two years, swap rates have continued to trend downward.
- With the Fed’s decision to lower base rates near-zero, the cost of including floors in hedging relationships has increased.
- From 2018 to 2019 to 2020, the cost of an embedded 3-year 0% floor has risen from **1 to 6 to 11 basis points**.

<table>
<thead>
<tr>
<th>Date</th>
<th>Sept-18</th>
<th>Sept-19</th>
<th>Sept-20</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mid swap rate</td>
<td>2.70%</td>
<td>1.25%</td>
<td>0.14%</td>
</tr>
<tr>
<td>Floor value</td>
<td>0.01%</td>
<td>0.06%</td>
<td>0.11%</td>
</tr>
<tr>
<td>All-in rate</td>
<td>2.71%</td>
<td>1.31%</td>
<td>0.25%</td>
</tr>
</tbody>
</table>

Pricing as of 9/2/2020

**Existing hedge portfolio**

- Corporates should consider aligning trade structure with terms outlined in credit agreements; e.g. including 0% floor in swap if debt is floored to 0%.
- This would allow for smoother applicability of accounting guidance and prevent hedges from failing out of hedge accounting.
- Corporates that previously hedged but excluded 0% floors from swap structures should consider buying back the 0% floor value.

**Challenges to navigate**

1. With rates reaching close to 0%, bank pricing on floors has become increasingly opaque.
2. Bank credit spreads continue to widen over liquidity concerns, further leading to inefficient pricing.
3. Hedging relationships with floor mismatches may no longer be highly effective even before rates fall below the floor strike, resulting in failure out of hedge accounting.
Hedging in the current interest rate environment

Accounting considerations with respect to floored swaps

<table>
<thead>
<tr>
<th></th>
<th>Pros</th>
<th>Cons</th>
</tr>
</thead>
<tbody>
<tr>
<td>Buy matching floor</td>
<td>Removes mismatch with underlying exposure</td>
<td>Most expensive upfront cost</td>
</tr>
<tr>
<td>Buy lower strike floor</td>
<td>Lessens mismatch while being less expensive than matching the floor</td>
<td>Expensive upfront costs and cannot guarantee highly effective relationship ongoing</td>
</tr>
<tr>
<td>Buy partial term floor</td>
<td>Least expensive option to provide some protection</td>
<td>New strategy and cannot guarantee highly effective relationship ongoing</td>
</tr>
</tbody>
</table>
Hedging in the current interest rate environment
Forward hedging for fixed-rate debt issuance

**Background**

- Given the low rate environment, companies can **consider issuing new debt** by either prepaying existing bonds and or making plans to issue when existing bonds mature.
- Planning to issue in the future introduces the **risk of Treasury yields rising** between today and the new issuance date.
- Companies can hedge that risk, and lock in a component of future fixed issuance today (which are at historic lows) using a **forward starting swap** or **treasury lock**

<table>
<thead>
<tr>
<th></th>
<th>Spot start</th>
<th>6m fwd</th>
<th>12m fwd</th>
<th>18m fwd</th>
</tr>
</thead>
<tbody>
<tr>
<td>10y US Treasury rate</td>
<td>0.67%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10y swap spread</td>
<td>0.01%</td>
<td>-</td>
<td></td>
<td></td>
</tr>
<tr>
<td>10y swap rate (spot starting)</td>
<td>0.68%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Forward carry</td>
<td>-</td>
<td>0.05%</td>
<td>0.10%</td>
<td>0.16%</td>
</tr>
<tr>
<td>10y forward starting swap rate</td>
<td>-</td>
<td>0.73%</td>
<td>0.78%</td>
<td>0.84%</td>
</tr>
<tr>
<td>Effective Treasury rate</td>
<td>-</td>
<td>0.72%</td>
<td>0.77%</td>
<td>0.83%</td>
</tr>
</tbody>
</table>

**U.S corporate bond issuance (in billions)**

**Historical swap spread**

*Market data as of 9/02/2020*
Hedging in the current interest rate environment
Forward hedging for fixed-rate debt issuance

Forward hedging involves entering into a trade now to lock in future exposure, such as an anticipated bond issuance. The most common derivative instruments considered when contemplating implementing a forward hedging strategy are:

<table>
<thead>
<tr>
<th>Treasury locks (T-locks)</th>
<th>Forward-starting swaps</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Tenor</strong></td>
<td></td>
</tr>
<tr>
<td>• Typically used for short-term hedging</td>
<td>• Flexibility for both short- and long-term hedging and uncertainty in issuance pricing</td>
</tr>
<tr>
<td><strong>Risk component hedged</strong></td>
<td></td>
</tr>
<tr>
<td>• Only hedges treasury component (not swap spread)</td>
<td>• Hedges both treasury component and swap spread</td>
</tr>
<tr>
<td><strong>Transaction costs</strong></td>
<td></td>
</tr>
<tr>
<td>• Generally more efficient pricing when tenor less than three to six months</td>
<td>• Liquid market and efficient pricing for tenors that exceed six months</td>
</tr>
<tr>
<td><strong>Hedge accounting</strong></td>
<td></td>
</tr>
<tr>
<td>• Increased complexity</td>
<td>• Easier to qualify for hedge accounting</td>
</tr>
</tbody>
</table>

Considerations:
- Larger DV01 than typical interest rate swaps
- Lower credit charge
- Mandatory cash settlement
- Treasury pass inefficiencies
- ‘In the market twice’ (initial trade and cash settlement)
Additional accounting considerations

**Timing**
Certainty of timing of issuance

**Scope**
Defining the hedged forecasted transactions

**Notional**
Knowing how much debt will be issued

**Tenor**
Certainty of the tenor to be issued
Poll question 3

How does hedge accounting influence your organization’s financial risk-management strategies?

A. Achieving hedge accounting treatment is a high priority and limits our strategic options
B. Achieving hedge treatment is a high priority, but does not limit our strategic options
C. Achieving hedge accounting treatment is not a high priority and therefore does not limit our strategic options
D. Volatility associated with mark-to-market is not currently a concern, but may be in the future
Quick LIBOR-SOFR transition update
Impact of COVID-19 on timing of LIBOR transition

FHLBs may no longer enter into LIBOR-based transactions maturing after Dec. 31, 2021

CME and LCH clearing houses switch from Fed Funds to SOFR discounting for valuing cleared trades

All GBP-denominated loans must be indexed to SONIA, rather than GBP LIBOR

Previously set for Sept. 30, 2020

Scheduled publication of amendments to the 2006 ISDA Definitions and related protocol

Effectiveness of amendments to the 2006 ISDA Definitions and related protocol

Previously set for August

Effectiveness of amendments to the 2006 ISDA Definitions and related protocol

June 30, 2020

Oct. 19, 2020

Nov./Dec. 2020

Mar. 31, 2021

July 2020

Sept. 2020

Dec. 31, 2020

Dec. 31, 2021

Freddie Mac and Fannie Mae will no longer purchase LIBOR-indexed loans beyond EOY 2020

Freddie Mac and Fannie Mae will no longer accept applications for LIBOR-indexed loans beyond Q3 2020

Publication of Bloomberg indicative fallback rates

LIBOR panel banks are no longer mandated to submit LIBOR quotes after which market is expected to transition from LIBOR

Monitor trigger events and the possibility of early discontinuation of LIBOR
## LIBOR-SOFR transition issues

<table>
<thead>
<tr>
<th>Impact</th>
<th>Highlights</th>
<th>Action items</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Impacts to current debt &amp; trades</strong></td>
<td>• Legacy LIBOR loans and trades will need to fallback to SOFR; questions outstanding on Protocol and fallback triggers</td>
<td><strong>ISDA fallback</strong>&lt;br&gt;• Protocol and amended definitions for fallback rates, triggers, and pre-cessation triggers&lt;br&gt;• Fallbacks may include spread adjustment (5y historical median between LIBOR and compounded SOFR); Bloomberg selected as the vendor to calculate and publish</td>
</tr>
<tr>
<td><strong>Impacts to future trades</strong></td>
<td>• Questions outstanding on how SOFR products will trade and are heavily dependent on the development of a SOFR debt market</td>
<td></td>
</tr>
<tr>
<td><strong>Operational impacts</strong></td>
<td>• Calculating SOFR in arrears, rate is set at the end rather than the beginning of period</td>
<td>• Interest rate will reflect the exact rate over the period rather than a projected rate&lt;br&gt;• More complex calculation required</td>
</tr>
<tr>
<td><strong>Hedge accounting impacts</strong></td>
<td>• Changes in derivative critical terms may result in termination, causing a de-designation of the hedging relationship</td>
<td><strong>ASC 848 – Reference Rate Reform</strong>&lt;br&gt;• FASB issues to provide operational and accounting relief for transition away from IBORs</td>
</tr>
</tbody>
</table>
Questions?