

NORDIC BATTLE OF TREASURY - IR RISK MANAGEMENT

GTreasury

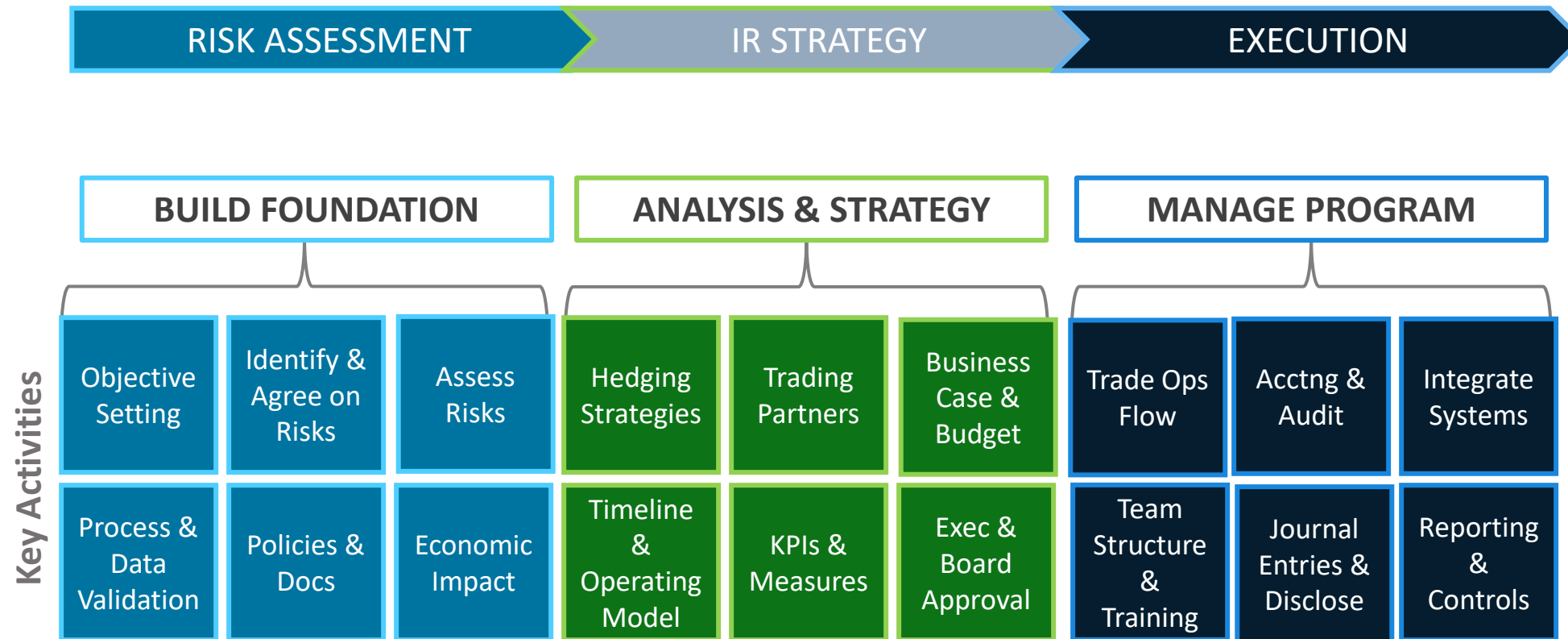
March 8, 2023



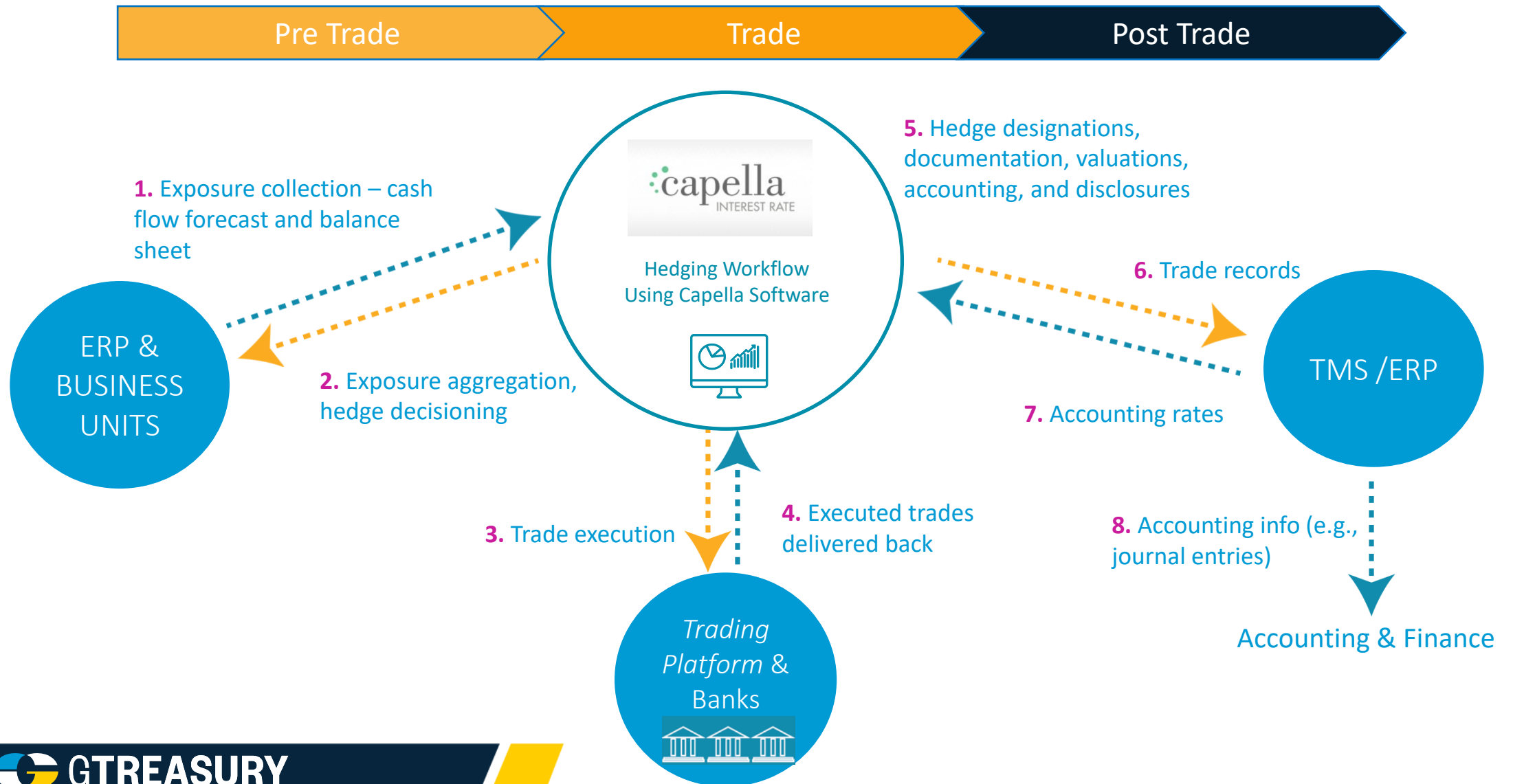
Ruth Hardie is Senior Director, Client Services, for Hedge Trackers, a GTreasury Co. She has more than three decades of experience in financial auditing and hedge accounting specifics. She joined Hedge Trackers at its inception in 2000 and currently is the Interest Rate SME. She was instrumental in building the firms' team of derivative specialists who partner with corporations around the globe to provide managed services, consulting, analytics and hedge accounting software. For Hedge Trackers, Ruth has designed and accounted for cash flow, fair value and net investment hedge strategies that meet the GAAP/IFRS documentation and reporting requirements. Prior to joining Hedge Trackers, she was a Manager with Deloitte, LLP. Ruth holds a bachelor's degree in finance from the University of Colorado Boulder-Leeds School of Business, an MBA from San Jose State University and qualified as a CPA. She is an in-demand national and international speaker for both G Treasury training and third-party seminars and conferences.



Ruth Hardie
Sr. Director, Client Services
rhodie@gtreasury.com or
rhodie@hedgetrackers.com
Linkedin/ruthhardie



Integrated Solutions of People, Process & Technology



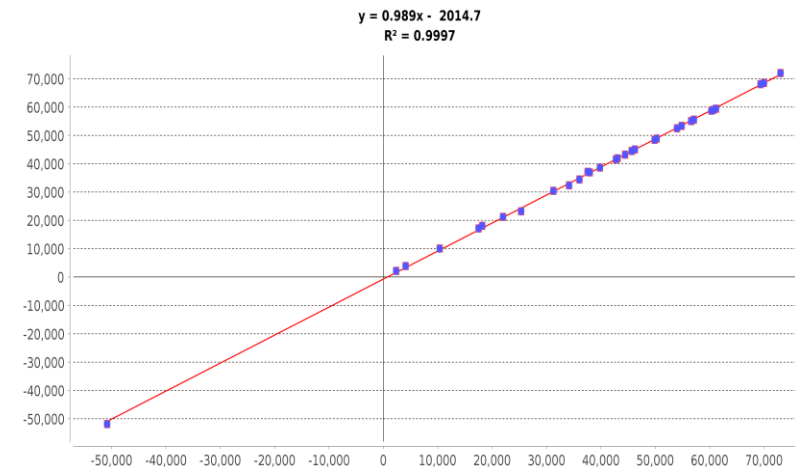
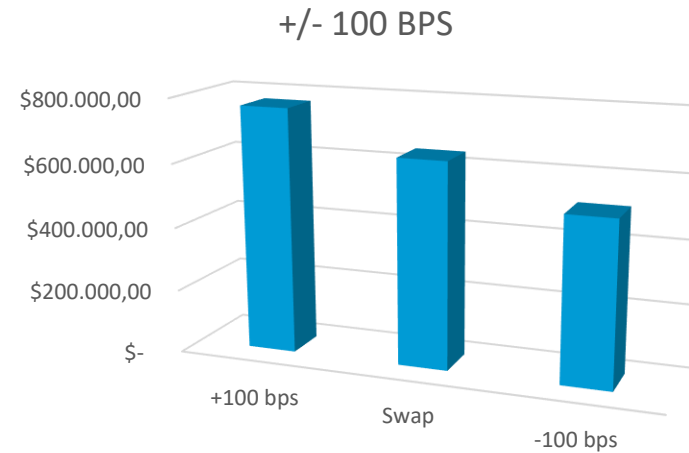
Scenario Analysis

Rate Shocks

- Parallel
- Change the shape of the curve
- By financial instrument
- Portfolio level
- Vol shocks

Historical Trend Analysis

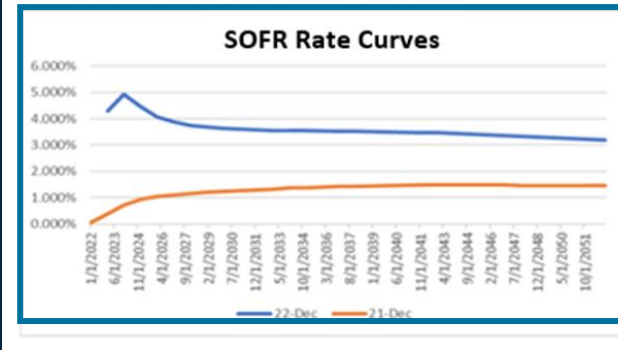
Impact Analysis



Debt valuation – Portfolio Analysis

General changes due to interest rates:

2-4% increase in rates from December 2021 to December 2022



Caused up to 21% decrease in discount rates, which increases the amount of discounting



Change Analysis - Fixed Rate Debt Portfolio

Dirty value 12/31/2021: -38,032,668.42

Projected cashflows for 2022: -2,665,133.28 projected payments 7.0% "realized"

Remaining discounted cfs 2023-2040 @ 12/31/2021: -35,367,535.14

Remaining discounted cfs 2023-2040 @ 12/31/2022: -30,357,260.27 increase in dirty value 20.2%

Change due to discount/curve rates: -5,010,274.87 discount change/rise 13.2% in rates



MODELING NUANCES

capella INTEREST RATE DemoS Corporation

CLIENT SUPPORT HEDGE TRACKERS Logout Setup Help

Valuations Trade Complex Curve Setup

Trade Details Trade Groups FX Spot New Copy Save

Import trades Export trades Trade History

Select trade:
Trade Name: Swap SOFR Edit

Functional Currency: USD Valuation Date: 11-30-2020 Curve Date: 11-30-2020

Dual Curve Stripping: ☐

Report Run MTM See Cash Flows PFE CVA Test

Trade name*: Swap SOFR
Trade date*: 08-09-2019
Instrument type*: Swap

Counterparty: JP Morgan
Instrument sub type*: Fixed/Float

Construct Legs Leg Details

Pay Leg

Effective Date*: 08-09-2019
Maturity Date*: 08-09-2024
Leg Type*: Fixed
Currency*: USD
Coupon*: 1.4712071168%

Notional*: 100,000,000.00
Amortization: ☐
Exchange of Principal*: None
Pay Frequency*: Quarterly
Pay Date*: 9th
First Month*: November

Receive Leg

Effective Date*: 08-09-2019
Maturity Date*: 08-09-2024
Leg Type*: Floating
Currency*: USD
Index/Tenor: SOFR spot
Spread*: 0%
[Reset Options](#)

Notional*: 100,000,000.00
Amortization: ☐
Exchange of Principal*: None
Receive Frequency*: Quarterly
Receive Date*: 9th
First Month*: November

Calculated Values

Clean Market Value: -5,010,138.07
Accrued Interest: -81,198.52
Market Value: -5,091,336.59
Break-even Rate: 0.1300047919%
PV01: 37,374.55
Active Reset: 0.07099%

Trade Setup

Entity*: Corp
Strategy*: Simpl-Swap

Trade Options

Credit Value Adjustment (CVA) Apply ☐
Reset Options (Receive)
Advanced Pay Leg Options
Advanced Receive Leg Options

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Valuations Trade Complex Curve Setup

Valuations

New Trade Export Trade List

Trade List

Split Complex Trades Trade Status: Actual

Capella ID	Entity	Trade Name	Complex	Instrument ...	Maturity D ...
0911-03-25124	ENT1	Cap 3.1		Cap	09/01/20
0911-03-15123	ENT1	Swap 3.1		Fixed/Float	09/01/20
0911-03-11386	ENT1	Swap 1-3m		Fixed/Float	10/31/20
0911-03-11387	ENT1	Swap 2-3m		Fixed/Float	07/31/20
0911-03-11392	ENT1	Swap 3		Fixed/Float	08/31/20
0911-03-11393	ENT1	Swap 4		Fixed/Float	06/30/20

Summary
Up Down Save Positions

New Trade Group Export Trade Group List

Trade Group List

MODELING NUANCES

■ Risk Free Rates Nuances

- Reset Type
 - In arrears, In advance
- Averaging Type
 - Weighted, Simple, None
- Compounding
- Rounding
- Rate Cutoff
- Holidays
- Business Days

Reset Options (Receive)

Leverage*:	100%
Reset Type*:	In arrears
Averaging*:	Weighted
Compounding:	<input checked="" type="checkbox"/>
Exclude Actuals:	<input checked="" type="checkbox"/>
Include Spread:	<input type="checkbox"/>
Rounding*:	Nearest 5 Decimals
Index Ticker*:	SOFR
Days Before Accrual*:	0
Daycount for Rate:	Act/360
Reset Dates:	
Reset Frequency:	Daily
Rate Cutoff Days:	0
Reset Holidays:	USD, USF
First date:	03-13-2020
Prior to last date:	12-28-2023
Business Days:	Previous
Adjust Maturity Date:	<input checked="" type="checkbox"/>

MODELING NUANCES

- Payment Delays
- Holidays
- Accruals

Trade Options

Credit Value Adjustment (CVA) Apply ☐

Reset Options (Receive)

Advanced Pay Leg Options

Payment Dates:

First date: 11-12-2019

Prior to last date: 05-09-2024

Business Days: Modified Following

Holidays: USD

Adjust Maturity Date: ☒

Payment Delay: ☒

no. of bus days*: 2

Specific Day Of Month:

Calculation Dates:

First date: 11-12-2019

Prior to last date: 05-09-2024

Day Count: Act/360

Business Days: Modified Following

Holidays: USD


Exclude first day: ☐

Include last day: ☐

Advanced Receive Leg Options

COMPLEX INSTRUMENTS

HEDGE TRACKERS

Powered by:  capella
Interest Rates

Client: Example
Entity: Example
Complex: FI Swap 1
Value Date: 01-31-2023
Functional Ccy: USD

	Total Complex	CVA Total
Clean Market Value:	22,381,774.19	22,252,717.20
Accrued Interest:	0.00	0.00
Market Value:	22,381,774.19	22,252,717.20

Trade Details:

Instrument Type: Swap-Fixed/Float
Counterparty: Bank of Tokyo-Mitsubishi UFJ (China), Ltd.
Effective Date: 06-30-2022
Maturity Date: 03-31-2027
Accruing: Term SOFR USD

Discounting: SOFR USD/SOFR USD
Curve Date: 01-31-2023
Valuation (MTM):

Credit Valuation Adjustment(CVA)

Credit Adjustment: -129,056.99
Credit Adjustment (applied): -129,056.99

Entity Credit Curve: Simpson
Counterparty Credit Curve: BMN-Bank of
Tokyo-Mitsubishi
Collateral:

Total Cash Flow Table

Payment Begin Date	Payment End Date	Total Payment	Discount	Discounted Total	Accrued Interest	Credit Adj CVA Applied
01-31-2023	02-28-2023	1,023,001.80	0.9964162804	1,019,335.65		-378.08
02-28-2023	03-31-2023	1,345,881.24	0.9922798076	1,335,490.78		-1,043.54
03-31-2023	04-28-2023	1,055,940.11	0.9885778624	1,043,879.01		-1,202.56

COMPLEX INSTRUMENTS

Short Term Mkt Val

Cash Base: 13,309,733.43
Accrual Base: 13,309,733.43
CVA Cash Base: -32,647.39
CVA Accrual Base: -32,647.39

Complex Trade

Main: Swap 2
 Floor 2

Trade name: Swap 2

Leg Type: fixed
Currency: USD
Coupon: 2.30600%
Business Days: Modified Following
Apply To: All dates

Holidays: New York (2060)

Trade name: Swap 2

Leg Type: floating
Currency: USD
Index/Tenor: SOFR/1M
Business Days: Modified Following
Apply To: All dates

Holidays: New York (2060)
Reset Holidays: New York (2060); Good Friday (2060)

Pay Leg Cash Flow Details Table

Payment End Date	Fixed Coupon	Notional	Payment Total	Discounted Total
02-28-2023	2.30600%	-583,162,500.00	-1,045,934.34	-1,042,186.01
03-31-2023	2.30600%	-577,537,500.00	-1,157,998.74	-1,149,058.76
04-28-2023	2.30600%	-571,912,500.00	-1,035,845.59	-1,024,014.02
05-31-2023	2.30600%	-566,287,500.00	-1,220,818.02	-1,201,602.48
06-30-2023	2.30600%	-410,625,000.00	-1,109,834.56	-1,087,874.56
07-31-2023	2.30600%	-405,000,000.00	-1,135,659.36	-1,108,604.88
08-31-2023	2.30600%	-399,375,000.00	-1,135,659.36	-1,104,120.58

Receive Leg Cash Flow Details Table

Payment End Date	Reset Begin Date	Reset Rate	Total Rate	Notional	Payment Total	Discounted Total
02-28-2023	01-31-2023	4.56144%	4.56144%	583,162,500.00	2,068,936.14	2,061,521.65
03-31-2023	02-28-2023	4.98614%	4.98614%	577,537,500.00	2,503,879.97	2,484,549.54
04-28-2023	03-31-2023	4.65673%	4.65673%	571,912,500.00	2,091,785.70	2,067,893.03
05-31-2023	04-28-2023	4.94137%	4.94137%	566,287,500.00	2,616,009.07	2,574,833.38
06-30-2023	05-31-2023	4.82379%	4.82379%	410,625,000.00	2,321,601.14	2,275,664.22
07-31-2023	06-30-2023	4.98058%	4.98058%	405,000,000.00	2,452,838.22	2,394,404.97
08-31-2023	07-31-2023	4.75971%	4.75971%	399,375,000.00	2,344,061.02	2,278,963.32

COMPLEX INSTRUMENTS

Trade name: Floor 2

Position: Buy
Exercise Type: European
Currency: USD
Index/Tenor: SOFR/1M
Business Days: Modified Following

Apply To: All dates
Holidays: New York (2060)
Reset Holidays: New York (2060); Good Friday (2060)

Option Details Table

Payment End Date	Reset Begin Date	Reset Rate	Volatility	Strike	Total Rate	Notional	Payment Total	Discounted Total
02-28-2023	01-31-2023	4.56144%	0.00000%	0.00000%	4.56144%	583,162,500.00	0.00	0.00
03-31-2023	02-28-2023	4.98614%	41.00208%	0.00000%	4.98614%	577,537,500.00	0.00	0.00
04-28-2023	03-31-2023	4.65673%	41.00208%	0.00000%	4.65673%	571,912,500.00	0.00	0.00
05-31-2023	04-28-2023	4.94137%	41.00208%	0.00000%	4.94137%	566,287,500.00	0.00	0.00
06-30-2023	05-31-2023	4.82379%	41.00208%	0.00000%	4.82379%	410,625,000.00	0.14	0.14
07-31-2023	06-30-2023	4.98058%	41.00208%	0.00000%	4.98058%	405,000,000.00	0.83	0.81

Service Delivery - *Full suite of risk management services and products*

RISK ASSESSMENT

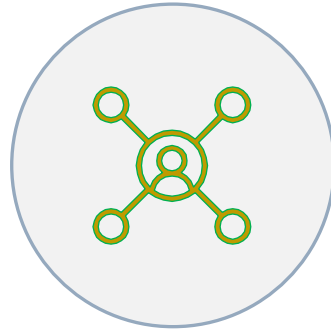
STRATEGY

EXECUTION



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& Accounting



Accounting Services

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QUESTIONS?



THANK YOU

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