

CLAR 2023

Managing Interest Rate Risk in a High Volatility Environment

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Intended for Institutional Clients Only
See Page 36 for Important Disclaimers & Disclosures

RAYMOND JAMES

Section 1

WHO WE ARE

Raymond James Overview



Corporate Highlights

- Full-service securities firm **founded in 1962** and **public since 1983** (“RJF” on NYSE)
- Fiscal 2022 net revenue **\$11 billion**; net income approximately **\$1.5 billion**
- Total market capitalization of **\$21.3 billion**
- More than **8,600 financial advisors** and over **\$1.1 trillion** in client assets
- **More than 135 consecutive quarters of profitability**



Geographic Presence

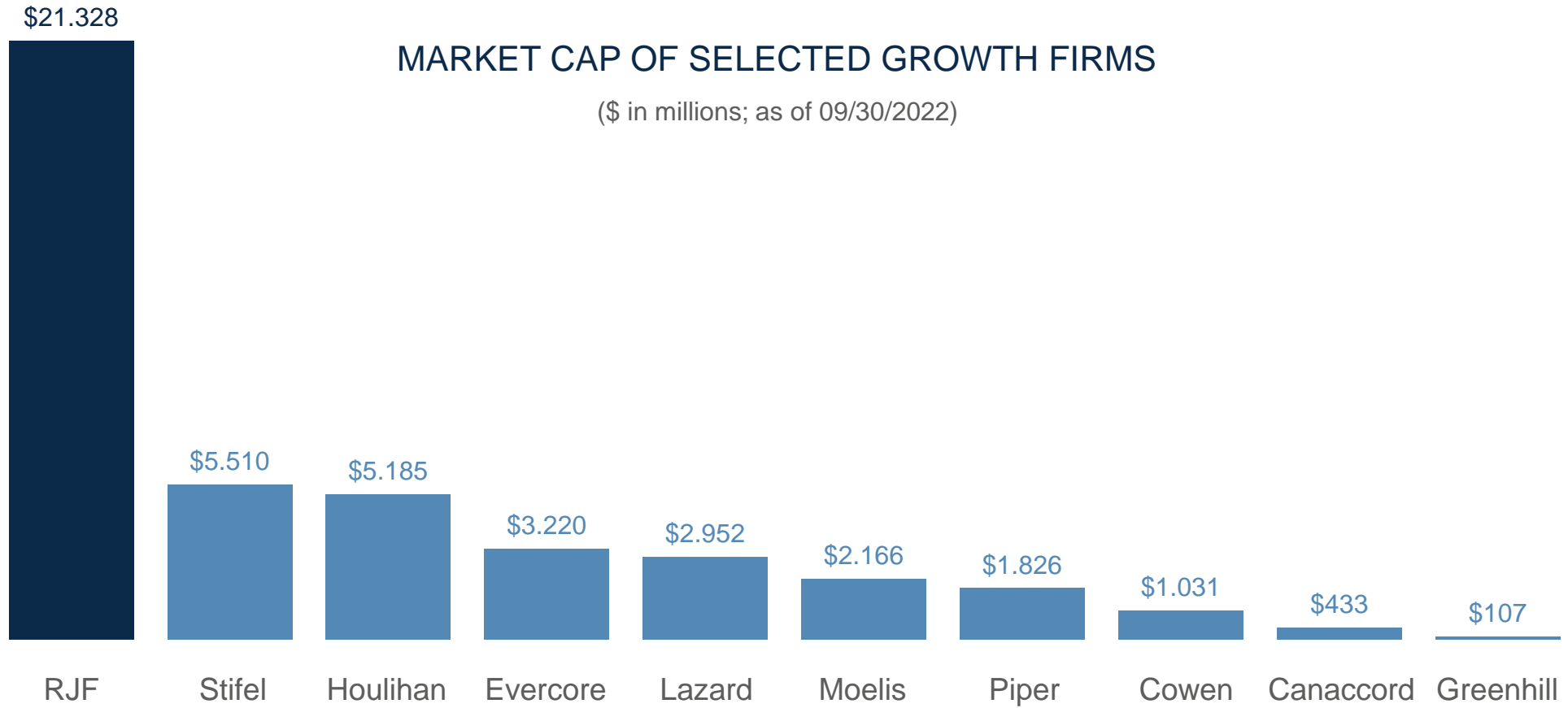
- Offices throughout the United States, Canada and overseas
- European operations in the United Kingdom, France, Belgium, Germany, Switzerland, and Poland
- **Over 33** North American and international investment banking and institutional sales offices



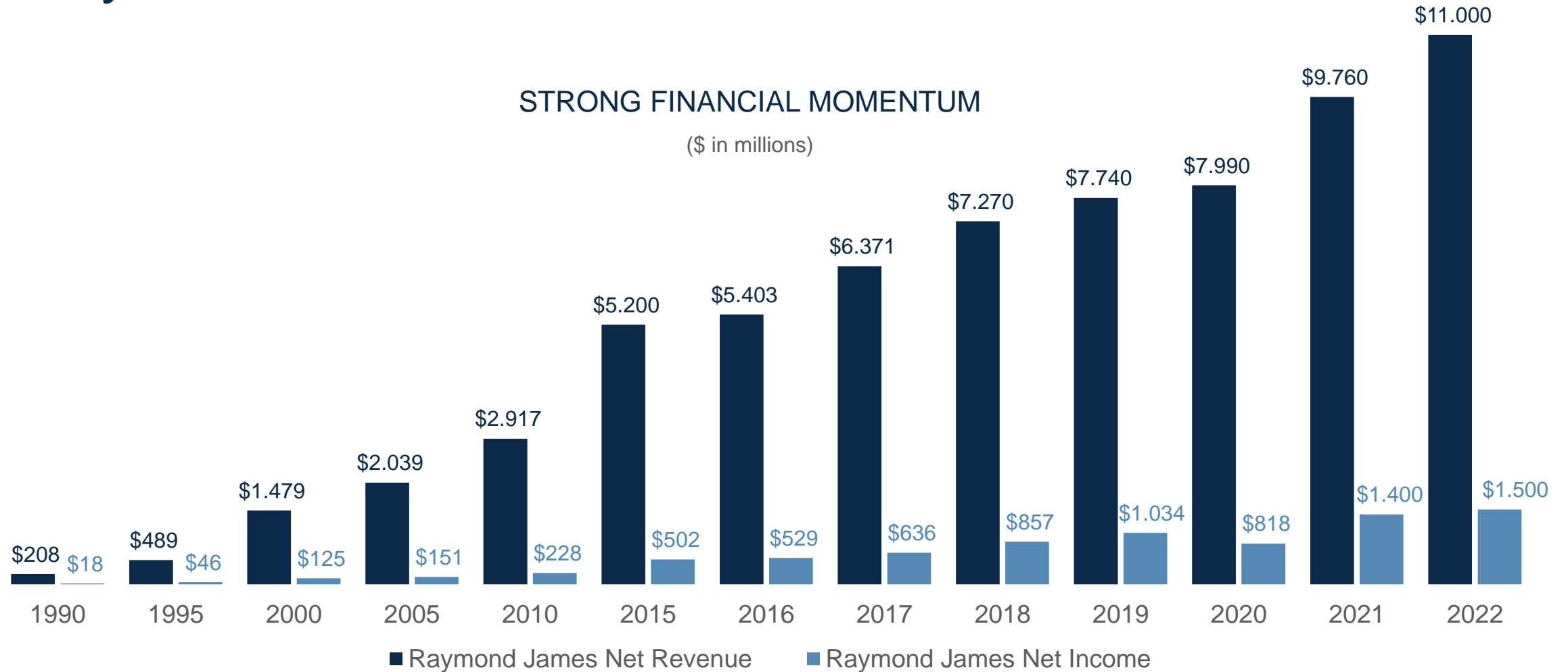
Highly Recognized Brand

- Investment banking was recognized with **6 M&A Deal of the Year** awards (2021)
- **Ranked in the top 10** among all firms in cumulative StarMine awards in a ten-year period that ended in 2020
- Public finance was recognized with the **Deal of the Year** award during the Bond Buyer’s 19th Annual Deal of the Year Awards (2020)

Raymond James Overview



Raymond James Overview



Capital Markets Overview



Fixed Income Capital Markets

- Around **175** experienced institutional salespersons servicing more than **2,500** institutional accounts
- **100+** Fixed Income traders
- More than **50** Fixed Income analysts/strategists supporting clients



Global Equities

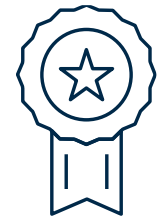
- One of Wall Street's leading equity research efforts with approximately **60 research analysts** covering **more than 1,200 companies** in North America
- Ranked **2nd** in the **2021 Greenwich SMID Cap Equity Investors Study** in overall U.S. small/mid-cap research/advisory penetration
- **Received nine awards** in the 2020 StarMine Analyst Awards from Refinitiv and **ranked in the top 10** in the U.S. over the past 10-year period for total awards won

Investment Banking

- Over **500** professionals organized by industry and transaction specialty groups
- Since 2017, we have participated in **raising over \$300 billion** in capital for our corporate clients and **completed more than 1,100** advisory assignments, including **over 950** M&A buy-side or sell-side advisory assignments
- Recognized with **10 M&A Deal of the Year** awards (2020)

Public Finance

- Approximately **180** professionals in **37** locations nationwide
- **Top 5 underwriter nationally** of municipal bonds
- Largest underwriting desk in the Southeast
- Public finance was recognized with the **Deal of the Year** award during the Bond Buyer's 19th Annual Deal of the Year Awards (2020)



Fixed Income Capital Markets Overview

It's face-to-face connections that help us keep our finger on the pulse of investor sentiment. Backed by a research-driven firm, we pride ourselves on deep relationships with all types of institutional investors.

Highlights:

- Active relationships with more than **2,500+** institutions in all **50** states including Alaska and Hawaii, and the territory of Puerto Rico
- More than **175** experienced institutional salespersons
- Over **30** sales locations in major metropolitan areas from New York to San Francisco

Strategies:

- **More than 50** Fixed Income analysts/strategists supporting clients
- Portfolio and balance sheet peer comparison
- Portfolio review and optimization
- Pre- and post-purchase analysis
- Investment policy review
- Portfolio restructuring ideas

Fixed Income Capital Markets Overview

It's face-to-face connections that help us keep our finger on the pulse of investor sentiment. Backed by a research-driven firm, we pride ourselves on deep relationships with all types of institutional investors.

Trading products:

- **More than 100** Fixed Income traders
- Primary products include Corporates, RMBS/CMO, Gov't Agency, CMBS/MBS, Municipals, CLO/ABS, Treasuries, SBA, Gov't Loans, BOLI, Brokered CDs, Repos and Derivatives

Additional capabilities:

- CD issuance
- BOLI
- Whole Loan trading and analysis
- Derivatives

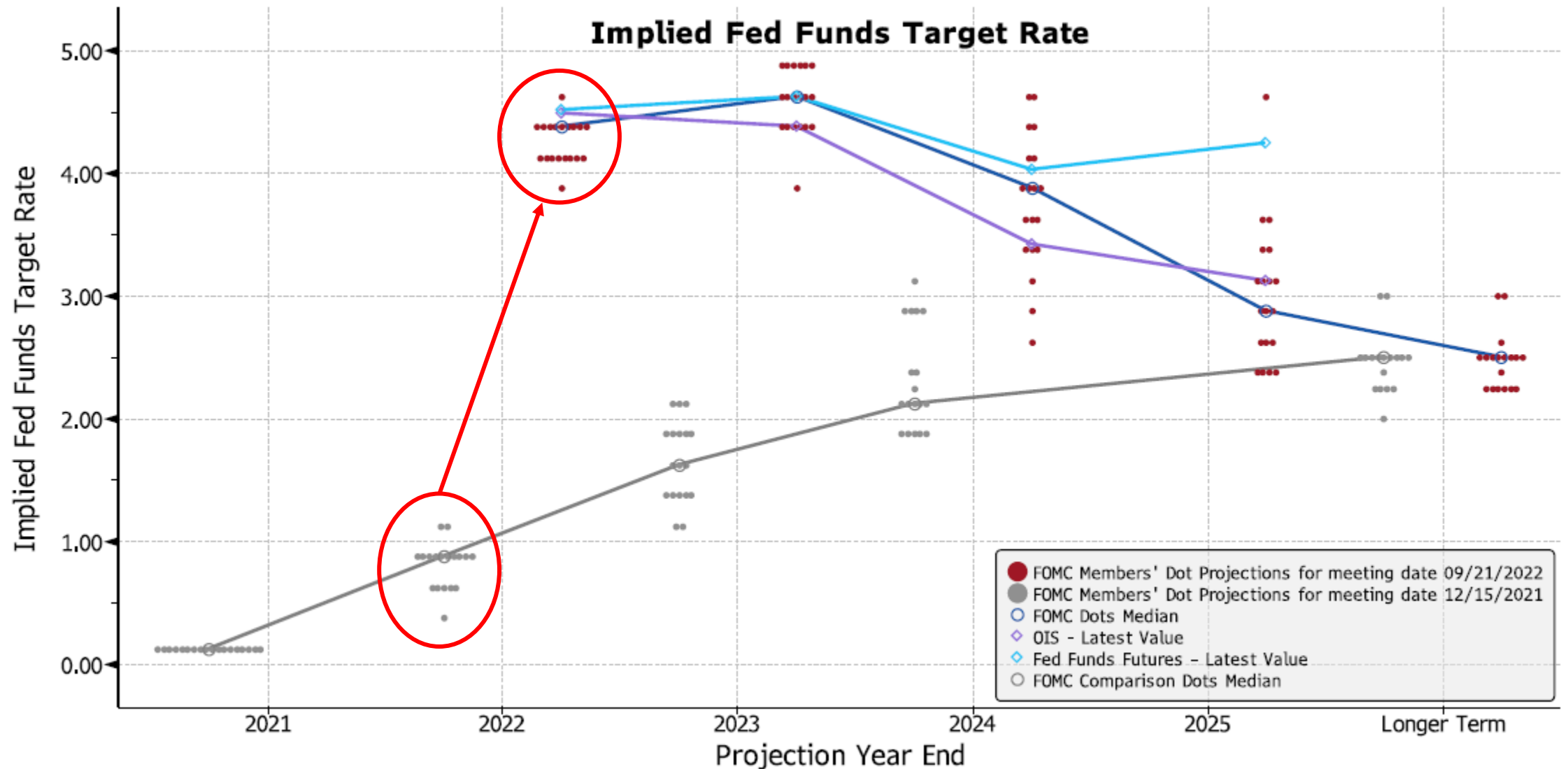
Research/services:

- eFolioPlus®
- Asset/Liability, Portfolio Accounting
- Research reports
- Conferences, Seminars and Bond School
- Economic Commentary

Section 2




ECONOMIC LANDSCAPE

Guidance and Interest Rate Expectations

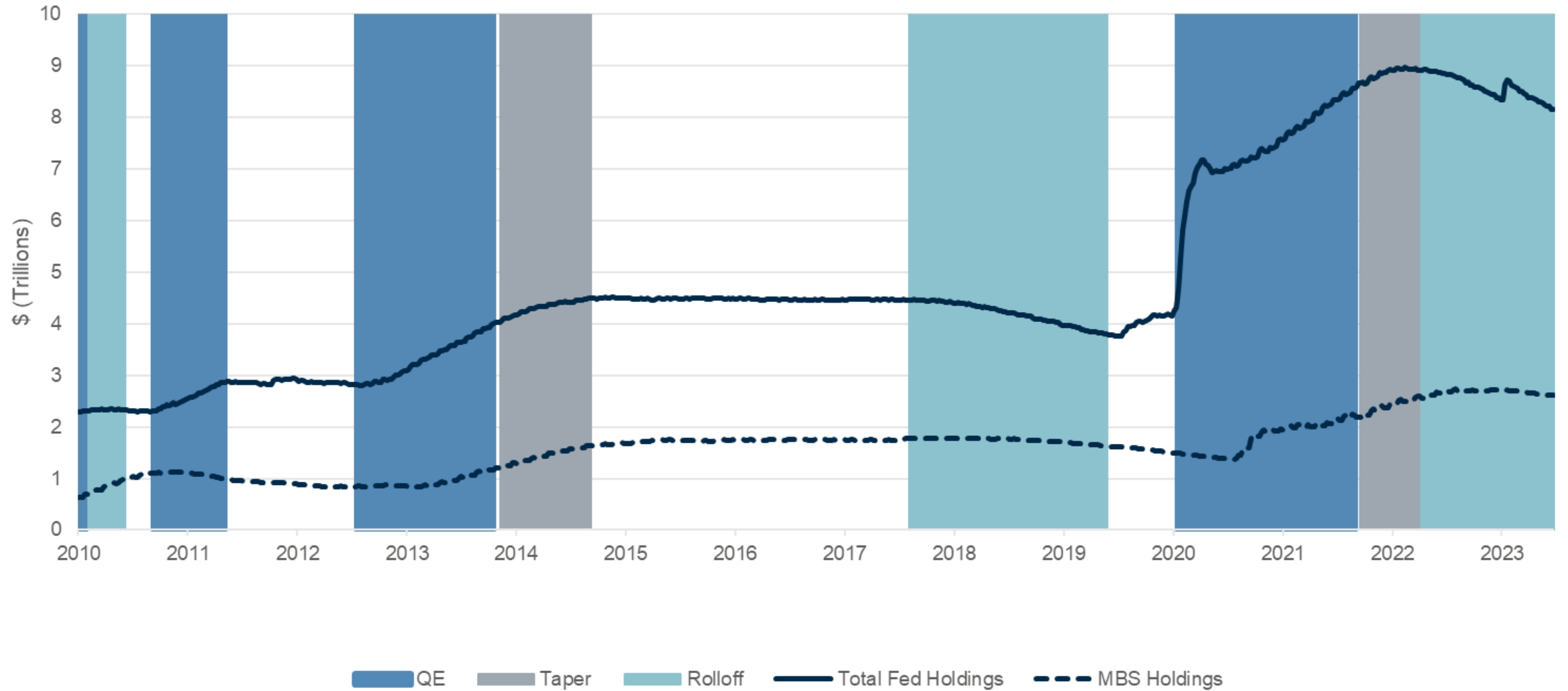


Economist Projections (2021)

- Global survey of 65 PHD economists projections for key economic statistics. The consensus forecast was one rate hike in 2022 as of 12/15/2021.
- “About half of Fed policymakers believe a rate hike will need to follow in 2022, with a few suggesting it may have to come by the summer. The other half of U.S. rate-setters see rate hikes as not appropriate until 2023, and one of them - Minneapolis Fed President Neel Kashkari - is holding out for 2024.” October 2021. ([Reuters](#))

Country/Region/World		Contributor		Contributor Composite		Yearly		Quarterly		
	United States	Browse	<input checked="" type="radio"/> Private	<input type="radio"/> Official						
		Actual / Forecasts				Probability of Recession				15.0%
Indicator	Q1 21	Q2 21	Q3 21	Q4 21	Q1 22	Q2 22	Q3 22	Q4 22	Q1 23	Q2 23
Economic Activity										
Real GDP (YoY%)	0.5	12.2	4.9	5.0	4.5	3.9	4.1	3.6	3.1	2.7
 Real GDP (QoQ% SAAR)	6.3	6.7	2.1	5.0	4.3	4.0	3.2	2.6	2.4	2.2
Consumer Spending (...)	11.4	12.0	1.7	4.0	3.4	3.0	2.8	2.5	2.3	2.2
Government Spending...	4.2	-2.0	0.9	1.3	2.5	2.0	1.8	1.6	1.5	1.2
Private Investment (...)	-2.3	-3.9	11.6	7.0	8.7	6.0	5.4	3.8	3.4	3.2
Exports (QoQ% SAAR)	-2.9	7.6	-3.0	5.0	6.0	6.1	6.1	5.5	5.3	4.6
Imports (QoQ% SAAR)	9.3	7.1	5.8	5.0	5.3	5.0	4.9	4.5	4.1	4.0
Industrial Production (YoY...			6.1	4.3	4.3	3.8	3.7	3.7	3.3	2.8
Price Indices										
CPI (YoY%)	1.9	4.9	5.4	6.0	5.6	4.0	3.2	2.6	2.5	2.4
 PCE Price Index (YoY%)	1.8	3.9	4.3	4.9	4.5	3.5	2.8	2.3	2.3	2.2
Core PCE (yoy%)	1.7	3.4	3.6	4.0	4.0	3.1	2.6	2.5	2.5	2.4
Housing Market										
Housing Starts (000s SAAR...			1590	1578	1575	1588	1582	1550	1540	1535
New Home Sales (000s SA...			743	808	823	836	843	848	851	843
Existing Home Sales (Mln ...			5.9	6.0	6.1	6.1	6.1	6.0	6.0	5.9
Building Permits (000s SA...			1670	1649	1693	1705	1705	1705	1705	1705
Labor Market										
Unemployment (%)	6.2	5.9	5.1	4.5	4.2	4.0	3.8	3.8	3.7	3.7
Non Farm Payrolls (000s S...	785	962	379	500	386	328	265	240	225	183
Average Hourly Earnings (...)	4.3	3.7	4.5	4.3	4.7	4.4	4.1	4.0	4.0	3.6
External Balance										
Curr. Acct. (% of GDP)	-3.1	-3.2		-3.4	-3.4	-3.3	-3.3	-3.3	-3.2	-3.2
Financial Balances										
Budget (% of GDP)	-16.8	-14.0	-12.0	-8.7	-7.3	-6.2	-5.6	-5.5	-5.4	-5.3
Government Debt (% of GD...			102.0	98.8	99.3	99.2	99.4	102.9	103.0	103.0
Interest Rates										
Central Bank Rate (%)	0.25	0.25	0.25	0.25	0.25	0.30	0.40	0.60	0.80	0.95
3-Month Rate (%)	0.19	0.15	0.13	0.17	0.22	0.27	0.39	0.55	0.76	0.87
2-Year Note (%)	0.16	0.25	0.28	0.44	0.57	0.67	0.79	0.92	1.07	1.18
10-Year Note (%)	1.74	1.47	1.49	1.64	1.73	1.82	1.90	1.99	2.08	2.16
Exchange Rates										
EURUSD	1.17	1.19	1.16	1.14	1.13	1.13	1.15	1.16		

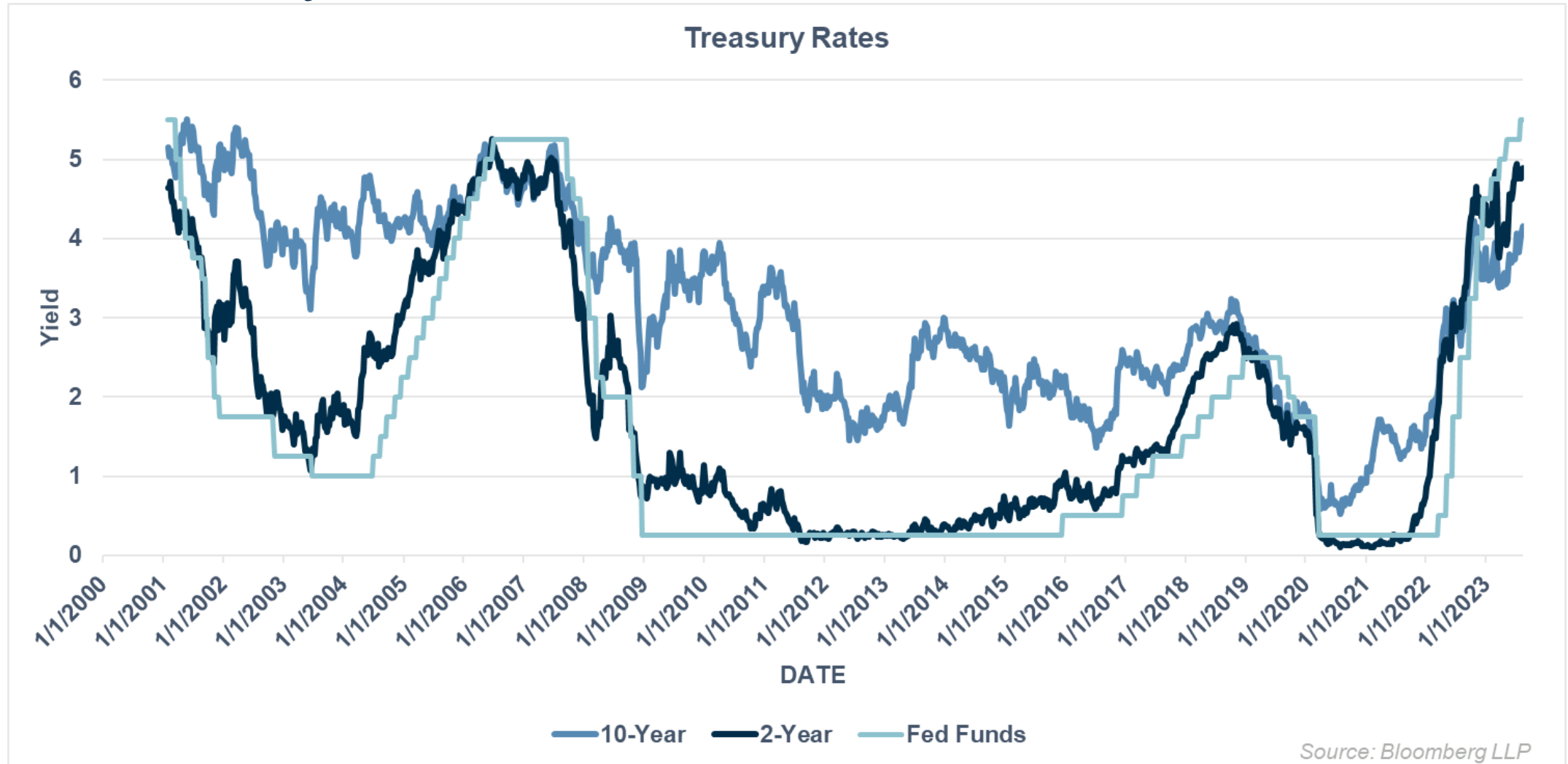
Fed Balance Sheet



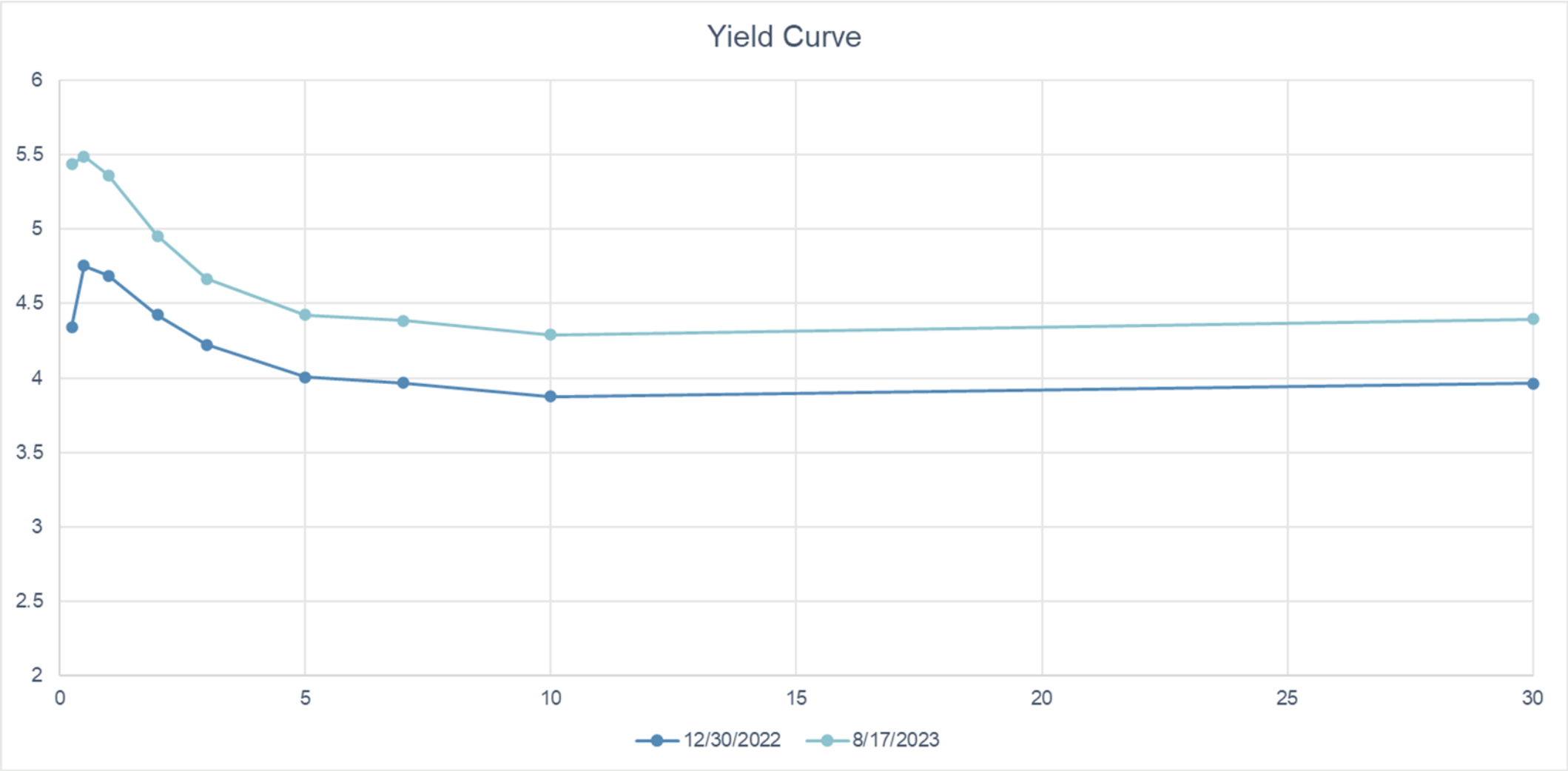
Global Inflation



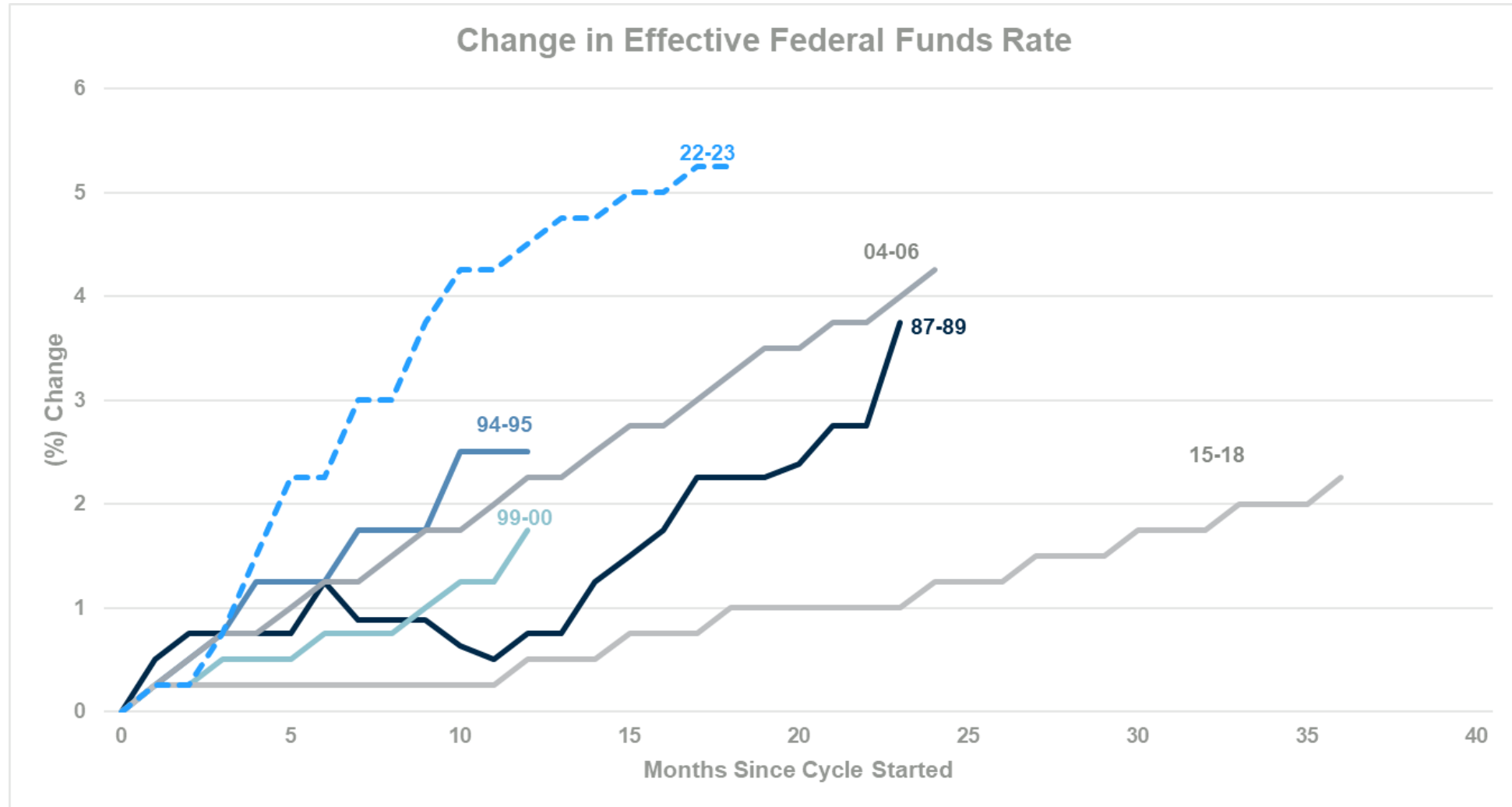
Curve Analysis



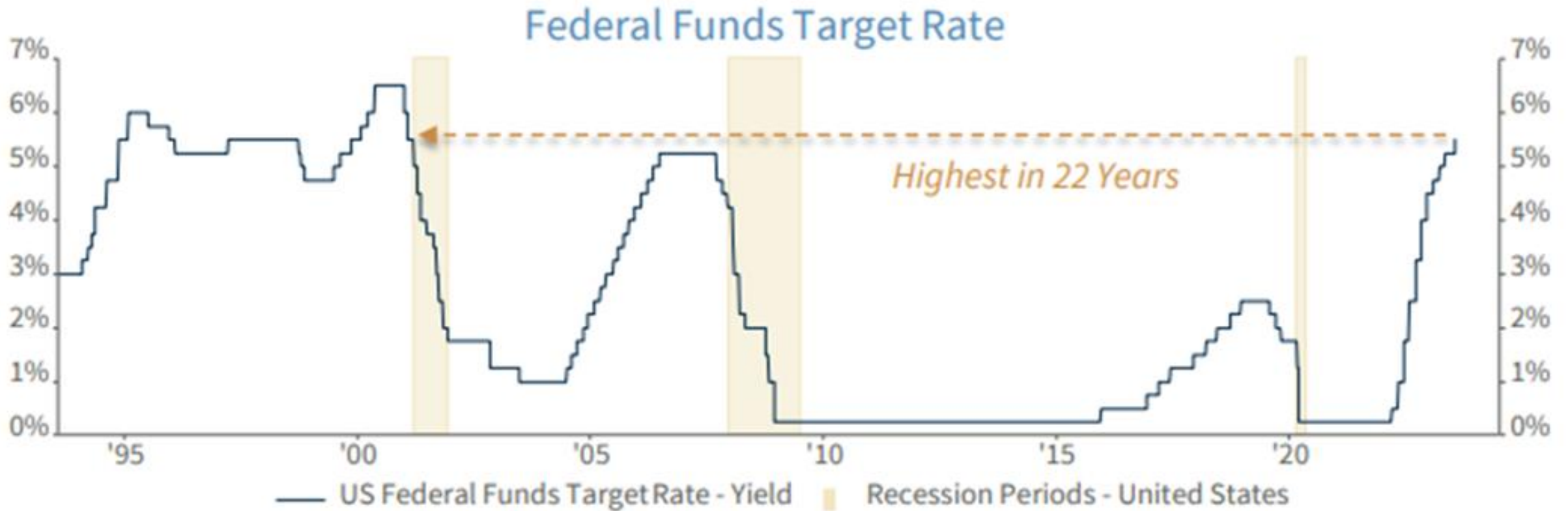
Current Yield Curve



Change In Effective Fed Funds

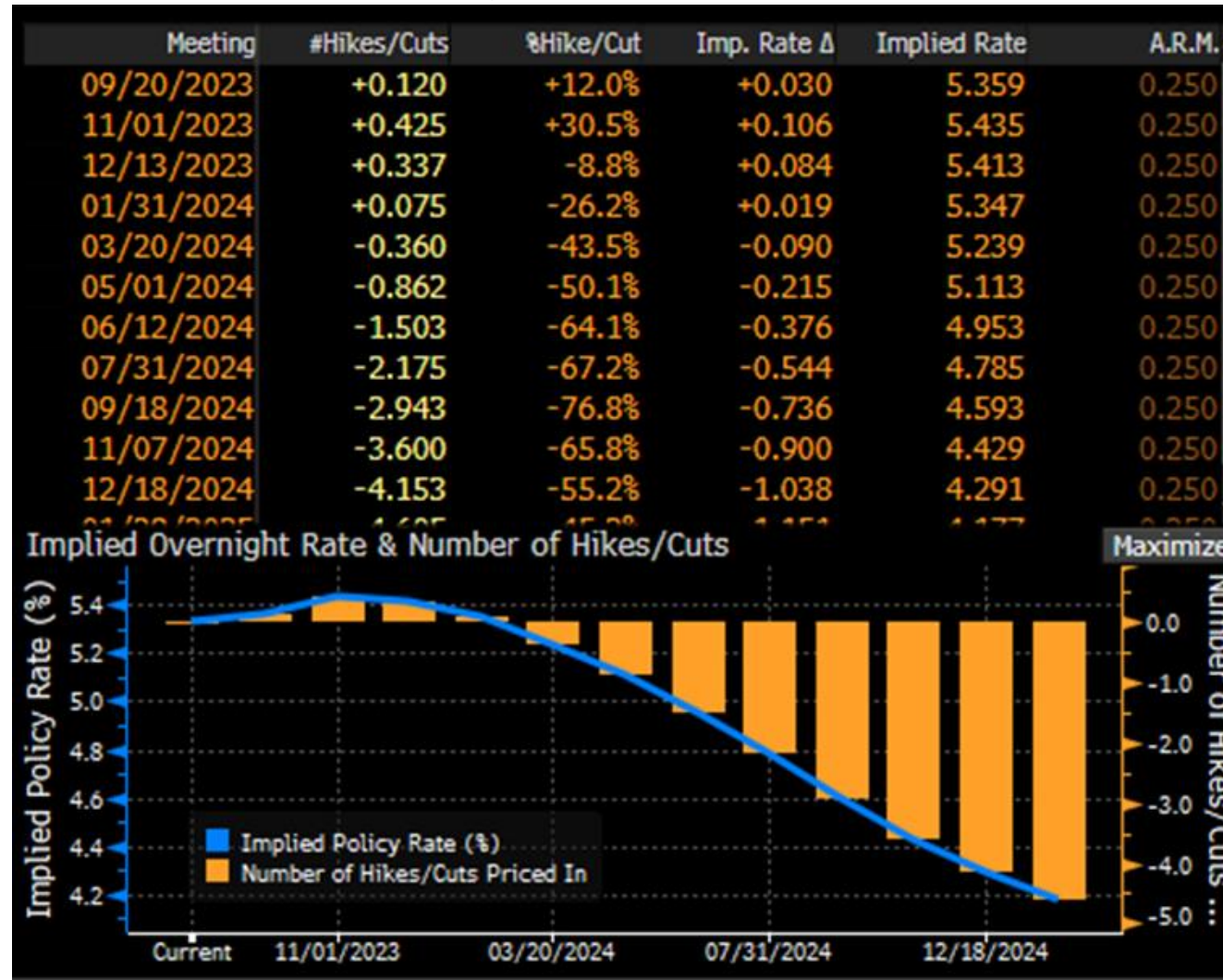


Highest Rates in 22 Years



Source: FactSet, RJ Economics

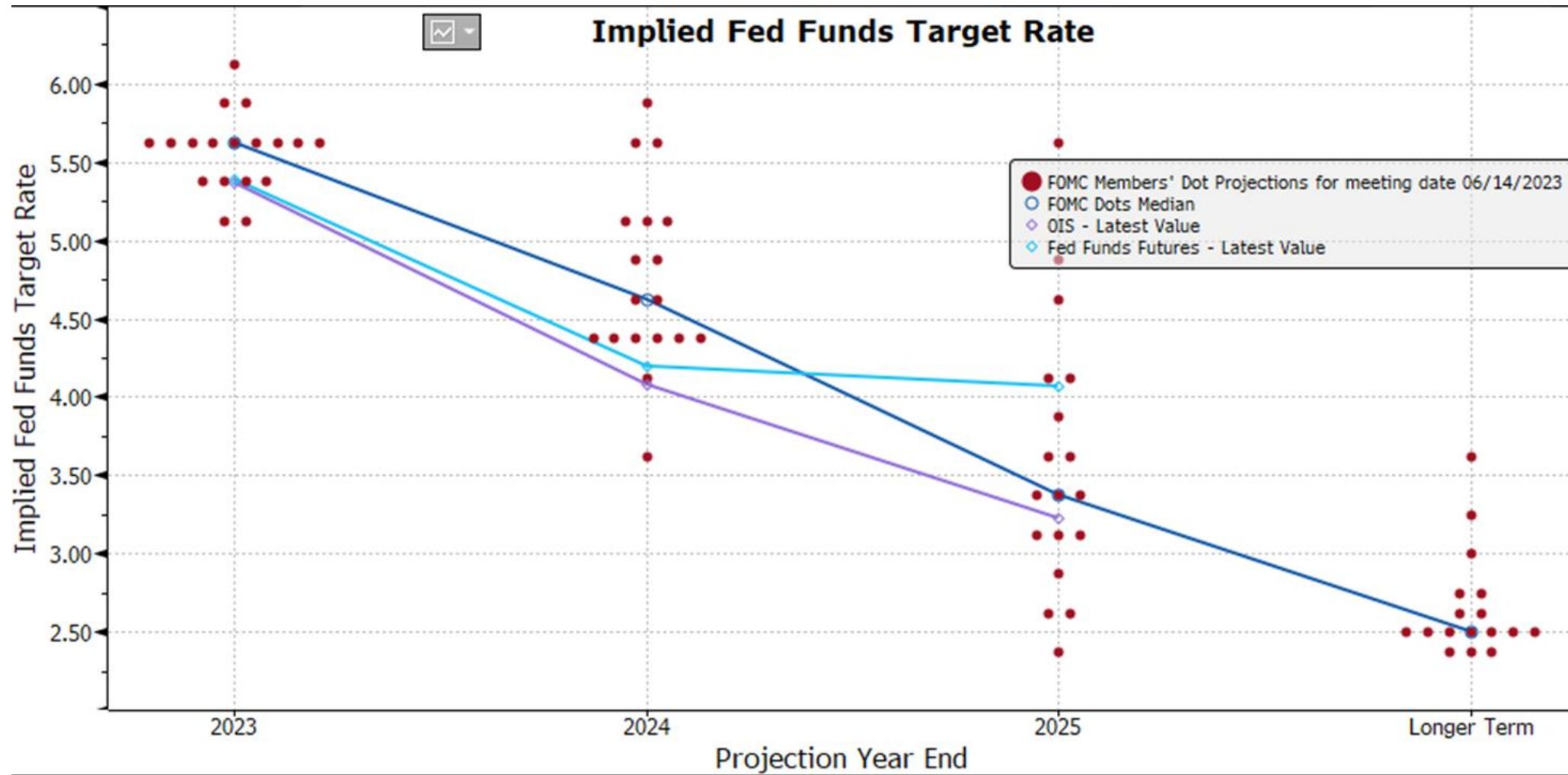
Fed Funds Futures Projection Of Rate Hikes



Bloomberg Economists Survey

Bloomberg Economists Survey Forecasts											
Rate	Market Yields	Q3 23	Q4 23	Q1 24	Q2 24	Q3 24	Q4 24	Q1 25	Q2 25	Q3 25	Q4 25
US 30-Year	4.29	3.91	3.84	3.78	3.73	3.73	3.71	3.68	3.64	3.70	3.74
US 10-Year	4.15	3.75	3.64	3.54	3.48	3.45	3.42	3.39	3.33	3.38	3.41
US 5-Year	4.24	4.01	3.86	3.71	3.57	3.47	3.40	3.34	3.27	3.35	3.33
US 2-Year	4.84	4.65	4.41	4.07	3.80	3.58	3.41	3.30	3.13	3.14	3.09
US 3-Month Term SOFR	5.37	5.32	5.32	5.05	4.69	4.32	4.00	3.74	3.54	3.49	3.38
Fed Funds Rate - Upper Bound	5.50	5.50	5.50	5.25	4.80	4.30	3.95	3.60	3.35	3.20	3.10
Fed Funds Rate - Lower Bound	5.25	5.26	5.26	5.01	4.53	4.07	3.71	3.36	3.12	2.96	2.85

Fed Dot Plot



What does interest rate risk look like?



Regulatory Environment

- American Bank Regulations tend to fight yesterday's problem.
- Expect new regulations for Bank's \$100bln and higher.
- But the new regulations tend to trickle down to smaller banks.
- Robust banking lobby in the U.S. means a tough fight for new regulations to be voted in.
- Merger's & Acquisitions are beginning to pick back up.
- M&A is the preferred method of American regulators to solve problem banks.
- All of this leads us to a tougher regulatory environment and more pressure on risk managers.

Section 3

TOOLS TO MONITOR RISK IN A HIGHLY VOLATILE INTEREST RATE ENVIRONMENT

Different Type of Crisis

- Great Financial Crisis of 2008 was a credit crisis.
- 2022-2023 is a duration/interest rate risk crisis.
- The banking system was forced to accept \$5tn of Covid era monetary/fiscal stimulus.
- Regulators/Investors encouraged banks to buy securities at record low rates.
- Purchase safe (from a credit aspect) securities and earn an attractive spread over a zero cost of funds.
- The idea of a 550bps rate hike in 18 months wasn't on anyone's mind. Credit quality remained high.
- An immediate repricing on the liability side while deposits were shrinking, paired with long duration assets at a loss left us in the position we are in today.

What does interest rate risk look like?



Fixed Income Strategies

Unparalleled solutions

With over **100** years of combined experience, our team of strategists is responsible for evaluating portfolios and balance sheets, then identifying strategies that enhance clients' interest rate risk positions. We do all this while improving earnings and the overall value of the franchise.

Services provided:

- Portfolio review and analysis (PRA)
- Investment policy review
- Peer group comparisons
- Asset optimizations
- Excess cash deployment strategies
- Leverage strategies
- Strategic growth model
- Profitability view
- Strategy seminars
- **pCR™**
- Portfolio restructuring

The Asset Optimizer:

- Searches up to 50 Street firms, and with a mathematical certainty, considers every possible security allocation
- Identifies value in the current market by finding the mix of securities that maximizes return while staying within the institution's risk, return and cash flow parameters

pCR™ Parity Convergence Risk:

- **pCR** is a series of risk metrics only available through eFolioPlus® that provides valuable insight into the impact of time on the portfolio's risk profile, unrealized gain/loss, and cumulative realized earnings.
- The **pCR** platform enhances the portfolio monitoring process, adds a new dimension to pre-purchase analytics and expands communication with board members and regulators.

Asset Optimization

The bond buying process made easier

We know that selecting the right investments for your institution is a challenging process. The list of risk parameters that must be considered continues to grow longer and longer. This combined with the sheer number and various types of securities available result in a decision process that requires a considerable amount of time and analysis. The Asset Optimizer saves time and most importantly, unlocks value in the market.



Exploration

Removes pre-conceived notions to identify value in the current market by searching from inventories of 50+ street dealers



Computation

Includes the ability to input detailed risk, return, and cash flow parameters to ensure investments fit the needs of your institution and comply with policy limits



Customizable

Because a trial and error approach is extremely time consuming given the number of offerings, the optimizer performs as many as tens of thousands of iterations to identify the combination of bonds that maximizes your institution's risk-adjusted performance.



Results

The result is an unbiased selection of investments that meets your institution's needs and has been optimized to a mathematical certainty. The output includes graphics as well as the impact on your overall portfolio and A/L position

Parity Convergence Risk



Is the fear of unrealized losses costing your institution?
We can help.

pCR, or parity convergence risk, adds a new dimension to pre-purchase analysis allowing you to maximize portfolio performance now and in the future.



Unrealized losses are **temporary** to capital

Book and market values converge to par as maturity approaches

pCR quantifies the convergence of both book and market values to par over time by marrying FASB book accounting with horizon market pricing

With pCR you can pinpoint how quickly and when your unrealized losses are eliminated



Income is **permanent** to capital

Unlike unrealized losses, income, through retained earnings, is booked as permanent equity capital

Income builds capital without diluting current shareholders' equity

pCR quantifies how much income your portfolio generates and allows you to justify investment decisions to management and regulators

eFolioPlus provides clients with dynamic and comprehensive solutions for measuring, monitoring and managing their portfolio.



Online, interactive analytics

- View analytics for the total portfolio, sectors, and individual CUSIP numbers in **24** rate environments
- View estimated cash flow distribution, coupon adjustments and roll-off yield analysis
- Third-party security modeling and pricing



Robust reporting

- Select and/or sort from up to **200** fields of analytical and accounting data
- Board-ready portfolio summary and graphics package
- Municipal surveillance reports



Pre-purchase analysis

- Explore potential purchases and/or sells prior to execution
- Provide documentation for regulatory compliance
- Evaluate the impact of a transaction on the entire portfolio
- Determine whether a strategy makes economic sense



Inventory and research

- Access Raymond James' proprietary research
- Access Raymond James' inventory

Interactive Shock and Cashflow Analysis

Cash Flow

Time Period

Monthly/All

Cashflow Type

Principal

Delay Type

☐ As if no delay
☒ Includes delay

Totals

☐ Current Month
☐ Remaining Total
☒ All

UPDATE

Time Period	Principal	Interest	Principal/Interest	Dn200	Dn100	Base	Up50	Up100	Up200
Total	Remaining Principal			82,775,067	82,774,928	82,774,936	82,774,921	82,774,929	82,774,923
1 (08/2023)	Roll-Off Book Yield			3,910,584	3,867,030	988,323	973,189	958,532	931,211
2 (09/2023)	Remaining Book Yield			1,155,769	1,106,093	576,424	557,663	539,384	506,339
3 (10/2023)	Remaining Book Yield At Given Reinvest Rate			810,514	758,303	724,002	703,221	682,829	645,385
4 (11/2023)	Remaining Average Life			634,203	590,832	563,900	546,537	529,396	498,116
5 (12/2023)	Effective Coupon			872,138	831,050	805,006	788,201	771,470	740,686
6 (01/2024)	Remaining Book Yield (Base Case)			818,627	815,909	767,199	730,152	705,529	643,647
7 (02/2024)	Remaining Book Yield With Reinvest (Base Case)			649,209	646,489	601,732	565,695	542,566	483,490
8 (03/2024)				637,665	634,938	593,638	559,739	537,702	480,789
9 (04/2024)				776,244	773,434	732,244	698,754	674,514	613,810
10 (05/2024)				618,704	615,725	580,500	550,580	530,473	477,485
11 (06/2024)				608,607	605,503	572,971	544,861	525,651	474,552

Interactive Shock and Cashflow Analysis

Cash Flow

Time Period		Cashflow Type		Delay Type		Totals	
Monthly/All		Principal		<input type="checkbox"/> As if no delay <input checked="" type="checkbox"/> Includes delay		<input type="checkbox"/> Current Month <input type="checkbox"/> Remaining Total <input checked="" type="checkbox"/> All	
Time Period	Dn100	Dn50	Dn25	Base	Up50	BearSteep	BullSteep
Total	82,774,928	82,773,616	82,772,956	82,774,936	82,774,921	65,350,928	65,334,631
1 (08/2023)	3,867,030	3,852,532	3,095,311	988,323	973,189	486,141	491,629
2 (09/2023)	1,106,093	589,889	582,039	576,424	557,663	571,856	582,821
3 (10/2023)	758,303	739,915	730,938	724,002	703,221	715,727	735,733
4 (11/2023)	590,832	576,284	569,160	563,900	546,537	555,772	574,782
5 (12/2023)	831,050	817,052	810,157	805,006	788,201	546,621	569,646
6 (01/2024)	730,152	716,956	710,425	705,529	689,552	694,940	719,959
7 (02/2024)	565,695	553,315	547,154	542,566	527,518	531,043	559,631
8 (03/2024)	559,739	547,980	542,093	537,702	523,349	524,928	556,485
9 (04/2024)	698,754	685,970	679,537	674,514	659,365	657,530	695,913
10 (05/2024)	550,580	539,927	534,532	530,473	517,362	515,301	551,961
11 (06/2024)	544,861	534,721	529,556	525,651	513,131	509,573	548,530
12 (07/2024)	788,007	778,443	773,543	769,830	757,956	753,076	792,315

Custom Reports

ARM Info

Analytic

Call Analysis - Current Portfolio

Cashflow Shock Interest 0-60 Months

Cashflow Shock Interest > 60 Months

Cashflow Shock Principal 0-60 Months

Portfolio 145501M22 Taxtree Muni

Portfolio 15672RAA3 Floating ABS

Portfolio 190335LJ6 Taxable Muni

☒ Analytic

☐ Reportfolio

Raymond James obtains market prices from leading industry sources. Securities that are not priced by these sources may be priced by the Raymond James trading desk. In either case market prices are not bids and no representation is made regarding the availability of a willing buyer.

Quick Filter

Description	Original Face	Par	Coupon	Maturity	Book Yield	Next Call Date	Next Call Price	Yield To
BAC 1.734 07/22/27 '26 MTN ReOpened	1,500,000	1,500,000	1.73400	07/22/2027	4.50800	07/22/2026	100.00000	4
HAPOAL 0.5 12/15/25	249,000	249,000	0.50000	12/15/2025	0.50000			
BURLESON TEX	1,100,000	1,100,000	3.00000	03/01/2029	3.90800	08/07/2023	100.00000	3
CARROLLTON MICH PUB SCH DIST	750,000	750,000	2.75000	05/01/2029	3.32600	11/01/2024	100.00000	3
CERBLN A1	1,000,000	684,970	6.96957	07/15/2030	7.96500			
COAST CMNTY COLLEGE DIST CALIF	4,000,000	4,000,000	2.26400	08/01/2035	1.87800			

Columns

Filters

- Choose from a list of standard, preformatted reports
- Use the “Quick Filter” option to isolate individual bonds
- Sort and filter columns with the grid

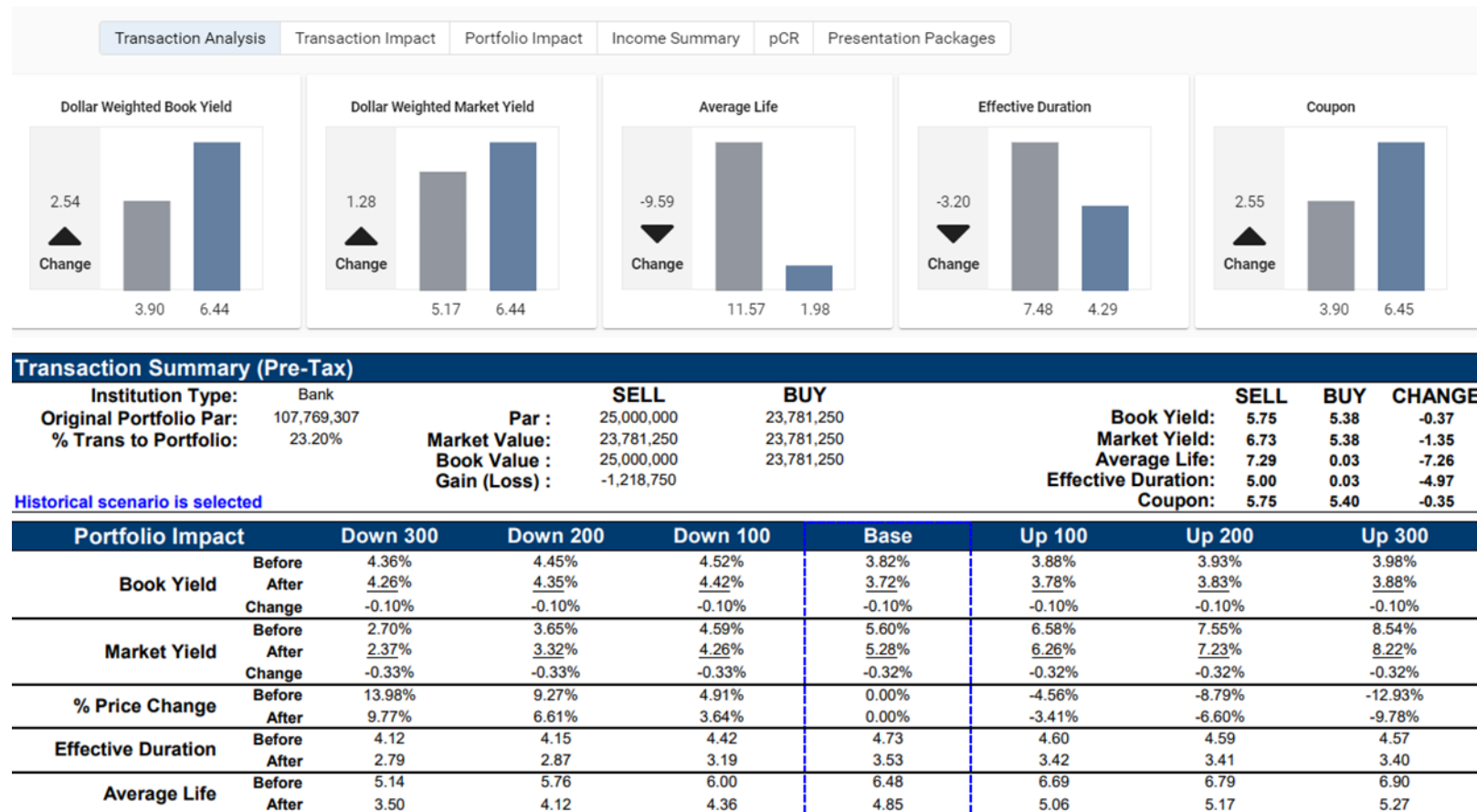
Custom Reports

- >200 Fields to choose from.
- Create, save, edit and share with others.

The screenshot shows a 'Add Custom Report' dialog box with a close button (X) in the top right corner. At the top, there is a text input field labeled 'Report Name *'. Below this, a note states: '* Note: Please change the name to save as a new report. Public reports will be labeled as Predefined. Predefined names are reserved and cannot be used again.' The dialog is divided into two main sections: 'Available Fields' on the left and 'Assigned Fields' on the right. The 'Available Fields' section has a search bar labeled 'Search Available Fields' and a list of fields including: ANALYTICS - CUSIP, REPORTFOLIO - CUSIP, ANALYTICS - AS OF DATE, ANALYTICS - BALLOON TERM, ANALYTICS - BASE AVERAGE LIFE, ANALYTICS - BASE BOND EQUIVALENT BOOK Y, ANALYTICS - BASE BOND EQUIVALENT MARKE, ANALYTICS - BASE EFFECTIVE CONVEXITY, ANALYTICS - BASE EFFECTIVE DURATION, ANALYTICS - BASE GAIN OR LOSS TO BOOK, and ANALYTICS - BASE MARKET PRICE. Between the two sections are four arrow buttons: a single right arrow, a double right arrow, a single left arrow, and a double left arrow. The 'Assigned Fields' section has a search bar labeled 'Search Assigned Fields' and an empty list area. Below the list area, it says 'Drag & Drop fields to modify column order.' At the bottom right, there are two buttons: 'CANCEL' and 'SAVE'.

eSwap Analysis

Run what-if buy/sell simulations on your portfolio.



Raymond James

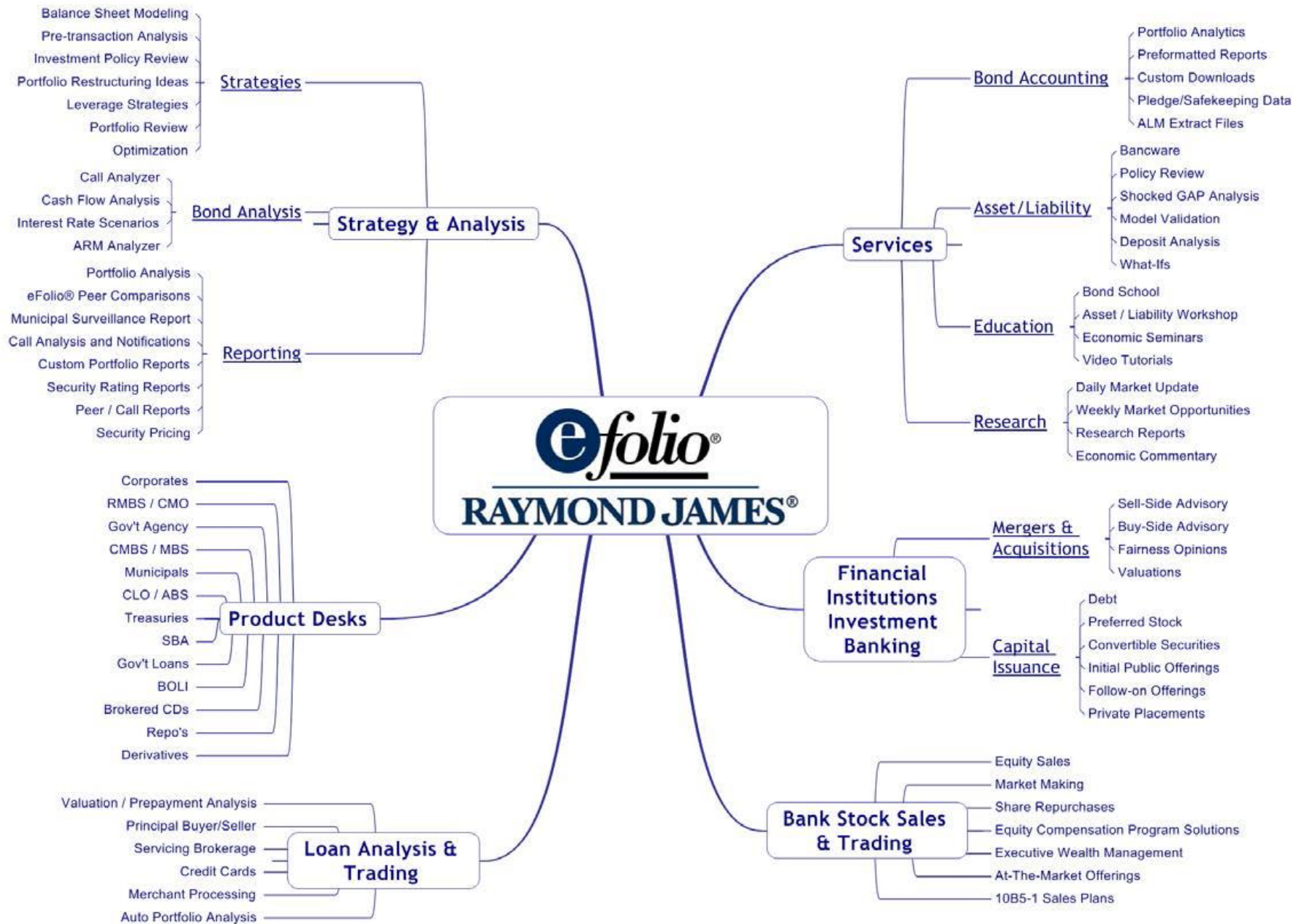
Fixed Income Capital Markets

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