

PHI



ENIX

2024

**Designing Custom
Blends of Taxable and
Tax-Exempt Bonds**



Panelists

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Senior Vice President and Chief Financial Officer | Utah Housing Corporation

Michael Babcock

Assistant Director of Capital Markets | Illinois Housing Development Authority

Damian Busch

Senior Vice President | Jefferies LLC

Discussion Leader

Hazim Taib

Chief Financial Officer | Connecticut Housing Finance Authority

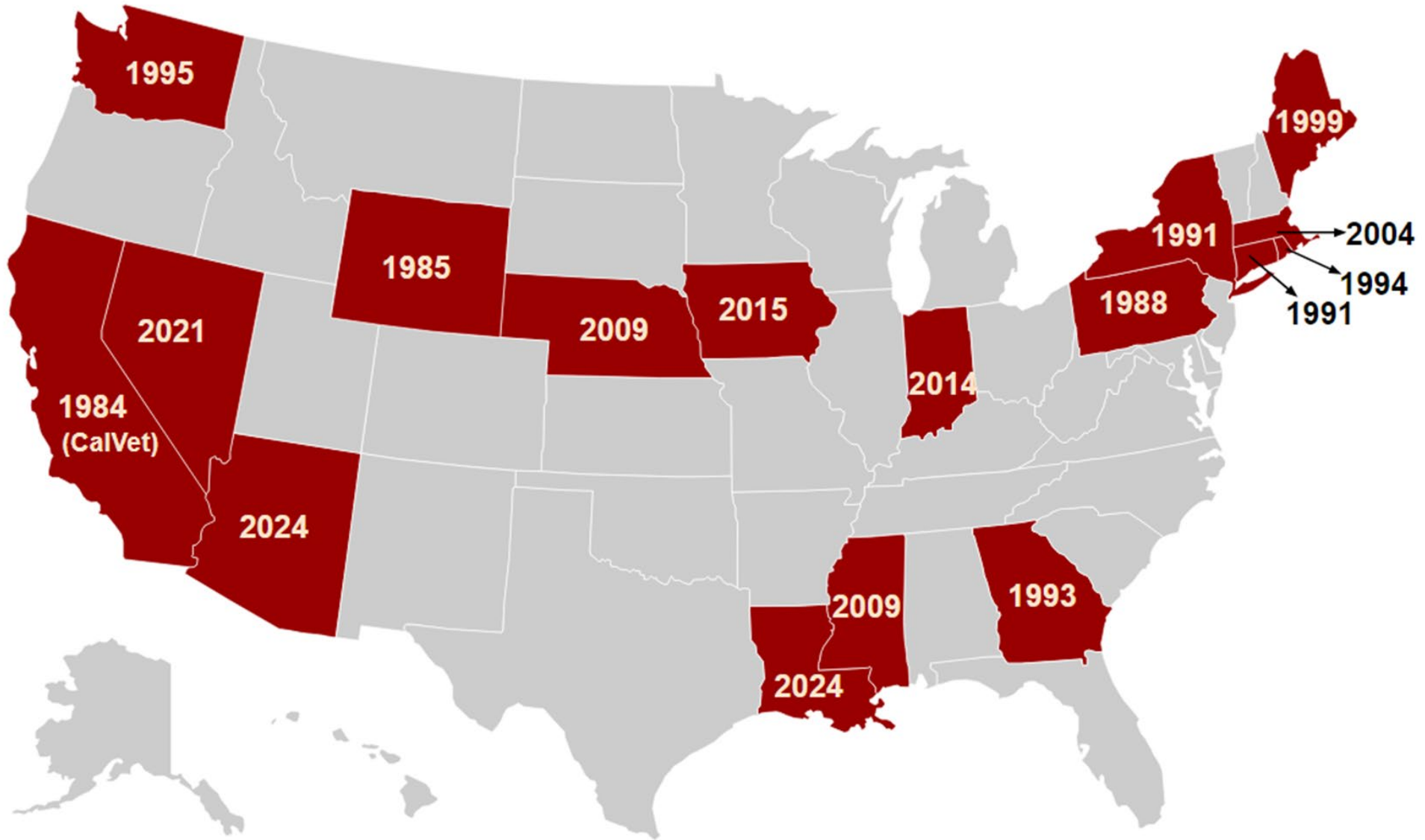


Regulatory Disclosure

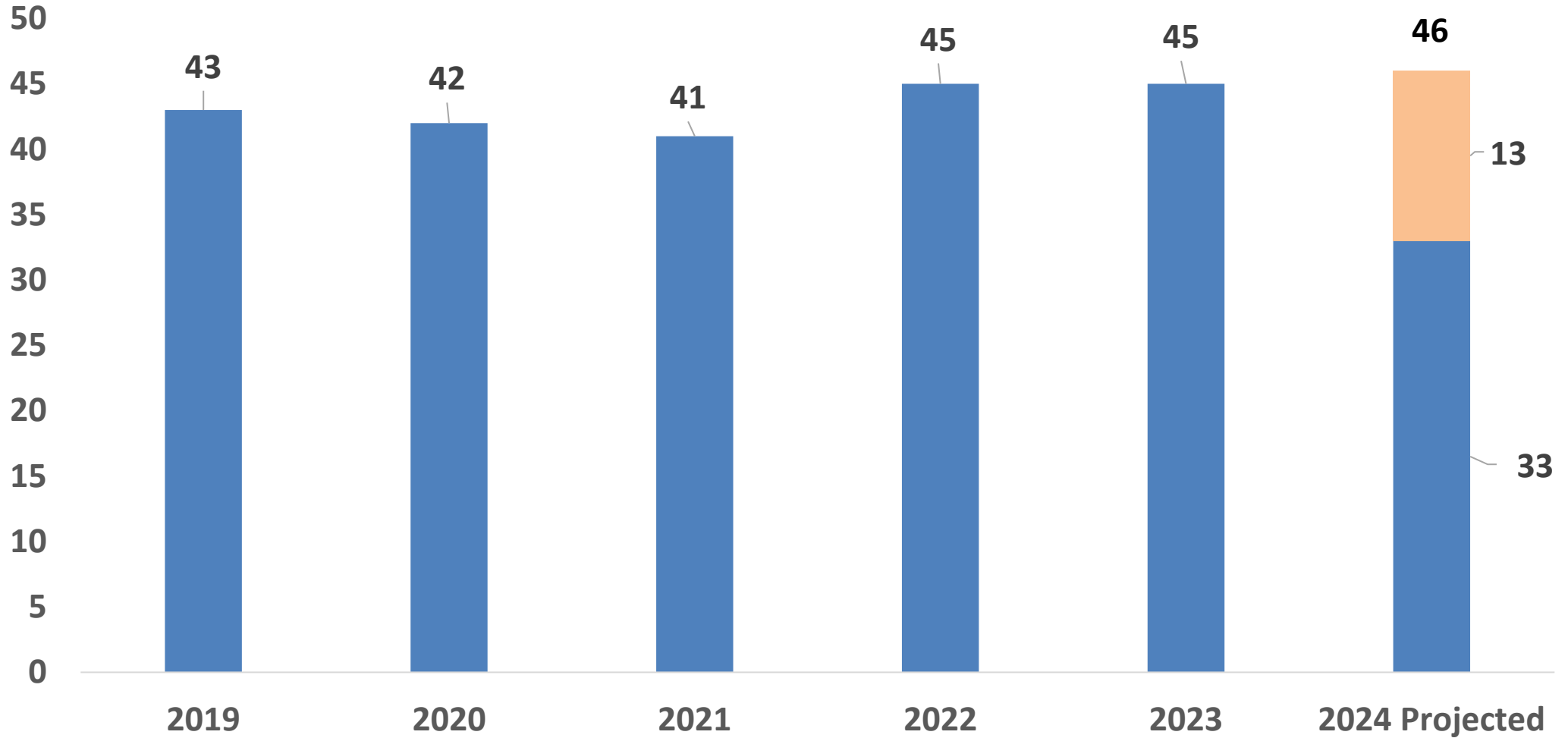
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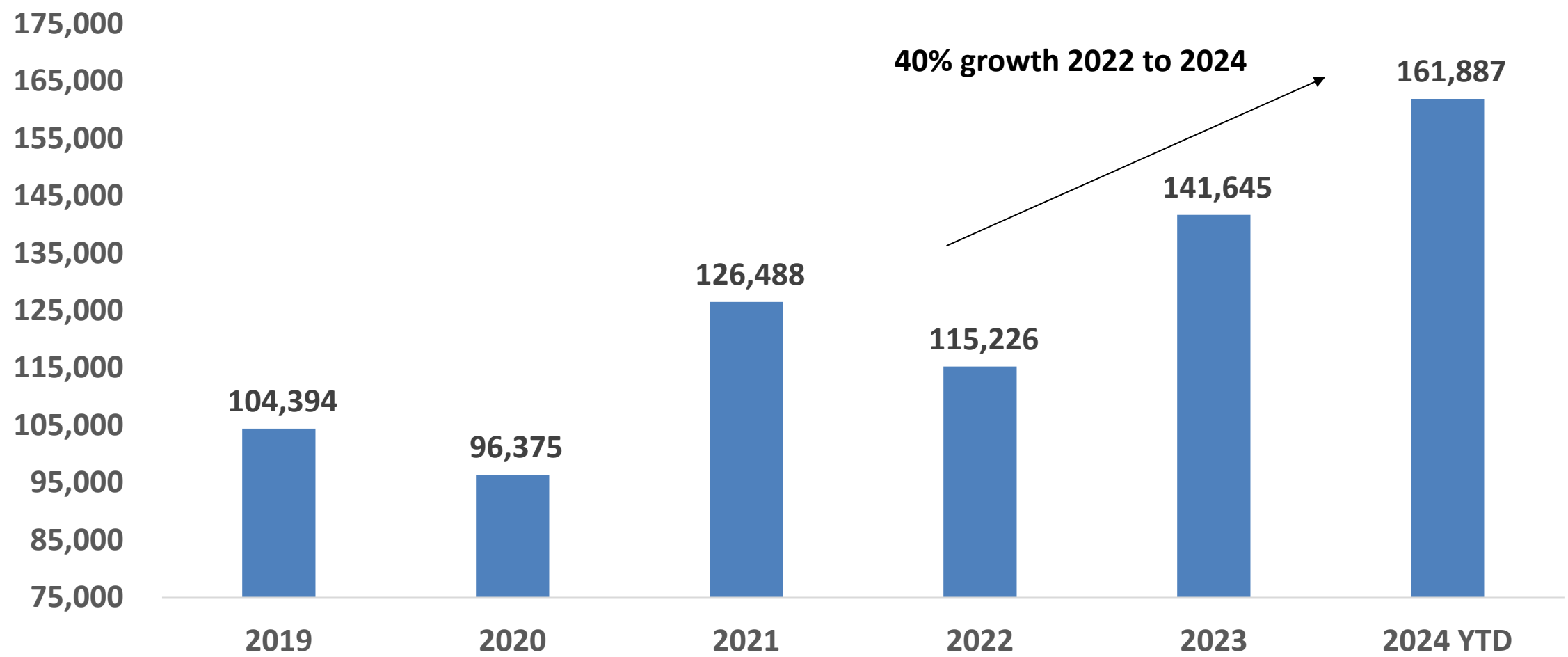




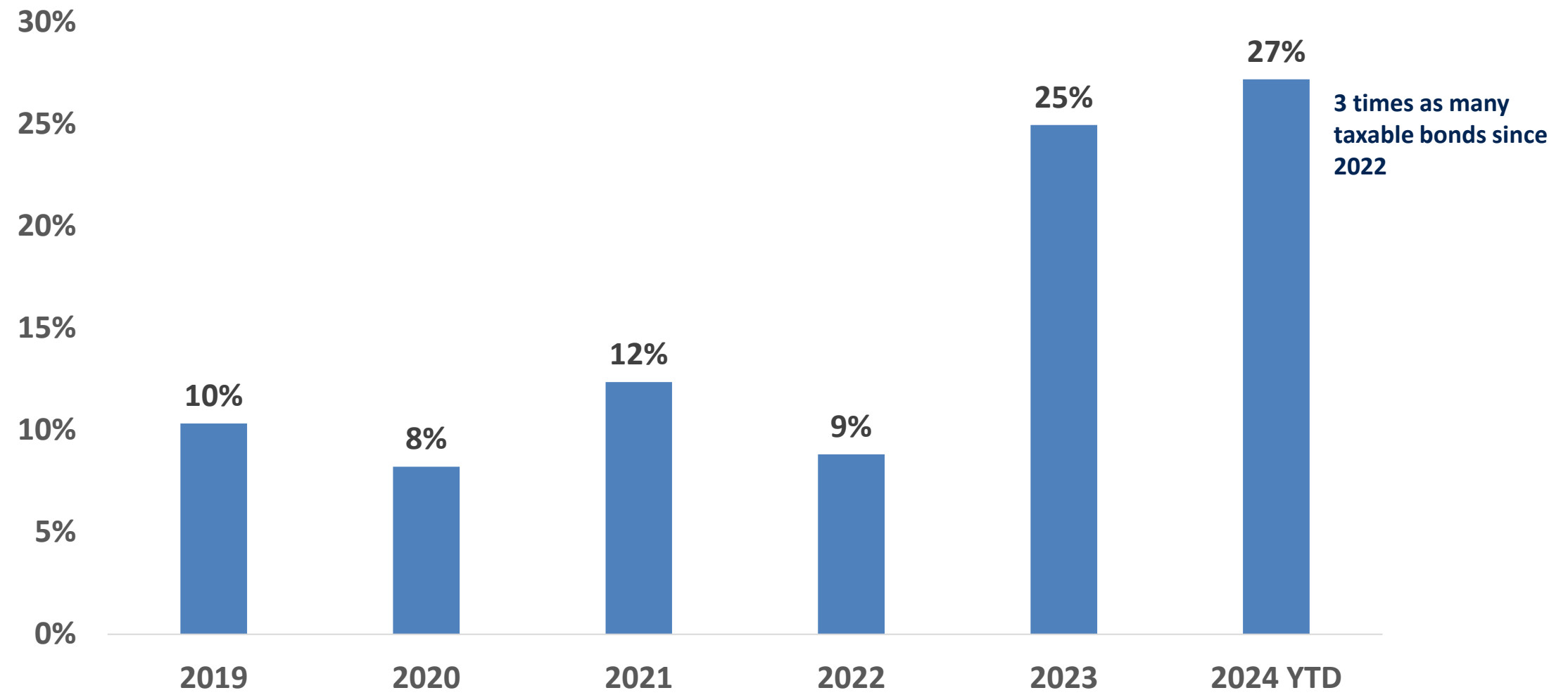
Number of Issues, cfX Advisory Clients



Average Issue Size, cfX Advisory Clients in 000's

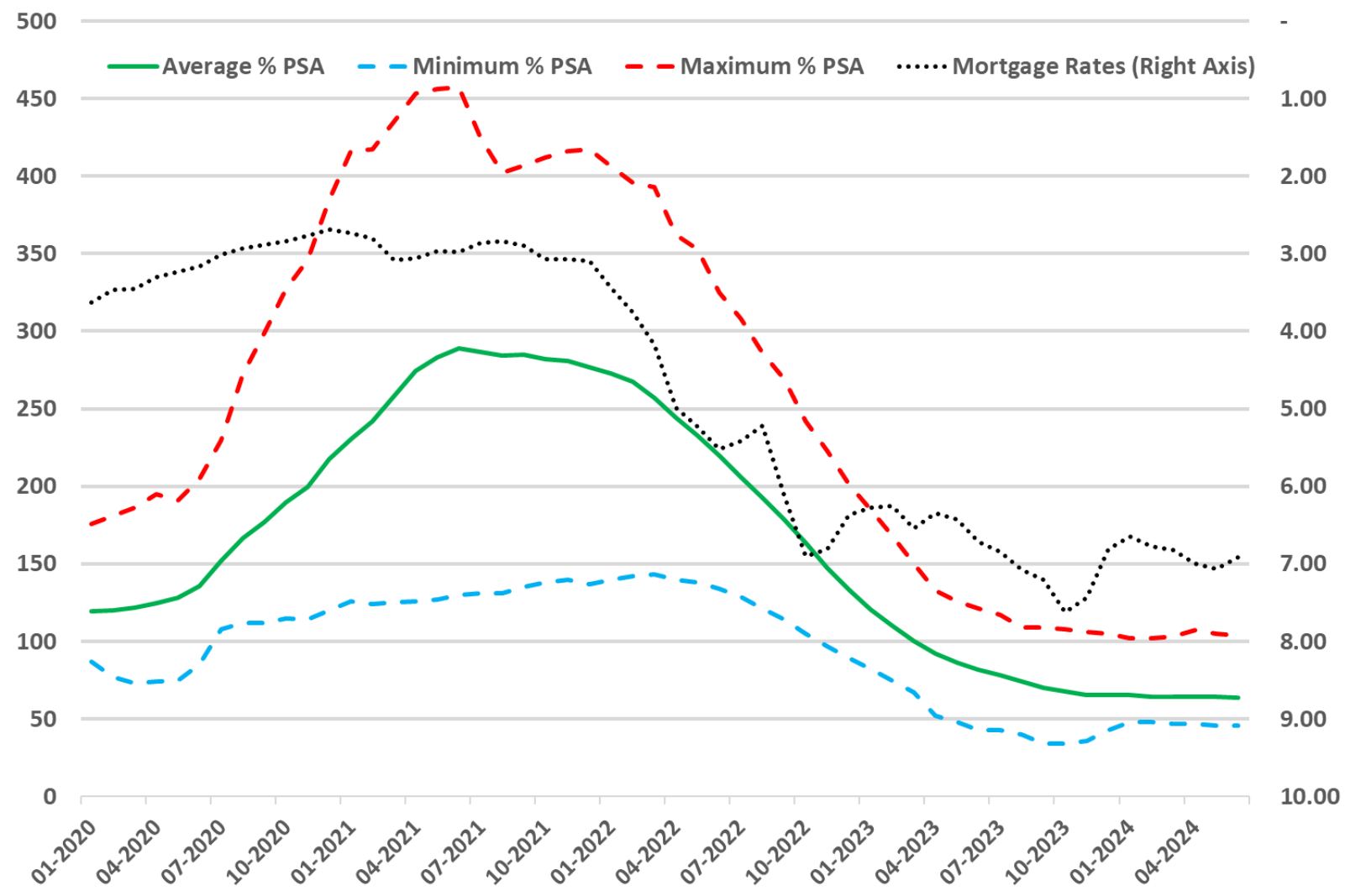


Percent Taxable Bonds, cfX Advisory Clients



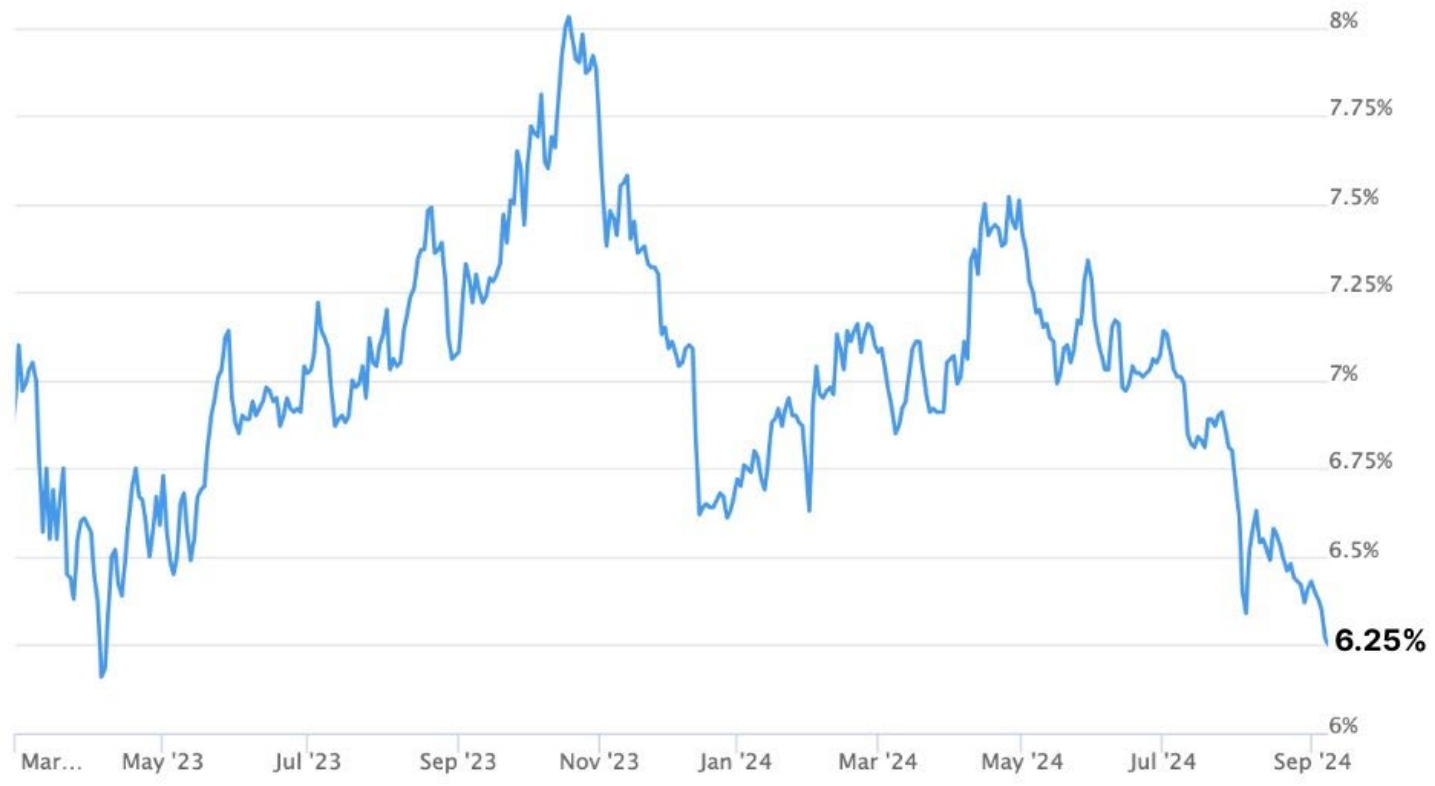


Minimum, Average & Maximum Trailing One Year % PSA Rates for 15 State HFAs
Last 3 Plus Years - 2020-06/2024



Mortgage Rates Hit Lowest Level of 2024

30 Year Fixed Mortgage Rate



Source: Mortgage News Daily

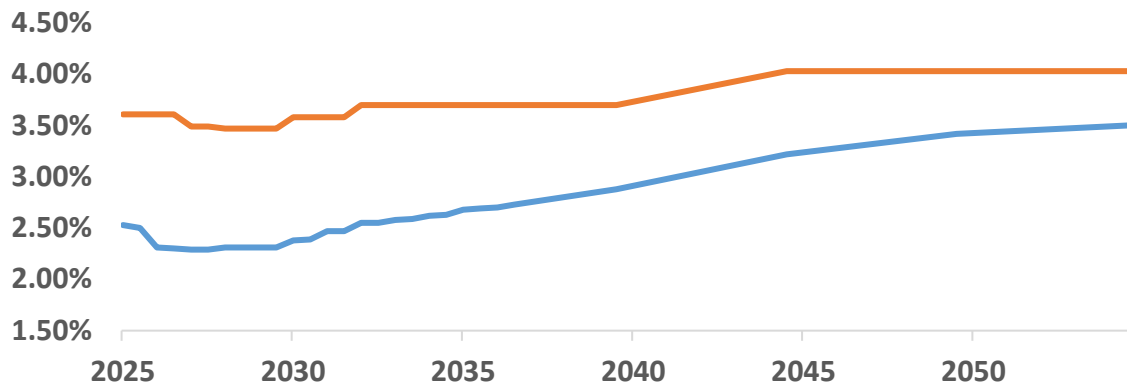
Summary “Why?”

- Significant increase in single family production volume due to:
 - Higher rates – tax-exemption more valuable
 - DPA Programs
 - Quantitative tightening – reduced viability of TBA
- Limited volume cap from increased MRB volume and competition from other uses; multifamily, IDB, student loans

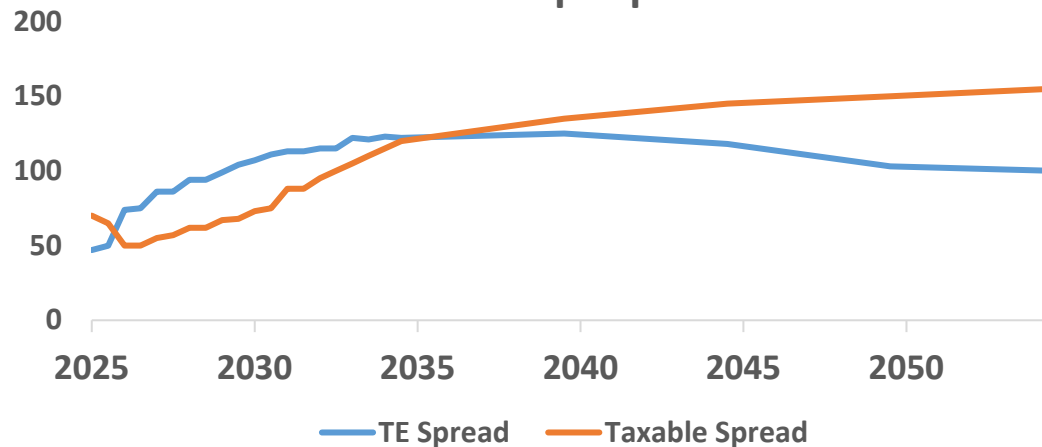
Example:

- Single Family transaction - \$100 million lendable proceeds
- 50% tax-exempt, 50% taxable, all for first-time homebuyers
- 100% MBS
- New volume cap
- 9/18/2024 scale
- 4% DPA forgivable after 5 years

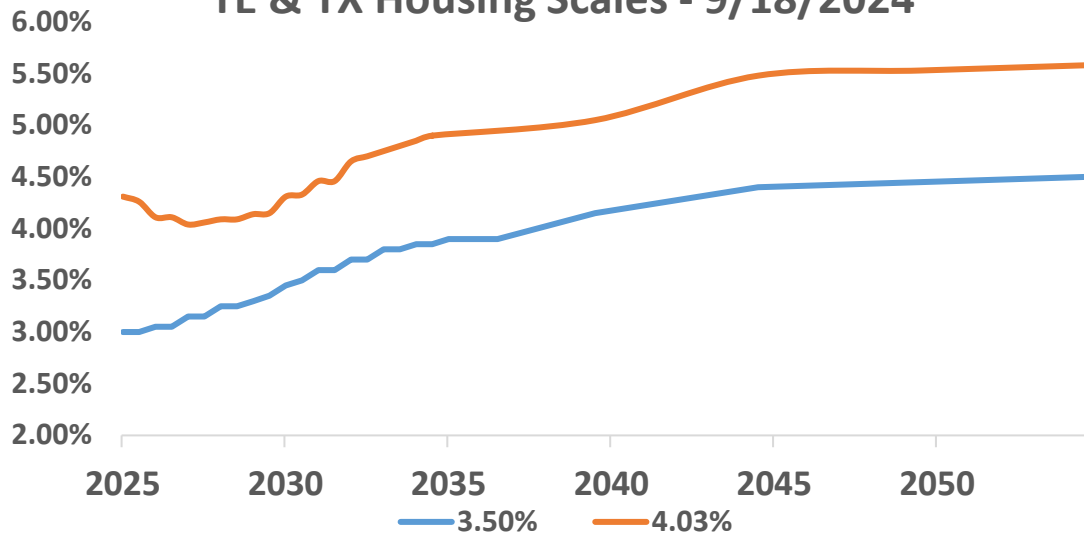
TE (MMD) and TX (UST) Index - 9/18/2024



Taxable and Tax-Exempt Spreads - Par Bonds



TE & TX Housing Scales - 9/18/2024



Non-AMT Premium PAC Pricing (50% - 500% PSA)				
Avg. Life	Coupon	MMD	Spread	Yield
5.0	6.00%	2.31%	118	3.50%
Taxable Premium PAC Pricing (50% - 500% PSA)				
Avg. Life	Coupon	TSY	Spread	Yield
5.0	6.00%	3.47%	135	4.82%

Results @ 100% FHA	A	B	C
Structure	No PAC	5-Yr TE 50 PSA PAC	5-Yr TX 50 PSA PAC
Fixed% / Variable%	100% Fixed	100% Fixed	100% Fixed
PAC Sizing Speed	NA	50 PSA	50 PSA
Structure Summary (in 000's)			
Tax-Exempt Par Serials (2034-2036)	2,045	2,045	2,045
Tax-Exempt Terms (2036-2054)	47,955	30,615	47,955
Tax-Exempt PAC (2054)	-	15,585	-
Taxable Par Serials (2025-2035)	13,230	13,230	13,230
Taxable Terms (2036-2054)	36,770	36,770	20,370
Taxable PAC (2054)	-	-	15,600
Total Tax-Exempt Par	50,000	48,245	50,000
Total Taxable Par	50,000	50,000	49,200
Total Bond Par	100,000	98,245	99,200
PAC Premium	-	1,751	795
Total Proceeds	100,000	99,996	99,995



Results @ 100% FHA	A	B	C
Structure	No PAC	5-Yr TE 50 PSA PAC	5-Yr TX 50 PSA PAC
Fixed% / Variable%	100% Fixed	100% Fixed	100% Fixed
PAC Sizing Speed	NA	50 PSA	50 PSA
Composite Yield Spread Analysis (excludes Bond COI, Loan Acquisition & Servicing)			
Mortgage Yield with DPA	5.93	5.93	5.93
Bond Yield	4.85	4.81	4.69
Composite Spread	1.08	1.12	1.24



Summary “How?”

- Upward sloping housing bond yield curve, place most expensive taxable debt in front of structure
- Compare PACs to see where most efficient
- Mortgage yield compliance opportunities
 - Fund and allocate first time homebuyer DPA loans to tax-exempt mortgage yield (reduces tax-exempt mortgage yield)
 - Taxable generally allowed to receive inflated portion of interest at a “market rate,” allowing for a reduced tax-exempt mortgage yield

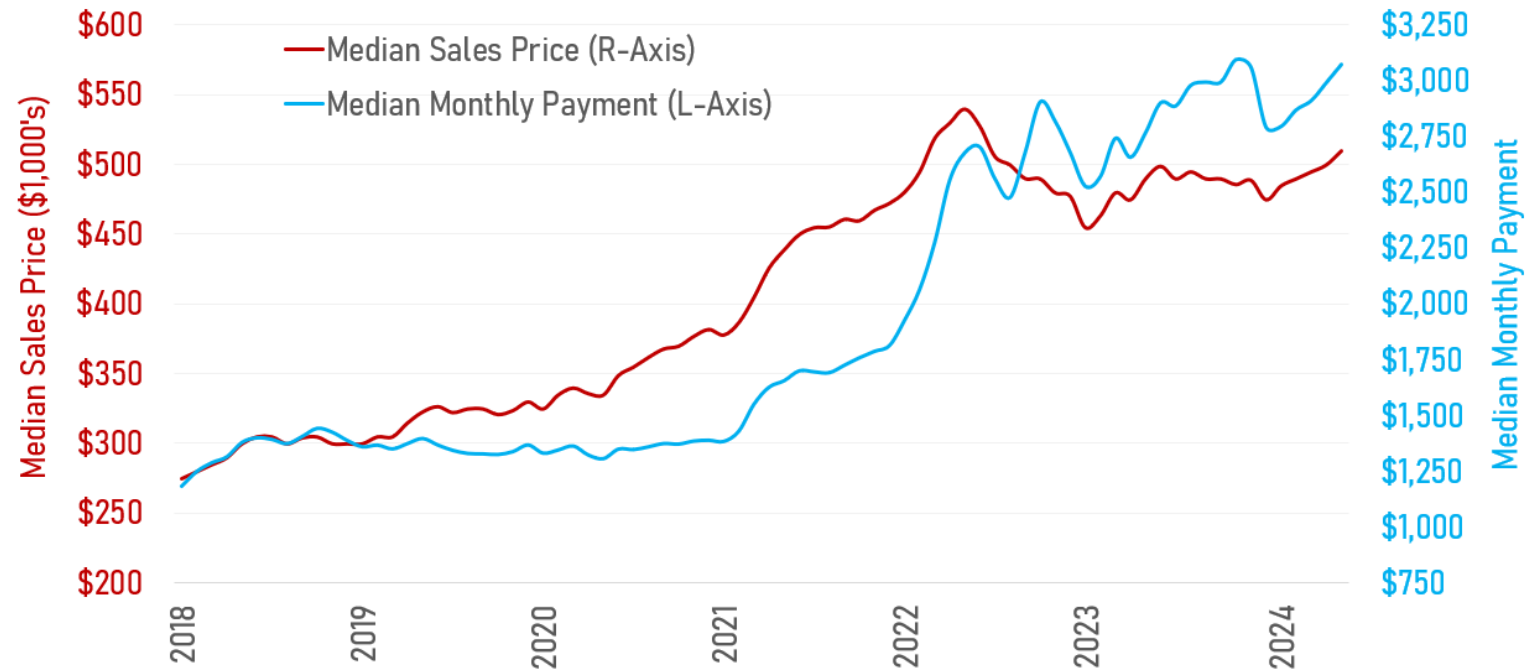
Premium Generation

Designing Custom Blends of Taxable and Tax-Exempt
Bonds

September 30th, 2024

Backdrop

Median Sales Price & Monthly Mortgage Payment (Through May 2024)



Source: Kem C. Gardner Policy Institute, UtahRealEstate.com Sales Data, FreddieMac Mortgage Survey Data

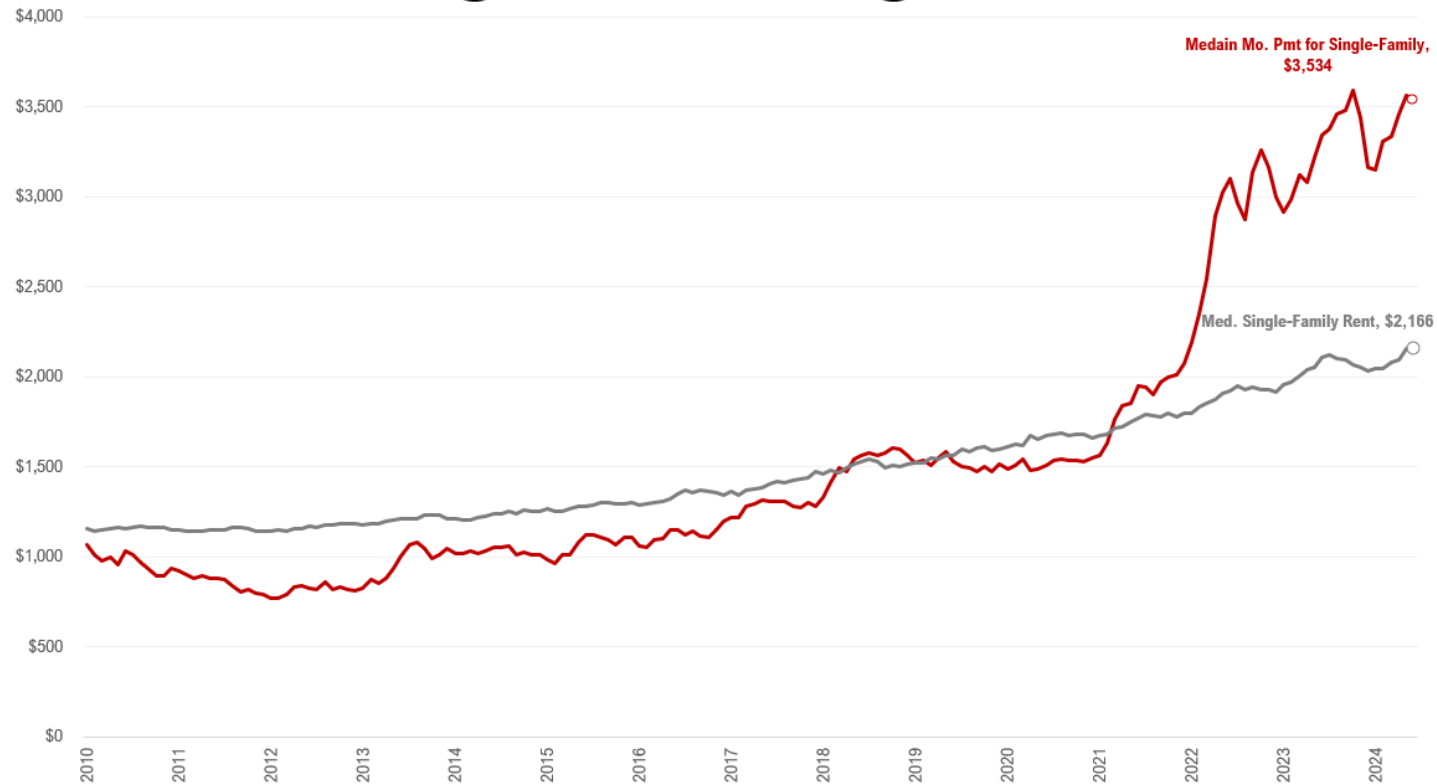
Kem C. Gardner Policy Institute

DAVID ECCLES SCHOOL OF BUSINESS

UNIVERSITY OF UTAH

Backdrop, cont.

Cost of Renting vs. Owning - Wasatch Front



Source: Kem C. Gardner Analysis of UtahRealEstate.com and RentRange Data

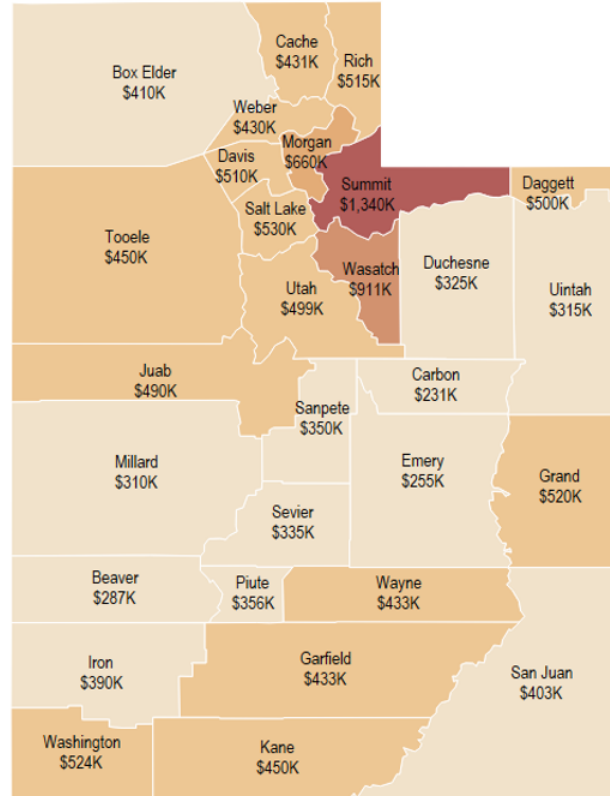
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Backdrop, cont.

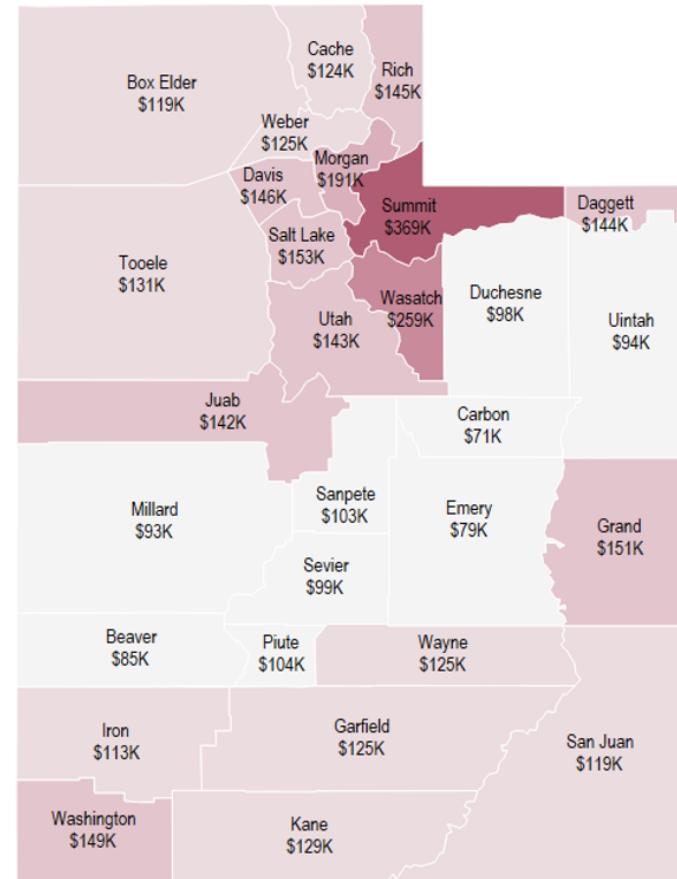
Median Price by County 2024 Jan-June



Source: UtahRealEstate.com

Backdrop, cont.

Income Needed to Afford the Median Priced Home 2024 Jan-June



Source: Kem C. Gardner Policy Institute

Kem C. Gardner Policy Institute

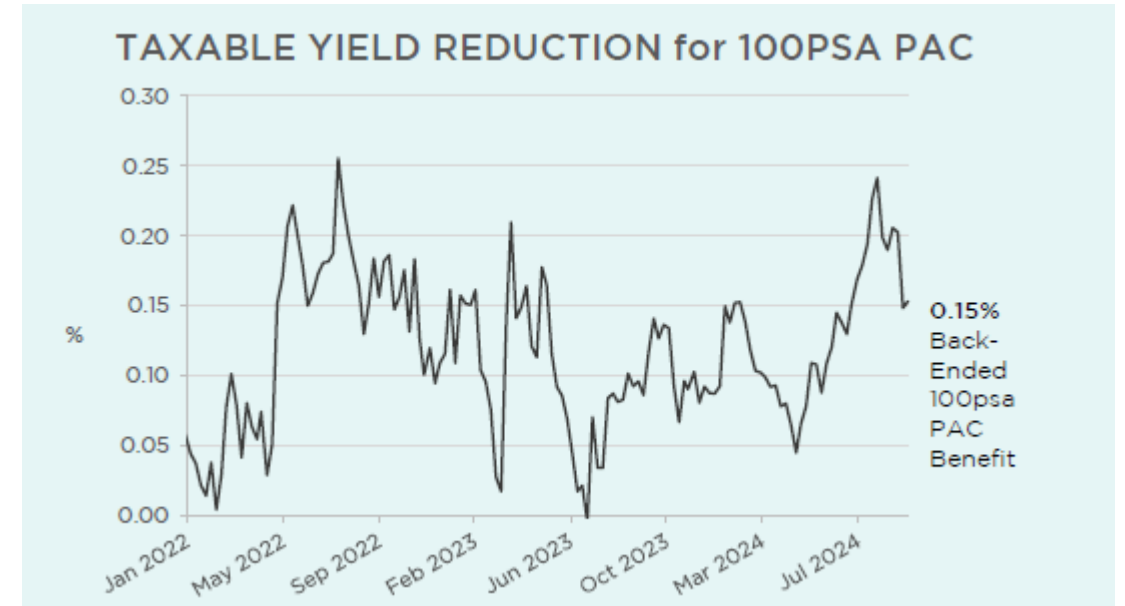
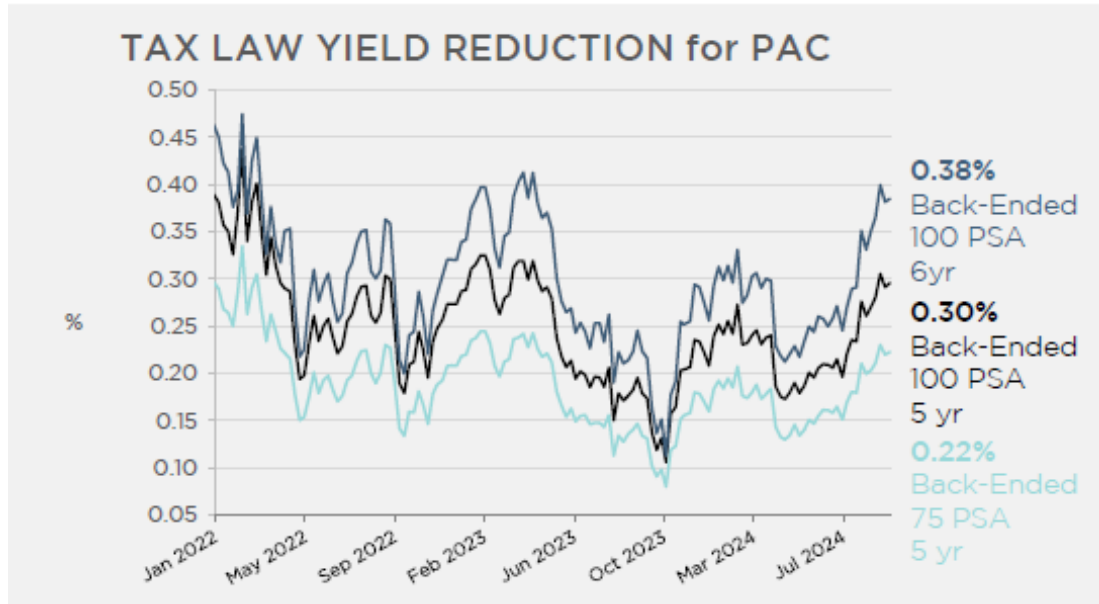
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Down Payment Assistance (“DPA”) Product

- General Characteristics
 - Second Mortgage up to 6% of the first mortgage amount
 - No cap in place for amount of DPA proceeds
- Production
 - Annual Origination Volume - \$1,300,000,000
 - Average first mortgage purchase price - \$366,000
 - Maximum DPA Funds needed per loan - \$22,000

Pricing Trend(s)



Scenario Analysis

	Scenario 1	Scenario 2	Scenario 3
	Base Scenario (75 PSA PAC)	Benefit of 100 PSA PAC	Maximize TE PAC (back-ended) & Reduction to Taxable Non-Qualified PAC
(Non-AMT) Qualified Production - \$77.5MM (A)			
PAC PSA	75%	100%	100%
Avg life (yrs)	6.0	6.0	6.0
Location	Back ended	Back ended	Back ended
Amount	25,745,000	32,635,000	65,080,000
Price	110.270%	110.245%	110.248%
Premium generated	2,644,012	3,343,456	6,669,398
(Taxable) Qualified Production - \$77.5MM (B)			
PAC PSA	75%	100%	-
Avg life (yrs)	6.0	6.0	-
Location	Parallel	Parallel	-
Amount	25,540,000	32,250,000	-
Price	103.539%	103.530%	-
Premium generated	903,861	1,138,425	-
(Taxable) Non-Qualified Production - \$70.0MM (C)			
PAC PSA	75%	100%	50%
Avg life (yrs)	6.0	6.0	5.0
Location	Parallel	Parallel	Parallel
Amount	23,225,000	29,480,000	12,845,000
Price	103.540%	103.530%	103.184%
Premium generated	822,165	1,040,644	408,985

	Scenario 1	Scenario 2	Scenario 3
	Base Scenario (75 PSA PAC)	Benefit of 100 PSA PAC	Maximize TE PAC (back-ended) & Reduction to Taxable Non-Qualified PAC
Output			
(Non-AMT) Qualified Production (A)	4.27	4.22	4.01
(Taxable) Qualified Production (B)	5.63	5.61	5.73
Combined bond yield (AB)	4.95	4.92	5.11
(Taxable) Non-Qualified Production (C)	5.65	5.63	5.69
Combined bond yield (ABC)	5.17	5.14	5.29
Total Non AMT PAC	25,745,000	32,635,000	65,080,000
Total Taxable	48,765,000	61,730,000	12,845,000
Total PAC	74,510,000	94,365,000	77,925,000
Total Premium Generated	4,370,037	5,522,525	7,078,383

Considerations

Pros

- Additional Premium

Cons

- 10 Year Rule Stress
 - Mitigant – Parallel Structure
- Investor Sentiment
 - Mitigant - Redemption Language
- Yield increase at 100FHA
 - Mitigant – Expected PSA for UHC are higher and will offset initial yield increase



Foreign Investment in Single Family Revenue Bonds

Michael Babcock

Assistant Director- Capital Markets, Illinois Housing Development Authority

September 30, 2024



IHDA Single Family Revenue Bonds Series 2024 AB

- Parity Indenture backed by Mortgage Backed Securities
- \$495,250,000 Total Issuance, “AAA” Rated by Moody’s
- 2024 A: Non-AMT
 - Par of \$145,000,000
 - Premium of 3,799,589
- 2024 B: Taxable
 - Par of \$349,250,000
 - Premium of \$1,310,400



Structuring Considerations

- Volume Cap constraints
 - Oversubscribed on Single Family
- Record single family loan production
 - \$1.8BB in production in CY23
- Strategies for execution
 - SF Mortgage Rate Setting
 - “Best Execution”
 - DPA Program Tailoring
- Investor Engagement



Taxable Debt

- Access to broader investor base
- Eliminates Tax-Exempt restrictions
- Preserves Volume Cap
- Alternative to TBA



Foreign Investors

- Considerations:
 - Bifurcation of Official Statement
 - Disclaimer/Notice on Foreign Investment
 - Additional Marketing
- Rationale/Logic:
 - Higher yield than tax exempt bonds
 - Diversification for Foreign Investors' portfolios
 - Stable Currency (USD)
 - Liquid Securities
 - Global Economic Conditions
 - Credit Quality– “AAA” by Moody's



IHDA Single Family Revenue Bonds Series 2024 AB

Sale Results

- Series 2024 B (taxable)
 - ~\$20MM of orders by two (2) foreign institutional investors



Takeaways

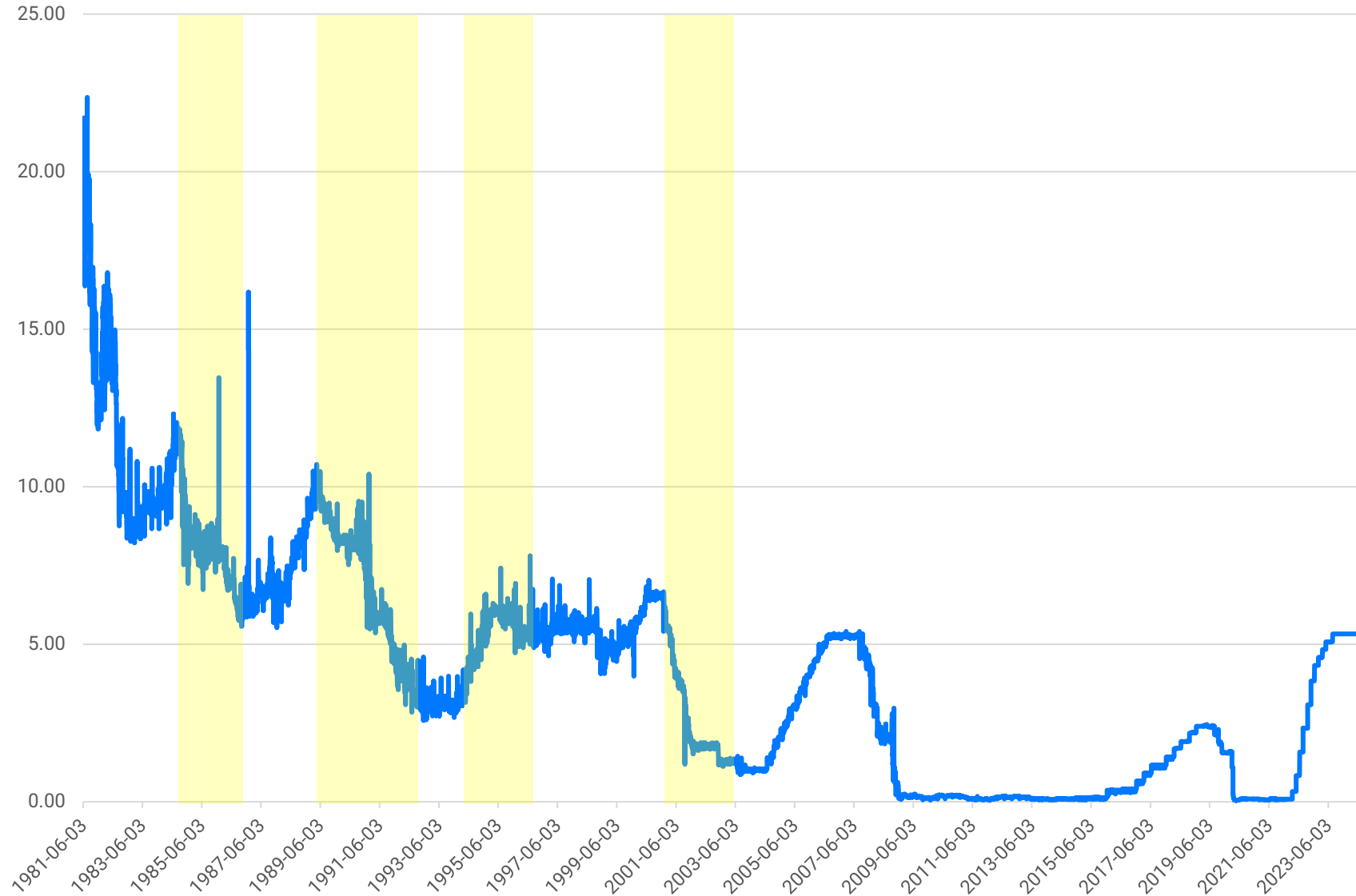
- Overall pleased with the process
- Additional work on behalf of Counsels and Underwriters
 - Bifurcation of documents/disclaimers
- Attempted a second sale with Series 2024 CD
 - Similar structure/size
 - No interest from foreign investors
 - Currency Hedging
 - Inadequate size
- Future:
 - Framework is in place
 - Continue to consider so long as taxable debt is best execution

Interest Rates and MRB Structures

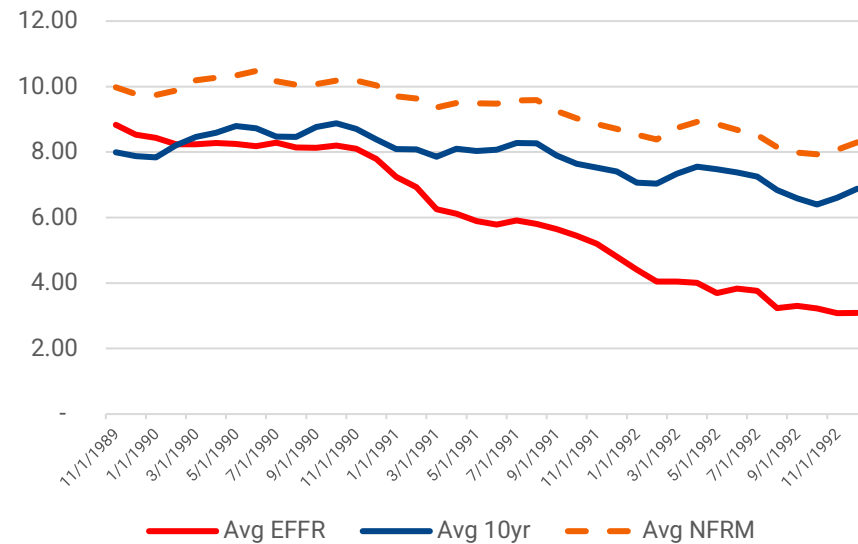
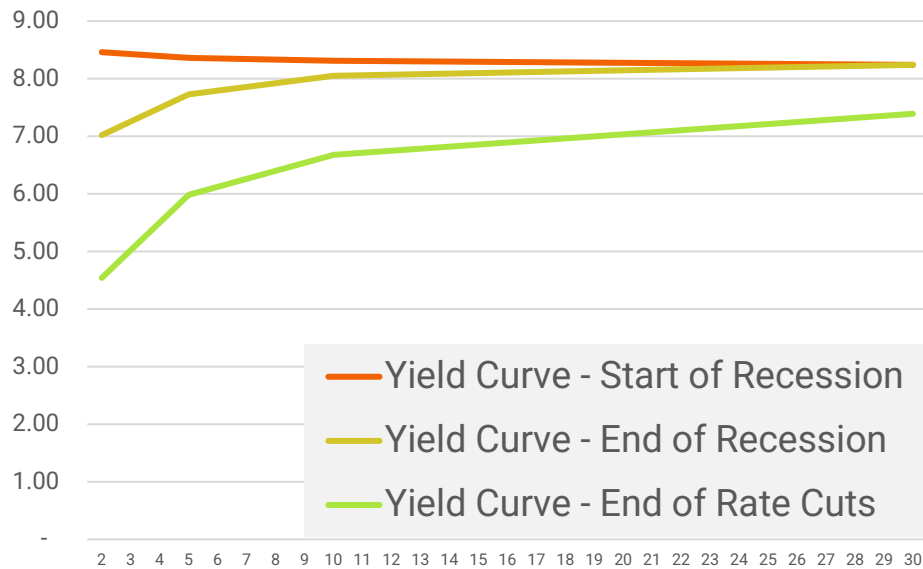
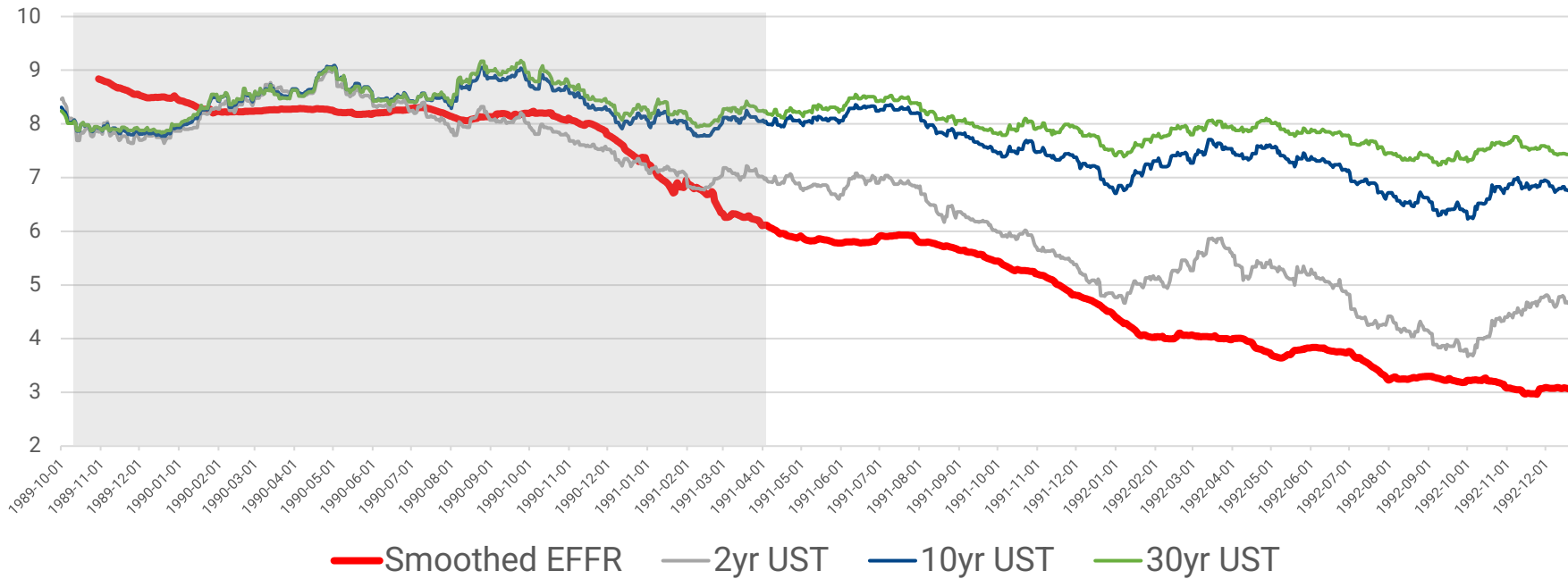


Effective Fed Funds Rate

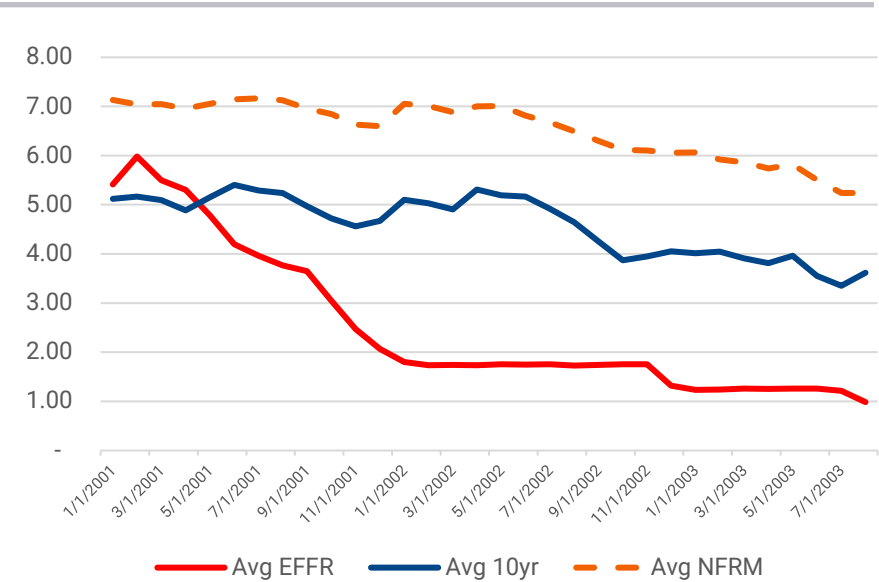
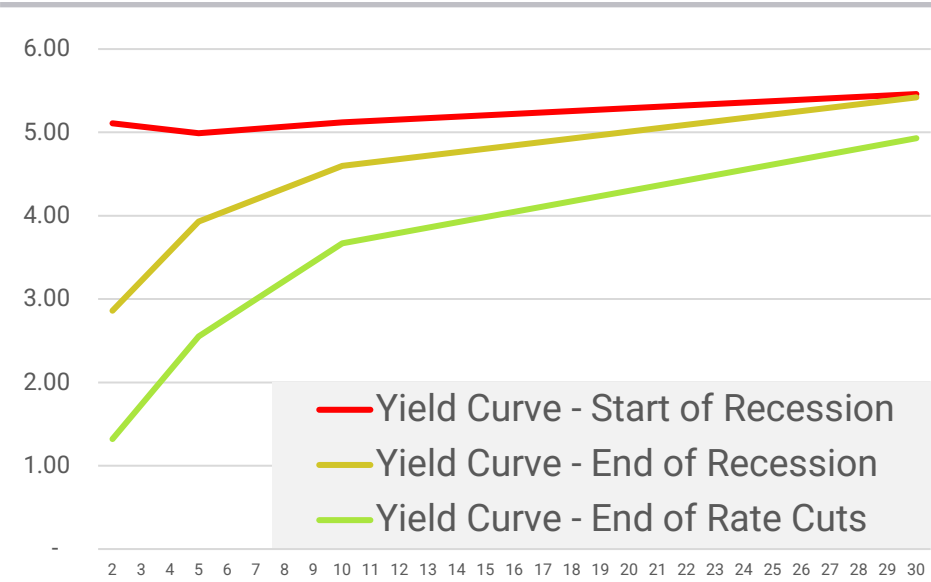
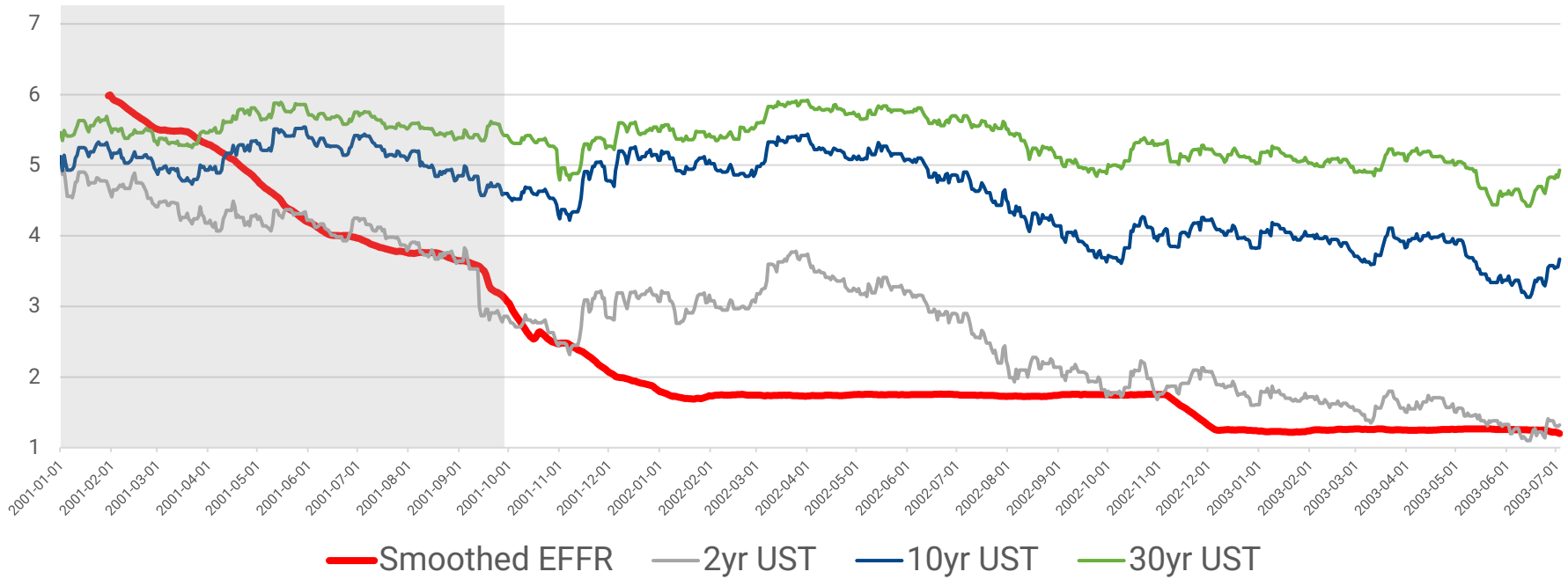
1981 - Present



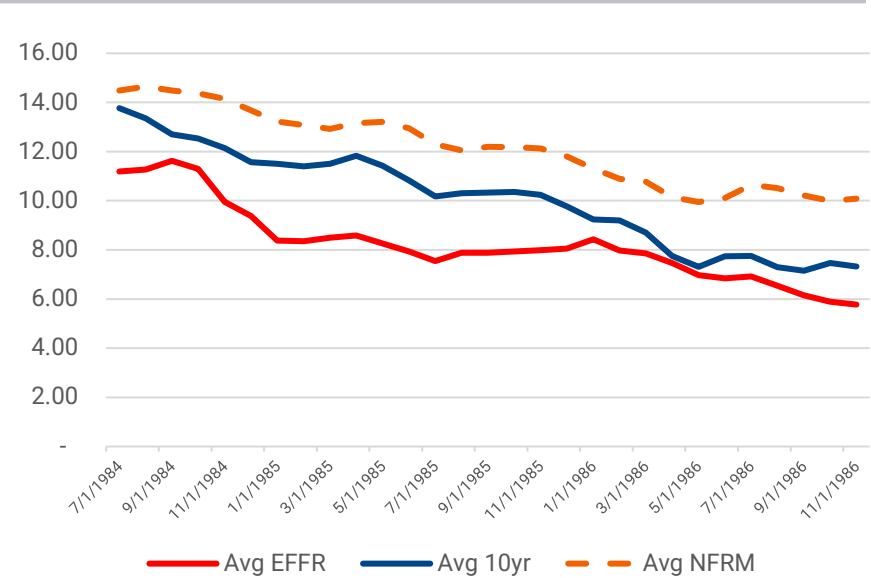
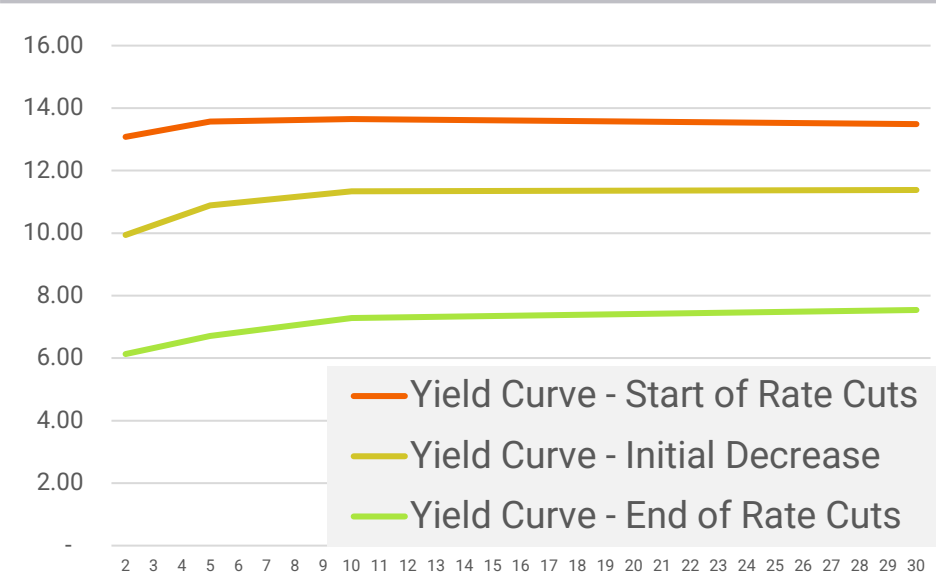
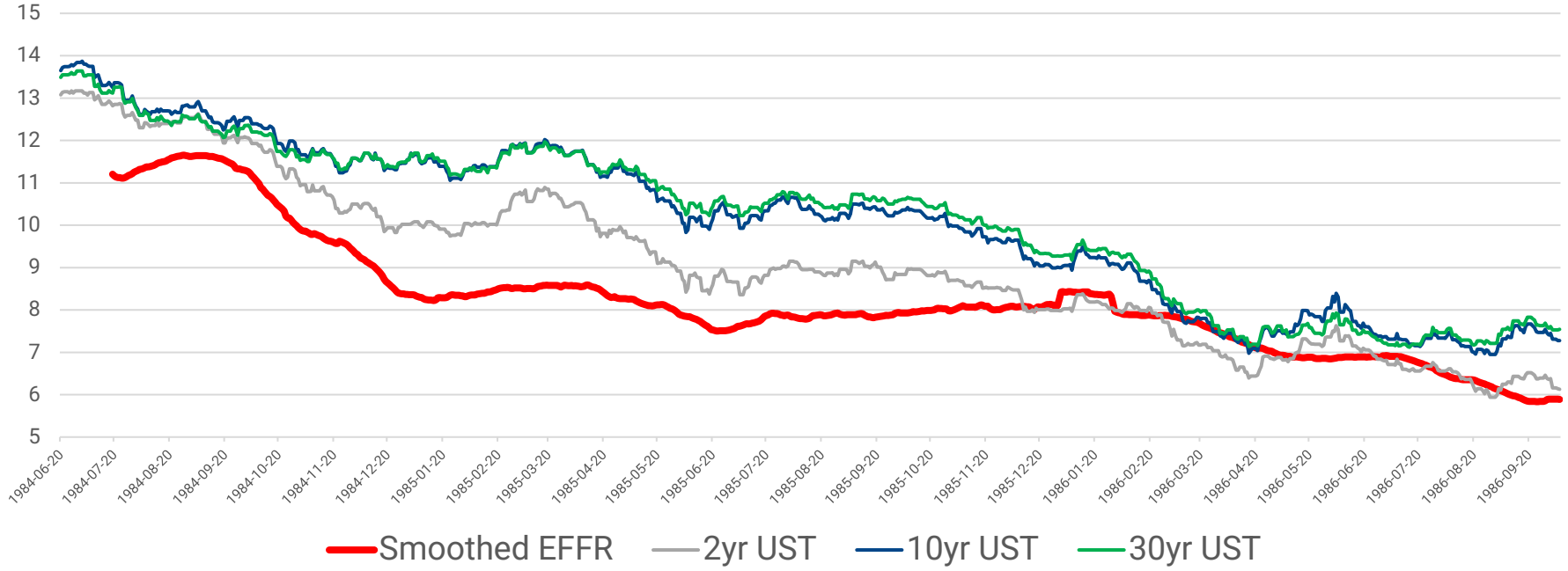
Recession 1989 - 1991



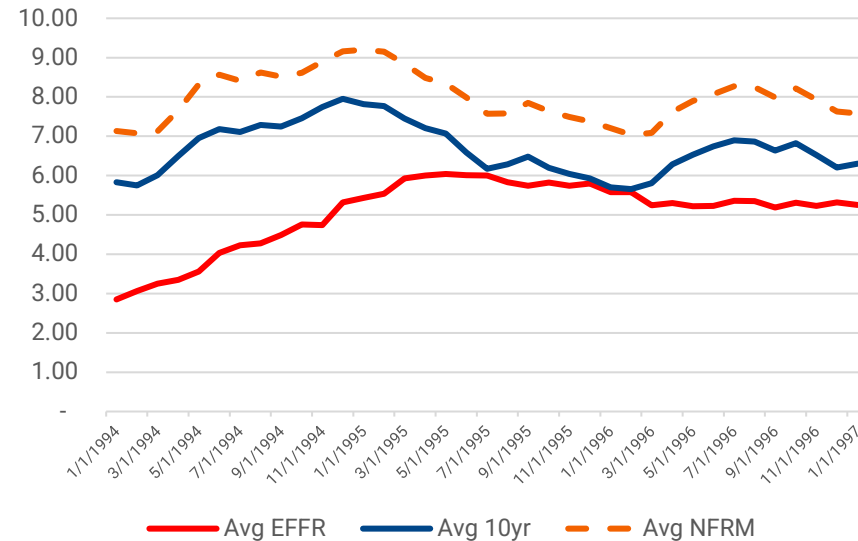
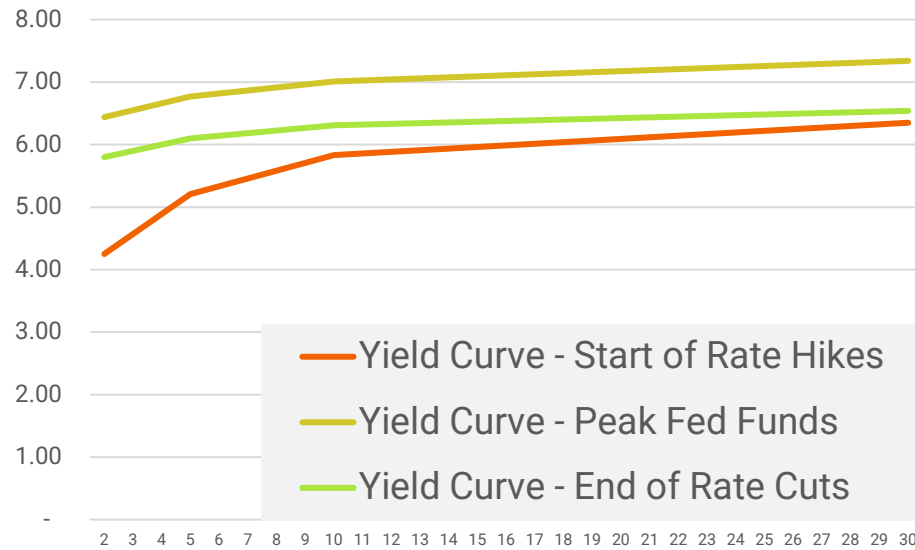
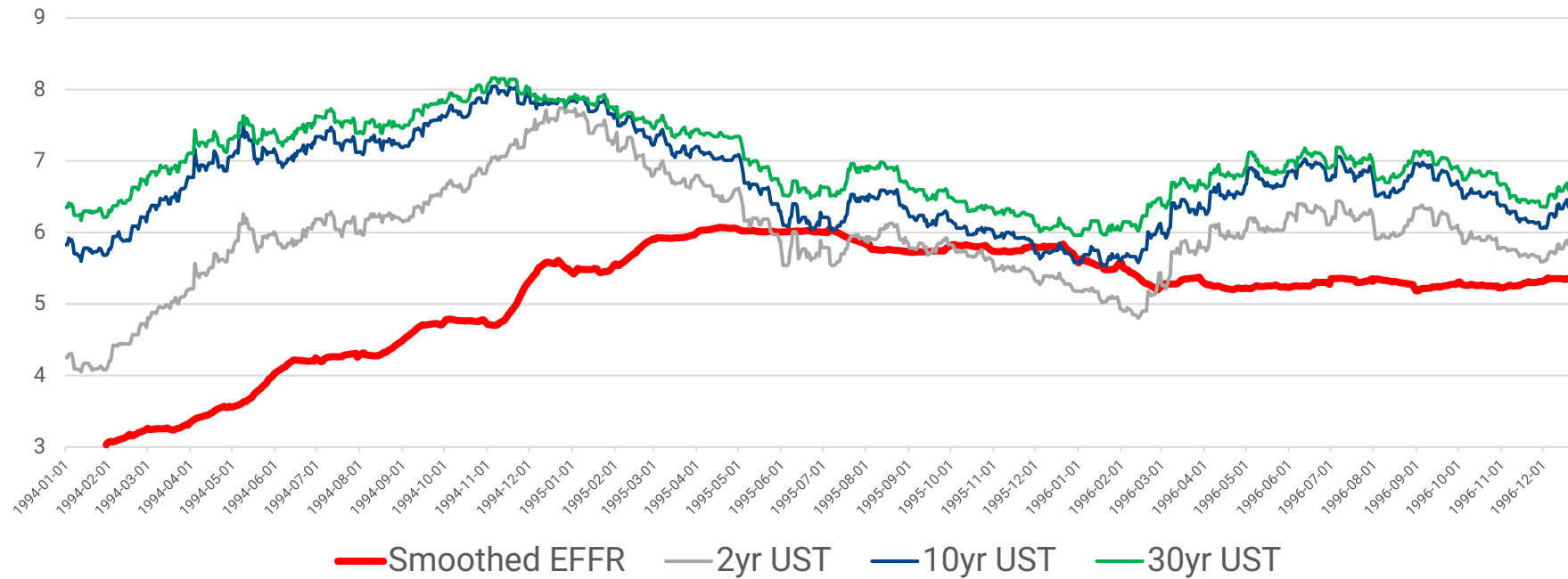
Recession 2001 - 2003



Rate Cutting Cycle: 1984 - 1986



“Perfect” Soft Landing: 1994 – 1996



Drivers of Longer-Term Yields

- 1) Are the cuts in response to perceived economic weakness?
 - Flight to safety may push treasury yields down
 - 2) Are the cuts expected to stimulate economic growth?
 - This may lead to higher future inflation expectations
 - 3) Are the cuts expected to shift money flows into higher risk assets?
 - “Risk on” trade may cause UST to rise due to lower demand
-

Recession
1989 - 1991

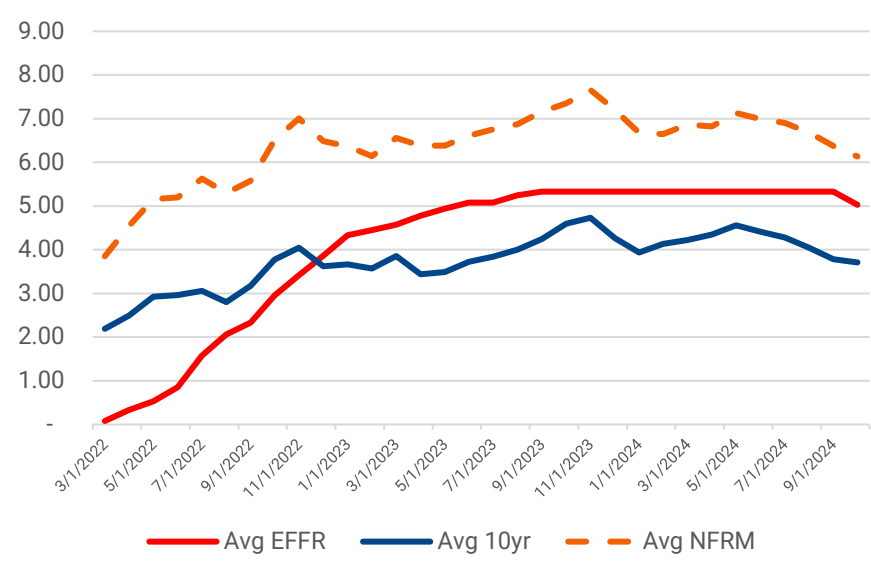
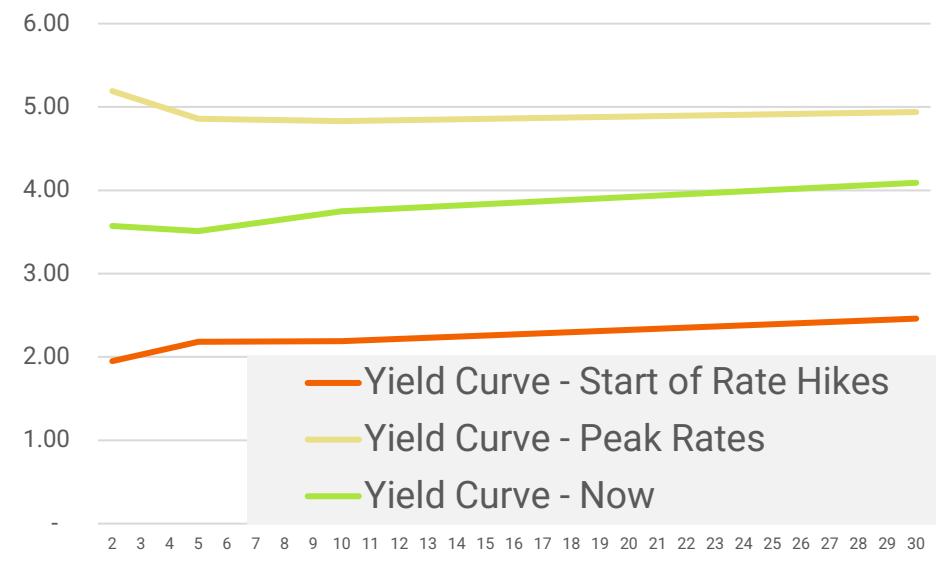
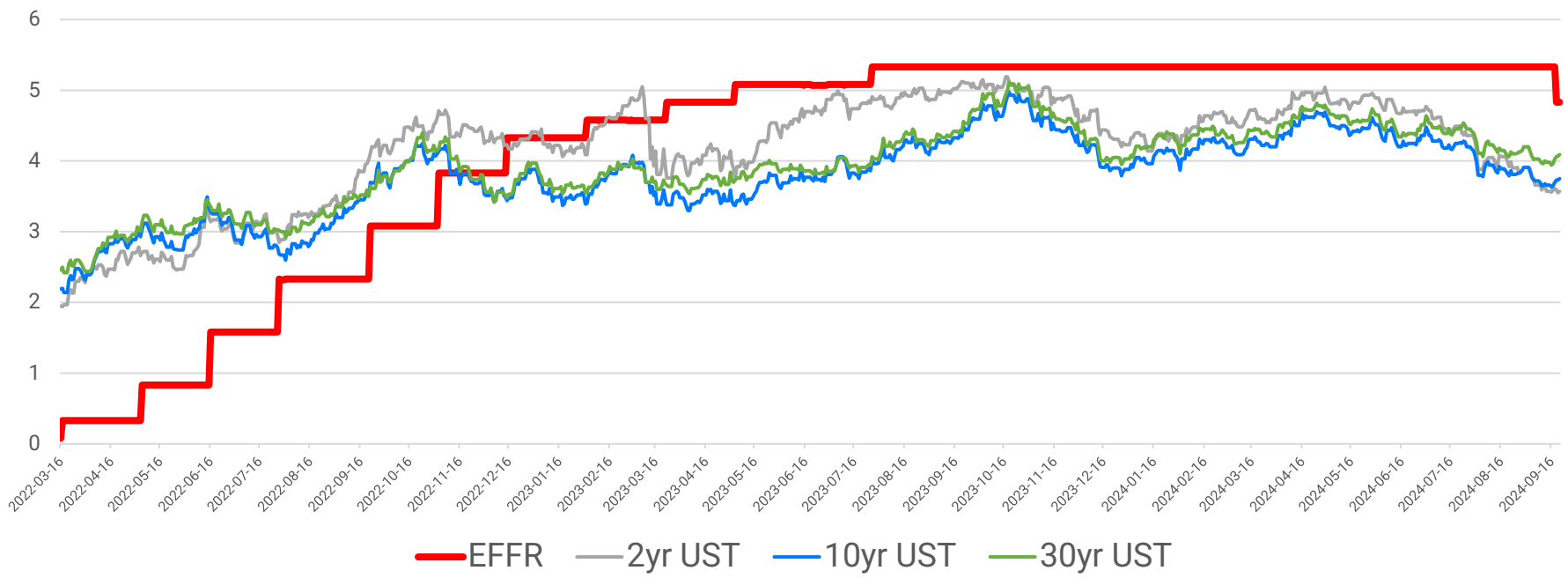
Rate Cutting Cycle
1984 - 1986

Recession
2001 - 2003

“Perfect” Soft Landing
1994 – 1996

- Fed Funds was **higher** than all UST rates
 - Rate decrease was meant to be stimulatory to exit recession, but a lingering concern regarding inflation
 - Previous rate increases were to tame inflation
- Fed Funds **did not exceed LT UST**
 - Rate decrease was meant to avoid chilling an already cooling economic cycle
 - Economy never entered a technical recession

Today



Structuring to Curve Steepness – Basic Tools

HFAs have used various traditional strategies to “come down the curve”

PAC Bonds Planned Amortization Class

- High coupon PAC bonds “kick” in low prepayment cash flow runs
- Return to higher prepay bands / larger size

Variable Rate Hedged or Unhedged

- Unhedged can cause stress in low prepayment / high-rate cash flow runs
- Hedged can cause stress in high prepayment / low-rate cash flow runs

Frontloading Acceleration of nominal debt maturities

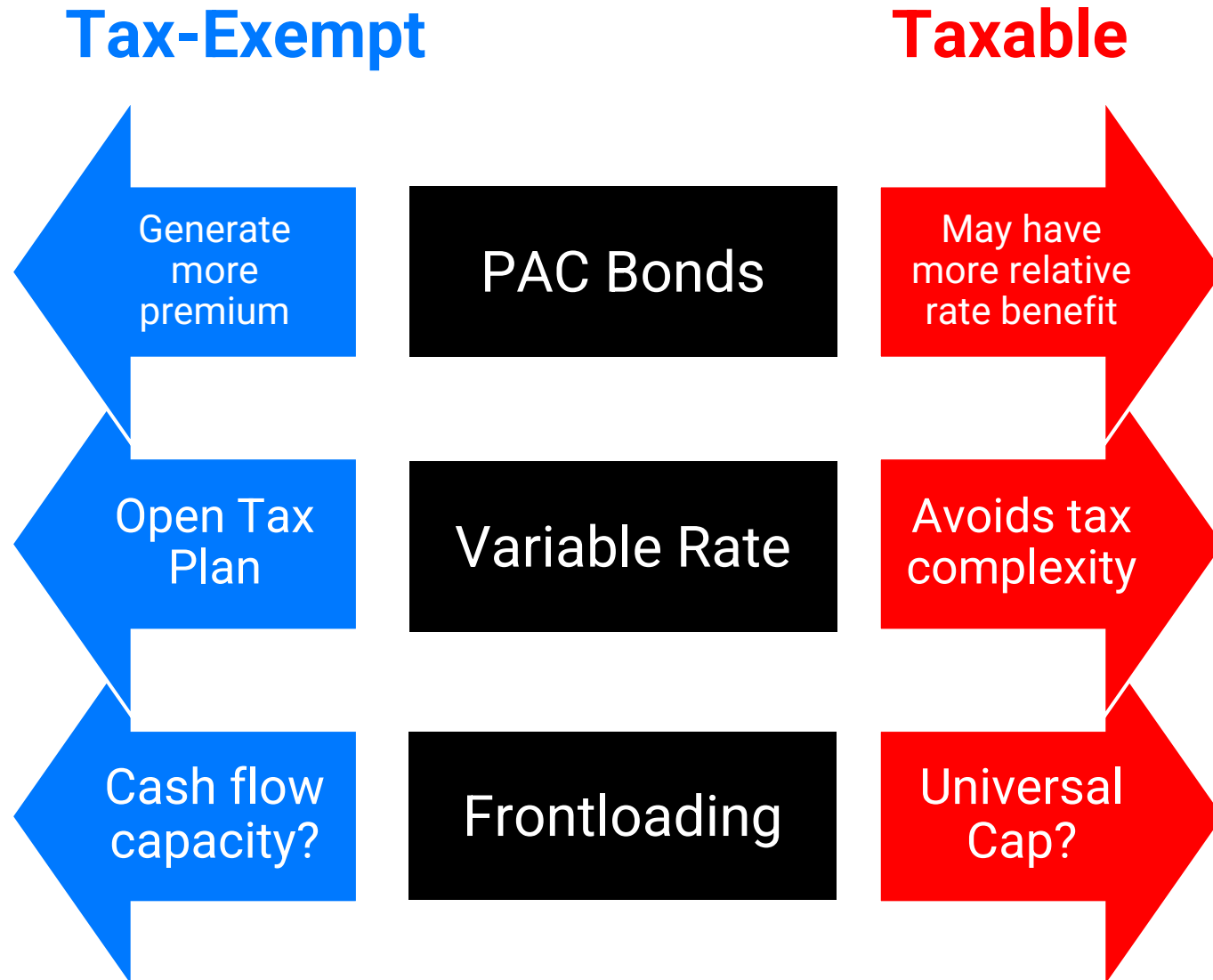
- Causes stress in low prepayment cash flow runs
- Cross-callers may be able to “make room” for it if prepays accelerate

Pass Throughs Single Maturity Structures

- Stand-alone structure with optional call feature
- Prices to expected average life

Volume Cap Remains a Constraint – How to Deploy Taxable Debt?

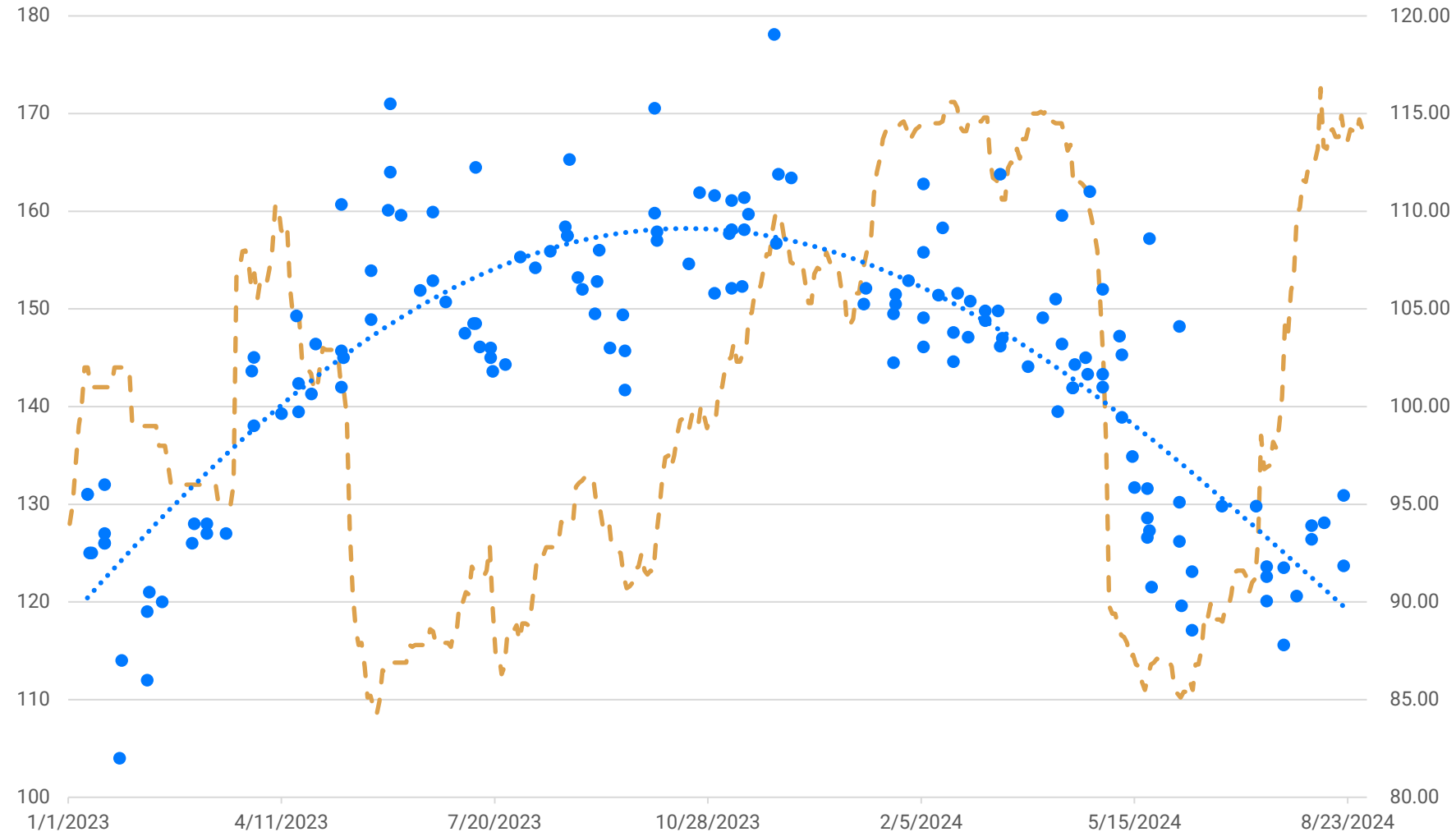
Blending TE / TX in a steeper yield curve environment presents new considerations



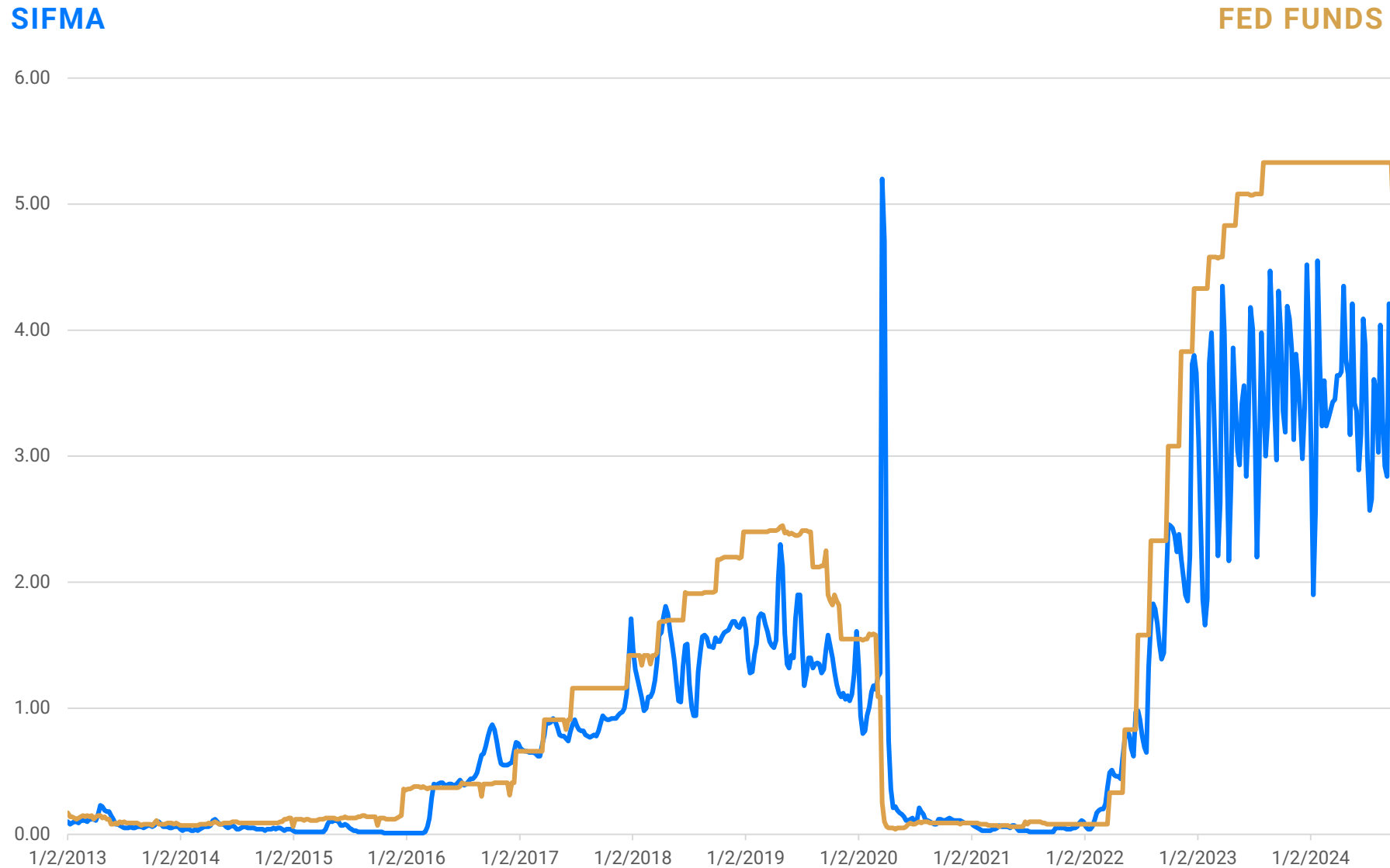
Tax-Exempt PAC Pricing has Improved

**NAMT PAC SPREADS TO MMD
AT AVERAGE LIFE**

**DIFFERENTIAL:
30YR – 5YR MMD**



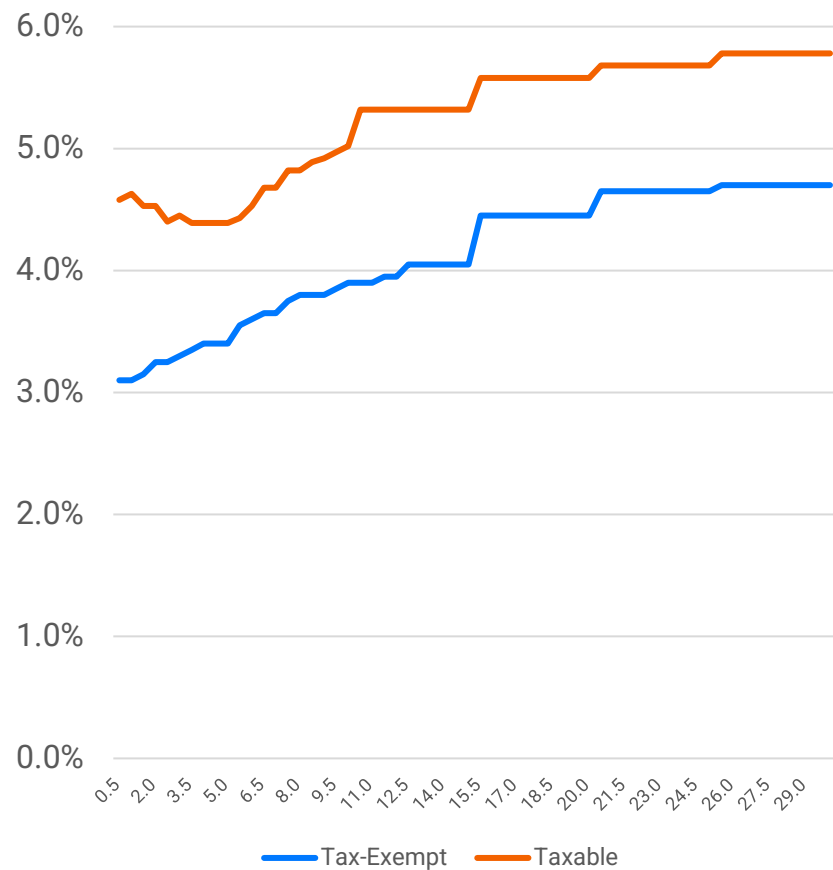
Short-Term Rates Generally Follow Fed Funds



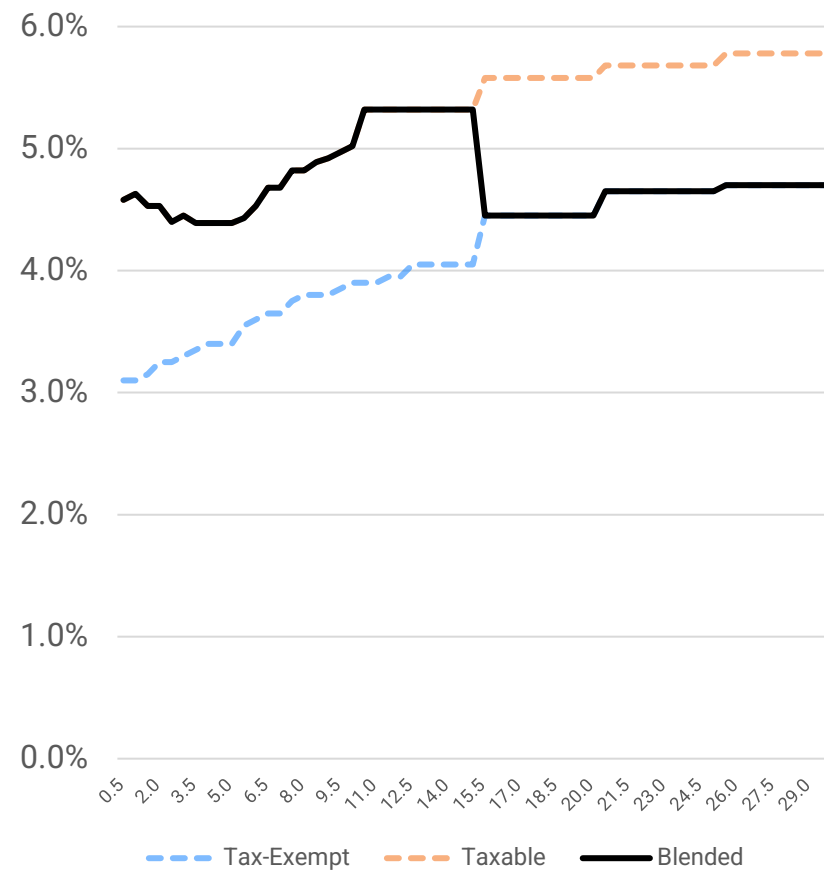
Accelerating Taxable Bonds

This structure anticipates that Universal Cap transfers will need to occur

AA HOUSING TE/TX YIELD CURVES



SAMPLE BLENDED EXECUTION REQUIRING UCAP XFERS



Accelerated Taxable Bonds - Cost of Funds Benefit

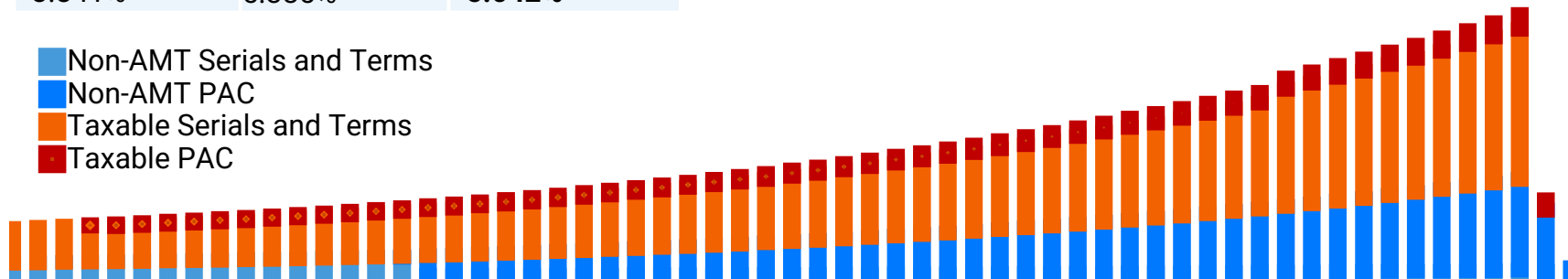
The yield benefits to the issuer must warrant the tax complications introduced

BASE CASE (UHC 2024 GH STRUCTURE):

Bond Yield Calculation¹

TAX-EXEMPT	TAXABLE	COMPOSITE
3.841%	5.385%	5.042%

- Non-AMT Serials and Terms
- Non-AMT PAC
- Taxable Serials and Terms
- Taxable PAC



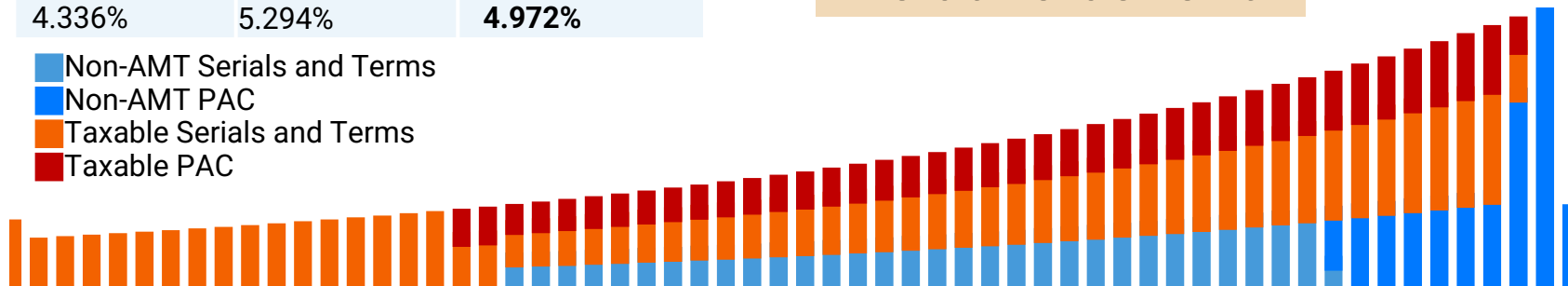
ACCELERATED TAXABLE ALTERNATIVE:

Bond Yield Calculation¹

TAX-EXEMPT	TAXABLE	COMPOSITE
4.336%	5.294%	4.972%

- Non-AMT Serials and Terms
- Non-AMT PAC
- Taxable Serials and Terms
- Taxable PAC

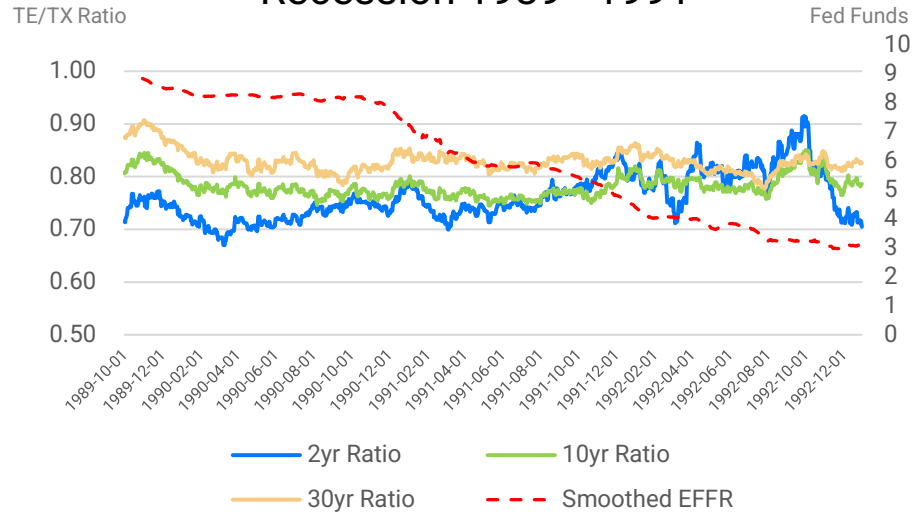
7 basis points of relative benefit



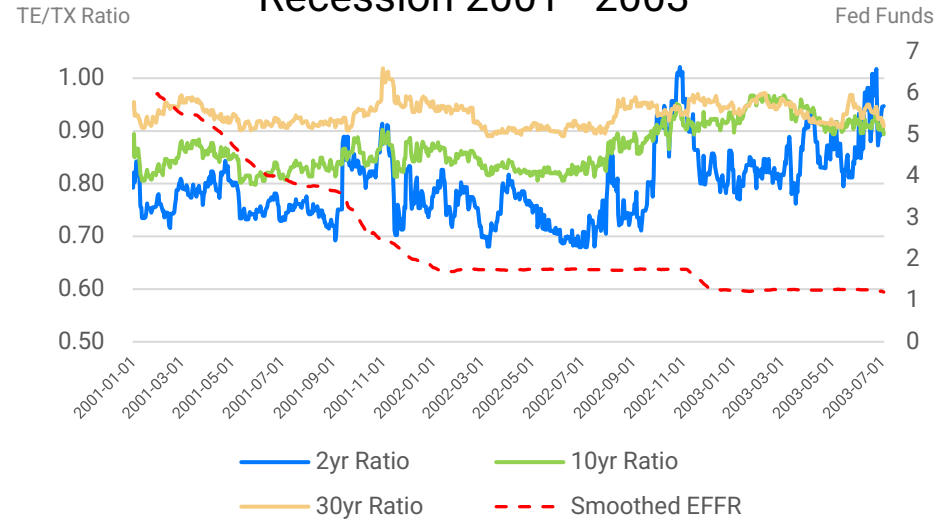
1. Bond Yield at 100% FHA. Rates as of August 22, 2024.
September 2024

TE / TX Ratios – Previous Rate Cutting Cycles

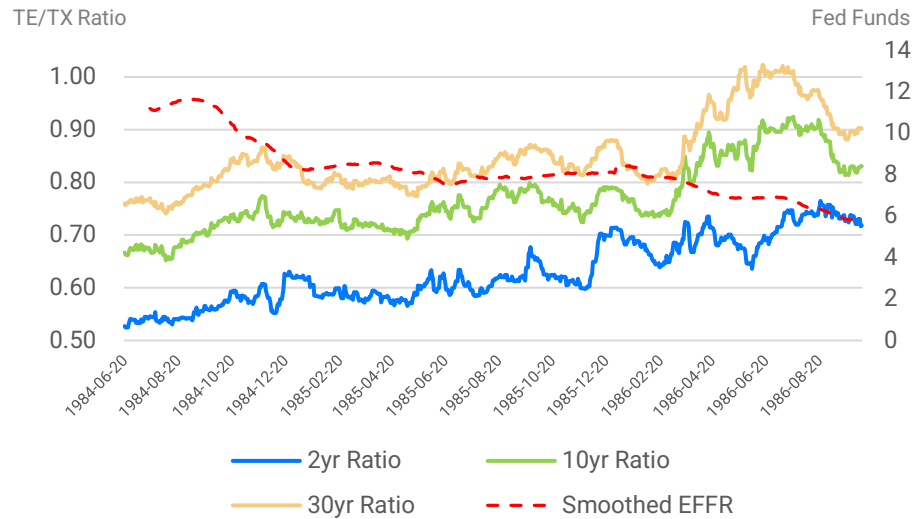
Recession 1989 - 1991



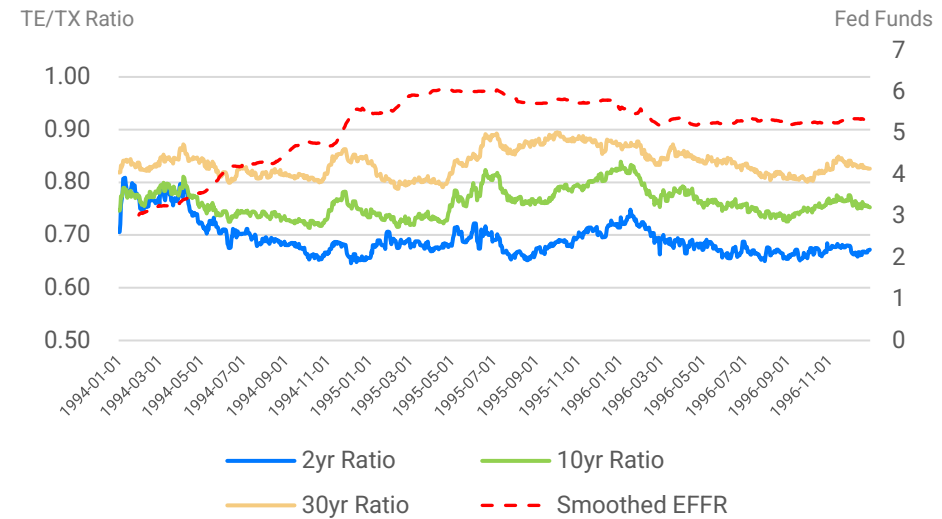
Recession 2001 - 2003



Rate Cutting Cycle: 1984 - 1986



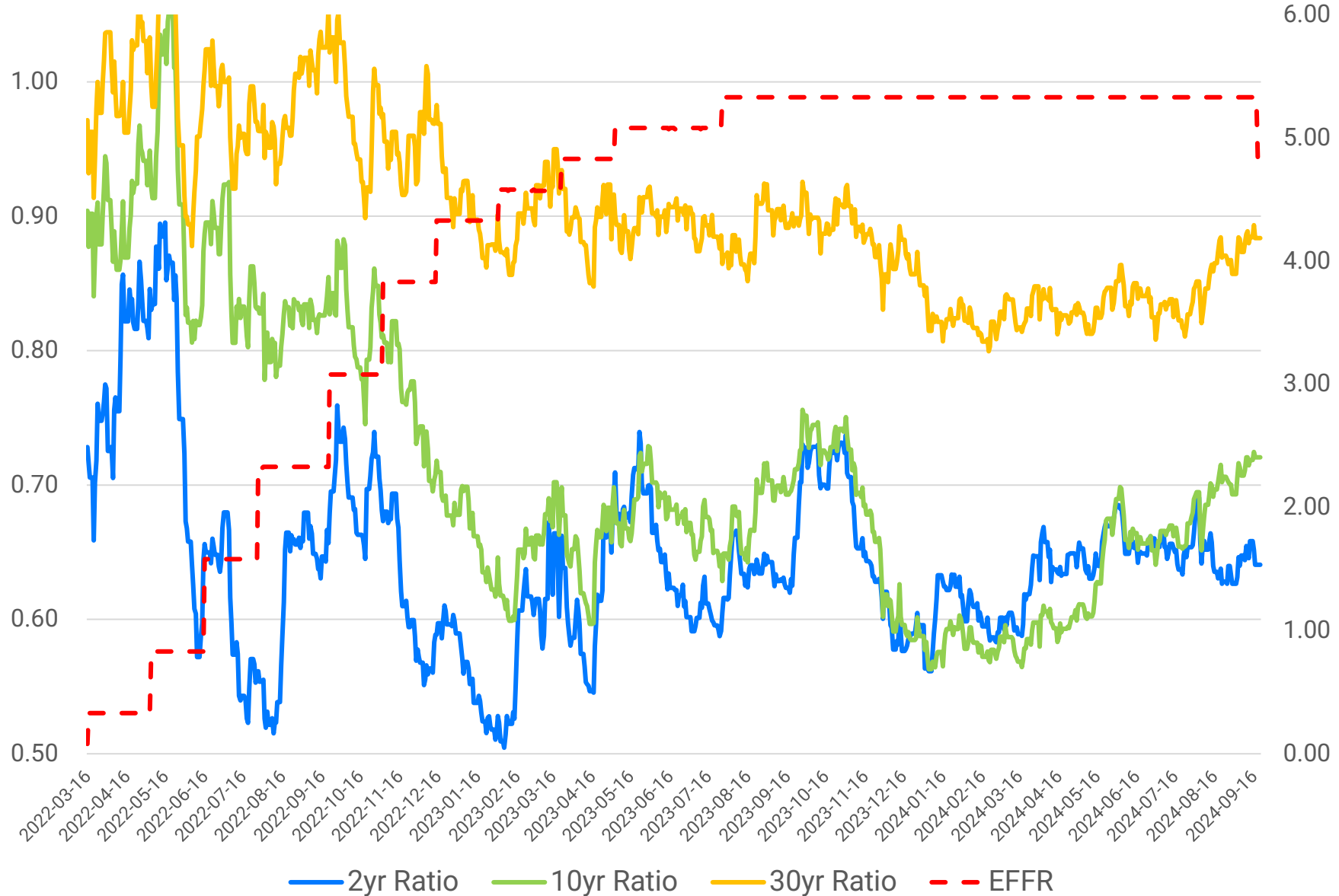
“Perfect” Soft Landing: 1994 – 1995



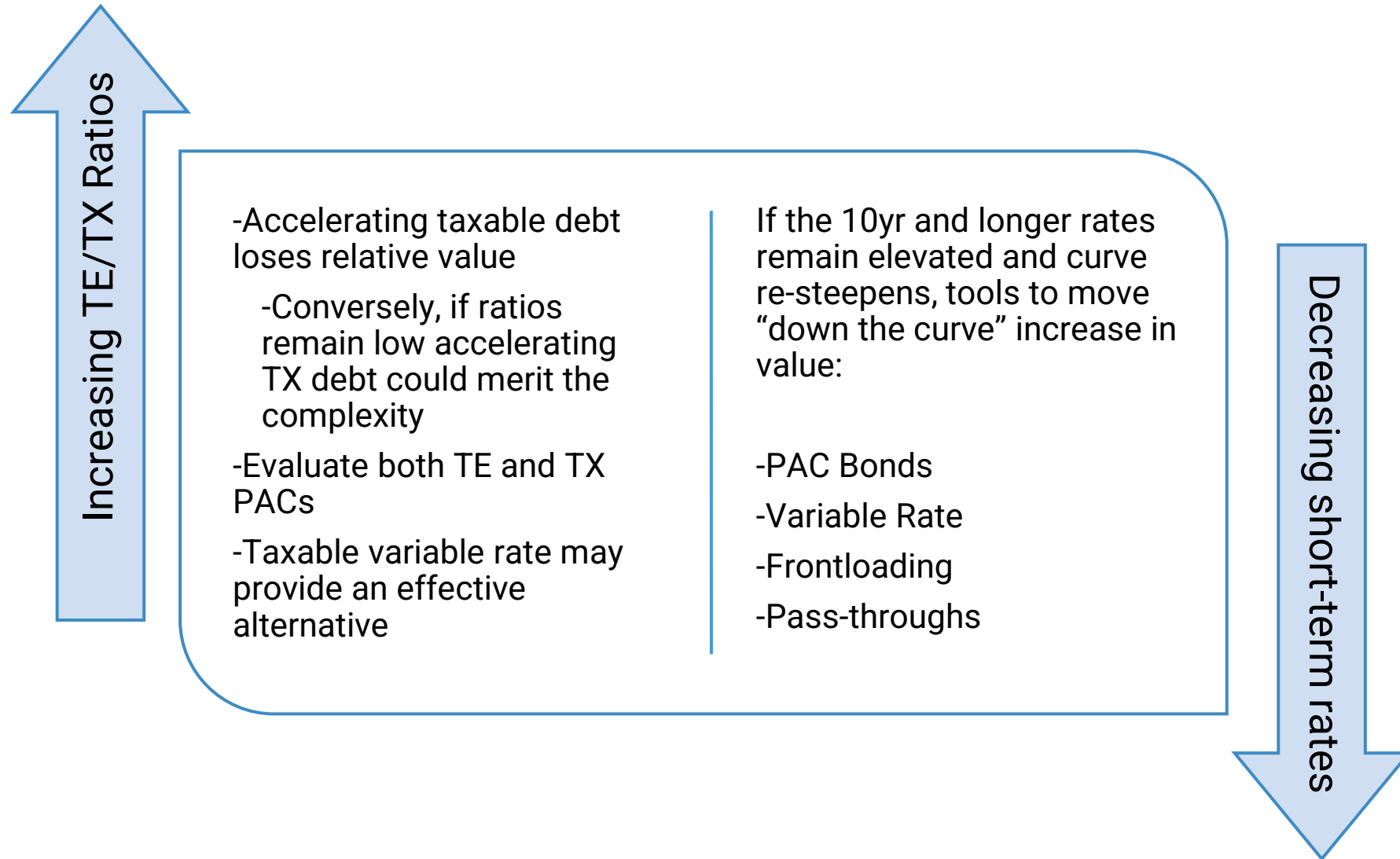
TE / TX Ratios Today

TE/TX Ratio

Fed Funds



Looking Forward



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