

CDIAC MUNICIPAL DEBT ESSENTIALS

Marketing, Pricing, & Method of Sale

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SESSION 3 | MARKETING & PRICING

Marketing and Pricing: Issuer's Perspective

- **Municipal entities issue bonds to fund public infrastructure, often with strict revenue limitations**

Transportation



Schools



Housing



General Operations



Utilities



Refundings





Marketing and Pricing: Municipal Advisor's Perspective

- **Has a fiduciary duty to the Issuer – which is to put the interest of the Issuer above their own interest (duty of loyalty and duty of care)**
- **Assists Issuer in evaluating borrowing cost by reviewing recent market comps and market conditions**
- **In a negotiated sale, assists Issuer in negotiating final interest rates on the bonds with the Underwriter**
- **In a competitive sale, confirms bids and final bond cash flows with winning bidder**

Marketing and Pricing: Underwriter's Perspective

- **MSRB Rule G-17** requires the Underwriter to deal fairly at all times with both municipal issuers and investors
- The Underwriter, in a negotiated financing, structures and pre-markets the bond issue well in advance of the pricing to maximize investor demand on the day of pricing





Marketing and Pricing: Investor's Perspective

- **Has responsibility to maximize total return, often relative to a benchmark or peer group**
- **Appetite for investments fluctuate daily, based on available cash to invest or reinvest**
- **Selection of maturities, credit (rating) levels, among other factors, depend on investment strategy, which is also fluid**

Structure of Underwriting Syndicate (Team): How Many Firms?

\$25M Transaction



100%

\$100M Transaction



70% / 30%

\$50M Transaction



100%

\$250M Transaction



60% / 20% / 20%

\$500M Transaction



50% / 20% / 10% / 10% / 10%

Structure of the UW Team: Who Does What?

Senior Manager Responsibilities

- Keeping Issuer Appraised
 - Market updates & trends, investor
- Recommends:
 - Optimal Debt Structure
 - Credit (Rating) Strategy
- Prices Bonds — sets market rates
 - Investor outreach (Pre-Marketing)
 - Commits capital (Underwriting)

Co-Manager Responsibilities

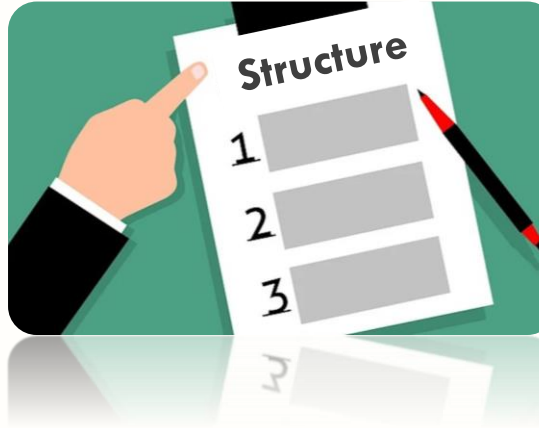
- May provide banking ideas
- Supplements senior manager efforts with investor outreach
 - Underwriting Liability set by Issuer

What Affects Pricing?

Investor Demand



Structural Characteristics



Par Size



Credit Quality



Market Tone



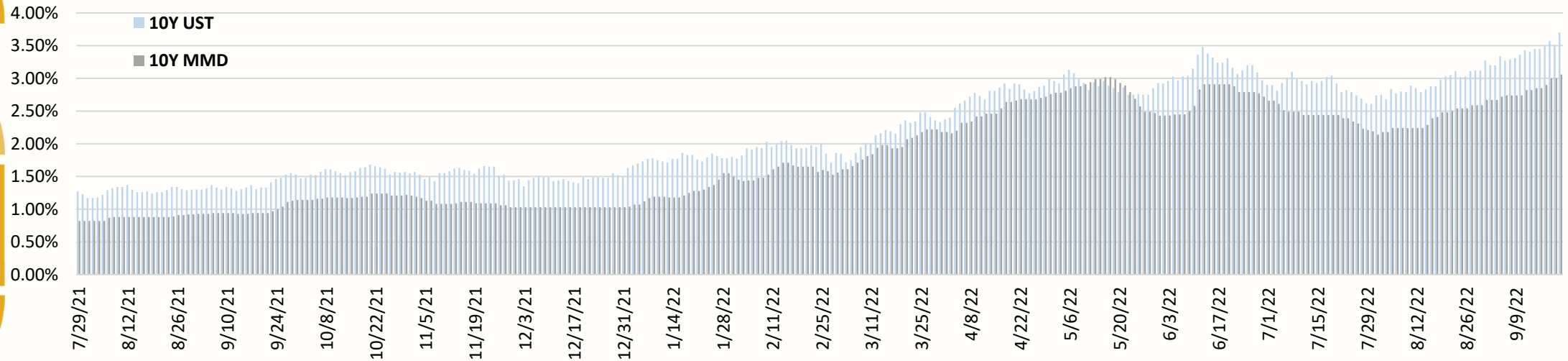
Economic Calendar



How Are Bonds Priced?

A. Identify the Pricing Benchmark

TAX-EXEMPT BONDS: MMD (Muni Market Data) “AAA” Yield Curve
TAXABLE BONDS : US Treasury Bond Yield Curve



	Since 9/22/2021		Current	1 Wk. Ago	1 Mo. Ago
	High	Low	(9/22/22)	(9/15/22)	(8/22/22)
10 Year UST	3.70%	1.33%	3.70%	3.45%	3.03%
10 Year MMD	3.06%	0.94%	3.06%	2.85%	2.48%

Source: TM3 and Bloomberg as of close 9/22/2022

How Are Bonds Priced?

B. Add a Credit/Liquidity Spread

Municipal Issuer rated "A1/A+/A+"						
Maturity	Coupon	MMD	Credit	Liquidity	Total Spread	Yield
2023	4.00%	1.59%	+15	+10	+25	1.84%
2024	4.00%	1.69%	+15	+12	+27	1.96%
2025	4.00%	1.71%	+15	+14	+29	2.00%
2026	4.00%	1.79%	+15	+16	+31	2.10%

What do investors need to know to purchase the bonds?

- + Type (GO vs Revenue)
- + Strength of Security Pledge
- + Project Risks
- + Service Area Demographics
- + Risks (e.g. litigation, climate)

How quickly/easily can an investor sell the bond?

- + Rating(s)
- + Name (size) of Issuer
- + Size of Maturity
- + Market Technicals/Demand
- + Market Tone/Interest Rate Trends

How Are Bonds Priced?

- Pricing Data Points (“comps”) are used to assess the fairness of the pricing

Sale Date	05/18/22 Ontario Public Financing Authority 2022 Lease Revenue Bonds, Series A \$90,830 11/1/32 @ 100 AGM --/AA/--							05/18/22 North Lake Tahoe PFA Lease Revenue Bonds, Series 2022 \$69,315 12/01/29 @103 None --/AA/--						
Issuer														
Issue														
Par														
Call Date														
Insurance														
Rating														
Year	Par	Coupon	Yield	MMD*	Spread	YTM	Spread	Par	Coupon	Yield	MMD*	Spread	YTM	Spread
2023	\$1,335	5.00	1.89	1.77	0.12			\$995	5.00	2.26	2.17	0.09		
2024	\$1,405	5.00	2.17	1.98	0.19			\$1,045	5.00	2.53	2.37	0.16		
2025	\$1,480	5.00	2.37	2.07	0.30			\$1,095	5.00	2.76	2.50	0.26		
2026	\$1,555	5.00	2.44	2.12	0.32			\$1,155	5.00	2.86	2.52	0.34		
2027	\$1,635	5.00	2.57	2.20	0.37			\$1,215	5.00	3.00	2.62	0.38		
2028	\$1,715	5.00	2.70	2.30	0.40			\$1,275	5.00	3.16	2.75	0.41		
2029	\$1,805	5.00	2.87	2.42	0.45			\$1,340	5.00	3.32	2.87	0.45		
2030	\$1,900	5.00	2.98	2.48	0.50			\$1,410	5.00	3.40	2.92	0.48		
2031	\$1,995	5.00	3.06	2.54	0.52			\$1,480	5.00	3.49	2.99	0.50		
2032	\$2,095	5.00	3.15	2.58	0.57			\$1,555	5.00	3.57	3.03	0.54	3.66	0.63
2033	\$2,205	5.00	3.22	2.62	0.60	3.34	0.72	\$1,635	5.00	3.74	3.09	0.65	3.87	0.78
2034	\$2,320	5.00	3.28	2.64	0.64	3.49	0.85	\$1,720	5.00	3.83	3.11	0.72	3.99	0.88
2035	\$2,435	5.00	3.33	2.66	0.67	3.62	0.96	\$1,810	5.00	3.93	3.13	0.80	4.11	0.98
2036	\$2,560	5.00	3.39	2.67	0.72	3.73	1.06	\$1,900	5.00	3.99	3.14	0.85	4.20	1.06
2037	\$2,695	5.00	3.46	2.69	0.77	3.84	1.15	\$2,000	5.00	4.02	3.16	0.86	4.26	1.10

*All spreads based on interpolated MMD through 2035.

Note: All par amounts in \$000s

How Are Bonds Priced?

Call Option Effect on Par Amount & Yields

Call Option Comparison: Tax Exempt Bonds			
Call Feature	5-Year	7-Year	10-Year
Par	\$228,470,000	\$223,215,000	\$217,010,000
Premium	\$22,733,358	\$27,960,216	\$34,130,113
Bond Proceeds	\$251,203,358	\$251,175,216	\$251,140,113
All-In TIC (Yield to Maturity proxy)	4.22%	4.02%	3.79%
Arbitrage Yield (Yield to Call proxy)	2.92%	2.99%	3.06%
Total Debt Service	\$440,225,184	\$430,097,693	\$418,151,117

- **10-Year optional call is “standard” in municipal bond market**
- **Shorter calls provide greater call but have a higher “kick” to YTM**
- **So, when or why would an Issuer prefer a shorter call?**
- **What about in Taxable Bonds? What are Make-Whole Calls?**

How Are Bonds Priced?

Couponing Effect on Par Amount & Yields

Coupon Comparison: Tax-Exempt Bonds			
Coupon Structure	3% Coupons	4% Coupons	5% Coupons
Par	\$253,760,000	\$232,760,000	\$216,550,000
Premium/(Discount)	(\$2,427,051)	\$18,465,288	\$34,591,331
Bond Proceeds	\$251,332,949	\$251,225,288	\$251,141,331
All-In TIC (Yield to Maturity proxy)	3.12%	3.41%	3.77%
Arbitrage Yield (Yield to Call proxy)	3.08%	3.04%	3.01%
Total Debt Service	\$384,392,497	\$399,062,129	\$417,293,181

- **Higher coupons are strongly preferred by investors, especially in a rising interest rate environment**
- **Lower coupons are more economic in stable/lower interest rate environments**

How Are Bonds Priced?

Evaluating the Use of Insurance

- **Two active insurers: AGM and BAM**
 - S&P ratings of 'AA'
- **Using insurance “lends” the Insurer’s rating to the transaction**
 - Beneficial to Issuer’s whose transactions are rated below 'AA'
- **Bond insurance should reduce the cost of a borrowing**
 - A surety reserve vs a cash funded reserve
 - Lower interest rates resulting in lower debt service
- **If insurance and/or surety bids are too high, insurance becomes too costly and increases debt service**
 - Evaluated prior to the pricing; sometimes a pricing day decision

One of the Most Important Steps Issuers Can Take to Secure the Best Price: Improved Disclosure

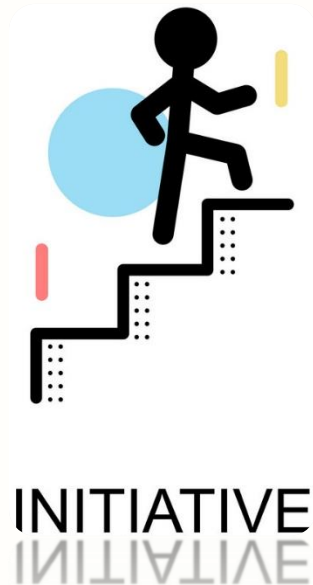
Reserve Levels



Multi-Year Budgets



FitchRatings
MOODY'S
S&P Global
Ratings



Green Bonds: What are They and Why Should I label My Bond Green?

- **Impact of the project is just as important as the project itself**
 - Detailed disclosure metrics of “Green” label such as:
 - Impact on environment/climate
 - Carbon Emissions; Waste Reduction; etc.
 - Dedicated Green Investor relations website
 - Annual Reports



Renewable
energy



Energy
efficiency



Clean
transportation



Responsible
waste management

Green Bond Designation: Two Recent Examples

- **Western Placer Waste Management Authority - Solid Waste Revenue Bonds, Series 2022A (Green Bonds)**

- Funded a Materials Recovery Facility to meet statewide diversion mandates
- Self-Designation
- Garnered large orders from three ESG focused bond funds



NEUBERGER	BERMAN
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- **California Public Works - Lease Revenue Bonds, 2021 Series C & D (Green Bonds – Climate Bond Certified)**

- Funded construction of a LEED building designed with sustainability as a goal
- Third-party certification
 - Climate Bond Certified
- Third-party engaged to verify to certification
 - Kestrel Verifiers
 - Report included as POS Appendix

Marketing Trends:

Inflation vs. Recession Tug of War

- **Fed raising rates at fastest pace in 30 years**
 - Monetary policy poses greatest risk of a recession by hiking rates too fast or too far
 - World events are fueling inflation: Ukraine, China, Supply Chain
 - Inflation fears triggers rise in rates
 - Recession fears result in market rallies/lower interest rates

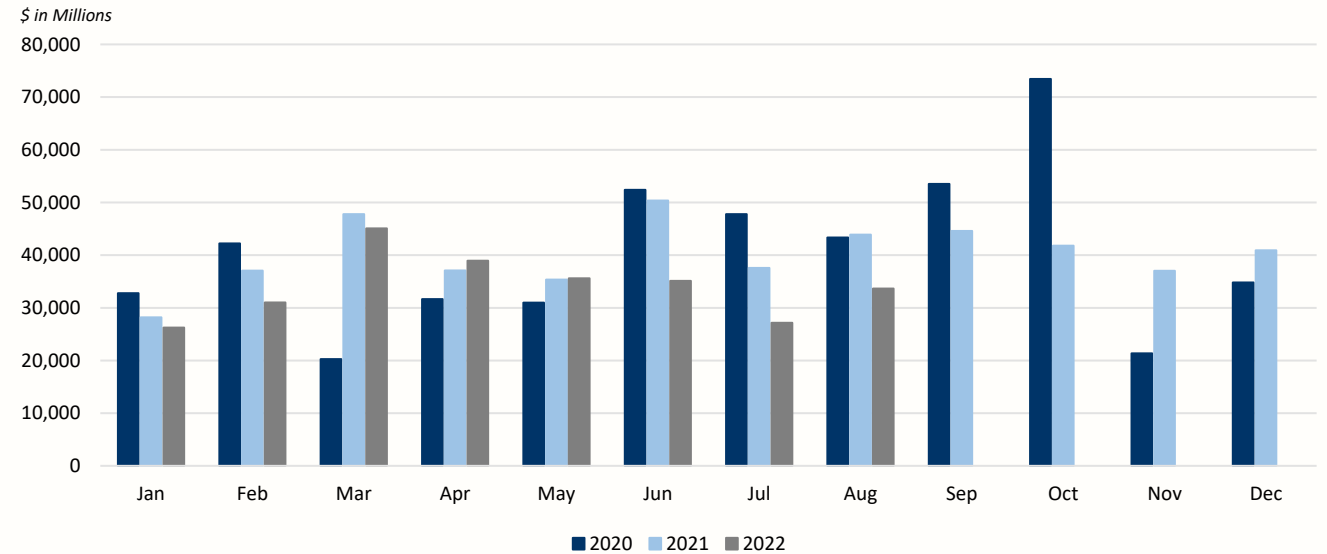


Market Trends: 2022

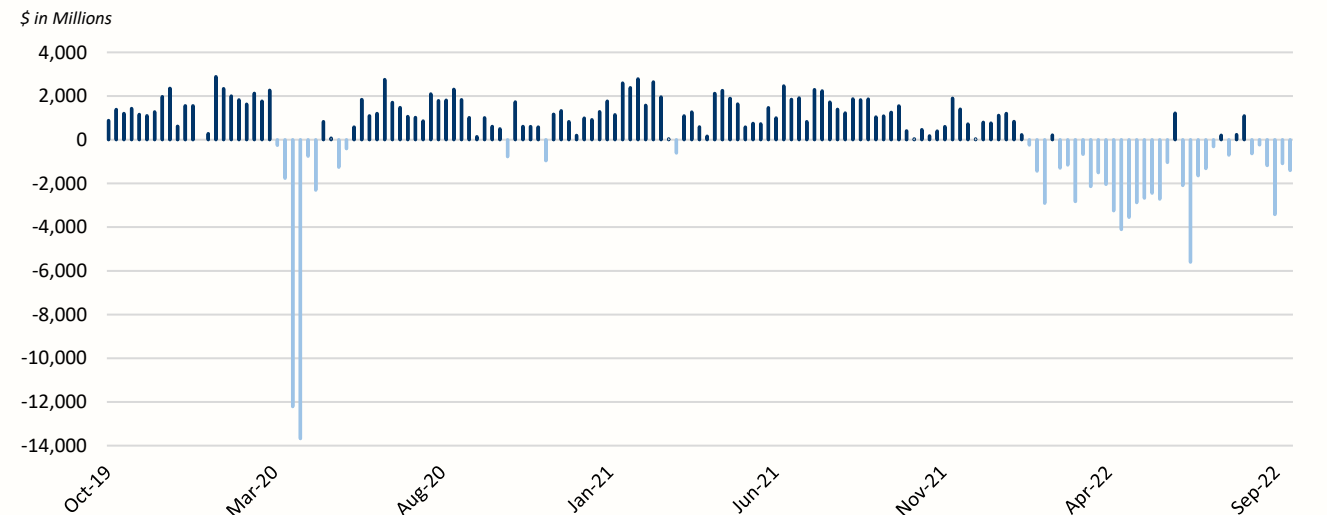
- **Sharp (unexpected) increase in interest rates starting in January**
- **YTD ~14.0% reduction in issuance (mostly fewer refundings)**
- **Rising rates & inflation are the key drivers on investor hesitancy**

Source: TM3 and Bond Buyer as of close 7/29/2022

2022 Issuance Volume - \$272.810 billion; ↓ 14%YOY

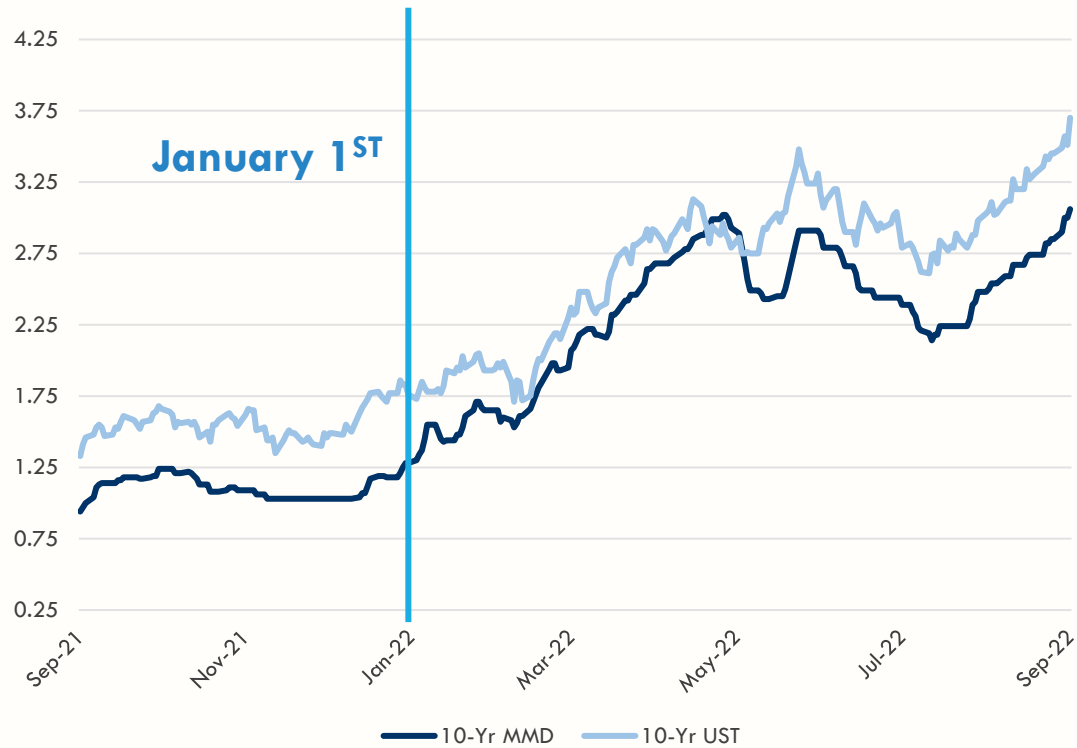


Muni Fund Flows YTD Total \$(54.407) Billion of Net Inflows

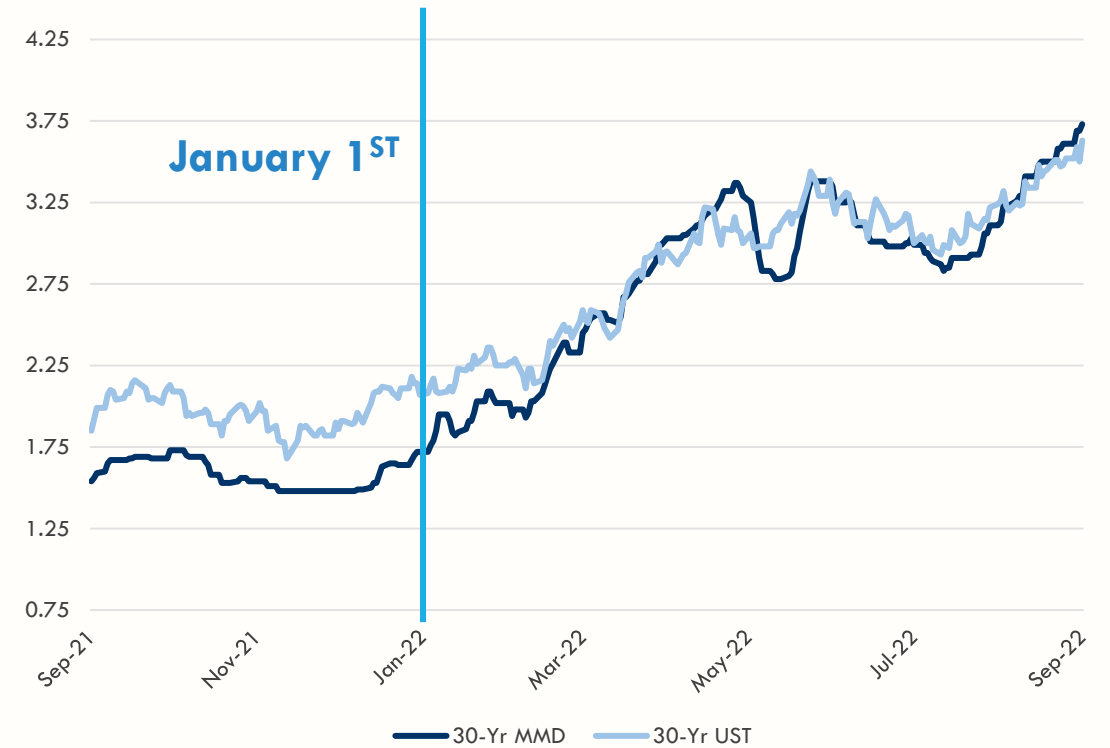


Marketing Trends: Since January 2022

10-Year MMD & UST Rates

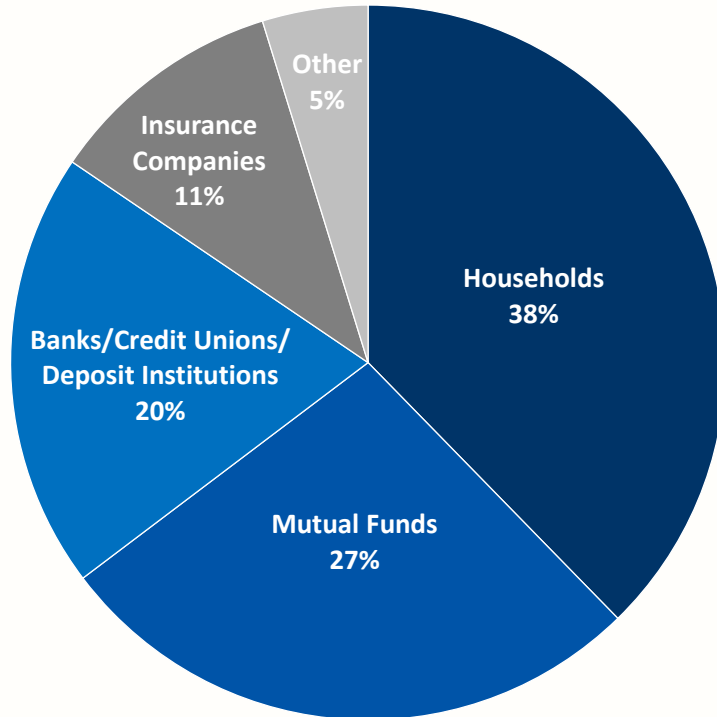


30-Year MMD & UST Rates



Who Buys Municipal Bonds?

- >\$4T in bonds outstanding as of March 2022
- Bond purchasers on the day of pricing differ from long term bond holders



Recent Muni TAXABLE Bond Example

- **Santa Cruz Metropolitan Transit District – Sales Tax Revenue Bonds, (Measure G) Series 2022**



Account	Allotments
Performance Trust	\$7,605
Delphi Financial	6,640
Wells Capital Management	4,590
Standard Ins. Co.	4,465
PIMCO Advisors	2,825
Brotherhood Mutual	2,770
First New York Securities	2,750
Transmarket Bastion	2,480
Neuberger Berman	1,820
Union Bank of CA	1,820
Indiana Farm Bureau	1,750
Allstate Insurance Co	1,725
Bel Air Investment Advisors	1,575
Western Asset Fund	1,200
Fiduciary Trust Co. of NY	1,175
16th Amendment Advisors	1,000
Sterling Capital Mgmt	975
Sit Investment Advisors	875
J.P. Morgan Fleming	975
Halyard Asset Management	600
Belle Haven Investments	585
RBC Global Asset Mgmt	500
Three add'l SMA's	1,050
Total	\$51,750

Recent Muni TAX-EXEMPT Bond Example

- **Ontario PFA – 2022 Lease Revenue Bonds, Series C (Civic Center Improvements)**



BlackRock

CHILTON
INVESTMENT COMPANY

nuveen
A TIAA Company

Payden&Rygel

P I M C O



Account	Allotments
EV Tabs	\$17,070
Allstate Insurance Company	15,765
PIMCO Advisors L.P.	11,220
Payden & Rygel	8,805
Blackrock/MLAM	9,000
J.P. Morgan Fleming	3,385
Wells Capital Management	3,360
Nuveen Asset Mgmt, LLC	3,045
Fiera Capital Inc.	2,390
Breckinridge Capital Advisors	1,710
Western Asset Fund	1,625
Massachusetts Fin. Services	2,400
US Trust Corporation	1,135
RW Baird Advisors	1,665
Wells Fargo Private Group	455
Clark Capital Mgmt Group	610
Hartford Life Insurance Co.	515
Columbia Mgmt Group	660
Invesco Power Share	2,500
Blackrock PPG	525
Maritime Capital	1,275
Five add'l SMA's	1,715
Total	\$90,830



Main Takeaways

- **Pricing Municipal Bonds is more “art than science”**
- **External Factors (macro-economic, supply & demand, etc.) are beyond issuers’ control**
- **Internal Factors (Disclosure, Finance Team, Structure, etc.) should be a focus of the Issuer to secure the lowest borrowing rate**