NATIONAL ASSOCIATION OF BOND LAWYERS

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LET ME CHECK WITH MY DESK

Chair:

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Panelists:

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Let Me Check With My Desk **will educate bond lawyers on the role played by the municipal bond trading desk. Participants in a typical municipal bond transaction (other than bond lawyers!), including investment bankers and representatives of IPREO, will give attendees a behind-the-scenes look at how municipal bonds are structured, marketed, priced, and closed. Attendees will leave with a better understanding of the factors that shape pricing and trends in the municipal bond market, the mechanics of underwriting an actual sale of municipal bonds, as well as special topics such as the inner workings of DTC, proprietary trading risk, and hypothetical situations posed to the panelists.**

I. What is “the Desk”?

A. The “Desk” is the physical location in an investment bank where the buying and selling of securities occurs. Formally, the “Desk” is bifurcated into two separate groups of professionals:

1. The Underwriting Desk (also known as the Syndicate Desk), which conducts transactions in primary offerings (“new issues”), and

2. The Sales & Trading Desk(s) (also known as the Trading Desk), which is primarily involved in secondary market trading.

B. Although these two groups will work in tandem in the marketing and underwriting of a new bond issue, the distinction between them is important. The Underwriting Desk is generally part of the investment banking (“private”) side of the investment bank, while the Sales & Trading Desk are on the investor (“public”) side. Underwriting Desk professionals can be privy to material nonpublic information (“MNPI”); sales & trading professionals generally are not, unless they are “wall crossed,” and restricted from trading on the MNPI received. The Underwriting Desk serves the critical role as a “bridge” between the investment banking team and the Sales and Trading Desk (and, derivatively the larger investor market as a whole).

C. Thus, when bankers refer to “the Desk”, the actual meaning of that term, and the subparts of the functions, will depend upon the context in which they are using it.

D. All underwriting and sales and trading professionals must pass certain FINRA licensing/qualification exams: the Securities Industry Essentials Exam, Series 7 (General Securities Representative) and Series 63 (Uniform Securities Agent State Law) being the basic ones. Municipal-specific licenses include the Series 52 (Municipal Securities Representative) and 53 (Municipal Securities Principal). Other licenses may be required depending upon a professional’s specific function, e.g., Series 57 (Securities Trader Representative).

> NOTE: All municipal securities transactions (on either desk) must be “supervised” by a Municipal Securities Principal. (Series 53 license); this is required for municipal securities transactions even if the bonds are taxable. Thus, for example, a tax-exempt municipal bond issue for a private college, combined with a taxable obligation of the college, may be handled by two different professionals of a syndicate and/or Sales and Trading Desk, depending upon what licenses are held by the supervisor, as well as the structural organization of the desk operations.

II. What Does the Underwriting Desk Do?

A. The Underwriting Desk serves as the central point in many aspects of a <u>primary issuance</u>, not all of which will be visible to counsel (or for that matter, the issuer).

1. As noted above, the Underwriting Desk is the bridge between the investment banking team (the "deal team") and the Sales and Trading Desk (and, derivatively the larger investor market as a whole). In that role, the Underwriting Desk serves:

    a) As a resource – before and during the issuance process -- to bankers (as thus to issuers) for market perspectives and intelligence.

    b) As a central clearing point for investor questions and feedback.

    c) As the party responsible for delivering pricing and structuring information to the market, via "wires".

    d) As a representative of the underwriting syndicate, if one is formed

2. More specifically, the Underwriting Desk:

    a) Provides bankers with interest rate "scales" for proposals to municipal issuers, as well as development of plans of finance before a transaction is made public

    b) Provides bankers and issuer clients with a range of non-deal-specific data:

        (1) Market technicals, e.g.:

            (a) Bond redemptions: what is the expected amount of bonds maturing (cash to be re-invested) (by State, sector, and ratings)?

            (b) Supply (YTD and projected): what has / will be issued?

            (c) Bond fund returns

        (2) Trading Data (volumes / inventory): How much of the issuer's bonds has traded throughout the year?

        (3) Investor Data, e.g., Lipper for investor fund flow data

        (4) Market Updates / Meetings

    c) Provides a perspective on market receptivity to (and price for) various structural alternatives for a financing (e.g., coupons, call features, etc.). Helps develop marketing strategy once the transaction is underway

    d) Coordinates input from sales professionals as to investor demand and interests and more general market feedback

    e) Helps finalize bond sales/structure

    f) As the coordinator of the marketing process, establishes price/yield levels

    g) If necessary, provides an underwriting commitment for any unsold balances.

3. Working with the Sales & Trading Desk, the Underwriting Desk will coordinate and submit bids on competitive bid sales.

4. <u>Syndicates</u>. If two or more banks and broker dealers are appointed by an issuer to market its bonds, a "syndicate" will be created to sell a bond issue. The Underwriting Desk typically will serve as the liaison between its particular investment bank and the rest of the syndicate, especially the senior managing underwriter appointed by the issuer

    a) Not all transactions have a syndicate; many smaller issues will have a sole underwriter

    b) May include larger and smaller firms, based upon regional diversity, DBE, retail sales strength

    c) Number of syndicate members can be driven by size of transaction

d) The Master Agreement Among Underwriters ("AAU") governs participation arrangements and risk sharing of liability of the underwriters

e) A Selling Group (which can sell bonds, but does not have underwriting liability) can also be added to the marketing process

III. What Does the Sales & Trading Desk Do?

A. Sales & Trading Desk(s) serve two general roles:

1. Traders will buy and sell bonds on behalf of the broker/dealer or bank, executing "principal" trades for which the bank putting up its own capital to purchase bonds that are part of the inventory of bonds held by the bank or, conversely, selling bonds held in inventory.

2. Sales professionals are the professionals that focus on investors as their clients. Sales professionals are often further subdivided by the type of investors that they cover:

a) "Retail brokers" are sales professionals that cover individual investors.

b) "Institutional sales" professionals will cover mutual funds, ETFs, corporations (e.g., insurance companies, pension funds, large portfolio managers and similar portfolio managers.

3. Depending upon the size, client base, and product focus, banks and broker dealers may segregate or consolidate components of the firm's overall sales and trading platform. Thus, for example, a small firm may combine both the trading function and the institutional sales function; a larger firm may allow for limited trading by a retail sales desk. Others may combine certain fixed income products (municipal bonds, U.S. Treasuries, corporate bonds, etc.) on a single sales or trading platform. Generally, banks and broker/dealers will separate their fixed income and equity trading desks; other financial products such as junk bonds and credit default swaps (CDS) may be further traded and sold from separate desks.

4. In the context of municipal bonds, the Sales & Trading Desk performs two specific functions:

a) For new issuances ("primary offerings"), the Sales Desk has the primary responsibility for marketing the bonds to investors. As part of this process, the sales professionals will typically

(1) Provide feedback to the Underwriting Desk as to investor demand and interest rate or yield levels at which intuitional investors would be willing to participate.

(2) Manage and direct any questions that investors may have about the bond issue.

(3) Enter orders received into the order book for the underwriting.

b) Because a Preliminary Official Statement will have been distributed prior to marketing to investors, there is time for a dialogue between the issuer's "side" of the transaction (issuer, bond counsel, the investment banking team) and the sales desk, and even with investors directly. The sales desk helps to facilitate those discussions. In all cases, all parties need to be mindful that no MNPI (i.e., material information, such as internal financial projections, not disclosed in the Preliminary Official Statement) is discussed,

c) Second, to the extent that an "unsold balance" (bonds that have been bought by a broker/dealer in either a competitive or negotiated underwriting, but for which no buyers have been lined up) exists on a new issue, the Trading Desk may choose to take a portion of those unsold bonds on as a risk position for its own account.

d) And, obviously, the Sales & Trading Desks conduct all secondary market trades; the Underwriting Desk would as a rule would not be involved in secondary market trades.

IV. The Marketing Process (from the Desk Perspective)

A. MSRB Rules. The marketing process is bound to a significant extent by MSRB rules governing primary issuance practices. In addition to general market practice rules, the rules specific to new issue underwritings include:

1. Rule G-11: Primary Offering Practices; governing priority of orders, syndicate allocations and settlement of accounts, and disclosures to the issuer and syndicate members.

2. Rule G-32, Disclosures in Connection with Primary Offerings; governing certain customer disclosures, underwriter submissions of OS and advance refunding documents, and submission of Form G-32 data to the MSRB.

3. Rule G-34; requiring that CUSIPs be obtained for all eligible bonds, submission of NIIDS data to DTC, and limits on the use of the NRO designation.

B. Before a POS is Posted:

1. Internal Approvals/Processes

2. Internal Committee Approvals/ Limits

a) Know Your Customer review/Credit Approval, etc.

3. Preliminary discussion with the client and the banking team of syndicate formation and policies

4. Printer Labels:

5. Ipreo Set up and Access: (discussed below)

6. Draft Sales Point Memorandum / New Issue Packet (more on that later)

7. Dialogue with issuer and its municipal advisor: critical that Underwriting Desk, the issuer, and the banking team are on same page as to what to expect as the process moves forward

8. Dialogue with the client as to timing and structure

C. The Formal Launch: Posting of the POS

1. When the POS is posted (made available to investors), the public marketing of the transaction can begin

a) Posting of the POS can be via a variety means:

(1) "Online" printing services, e.g., MuniOS.com

(2) EMMA
(3) Hard copies mailed to customers (less and less frequent)
(4) Investor calls
(5) Flyers

2. The POS is often supplemented by two additional communications tools:
   a) An <u>internal</u> Sales Point Memorandum or New Issue Packet (SPM), which summarizes many transactional and marketing aspects of the deal:
      (1) Links to the online version of the POS and Roadshow (if one is done)
      (2) Structure Summary
      (3) Use of Proceeds / Refunded Series
      (4) Issuer Overview
      (5) Relevant Credit Points, with Rating Reports Links
      (6) Top Holders and Holders of Refunded Bonds

   b) For certain large offerings, it is customary, not only in the municipal bond market, but other capital-raising businesses, for the underwriting team and the management of the issuer to make virtual (electronic) or in-person presentations and/or meetings with potential investor groups to discuss the transaction (such meetings are commonly known as"Roadshows."
      (1) Presentation will highlight many of points 1-4 above for investors
      (2) Investors often have the opportunity to participate in a follow-up telephonic group call or 1x1 discussions with the issuer.
      (3) All material information presented to or discussed with investors needs to be derived from information in the POS.
   c) Investor participation in a Roadshow, and the Roadshow's contents, is coordinated by the Underwriting Desk, working with Sales and Trading Desk and the banking team.

D. The Pricing of the Bonds: Can be followed in the stages of the Ipreo "Pricing Wires" (see also below): Multi-step process to find the clearing prices for bonds.

1. Structure Wire
   a) Broadcasts the structure to market
   b) Allows accounts to set aside money for specific maturities
2. Price Views Wire
   a) Allows senior manager to get syndicate's views on price
   b) Co-Managers have ability to opine on levels
3. Retail Order Period ("ROP")/ Pre-Marketing / Price Thoughts Wire
   a) First chance to broadcast levels to market
   b) If have an ROP, retail has ability to place orders before institutions
4. Preliminary Pricing Wire
   a) After we have orders from retail and/or indications from institutional accounts, book opens to institutions
   b) Order period generally runs for an hour or so (Senior Manager / bankers have ability to see order books in Ipreo)

c) After books close, Senior Manager has ability to adjust price based on levels of subscription

5. At this point, final yields are agreed upon with the issuer (verbal award from issuer)

a) Bankers then will update and finalize the amortization structure of the issue, and reconvey that to the Underwriting Desk

E. After the "Handshake": The Finalization of the Transaction (again, follow the wires!)

1. Re-Pricing Wire: Updated levels communicated to market

a) Investors have the ability to drop if yields have changed (lowered).

b) Underwriting Desk provides allotments to specific investors once all investor drops are received

2. CUSIP Wire: information on CUSIPs sent to market

a) Underwriting Desk typically orders CUSIPs for new money issuances

b) For refundings, CUSIPs may be needed for partially refunded and/or partially unrefunded bonds

3. Final Pricing Wire: Final pricing terms and CUSIPs communicated to market

4. DTC NIIDS & MSRB G-32 submissions

5. Execution of the BPA: Starts the process of trade ticketing. Actual sales tickets cannot be written to accounts until:

a) The BPA is signed (which is why it is important to have a written award ASAP); and

b) DTC is notified

(1) DTC closes at 5pm ET and the MSRB has a rule that does not allow bonds to trade until 2 hours after DTC is notified.

(2) Thus, bonds can only be freed to trade the same day if we have BPA executed by 3pm ET

(3) If not, bonds "freed up" at 9am next day

6. Trades are usually set up prior to the execution of the BPA, but are formally "booked" or ticketed within the parameters of the DTC and MSRB rules above at a specific time set by the Underwriting Desk, working the back office operations.

a) Trades are reported within 15 minutes of actual booking.

7. Free to Trade Wire: Restrictions on syndicate members are lifted. And bonds are "freed to trade" in secondary market.

a) Prior to then, all underwriters in the syndicate are required to offer to sell any unsold bonds at only the offering price(s) set by the syndicate.

8. Closing: Settlement Typically through DTC (see below)

F. After Bonds are Freed to Trade:

1. Generally considered secondary market trading, which will typically run through the Sales and Trading Desks

2. Unsold balances may be retained by the Underwriting Desk and sold from that part of the Desk, or may be transferred to the "books" of the Trading Desk.

G. Taxable Bonds follow a similar multistep process, with differing nomenclature

1. Usually marketed based upon the spread to an "on the run" (newly issued) Treasury of comparable maturity.

2. Coupon/yield is "set" AFTER the BPA is signed and bonds are allotted, based upon the actual Treasury rates at a specific, previously announced time.

V. Structuring & Pricing Municipal Bonds: The Factors Affecting Prices and Yields

A. Bond Prices and Yields are inverse to Each Other. A $100 principal bond with a 4% coupon returns $4 and has a 4% yield when sold at an initial offering price of $100. However, if the price to purchase that bond increases to $101, then the $4 return yields less than 4%. If the cost to purchase the bond goes down to $99, then the $4 return yields more than 4%.

B. U.S. Treasury Market. The federal government uses the U.S. Treasury Market to borrow money to finance governmental operations. Treasuries, backed by the U.S. Government, are considered to be risk-free investments. The U.S. Treasury Market is highly liquid. Consequently, Treasuries, and changes in that market, serve an important reference point for pricing assets in markets with credit risk – including municipals.

1. As noted above, taxable municipal bonds are often explicitly priced as a spread to comparable Treasuries.

C. Yield Curves. A yield curve represents the yield on an investment at different fixed duration points. Treasury Market securities have durations from 13 weeks all the way to 30 years. Typically, investors require greater yield as the duration of an investment increases. Short-term Treasuries have lower yields than long-term Treasuries, which gives the curve an upward slope. A normal slope indicates a stable economic cycle, where investors expect long-term rates to continue rising. A flat curve, where yields are consistent across various durations, indicates an uncertain economic period. An inverted curve, where short-term rates are higher than long-term rates, indicates a recessionary cycle where investors expect long-term rates to go down and therefore seek safer long-term investments, driving down the price of long-term Treasuries.

D. Municipal Bond Yield Curves. Various services and entities maintain indices of municipal bond pricing. Among the more popular, The Municipal Market Data (MMD) AAA Curve (currently owned by Refinitiv) is based on "AAA rated" state general obligation bonds and is utilized by sellers to gauge sale prices. Others (publicly available le on EMMA) include:

1. Bloomberg's BVAL AAA Curves
2. BondWave AA QCurve
3. ICE US Municipal AAA Curve
4. IHS Markit Municipal Bond AAA Curve
5. MBIS Municipal Benchmark Curve
6. S&P Municipal Bond Index
7. Variable rate bonds are often quoted or priced based on a spread to a floating rate index:
    a) SIFMA Municipal Swap Index (based on tax-exempt VRDN rates)
    b) LIBOR Index (to be phased out by 6/30/23)
    c) Secured Overnight Financing Rate (SOFR)
    d) Bloomberg Short-Term Bank Yield Index (BSBY)

E. Municipal Bonds to Treasuries Ratio. As a class, municipal bonds are considered to be among the lowest risk category of investments, although the interest on typical municipal bonds is tax-free, while the interest on Treasuries is federally taxable. Therefore, bankers and traders will often compare the prices of bonds and Treasuries against each other to determine, on any given day, or at any given moment, which is relatively more valuable—taking into account the taxes on Treasury interest.

F. Spreads. Investment banks and intuitional investors commonly price riskier assets in terms of the "spread" to an index such as MMD – the more the perceived risk in a bond, the wider the spread. Investors will focus on both the absolute level of the spread as well as the relative spread., compared to other available investments.

VI. The Two "Backbones" of the Operations System: DTC & Ipreo

A. DTC and Ipreo are two of the critical "behind the scenes" systems that help to make the municipal bond market among the most efficient in terms of execution in the securities market.

1. These two platforms operate in tandem with the bank's own internal trade execution, reporting and operating systems to provide for efficient execution of new issue underwriting and trades, with the aim of minimizing the amount of manual input (consequent reduction in time and potential for error).

B. DTCC. ***For an excellent overview of DTC and its operations, please read NABL's white paper, "Demystifying DTC: the Depositary Trust Company and the Municipal Bonds Market (March 2017):*** https://www.nabl.org/DesktopModules/Bring2mind/DMX/API/Entries/Download?portalid=0&EntryId=1093

1. DTCC is a SEC-registered "clearing agency" that serves multiple functions:

a) Custodian of bonds: bonds are "immobilized" and held in custody, either by DTC directly or via arrangements with bank trustees and other financial institutions via DTC's FAST system.

b) Book entry transfer of ownership of bonds among DTC participants only

(1) Participation in DTC is limited to registered broker-dealers, banks, clearing corporations, and similar financial institutions approved by DTC

(2) Actual ("beneficial") owners of bonds are not participants in the DTC system, unless they are one of the entities above.

(3) Consequently, not all trades will clear and settle through DTC's operations. For example, the sale of a bond to a retail customer of the senior managing underwriter of a bond issue will not be settled on DTC, but rather on the internal books and records of the broker /dealer. Conversely, the sale of bonds to a retail customer of co-manager will be settled first on DTC as a transfer to the co-manager's DTC account, with a similar internal settlement between the customer and the comanager.

c) Comparison of Broker-Broker Trades: National Securities Clearing Corp. (NSCC). For all broker-to-broker trades, DTC's processes require that BOTH brokers report the trade to NSCC; NSCC then "compares the two trade reports to make sure that they match, after which they are settled in the normal process.

d) Settlement of trade amounts, debiting the account of the purchasing DTC participant (or its financial institution) and crediting that of the seller.

e) Payment of principal, interest, redemption amounts, etc. to the Beneficial Owners (the actual holders) on its books and records.

f) Tracking of amounts of bonds outstanding, adjusting for redemptions, refundings, sinking fund installments, etc.

g) Processes and systems for the conduct of tenders, exchanges, etc.,

h) Physical delivery of issuer communications to investors via the Participants, as requested by the issuer.

2. To our knowledge, DTC currently is the only clearing agency approved by the SEC for municipal bonds

C. Ipreo is a multiuse/multipurpose platform, intended to automate & facilitate new issuance underwriting and transaction execution and providing new issue information to the street at large. These functions include:

1. Communications platform for information dissemination ("wires") among syndicate desks of underwriters and selling group members. The "wires" that Ipreo can provide include:

a) Syndicate formation wire AAU/Invitation wire
b) Preliminary structure/price views wire
c) Preliminary pricing wire
d) Repricing Wire
e) CUSIP wire
f) Final pricing wire
g) Refunded bonds wire
h) Allotments letter
i) "Free to trade" wire
j) "Hold the price" wire(s)
k) Summary of orders by priority / Order Letter
l) Order Status Wire Order Termination Wire
m) MSRB G-11 / Preliminary and Final Designation
n) Syndicate balances wire
o) Spread detail wire
p) "Free Text" wire with any message to be shared with syndicate
q) Syndicate List wire

2. Book- building function (Electronic Order Entry):

a) Direct new issue order from investors and other underwriters and broker/dealers

b) Entry of orders received by/conveyed to the senior manager

3. "Game Day": graphic and tabular presentation, in real time, of orders, by maturity/investor/dealer, with comparison to maturity limits (premium feature)

4. Interface with trade ticket processing within the broker/dealer

5. Data feed to DTCC's New Issue Information Dissemination Service (NIIDS)

a) NIIDS is the central repository for all information, available to ALL broker/dealers, about each bond necessary for trade processing (coupon, maturity, call date, interest payment dates etc.)

6. Data feed to DTCC's Underwriter Source function

    a) Information necessary to enable DTCC to clear and settle trades on its books and records, including the initial settlement, as well as bond payment information.

7. Reporting per deal (including P&L calculations) and cross-deal data
8. Street-wide forward calendar

VII. Discussion Topics

A. What are the Current Factors Affecting Bond Pricing?

B. How does the Desk determine whether to offer premium or discount bonds, as well as serial versus term bonds?

C. Not all Bonds are the Same – How are General Obligation, Revenue, Project Finance, Private Activity, and "High Yield" bonds priced and marketed differently?

D. The Sale Process

1. Timing leading up to the sale date – when does it all start? What does the Desk do leading up to the sale date?
2. How is the sale actually conducted? Are sales/trades happening over the phone, Bloomberg messaging, electronic trading platforms
3. How are sale dates selected for pricing? What is the impact of economic news, Fed meeting, other issues pricing that same day
4. What happens if all the orders aren't filled? Or if the issue is oversubscribed. Is it the Desk that fills (or over-fills) the order book for an offering or is it the underwriting deal team?
5. Hold-the-Price
6. What are "tickets" and how do you write them?
7. Changing tickets and busted trades

E. Stories from the Desk

Institutional vs retail investors – How are they different and how does the Desk approach them? What happens when the Desk receives feedback/questions from them? What are typical questions that the Desk commonly receives from such investors?

VI. Closing

1. How does the Desk prepare for a closing?

a. Wires

b. Coordination with Trustee and Issuer

c. Contact with the Investors

2. DTC (See NABL White Paper)
    3. How are funds transferred at closing?
    4. What happens if the deal does not close by the DTC cut-off time?

VII. Special Topics

    1. How do you identify bondholders in a consent situation?
    2. How does the Desk trade bonds?
    3. POS/OS stickered—what problems can that cause with investors?
    4. What happens with the Blue Sky memo after it is sent to the banker?