Producer Price Indexes for Stockbrokers, Dealers and Investment Banking Companies

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Producer Price Index Program
U.S. Bureau of Labor Statistics
Producer Price Index for Stockbrokers, Dealers and Investment Banking Companies

I. Industry Output

The primary function of participants in this industry is to be the intermediary between buyers and sellers of securities. Liquidity and stability is also provided to the securities markets by being the buyer or seller of last resort.

Primary services

The most important services performed by participants in this industry are: brokerage services, dealer or trading services, investment banking services including the underwriting of new and additional stock and bond issues, and mergers and acquisition advisory services. In addition, services include buying and selling mutual fund shares for their clients and managing client accounts. One of the primary services provided is investment advice in conjunction with other brokerage services. The investment advice provided along with other brokerage and investment services may be a separate fee or built into the price of the brokerage or investment service. This industry also performs many services for other members of the industry such as clearing and account administration. Excess money and securities are also lent to a wide variety of industry and non-industry members at a price.

II. Item Selection

Information from the Securities and Exchange Commission (SEC) and the Securities Industry Yearbook, 1996-97, were used to construct frames for this industry. From the Securities Industry Yearbook, a frame was created where each record included a department of a company. A measure of size was assigned to each record using SEC data. Two hundred and sixty-three sample units were selected. Each sample unit is to represent one collection visit to the company. For all other companies for which departments were not available, one frame unit was created for each company. An additional 136 sample units were selected randomly from a SEC listing for a total of 399 sample units.

Once the actual service is selected, its price determining characteristics are identified to permit monthly repricing of the same unique item. The price determining characteristics for each service line are as follows:

Brokerage Services

Person Conducting Transaction: (Specialist, broker’s broker, registered representative, floor broker, etc.)

Specific Type of Security: (Intel stock, 10 yr. Treasury bond, General Motors option, etc.)

Quantity of security purchased: (100 shares of stock, 5 options contracts, 10 Treasury bills, etc.)

Market value of security: (price per share, option premium)

Type of client: (retail, institutional, government, other broker, etc.)

Trading volume of client: (trades less than 10 times/yr, trades large volumes frequently, etc.)
**Price-determining characteristics of equity securities**

**Type of order:** (limit, market, stop, etc.)

**Order placed through:** (by telephone, by registered representative, by modem, by Super Dot, etc.)

**Additional services provided:** Research is the most common additional service that, if provided, will raise the commission rate charged on a transaction. This pertains mostly to institutional clients.

**Additional charges:** Some brokers charge a fixed fee for each transaction to cover transfer and clearing costs. If the trade is an odd lot, which costs the company more, there will be an extra charge.

**Payment for order flow:** Some brokers, who don’t have a seat on the NYSE, need to place their orders through dealers who do have seats on the exchange. Sometimes, the “introducing” broker can make an agreement with a dealer on the exchange to place most all of his/her orders through the dealer. For this exclusivity, the dealer with the seat will rebate a part of its commission or spread to the “introducing” broker. This is called “payment for order flow.” For some deep discount brokers, this may be their primary revenue source, and it is typically based on a percentage of the transaction.

**Price-determining characteristics of options transactions**

**Overview:** Intra-industry clients and institutional clients are charged a flat fee for the purchase or sale of an options contract. Retail clients, however, are charged a commission based on the price, or “premium,” of the option.

**Type of option:** (Call, put)

**Underlying security:** (stock, stock index, bond, etc.) Options are a type of derivative security so named because their prices are determined by, or “derive from,” the prices of other securities.

**Number of contracts purchased/sold:** The unit of sale for an option is a contract.

**Contract expiration:** (this month, next month, next on-cycle month, etc)

**Description of strike price:** (at the money, in the money, out of the money) Since there can be several options contracts with strike prices that would be profitable or unprofitable at any current time, a description of how far away from the “at the money” price the strike price is, is needed for repricing.

**Size of transaction:** The size of the transaction plays a role in determining the commission and is defined as the number of contracts times the premium per contract.
**Dealer Services**

**Specific Type of Traded Security:** (Intel stock, 10 yr. Treasury bond, General Motors 30 year bond, etc.)

**Quantity purchased:** (100 shares of an OTC stock, $1000 worth of commercial paper, 5 bonds, etc.)

**Market value of security:** (price per share, option premium, price of bond)

**Type of client:** (retail, institutional, government, other dealer, etc.) These different clients will generally receive different markups or spreads.

**Trading volume of client:** (trades less than 10 times/yr, trades large volumes frequently, etc.)

*Price determining characteristics of debt transactions*

**Bond rating:** (AAA, BB, high yield, etc.)

**Par value:** ($1,000, $10,000)

**Coupon rate:** The coupon rate is the bond’s interest payment per dollar of par value. Bond prices will be adjusted based on the Lehman Bros. Bond Index, which already takes into account interest rate changes and their effect on bond prices. Thus, the exact price of a bond as indicated by the coupon rate might be unnecessary.

**Discount rate:** For certain types of debt, such as Treasuries and Commercial paper, the interest is calculated not as an interest above par value, but as a discount off par value. The discount rate refers to the interest rate used in determining the present value of future cash flows.

**Maturity date**

**Type of issue:** (on-the-run, off-the-run, new issue, previous issue)

**Type of corporate bond:** (mortgage, collateral, debenture, etc.)

**Provisions of bond:** (callable, convertible, exchangeable, etc.)

**Investment Banking Services**

Overview: Since investment banking is a custom service, an actual investment banking transaction will be described on the checklist, which will then convert to being a hypothetical transaction during repricing. The Washington Office will have to escalate the dollar-denominated characteristics, leaving the other characteristics fixed.
Price determining characteristics common to all investment banking activities

Size of the offering/placement/deal, etc.

Securities involved.

Additional services performed: (Fairness opinions, firm valuations, etc.) Almost all investment banking is customized with each underwriting requiring a different scope of services. Generally the price of the services is imbedded in the spread charged, but can sometimes be assessed separately.

Company characteristics: Much of investment banking from IPOs to mergers and acquisitions is based on the valuation of the company, and an assessment of its future condition, in terms of sales and growth. An earnings statistic for the industry would therefore be used as an escalator for this index item.

Complexity of the deal.

Price determining characteristics for underwriting services

Type of public offering: (best efforts, firm commitment)

Role of investment banker: (manager, co-manager, underwriter, advisor).

Note: Theoretically, it would be ideal to be able to get the investment banker’s compensation as it relates to the role played in the deal and the size of the syndicate. However, this was not possible for many members who are only peripherally involved in the deal and essentially take what money the manager gives them.

Price determining characteristics for merger and acquisition services

Party represented: Whether the investment banker is representing the buyer or the seller will affect the price.

Margin Lending, Mutual Fund Sales, and Other Securities Related Services

Form of remuneration: (front-end load, back-end load, no load, etc.)

Year redeemed

Number of shares, net asset value and total value

Price determining characteristics of margin lending
Loan amount.

Interest rate: The interest rate determines the amount the broker will get back.

*Price determining characteristics of investment advisory services*

Type of security: The type of security such as stock, bonds, futures, mutual fund etc. determine the complexity of the financial advice services rendered.

Length of the financial plan: Financial plans can be abbreviated or comprehensive.

Complexity of advice: Advice that necessitates complex analysis and research often is priced higher.

**III. Index Methodology**

**Brokerage Services**

*Commission*

The industry-specific term for the remuneration brokers receive for their services is “Commission.” Commissions are derived in a number of different ways.

For stock transactions to large institutional clients, brokers typically charge a “cents per share”. For stock transactions to small retail clients, brokers generally charge a “percent of the transaction”. The transaction is based on the number of shares purchased multiplied by the price per share. These rates typically decline with increasing transaction sizes. Deep discount brokers often charge the client a very low flat fee per transaction with much of their remuneration coming in the form of “payment for order flow.” Payment for order flow is the term for the rebate given back to originating brokers by other brokers who act as middlemen or market makers in the transaction. The payment is typically in the form of a percentage of the profit made on the transaction or a cent per share.

For options, the commission can be a flat fee per contract, a percent of the principal/transaction, or a combination of both of the above.

Commissions for other securities are generally a version of those just mentioned.

If the commission is based on a percent of the transaction, the calculation for this commission will be done in the specification and the reporter will be asked to provide the entire value of the commission. The unit of measure for this type of price is “per transaction,” or “per trade,” or “per ticket.” For simpler commission calculations, the units of measure may simply be a value per share ($.06/share), or value per contract ($35/contract), or value per trade ($10/trade).
Minimum fees are common. The minimum fee will supersede any other calculation methodology if applicable.

**EXAMPLE**

**Base Period**

Price = $300.00  
Index = 100.0

**Period 1:** Broker transacts 100 shares of XYZ @ $93.00 and charges 3% commission.

\[
\text{Price} = (\text{Stock price})(\text{Number of shares})(\text{Commission rate}) = (93.00)(100)(0.03) = 279.00
\]

Price relative = 279.00/300.00 = 0.9300  
Index = 93.0

**Period 2:** Broker transacts 100 shares of XYZ @ $97.00 and charges 3% commission.

\[
\text{Price} = (\text{Stock price})(\text{Number of shares})(\text{Commission rate}) = (97.00)(100)(0.03) = 291.00
\]

Price relative = 291.00/300.00 = 0.9700  
Index = 97.0

**Dealer Services**

*Dollar Value of Markup (applies mostly to bonds)*  
*Dollar Value of Quoted Spread*

Dealers, as opposed to brokers, take possession of the securities traded. Therefore, their “price” is the difference between what they paid for the securities and the selling price.

Dealers are viewed as the suppliers of immediacy - the ability to trade promptly - to make the market. The bid-ask spread can be viewed in turn as the price charged by dealers for supplying immediacy. The “quoted spread” is the difference between what a dealer is asking to sell a security for (ask price) at a fixed point in time and what s/he is bidding for the same security (bid price) at that time. First the quoted spread consists of the highest and lowest prices being quoted at that minute. A portion of actual buys and sells may take place within the quoted spreads, or discounted. This is called a “realized, or effective spread.” Also, the dealer rarely buys and sells the stock at this fixed point in time. A dealer essentially gambles with the market, buying when
the price is low and selling when it’s high. Thus, the dealer will store up securities in inventory when the price is low and sell from inventory when prices are up.

In order to facilitate this immediacy, dealers use over-the-counter-market, NASDAQ, to trade stocks. To measure the price of this immediacy, stock quotes are priced entirely in the Washington Office. Each month NASDAQ sends to the Producer Price Index program information on the bid/ask spread and trading volume that occurs at the close of the first trading day of the month, on the PPI pricing day, and on the Wednesday prior to the week in which the preliminary PPI index is calculated. These dates are held constant every month.

Once the NASDAQ information is received, an average spread for the three days, weighted by trading volume, is calculated to determine the change in price for dealer services.

For many widely traded, low risk, securities like Treasuries, or for “new issue” debt, the dealer charges a markup of anywhere from 1/32 to 1/2 percent of the price of the bond. Generally, for a specific type of security such as a non-corporate bond/bill/note, the markup is the same.

For these debt securities such as bonds, the reporter will provide the current ask price of the bond. However, if the reporter is unable to provide the current ask price of the bond, the bond will be priced by the Washington Office using the Lehman Brothers Bond Index prior to repricing on a quarterly basis. The purpose of this is to impute the current ask price of a bond. The Lehman Brothers Bond Index provides a comprehensive list of indexes of several types of bonds such as municipal, corporate, mortgage backed securities etc.

If the reporter provides a corporate bond from the entertainment sector for example, then the Lehman Brothers Bond Index for corporate investment grade bonds from the entertainment sector will be used to calculate the price of the bond provided by the reporter. The reporter will then reprice the bond giving the markup or spread on a comparable bond using the adjusted price of the bond to calculate their dollar values. For example, XYZ Communication, a corporate high yield, bond is being repriced. Initially, the price of the bond is $100. In April, the Lehman Brothers Bond Index price for that class of bonds was $88.28, then in July according to the Lehman Brothers Bond Index for the entertainment sector, the price of entertainment bonds on average is $94.13. The percent change is 2.07 percent. One hundred dollars, the initial value is then adjusted by 2.07% to obtain $102.07, the escalated market value of the bond.

As a side note: Dealers also may have proprietary trading accounts used solely as investments for the company. These accounts are not output for this industry and are excluded.

EXAMPLE

*Base Period*

Price = $0.0625  
Index = 100.0  

*Period 1:* Dealer purchases XYZ corporate bond for $98.3125 (bid) and sells for $98.3750 (ask).
Price = Ask price – Bid price
= $98.3750 - $98.3125
= $0.0625

Price relative = 0.0625/0.0625 = 1.000
Index = 100.0

**Period 2:** Dealer purchases XYZ corporate bond for 99.3750 and sells for 99.500*.

*This price is imputed using Lehman Brothers Bond index for corporate bonds.

Price = Ask price – Bid price
= $99.5000 - $99.3750
= $0.1250

Price relative = 0.1250/0.0625 = 2.0000
Index = 200.0

**Investment Banking Services**

**Estimated Dollar Value of Gross Spread**

**Estimated Fee**

One of the primary roles of an investment banker is to set the market price of a new issue of securities, and to solicit buyers for the new securities. The investment banker typically buys the entire issue of securities, e.g. stocks and debt instruments, at a discount and resells the securities at the market price. This difference between the discounted purchase price and the sale price is called the “gross spread.” This gross spread is generally calculated as a percentage of the value of the issue. The fees for underwriting or management of underwriting is either a value of the issue or a value of the gross spread. Since no two issues are alike and not easy to update, if requested by the reporter, the Washington Office will escalate the current market values of the initial public offering and secondary offerings.

For new stock issues (IPOs), the market value will be escalated quarterly by earnings data. For secondary offerings and debt offerings, the values will be escalated quarterly by the change in the GDP Chain Type Price Index to account for the time value of money. The reporter will receive the updated values and asked to provide an estimated gross spread or fee for the described investment banking service.

**NOTE:** The process of underwriting a new issue is usually spread out among a number of brokers, each with different roles in the process. Each broker will get a different percentage of the gross spread depending on his role in the underwriting, and the number of other brokers/investment bankers that are involved in the underwriting. However, the base period
(collection visit) relationship between the syndicate members will be held constant and an estimate of the total gross spread will be repriced.

Services such as mergers and acquisitions, leveraged buyouts, and private placements are associated with investment banking services. These services primarily involve the broker giving advice on the proper price of the transaction and strategies for takeover. Private placements involve a broker’s assistance in placing a large amount of new issue stocks with a select number of buyers. For these services, an investment banker charges a fee. However, it is most common that the fee will be calculated as a percentage of the transaction. Since no two transactions will be alike, the respondent will be asked to provide an estimate of the current market value of the merger, etc. and provide the corresponding fee or percentage that would be made on the deal.

Asset securitization generates revenue in two methods. The first method occurs when an investment-banking firm securitizes assets on behalf of a client, and then underwrites the issue. A gross spread is received. The second method that generates revenue is if the investment-banking firm buys the underlying assets, creates the securities, and then sells the securities. A profit is realized on the difference between the entire issue sale price and purchase price of the assets.

**EXAMPLE**

**Base Period**

<table>
<thead>
<tr>
<th>Price</th>
<th>Index</th>
</tr>
</thead>
<tbody>
<tr>
<td>$24,000.00</td>
<td>100.0</td>
</tr>
</tbody>
</table>

**Period 1:** Investment banker issues IPO for telecommunications industry with total offering price of $2,000,000 and receives 20% of 6% gross spread as manager.

\[
\text{Price} = (\text{Issue price})(\text{Gross spread})(\text{Manager's fee}) = (2,000,000)(0.06)(0.20) = 24,000.00
\]

Price relative = $24,000/$24,000 = 1.0000

Index = 100.0

**Period 2:** Investment banker issues IPO for telecommunications industry with total offering price of $2,200,000* and receives 20% of 6% gross spread as manager.

*Offering price is imputed using earnings data for the telecommunications industry.

\[
\text{Price} = (\text{Issue price})(\text{Gross spread})(\text{Manager's fee}) = (2,200,000)(0.06)(0.20) = 26,400.00
\]

Price relative = $26,400/$24,000 = 1.1000

Index = 110.0
Mutual Fund Sales

Load
12b-1 Fee
Actual Fee

A load is compensation from a mutual fund company for the one-time sale or redemption (if a back-end load is charged) of a mutual fund. It is similar to a sales commission. The 12b-1 fee is compensation for maintaining a mutual fund account. This fee can be distributed monthly to broker-dealers, and represents a portion of the assets held by clients of the brokerage company. Some brokers may also charge a fixed fee per transaction.

EXAMPLE

Base Period

<table>
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<th>$69.00</th>
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</thead>
<tbody>
<tr>
<td>Index</td>
<td>100.0</td>
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</tbody>
</table>

Period 1: Broker transacts 100 shares of XYZ Mutual Fund with net asset value (NAV) of $36.00 and charges 2% front-end load.

Price = (NAV)(Number of shares)(Commission rate)  
= ($36.00)(100)(0.02)  
= $72.00

Price relative = 72.00/69.00 = 1.0435

Index = 104.4

Period 2: Broker transacts 100 shares of XYZ Mutual Fund with net asset value (NAV) of $34.00 and charges 2% front-end load.

Price = (NAV)(Number of shares)(Commission rate)  
= ($34.00)(100)(0.02)  
= $68.00

Price relative = 68.00/69.00 = 0.9855

Index = 98.6

Margin Lending

Interest Income

Margin lending is the borrowing of money from a broker in order to buy more stocks using the current stock portfolio for collateral. Brokers will charge an interest rate that is a higher percentage than the “broker’s call rate.” Multiply the interest rate by a loan amount to arrive at
the interest income. Rebates on the interest may be given to correspondent brokers. The loan amount will be escalated on an annual basis by the GDP Chain Type Price Index.

**EXAMPLE**

**Base Period**

Price = $220.00  
Index = 100.0

**Period 1:** Broker loans $2,500 and charge a call rate of 7.5% plus additional 1.5%.

\[
\text{Price} = (\text{Principal})(\text{Loan rate}) \\
= (2,500)(0.075 + 0.015) \\
= 225.00 \\
\]

Price relative = 225.00/220.00 = 1.0227  
Index = 102.3

**Period 2:** Broker loans $2,550* and charge a call rate of 7.5% plus additional 1.5%.

*Principal is adjusted by GDP chain type price index .

\[
\text{Price} = (\text{Principal})(\text{Loan rate}) \\
= (2,550)(0.075 + 0.015) \\
= 229.50 \\
\]

Price relative = 229.50/220.00 = 1.0432  
Index = 104.4

**Other Securities Related Services**

**Actual fee**  
**Interest income**

Brokers may charge fees for opening an IRA account or for transferring stocks from one account to another. Brokers also charge other brokers fees for performing administrative services, such as clearing and account supervision. Some fees are calculated as a fixed charge per transaction. Execution fees are typically calculated as a cent per share.

Broker-dealers enter into a number of financing agreements with clients and other broker-dealers. Some of the ways broker-dealers finance their holdings is through repurchase agreements (repos) and reverse repurchase agreements. Interest income is earned on reverse repurchase transactions. Interest is paid on repurchase agreements. Only reverse repurchase agreements will be collected. An example of a reverse repurchase agreement follows.

A client of the dealer has purchased $5 million in government securities but needs to somehow finance this purchase. The dealer has an excess of $5 million in funds. The dealer agrees to buy...
the securities for a price that is determined by the "repo rate" and have them repurchased the next
day for $5 million. In this example, the repo rate is 6%. To determine the price at which the
dealer will buy the securities, the dollar interest must be calculated as follows:

\[
\text{Dollar interest} = (\text{Dollar principal}) \times (\text{Repo rate}) \times (\text{Repo term}/360) \\
= \$5,000,000 \times 0.06 \times 1/360 \\
= \$833.33
\]

Thus, the client sells the securities to the dealer for $4,999,166.67 ($5 million less $833.33) and
buys them back the next day for $5,000,000. The dealer earns $833.33 in interest. The
Washington Office will escalate the dollar principal by the GDP Chain Index, and ask the
reporter to supply the new repo rate and interest income.

The lending of a security also generates interest income.

**Investment Advisory Services**

Prices for financial planning, financial advice, portfolio analysis and investment research can be
listed as well as negotiated in contracts. These contractual or listed fees can be flat or retainer,
hourly, quarterly, annually, project based, or a percentage of income. Flat fees for financial
planners are usually charged for a quoted service such as developing a financial plan, preparing a
tax return, or drafting a will for an estate type financial plan. Flat fees are also determined on a
sliding scale. For example, the cost of a financial plan is based on the complexity of a client’s
investment holdings. A person with $10,000 in savings and a moderate annual income will not
pay as much as a person with a trust fund, three homes and stock and bond portfolios.

Hourly fees tend to be list prices which are determined from the amount of time a financial
planner, financial advisor, portfolio analyst or an investment researcher spends with his/her
client, including time in research, reviewing the plan or research document and discussing the
implementation options.

Some financial planning firms charge clients an annual fee rather than an hourly fee which will
cover all the services provided; that is, clients can call their financial planner any time or go in to
see their planners without any additional charges. Project based fees are determined from a
particular project or proposal worked on for a client that is formulated by a financial planning,
portfolio analysis or investment research firm.

**IV. Issues in Maintaining Constant Quality**

A fundamental issue in pricing security brokers, dealers, and investment banking companies' services is the ability
to maintain constant quality. Constant quality is maintained for those service lines, in which escalation and
imputation are necessary since the repricing methodology obviated performing substitutions. Actual services are
selected in the reference period and are then escalated or imputed periodically. Therefore, since the service lines
below are hypothetical, constant quality will be maintained through escalation or imputation. These service lines are
as follows:
**Dealer Services:** The market or ask prices for bonds are imputed using the Lehman Brothers Bond Index, which the reporter then reprices by giving the markup or spread on a comparable bond using the imputed price of the bond; therefore, substitutions of bonds are not necessary. A market maker, who at initiation, made a market in a particular stock, may not make a market in that stock anymore. (This is a common occurrence that can last a month or forever. If a market maker drops a stock due to inactivity, the market maker has to wait at least 30 days before being able to pick up the stock again). Since the OTC stocks are priced using NASDAQ three days averages of the bid-ask spreads, quality adjustments cannot be made.

**Investment Banking:** The values of the offerings and placements will be escalated in Washington using earnings data, so the reporter will only have to estimate what s/he would charge if this new escalated deal similar to the original were to be done today. Substitutions, therefore, are not anticipated.

**Margin Lending:** The value of the loan borrowed from the broker will be escalated in the Washington Office, therefore substitutions are not expected.

Constant quality is not maintained for the following service lines shown below, since these services are not escalated and *are* usually substituted. The reason for this substitution is due to the fact that the services below are actual rather than hypothetical, as opposed to the cases above. These services are actual services therefore, the reporter can directly identify the services that are being repriced.

**Mutual Fund Sales and Other Securities Related Service:** A mutual fund will substitute for the other mutual fund that is no longer offered for sale. Clients with similar financial plans, financial advice, portfolio analysis and investment research will be substituted.

**Brokerage Services:** Service substitutions can be expected when a company is bought out and its stock is no longer traded.
## Appendix 1. Escalations

<table>
<thead>
<tr>
<th>Type of Service</th>
<th>Security</th>
<th>Price</th>
<th>Characteristic</th>
<th>Escalation</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Brokerage Equity</td>
<td>flat fee</td>
<td>none</td>
<td>N</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Brokerage Equity</td>
<td>% of transaction</td>
<td>transaction/stock price</td>
<td>N</td>
<td>reporter updates market price of stock</td>
<td></td>
</tr>
<tr>
<td>Brokerage Debt</td>
<td>flat fee</td>
<td>none</td>
<td>N</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Brokerage Options</td>
<td>flat fee</td>
<td>none</td>
<td>N</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Brokerage Options</td>
<td>% of transaction</td>
<td>transaction price</td>
<td>N</td>
<td>reporter matches spec to the current market price of a new option</td>
<td></td>
</tr>
<tr>
<td>Dealer Debt</td>
<td>bid/ask spread</td>
<td>market price of selected debt instrument</td>
<td>N</td>
<td>WO impute using Lehman Bros bond index or reporter can choose to impute.</td>
<td></td>
</tr>
<tr>
<td>Dealer Debt</td>
<td>markup</td>
<td>market price of selected debt instrument</td>
<td>N</td>
<td>WO impute using Lehman Bros bond index or reporter can choose to impute.</td>
<td></td>
</tr>
<tr>
<td>Dealer Equity-OTC</td>
<td>bid/ask spread</td>
<td>stock price</td>
<td>N</td>
<td>WO repricing</td>
<td></td>
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<tr>
<td>Dealer Equity-Not OTC</td>
<td>bid/ask spread</td>
<td>stock price</td>
<td>N</td>
<td>reporter update bid/ask spread (market price)</td>
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</tr>
<tr>
<td>Investment bank IPOs/Equity</td>
<td>gross spread</td>
<td>company value</td>
<td>Y</td>
<td>WO escalates using earnings</td>
<td></td>
</tr>
<tr>
<td>Investment bank IPOs/Debt</td>
<td>gross spread</td>
<td>debt value</td>
<td>Y</td>
<td>WO escalates using GDP Chain Linked Price Index</td>
<td></td>
</tr>
<tr>
<td>Investment bank Secondary/Equity</td>
<td>gross spread</td>
<td>offering value</td>
<td>Y</td>
<td>WO escalates using GDP Chain Linked Price Index</td>
<td></td>
</tr>
<tr>
<td>Investment bank Secondary/Debt</td>
<td>gross spread</td>
<td>offering value</td>
<td>Y</td>
<td>WO escalates using GDP Chain Linked Price Index</td>
<td></td>
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<tr>
<td>Investment bank Private placement/Equity</td>
<td>fee</td>
<td>placement value</td>
<td>Y</td>
<td>WO escalates using earnings</td>
<td></td>
</tr>
<tr>
<td>Investment bank M &amp; A Advisory</td>
<td>fee</td>
<td>transaction value</td>
<td>Y</td>
<td>WO escalates using GDP Chain Linked Price Index</td>
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</tr>
<tr>
<td>Investment bank Merchant bank</td>
<td>fee</td>
<td>loan value</td>
<td>Y</td>
<td>WO escalates using GDP Chain Linked Price Index</td>
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<tr>
<td>Investment bank Asset Securitization</td>
<td>interest</td>
<td>asset value</td>
<td>Y</td>
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<td>WO escalates using GDP Chain Linked Price Index</td>
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<td>Y</td>
<td>WO or reporter escalates by portfolio’s quarterly rate of return excluding fees and distributions</td>
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