

**Asia-Pacific Financial Forum  
Interim Report to the APEC Finance Ministers**

**ANNEX F  
Self-Assessment Template: Bond Market Data**

## **Bond Market Data**

Below is a list of types of bond information that may be useful for market participants when making investment decisions. While the list is broad, it should be recognized that governments may not always be in a position to provide certain types of information, such as information on corporate bond yield curves. In some cases, private enterprises including EPFR and Bloomberg have undertaken to provide investors with information that is not necessarily available from public sources. However, it is also important to note that often these are subject to fees.

### **I. Total Bonds Outstanding**

Information on the total bonds outstanding is helpful for investors for two reasons. From a credit risk standpoint, knowing total bonds outstanding also helps assess the overall indebtedness of the country. Also, the size of the market is also helpful in terms of liquidity. The bigger the bond market, the easier it is to accommodate large fund managers.

- a. Government/Corporate – Breaking down the bonds outstanding between government and corporate bonds is helpful as investors may only be interested in one of these markets. The government and corporate categories can also be broken down to provide more granularity. Knowing the breakdown is helpful as characteristics of bonds may be different and it aids in identifying risks in particular sectors. For example, local government bonds or municipal bonds may not necessarily enjoy the same level of credit standing as the central government.
  - i. Government Bonds
    1. Treasury Bonds – Bonds issued by the central government, typically for budget purposes
    2. Central Bank Bonds – Bonds issued by the central bank, normally done to control liquidity or the money supply
    3. Local Government Bonds – Bonds issued by local government units
    4. Government Agencies/Government Owned-Controlled Corporations – Some government agencies or government-owned corporations issue bonds directly and in some cases can carry guarantees from the central government.
  - ii. Corporate Bonds
    1. Commercial Papers – Short-term debt, usually issued in money markets
    2. Senior Corporate Bonds – Senior corporate debt has priority in claims over subordinated debt.

3. Subordinated Corporate Bonds – Subordinated debt tends to have lower priority. Banks commonly issue these in order to raise capital to meet Basel requirements.
  4. Callable/Puttable Bonds – Bonds that have embedded options. There is some overlap as subordinated debt typically has a call option included.
  5. Asset-backed Bonds – Bonds that have been collateralized with some type of asset. Examples include mortgage-backed securities or covered bonds.
  6. Combination- In practice, different types of features can be combined. For example, Tier 2 securities are a combination of subordination and a call feature. Other types may also be created such as an asset-backed bond that is callable.
- b. By Rating – Rating distribution of corporate bond market is helpful also as it helps gauge the credit risk of the corporate bond market.
- c. By Tenor – Tenor is important as different investors have different duration requirements. For example, insurance companies seek longer term investments while individuals typically prefer shorter term investments.

Tenor can also be broken down into:

- i. Original Maturity
  1. Original maturity based on maturity date.
  2. Original maturity based on call date/put date
- ii. Remaining Maturity
  1. Remaining maturity based on maturity date
  2. Remaining maturity based on call date/put date.

Liquidity can sometimes differ by the original maturity of the bond and some investors focus on certain maturities as noted above. Remaining maturity is also helpful as it helps identify funding risk. If the average remaining maturity is lower, then the bond market may have some liquidity risk as additional funding will be required when the bonds mature. In addition, the maturity dates may also be subdivided based on call or put dates. This is helpful as it will allow investors to better assess funding risk or investment risk should the bonds be called or redeemed early.

- d. By Sector – A breakdown is useful as corporate bonds are not homogenous. For example, an industry breakdown is useful as some investors seek exposure to certain industries or seek to limit them.

- i. Exchange-listed – In some markets, bonds are listed on exchanges and may enjoy greater liquidity and price transparency versus over-the-counter bonds.
  - ii. Government-owned – Some companies are government-owned or controlled. For these companies, they may enjoy some type of government support that will reduce credit risk.
  - iii. Industry – Identifying bonds by sector determines which industries are issuing bonds, which provides information on concentration risk or industries that require greater amounts of funding.
  - iv. Issuers listed on Stock Exchange – The equity securities of some bond issuers are listed on exchanges. This reduces funding risks for some issuers as they will have access to other forms of capital. Also, transparency tends to be greater for exchange-listed companies.
- e. Investor Profile – Diversity of the investor base is also important as it helps in funding diversity. The percentage of “real” versus “fast” money is helpful as investments by “real” money tends to be less volatile. Also, knowing if there are foreign investors helps gauge risk of capital flight. Investor profiles can also be broken down by bond types, similar to the discussion above.
- i. Government Bonds
    - 1. Treasury Bonds
    - 2. Central Bank Bonds
    - 3. Local Government Bonds
    - 4. Government Agencies/Government Owned-Controlled Corporations
  - ii. Corporate Bonds
    - 1. Commercial Papers
    - 2. Senior Corporate Bonds
    - 3. Subordinated Corporate Bonds
    - 4. Callable/Puttable Bonds
    - 5. Asset-backed

## II. Issuance Data

Issuance data is important also as it helps gauge the existing liquidity of the market. Large issuances in the best may suggest that either liquidity is ample or may indicate that future liquidity may be constrained due to the “crowding out” effect.

- i. Government/Corporate – A distinction between government and corporate bond issuance is helpful as the two markets may be distinct. Government issuance is also helpful for estimating how much of funding needs have been met or can be examined versus government budget performance. This can be broken down further into different types:
  - 1. Government Bonds (see prior discussion)
    - a. Treasury Bonds
    - b. Central Bank Bonds
    - c. Local Government Bonds
    - d. Government Agencies/Government Owned-Controlled Corporations
  - 2. Corporate Bonds
    - a. Commercial Papers
    - b. Senior Corporate Bonds
    - c. Subordinated Corporate Bonds
    - d. Callable/Puttable Bonds
    - e. Asset-backed
    - f. Industry
    - g. Exchange-listed
    - h. Government-owned
    - i. Issuers Listed on Stock Exchange
- b. By Rating – Ratings distribution is helpful as it helps identify if there is a good mix of different credit types or the risk of credit bubbles For example, if issuances of lower-rated issuers have been increasing.
- c. By Tenor – This is helpful as it determines if issuers have been lengthening or shortening their maturity profiles which helps in the assessment of funding risk in the future.

### III. Yield Curve

Having an available yield curve is useful for investors as it helps them assess the relative attractiveness of different bond markets. Yield curves are also important as it is used for valuation of not only bonds but also for derivative instruments such as swaps.

- a. Government Yield Curves – Government yield curves are important as they are not only used for evaluating investments in government bonds but as the benchmark risk-free rate yield curves, used for pricing of corporate bonds, equity investments and derivative instruments.
- b. Corporate Yield Curves – Corporate yield curves are helpful to assess credit spreads. It can be used for pricing/evaluating corporate bond investments for a given rating such as for issuance or if a certain corporate bond is overpriced or underpriced.
- c. Individual Bond Prices – Individual bond prices will be helpful for investors as they seek evaluate individual bonds or companies. They also help monitor investment performance or value existing investments.

The yield curve information can also be broken down into the different bond types to provide additional information on pricing. In addition to type, providing historical data on yields is helpful to help assess in scenarios such as stress or scenario-testing or providing data for economic models. It can also be used for marking-to-market by institutions.

### IV. Foreign Fund Flow Data

Foreign Fund Flow Data refers to investment flows by foreign investors. This indicator will help assess the degree of vulnerability of a particular market with respect to “flight to quality”. This again can be broken down into bond types. Portfolio flows can also be identified by country. This will identify which countries have excess liquidity and have been investing outside and help highlight if there are risks should certain countries decide to tighten monetary policy and will determine if fund outflows will be likely.

### V. Liquidity

Liquidity is an important metric as it determines the ability of a market to absorb fund movements. If liquidity is too low, investors will have difficulty in exiting their investments in a timely manner. Also, ample liquidity helps attract large funds. Similar to the other discussion, liquidity factors can be broken out into the different bond types.

- a. Trading Volume – Absolute size of trade volumes is helpful to determine the size of the secondary market and if it is able to accommodate large placements.
- b. Bid-ask spreads – Helps investors assess the costs of trading and lower costs while indicating a more or less liquid market

- c. Turnover Ratio – Provides information on how active the market is as absolute trading volume is related to outstanding bond size

## Self-Assessment Form

Please rank how well your market provide information.

Rating Guide

- 5 Data is freely available to the public and is reported on a timely basis
- 4 Data is available to the public subject to fees/subscription; and is reported on a timely basis
- 3 Data is available to the public but is not available on a timely basis
- 2 Data is being collected; but not available to the public
- 1 Data is not available and is not being collected
- 0 N/A (ie. Foreign fund flow data is not available as capital markets are completely closed to foreign investment)

### Rating

	5	4	3	2	1	0
<b>Total Bonds Outstanding</b>						
Aggregate Government						
Treasury Bonds						
Central Bank Bonds						
Local Government Bonds						
Government Agencies						
Government-owned/Controlled Corporations						
Aggregate Corporate						
Commercial Papers						
Senior Corporate Bonds						
Subordinated Bonds						
Callable/Puttable Bonds						
Asset-backed						
Combination						
By Rating (Corporate Bonds)						
By Tenor						
Aggregate Government						
Original Maturity						
Original Maturity to Put/Call Date						
Remaining Maturity						
Remaining Maturity to Put/Call Date						
Aggregate Corporate						
Original Maturity						
Original Maturity to Put/Call Date						
Remaining Maturity						
Remaining Maturity to Put/Call Date						



By Sector (Corporate Bonds)						
Exchange-listed Bonds						
Government-owned						
Industry						
Issuer Listing on Stock Exchange						
Investor Profile						
Aggregate Government						
Treasury Bonds						
Central Bank Bonds						
Local Government Bonds						
Government Agencies						
Government-owned/Controlled Corporations						
Aggregate Corporate						
Commercial Papers						
Senior Corporate Bonds						
Subordinated Bonds						
Callable/Putable Bonds						
Industry						
Asset-backed						
Combination						
<b>Issuance Data</b>						
Aggregate Government						
Treasury Bonds						
Central Bank Bonds						
Local Government Bonds						
Government Agencies						
Government-owned/Controlled Corporations						
Aggregate Corporate						
Commercial Papers						
Senior Corporate Bonds						
Subordinated Bonds						
Callable/Putable Bonds						
Asset-backed						
Industry						
Exchange-listed						
Government-owned						
Exchange-listed Bonds						
Government-owned						
Industry						
Issuer Listing on Stock Exchange						
By Rating (Corporate Bonds)						
By Tenor						

Aggregate Government						
Treasury Bonds						
Central Bank Bonds						
Local Government Bonds						
Government Agencies						
Government-owned/Controlled Corporations						
Aggregate Corporate						
Commercial Papers						
Senior Corporate Bonds						
Subordinated Bonds						
Callable/Puttable Bonds						
Industry						
Exchange-listed						
Government-owned						
Asset-backed						
Combination						
<b>Yield Curve</b>						
Government Yield Curves						
Historical Data						
Treasury Bonds						
Central Bank Bonds						
Local Government Bonds						
Government Agencies						
Government-owned/Controlled Corporations						
Corporate Yield Curves						
Historical Data						
Commercial Papers						
Senior Corporate Bonds						
Subordinated Bonds						
Callable/Puttable Bonds						
Industry						
Asset-backed						
By Rating						
Individual Bond Prices						
Government						
Corporate						
<b>Foreign Fund Flow Data</b>						
Aggregate Government						
Treasury Bonds						
Central Bank Bonds						
Local Government Bonds						
Government Agencies						
Government-owned/Controlled Corporations						

Country						
Maturity Profile						
Aggregate Corporate						
Commercial Papers						
Corporate Bonds						
Subordinated Bonds						
Callable/Putable Bonds						
Combination						
Industry						
Country						
Maturity Profile						
<b>Liquidity</b>						
Trading Volume						
Aggregate Government						
Treasury Bonds						
Central Bank Bonds						
Local Government Bonds						
Government Agencies						
Government-owned/Controlled Corporations						
Aggregate Corporate						
Commercial Papers						
Corporate Bonds						
Subordinated Bonds						
Callable/Putable Bonds						
Industry						
Bid-ask Spreads						
Aggregate Government						
Treasury Bonds						
Central Bank Bonds						
Local Government Bonds						
Government Agencies						
Government-owned/Controlled Corporations						
Aggregate Corporate						
Commercial Papers						
Corporate Bonds						
Subordinated Bonds						
Callable/Putable Bonds						
Industry						
Combination						
Turnover Ratios						
Aggregate Government						
Treasury Bonds						

Central Bank Bonds						
Local Government Bonds						
Government Agencies						
Government-owned/Controlled Corporations						
Aggregate Corporate						
Commercial Papers						
Corporate Bonds						
Subordinated Bonds						
Callable/Puttable Bonds						
Combination						
Industry						