

= Bloomberg Fair Value (BFV)
LO/BP Shift

<HELP> for explanation,
 ENTER ALL VALUES AND HIT <GO>

P181 Govt **BFV**

BLOOMBERG FAIR VALUE

US TREASURY N/B T 4 1/2 02/15/16 96-15 96-16 (4.96 /95) BGN @16:33

VALUE: 96.66576

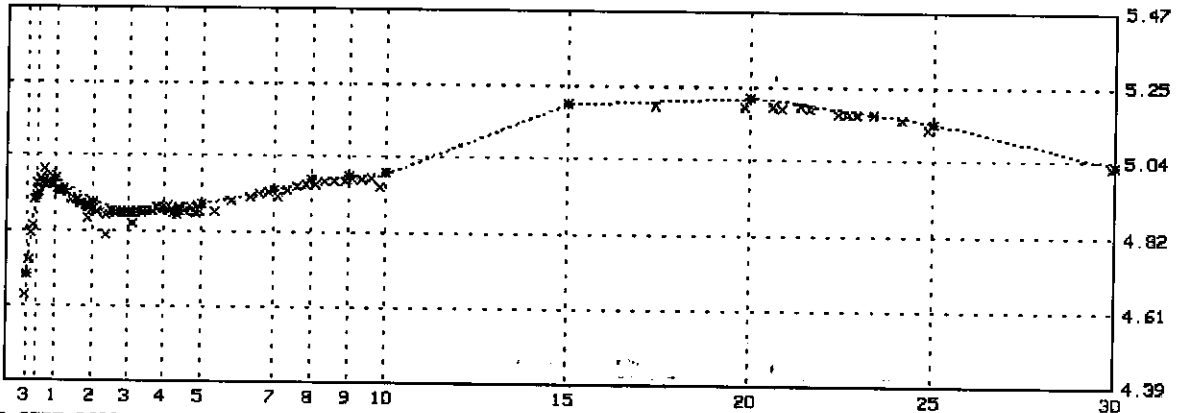
YIELD: 4.931

(Yield to maturity)

Settle 4/11/06 Adjusted Spread Implied Sect. Imp. Option
 BPS shift to fair value Volatility Value
 + .0 bp 6.00 % 0.00

| | |
|----|------|
| 3m | 4.70 |
| 6m | 4.92 |
| 1 | 4.97 |
| 2 | 4.91 |
| 3 | 4.87 |
| 4 | 4.89 |
| 5 | 4.90 |
| 7 | 4.94 |
| 8 | 4.97 |
| 9 | 4.98 |
| 10 | 4.99 |
| 15 | 5.19 |
| 20 | 5.22 |
| 25 | 5.15 |
| 30 | 5.03 |

USD TSY < 6.75% CPN (SECTOR B2)



-3 BP shift

<HELP> for explanation.
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BLOOMBERG FAIR VALUE

US TREASURY N/B T 4 1/2 02/15/16 96-15 / 96-16 (4.96 /95) BGN @16:33

VALUE: 96.43291

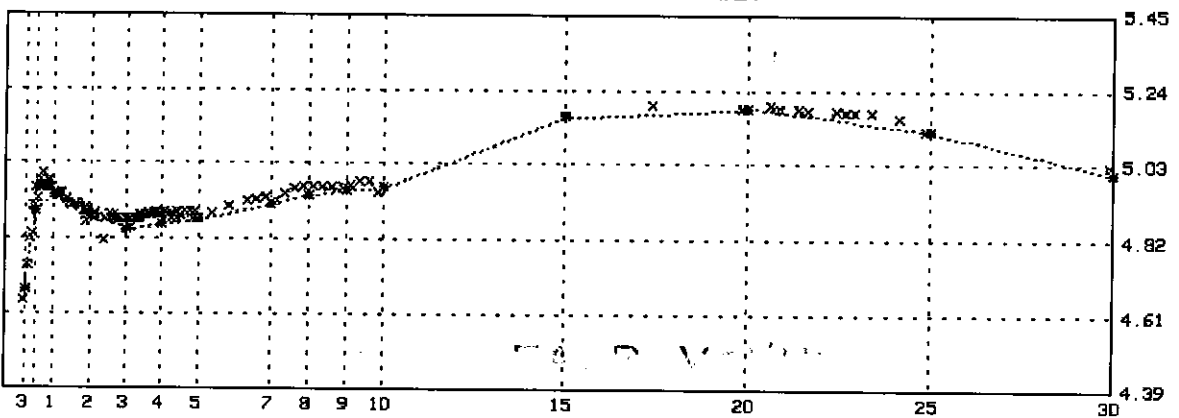
YIELD: 4.962

(Yield to maturity)

| | | | |
|----------------|-----------------|---------------|-------------|
| Settle 4/11/06 | Adjusted Spread | Implied Sect. | Imp. Option |
| BPS shift | to fair value | Volatility | Value |
| | + .0 bp | 3.00 % | 0.00 |

| | |
|----|------|
| 3m | 4.67 |
| 6m | 4.89 |
| 1 | 4.94 |
| 2 | 4.00 |
| 3 | 4.04 |
| 4 | 4.86 |
| 5 | 4.87 |
| 7 | 4.91 |
| 8 | 4.94 |
| 9 | 4.95 |
| 10 | 4.96 |
| 15 | 5.16 |
| 20 | 5.19 |
| 25 | 5.12 |
| 30 | 5.00 |

USD TSY < 6.75% CPN (SECTOR B2)



+5 bp shift

<HELP> for explanation.
 ENTER ALL VALUES AND HIT <GO>

P181 Govt **BFV**

BLOOMBERG FAIR VALUE

US TREASURY N/B T 4 1/2 02/15/16 96-15 / 96-16 (4.96 /95) BGN @16:33

VALUE: 95.82972

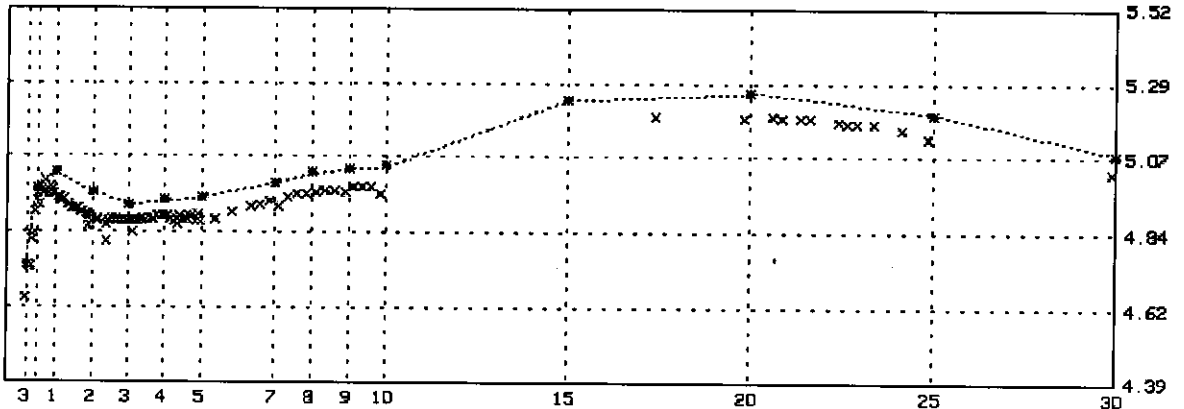
YIELD: 5.042

(Yield to maturity)

| | | | |
|----------------|-----------------|---------------|-------------|
| Settle 4/11/06 | Adjusted Spread | Implied Sect. | Imp. Option |
| BPS shift | to fair value | Volatility | Value |
| | + .0 bp | 6.00 % | 0.00 |

| | |
|----|------|
| 3m | 4.75 |
| 6m | 4.97 |
| 1 | 5.02 |
| 2 | 4.96 |
| 3 | 4.92 |
| 4 | 4.94 |
| 5 | 4.95 |
| 7 | 4.99 |
| 8 | 5.02 |
| 9 | 5.03 |
| 10 | 5.04 |
| 15 | 5.24 |
| 20 | 5.27 |
| 25 | 5.20 |
| 30 | 5.08 |

USD TSY < 6.75% CPN (SECTOR B2)



Australia 61 2 9777 8600 Brazil 5511 3048 4500 Europe 44 20 7330 7500 Germany 49 69 920410
 Hong Kong 852 2977 6000 Japan 81 3 3201 8900 Singapore 65 6212 1000 U.S. 1 212 318 2000 Copyright 2006 Bloomberg L.P.
 6649-542-0 10-Apr-06 16:43:59

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Govt **BFV**

HELP FOR **BLOOMBERG FAIR VALUE**

Search **BFV** <HELP> for: [REDACTED]

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Use BFV to determine a theoretical value for where a selected bond should trade compared to bonds trading in the same industry and with the same credit rating. When a price is not available, BFV provides a starting point as to where a bond would be priced. When a price is available, BFV helps to determine whether a bond is priced rich or cheap.

- 1) Instructions
- 2) Description of Display
- 3) What is BFV?
- 4) How is BFV Calculated?
- 5) BLOOMBERG MARKETSTW Articles

TO ACCESS: {ticker symbol} <yellow key> BFV <Go>
K06 7/15/03 <CORP> BFV <Go>
CT30 <GOVT> BFV <Go>

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INSTRUCTIONS

~~Once you select a security, enter BFV <Go>. Additional instructions appear on the screen.~~

~~To change your settlement date, enter PDF <Go> (Personal Settings) and select Settle dates, Terminal ID.~~

To change your pricing source, enter PCS <Go> (Price Provider Search List).

~~To view a menu of Fair Market sector curves, enter **FMC** <Go>. To view a menu of Fair Market curve indices, enter FMCI <Go>.~~

Australia 61 2 9777 8600

Brazil 5511 3048 4500

Europe 44 20 7330 7500

Germany 49 69 920410

Hong Kong 852 2977 6000

Japan 81 3 3201

8900

Singapore 65

6212

1000

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212 318

2000

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DESCRIPTION OF DISPLAY

The security's market information appears at the top of the screen. For more information, enter Q <HELP>. Depending on the security you select, some or all of the following fields appear:

VALUE: The calculated Bloomberg Fair Value (**BFV**) for the issue. This calculation is an indication of a bond's market value given the trading levels of other bonds of the same general issuer type and market-perceived credit quality. In most cases, the actual and perceived credit quality are the same (i.e., the composite rating defined by rating agencies and the implied ratings are equal).

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HELP FOR **BLOOMBERG FAIR VALUE**

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For example, ABC bond has a BGN (Bloomberg Generic) price of 100 and a composite rating of AA1. The BLOOMBERG PROFESSIONAL™ service searches for the Fair Market Curve that present values the cash flows closest to its BGN price of 100. If similar bonds within the AA1 sector are present valued closest to 100, then the composite and implied curve would both be AA1. If the present value of ABC's cash flows is closer to the levels of a higher or lower-rated curve, then that curve is its implied curve (best fit curve) and the composite and implied ratings will be different.

YIELD: The yield-to-maturity (**YTM**) corresponding to the calculated BFV. YTM is the percentage rate of return paid on a bond, note, or other fixed income security if you buy and hold it to its maturity date.

Exercise Prem: Appears only for callable bonds. The costs associated with calling the bond, expressed as a percentage of par. The model adjusts the call schedule by adding the exercise premium to the call strike prices.

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Brazil 5511 3048 4500

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Germany 49 69 920410

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Call Schedule: Appears only for callable bonds. The call dates and prices.
NOTE: The call schedule displays only those calls relevant to the settle date and beyond.

Put Schedule: Appears only for puttable bonds. The put dates and prices.
NOTE: The put schedule displays only those puts relevant to the settle date and beyond.

Settle: The date securities must be delivered and paid for to complete a transaction. Typically this is the trade date plus three days (T+3).

BPS shift: The number of basis points by which to shift the entire sector yield curve. You can use this field to perform the analysis using parallel shifts. (NOTE) To change specific points on the curve, adjust any of the individual sector rates and press <Go>.

Parallel Shifts

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Adjusted Spread *OAS*
to fair value: The option-adjusted spread to the sector yield curve, in basis points (bp). If the bond historically trades away from its sector curve and you want to calculate the BFV based on this assumption, enter the price discrepancy, in basis points. If you enter a value, the cross-mark that appears on the graph, which represents the yield to workout, is moved respectively.

Implied Sect.
Volatility: The implied volatility based on volatility assumptions implicit in current market valuations of bonds with options, as a percentage.

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Imp. Option

Value: The implied option value. The model's determination of the total value of all embedded options. If the bond has only embedded calls, this number is positive. If the bond has only embedded puts, this number is negative. Sinks are thought of as partial calls and contribute a positive value to the option value. For example, if the bond has an embedded call worth \$3.00 to the issuer and an embedded put worth \$2.00 to the bondholder, the option value is quantified as \$1.00 (\$3 - \$2).

Price: Appears only for corporate bonds with BGN (Bloomberg Generic) pricing. The price used to calculate the implied ratings for the bond or the dollar value of a composite or implied rating split.

Impl. Rating: Appears only for corporate bonds with BGN (Bloomberg Generic) pricing. The bond's implied rating.
(1 <Go> for more information on implied ratings)

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Impl. Curve: Appears only for corporate bonds with BGN (Bloomberg Generic) pricing. The bond's implied curve. NOTE: The curve displayed on the graph and in the fields is the bond's actual rating curve.

The sector number and name appear in white above the graph. The number represents the sector's fair market curve (FMC). FMC's are constructed by plotting quotes of similar issues, in terms of credit rating and economic function, and fitting a curve to those quotes. This process creates specific yield curves for various bond types (e.g. the A2 Utility Curve).

The graph displays the Bloomberg Fair Value curve, with time on the horizontal x-axis and the yield on the vertical y-axis. Observation points are marked with an (X) or with an asterisk (*) when the point is on the curve.

Sinking Fund: Appears only for sinkable bonds. The sinking fund provisions, including the amount to be retired, the percentage retired per year, and the date that the sinking fund schedule begins.

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Actual Balance: Appears only for sinkable bonds. The bond's current amount outstanding. Each (M) equals '000.

Scheduled Bal.: Appears only for sinkable bonds. The amount that is currently outstanding if the issuer sinks the minimum amount possible. Each (M) equals '000.

Prorata Sinker?: Appears only for sinkable bonds. Choose (Y) if the bond has a ~~pro rata sinker~~. The issuer may be able to meet sinking fund requirements by buying bonds in the open market, if the bonds are trading at a discount. If the issuer must meet sinking fund requirements by retiring bonds on a pro rata basis at par, the bond is said to have a pro rata sinker.

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HOW IS BFV CALCULATED?

To begin calculating Bloomberg Fair Value (BFV), Bloomberg creates fair market sector curves. Each curve is composed of bonds having the same issuer type and credit quality.

To reflect the current market for the selected issue, Bloomberg uses BGN (Bloomberg Generic) prices to construct the yield curve. BGN is the average of recently contributed prices that come from high-quality price contributors and that agree within a specified margin. BGN prices are re-calculated every day when the market closes. During the trading day, some markets' government BGN prices are updated as contributed prices come in and some of those markets' non-government BGN prices are updated at a constant spread to the nearest government benchmark.

*Gov's are updated
intraday*

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To account for embedded options (puts, calls, and sinks) BFV uses an implied volatility, reflecting current market conditions, to value the options. This type of volatility describes the market's current tendencies in pricing embedded bond options.

Implied volatility is derived by examining the relationship between the BGN and the BFV price for all bonds within the sector. Using an iterative process, BFV solves for an implied sector volatility, which in theory, leaves only credit perception and market inefficiency to account for price discrepancies within the sector.

The volatility value that minimizes the standard deviation of the difference between the BGN and BFV is used as the implied sector volatility. This derived curve is used to calculate the present values of the bond's cash flows. BFV employs the option-adjusted spread model to solve for embedded option values based on a zero-spread to its sector curve. BFV is the gross cash flow minus the dollar value of any embedded options.



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The implied rating is the Bloomberg composite rating assigned to the fair market curve that minimizes the difference between a bond's BFV and the BGN quote. A BFV substantially different from its BGN can generate an implied rating that is higher or lower than the bond's actual rating. This difference in rating indicates that the market's perception of the issue's credit quality is not in line with that of the rating agencies.



BLOOMBERG FAIR VALUE

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