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**Figure 1.**

S&P 500 Forward Earnings Yield* (4.60)
10-Year US Treasury Bond Yield (1.61)

* S&P 500 12-month forward consensus expected operating earnings divided by S&P 500 stock price index.
Source: Standard & Poor’s and Federal Reserve Board.

**Figure 2.**

STOCK VALUATION MODEL (using 10-year Treasury bond yield)*
(Percent overvalued or undervalued)

* S&P 500 stock price index divided by S&P 500 fair-value price defined as S&P 500 12-month forward consensus expected operating earnings divided by 10-year US Treasury bond yield converted to percentage.
Source: I/B/E/S data by Refinitiv and Federal Reserve Board.
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Figure 3.

S&P 500 FORWARD P/E & RECIPROCAL OF BOND YIELD

- Bonds’ P/E* (62.1)
- S&P 500 Forward P/E** (21.7)

** S&P 500 stock price index divided by S&P 500 12-month forward consensus expected earnings.
Source: Standard & Poor’s Corporation and I/B/E/S data by Refinitiv.

Figure 4.

STOCK VALUATION MODEL
(using 10-year Treasury bond yield)*
(ratio scale)

- S&P 500 Stock Price Index (3910.5)
- S&P 500 Fair-Value Price* (11178.3)

Source: I/B/E/S data by Refinitiv and Federal Reserve Board.
**CORPORATE BOND YIELDS (percent)**

**Corporate Bond Yields**
- AAA Corporate Bond Yield (2.9)
- A-BBB Corporate Bond Yield (3.6)
- Average Corporate Bond Yield (3.3)

* Moody’s data for Aaa and Baa yields through 1996, then ICE Bofa Merrill Lynch data for AAA and BBB yields.

Source: Federal Reserve Board and Haver Analytics.

**Figure 5.**

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**S&P 500 FORWARD EARNINGS YIELD & CORPORATE BOND YIELD**

- S&P 500 Forward Earnings Yield* (4.6)
- Corporate Bond Yield Less LTEG
  - Weighted by 0.0, 0.1, and 0.2** (1.6)

* S&P 500 12-month forward consensus expected operating earnings divided by S&P 500 stock price index.

** Corporate bond yield (average of Moody’s Aaa and Baa yields through 1996, then average of ICE Bofa Merrill Lynch data for AAA and BBB yields) less analysts’ consensus of S&P 500 long-term earnings growth.

Source: Thomson Reuters I/B/E/S, Standard & Poor’s, Federal Reserve Board, and Haver Analytics.
STOCK VALUATION MODEL (using corporate bond yield) (ratio scale)

- S&P 500 Stock Price Index (3910.5)
- S&P 500 Fair-Value Price* (5492.8)

* S&P 500 forward consensus expected operating earnings divided by corporate bond yield (average of Moody’s Aaa and Baa yields through 1996, then average of ICE Bofa Merrill Lynch data for AAA and A-BBB yields).

Source: Thomson Reuters I/B/E/S, Standard & Poor’s, Federal Reserve Board, and Haver Analytics.

STOCK VS BONDS VALUATION MODEL (using average of Aaa and Baa corporate bond yield)* (percent overvalue or undervalued)

* S&P 500 stock price index divided by S&P 500 fair-value price defined as S&P 500 52-week forward consensus expected earnings divided by average of Moody’s Aaa and Baa yields through 2005, then weekly BoA Merrill Lynch data for AAA and A-BBB yields, converted to percentage.

Source: I/B/E/S data by Refinitiv, Standard & Poor’s, Bank of America Merrill Lynch, and Federal Reserve Board.
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Figure 9.

FED’S STOCK VALUATION MODEL (percent overvalued or undervalued)

Percentage S&P 500 Over/Under Valued Relative to Fair Value

- Using Treasury Bond Yield* (-4.7)
- Using Corporate Bond Yield** (-28.8)

* S&P 500 12-month forward consensus expected operating earnings divided by 10-year US Treasury bond yield converted to percentage.
** S&P 500 12-month forward consensus expected operating earnings divided by corporate bond yield (using average of Moody’s Aaa and Baa yields through 1996, then average of ICE Bofa Merrill Lynch data for AAA and A-BBB yields) converted to percentage.
Source: I/B/E/S data by Refinitiv, Standard & Poor’s, Federal Reserve Board, and Haver Analytics.

Figure 10.

S&P 500 FORWARD EARNINGS YIELD vs CPI INFLATION (percent)

- S&P 500 Forward Earnings Yield* (4.60)
- CPI Ex Food & Energy (1.28)

* S&P 500 12-month forward consensus expected operating earnings divided by S&P 500 stock price index.
Source: Standard & Poor’s and Bureau of Labor Statistics.
Figure 11.

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S&P 500 FORWARD EARNINGS YIELD vs NOMINAL GDP (percent)

- S&P 500 Forward Earnings Yield* (4.60)
- GDP (yearly percent change) (-1.16)

* S&P 500 12-month forward consensus expected operating earnings divided by S&P 500 stock price index.
Source: Standard & Poor’s and Bureau of Economic Analysis.