

# Valuation

Yardeni Research, Inc.

*January 31, 2012*

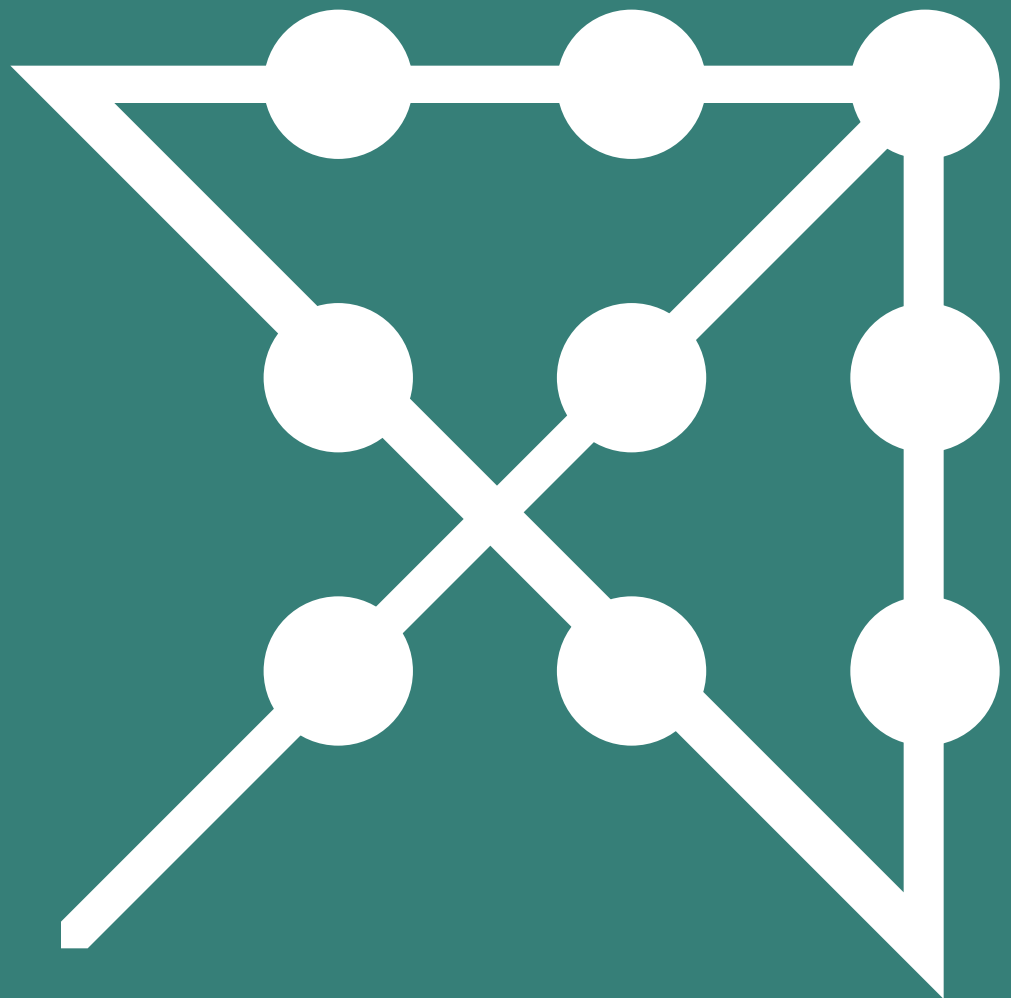
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*thinking outside the box*

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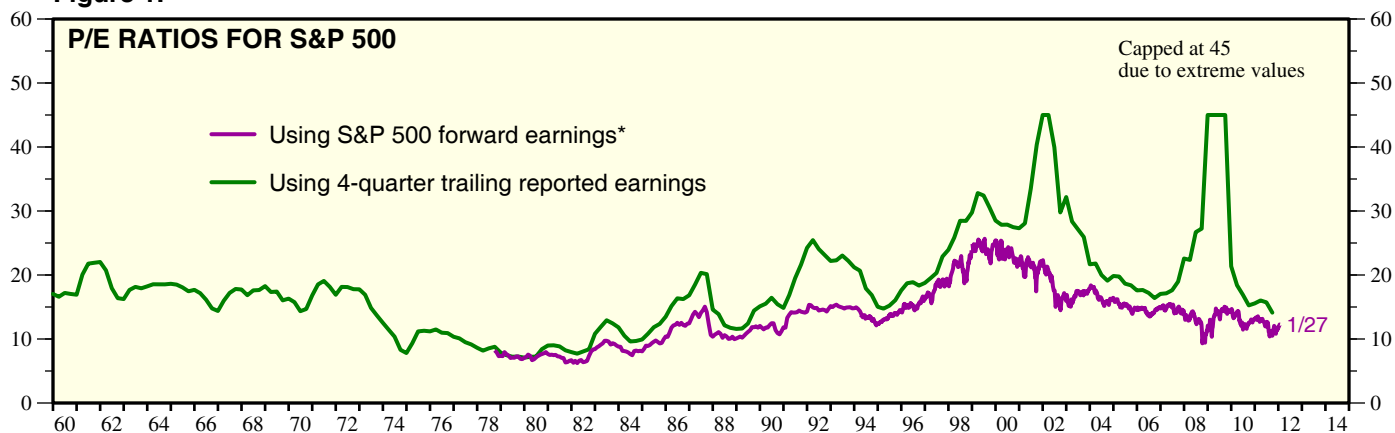
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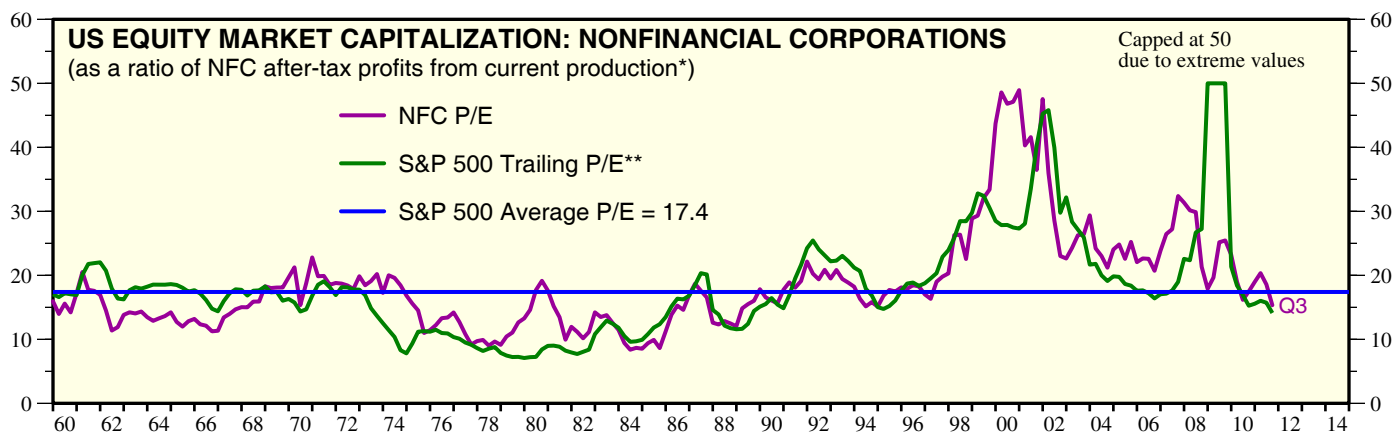
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# - P/E Ratios -

Figure 1.

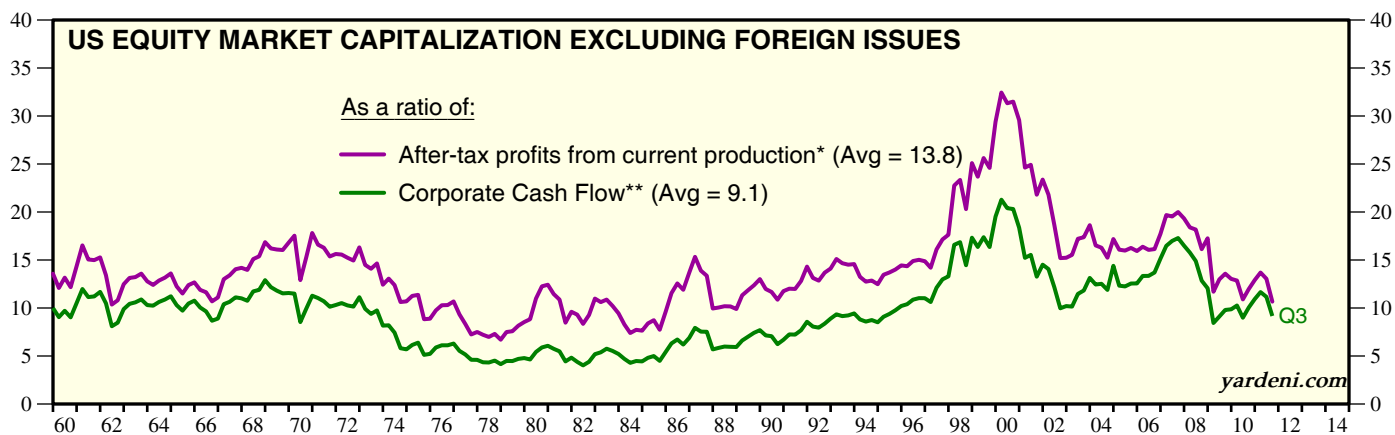


\* Price divided by 12-month forward consensus expected operating earnings per share using mid-month data. Monthly data through April 1994, weekly thereafter.



\* Including IVA and CCadj. These two adjustments restate the historical cost basis used in profits tax accounting for inventory withdrawals and depreciation to the current cost measures used in GDP.

\*\* Using four-quarter trailing reported earnings.



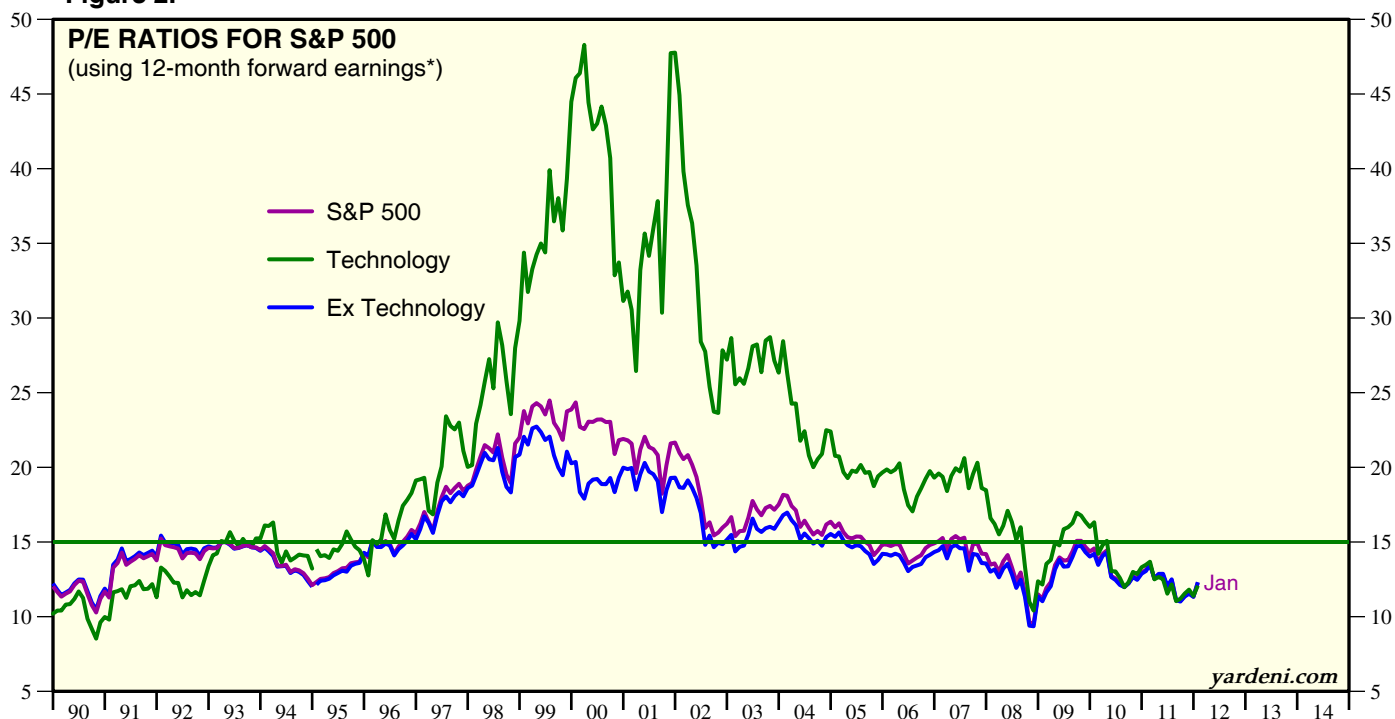
\* Including IVA and CCadj. These two adjustments restate the historical cost basis used in profits tax accounting for inventory withdrawals and depreciation to the current cost measures used in GDP.

\*\* After-tax operating retained earnings plus tax-return-based depreciation.

Source: Thomson Reuters, US Department of Commerce, Bureau of Economic Analysis, Federal Reserve Board Flow of Funds Accounts, and Standard & Poor's Corporation.

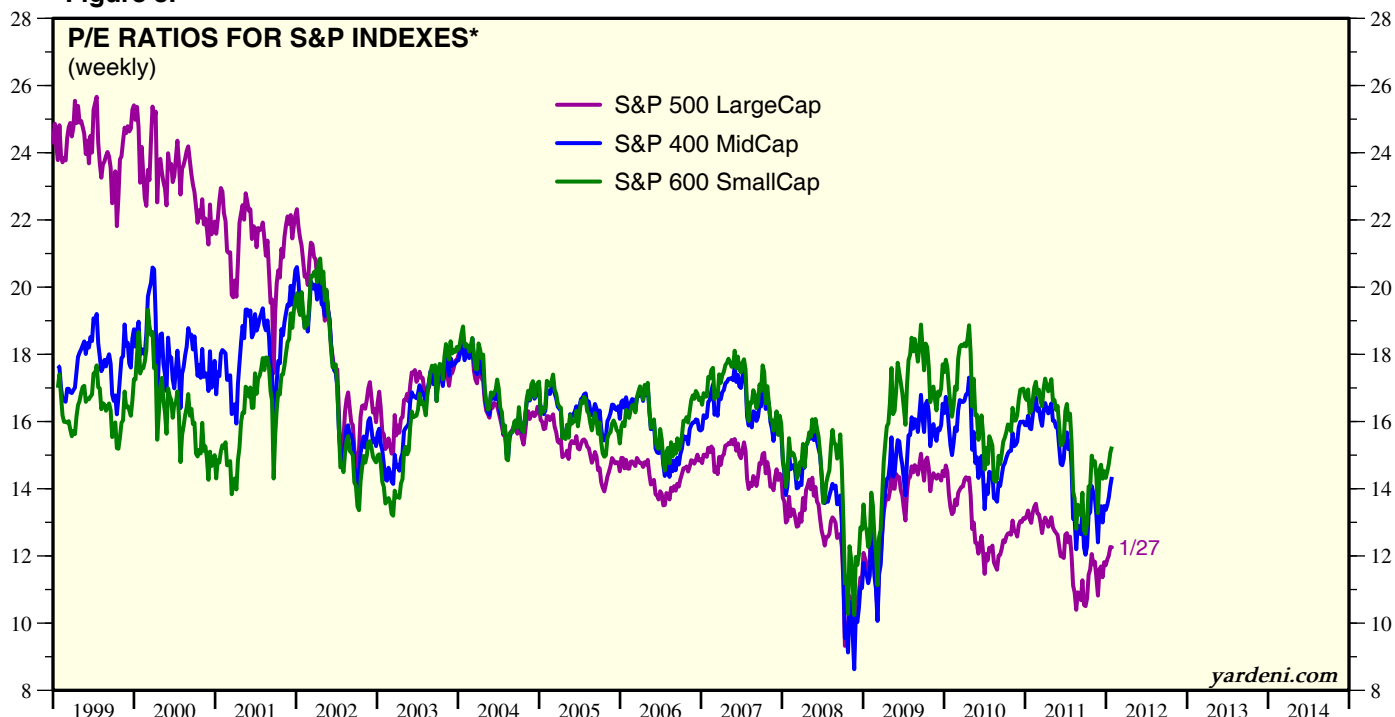
# - P/E Ratios -

**Figure 2.**



\* Price divided by 12-month forward consensus expected operating earnings per share using mid-month data.  
Data from 1995 based on Global Industry Classification Standard.  
Source: Thomson Thomson Reuters.

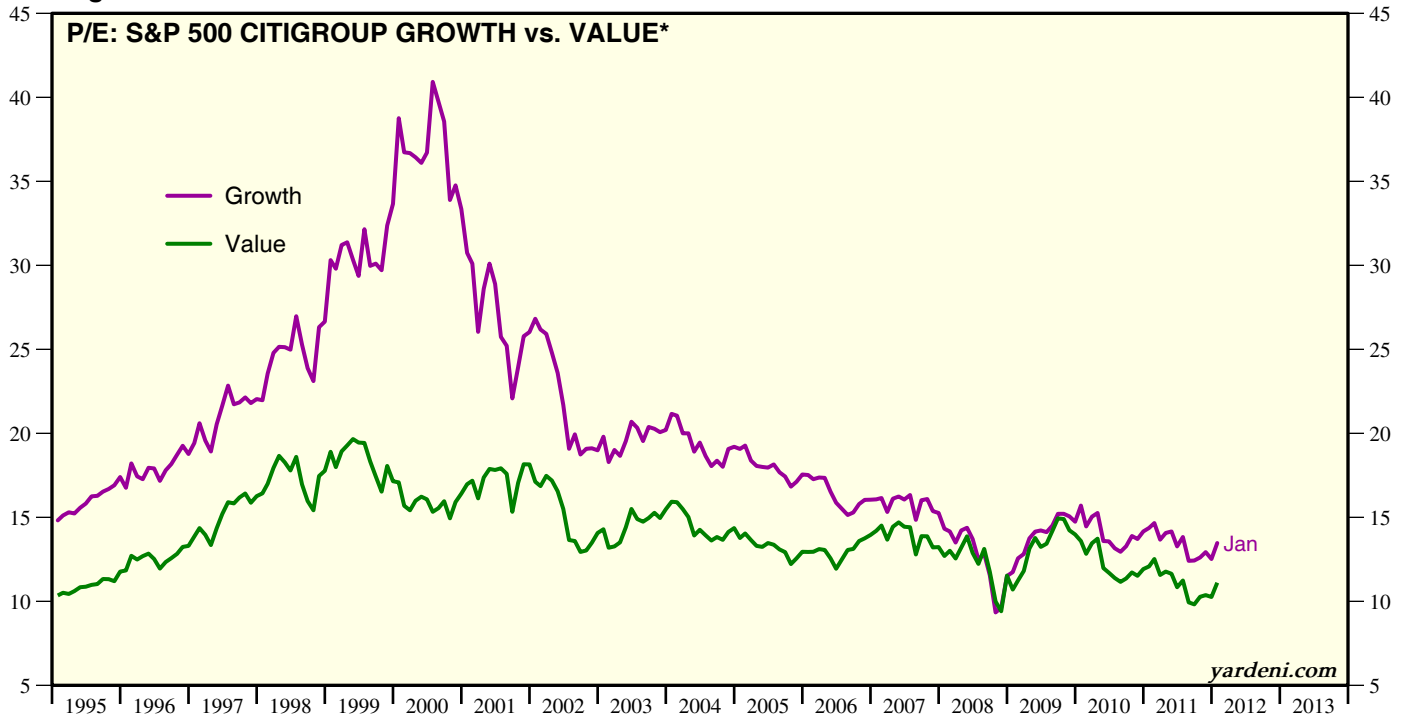
**Figure 3.**



\* Price divided by 52-week forward consensus expected operating earnings per share.  
Source: Thomson Reuters.

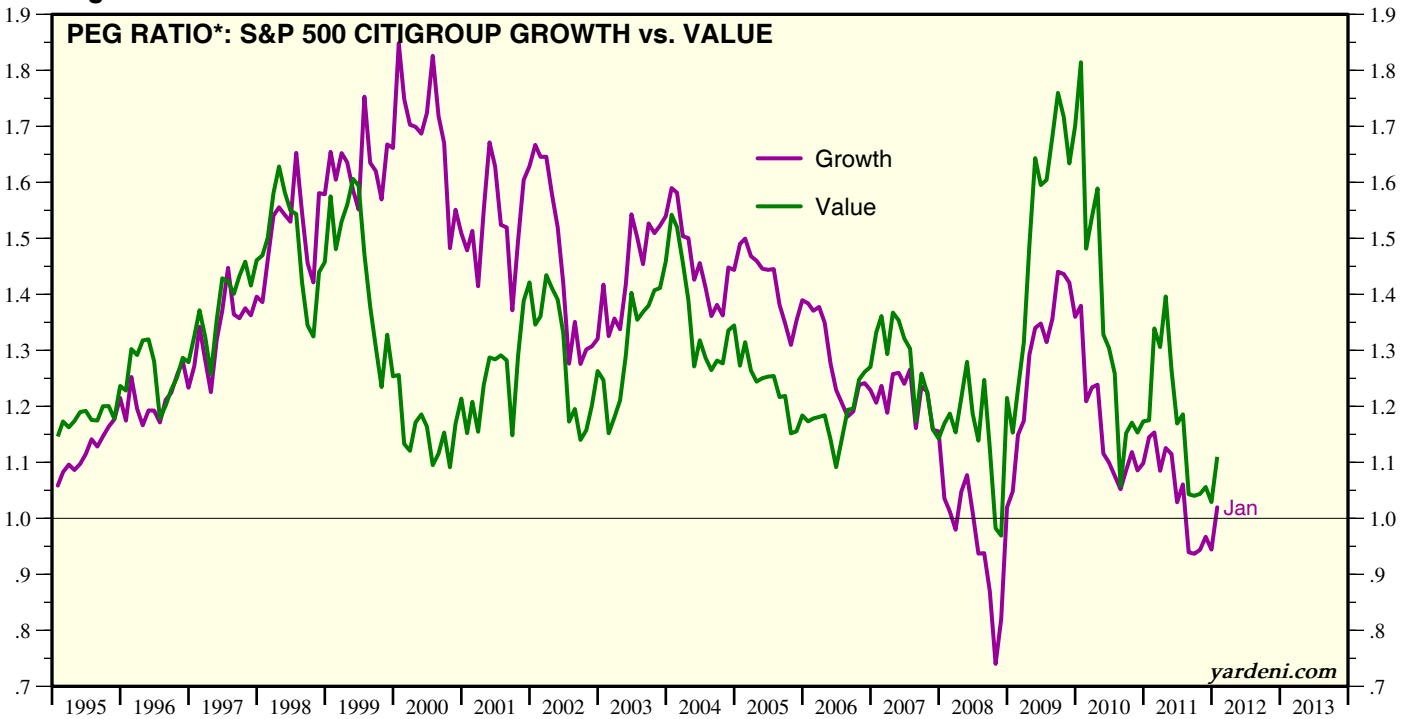
# - Growth vs Value P/Es -

**Figure 4.**



\* Using consensus 12-month forward earnings forecasts.  
Source: Thomson Reuters.

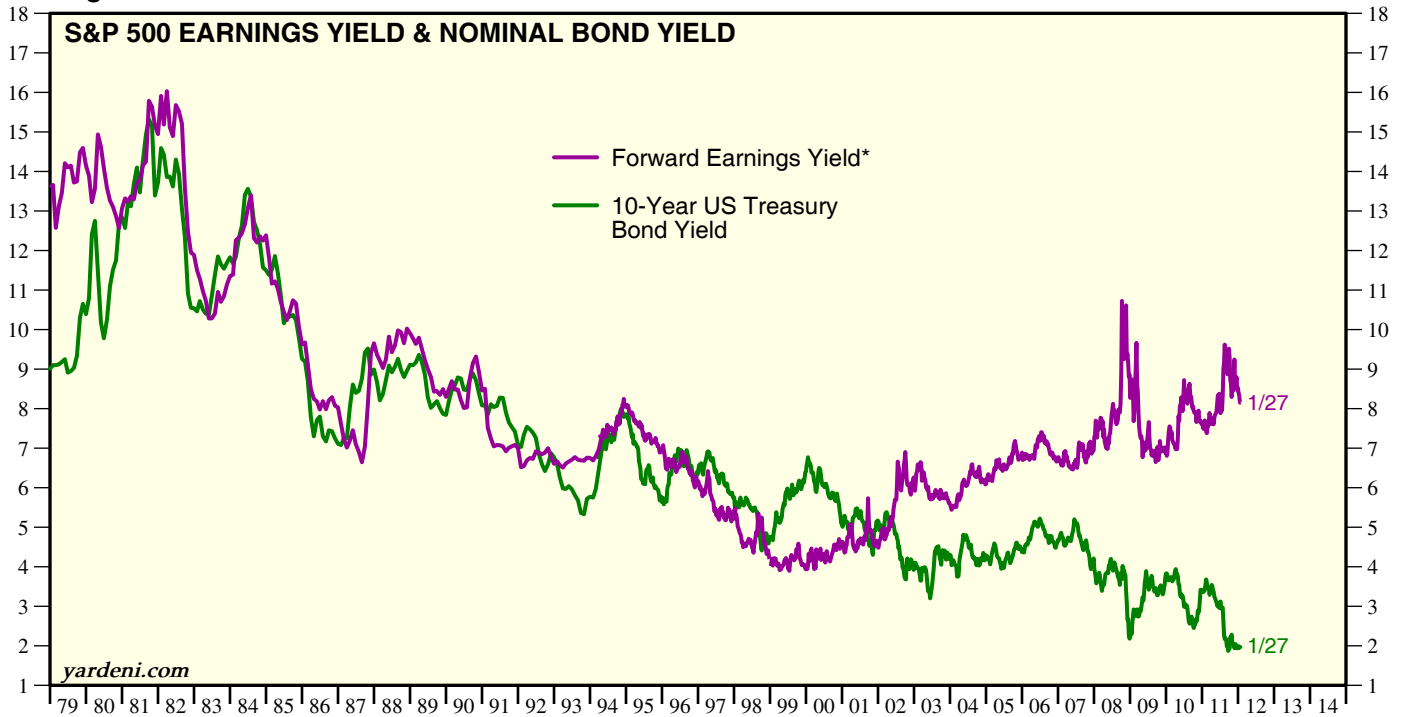
**Figure 5.**



\* Using 5-year forward consensus expected earnings growth.  
Source: Thomson Reuters.

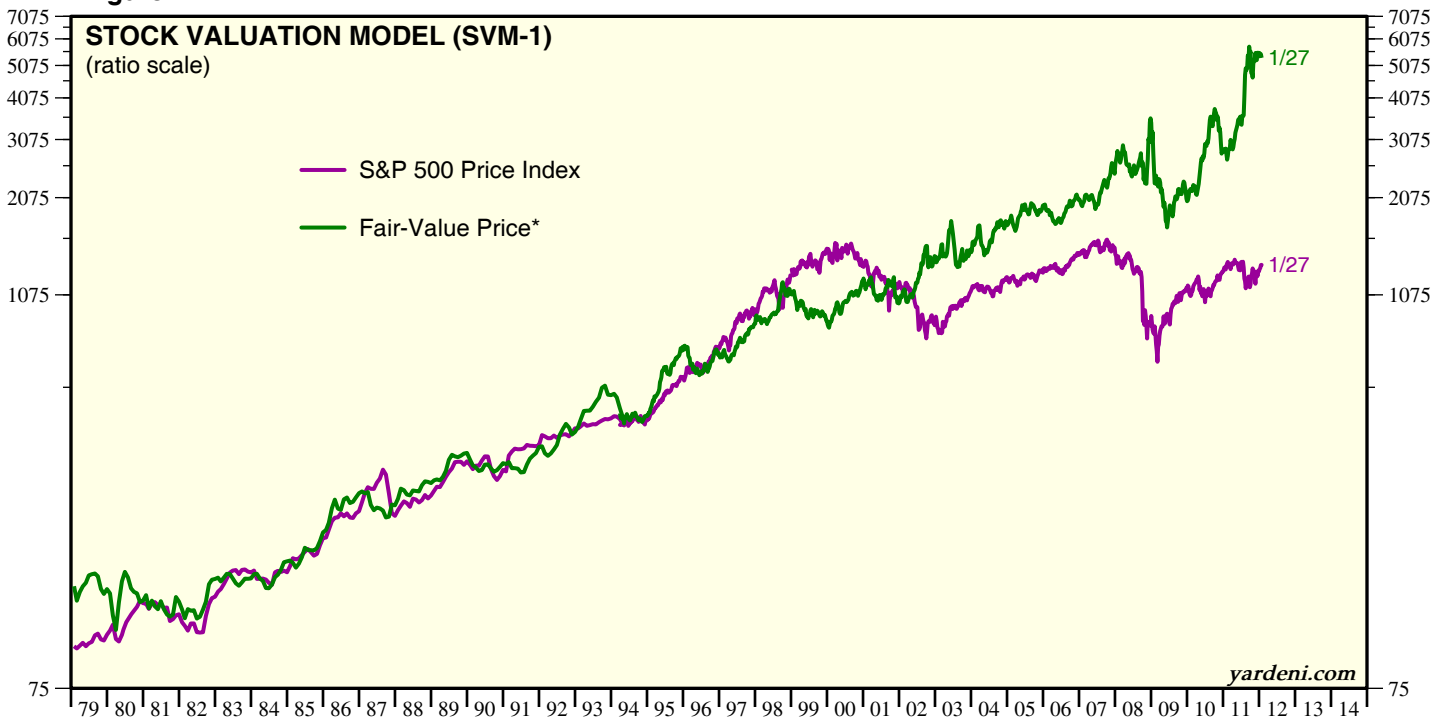
# - Valuation: SVM-1 (Fed Model) -

**Figure 6.**



\* 12-month forward consensus expected earnings divided by S&P 500 Index. Monthly through April 1994, weekly after.  
Source: Thomson Reuters and Board of Governors of the Federal Reserve System.

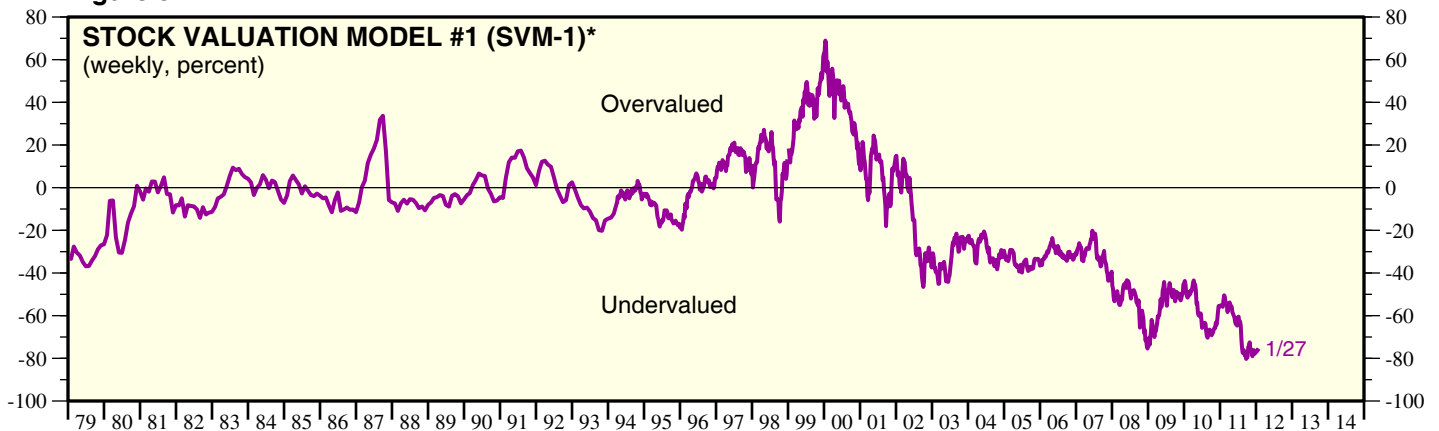
**Figure 7.**



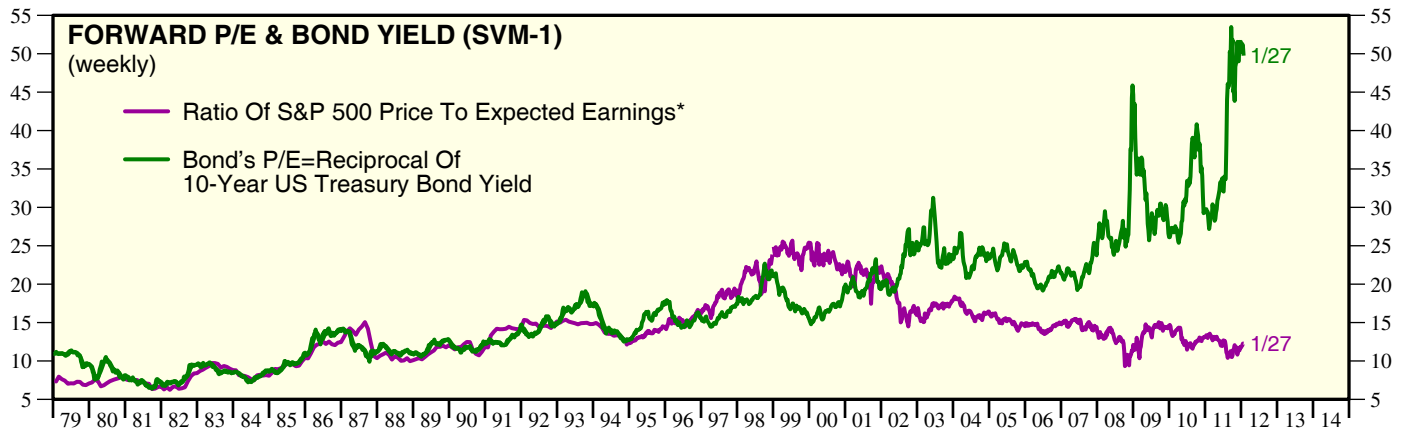
\* 12-month forward consensus expected earnings divided by 10-year US Treasury bond yield. Monthly through April 1994, weekly after.  
Source: Thomson Reuters and Board of Governors of the Federal Reserve System.

# - Valuation: SVM-1 (Fed Model) -

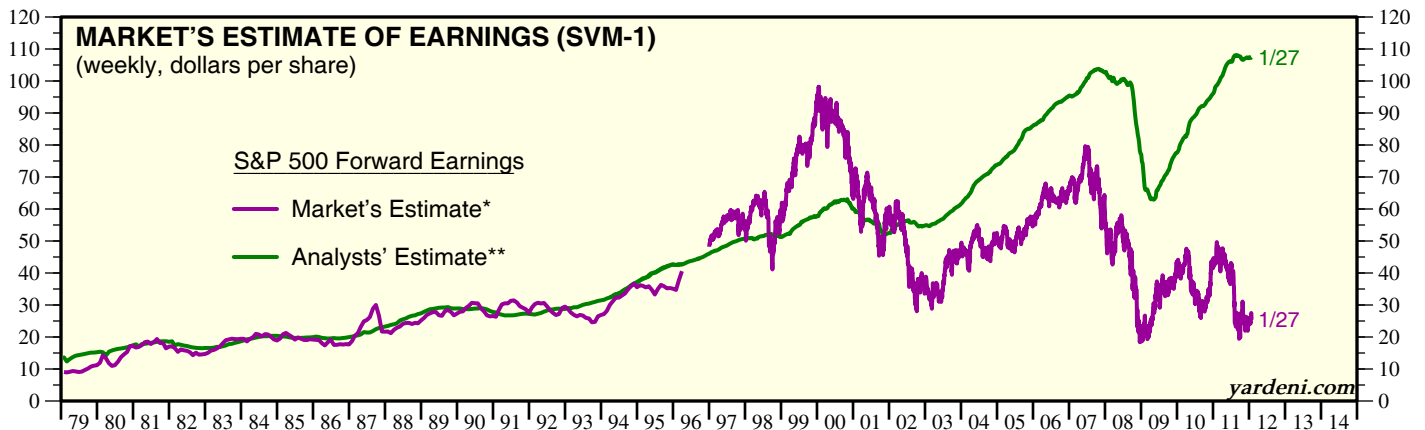
**Figure 8.**



\* Ratio of S&P 500 Index to its fair value (52-week forward consensus expected S&P 500 operating earnings per share divided by the 10-year US Treasury bond yield minus 100). Monthly through April 1994, weekly thereafter.



\* 52-week forward consensus expected S&P 500 operating earnings per share. Monthly through March 1994, weekly thereafter.



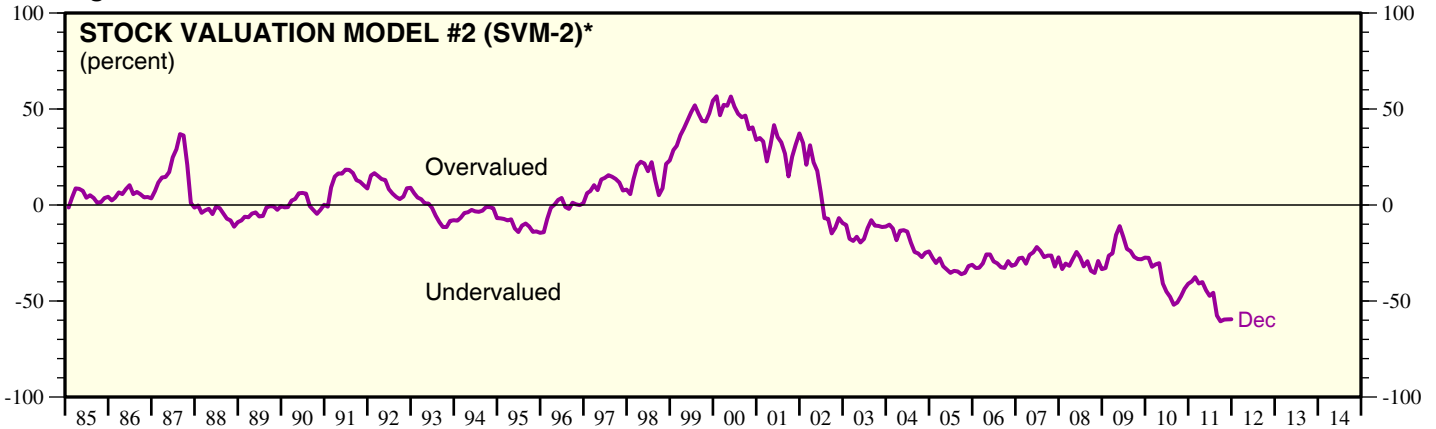
\* S&P 500 index multiplied by 10-year government bond yield. Monthly through March 1994, weekly thereafter.

\*\* 12-month forward consensus expected S&P 500 operating earnings per share. Monthly through March 1994, weekly thereafter.

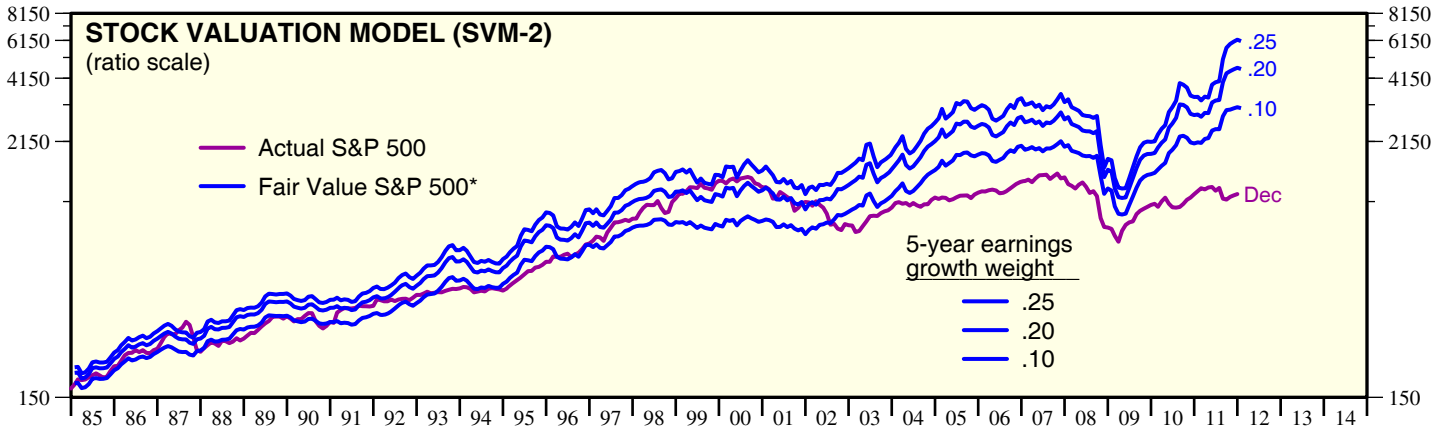
Source: Standard & Poor's Corporation and Thomson Reuters.

# - Valuation: SVM-2 (Yardeni Model) -

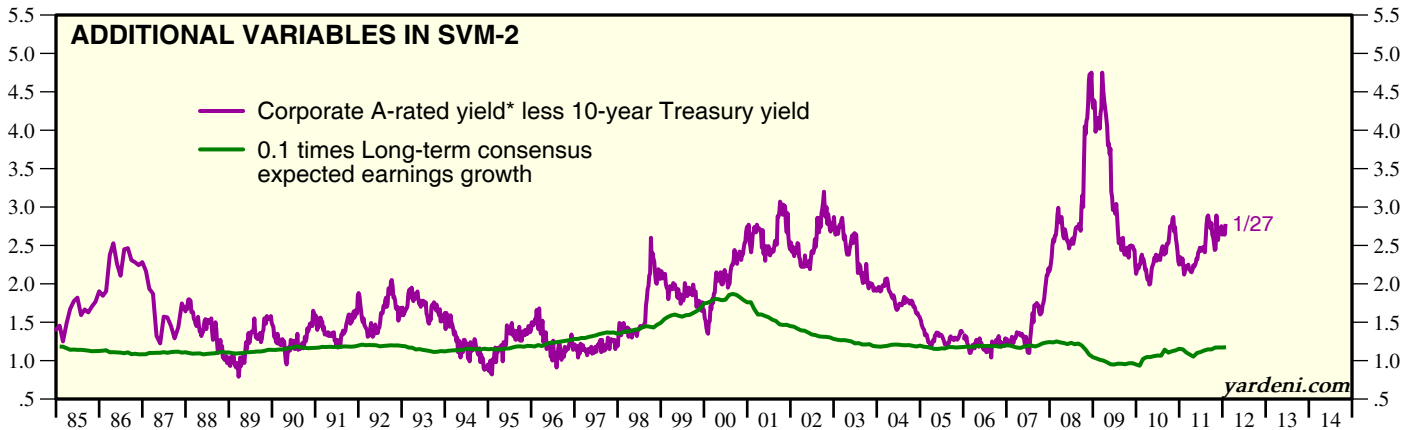
**Figure 9.**



\* Ratio of S&P 500 index to its fair value (12-month forward consensus expected S&P 500 operating earnings per share divided by the difference between Moody's A-rated corporate bond yield less fraction [0.10] of 5-year consensus expected earnings growth).



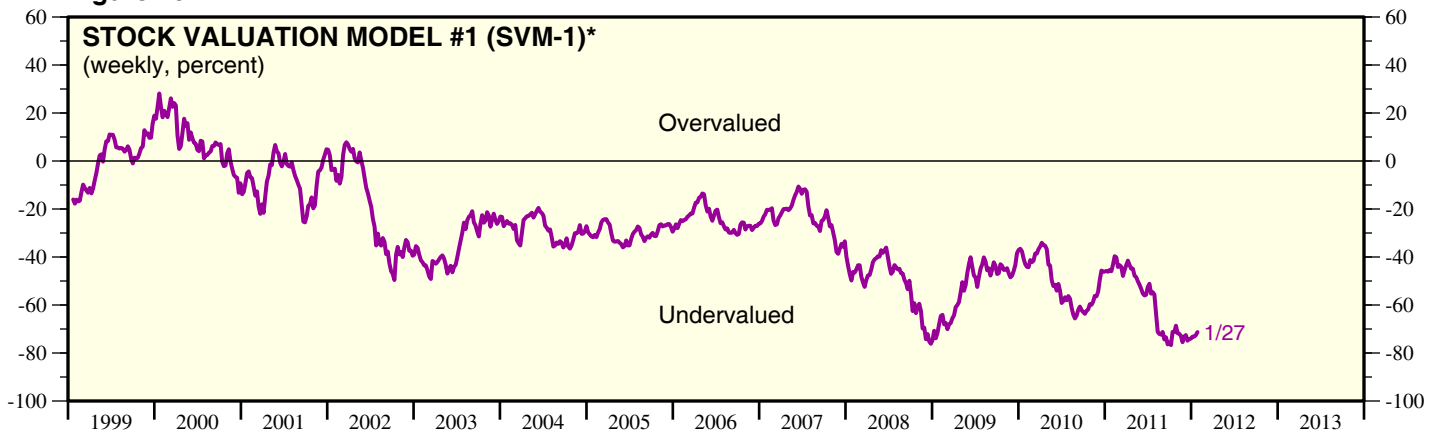
\* Fair value is 12-month forward consensus expected S&P 500 operating earnings per share divided by the difference between Moody's A-rated corporate bond yield less fraction (as shown above) of 5-year consensus expected earnings growth.



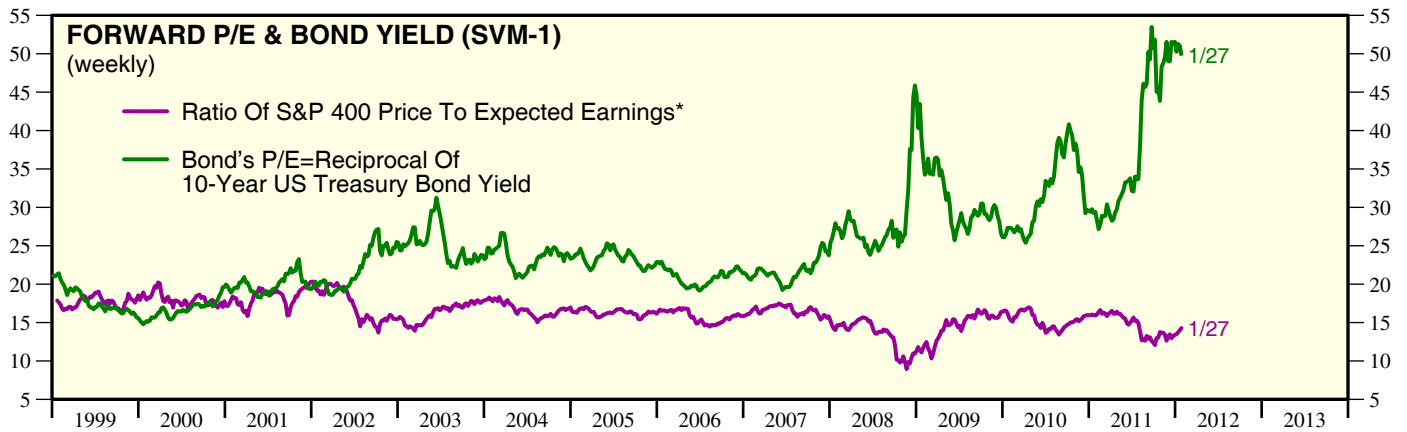
\*Moody's corporate A monthly through 1987, then weekly through 2005. Beginning in 2006 S&P corporate A.  
Source: Moody's Investors Service and Thomson Reuters.

# - Valuation: SVM-1 (S&P 400) -

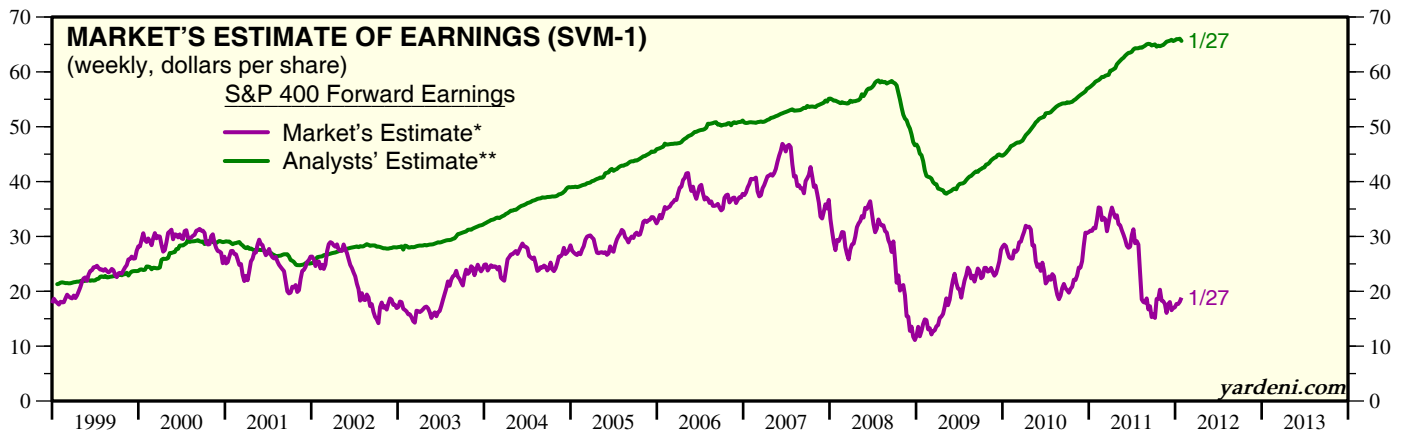
**Figure 10.**



\* Ratio of S&P 400 Index to its fair value (52-week forward consensus expected S&P 400 operating earnings per share divided by the 10-year US Treasury bond yield minus 100).



\* 52-week forward consensus expected S&P 400 operating earnings per share.



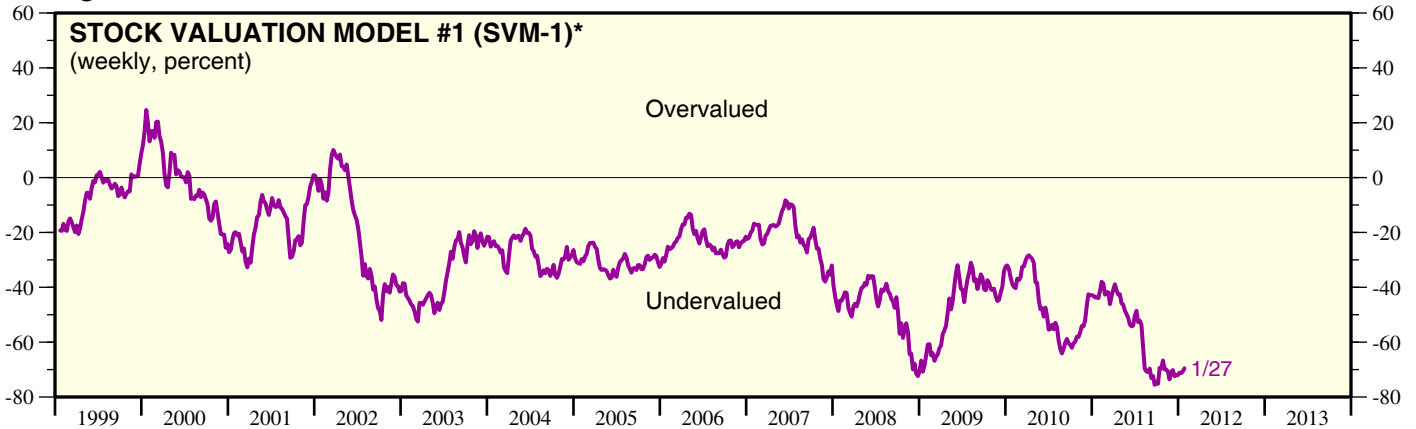
\* S&P 400 index multiplied by 10-year government bond yield.

\*\* 52-week forward consensus expected S&P 400 operating earnings per share.

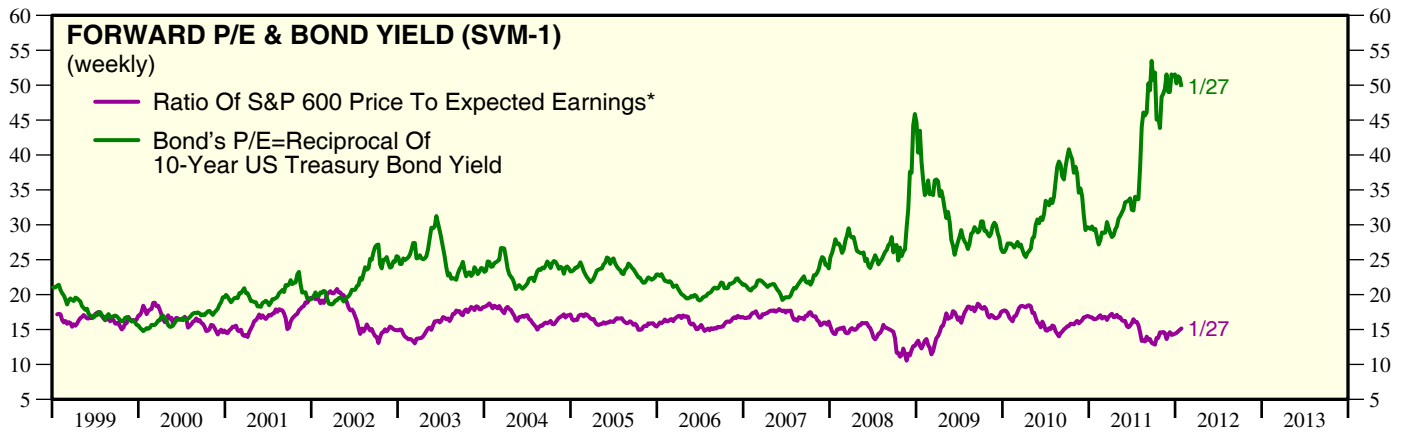
Source: Standard & Poor's Corporation and Thomson Reuters.

# - Valuation: SVM-1 (S&P 600) -

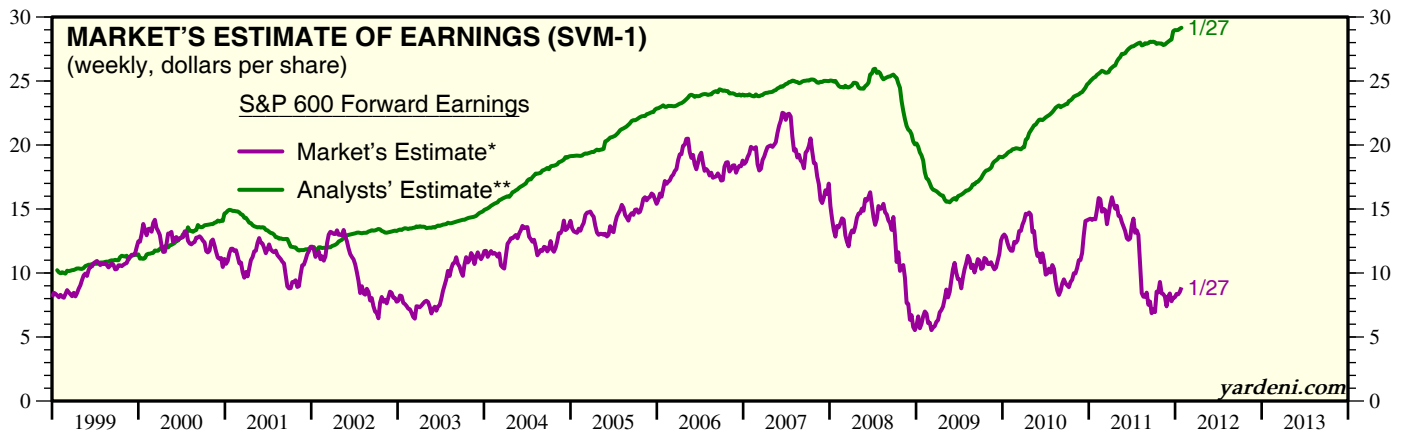
**Figure 11.**



\* Ratio of S&P 600 Index to its fair value (52-week forward consensus expected S&P 600 operating earnings per share divided by the 10-year US Treasury bond yield minus 100).



\* 52-week forward consensus expected S&P 600 operating earnings per share.



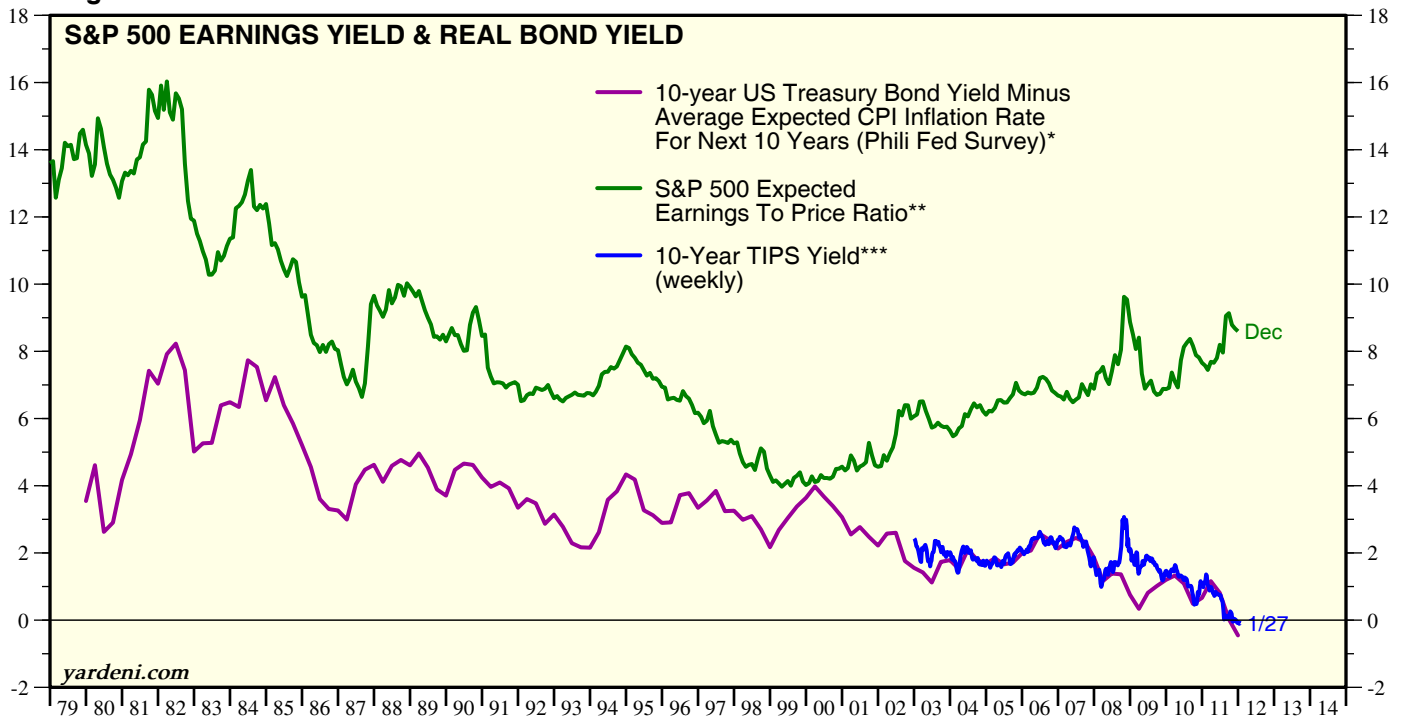
\* S&P 600 index multiplied by 10-year government bond yield.

\*\* 52-week forward consensus expected S&P 600 operating earnings per share.

Source: Standard & Poor's Corporation and Thomson Reuters.

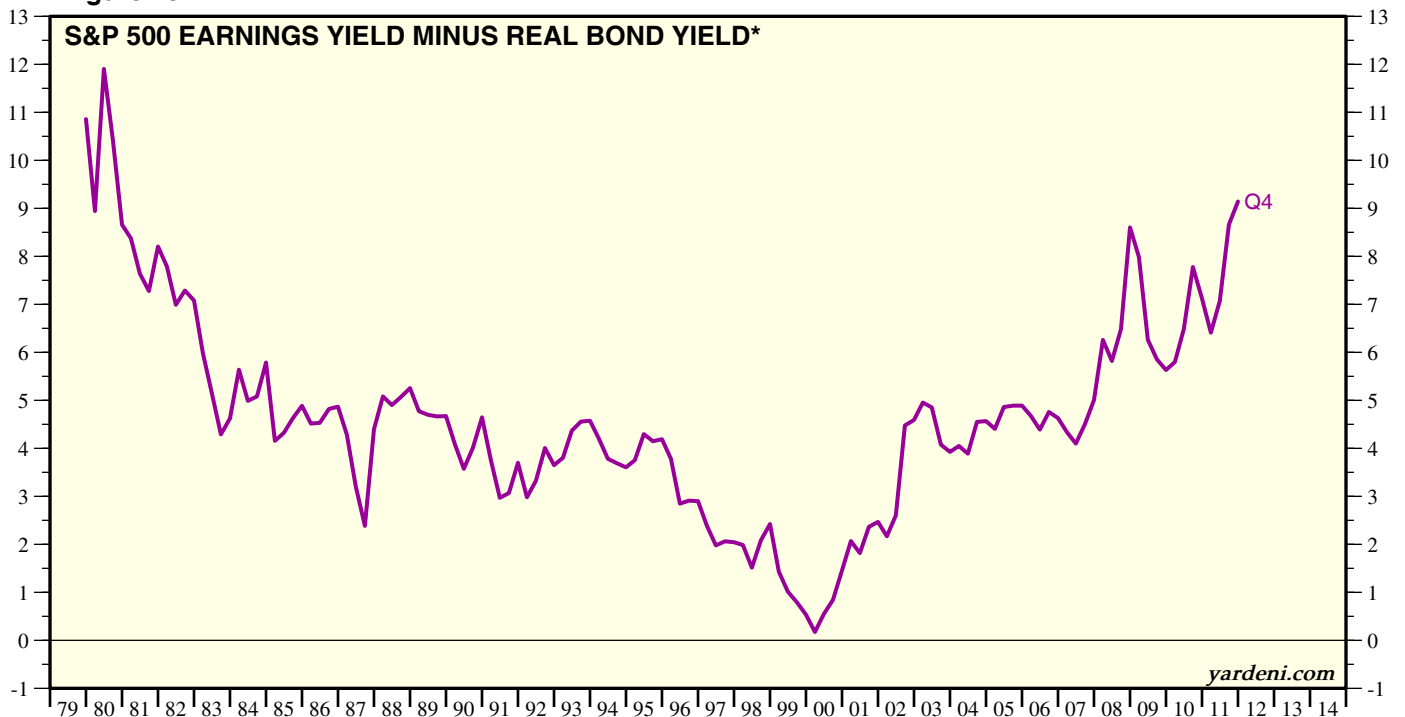
# - Valuation: Equity Risk Premium -

Figure 12.



\* Data from 1979 to 1991 quarterly, monthly thereafter.  
 \*\* Earnings-price ratio is based on the Thomson Financial consensus estimates of earnings over the coming 12 months.  
 \*\*\* Yields on Treasury inflation protected securities (TIPS) adjusted to constant maturities.  
 Source: Board of Governors of the Federal Reserve System, US Treasury, Thomson Reuters, and Federal Reserve Bank of Philadelphia.

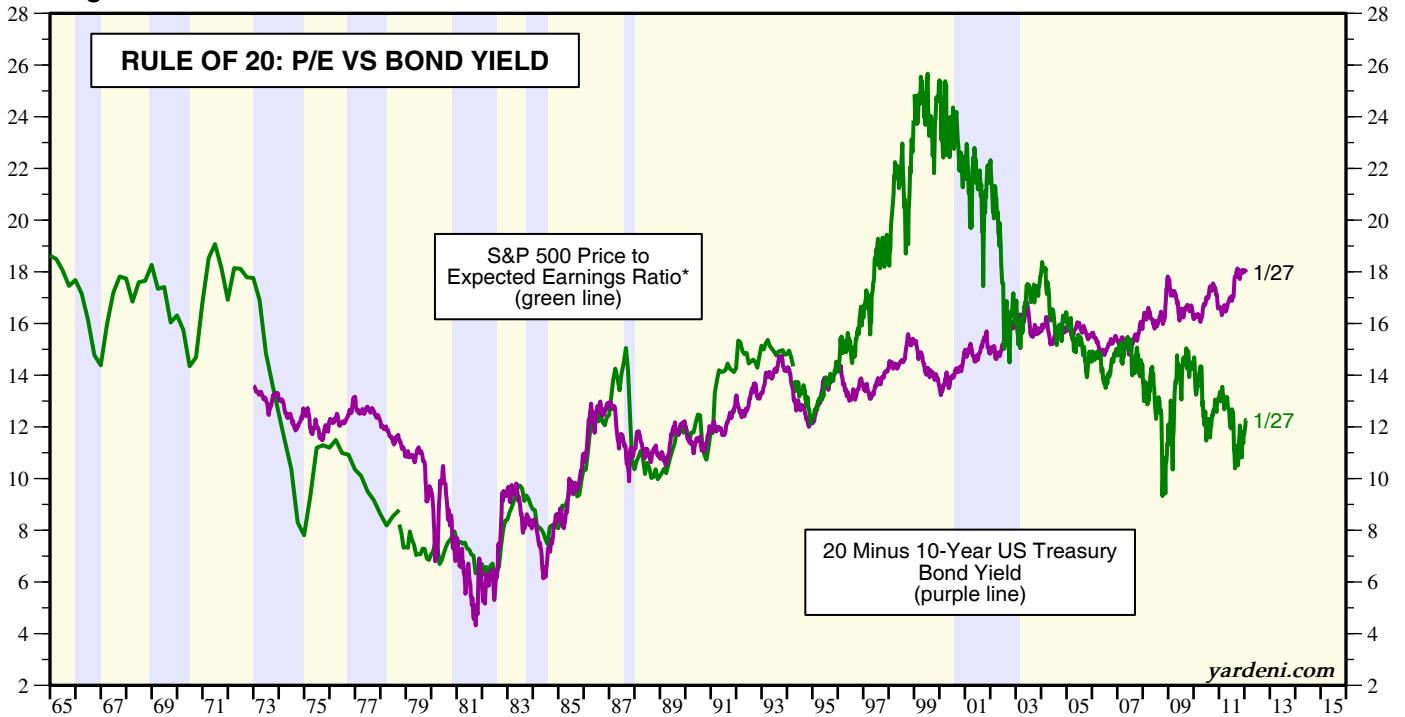
Figure 13.



\* S&P 500 forward expected earnings to price ratio minus 10-year Treasury bond yield minus average expected CPI inflation rate for next 10 years (Phili Fed Survey).  
 Source: Board of Governors of the Federal Reserve System, US Treasury, Thomson Reuters, and Federal Reserve Bank of Philadelphia.

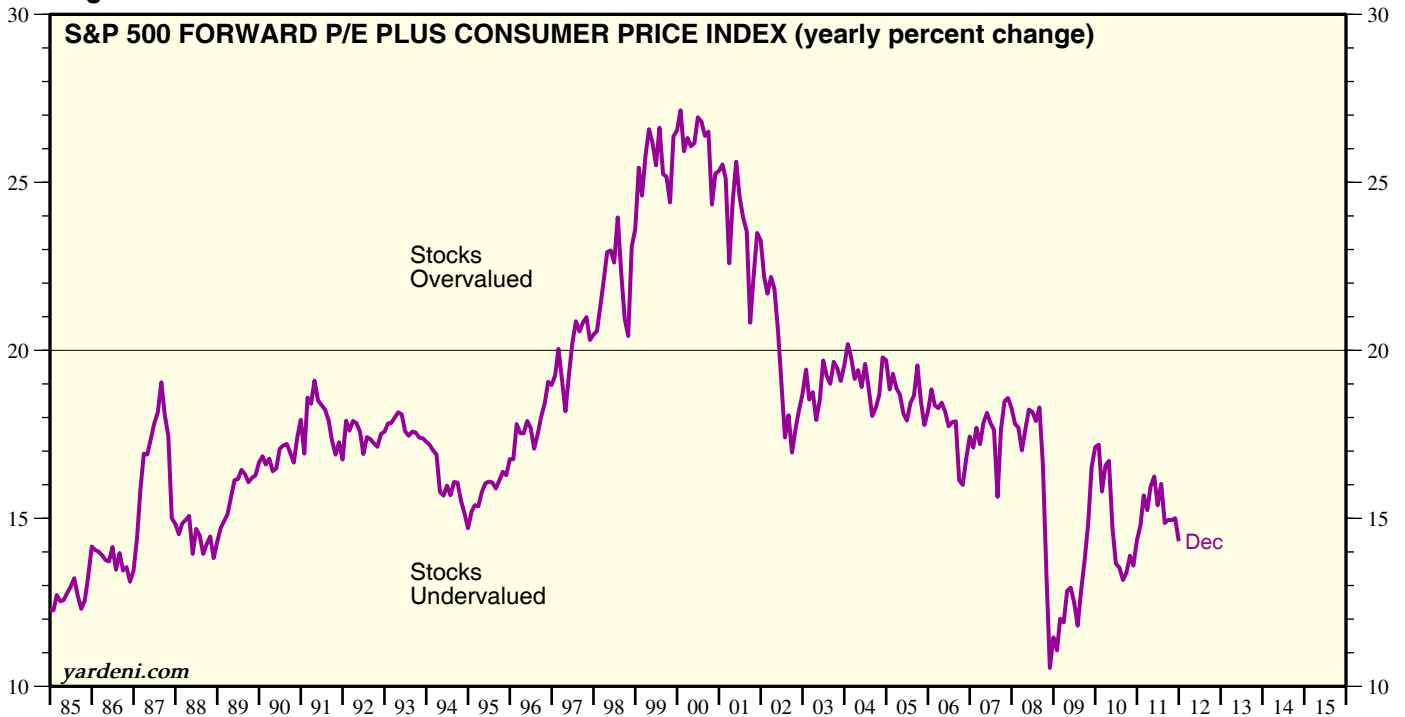
# - Valuation: Rules of 20 -

Figure 14.



\* Using four-quarter trailing reported earnings per share from 1965 to September 1978. Then 12-month forward consensus expected S&P 500 operating earnings per share from October 1978 through March 1994, weekly after.  
 Note: Shaded areas are periods when S&P 500 fell 15% or more.  
 Source: Thomson Reuters and Board of Governors of the Federal Reserve System.

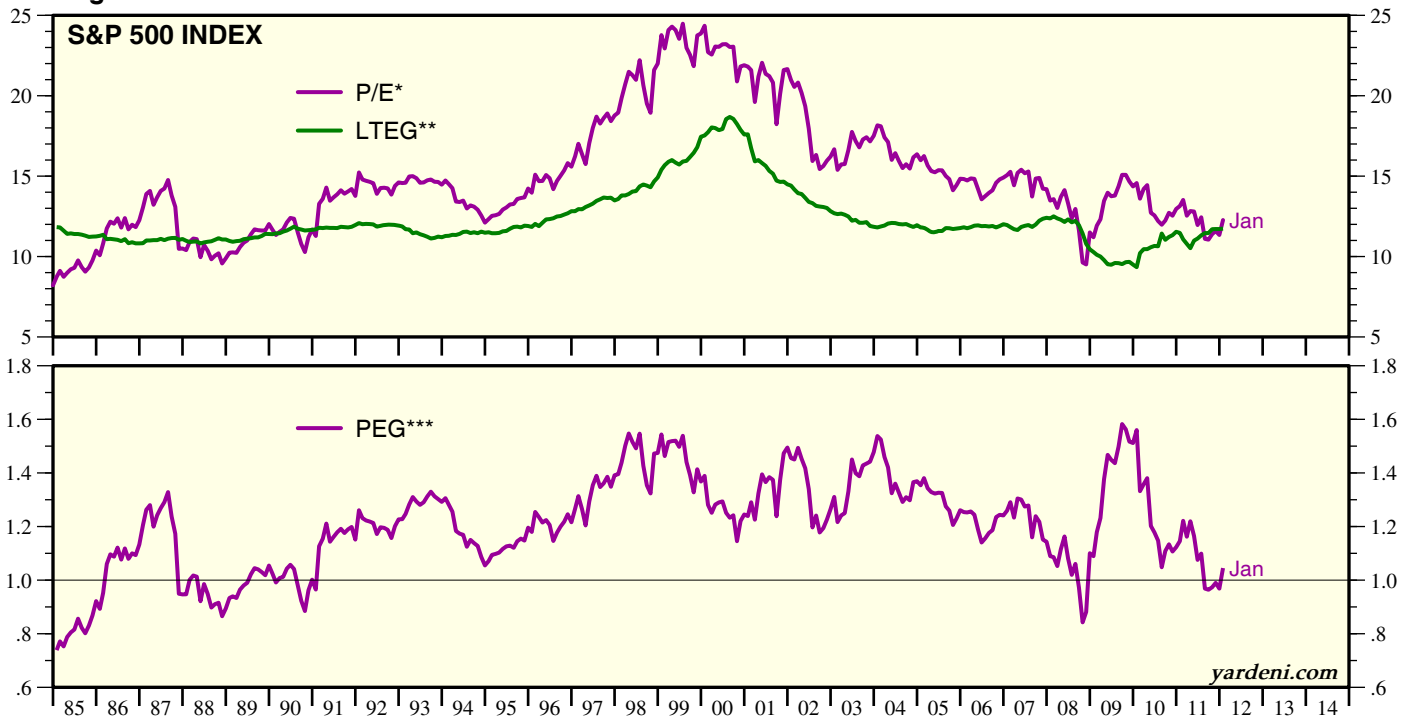
Figure 15.



Source: Thomson Reuters and US Department of Labor, Bureau of Labor Statistics.

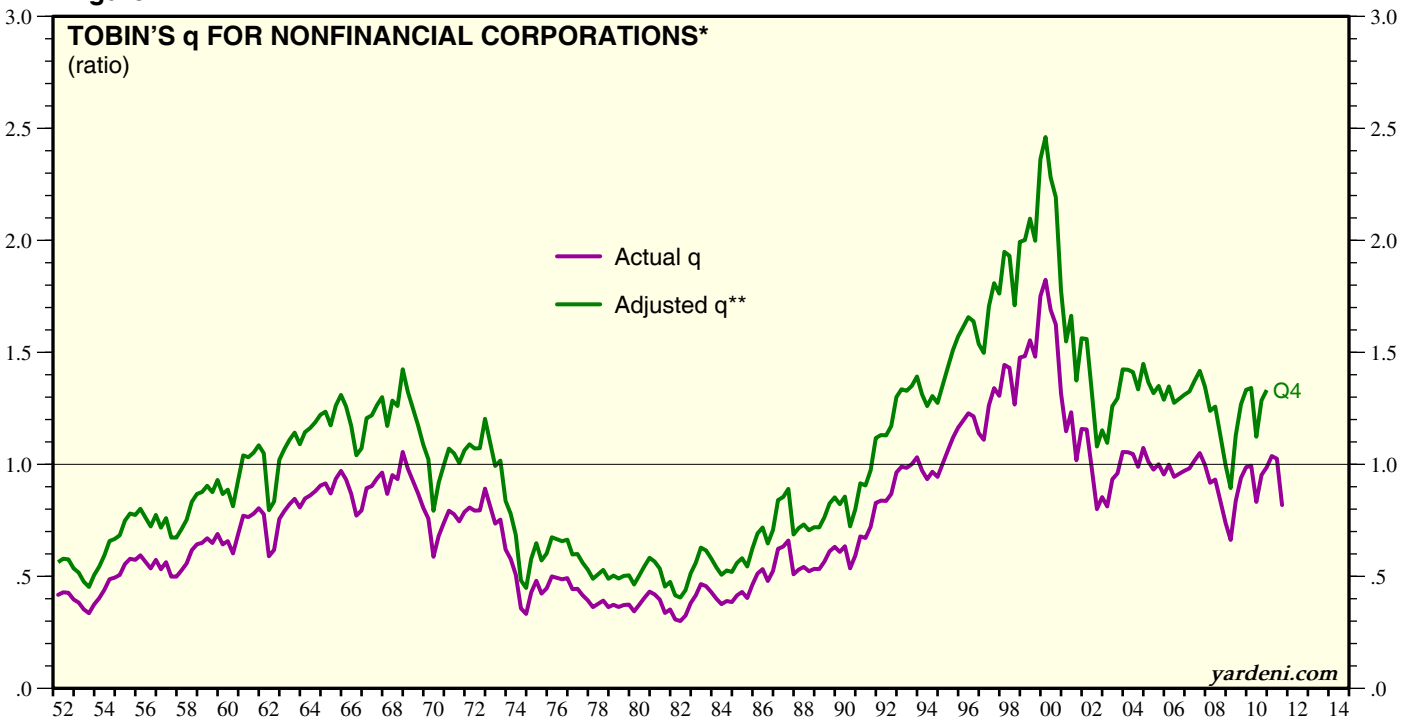
# - Valuation Models -

**Figure 16.**



\* P/E = price-to-earnings ratio using mid-month price and 12-month forward consensus earnings expectations.  
 \*\* LTEG = consensus median 5-year expected earnings growth.  
 \*\*\* PEG = P/E divided by LTEG.  
 Source: Thomson Reuters.

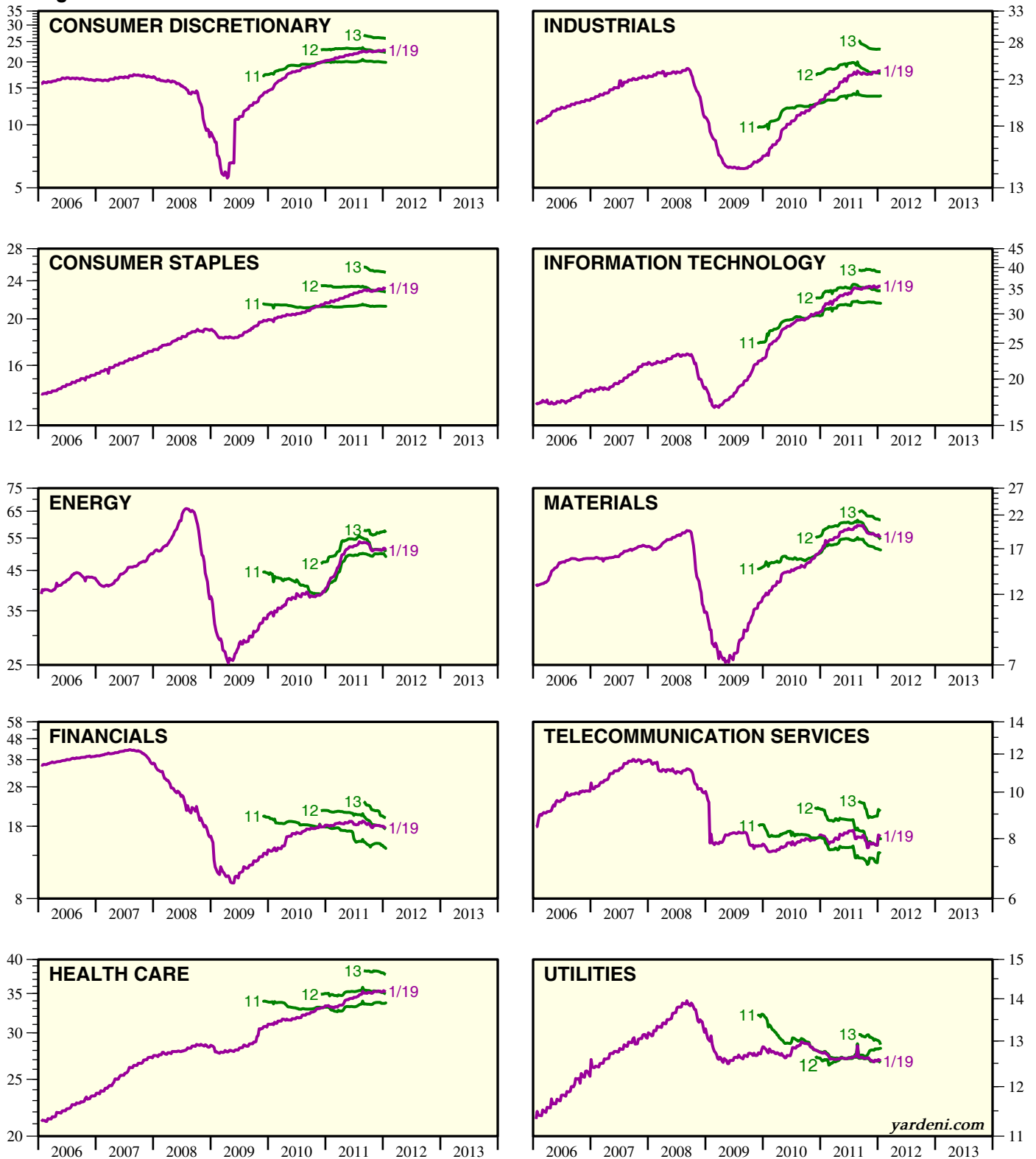
**Figure 17.**



\* Ratio of market value of equities to net worth at market value, which includes real estate (including structures) at market value and equipment, software, and inventories at replacement cost.  
 \*\* Actual divided by average since 1952.  
 Source: Federal Reserve Board Flow of Funds Accounts.

# - S&P 500 Forward Earnings -

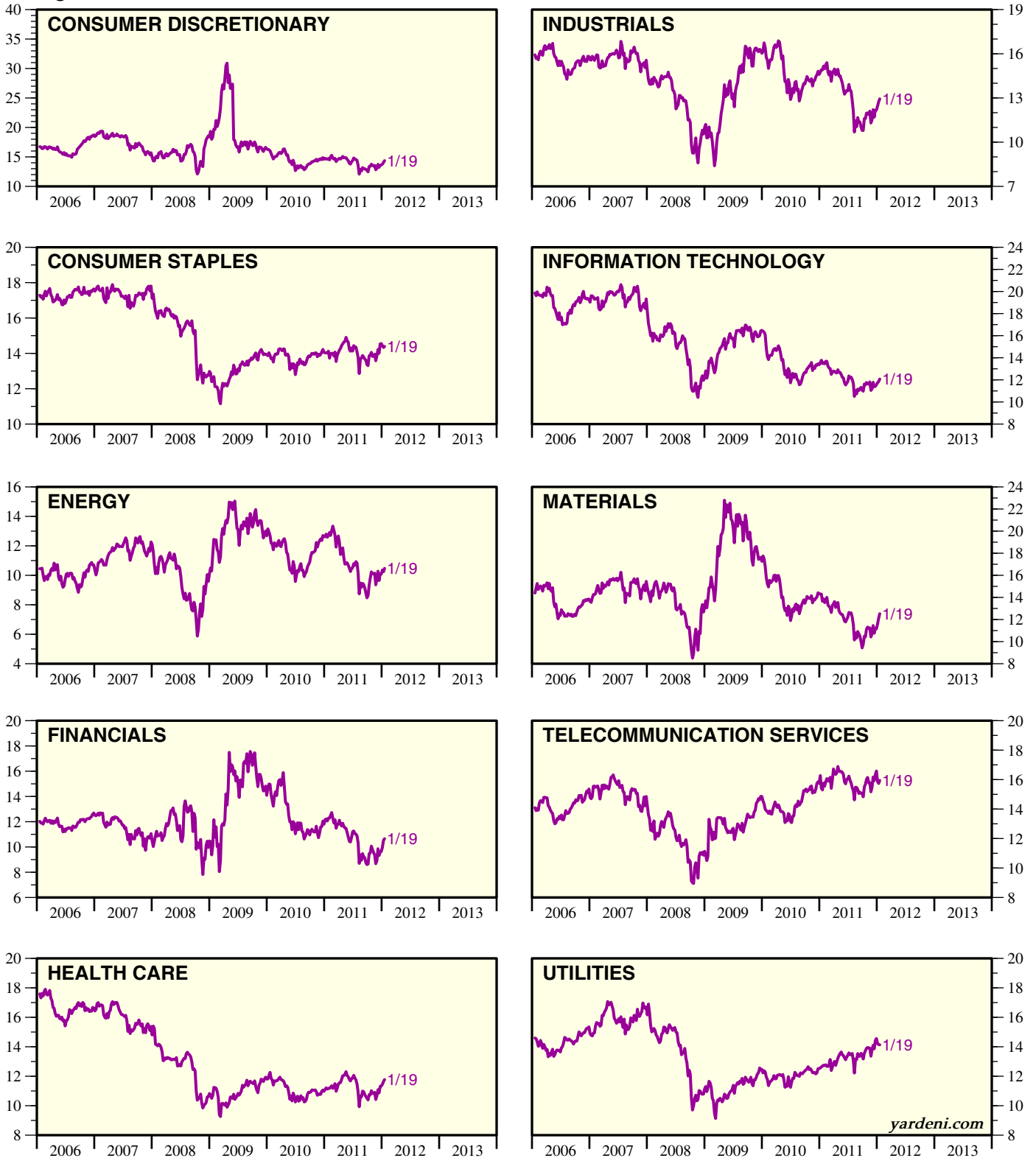
Figure 18.



Source: Thomson Reuters.

# - S&P 500 Valuation -

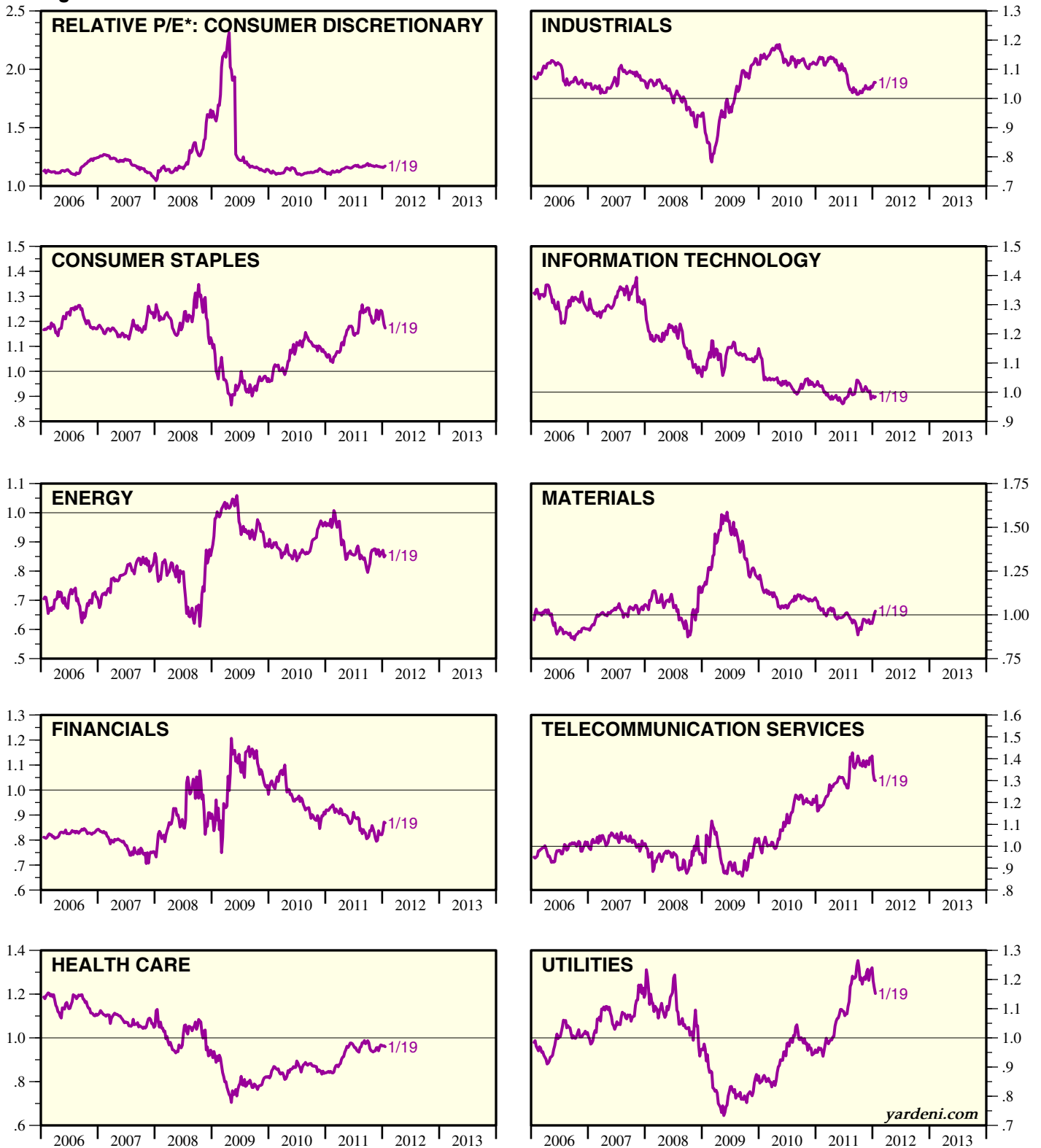
**Figure 19.**



Source: Thomson Reuters.

# - S&P 500 Relative Valuation -

Figure 20.

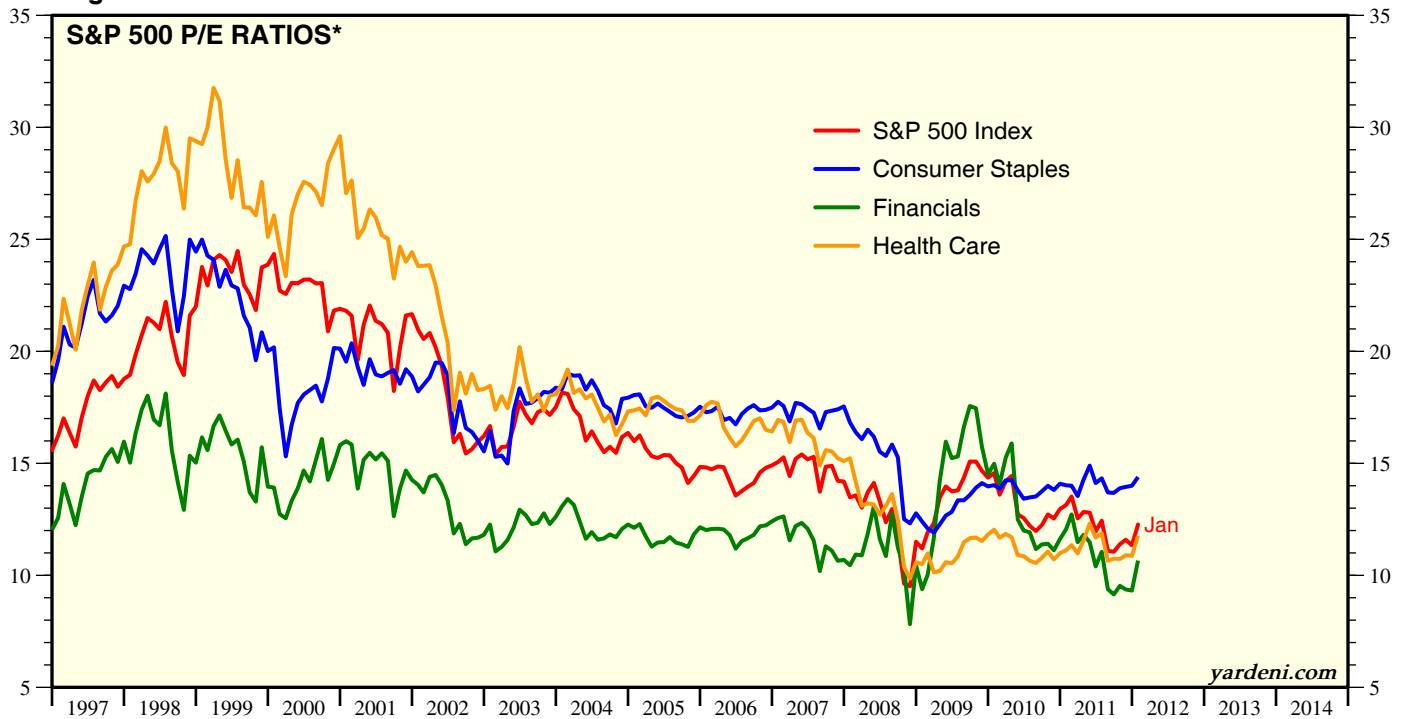


\*Sector's forward P/E divided by S&P 500 forward P/E.

Source: Thomson Reuters.

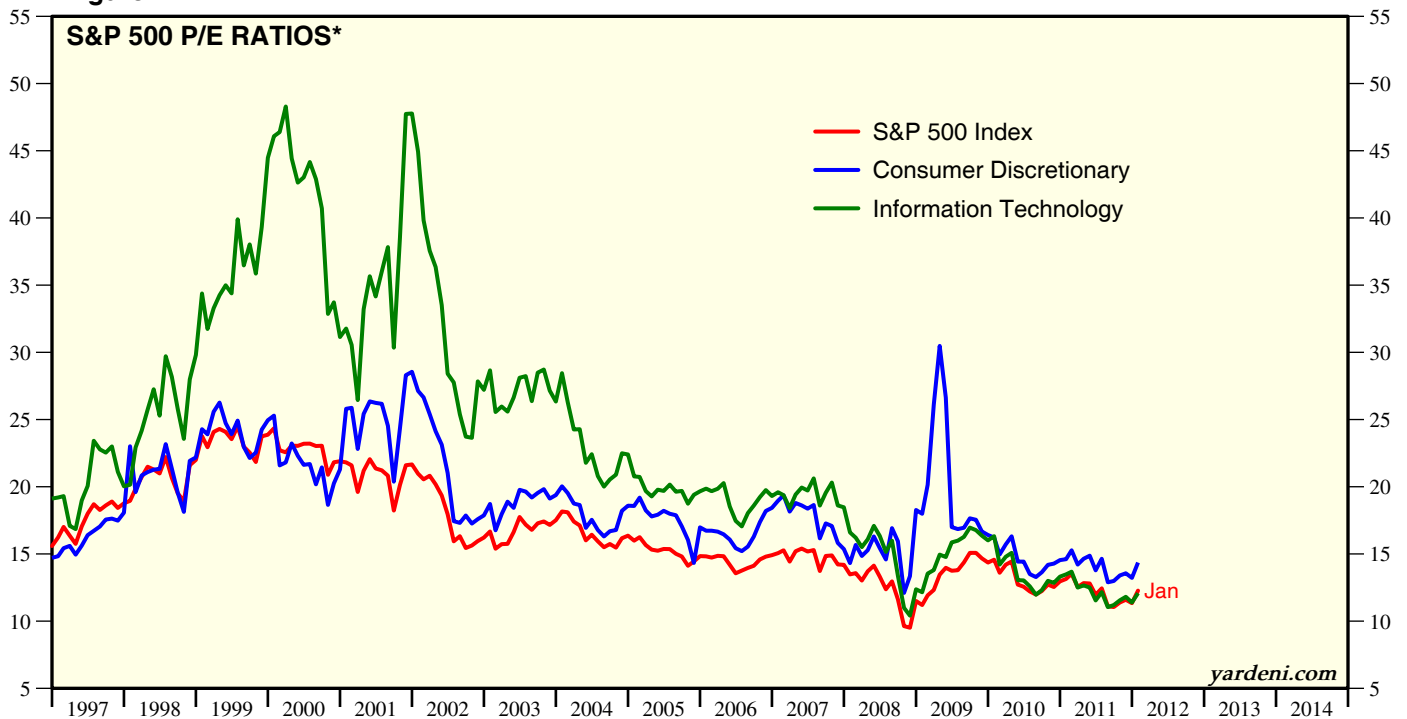
# - S&P 500 Sector P/Es -

**Figure 21.**



\* Price divided by 12-month forward consensus expected operating earnings per share using mid-month data.  
Source: Thomson Reuters.

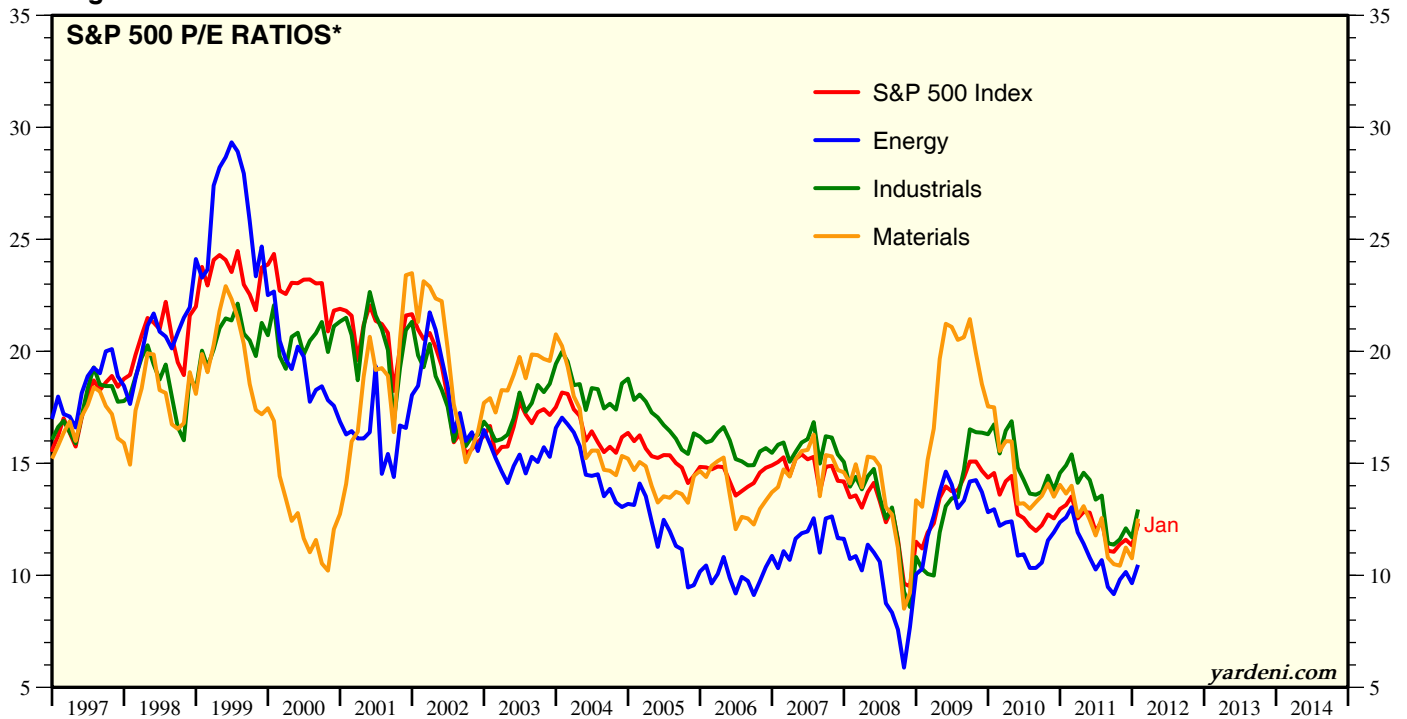
**Figure 22.**



\* Price divided by 12-month forward consensus expected operating earnings per share using mid-month data.  
Source: Thomson Reuters.

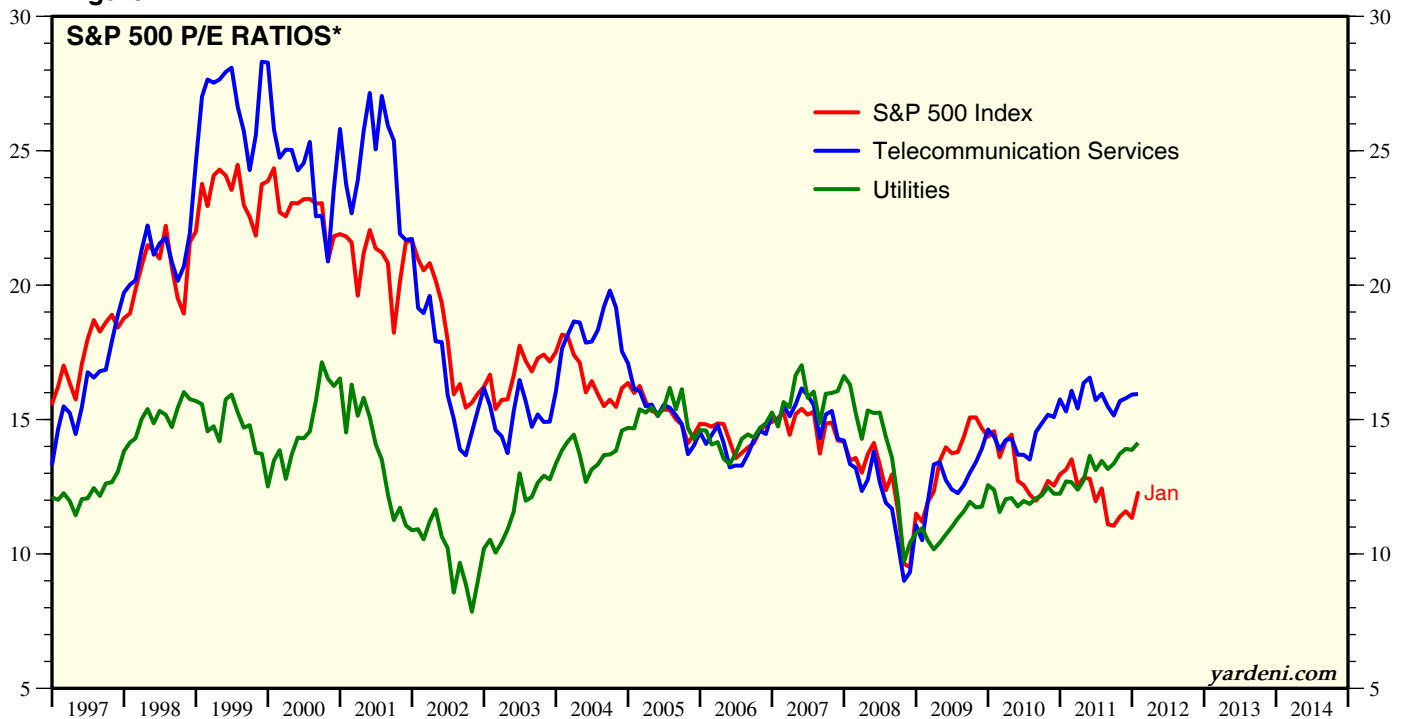
# - S&P 500 Sector P/Es -

**Figure 23.**



\* Price divided by 12-month forward consensus expected operating earnings per share using mid-month data.  
Source: Thomson Reuters.

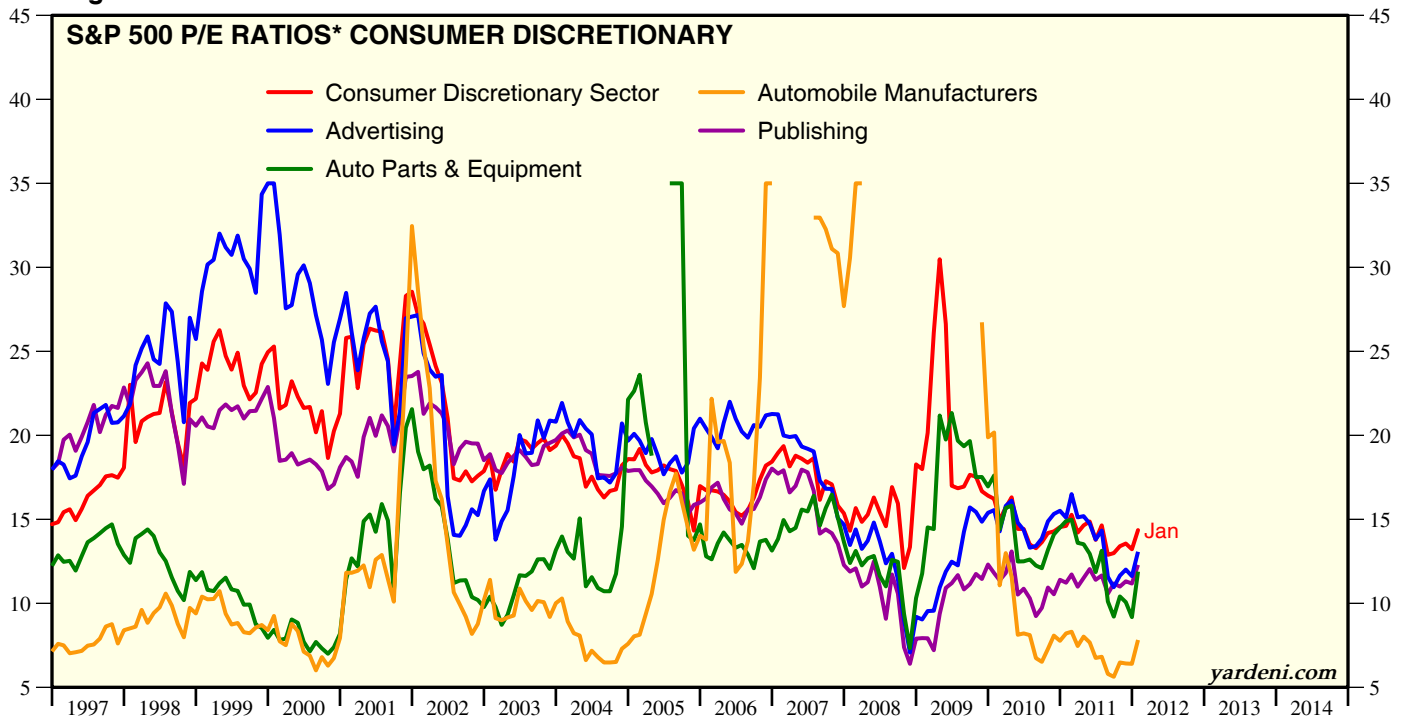
**Figure 24.**



\* Price divided by 12-month forward consensus expected operating earnings per share using mid-month data.  
Source: Thomson Reuters.

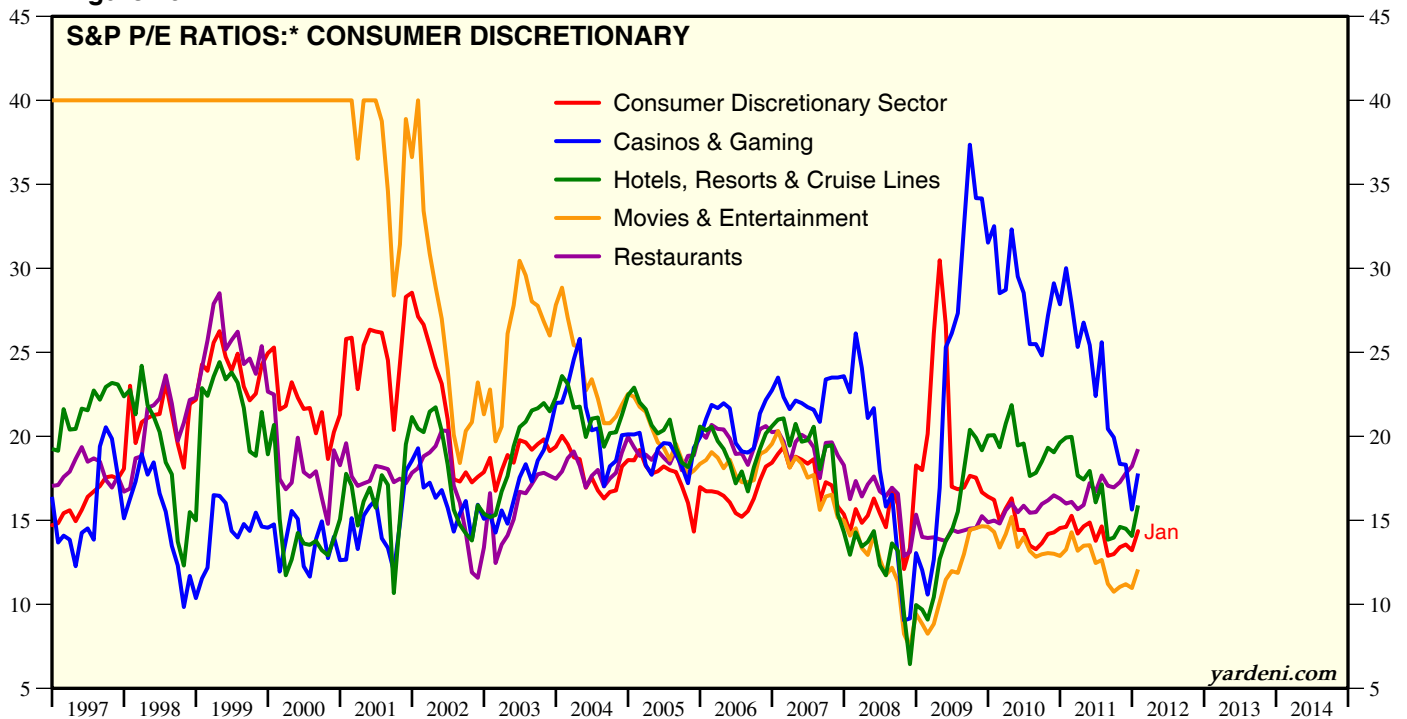
# - Consumer Discretionary P/Es -

**Figure 25.**



\* Price divided by 12-month forward consensus expected operating earnings per share using mid-month data.  
P/E capped at 40 for all industries.  
Source: Thomson Reuters.

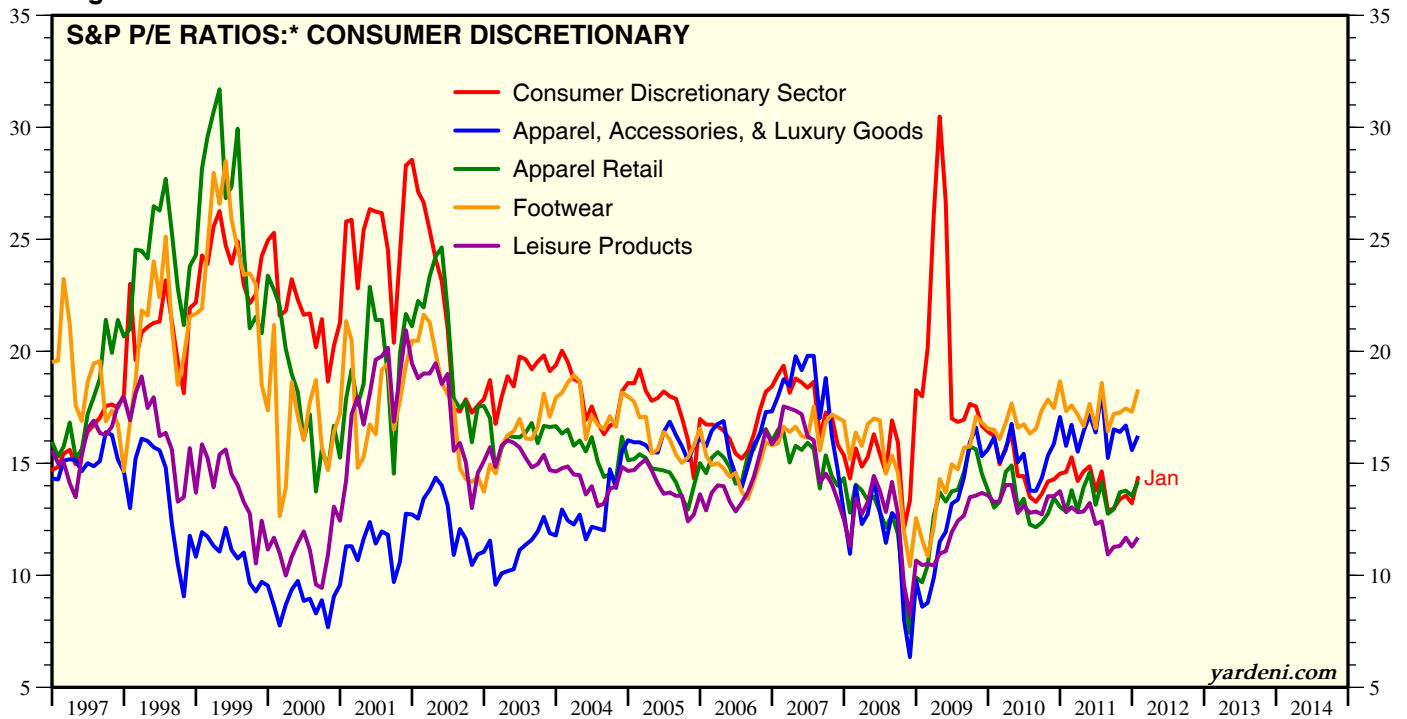
**Figure 26.**



\* Price divided by 12-month forward consensus expected operating earnings per share using mid-month data.  
P/E capped at 40 for all industries.  
Source: Thomson Reuters.

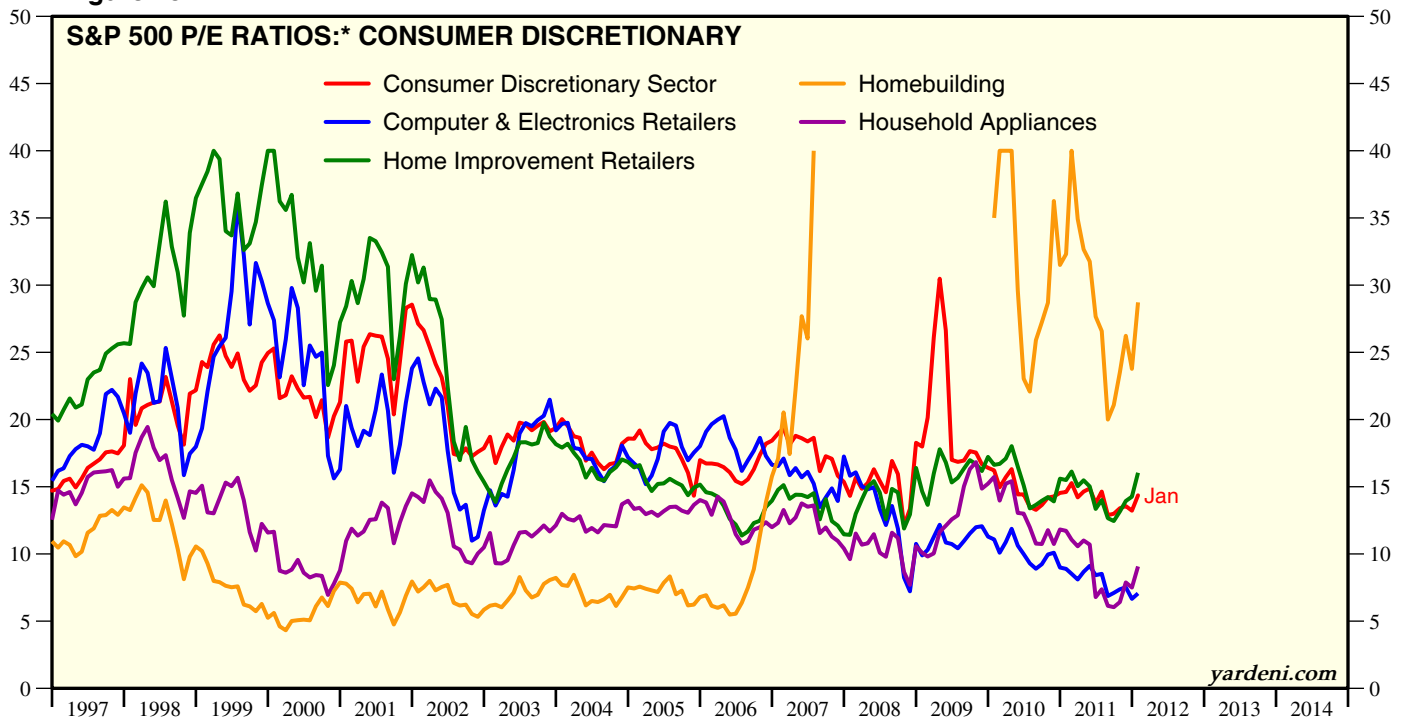
# - Consumer Discretionary P/Es -

**Figure 27.**



\* Price divided by 12-month forward consensus expected operating earnings per share using mid-month data.  
Source: Thomson Reuters.

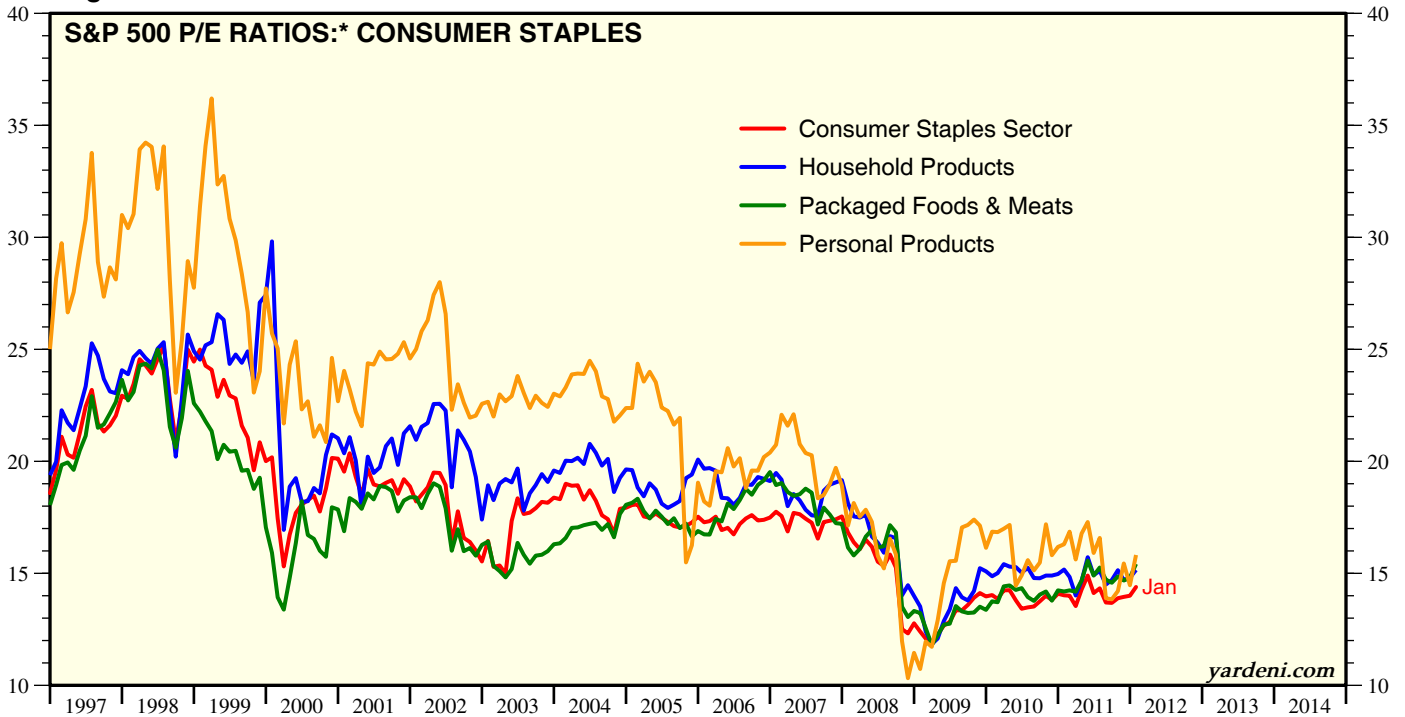
**Figure 28.**



\* Price divided by 12-month forward consensus expected operating earnings per share using mid-month data.  
P/E capped at 40 for all industries.  
Source: Thomson Reuters.

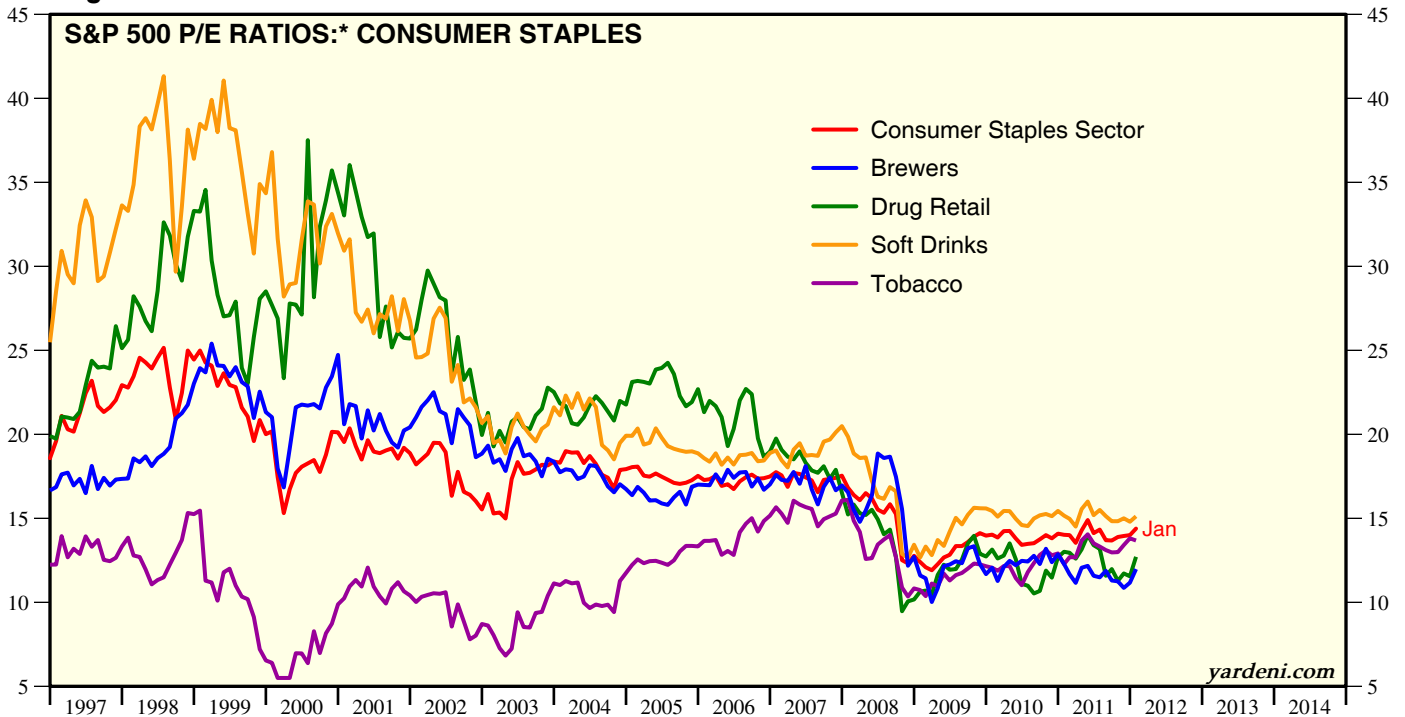
# - Consumer Staples P/Es -

Figure 29.



\* Price divided by 12-month forward consensus expected operating earnings per share using mid-month data.  
Source: Thomson Reuters.

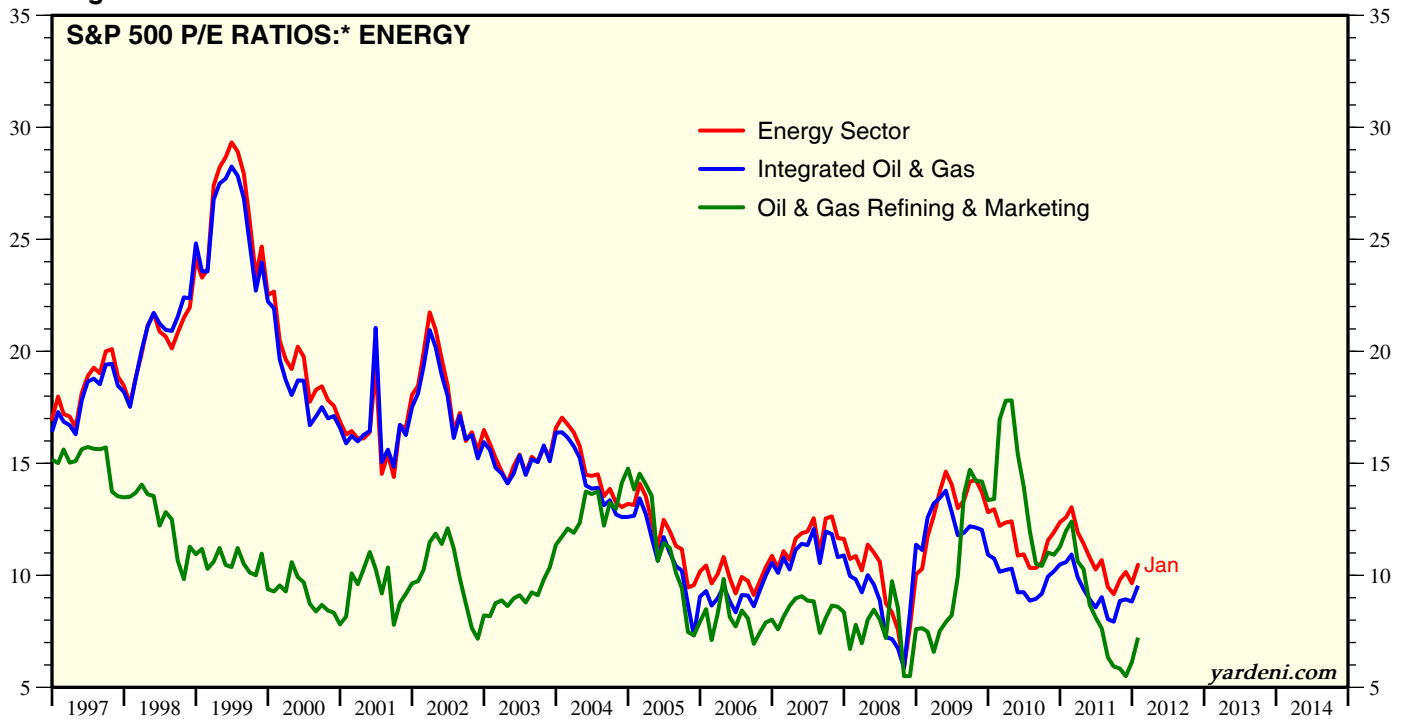
Figure 30.



\* Price divided by 12-month forward consensus expected operating earnings per share using mid-month data.  
Source: Thomson Reuters.

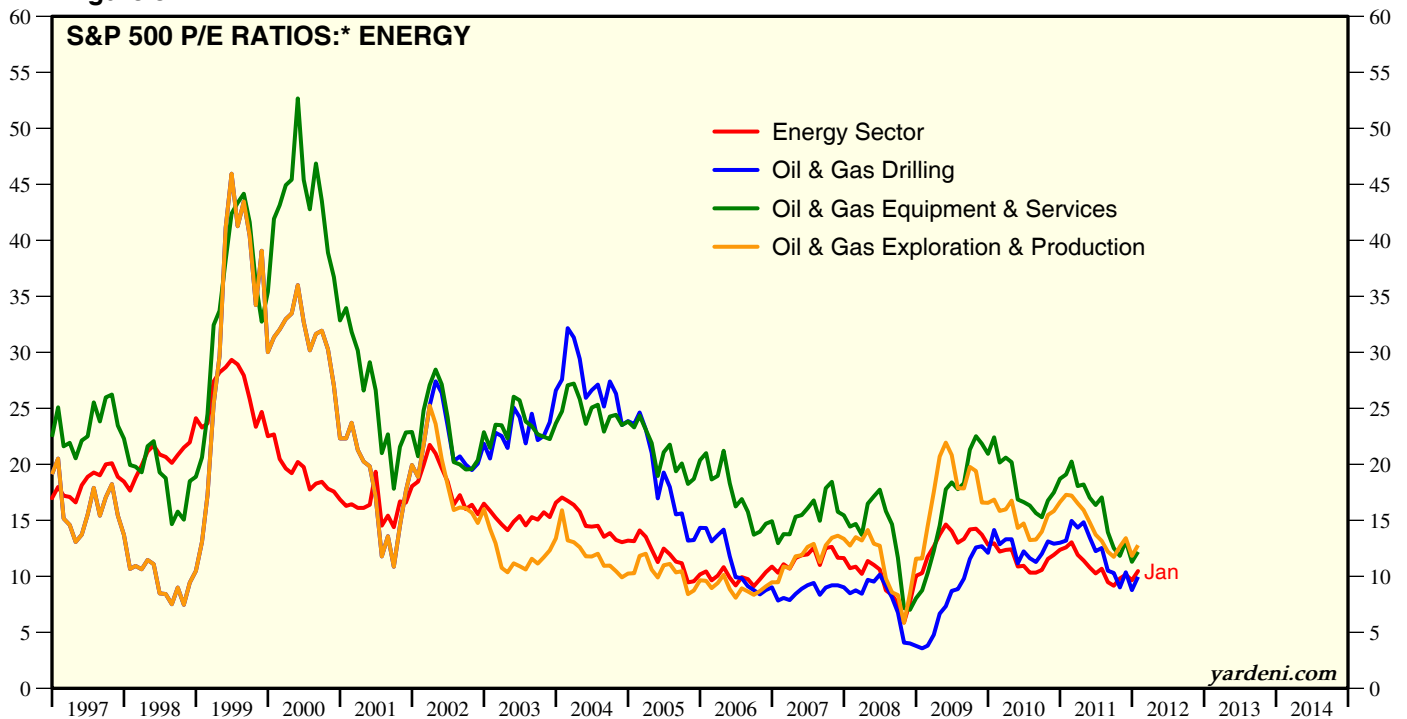
# - Energy P/Es -

**Figure 31.**



\* Price divided by 12-month forward consensus expected operating earnings per share using mid-month data.  
Source: Thomson Reuters.

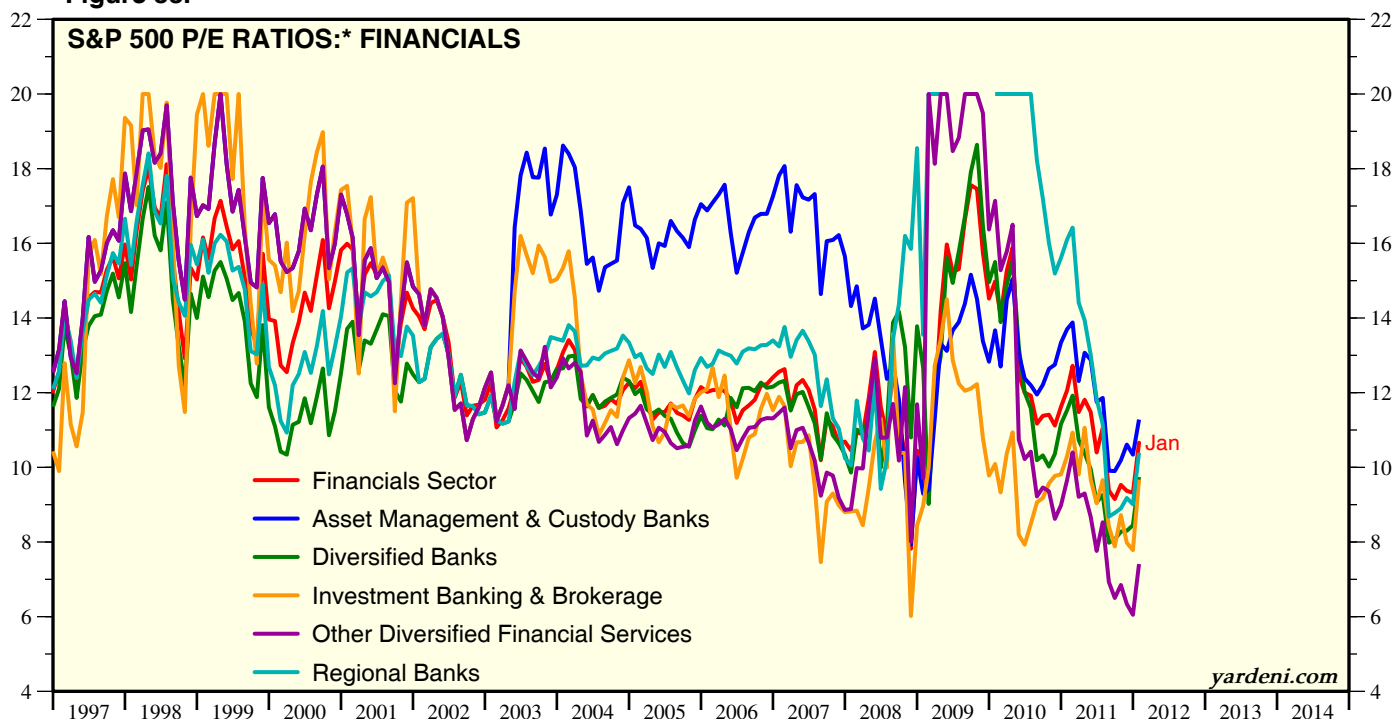
**Figure 32.**



\* Price divided by 12-month forward consensus expected operating earnings per share using mid-month data.  
Source: Thomson Reuters.

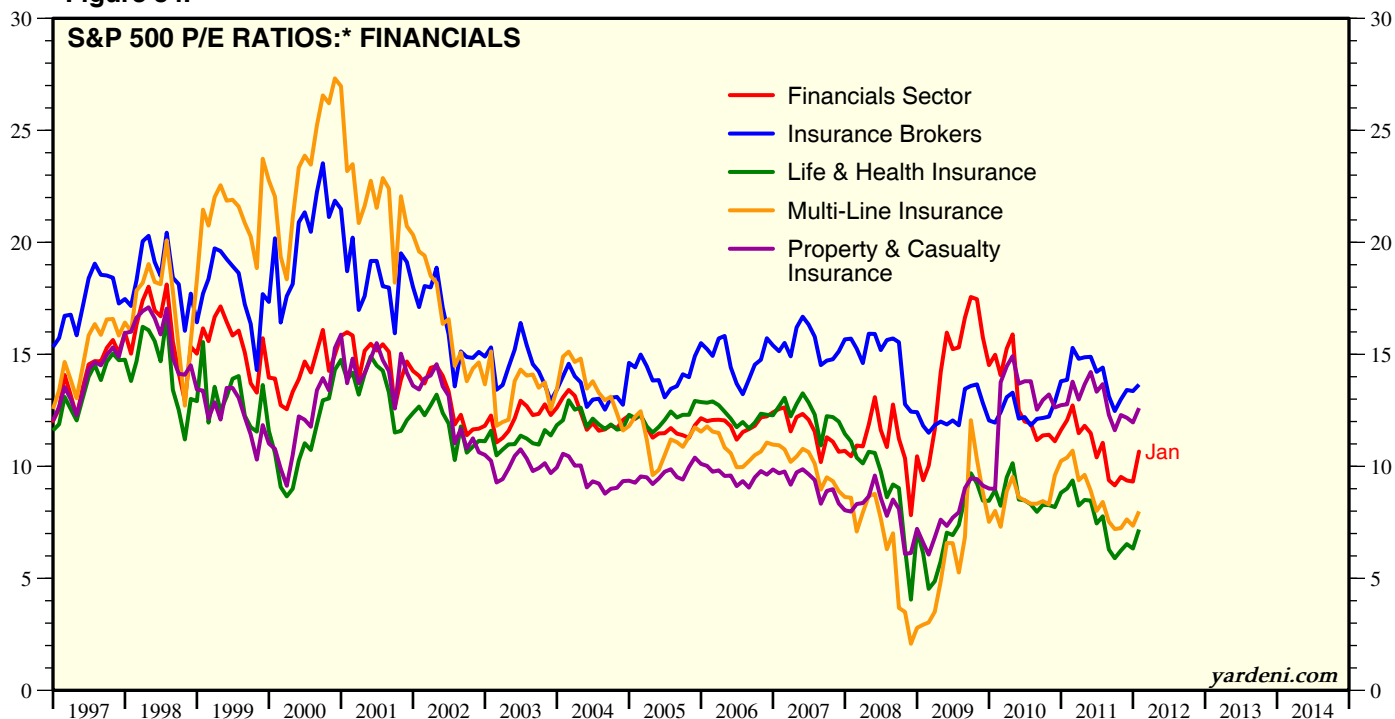
## - Financials P/Es -

**Figure 33.**



\* Price divided by 12-month forward consensus expected operating earnings per share using mid-month data. PE capped at 22 for all industries. P/E capped at 20 for all industries. Source: Thomson Reuters.

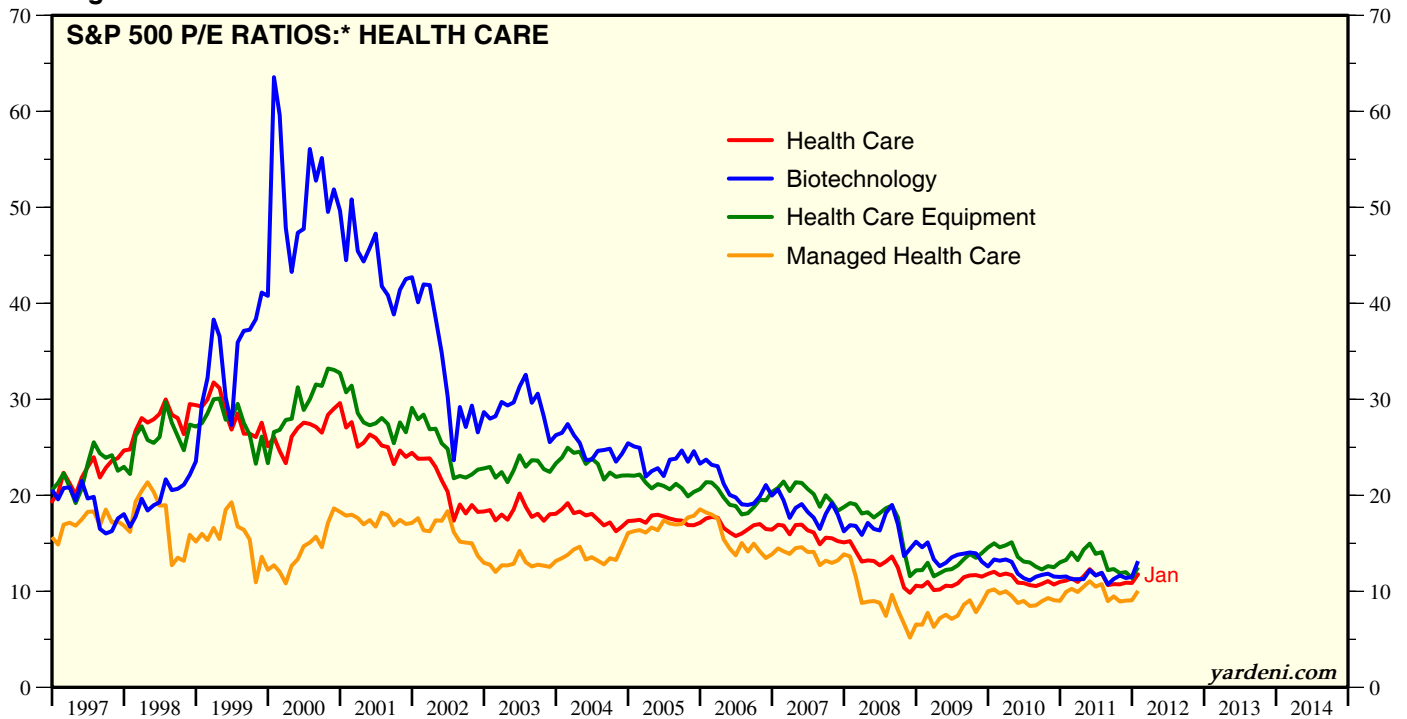
**Figure 34.**



\* Price divided by 12-month forward consensus expected operating earnings per share using mid-month data. Source: Thomson Reuters.

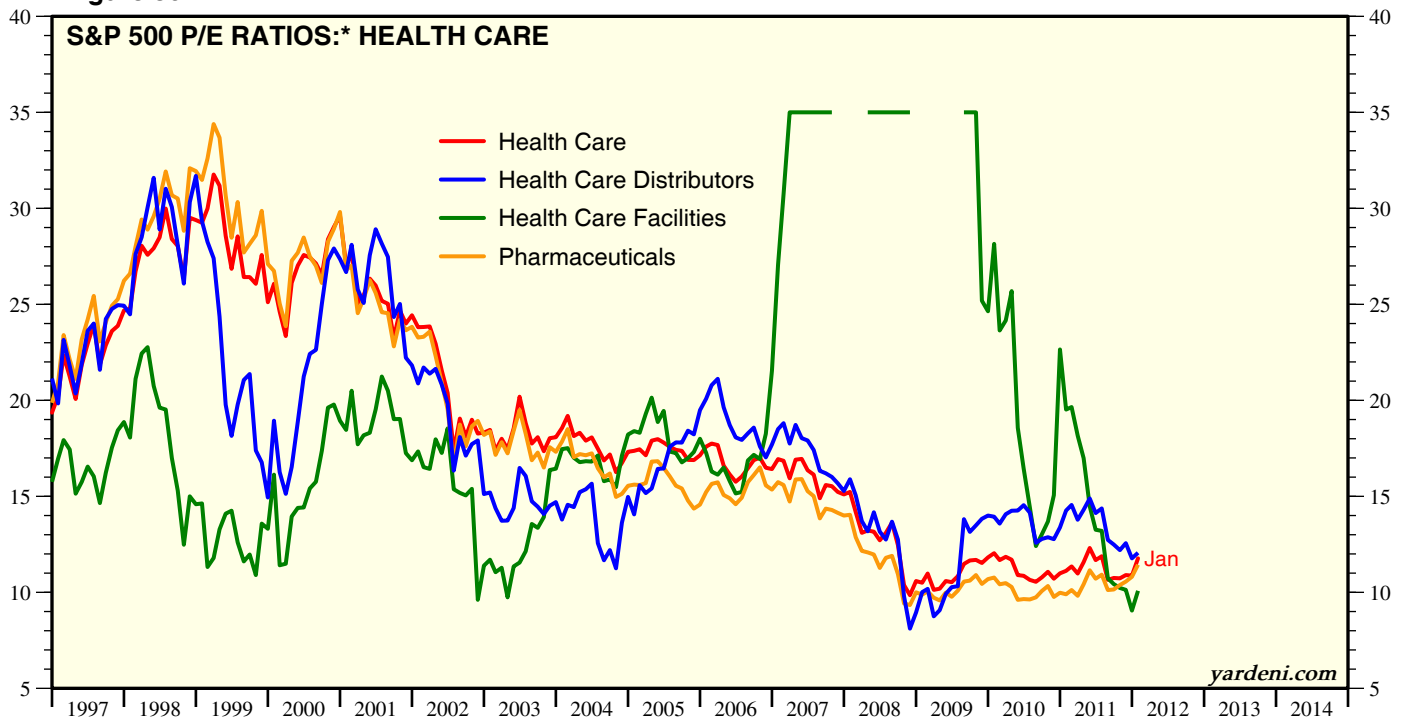
# - Health Care P/Es -

**Figure 35.**



\* Price divided by 12-month forward consensus expected operating earnings per share using mid-month data.  
Source: Thomson Reuters.

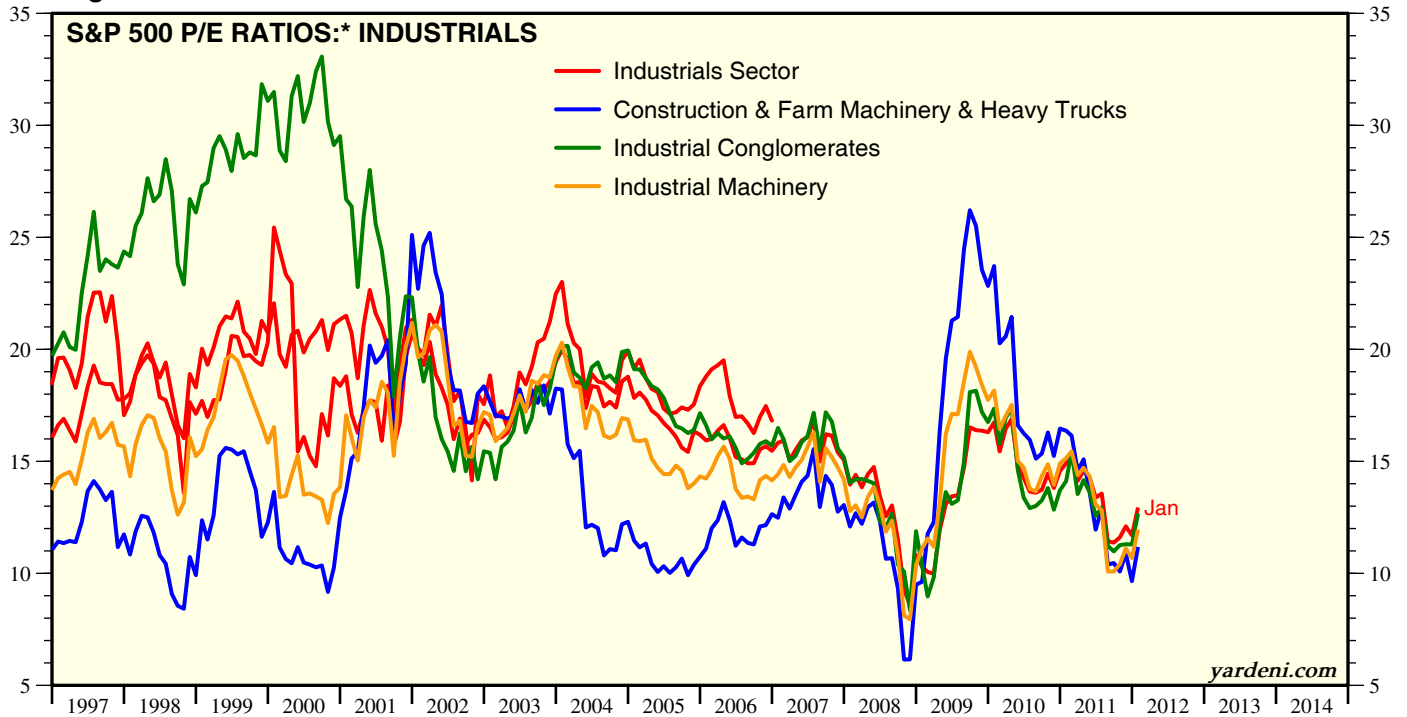
**Figure 36.**



\* Price divided by 12-month forward consensus expected operating earnings per share using mid-month data.  
P/E capped at 35 for all industries.  
Source: Thomson Reuters.

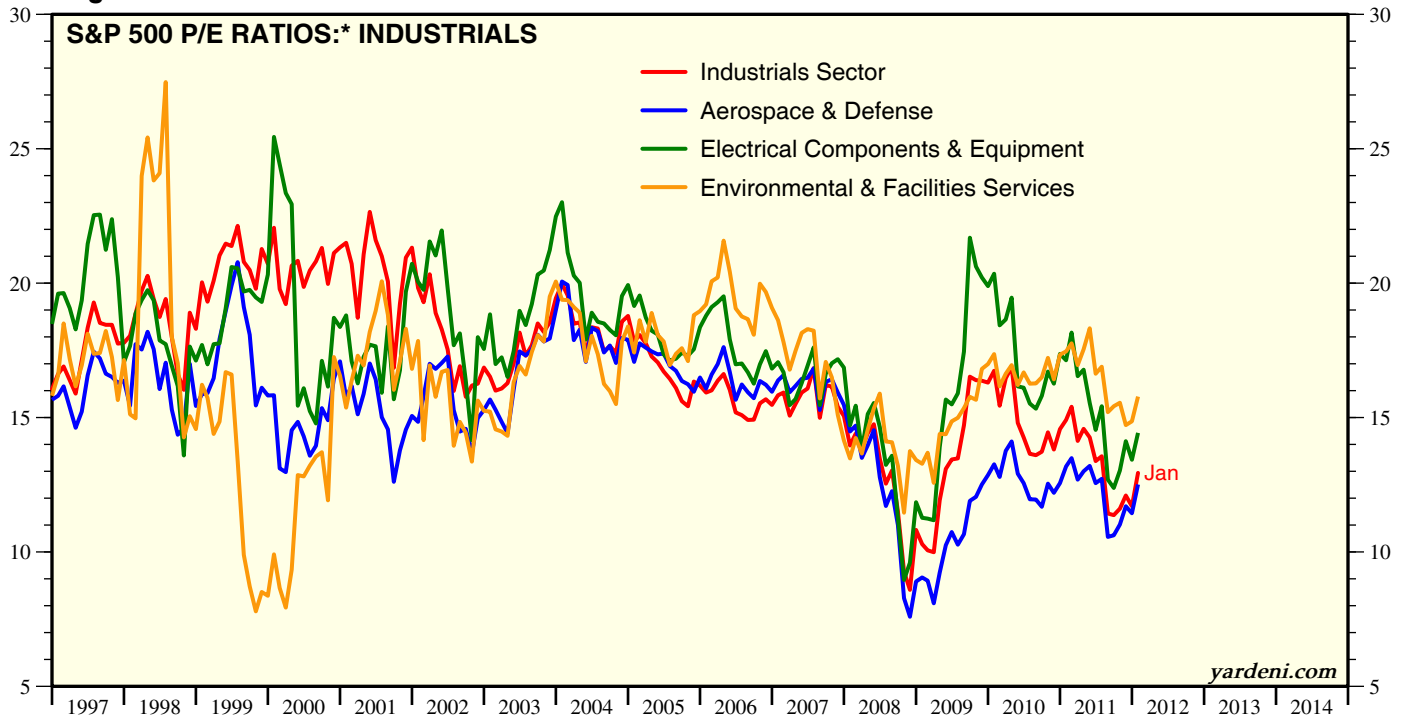
# - Industrials P/Es -

**Figure 37.**



\* Price divided by 12-month forward consensus expected operating earnings per share using mid-month data.  
Source: Thomson Reuters.

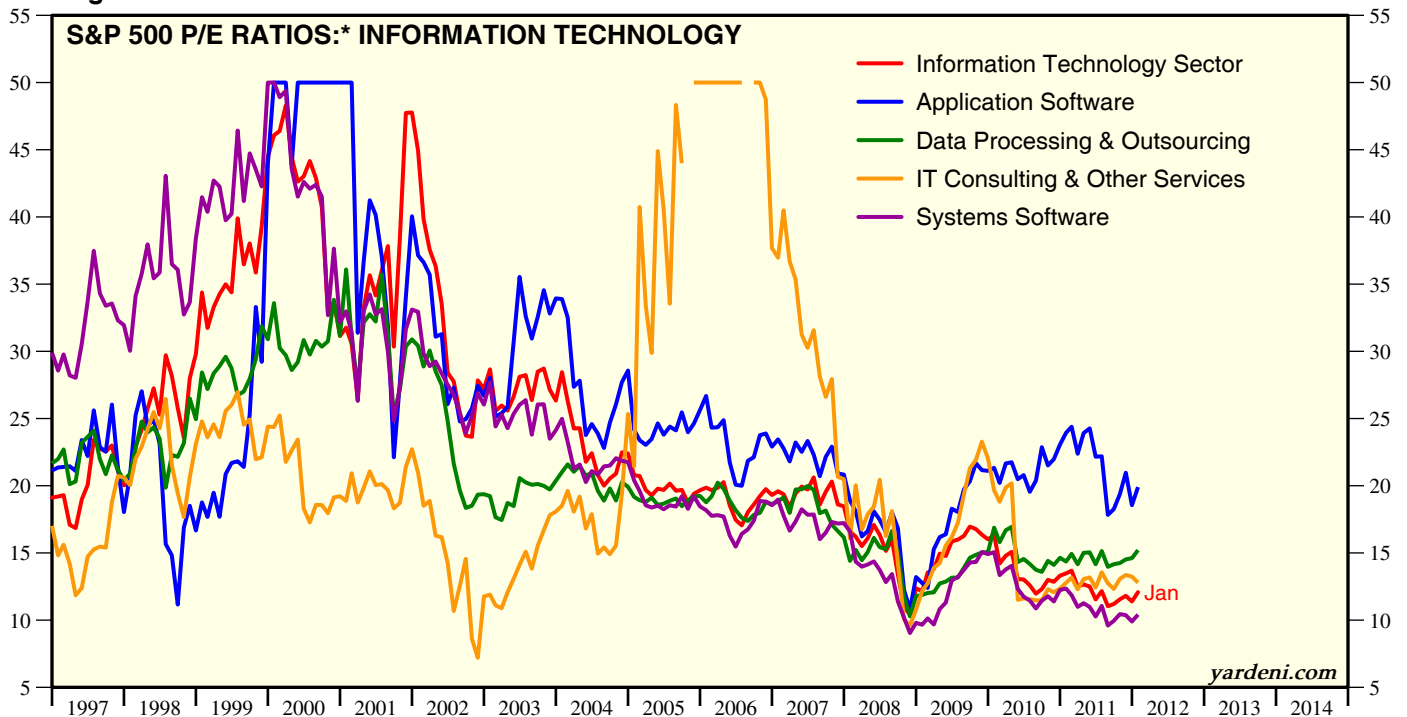
**Figure 38.**



\* Price divided by 12-month forward consensus expected operating earnings per share using mid-month data.  
Source: Thomson Reuters.

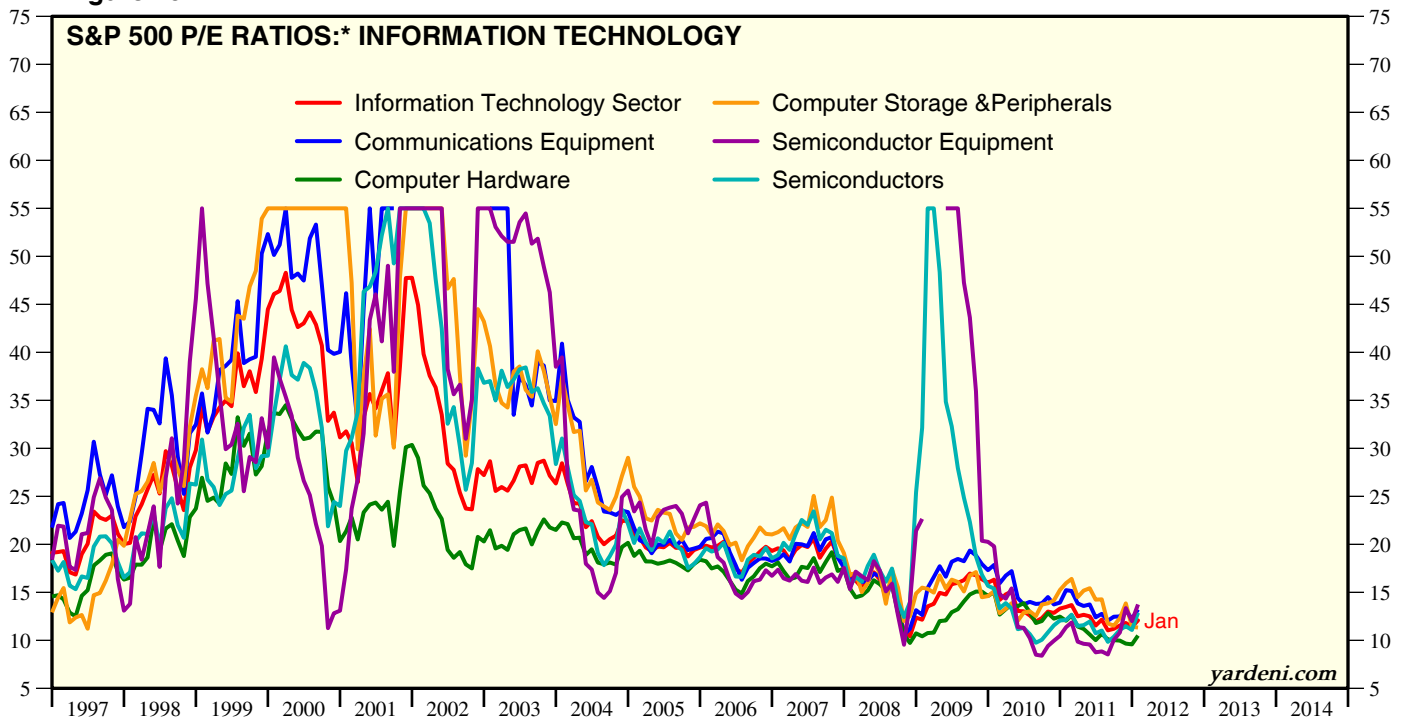
# - Information Technology P/Es -

**Figure 39.**



\* Price divided by 12-month forward consensus expected operating earnings per share using mid-month data.  
 PE capped at 50 for all industries.  
 Source: Thomson Reuters.

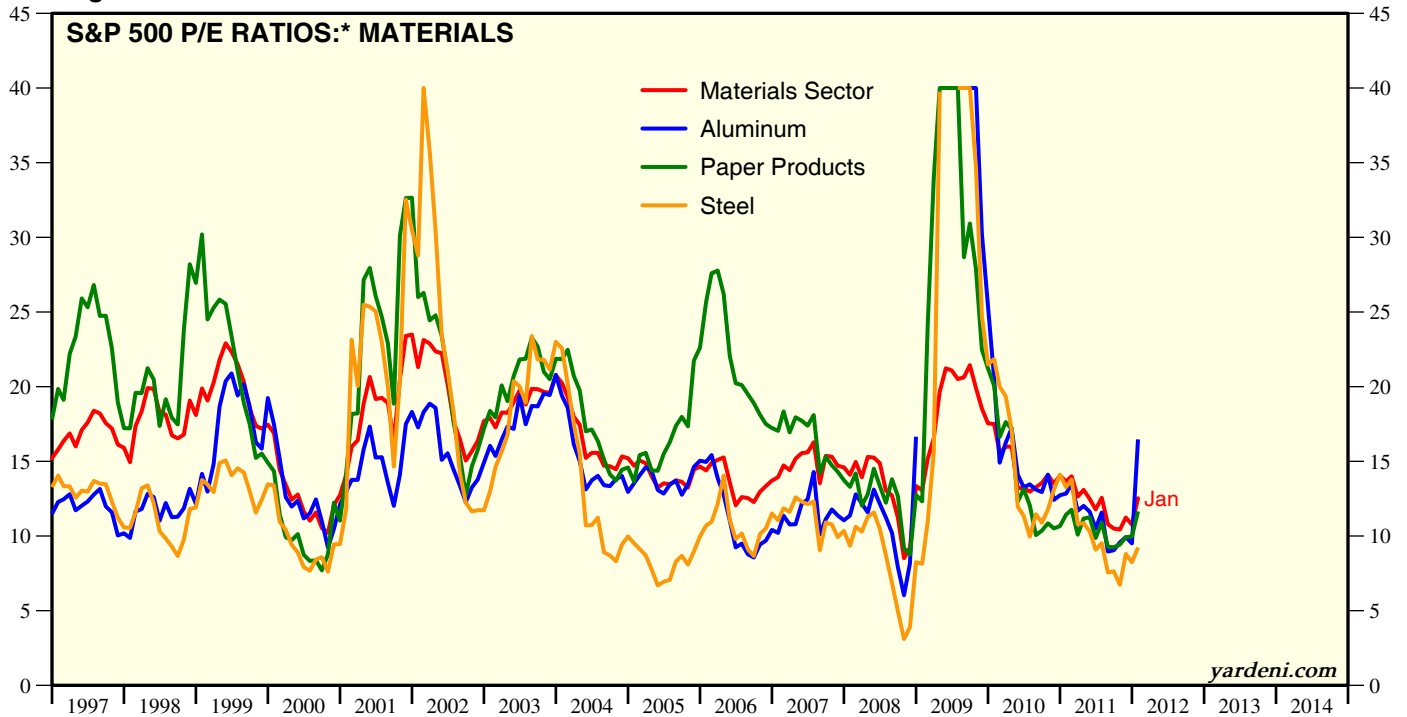
**Figure 40.**



\* Price divided by 12-month forward consensus expected operating earnings per share using mid-month data.  
 PE capped at 55 for all industries.  
 Source: Thomson Reuters.

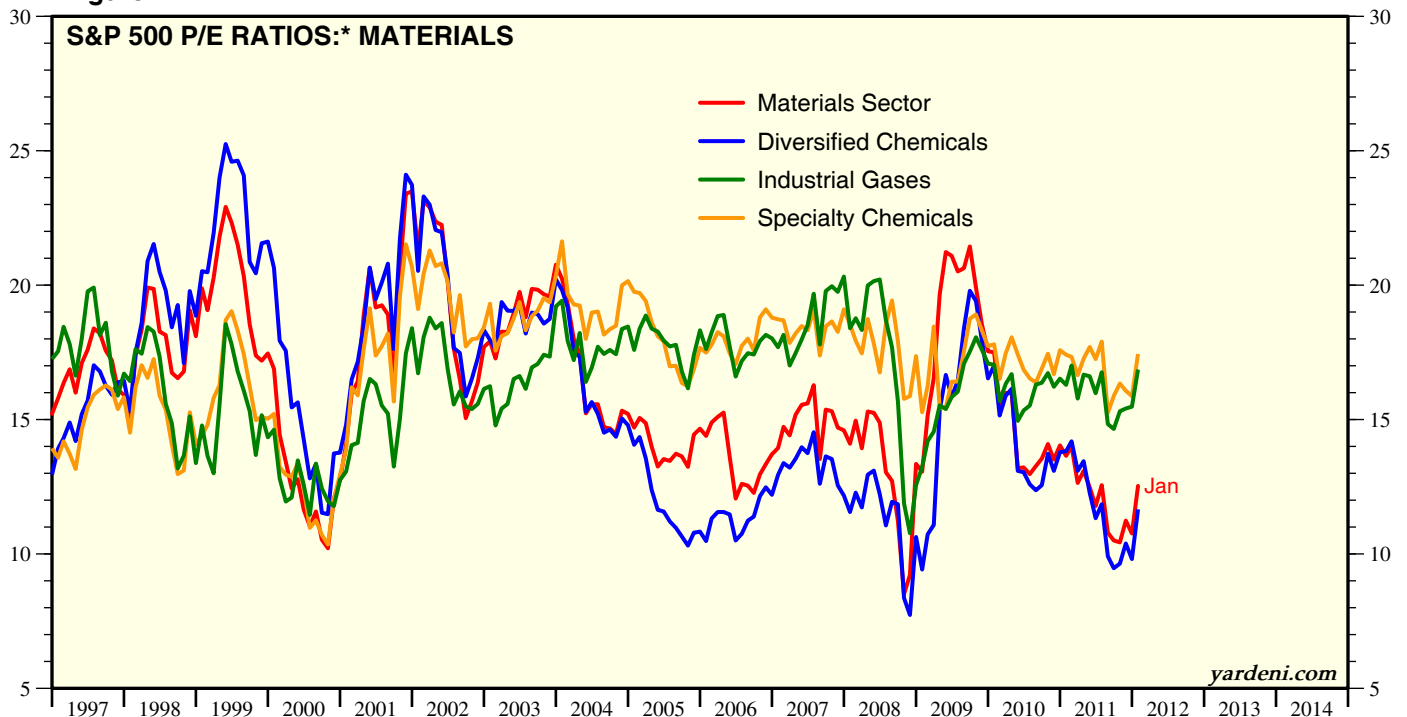
# - Materials P/Es -

**Figure 41.**



\* Price divided by 12-month forward consensus expected operating earnings per share using mid-month data.  
PE capped at 40 for all industries.  
Source: Thomson Reuters.

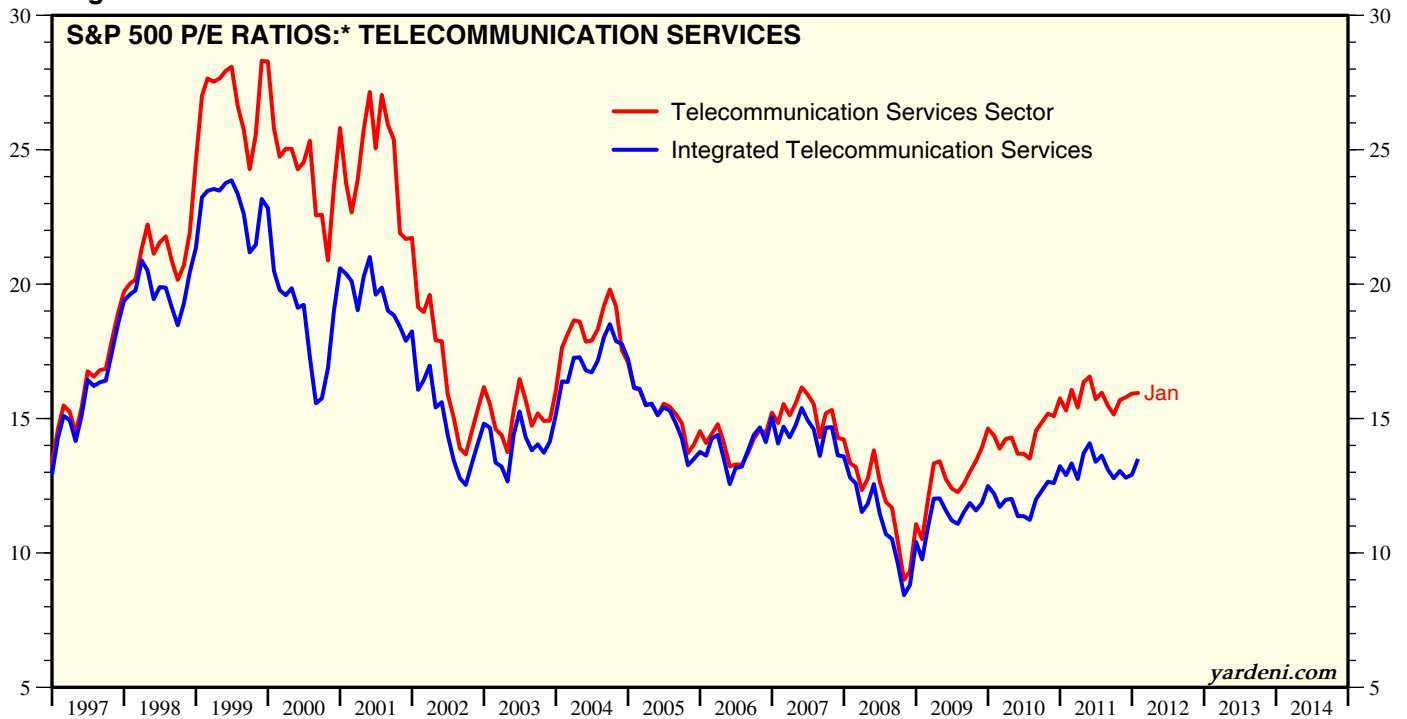
**Figure 42.**



\* Price divided by 12-month forward consensus expected operating earnings per share using mid-month data.  
Source: Thomson Reuters.

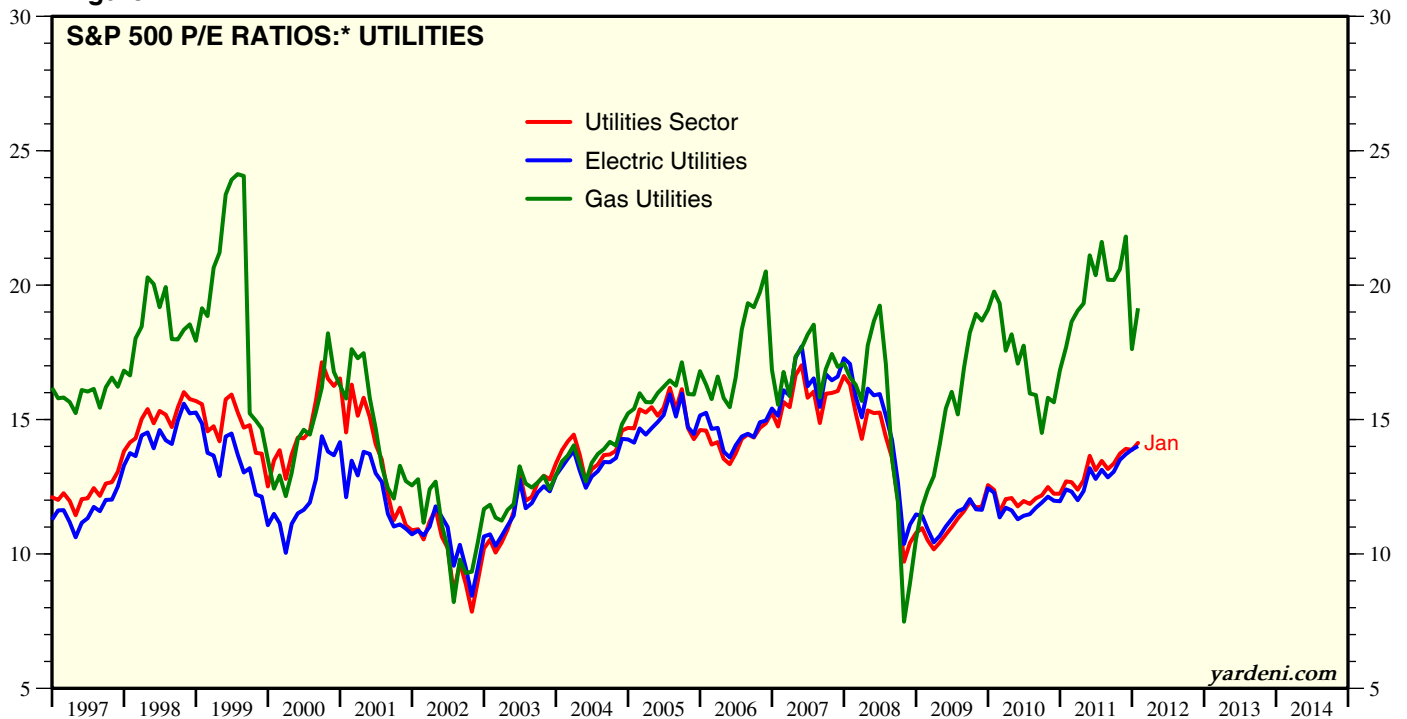
# - Telecommunication Services & Utilities P/Es -

Figure 43.



\* Price divided by 12-month forward consensus expected operating earnings per share using mid-month data.  
Source: Thomson Reuters.

Figure 44.



\* Price divided by 12-month forward consensus expected operating earnings per share using mid-month data.  
Source: Thomson Reuters.

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