

EQUITIES AND TOBIN'S Q

Edited by the Research Team of
THE MANUAL OF Ideas
 SERIOUS IDEAS FOR SERIOUS INVESTORS™

“The bottom line of monetary policy is its effect on capital investment, in business plant and equipment, residences, inventories, and consumer durable goods. The effect is not well represented by the market interest rates usually cited, or by quantities of money or credit. Our approach to monetary economics and macroeconomics led us naturally to a different measure, closer to investment decisions. This has become known as ‘Tobin’s q.’” —James Tobin



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About This Report

Equities and Tobin's Q, 1900-2010

—Evaluating the Market Outlook in the Context of a Century of History

In *Equities and Tobin's Q*, John Mihaljevic updates on a quarterly basis the Q estimation technique he refined with Nobel Laureate James Tobin at Yale University in 1996-97. Each report includes Flow of Funds data released by the U.S. Federal Reserve, discusses implications for equity investors of the Q ratio and selected other market valuation measures, and puts the Q ratio in historical context.

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About The Author

John Mihaljevic, CFA, served as James Tobin's research assistant from 1996-98 and worked with Professor Tobin to refine the Q estimation method. Mr. Mihaljevic was also involved in research projects at the Cowles Foundation, including researching James Tobin's *Money, Credit and Capital*.

Mr. Mihaljevic graduated *summa cum laude* from Yale, having earned distinction in the study of economics. In addition to working for and studying under Mr. Tobin, Mr. Mihaljevic studied under Yale Chief Investment Officer David Swensen and Sterling Professor of Economics William Nordhaus.

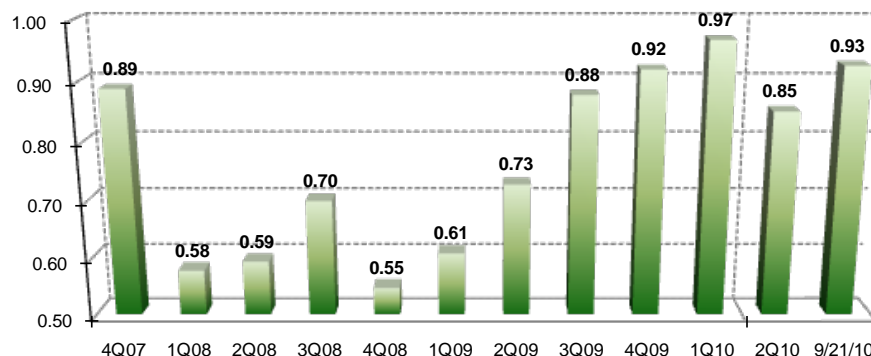
Mr. Mihaljevic has worked as an investment banker, equity analyst and investment manager. He currently serves as managing member of Mihaljevic Capital Management and managing editor of *The Manual of Ideas*.

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Tobin's Q Ratio, December 31, 2007 to September 21, 2010¹



¹ Tobin's Q as of September 21, 2010 represents an estimate based on data in the Fed's Z.1 release for the quarter ended June 30, 2010, as well as the subsequent change in the S&P 500 Index.

Source: The Federal Reserve, The Manual of Ideas analysis.

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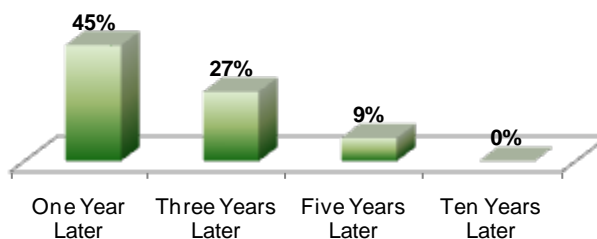
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Executive Summary: U.S. Equities Still Expensive

- **Tobin's Q has increased from 0.85 at the end of the second quarter to 0.93 as of September 21st**, based on data from the Federal Reserve and Manual of Ideas estimates. The most recent estimate is slightly above the Q ratio of 0.92 at the end of the year 2009.
- **During the second quarter, Q fell 12% sequentially along with a decline in equity prices.** The numerator of Q (market value of debt and equities adjusted for land value and net liquid assets) was down 14% in the quarter, while replacement cost decreased 2%.
- **We estimate that Q has risen 9% since June 30th, to 0.93 as of September 21st**, based on Q2 figures contained in the Fed's Z.1 release on September 17th, adjusted to reflect the 11% decline in the S&P 500 Index since the end of the second quarter. As our current Q estimate is based partly on data expected to be updated in the next Z.1 release on December 9th, we base the market outlook in this report both on the June 30th estimate of Q as well as our less precise estimate of the Q ratio as of September 21st.
- **We conclude that the market outlook has not changed materially from our last update.** Q still sends a neutral one-year market signal and bearish signals over three, five and ten years. The medium- to longer-term outlook improved during the second quarter as a result of the fall in the S&P 500 Index, but has since deteriorated slightly based on the rebound in U.S. equity prices. If the S&P 500 fell back to 919, the index level on June 30th, 2009, the medium- to long-term outlook would move from bearish to neutral.
- **We form our neutral near-term and bearish longer-term outlook by putting recent increases in Q in historical context.** Of the eleven instances when this occurred, Q was higher one year later in five instances and unchanged in one instance. Only three out of eleven times, Q was higher three years after the initial increase. Q was higher in only one instance five years after the initial increase. Ten years after each initial increase in Q to at least 0.85 in any year, Q was lower in ten out of ten instances (one more historical data point remains to be determined, as in one instance the increase in Q to 0.85 or above occurred from 2002-03, i.e., less than ten years ago).

When Tobin's Q rises to at least 0.85, is it higher or lower after one year, three years, five years and ten years?

(percentage of instances when subsequent Q was higher;
based on data from 1900-2010)



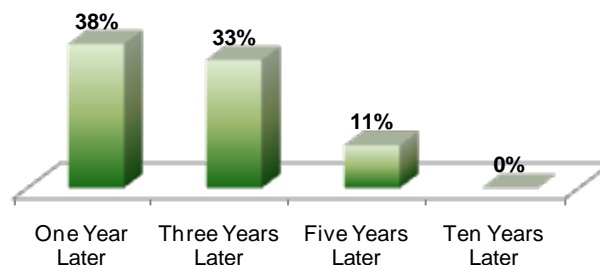
Source: The Manual of Ideas analysis.

- **A similar pattern is evident regarding the Q estimate of 0.93 as of September 21st.** Of the eight instances when Q initially rose to 0.93 or above, Q was higher one year later in three instances, lower in four instances and unchanged in one instance. Three out of nine times, Q was higher three years after the initial increase. It was lower in each of the

remaining five instances. Q was higher in only one instance and lower in seven instances five years after the initial increase to 0.93 or above. Ten years after each initial increase to at least 0.93 in any year since 1900, Q was lower in seven out of eight instances (one more historical data point remains to be determined, as in one instance the increase to 0.93+ occurred from 2002-03, i.e., less than ten years ago).

When Tobin's Q rises to at least 0.93, is it higher or lower after one year, three years, five years and ten years?

(percentage of instances when subsequent Q was higher; based on data from 1900-2010)



Source: The Manual of Ideas analysis.

- We repeat an important caveat regarding the bearish mid- to long-term outlook for U.S. equities: Erosion of Tobin's Q may not necessarily translate into declining equity prices if replacement cost increases at an accelerating pace due to inflation.** The replacement cost of structures, equipment, software, and inventories represents the denominator of the Q ratio. Replacement cost has historically increased at a single digit annual pace, though increases have been higher during inflationary periods. For Q to remain unchanged while replacement cost goes up, market value must increase at the same pace as replacement cost. Put differently, if replacement cost rises sharply, Q could decline even as market value remains constant or increases. If the Fed's "quantitative easing" and other liquidity-boosting measures, coupled with the government's record fiscal stimulus, produce a hyper-inflationary environment, equity prices could rise.
- Deflation concerns gain some credence in the short term,** as replacement cost was down 2% sequentially in Q2, after being up 1% in Q1 and flat in Q4 2009. Despite low single digit deflation in the short term, inflation remains the bigger risk, in our view.

Background and Significance of Tobin's Q

Putting Q in Historical Context

The following table shows instances when Tobin's Q initially increased to 0.85 or above—the level reached on June 30th. The analysis is based on annual data from 1900-2009.

- Of the eleven instances when this occurred, Q was higher one year later in five instances and unchanged in one instance.
- Only three out of eleven times, Q was higher three years after the initial increase.
- Q was higher in only one instance five years after the initial increase.
- Ten years after each initial increase in Q to at least 0.85 in any year, Q was lower in ten out of ten instances (one more historical data point remains to be determined, as in one instance the increase in Q to 0.85 or above occurred from 2002-03, i.e., less than ten years ago).

Analysis of Instances When Q Increased to 0.85 or Above, 1900-2010 ¹

	What Happened?	Was Q Higher or Lower In Years Following Rise to 0.85 or Higher?
1901-1902	<ul style="list-style-type: none"> ➤ Q increased from 0.68 in 1901 to 1.04 in 1902 ➤ Q fell to 0.83 in 1903 ➤ Q rebounded to 0.91 in 1904 and 1.08 in 1905 but fell back to 1.00 in 1906 	<ul style="list-style-type: none"> ➤ One year later: Q was lower ➤ Three years later: Q was higher ➤ Five years later: Q was lower ➤ Ten years later: Q was lower
1903-1904	<ul style="list-style-type: none"> ➤ Q increased from 0.83 in 1903 to 0.91 in 1904 ➤ Q rose to 1.08 in 1905 ➤ Q dropped to 1.00 in 1906 and 0.76 in 1907 but increased slightly to 0.78 in 1908 	<ul style="list-style-type: none"> ➤ One year later: Q was higher ➤ Three years later: Q was lower ➤ Five years later: Q was lower ➤ Ten years later: Q was lower
1908-1909	<ul style="list-style-type: none"> ➤ Q increased from 0.78 in 1908 to 0.89 in 1909 ➤ Q decreased slightly to 0.87 in 1910 ➤ Q dropped to 0.82 in 1911 and remained relatively flat at 0.83 in 1912 and 0.82 in 1913 	<ul style="list-style-type: none"> ➤ One year later: Q was lower ➤ Three years later: Q was lower ➤ Five years later: Q was lower ➤ Ten years later: Q was lower
1928-1929	<ul style="list-style-type: none"> ➤ Q increased from 0.82 in 1928 to 1.06 in 1929 ➤ Q decreased to 0.93 in 1930 ➤ It plummeted to 0.59 in 1931 and 0.30 in 1932 before rebounding to 0.48 in 1933 	<ul style="list-style-type: none"> ➤ One year later: Q was lower ➤ Three years later: Q was lower ➤ Five years later: Q was lower ➤ Ten years later: Q was lower
1934-1935	<ul style="list-style-type: none"> ➤ Q increased from 0.76 in 1934 to 0.98 in 1935 ➤ Q rose further to 1.08 in 1936 ➤ It decreased to 0.97 in 1937 and 0.75 in 1938, but rebounded to 0.91 in 1939 	<ul style="list-style-type: none"> ➤ One year later: Q was higher ➤ Three years later: Q was lower ➤ Five years later: Q was lower ➤ Ten years later: Q was lower
1938-1939	<ul style="list-style-type: none"> ➤ Q increased from 0.75 in 1938 to 0.91 in 1939 ➤ Q fell to 0.69 in 1940 ➤ It fell further to 0.57 in 1941 and 0.43 in 1942, but increased to 0.54 in 1943 	<ul style="list-style-type: none"> ➤ One year later: Q was lower ➤ Three years later: Q was lower ➤ Five years later: Q was lower ➤ Ten years later: Q was lower
1963-1964	<ul style="list-style-type: none"> ➤ Q increased from 0.80 in 1963 to 0.90 in 1964 ➤ Q increased further to 0.97 in 1965 ➤ Q fell to 0.80 in 1966 but rose to 0.96 in 1967 and 1.05 in 1968 	<ul style="list-style-type: none"> ➤ One year later: Q was higher ➤ Three years later: Q was higher ➤ Five years later: Q was lower ➤ Ten years later: Q was lower
1966-1967	<ul style="list-style-type: none"> ➤ Q increased from 0.80 in 1966 to 0.96 in 1967 ➤ Q increased further to 1.05 in 1968 ➤ Q decreased to 0.82 in 1969 and 0.75 in 1970, rebounding to 0.80 in 1971 	<ul style="list-style-type: none"> ➤ One year later: Q was higher ➤ Three years later: Q was lower ➤ Five years later: Q was lower ➤ Ten years later: Q was lower
1971-1972	<ul style="list-style-type: none"> ➤ Q increased from 0.80 in 1971 to 0.90 in 1972 ➤ Q plummeted to 0.61 in 1973 ➤ Q crashed to 0.29 in 1974 and then proceeded to rebound to 0.49 in 1975 and 0.53 in 1976 	<ul style="list-style-type: none"> ➤ One year later: Q was lower ➤ Three years later: Q was lower ➤ Five years later: Q was lower ➤ Ten years later: Q was lower
1991-1992	<ul style="list-style-type: none"> ➤ Q increased from 0.84 in 1991 to 0.96 in 1992 ➤ Q increased again to 1.03 in 1993 ➤ It fell back to 0.96 in 1994 before proceeding to 1.14 in 1995 and 1.26 in 1996 	<ul style="list-style-type: none"> ➤ One year later: Q was higher ➤ Three years later: Q was higher ➤ Five years later: Q was higher ➤ Ten years later: Q was lower
2002-2003	<ul style="list-style-type: none"> ➤ Q increased from 0.82 in 2002 to 1.07 in 2003 ➤ Q remained flat at 1.07 in 2004 ➤ It decreased to 0.91 in 2005 and 2006, then to 0.89 in 2005 	<ul style="list-style-type: none"> ➤ One year later: Q was the same ➤ Three years later: Q was lower ➤ Five years later: Q was lower ➤ Ten years later: Q was TBD

Source: The Manual of Ideas analysis.

¹ Based on adjusted Q ratio estimates from 1900-2009.

The following table shows instances when Tobin's Q initially increased to 0.93 or above—the level reached on September 21st. The analysis is based on annual data from 1900-2009.

- Of the eight instances when Q initially rose to 0.93 or above, Q was higher one year later in three instances, lower in four instances and unchanged in one instance.
- Three out of nine times, Q was higher three years after the initial increase. It was lower in each of the remaining five instances.
- Q was higher in only one instance and lower in seven instances five years after the initial increase to 0.93 or above.
- Ten years after each initial increase to at least 0.93 in any year since 1900, Q was lower in seven out of eight instances (one more historical data point remains to be determined, as in one instance the increase to 0.93+ occurred from 2002-03, i.e., less than ten years ago).

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	What Happened?	Was Q Higher or Lower In Years Following Rise to 0.91 or Higher?
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1904-1905	<ul style="list-style-type: none"> ➤ Q increased from 0.91 in 1904 to 1.08 in 1905 ➤ Q fell to 1.00 in 1906 ➤ Q dropped sharply to 0.76 in 1907 and rebounded to 0.78 in 1908 and 0.89 in 1909 	<ul style="list-style-type: none"> ➤ One year later: Q was lower ➤ Three years later: Q was lower ➤ Five years later: Q was lower ➤ Ten years later: Q was lower
1928-1929	<ul style="list-style-type: none"> ➤ Q increased from 0.82 in 1928 to 1.06 in 1929 ➤ Q decreased to 0.93 in 1930 ➤ It plummeted to 0.59 in 1931 and 0.30 in 1932 before rebounding to 0.48 in 1933 	<ul style="list-style-type: none"> ➤ One year later: Q was lower ➤ Three years later: Q was lower ➤ Five years later: Q was lower ➤ Ten years later: Q was lower
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1964-1965	<ul style="list-style-type: none"> ➤ Q increased from 0.90 in 1964 to 0.97 in 1965 ➤ Q dropped substantially to 0.80 in 1966 ➤ Q rebounded strongly to 0.96 in 1967 and 1.05 in 1968 before falling back to 0.82 in 1969 	<ul style="list-style-type: none"> ➤ One year later: Q was lower ➤ Three years later: Q was higher ➤ Five years later: Q was lower ➤ Ten years later: Q was lower
1966-1967	<ul style="list-style-type: none"> ➤ Q increased from 0.80 in 1966 to 0.96 in 1967 ➤ Q increased further to 1.05 in 1968 ➤ Q decreased to 0.82 in 1969 and 0.75 in 1970, rebounding to 0.80 in 1971 	<ul style="list-style-type: none"> ➤ One year later: Q was higher ➤ Three years later: Q was lower ➤ Five years later: Q was lower ➤ Ten years later: Q was lower
1991-1992	<ul style="list-style-type: none"> ➤ Q increased from 0.84 in 1991 to 0.96 in 1992 ➤ Q increased again to 1.03 in 1993 ➤ It fell back to 0.96 in 1994 before proceeding to 1.14 in 1995 and 1.26 in 1996 	<ul style="list-style-type: none"> ➤ One year later: Q was higher ➤ Three years later: Q was higher ➤ Five years later: Q was higher ➤ Ten years later: Q was lower
2002-2003	<ul style="list-style-type: none"> ➤ Q increased from 0.82 in 2002 to 1.07 in 2003 ➤ Q remained flat at 1.07 in 2004 ➤ It decreased to 0.91 in 2005 and 2006, then to 0.89 in 2005 	<ul style="list-style-type: none"> ➤ One year later: Q was the same ➤ Three years later: Q was lower ➤ Five years later: Q was lower ➤ Ten years later: Q was TBD
2009-2010 YTD	<ul style="list-style-type: none"> ➤ Q increased from 0.92 at yearend 2009 to 0.85 as of June 30, 2010 and 0.93 as of September 21, 2010 	<ul style="list-style-type: none"> ➤ One year later: TBD ➤ Three years later: TBD ➤ Five years later: TBD ➤ Ten years later: TBD

Source: *The Manual of Ideas* analysis.

¹ Based on adjusted Q ratio estimates from 1900-2009.

Investment Decisions and Tobin's Q

INVESTMENT MANAGEMENT

The Q Ratio as an Input into Investment Decision-Making Processes

Several studies have shown that stock market investments at times when the Q ratio was less than parity have produced above-average long-term returns. For example, Matthew Harney and Edward Tower, authors of "Rational Pessimism: Predicting Equity Returns using Tobin's q and Price/Earnings Ratios," summarize their conclusion as follows: "We discover that q beats all variants of the PE ratio for predicting real rates of return over alternative horizons."¹

The Manual of Ideas has analyzed three series of historical data on Tobin's Q in order to draw conclusions on specific Q values that might be used as buy or sell signals for U.S. equities.

- ▶ The data series include James Tobin's "old" and "new" methodologies and data provided by Olivier Blanchard, Chanyong Rhee and Larry Summers in 1992.
- ▶ The Tobin (new) methodology was developed jointly by James Tobin and John Mihaljevic in 1996-97. The Tobin (new) dataset accompanies this report and is available in Excel.
- ▶ Blanchard, Rhee and Summers (BRS) calculated the Q ratio going back to 1900. Their calculation showed Q at 1.26 in 1929, immediately prior to the Great Depression. Due to their series' upward bias as compared to the Tobin (new) methodology, we adjust the BRS estimate of Q downward to 1.06 for 1929. Similarly, we adjust their low estimate of Q of 0.36 in 1932 down to 0.30.

Based on the adjusted BRS series and the Tobin (new) series, we conclude that a **successful market-timing strategy over the past century would have been to buy U.S. equities when the Q ratio hit 0.40 or below, and to sell U.S. equities when then Q ratio hit 1.00.**²

The current estimated Q value of 0.93 puts us uncomfortably close to a Q sell signal.

Tobin's Q Ratio — Historical Buy and Sell Signals, 1900 – September 21, 2010



Source: The Federal Reserve; Blanchard, Rhee, and Summers; *The Manual of Ideas*.

¹ Access the Harney and Tower paper at <http://www.econ.duke.edu/Papers/Abstracts02/abstract.02.29.html>

² Empirical evidence suggests that a parity Q ratio (Q=1) should have been read as a sell signal. Without the benefit of historical experience, one might have assumed that Q=1 merely signaled fair value. However, if one adopts a "bargain hunter" mentality, it is quite easy to agree that it makes little sense to buy assets at market prices when such prices exceed replacement cost, even if the premium is very small. Entrepreneurship drives the American capitalist system, and the empirical parity Q sell signal suggests that, investment costs being equal, Americans have preferred to start a new business rather than invest in an existing one.

Economic Rationale

Tobin conceptualized the Q ratio as a measure of over- or undervaluation of publicly traded assets. In its simplest form, Q equals market value divided by replacement cost.

- ▶ **If the market value of an asset exceeds the cost of replacing it ($Q > 1$),** an incentive exists to recreate the asset and immediately sell it in the market at a premium to cost. As a result, incremental real investment will tend to force high Q ratios back down to parity ($Q \downarrow 1$).

- ▶ **No straightforward balancing mechanism exists in the case of low Q ratios,** i.e., when the market is valuing an asset below its replacement cost ($Q < 1$). When Q is less than parity, the market seems to be saying that the deployed real assets will not earn a sufficient rate of return and that, therefore, the owners of such assets must accept a discount to the replacement value if they desire to sell their assets in the market. If the real assets can be sold off at replacement cost, for example via an asset liquidation, such an action would be beneficial to shareholders because it would drive the Q ratio back up toward parity ($Q \uparrow 1$). In the case of the stock market as a whole, rather than a single firm, the conclusion that assets should be liquidated does not typically apply. A low Q ratio for the entire market does not mean that blanket redeployment of resources across the economy will create value. Instead, when market-wide Q is less than parity, investors are probably being overly pessimistic about future asset returns.

James Tobin explained the concept of Q as follows:

“The bottom line of monetary policy is its effect on capital investment, in business plant and equipment, residences, inventories, and consumer durable goods. The effect is not well represented by the market interest rates usually cited, or by quantities of money or credit. Our approach [the approach of James Tobin, William Brainard “and other colleagues at Yale”] to monetary economics and macroeconomics led us naturally to a different measure, closer to investment decisions. This has become known as “Tobin’s q.” It is the ratio of the market valuation of capital assets to their replacement costs, for example, the prices of existing houses relative to the costs of building comparable new ones. For corporate businesses, the market valuations are made in the securities markets. It is common sense that the incentive to make new capital investments is high when the securities giving title to their future earnings can be sold for more than the investment cost, i.e., when q exceeds one. We see the reverse in takeovers of companies whose qs are less than one it is cheaper to buy their productive assets by acquiring their shares than to construct comparable facilities from scratch. That is why in our models q is the link from the central bank and the financial markets to the real economy.”¹

¹ Tobin, James, *Volume 4: Essays in Economics: National and International*, Cambridge, MA: MIT Press, 1996, pp. 14-15.

Tobin expounded on the adjustment mechanism associated with Q in his book *Money, Credit, and Capital*:

“...old [i.e., existing] capital, adjusted for depreciation, and new are perfect substitutes in production. Therefore they should, as argued above, generally command the same price, at least in equilibrium [i.e., Q should equal 1]. However, the arbitrage necessary to maintain this parity does not operate instantaneously. A boom in the stock market increases the valuation of the plants and machines to which the owners of common shares hold title. The prices of new plants and machines do not rise as fast or as much. They will rise only as new orders are placed, production is raised, and marginal costs are increased. Meanwhile the discrepancy of market value from reproduction cost, of q from 1, of the valuation of existing capital from the price of new capital goods, works in two ways to restore portfolio balance equilibrium temporarily.”

“First, if the supply of currency is too large and that of [tangible] capital too small, increasing the market valuation of capital tends to correct the proportion by raising the share of capital in private wealth. Second, an increase in the market valuation of existing capital means a reduction in its market return. Wealth owners will therefore be satisfied to hold a smaller share of their wealth as capital. The marginal productivity of capital is a technological fact and is not altered by events in the stock market or other markets for used capital. It is the value of the yield of a unit of capital. But if the market price that must be paid to obtain the yield of a unit of capital exceeds its replacement cost, the return on the market price is smaller than the marginal productivity. Suppose that 100 units of capital, value at reproduction cost, yield in productive use a return of 10 per year. If the corresponding shares command 200 in the stock market, their market return is 5 percent instead of 10 percent. All this can occur within the financial and capital markets themselves, without any repercussions on commodity prices, production, and employment.”

“A third way that equilibrium can be restored is that arbitrage opportunities stimulate—or in the opposite case deter—the production of new capital goods. Discrepancy of market valuation from reproduction cost, with the corresponding discrepancy in the opposite direction of market return from marginal productivity, cannot be a permanent equilibrator of asset demands and supplies. The arbitrage opportunity—for example, buy a machine for 100 and collect 200 by selling shares in it—will presumably induce actions that tend somehow to eliminate the discrepancy.”

“This third equilibrator mechanism is slower and more fundamental. Any sustained and abnormal excess of the market value of capital goods over their costs of reproduction is an incentive to production of new capital goods. Or, to put the same point another way, capital formation is stimulated

when the market return from owning capital goods is smaller than their marginal productivity. An increase in the physical stock of capital may gradually take the place of the previous inflation valuation of the smaller existing stock. Moreover, relative abundance of capital will drive its actual marginal productivity down toward its market return. In this way a portfolio balance that initially required a large discrepancy of market value over reproduction cost can be maintained while the discrepancy is being eliminated. In a sense the stock market acts out in advance and in purely financial terms the subsequent and much slower adjustment of the physical stock of capital an its basic return.”

“A fourth possibility of adjustment is change in the expected real return on currency. If the supply of currency is excessive, one way to make wealth owners content is to increase the expected return on currency, to make them expect price deflation or slower inflation. Note, however, that the natural reaction to an excess supply of currency is to *raise* prices, as people try to buy capital. As already observed, the higher level of prices works in an equilibrating direction. But the rising prices themselves, and expectations of future price inflation, work the other way, damping the demand for currency an increasing demand for capital.”

“Thus the interaction of asset demands and asset supplies can be an important determinant of the course of prices and economic activity...”¹

A critique of Tobin's Q may include the following observations:

- **Q may be less relevant in an economy increasingly driven by intellectual property.** As the Q ratio does not consider the replacement cost of intangible assets (although it does include software), critics have pointed out that a “fair value” of Q should be higher today than several decades ago. We agree that an “equilibrium” value of Q is likely increasing slowly over time, but we also note that Q remains an important and reliable indicator of asset overvaluation. The Q ratio sent a strikingly bearish signal at the height of the Internet bubble, despite some critics’ observation at the time that the Q ratio should not have been relied upon because it excluded intangible assets.
- **The economic rationale behind the Q ratio is sound, but the underlying adjustment mechanism may take longer than most equity market investors can tolerate.** We agree with the observation that Tobin's Q should not be used a short-term market timing tool. The Q ratio derives its mean-reverting property from processes that take place in the real economy and, therefore, do not happen overnight. As a result, it may take years for the market value of equities to align closely with levels suggested by the Q ratio. However, at extreme levels of Q — below 0.40 or above 1.50 — Q's short-term signaling power increases markedly. As a result, in times of extreme market dislocation, the Q ratio may be able to provide some guidance even to investors with relatively short time horizons.

¹ Tobin, James, *Money, Credit, and Capital*, Boston, MA: Irwin McGraw-Hill, 1998, pp. 106-107.

Warren Buffett's Intuitive Use Of The Q Ratio

Buffett is famous for advocating investment in businesses with wide moats, i.e., with sustainable competitive advantage. As the following quote from Buffett shows, this idea dovetails nicely with the concept of replacement value (Tobin's Q). The cost of "replacing" a business with a wide moat would likely be significantly higher than the GAAP book value of that firm. Said Buffett,

"The test of a franchise is what a smart guy with a lot of money could do to it if he tried. If you gave me a billion dollars, and first draft pick of fifty business managers throughout the United States, I could absolutely cream both the business world and the journalistic world. If you said, "Go take the *Wall Street Journal* apart," I would hand back the billion dollars. Reluctantly, but I would hand it back to you. The real test of a business is how much damage a competitor can do, even if he is stupid about returns. The trick is to find the ones that haven't been identified by someone else."¹

By citing the *Wall Street Journal* as an example of a company with a wide moat, Buffett may have wanted to point out that some companies have built value over time, value that cannot be equaled even if significant capital is deployed to create a replica. Those companies have components of value into which financial capital is not readily convertible. In other words, those aspects of value (e.g., reputation, long-term customer contracts) have evolved over time or for other non-financial reasons and can only be reasonably replaced through similar processes. Most of Buffett's equity investments are good examples of companies with wide moats, including Coca-Cola, GEICO, Wells Fargo, Gillette, and American Express. We would argue that the following companies also have wide moats and would be great long-term investments at the appropriate price: Sony, due to its brand and design leadership in consumer electronics, despite high competition and pricing pressure in its industry; BMW, due to a defensible niche and intensely loyal customer base, despite tough industry conditions; and eBay, due to large barriers to entry and scale advantage.

A note on using replacement value as a basis for investment decisions: **It is a necessary but not sufficient condition that the replacement cost of a company exceed the equity market value.** If replacement value is below market value, competitors are likely to enter the industry. If replacement value exceeds market value, the investor should verify that returns on invested capital exceed the cost of capital. There is no use investing in a company with a high replacement value if no one would want to "replace" it anyway because of unattractive industry conditions.

¹ Train, John, *Money Masters of Our Time* (New York, New York: HarperCollins Publishers, 2000): 16-17.

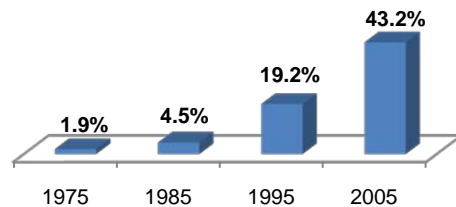
Adjusting Q To Reflect Intangible Assets

We present a proprietary methodology of “normalizing” historical Tobin’s Q to reflect the fact that intangible assets have increased as a proportion of total corporate assets over time. This methodology is still in “beta,” as we improve the quality of the data inputs and the adjustment mechanism itself. Nonetheless, we hope you will find value in this initial attempt at normalizing Q. *We caution that any normalization of Q for intangibles is likely to result in more aggressively bullish interpretations of the outlook suggested by Q, perhaps inappropriately so.*

A criticism of the Tobin’s Q approach to valuing equities has been that Q fails to incorporate **intangibles**, which play an increasingly important role in the U.S. economy. Critics argue that by ignoring intangibles, Q understates true replacement cost. This results in estimates of Q that are higher than “true” Q, making assets appear overvalued when they are fairly valued or undervalued.

There is no dispute that intangibles play a greater role in our economy today than a decade or a century ago. As the following chart shows, intangible net worth as a percentage of total book value of companies in the S&P 500 Index has increased from 2% in 1975 to 43% in 2005. We find it quite remarkable that intangibles accounted for only 2% of book value as late as 1975.

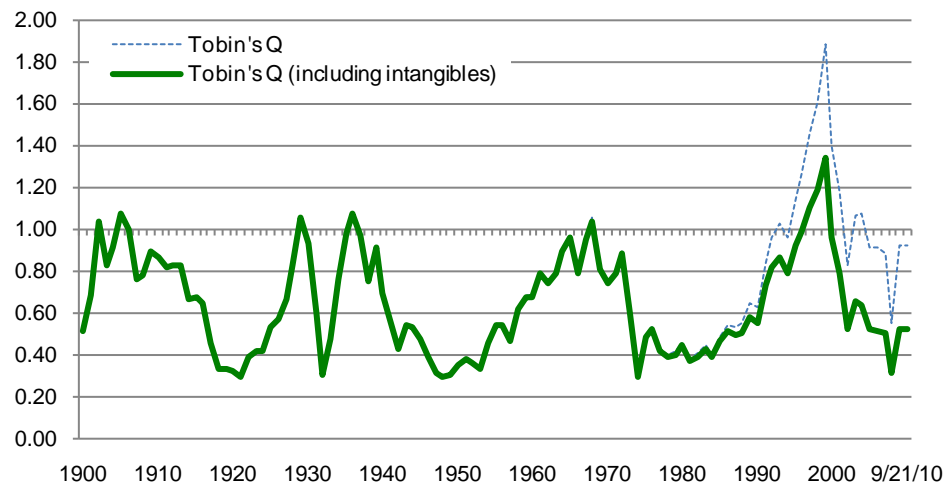
S&P 500 — Intangible Book Value as % of Total Book Value



Source: Ocean Tomo, Ned Davis Research.

The following chart compares Tobin’s Q as calculated elsewhere in this report to Tobin’s Q adjusted for intangible assets. The two time series are identical from 1900 through 1945, as we assume that intangibles were negligible until 1945. We further assume that intangible net worth as a percentage of book value started climbing from zero in 1945 to 1.9% in 1975, etc.

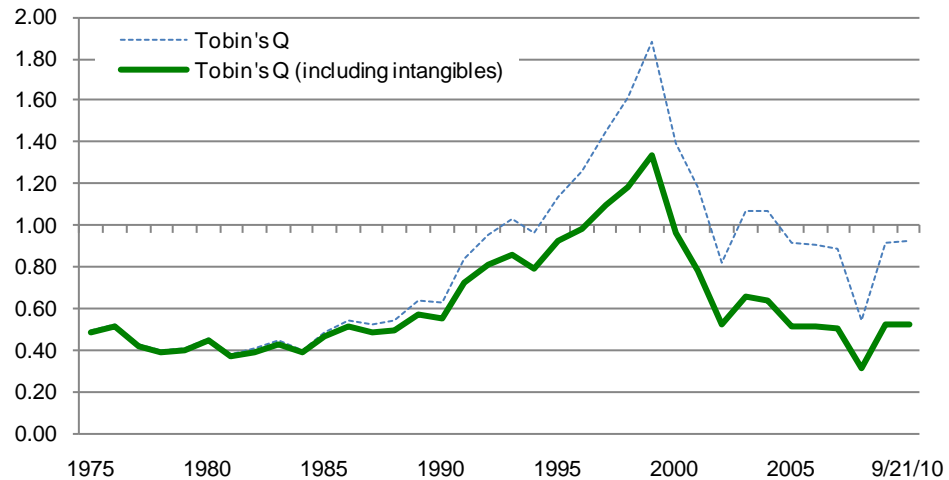
Tobin’s Q versus Tobin’s Q Adjusted for Intangible Assets, 1900 – September 21, 2010



Source: The Manual of Ideas analysis.

The following chart is identical to the preceding chart, except that we make the differences between the two time series more noticeable by showing data since 1975 only. As the chart shows, Tobin's Q adjusted for intangible assets has been materially lower than traditional Q over the past two decades.

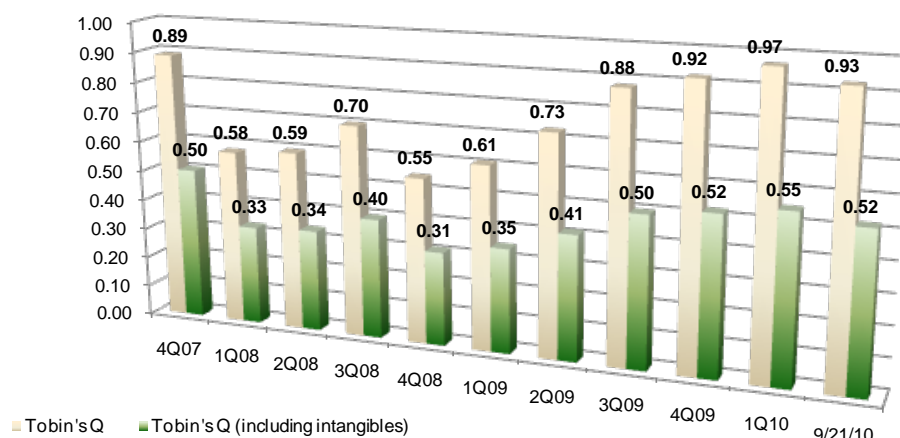
Tobin's Q versus Tobin's Q Adjusted for Intangible Assets, 1975 – September 21, 2010



Source: *The Manual of Ideas* analysis.

The following chart shows the same comparison on a quarterly basis since the fourth quarter of 2007, including the most recent data point as of September 21st, 2010. Once again, the difference between the two time series is rather striking. Obviously, the choice of time series will have a pronounced impact on conclusions regarding the outlook for equities. Since we regard our analysis in this regard as a “work in progress,” we are not inclined to make predictions based on Tobin's Q adjusted for intangible assets.

Tobin's Q versus Tobin's Q Adjusted for Intangible Assets, Q4 2007 – September 21, 2010



Source: *The Manual of Ideas* analysis.

Tobin's Q Estimates For 1,000 Largest Public Companies

In this section, we present Tobin's Q estimates for the 1,000 largest U.S.-listed public companies (ranked by market value). The table shown on the following pages includes three estimates of Q for each company: a current estimate, last quarter's estimate, and an estimate of Tobin's Q one year ago. The table is sorted by economic sector and industry classification in order to allow for easy comparison of companies within particular industries.

The Tobin's Q estimates presented in the following table are based on an estimation method developed by finance professors Kee H. Chung and Stephen W. Pruitt in a 1994 paper entitled, *A Simple Approximation of Tobin's q*. Chung and Pruitt presented a formula that can be calculated using publicly available and easily verifiable company-specific accounting and market pricing data. Chung and Pruitt show that at least 96.6% of the variability of Tobin's q, as calculated more elaborately by Lindenberg and Ross (1981), is explained by the "approximate Q" presented herein.

Chung and Pruitt define approximate Q as follows:

$$\text{Tobin's } Q = \frac{MVE + PS + DEBT}{TA}$$

where

MVE equals the market value of the common equity of a firm;

PS equals the liquidating value of the firm's preferred stock;

DEBT equals current liabilities minus current assets, plus book value of long-term debt;

TA equals the book value of the total assets of the firm.

Company-specific Tobin's Q ratios vary significantly from industry to industry and, to a lesser degree, within industries, as evidenced in the table below. The variability across industries is primarily due to the fact that companies in some industries employ relatively little capital and therefore generate unusually high returns on capital. Those types of companies typically trade at higher Q ratios than companies in capital-intensive, cyclical industries.

The Q estimation method used herein has one major drawback—it is not good at dealing with truly exceptional businesses, i.e., companies that have a large off-balance sheet intangible source of sustainable business value. Companies that fall into this category may include the likes of Coca-Cola, Microsoft and Walt Disney. That said, the Q ratios shown on the following pages can also serve as a valuable "reality check" to investors: If a company has a Q ratio meaningfully in excess of parity, the market may be pricing in *sustainable* long-term outperformance. In such cases, investors may want to verify their assumptions about the true sustainability of a company's high returns on capital.

Industry	Company (Ticker)	Price (\$)	Δ to Reach		MV (\$mn)	EV (\$mn)	Price/ Book	Tobin's Q			
			52-Week					Now	Last Quarter	Year Ago	
			Low	High							
Advertising	WPP (WPPGY)	55.69	-26%	3%	13,997	18,661	1.5	.6	1.9	.5	
	Omnicom (OMC)	39.22	-15%	12%	11,819	13,484	3.1	.9	2.1	1.0	
	Publicis Groupe S.A. (ADR) (PUBGY)	22.65	-17%	2%	8,102	9,090	9.1	2.7	1.0	.7	
	Interpublic Group (IPG)	9.65	-41%	27%	4,717	4,910	2.4	.5	.7	.5	
	Clear Channel Outdoor Hol (CCO)	10.75	-40%	23%	3,826	5,772	1.6	.8	1.2	.6	
Aerospace and Defense	Boeing (BA)	62.95	-25%	21%	46,059	48,979	>9.9	.8	1.1	.8	
	Honeywell International (HON)	43.82	-19%	11%	33,838	38,869	3.8	1.0	.7	.9	
	Lockheed Martin (LMT)	69.75	-3%	25%	25,284	26,704	6.8	.8	.9	1.0	
	General Dynamics (GD)	62.69	-12%	26%	23,846	25,855	1.9	.8	1.5	.9	
	Northrop Grumman (NOC)	58.91	-16%	18%	17,333	19,500	1.3	.7	.7	.7	
	Rolls-Royce (RYCEY)	45.33	-22%	6%	16,810	17,149	3.5	.7	.6	.6	
	Rockwell Collins (COL)	58.41	-19%	16%	9,182	9,417	5.8	1.8	1.3	1.7	
	Goodrich Corp. (GR)	71.97	-28%	8%	9,017	10,180	3.0	.9	2.6	.8	
	L-3 Comms (LLL)	70.73	-7%	38%	8,097	11,609	1.2	.6	1.8	.8	
	Embraer - Empr Bras Aeron (ERJ)	27.88	-31%	1%	5,163	5,009	2.1	.5	.0	.4	
	FLIR Systems (FLIR)	27.24	-12%	22%	4,307	4,023	3.3	2.3	.3	2.7	
	Air Courier	UPS (UPS)	66.68	-20%	6%	66,060	72,304	8.4	2.1	1.0	1.9
		FedEx (FDX)	82.28	-15%	19%	25,885	26,095	1.8	1.0	5.3	1.0
TNT N.V. (ADR) (TNTTY)		25.7	-9%	26%	9,609	11,137	3.3	1.2	3.1	1.3	
Airline	Lan Airlines S.A. (ADR) (LFL)	28.3	-57%	8%	9,588	11,580	8.7	2.1	.8	1.4	
	Ryanair (RYAAY)	30.24	-29%	4%	8,970	9,291	2.3	1.0	1.0	1.2	
	Southwest Airlines Co. (LUV)	11.83	-32%	18%	8,825	9,148	1.6	.8	1.1	.7	
	Delta Air Lines (DAL)	11.18	-39%	34%	8,819	20,168	>9.9	.6	1.0	.6	
	Lufthansa (DLAKY)	17.25	-28%	9%	7,899	10,337	.9	.4	.5	.5	
	China Eastern Airlines Co (CEA)	27.22	-51%	10%	6,140	14,300	4.3	1.1	1.6	.9	
	Air France - KLM (AFLYY)	14.65	-27%	30%	4,398	13,038	.6	.5	2.5	.5	
	British Airways (BAIRY)	18.25	-29%	6%	4,211	7,737	1.4	.7	1.4	.5	
	China Southern Airlines L (ZNH)	26.05	-45%	4%	4,171	12,993	2.3	1.0	1.9	.8	
	Gol Linhas Aereas Intelig (GOL)	14.9	-36%	13%	3,998	5,000	2.5	1.1	1.2	.9	
	UAL Corp. (UAUA)	21.95	-72%	14%	3,696	7,964	n/m	.6	.7	.6	
	TAM S.A. (ADR) (TAM)	22.36	-44%	16%	3,367	6,507	7.4	.9	.8	.8	
	Apparel/Accessories	Coach (COH)	41.55	-25%	7%	12,357	11,686	8.2	4.7	1.0	3.7
Polo Ralph Lauren (RL)		87.67	-19%	9%	8,404	7,675	2.8	1.6	2.7	1.5	
V.F. Corp. (VFC)		77.48	-11%	15%	8,369	9,011	2.3	1.2	.5	1.1	
Phillips-Van Heusen (PVH)		58.08	-34%	17%	3,854	6,063	1.9	.9	n/a	.9	
Gildan Activewear (GIL)		28.92	-43%	13%	3,508	3,307	3.3	2.3	.0	1.8	
Appliances & Tools	Stanley Black Decker (SWK)	59.59	-31%	11%	9,872	11,364	1.5	.7	.8	.9	
	Electrolux AB (ADR) (ELUXY)	44.69	-14%	21%	6,903	6,861	2.5	.6	3.2	.6	
	Whirlpool (WHR)	74.49	-12%	59%	5,662	7,339	1.5	.5	.5	.5	
	Makita (MKTAY)	30.38	-16%	31%	4,181	2,955	1.2	.4	.4	.6	
Audio & Video Equipment	Sony (SNE)	30.92	-16%	31%	31,028	26,500	.9	.3	.8	.3	
	Philips Electronics (PHG)	29.99	-24%	20%	28,350	28,491	1.4	.7	.3	.6	
	Panasonic (PC)	12.98	-6%	32%	26,849	29,481	.9	.3	.4	.3	
	Sharp (SHCAY)	10.01	-6%	38%	10,915	17,564	.9	.4	1.1	.5	
	SANYO Electric Co., Ltd. (SANYY)	8.04	-21%	67%	9,875	12,950	7.6	.7	.7	.4	
Auto & Truck Makers	Toyota (TM)	71.51	-6%	29%	112,123	209,886	.9	.5	2.3	.5	
	Honda (HMC)	34.94	-19%	7%	63,223	98,471	1.2	.6	.7	.5	
	Volkswagen (VLKAY)	20.85	-24%	75%	48,493	116,194	1.0	.3	.5	.4	
	Ford Motor Company (F)	12.49	-47%	17%	42,957	142,020	n/m	.9	1.3	.8	
	Nissan (NSANY)	16.56	-22%	8%	34,645	70,183	1.0	.4	1.4	.3	
	Volvo (VOLVY)	13.48	-39%	1%	27,330	42,303	2.8	.8	2.2	.6	

Industry	Company (Ticker)	Price (\$)	Δ to Reach		MV (\$mn)	EV (\$mn)	Price/ Book	Tobin's Q		
			52-Week					Now	Last Quarter	Year Ago
			Low	High						
	Fiat S.p.A. (ADR) (FIATY)	13.55	-28%	26%	16,760	38,147	1.2	.2	.3	.3
	PACCAR (PCAR)	45.5	-26%	7%	16,586	19,591	3.3	1.1	3.0	.8
	Tata Motors (TTM)	23.3	-51%	3%	10,481		n/m	n/a	.5	n/a
Auto & Truck Parts	Magna International (MGA)	77.83	-50%	11%	8,780	7,236	1.2	.5	.6	.2
	Genuine Parts Company (GPC)	43.48	-20%	4%	6,853	6,941	2.6	.9	1.3	.8
	Borg Warner (BWA)	47.65	-42%	3%	5,433	6,212	2.7	1.2	1.5	.8
	Autoliv (ALV)	61.29	-49%	0%	5,423	5,842	2.1	1.0	.1	.7
	TRW Automotive (TRW)	36.4	-60%	10%	4,355	5,632	2.9	.7	.5	.5
	Lear (LEA)	74.03	-47%	15%	3,662	3,094	1.8	.5	4.4	.4
Beverages (alcoholic)	Anheuser-Busch (BUD)	55.36	-22%	2%	88,842	131,160	2.8	1.2	.6	n/a
	Co. Bebidas Americas (ABV)	120.08	-35%	1%	73,936	74,438	5.4	3.2	.7	2.3
	Diageo (DEO)	67.25	-17%	7%	42,141	53,710	6.7	1.7	1.7	1.9
	Heineken (HINKY)	24.2	-17%	9%	27,878	40,127	2.1	1.1	1.1	1.2
	Kirin Holdings Company, L (KNBWY)	13.94	-10%	20%	13,288	22,832	1.1	.6	5.0	.7
	Molson Coors (TAP)	45.5	-16%	13%	8,460	9,394	1.2	.8	2.4	.9
	Constellation Brands (STZ)	17.96	-19%	5%	3,788	7,785	1.6	.8	1.1	.7
	Compania Cervecerias (CCU)	56.7	-42%	6%	3,619	3,985	3.7	1.7	1.8	1.2
Beverages (non-alcoholic)	Coca-Cola (KO)	57.56	-14%	3%	132,933	134,476	5.2	2.7	.4	2.7
	PepsiCo (PEP)	66.12	-12%	2%	105,193		5.4	1.9	.6	2.6
	Fomento Economico (FMX)	51.96	-32%	1%	92,858	95,010	>9.9	5.9	.9	5.0
	Coca-Cola Enterprise (CCE)	30.19	-38%	1%	15,173	22,635	>9.9	1.3	2.2	1.1
	Coca-Cola FEMSA (KOF)	80	-41%	1%	14,756	15,250	2.9	1.9	.7	1.2
	Coca-Cola HBC (CCH)	24.83	-20%	15%	9,084	12,247	2.5	1.2	.5	1.3
	Dr Pepper Snapple (DPS)	35.31	-28%	14%	8,434	10,591	3.0	1.2	2.2	1.2
	Hansen Natural (HANS)	45.48	-47%	5%	4,010	3,538	5.9	3.5	1.8	3.6
Biotechnology & Drugs	Sanofi-Aventis (SNY)	32.77	-15%	27%	85,511	93,587	1.3	.7	1.5	1.1
	Novo Nordisk (NVO)	93.09	-34%	1%	55,785	53,911	9.7	5.5	.7	4.0
	Amgen (AMGN)	55.22	-9%	13%	52,927	50,136	2.3	1.2	.6	1.5
	Teva Pharma (TEVA)	53.48	-12%	21%	50,004	52,143	2.6	1.4	.1	1.4
	Gilead Sciences (GILD)	34.56	-8%	43%	28,985	28,671	4.4	2.6	.0	4.9
	Celgene (CELG)	55.25	-13%	19%	25,385	22,240	5.2	3.5	5.2	4.8
	Allergan (AGN)	65.21	-18%	3%	19,786	19,098	3.9	2.4	.3	2.4
	Genzyme (GENZ)	70.15	-35%	1%	17,877	18,157	2.8	1.8	2.1	1.3
	McKesson (MCK)	62.35	-10%	15%	16,302	15,315	2.4	.5	.2	.6
	Biogen Idec (BIIB)	57.92	-28%	4%	14,012	14,122	2.7	1.8	n/a	1.6
	Shire Plc. (ADR) (SHPGY)	68.65	-29%	4%	12,864	13,288	6.1	2.7	.8	2.4
	Cardinal Health (CAH)	32.64	-20%	12%	11,462	10,836	2.2	.5	1.2	.2
	Eisai Co., Ltd (ADR) (ESALY)	35.3	-10%	14%	10,058	13,074	2.2	.9	2.3	1.0
	Hospira (HSP)	55.68	-23%	7%	9,316	10,274	3.2	1.6	.2	1.4
	Forest Labs (FRX)	31.25	-23%	6%	8,923	5,633	2.0	.9	1.4	1.0
	Life Technologies (LIFE)	46.51	-12%	21%	8,526	10,480	1.9	1.2	.9	1.2
	AmerisourceBergen (ABC)	30.18	-29%	10%	8,415	8,465	2.9	.6	.8	.6
	Vertex Pharmaceuticals (VRTX)	36.25	-14%	22%	7,353	6,515	8.9	4.1	3.8	4.2
	Edwards Lifesciences Corp (EW)	55.81	-40%	10%	6,326	6,183	5.7	3.6	1.0	2.4
	Dendreon Corp. (DNDN)	42	-41%	37%	6,047	5,643	>9.9	7.7	.8	8.1
	Warner Chilcott (WCRX)	22.75	-14%	34%	5,738	7,933	2.9	1.5	.9	2.3
	Perrigo Company (PRGO)	61.95	-50%	6%	5,680	6,926	5.2	2.0	.6	1.4
	Mylan (MYL)	18.2	-15%	30%	5,629	10,059	1.9	.8	.5	.8
	Human Genome Science (HGSI)	29.4	-41%	17%	5,532	5,532	8.0	3.9	2.2	4.5
	Alexion Pharma (ALXN)	60.07	-28%	2%	5,414	5,170	6.8	5.6	1.2	7.0
	Watson Pharma (WPI)	43.29	-22%	4%	5,406	6,413	1.7	1.0	.4	.9
	Dr. Reddy's Laboratories (RDY)	31.61	-44%	5%	5,374	5,471	5.9	3.0	.9	1.7

Industry	Company (Ticker)	Price (\$)	Δ to Reach		MV (\$mn)	EV (\$mn)	Price/ Book	Tobin's Q			
			52-Week					Now	Last Quarter	Year Ago	
			Low	High							
Broadcasting & Cable	Valeant Pharma (VRX)	64.6	-60%	2%	4,905	5,867	>9.9	3.0	.6	1.8	
	Cephalon (CEPH)	62.26	-15%	17%	4,682	4,768	2.1	.9	.8	.8	
	Biovail (BVF)	26.6	-51%	3%	4,219	4,355	3.1	2.1	.1	1.4	
	NBTY (NTY)	54.82	-42%	0%	3,477	3,616	2.6	1.4	.2	1.2	
	Endo Pharma (ENDP)	29.61	-35%	1%	3,417	2,757	2.2	1.0	1.6	1.0	
	Walt Disney (DIS)	34.56	-22%	10%	66,100	75,776	1.7	1.1	1.8	1.0	
	Comcast (CMCSA)	17.64	-21%	17%	49,508	76,419	1.1	.7	.1	.7	
	DIRECTV (DTV)	41.67	-40%	1%	37,028	43,737	>9.9	2.6	2.6	2.0	
	News Corp. (NWSA)	13.53	-18%	26%	35,458	40,069	1.4	.7	2.5	.7	
	Time Warner (TWX)	31.24	-16%	9%	35,121	47,403	1.1	.7	.7	.6	
	Viacom (VIA.B)	35.26	-25%	5%	21,444	27,525	2.3	1.3	.3	1.2	
	Time Warner Cable (TWC)	50.96	-25%	17%	18,112	38,845	2.0	.9	1.7	.9	
	Naspers Limited (ADR) (NPSNY)	43.25	-26%	5%	13,629	13,888	>9.9	5.1	.9	5.6	
	Discovery Comms (DISCA)	41.99	-37%	0%	11,952	14,852	1.8	1.3	.1	1.4	
	Grupo Televisa, S.A. (ADR) (TV)	19.4	-12%	14%	10,827	11,193	3.5	1.1	.7	1.1	
	CBS (CBS)	15.12	-25%	12%	10,293	15,997	1.1	.6	1.5	.6	
	Shaw Communications (USA) (SJR)	21.34	-20%	4%	9,167	12,957	3.5	1.4	1.2	1.3	
	DISH Network (DISH)	18.77	-9%	29%	8,405	12,317	n/m	1.6	.8	1.9	
	Business Services	Cablevision (CVC)	26.08	-30%	8%	7,949	18,896	n/m	2.5	1.9	1.8
		Scripps Networks (SNI)	45.65	-21%	5%	7,591	8,145	4.9	2.4	.6	3.1
Liberty Interactive (LINTA)		12.6	-22%	33%	7,536	12,531	1.3	.7	1.7	.7	
Liberty Global (LBTYA)		29.6	-37%	1%	7,213	24,058	2.7	.9	.5	.8	
Net Servicios de Comunicac (NETC)		13.03	-30%	15%	4,444	5,138	2.1	1.1	1.6	3.0	
Sirius XM Radio (SIRI)		1.13	-55%	11%	4,375	7,144	>9.9	1.2	.9	.9	
Liberty Capital (LCAPA)		49.73	-59%	1%	4,350	5,214	2.0	.8	2.0	.4	
Charter Comms (CCMM)		34.5	-16%	16%	3,957	16,574	2.4	1.1	1.2	.9	
Accenture (ACN)		40.56	-56%	10%	28,632	24,312	9.6	2.1	.3	1.7	
Automatic Data (ADP)		41.33	-36%	11%	20,335	18,704	3.7	.7	.1	.7	
Johnson Controls (JCI)		28.92	-18%	24%	19,472	21,929	2.1	.9	.7	.8	
Yahoo! (YHOO)		13.89	-7%	38%	18,728	16,108	1.5	1.1	1.8	1.5	
Marsh & McLennan Companie (MMC)		24.27	-17%	5%	13,166	15,279	2.2	1.0	.6	1.0	
Paychex (PAYX)		25.95	-5%	27%	9,380	9,013	6.7	1.7	.5	1.9	
Moody's (MCO)		25	-26%	24%	5,858	6,470	n/m	3.4	1.0	3.2	
Verisk Analytics (VRSK)		28	-7%	13%	5,011	5,430	>9.9	5.2	1.1	.7	
Hewitt Associates (HEW)		49.66	-32%	0%	4,567	4,456	4.6	1.5	2.1	1.2	
Iron Mountain (IRM)		20.41	-2%	41%	4,113	6,939	1.9	1.0	3.6	1.3	
Casinos & Gaming		Manpower (MAN)	48.5	-18%	30%	3,988	4,084	1.5	.5	.9	.6
		Equifax (EFX)	30.01	-9%	22%	3,752	4,749	2.3	1.3	1.2	1.4
	Genpact (G)	16.53	-60%	11%	3,626	3,330	2.8	1.8	1.1	1.4	
	Robert Half (RHI)	24.54	-14%	31%	3,622	3,334	4.4	2.5	1.0	2.3	
	Satyam (SAY)	5.12	-19%	34%	3,450	2,402	1.9	.9	.8	.9	
Chemical Manufacturing	Las Vegas Sands (LVS)	32.01	-60%	2%	21,150	28,545	3.8	1.5	.4	1.2	
	Wynn Resorts, Limited (WYNN)	91.91	-44%	2%	11,352	12,727	3.7	1.8	.3	1.8	
Chemical Manufacturing	MGM Mirage (MGM)	10.08	-15%	65%	4,449	16,482	1.6	.8	1.0	.7	
	BASF (BASFY)	58.55	-16%	12%	53,777	71,043	2.3	.8	.4	.8	
	E.I. du Pont de Nemours & (DD)	43.95	-32%	1%	39,841	46,347	4.6	1.1	2.8	.9	
	Monsanto (MON)	56.23	-21%	55%	30,390	32,616	2.9	1.5	.2	2.2	
	Sasol (SSL)	42.48	-21%	3%	27,977	28,097	2.1	1.2	1.9	1.1	
	Praxair (PX)	88.36	-18%	2%	27,044	32,022	5.0	2.2	3.5	2.2	
	Mosaic Company (MOS)	60.02	-37%	14%	26,738	25,559	3.1	1.9	.4	1.5	
	Syngenta (SYT)	49.67	-14%	16%	23,494	26,205	3.5	1.3	.5	1.2	
Air Products & Chem (APD)	82.2	-22%	4%	17,471	21,253	3.3	1.6	.2	1.6		

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			Low	High						
	Akzo Nobel (AKZOY)	59.25	-19%	18%	13,829	16,810	1.2	.6	.9	.7
	Sociedad Quimica y Minera (SQM)	48.13	-36%	2%	12,668	13,028	8.8	5.0	5.1	5.1
	PPG Industries (PPG)	72.05	-23%	1%	11,899	14,191	3.4	.9	.6	.7
	Agrium (AGU)	74.62	-38%	1%	11,715	12,717	2.3	1.1	.4	.7
	Braskem SA (BAK)	18.66	-45%	0%	7,412	13,706	1.5	.7	1.6	.6
	Sigma-Aldrich (SIAL)	58.88	-21%	4%	7,144	7,222	4.2	2.4	.6	2.3
	Lubrizol Corp. (LZ)	105.2	-37%	1%	7,101	7,481	3.3	1.4	1.9	1.1
	CF Industries (CF)	99.86	-42%	10%	7,098	9,098	1.9	1.0	.3	1.4
	Airgas (ARG)	67.7	-38%	0%	5,664	7,384	3.0	1.4	.2	1.2
	Celanese (CE)	31.85	-26%	12%	4,971	7,315	7.2	.8	.2	.7
	FMC Corp. (FMC)	67.36	-26%	0%	4,882	5,358	4.2	1.4	.2	1.3
	International Flavors & F (IFF)	48.39	-24%	7%	3,864	4,737	4.6	1.5	.1	1.2
	Nalco Holding (NLC)	25.65	-27%	14%	3,547	6,316	7.6	1.2	1.3	1.0
	Scotts Miracle-Gro Compan (SMG)	50.21	-25%	2%	3,362	3,974	4.0	1.4	.8	1.1
Chemicals - Plastics	Dow Chemical Company, The (DOW)	26.72	-16%	20%	30,991	53,360	1.9	.7	1.5	.7
	DSM (RDSMY)	11.95	-23%	9%	7,830	8,375	1.1	.5	.7	.6
	Eastman Chemical (EMN)	70.07	-29%	3%	5,062	6,238	3.0	1.0	1.0	.9
	Albemarle (ALB)	43.38	-29%	8%	3,960	4,430	3.3	1.5	1.1	1.3
Coal	Yanzhou Coal Mining (YZC)	21.9	-38%	31%	16,468	18,207	3.7	1.9	.7	1.3
	Peabody Energy Corp. (BTU)	47	-27%	11%	12,651	14,257	3.2	1.4	1.0	1.3
	CONSOL Energy (CNX)	34.81	-11%	67%	7,860	11,599	2.6	1.0	.6	1.2
	Alpha Natural (ANR)	39.35	-19%	42%	4,737	4,919	1.8	.9	2.2	1.5
	Walter Energy (WLT)	80.03	-34%	24%	4,235	4,326	>9.9	3.1	.2	2.8
	Arch Coal (ACI)	24.71	-23%	15%	4,015	5,742	1.9	1.1	2.0	1.1
Comms Equipment	QUALCOMM (QCOM)	42.53	-26%	17%	68,269	59,362	3.4	2.1	.8	2.5
	Nokia (NOK)	9.96	-20%	61%	37,300	31,495	2.1	.7	.5	1.1
	Corning (GLW)	17	-17%	24%	26,548	24,240	1.6	1.0	.7	1.1
	Research In Motion (RIMM)	46.72	-9%	89%	25,813	23,465	3.2	2.1	2.3	4.0
	Motorola (MOT)	8.38	-28%	12%	19,558	14,765	1.9	.6	3.5	.6
	Juniper Networks (JNPR)	30.01	-26%	7%	15,603	13,379	2.5	1.8	2.7	1.7
	Alcatel-Lucent (ALU)	2.88	-22%	72%	6,508	6,470	2.1	.3	1.5	.4
	Harris Corp. (HRS)	44.74	-20%	22%	5,773	6,526	2.6	1.3	.9	1.2
Comms Services	China Mobile (CHL)	50.43	-12%	8%	202,356	158,008	2.6	1.6	.7	2.1
	AT&T (T)	28.17	-16%	2%	166,457	235,078	1.6	.9	.6	.9
	Vodafone (VOD)	25.28	-28%	0%	133,340	188,035	.9	.8	.2	.9
	Telefonica (TEF)	70.53	-25%	27%	105,903	174,028	4.2	1.2	1.8	1.5
	Verizon (VZ)	31.68	-22%	1%	89,551	141,794	2.3	.7	.5	.6
	China Telecom Corp. Limi (CHA)	54.86	-27%	0%	81,199	90,087	2.5	1.6	.1	.9
	America Movil (AMX)	49.54	-17%	6%	79,969	85,492	3.9	1.8	.3	2.6
	NTT DoCoMo (DCM)	17.17	-19%	2%	71,373	70,308	1.3	.8	n/a	.8
	Nippon Telegraph & Teleph (NTT)	22.05	-11%	9%	58,351	97,708	.6	.4	>9.9	.4
	France Telecom (FTE)	21.14	-18%	32%	55,828	84,749	1.4	.9	.9	1.0
	China Unicom (Hong Kong) (CHU)	15.21	-32%	2%	35,843	45,728	1.2	1.0	.9	1.0
	Ericsson (ERIC)	10.55	-15%	17%	34,465	29,722	1.8	.7	1.0	.6
	Telstra Corp. Limited (A (TLSYY)	12.91	-11%	25%	32,128	43,990	2.8	1.2	1.7	1.4
	Telecom Italia (TI)	13.43	-22%	37%	26,042	73,778	.8	.7	n/a	.8
	Telenor ASA (ADR) (TELNY)	44.75	-29%	9%	25,063	32,978	3.0	1.3	.4	1.4
	BCE (BCE)	32.44	-27%	0%	24,449	36,849	1.7	1.0	n/a	.9
	KPN (KKPNY)	14.86	-18%	26%	24,046	39,870	5.4	1.3	.3	1.4
	Rogers Communications (US (RCI)	37.29	-30%	2%	21,759	29,757	5.4	1.9	.2	1.7
	Chunghwa Telecom (CHT)	21.76	-21%	1%	21,151	18,104	1.9	1.4	.1	1.1
	Telekom Indonesia (TLK)	41.07	-26%	3%	20,441	21,742	5.4	2.3	.6	2.3

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			Low	High						
	Swisscom AG (ADR) (SCMWY)	38.7	-21%	4%	20,047	29,542	3.7	1.4	.4	1.3
	American Tower (AMT)	49.27	-29%	1%	19,764	23,587	5.8	2.7	.1	2.2
	Mobile TeleSystems (MBT)	19.91	-14%	18%	19,082	23,462	6.3	1.6	.3	1.6
	BT Group (BT)	21.78	-27%	16%	16,907	32,903	n/m	.8	.1	.9
	Telmex Internacional, S.A (TII)	18.19	-34%	10%	16,829		n/m	n/a	.2	n/a
	Turkcell (TKC)	16.61	-27%	20%	14,617	13,696	2.6	1.5	.0	1.9
	Telefonos de Mexico (TMX)	15.01	-13%	27%	13,654	19,314	n/m	1.4	.1	1.5
	Sprint Nextel (S)	4.44	-37%	20%	13,259	29,283	.8	.6	.2	.5
	TELUS Corp. (USA) (TU)	40.46	-29%	2%	12,921	18,779	1.7	1.1	.1	1.0
	Crown Castle (CCI)	41.81	-30%	3%	12,137	18,600	4.9	1.8	.0	1.5
	Telecomunicacoes de Sao P (TSP)	24.01	-27%	14%	12,079	12,570	1.9	1.2	1.6	1.3
	CenturyTel (CTL)	38.79	-63%	1%	11,693	19,182	1.2	.9	.8	.8
	SK Telecom (SKM)	16.97	-14%	10%	11,077	13,426	1.8	1.0	1.4	1.3
	Portugal Telecom (PT)	12.42	-34%	3%	10,878	18,694	6.1	.9	.7	.8
	Qwest Comms (Q)	6.18	-46%	1%	10,749	22,053	n/m	1.2	.2	1.0
	Millicom International Ce (MICC)	98.51	-37%	1%	10,726	12,013	5.4	2.2	.2	1.8
	Philippine Long Distance (PHI)	56.68	-15%	8%	10,588	14,736	5.8	2.0	1.0	1.7
	Vivo Participacoes SA (AD (VIV)	26.61	-13%	25%	10,575	12,530	2.0	1.1	.8	1.0
	Advanced Info (AVIFY)	3.04	-34%	12%	9,017	9,406	4.9	2.7	1.0	2.2
	Frontier Comms (FTR)	7.96	-13%	8%	7,897	12,471	>9.9	1.8	1.7	1.0
	TIM Participacoes (TSU)	31.19	-28%	2%	7,722	9,133	1.6	.9	1.4	.8
	Clearwire (CLWR)	7.39	-32%	18%	7,279	7,791	4.2	.8	.7	.1
	Virgin Media (VMED)	21.7	-44%	3%	7,203	15,886	3.6	1.2	.8	1.0
	NII Holdings (NIHD)	41.38	-37%	6%	6,970	8,143	2.4	1.0	.3	1.0
	Telekom Austria AG (ADR) (TKAGY)	27.55	-22%	36%	6,096	10,081	3.2	1.1	.7	1.1
	Windstream Corp. (WIN)	12.41	-51%	1%	5,996	12,535	9.3	1.3	.9	1.2
	Tele Norte Leste Particip (TNE)	13.95	-8%	64%	5,338	17,410	1.2	.4	.8	.5
	Equinix (EQIX)	96.72	-21%	14%	4,409	5,751	2.5	1.4	1.3	1.6
	SBA Comms (SBAC)	38.15	-32%	2%	4,373	6,949	>9.9	2.0	2.2	1.7
	United States Cellular Co (USM)	45.2	-25%	6%	3,895	4,394	1.1	.8	1.8	.7
	Brasil Telecom SA (BTM)	19.8	-19%	74%	3,871		.6	.4	1.2	.6
	Telecom Argentina (TEO)	19.5	-28%	13%	3,841	3,752	2.9	1.6	.9	1.4
	Hellenic Telecom Organiza (OTE)	3.61	-9%	169%	3,531	9,395	2.8	.8	.8	1.0
	Nortel Inversora S.A. (AD (NTL)	22.25	-60%	3%	3,501		4.5	1.4	1.5	.6
	MetroPCS (PCS)	9.46	-42%	13%	3,348	5,924	1.4	.8	2.1	.9
	Telephone & Data (TDS)	31.49	-8%	13%	3,309	4,046	.9	.5	1.0	.5
	Magyar Telekom (MTA)	15.85	-16%	58%	3,308	4,685	1.4	.9	1.6	1.1
Computer Hardware	Apple (AAPL)	275.37	-34%	1%	251,568	227,280	5.8	3.6	.8	3.1
	IBM (IBM)	130.19	-11%	3%	164,206	178,615	7.8	1.7	.6	1.7
	Hewlett-Packard (HPQ)	39.14	-5%	40%	88,760	94,083	2.1	.8	1.9	1.1
	Dell (DELL)	12.45	-9%	41%	24,214	17,026	3.9	.6	.2	.9
Computer Networks	NetApp (NTAP)	49.04	-50%	1%	17,511	14,704	6.1	2.4	.5	1.5
	F5 Networks (FFIV)	100.98	-63%	0%	8,126	7,727	8.6	6.2	1.0	2.9
	Dassault Systemes S.A. (A (DASTY)	67.1	-21%	2%	7,990	7,079	3.8	2.0	1.5	2.1
Computer Peripherals	Cisco Systems (CSCO)	21.86	-9%	27%	124,860	100,283	2.8	1.3	1.3	1.7
	Canon (CAJ)	44.72	-18%	6%	55,408	46,122	1.7	.9	1.9	.8
	Lenovo (LNVGY)	12.33	-31%	30%	6,016	3,644	3.7	.6	.9	.7
Computer Services	Google (GOOG)	490.15	-12%	28%	156,214	126,155	3.8	2.6	.2	3.8
	Wipro Limited (ADR) (WIT)	13.77	-28%	8%	33,728	33,348	7.5	4.3	.9	4.1
	SOFTBANK CORP. (USA) (SFTBF)	30.68	-32%	0%	33,205	53,703	5.9	1.0	1.4	.9
	Baidu.com (BIDU)	85.73	-59%	3%	29,835	28,966	>9.9	>9.9	.6	>9.9
	priceline.com (PCLN)	334.95	-54%	0%	16,207	15,037	>9.9	6.2	.4	4.5

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	Fujitsu Limited (ADR) (FJTSY)	36.78	-25%	2%	15,225	17,926	1.7	.5	>9.9	.4
	Akamai Technologies (AKAM)	52.38	-66%	1%	9,513	9,073	4.8	4.1	.8	1.4
	Fiserv (FISV)	53.56	-16%	3%	8,040	11,141	2.6	1.4	.8	1.2
	Computer Sciences Corp. (CSC)	43.62	-9%	34%	6,734	8,113	1.0	.4	.4	.5
	Cerner Corp. (CERN)	79.18	-13%	17%	6,509	5,993	3.8	2.6	.6	2.8
	Teradata (TDC)	34.47	-25%	3%	5,767	5,043	5.7	3.1	1.3	2.8
	NetEase.com (NTES)	37.9	-31%	28%	4,863	3,647	3.9	2.6	.9	4.6
	IHS (IHS)	64.94	-26%	0%	4,161	4,083	4.0	2.4	.4	2.1
	CGI Group (USA) (GIB)	14.2	-23%	15%	3,935	3,946	1.9	1.1	3.0	.9
	FactSet Research (FDS)	82.05	-26%	3%	3,801	3,576	7.8	5.9	.5	4.8
	Alliance Data Sys. (ADS)	63.3	-17%	24%	3,332	8,248	>9.9	.5	1.1	1.1
Computer Storage	EMC (EMC)	20.57	-22%	2%	42,241	38,597	2.6	1.4	1.4	1.3
	SanDisk (SNDK)	38.12	-50%	33%	8,885	7,421	1.9	1.1	.6	.8
	Western Digital (WDC)	26.53	-13%	79%	6,084	3,750	1.3	.5	.6	1.3
	Seagate Technology (STX)	11.16	-12%	93%	5,265	5,252	1.9	.6	1.8	1.2
Conglomerates	General Electric (GE)	16.29	-16%	21%	174,160	590,049	1.5	.7	3.1	.7
	Siemens (SI)	101.01	-18%	3%	87,591	95,099	2.3	.8	2.7	.8
	LVMH (LVMUY)	26.32	-27%	1%	64,481	68,264	3.3	1.5	.8	1.3
	3M (MMM)	86.07	-20%	5%	61,380	62,126	4.4	2.1	1.0	2.0
	Emerson Electric (EMR)	51.22	-27%	5%	38,538	41,990	4.3	1.8	.6	1.6
	RWE (RWEQY)	66.43	-3%	51%	32,853	53,421	2.0	.5	.9	.5
	Tyco International (TYC)	39.42	-16%	3%	19,619	21,964	1.4	.8	.8	.7
	Raytheon (RTN)	45.89	-7%	31%	17,168	17,110	1.7	.7	1.3	.8
	Dover Corp. (DOV)	50.59	-28%	10%	9,443	10,344	2.3	1.2	2.3	1.0
	Fortune Brands (FO)	49.24	-25%	13%	7,502	11,319	1.4	.8	1.5	.7
	Norsk Hydro ASA (ADR) (NHYDY)	5.44	-15%	68%	6,566	6,585	.8	.3	.5	.4
	Leucadia National (LUK)	23.55	-20%	20%	5,730	7,377	1.4	1.1	.8	1.2
	Textron (TXT)	19.22	-17%	32%	5,270	11,362	1.8	.2	.7	.3
	Tomkins (TKS)	20.15	-50%	2%	4,449	4,816	2.8	1.1	1.4	.5
Construction Machinery	Caterpillar (CAT)	73.18	-35%	0%	46,138	71,694	5.0	1.0	2.6	.8
	Deere & Company (DE)	72.45	-44%	0%	30,709	50,815	5.0	1.1	.9	.8
	Komatsu Ltd. (ADR) (KMTUY)	22.56	-23%	2%	21,832	27,395	2.2	.9	.3	.8
	CNH Global (CNH)	37	-58%	0%	8,784	20,519	1.3	.4	1.0	.2
	Fastenal Company (FAST)	51.54	-33%	10%	7,599	7,378	6.0	4.6	1.1	3.7
	Joy Global (JOYG)	67.23	-37%	0%	6,943	6,726	6.2	1.9	4.7	1.6
	Bucyrus (BUCY)	70.37	-55%	5%	5,701	6,902	3.4	1.3	2.2	.9
	AGCO Corp. (AGCO)	39.98	-36%	1%	3,720	3,884	1.6	.6	.9	.4
Construction Materials	Lafarge S.A. (ADR) (LFRGY)	13.58	-17%	82%	15,560	34,801	.7	.6	-2	.8
	Cemex (CX)	8.12	-8%	70%	8,108	7,364	.5	.2	2.5	.3
	Vulcan Materials (VMC)	36.63	-1%	66%	4,699	7,399	1.2	.8	.5	1.0
	Martin Marietta (MLM)	75.3	-5%	37%	3,428	4,455	2.5	1.3	1.1	1.5
Construction Services	Sun Hung Kai Properties L (SUHJY)	15.34	-19%	9%	39,331	43,699	1.3	.8	.6	.9
	CRH (CRH)	16.74	-12%	82%	11,826	18,344	.9	.5	1.6	.7
	Fluor (FLR)	48.63	-18%	16%	8,693	7,049	2.5	.9	1.0	1.1
	Technip (TKPPY)	72.83	-22%	20%	7,801	5,807	2.6	.9	1.0	.7
	Jacobs Engineering (JEC)	36.11	-7%	40%	4,540	3,693	1.6	.7	.8	.9
	Quanta Services (PWR)	18.21	-8%	35%	3,842	3,322	1.2	.7	1.2	1.0
	KBR (KBR)	23.79	-27%	5%	3,718	2,584	1.6	.4	1.1	.4
	NVR (NVR)	622.5	-4%	24%	3,642	2,632	2.0	1.6	-1	1.8
	D.R. Horton (DHI)	10.61	-11%	46%	3,377	4,352	1.3	.9	.9	1.0
Construction Supplies	Tenaris S.A. (ADR) (TS)	36.52	-10%	31%	21,557	20,966	2.3	1.4	2.4	1.3
	Precision Castparts (PCP)	126.68	-27%	7%	18,020	17,984	2.9	2.1	.2	1.8

Industry	Company (Ticker)	Price (\$)	Δ to Reach		MV (\$mn)	EV (\$mn)	Price/ Book	Tobin's Q			
			52-Week					Now	Last Quarter	Year Ago	
			Low	High							
Containers & Packaging	Plum Creek Timber (PCL)	35.58	-18%	23%	5,750	8,231	4.1	1.9	1.3	1.6	
	Amcor Limited (AMCRY)	25.2	-27%	3%	7,696	10,470	2.1	1.0	1.1	.8	
	Ball Corp. (BLL)	59.97	-22%	0%	5,492	8,125	3.8	1.1	.9	1.0	
	Owens Illinois (OI)	28.75	-13%	38%	4,702	7,520	3.1	.9	.7	1.0	
	Crown Holdings (CCK)	28.22	-20%	6%	4,576	7,143	>9.9	1.0	4.8	.9	
	Pactiv (PTV)	32.49	-34%	1%	4,321	5,803	3.8	1.3	.4	1.1	
	Rexam (REXMY)	23.63	-13%	17%	4,144	7,016	1.2	.7	.5	.6	
	MeadWestvaco Corp. (MWV)	24.2	-14%	23%	4,133	5,625	1.3	.6	.4	.6	
	Avery Dennison Corp. (AVY)	36.15	-16%	20%	3,973	5,412	2.8	1.0	2.7	1.0	
	Bunzl (BZLFY)	59.02	-18%	2%	3,884	5,079	3.9	1.2	.5	1.2	
	Bemis Company (BMS)	31.07	-20%	2%	3,391	4,786	1.9	.9	1.2	.9	
	Sonoco Products Company (SON)	33.27	-21%	8%	3,349	3,763	2.4	1.1	.7	1.0	
	Electric Utilities	E.ON (EONGY)	28.22	-5%	54%	53,772	92,998	1.0	.4	.9	.6
		Southern Company (SO)	37.06	-17%	1%	30,786	52,132	2.0	.9	1.3	.9
National Grid (NGG)		43.45	-15%	30%	30,390	65,847	4.7	1.0	1.0	.9	
Exelon (EXC)		42.11	-60%	24%	27,835	39,088	2.1	.8	1.0	.9	
Dominion Resources (D)		43.42	-24%	4%	25,580	40,770	2.1	1.0	.7	.9	
Duke Energy (DUK)		17.51	-12%	2%	23,091	39,872	1.1	.7	1.1	.6	
CLP Holdings Limited (ADR (CLPHY)		8.04	-17%	0%	19,345	25,286	2.5	1.4	1.3	1.6	
PG&E (PCG)		45.26	-23%	7%	17,686	30,535	1.6	.7	1.5	.6	
Am. Electric Power (AEP)		35.88	-21%	3%	17,202	34,947	1.3	.7	.9	.7	
Korea Electric Power Corp (KEP)		12.8	-19%	42%	16,464	43,960	.5	.5	5.1	.5	
Public Service (PEG)		31.86	-9%	10%	16,120	25,296	1.8	.8	1.3	.8	
Enerjis (ENI)		23.72	-28%	1%	15,521	21,982	2.1	.8	.9	.7	
Empresa Nacional de Elect (EOC)		53.63	-21%	5%	14,692	18,234	3.3	1.5	-2	1.4	
Entergy (ETR)		76.68	-8%	10%	14,325	25,118	1.6	.6	.5	.7	
Spectra Energy Corp. (SE)		21.59	-15%	10%	13,991	23,770	1.9	1.0	.7	1.0	
Consolidated Edison (ED)		47.92	-16%	2%	13,544	24,599	1.3	.7	.3	.6	
PPL Corp. (PPL)		26.75	-11%	24%	12,913	17,585	1.6	.7	3.3	.8	
Progress Energy (PGN)		43.53	-16%	2%	12,736	24,687	1.3	.8	2.0	.7	
EDP-Energias de Portugal, (EDPFY)		33	-12%	44%	12,043	24,438	1.8	.6	.2	1.0	
CPFL Energia S.A. (ADR) (CPL)		70.53	-27%	9%	11,250	14,904	3.8	1.5	1.0	1.3	
Co. Energetica Minas (CIG)		16.32	-19%	14%	11,132	12,458	2.5	1.5	.8	1.5	
FirstEnergy (FE)		36.31	-8%	32%	11,069	25,683	1.3	.7	.7	.8	
Edison International (EIX)		33.85	-10%	8%	11,029	22,711	1.1	.5	.6	.5	
Xcel Energy (XEL)		22.82	-19%	1%	10,489	19,612	1.4	.7	.7	.7	
International Power (IPRPY)		59.45	-31%	4%	9,059	16,524	1.3	.8	.4	.8	
AES Corp. (AES)		10.88	-19%	42%	8,639	23,704	1.3	.6	.8	.7	
DTE Energy Company (DTE)		46.31	-27%	6%	7,817	15,661	1.2	.6	.7	.6	
Huaneng Power Internation (HNP)		25.68	-21%	19%	7,740	26,773	1.3	.9	4.6	.9	
Wisconsin Energy Corp. (WEC)		56.65	-24%	2%	6,622	11,599	1.8	.9	2.5	.8	
Ameren Corp. (AEE)		27.42	-16%	6%	6,559	14,060	.8	.5	.8	.5	
CenterPoint Energy (CNP)		15.03	-62%	2%	6,338	15,244	2.1	.8	.5	.8	
Constellation Energy (CEG)		30.81	-8%	26%	6,222	9,086	.7	.4	1.1	.6	
Companhia Paranaense de E (ELP)		22.75	-26%	3%	6,192	6,224	1.2	.7	1.4	.6	
United Utilities Group PL (UUGRY)		17.76	-21%	8%	6,052	14,021	2.6	1.0	1.1	.6	
Calpine (CPN)		12.56	-19%	14%	5,584	14,139	1.3	.8	.2	.7	
NRG Energy (NRG)		21.54	-7%	35%	5,454	11,704	.7	.4	1.1	.5	
Northeast Utilities Syste (NU)	29.12	-24%	4%	5,130	10,258	1.4	.7	1.7	.6		
SCANA Corp. (SCG)	39.8	-16%	3%	5,040	9,839	1.4	.8	1.4	.7		
TransAlta Corp. (USA) (TAC)	21.04	-16%	11%	4,571	9,033	1.6	.9	1.5	.9		
Pinnacle West Capital Cor (PNW)	40.36	-23%	3%	4,385	8,124	1.3	.6	2.6	.6		

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			Low	High						
	CMS Energy (CMS)	17.73	-27%	2%	4,081	10,516	1.5	.6	.8	.6
	Pepco Holdings (POM)	18.12	-21%	2%	4,057	10,120	1.0	.6	.0	.5
	Alliant Energy (LNT)	35.91	-27%	2%	3,979	6,756	1.4	.7	.8	.6
	NSTAR (NST)	38.21	-19%	2%	3,958	6,777	2.1	.8	.8	.7
	Allegheny Energy (AYE)	22.86	-17%	21%	3,877	8,029	1.2	.7	.9	.7
	OGE Energy (OGE)	39.81	-20%	6%	3,876	6,377	1.8	.9	1.0	.8
	Integrus Energy (TEG)	49.97	-32%	2%	3,859	6,092	1.3	.6	.7	.3
	TECO Energy (TE)	16.96	-21%	4%	3,639	7,015	1.7	.9	1.1	.9
Electronic Instruments	ABB (ABB)	20.6	-22%	10%	47,052	41,162	3.3	1.2	.7	1.1
	Eaton Corp. (ETN)	79.85	-32%	2%	13,399	16,088	2.0	.9	.0	.7
	Nidec Corp. (ADR) (NJ)	22.26	-18%	23%	12,391	12,442	3.1	1.3	1.7	1.3
	Tyco Electronics (TEL)	27.34	-24%	21%	12,220	12,820	1.8	.7	.8	.6
	LG Display Co Ltd. (ADR) (LPL)	16.4	-28%	32%	11,765	12,409	1.4	.7	1.2	.6
	Agilent Technologies (A)	30.55	-19%	23%	10,582	11,943	3.8	1.1	.9	1.5
	Katy Industries (KT)	19.07	-17%	20%	9,298	15,333	1.1	.7	.9	.6
	Rockwell Automation (ROK)	59.95	-34%	7%	8,504	8,583	6.2	1.8	.9	1.4
	AU Optronics Corp. (AUO)	9.59	-13%	39%	8,485	11,268	1.0	.6	4.1	.7
	Amphenol (APH)	47.35	-26%	1%	8,226	8,571	4.2	2.2	5.8	2.2
	Cooper Industries, Ltd. (CBE)	46.73	-23%	11%	7,792	8,295	2.6	1.3	.4	1.0
	TDK (TTDKY)	58.27	-14%	20%	7,516	8,150	1.2	.5	1.2	.5
	Energizer Holdings (ENR)	69.02	-29%	1%	4,844	6,719	2.4	1.0	1.5	.9
	Avnet (AVT)	25.83	-13%	32%	3,922	4,110	1.3	.3	.8	.3
	Molex (MOLX)	19.7	-11%	20%	3,432	3,331	1.7	.9	.2	1.0
	Sensata Tech (ST)	19.93	-23%	6%	3,410	4,937	3.5	1.5	1.7	n/a
Fabricated Plastic & Rubb	Ashland (ASH)	46.97	-29%	36%	3,698	4,635	1.0	.4	.3	.4
Food Processing	Unilever (UN)	27.91	-7%	19%	78,091	87,725	4.9	1.7	.9	1.9
	Unilever (UL)	27.44	-6%	18%	77,429	87,063	4.9	1.7	.9	1.9
	Kraft Foods (KFT)	31.35	-18%	1%	54,676	81,852	1.6	.9	3.3	.9
	Danone (DANOY)	11.38	-15%	15%	35,020	43,912	1.9	1.2	1.3	1.3
	General Mills (GIS)	36.17	-18%	8%	23,229	28,982	4.3	1.6	.8	1.5
	Archer Daniels (ADM)	32.38	-25%	3%	20,701	24,472	1.4	.6	.3	.5
	Kellogg (K)	50.58	-7%	11%	19,107	23,663	8.0	2.1	2.3	2.1
	H.J. Heinz (HNZ)	47.94	-20%	1%	15,261	19,320	7.7	1.9	.7	1.6
	Campbell Soup (CPB)	36.3	-15%	4%	12,325	14,016	>9.9	2.3	.2	2.2
	Hershey (HSY)	47.37	-26%	10%	10,759	12,052	>9.9	3.2	1.5	2.9
	ConAgra Foods (CAG)	22.09	-7%	19%	9,712	12,246	2.0	.9	1.2	1.0
	Sara Lee Corp. (SLE)	14.08	-29%	9%	9,324	11,150	6.3	1.2	.7	1.0
	Bunge (BG)	57.46	-21%	29%	8,060	10,237	.8	.3	.2	.4
	J.M. Smucker (SJM)	61.07	-16%	4%	7,298	8,028	1.4	.9	.7	.8
	Tyson Foods (TSN)	15.85	-25%	30%	5,983	7,731	1.2	.6	1.2	.5
	Hormel Foods Corp. (HRL)	44.16	-22%	1%	5,881	5,804	2.6	1.3	2.4	1.2
	McCormick (MKC)	41.24	-20%	1%	5,495	6,476	4.3	1.9	1.4	1.6
	Green Mtn Coffee (GMCR)	35.43	-44%	1%	4,675	4,937	7.1	4.0	.6	6.3
	Wimm-Bill-Dann Foods OJSC (WBD)	20.86	-23%	24%	3,451	3,771	5.1	2.4	.6	2.2
	Tate & Lyle (TATYY)	29.19	-19%	10%	3,383	4,623	2.7	.8	.2	.7
	Ralcorp Holdings (RAH)	60	-12%	16%	3,294	4,691	1.2	.8	.2	.8
Footwear	Nike (NKE)	77.26	-25%	2%	37,318	32,764	3.8	2.1	2.6	1.9
Forestry & Wood Products	Weyerhaeuser Company (WY)	15.97	-22%	23%	8,621	11,907	2.1	.8	.1	.7
	Rayonier (RYN)	49.85	-24%	3%	4,001	4,421	3.4	1.8	2.0	1.7
Furniture & Fixtures	Masco (MAS)	10.94	-9%	72%	3,922	6,642	1.6	.6	3.9	.7
Gold & Silver	Barrick Gold (ABX)	45.99	-27%	4%	45,331	48,518	2.7	1.6	2.0	1.4
	Freeport-McMoRan (FCX)	81.72	-31%	11%	38,444	40,187	3.7	1.5	2.5	1.4

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	Goldcorp (GG)	42.66	-23%	11%	31,400	31,612	1.9	1.4	1.2	1.4
	Newmont Mining Corp. (NEM)	63.01	-34%	2%	31,025	31,934	2.7	1.4	1.5	1.3
	AngloGold Ashanti (AU)	43.61	-22%	9%	15,951	16,755	5.6	2.0	1.1	1.6
	Kinross Gold (KGC)	18.2	-18%	31%	12,811	12,827	2.2	1.5	.5	1.9
	Eldorado Gold (EGO)	19.49	-49%	4%	10,664	10,510	3.8	3.0	3.7	4.1
	Agnico-Eagle Mines (AEM)	67.68	-27%	9%	10,632	11,073	3.6	2.4	1.4	2.8
	Compania de Minas (BVN)	41.22	-31%	4%	10,516	10,100	4.7	3.6	3.9	3.6
	Gold Fields (GFI)	14.83	-27%	7%	10,469	11,089	1.9	1.2	.8	1.3
	Lihir Gold Limited (ADR) (LIHR)	39.25	-42%	2%	9,931	9,665	3.0	2.5	.7	1.4
	Randgold Resources (GOLD)	98.17	-35%	2%	8,926	8,422	5.2	4.4	.7	5.9
	Silver Wheaton Corp. (USA) (SLW)	25.02	-58%	2%	8,607	8,809	4.7	3.7	.3	2.6
	Yamana Gold (AUY)	10.74	-15%	34%	7,958	8,193	1.1	.8	.2	.9
	IAMGOLD (IAG)	17.8	-32%	18%	6,619	6,488	2.6	2.1	.5	1.7
	Harmony Gold Mining Co. (HMY)	11.06	-21%	9%	4,741	4,796	1.2	1.0	.2	.9
Health Insurance	UnitedHealth (UNH)	34.13	-31%	6%	38,371	38,010	1.5	.8	.8	.8
	AFLAC (AFL)	51.78	-23%	9%	24,379	24,848	2.4	.3	.6	.3
	WellPoint (WLP)	54.06	-19%	29%	21,610	28,865	.9	.6	.7	.6
	Aetna (AET)	29.71	-16%	21%	12,401	15,085	1.2	.4	2.9	.4
	CIGNA (CI)	34.47	-22%	14%	9,382	10,769	1.6	.3	.9	.2
	Humana (HUM)	50.37	-29%	6%	8,524	1,557	1.3	.3	2.8	.3
	Unum Group (UNM)	22.2	-17%	19%	7,255	9,665	.8	.2	.7	.2
	Torchmark (TMK)	53.8	-26%	5%	4,348	5,311	1.1	.3	1.5	.3
	Assurant (AIZ)	40	-28%	1%	4,262	4,238	.8	.2	.7	.2
Healthcare Facilities	Fresenius Medical (FMS)	57.03	-17%	2%	16,908	21,574	2.5	1.2	6.6	1.2
	Quest Diagnostics (DGX)	48.27	-15%	30%	8,554	11,251	2.2	1.3	1.3	1.5
	Lab Corp. of America (LH)	74.96	-16%	11%	7,706	8,925	3.5	1.7	3.4	1.7
	DaVita (DVA)	64.93	-19%	3%	6,662	9,448	2.9	1.2	2.4	1.1
	Universal Health Svc (UHS)	35.77	-23%	22%	3,477	4,348	1.8	1.0	.9	1.0
Hotels & Motels	Marriott (MAR)	35.62	-32%	7%	12,923	15,734	>9.9	1.7	.4	1.3
	Starwood Hotels (HOT)	51.94	-47%	9%	9,875	13,139	5.1	1.5	.9	1.1
	Host Hotels & Resorts (HST)	14.46	-35%	18%	9,520	13,744	1.6	1.2	-1	1.0
	City Developments Limited (CDEVY)	8.58	-20%	9%	7,802	9,891	1.7	.7	.6	.7
	Hyatt Hotels (H)	39.13	-34%	12%	6,806	6,036	1.4	.8	1.0	n/a
	Royal Caribbean Cruises L (RCL)	30.12	-37%	27%	6,480	14,271	.9	.9	1.7	.8
	InterContinental H. (IHG)	17.6	-31%	6%	5,082	6,061	>9.9	2.3	1.9	1.8
	Wyndham (WYN)	26.98	-46%	4%	4,813	7,912	1.8	.9	.7	.7
Household Products	Procter & Gamble (PG)	60.97	-35%	6%	173,000	201,230	2.9	1.6	.5	1.5
	Colgate Palmolive (CL)	77.37	-5%	13%	37,602	40,528	>9.9	3.8	.6	3.8
	Avon Products (AVP)	31.07	-20%	17%	13,328	14,825	>9.9	2.1	.7	2.4
	Ecolab (ECL)	50.16	-19%	0%	11,703	12,545	6.3	2.6	.4	2.3
	Estee Lauder (EL)	58.87	-40%	21%	11,588	11,695	5.9	2.1	.6	1.4
	Clorox (CLX)	66.65	-15%	1%	9,260	11,968	>9.9	2.6	.6	2.4
	Brown-Forman (BF.B)	61.03	-23%	7%	8,921	9,381	4.8	2.5	3.2	2.0
	Shiseido (SSDOY)	22.18	-25%	5%	8,824	10,178	2.2	.9	.5	.8
	Newell Rubbermaid (NWL)	16.74	-22%	7%	4,659	6,842	2.5	.9	.9	.9
	Church & Dwight Co. (CHD)	64.45	-15%	9%	4,577	4,913	2.6	1.5	1.2	1.4
	Herbalife (HLF)	58.88	-47%	2%	3,485	3,558	8.8	3.0	.5	1.9
Insurance (miscellaneous)	Allianz (AZSEY)	10.98	-16%	20%	49,541	63,062	.9	.1	1.2	.1
	MetLife (MET)	40.16	-20%	19%	32,949	76,737	.8	.1	1.2	.1
	Aon Corp. (AON)	38.12	-8%	16%	10,281	11,518	1.9	.4	2.4	.5
	Willis Group (WSH)	31.13	-19%	12%	5,301	7,509	2.2	.4	5.4	.4
Investment Services	JPMorgan Chase (JPM)	40.06	-12%	20%	158,845	72,450	1.0	.3	.3	.2

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	Goldman Sachs (GS)	150.98	-14%	28%	77,848	336,213	1.2	.3	.7	.3
	UBS (UBS)	17.9	-32%	8%	67,885	(50,722)	1.5	.2	1.0	.2
	Credit Suisse (CS)	45.81	-21%	31%	54,664	(235,986)	1.6	.2	n/a	.2
	Morgan Stanley (MS)	26.47	-15%	35%	36,978	233,407	.9	.3	2.2	.3
	BlackRock (BLK)	165.05	-16%	48%	31,609	34,287	1.3	.2	1.3	1.4
	Bank of NY Mellon (BK)	25.43	-6%	28%	30,873	(40,051)	1.0	.2	1.1	.3
	Franklin Resources (BEN)	105.76	-21%	15%	23,806	19,513	3.2	1.9	1.0	2.1
	State Street (STT)	38.21	-15%	46%	19,177	16,415	1.2	.2	.5	.2
	Nomura (NMR)	5.13	-1%	67%	18,470	122,469	.8	.3	1.1	.3
	CME Group (CME)	263.87	-11%	34%	17,737	20,153	.9	.6	1.4	.6
	Charles Schwab (SCHW)	13.73	-8%	45%	16,392	8,190	2.8	.2	.9	.4
	T. Rowe Price (TROW)	49.66	-14%	20%	12,730	11,995	4.3	3.7	.5	3.9
	Friedman, Billings, Ramse (FBR)	17.55	-27%	39%	12,501	15,218	8.0	2.9	1.1	.5
	Ameriprise Financial (AMP)	47.62	-36%	4%	11,955	16,022	1.1	.2	1.4	.1
	Invesco (IVZ)	20.98	-22%	15%	9,886	15,515	1.2	.8	1.3	.9
	TD Ameritrade (AMTD)	15.72	-8%	35%	9,056	9,153	2.4	.7	.6	.7
	IntercontinentalExchange (ICE)	104.96	-14%	23%	7,772	7,942	2.9	.3	.4	.3
	NYSE Euronext (NYX)	29.74	-25%	17%	7,762	9,587	1.2	.8	1.6	.7
	Och-Ziff Capital (OZM)	14.88	-28%	24%	5,445	5,967	>9.9	3.9	.2	.9
	Legg Mason (LM)	29.88	-20%	17%	4,621	4,513	.8	.5	2.5	.6
	Jefferies (JEF)	24.65	-18%	26%	4,232	7,108	1.8	.2	.7	.3
	Affiliated Managers (AMG)	78	-26%	13%	3,986	5,197	2.7	1.1	1.6	1.1
	Blackstone Group (BX)	10.85	-18%	59%	3,945	9,401	1.0	.6	.9	.5
	NASDAQ OMX (NDAQ)	19.43	-12%	19%	3,938	5,154	.8	.5	.7	.5
	Lazard (LAZ)	35.88	-28%	24%	3,910	4,339	9.1	1.8	1.0	1.6
	SEI Investments (SEIC)	19.84	-16%	23%	3,740	3,428	3.8	2.5	2.4	2.3
	Eaton Vance Corp. (EV)	28.92	-11%	25%	3,417	3,532	8.9	3.1	5.1	3.4
Iron & Steel	ArcelorMittal (MT)	32.83	-20%	51%	49,587	70,012	.9	.5	.8	.5
	POSCO (PKX)	110	-20%	28%	33,976	33,064	2.0	1.3	1.0	2.2
	Gerdau SA (ADR) (GGB)	14.25	-16%	26%	20,227	26,264	1.8	.8	.2	.8
	Nucor Corp. (NUE)	38.74	-8%	31%	12,225	14,260	1.7	.9	1.3	1.1
	Kubota Corp. (ADR) (KUB)	45.04	-17%	13%	11,446	15,231	1.5	.6	.6	.6
	Mechel OAO (ADR) (MTL)	23.95	-38%	33%	9,970	16,070	2.4	1.1	.7	1.0
	Kobe Steel, Ltd. (ADR) (KBSTY)	11.5	-29%	3%	6,905	15,551	1.1	.5	1.4	.5
	Ternium (TX)	33.81	-34%	29%	6,778	6,179	1.2	.4	.6	.4
	United States Steel (X)	46.2	-28%	54%	6,633	9,359	1.5	.5	.9	.4
Jewelry & Silverware	Fossil (FOSL)	51.58	-49%	1%	3,462	3,027	3.4	2.0	.5	1.2
Life Insurance	China Life Insurance (LFC)	59.3	-4%	37%	111,757	105,151	3.9	.6	.3	.8
	ING Groep (ING)	10.04	-32%	88%	38,469	245,338	.6	.1	1.3	.1
	AXA (AXAHY)	16.66	-15%	77%	38,151	26,118	.6	.1	1.4	.1
	Prudential Financial (PRU)	55.22	-21%	21%	25,788	39,054	.9	.1	2.0	.1
	Prudential Public (PUK)	19.12	-26%	14%	24,284	30,478	2.2	.1	1.1	.1
	Manulife Financial Corp. (MFC)	12.67	-16%	73%	22,215	14,523	.9	.1	1.2	.2
	Swiss Re (SWCEY)	43.4	-13%	19%	16,089	9,911	.6	.2	.7	.1
	Sun Life Financial (USA) (SLF)	26.62	-17%	24%	15,044	14,396	1.0	.1	2.4	.1
	AEGON (AEG)	5.78	-13%	61%	9,853	23,805	.3	.0	1.0	.1
	Principal Financial (PFG)	25.35	-18%	24%	8,120	7,992	.9	.1	.8	.1
	Lincoln National (LNC)	24.56	-16%	37%	7,779	10,044	.6	.1	.8	.1
	Genworth Financial (GNW)	12.41	-33%	56%	6,073	10,510	.4	.1	.6	.1
	Reinsurance Group (RGA)	46.73	-9%	21%	3,419	5,086	.8	.2	.3	.2
Major Drugs	Johnson & Johnson (JNJ)	61.57	-8%	8%	169,591	162,342	3.2	1.7	.6	1.8
	Pfizer (PFE)	17.06	-18%	19%	137,153	160,700	1.6	.8	.8	.7

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	Novartis (NVS)	55.74	-22%	1%	127,505	123,150	2.3	1.2	5.7	1.3
	Roche (RHHBY)	34	-7%	33%	117,309	144,376	>9.9	2.2	1.3	1.7
	Merck (MRK)	36.33	-17%	14%	111,664	119,910	2.0	1.1	.1	1.2
	GlaxoSmithKline (GSK)	39.82	-19%	9%	103,389	116,338	7.6	1.8	.4	2.0
	Abbott Labs (ABT)	51.64	-14%	10%	79,734	93,842	4.0	1.6	.6	1.7
	AstraZeneca (AZN)	52.05	-23%	3%	74,478	73,744	3.4	1.4	.9	1.4
	Bayer (BAYRY)	66.62	-19%	22%	55,091	69,297	2.3	.9	1.1	.9
	Alcon (ACL)	167	-20%	0%	50,139	47,589	8.3	5.4	1.9	5.1
	Bristol Myers Squibb (BMY)	27.31	-21%	0%	46,832	45,916	3.0	1.5	1.5	1.4
	Eli Lilly (LLY)	35.79	-11%	6%	41,271	42,963	4.0	1.5	1.3	1.4
Medical Equipment	Medtronic (MDT)	33.3	-8%	40%	35,960	42,551	2.5	1.3	.9	1.8
	Baxter International (BAX)	44.99	-11%	38%	26,291	28,805	4.5	1.6	1.1	2.2
	Covidien (COV)	39.5	-11%	33%	19,811	20,649	2.3	1.0	.6	1.3
	Stryker Corp. (SYK)	48.03	-11%	24%	19,065	16,052	2.8	1.4	1.8	1.8
	Becton Dickinson (BDX)	73.48	-10%	10%	17,058	17,309	3.3	1.8	.7	1.7
	St. Jude Medical (STJ)	37.05	-15%	16%	12,130	13,425	3.2	1.7	1.2	2.1
	Luxottica (LUX)	26.14	-15%	13%	11,958	15,353	2.9	1.4	.3	1.5
	Intuitive Surgical (ISRG)	295.77	-20%	33%	11,639	10,671	6.0	4.7	3.0	6.3
	Zimmer Holdings (ZMH)	50.68	-9%	28%	10,185	10,329	1.8	1.1	2.1	1.4
	Boston Scientific (BSX)	5.42	-7%	108%	8,222	13,444	.8	.6	.5	.8
	Smith & Nephew (SNN)	43.72	-6%	24%	7,772	8,494	3.4	1.6	1.6	1.8
	C.R. Bard (BCR)	80.2	-8%	12%	7,627	7,201	3.6	2.3	1.6	2.4
	Varian Medical (VAR)	59.19	-40%	1%	7,199	6,635	5.2	2.7	3.7	2.1
	CareFusion (CFN)	24.22	-16%	24%	5,386	5,368	1.1	.6	1.3	-.1
	Henry Schein (HSIC)	56.35	-13%	11%	5,157	5,370	2.3	1.0	1.1	1.1
	ResMed (RMD)	33.06	-35%	7%	5,004	4,637	3.9	2.7	2.3	1.9
	DENTSPLY (XRAY)	30.66	-9%	24%	4,379	4,514	2.6	1.5	.9	1.7
	Hologic (HOLX)	16.54	-20%	19%	4,286	5,225	1.5	.9	.3	1.0
	IDEXX Laboratories (IDXX)	59.93	-21%	14%	3,458	3,479	6.6	4.0	2.2	3.6
	Patterson Companies (PDCO)	27.15	-11%	21%	3,366	3,593	2.3	1.3	.7	1.4
Metal Mining	BHP Billiton Limited (BHP)	72.53	-20%	15%	201,826	204,842	4.2	2.3	.8	2.5
	BHP Billiton plc (BBL)	60.77	-19%	17%	169,102	172,410	3.5	1.9	1.0	n/a
	Vale (VALE)	27.85	-23%	25%	147,275	165,018	2.4	1.4	.6	1.4
	Rio Tinto (RTP)	55.74	-29%	12%	109,350	122,142	2.4	1.3	1.0	.8
	Anglo American (AAUKY)	19.57	-24%	20%	51,646	61,969	1.9	1.0	1.2	.9
	Teck Cominco (TCK)	38.12	-35%	23%	22,471	27,241	1.5	1.0	2.8	.8
	Grupo Mexico (GMBXF)	2.72	-38%	10%	21,207	23,268	4.2	1.9	1.8	1.6
	Aluminum Corp. China (ACH)	21.71	-17%	58%	11,745	20,875	1.6	.9	1.0	1.0
	Alcoa (AA)	11.17	-12%	58%	11,409	19,920	.9	.5	1.3	.5
	Cameco (CCJ)	26.07	-21%	29%	10,173	9,722	2.1	1.3	1.5	1.6
	Ivanhoe Mines Ltd. (USA) (IVN)	20.33	-49%	1%	9,935	9,203	5.9	3.7	.5	6.6
	Cliffs Natural (CLF)	60.96	-52%	25%	8,257	8,454	2.8	1.4	1.0	1.0
	Alumina Limited (AWC)	7.03	-32%	10%	4,289	4,603	1.5	1.4	.7	1.0
	Titanium Metals (TIE)	18.37	-54%	25%	3,310	3,124	3.0	1.8	.6	.8
Misc. Capital Goods	United Technologies (UTX)	69.53	-15%	11%	64,598	71,666	3.2	1.2	.6	1.1
	Mitsui & Co., Ltd. (ADR) (MITSY)	277.53	-16%	28%	25,298	50,423	1.0	.4	1.0	.4
	Illinois Tool Works (ITW)	46.24	-13%	14%	23,282	25,047	2.7	1.5	2.6	1.5
	Hitachi (HIT)	43.88	-41%	3%	19,798	41,168	1.2	.2	.4	.2
	Cummins (CMI)	85.14	-51%	1%	16,925	16,488	4.4	1.6	.7	.9
	Ingersoll-Rand (IR)	34.89	-18%	17%	11,263	14,327	1.6	.7	.2	.6
	W.W. Grainger (GWW)	118.74	-28%	1%	8,426	8,546	3.9	2.0	.3	1.6
	ITT Corp. (ITT)	45.71	-8%	27%	8,383	9,008	2.1	.7	.8	.9

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	Metso Oyj (ADR) (MXCYY)	42	-39%	0%	6,285	7,418	2.6	.9	.5	.6
	Flowserve (FLS)	103.93	-22%	15%	5,814	5,876	3.2	1.3	.1	1.3
	Mettler-Toledo Internatio (MTD)	123.58	-30%	5%	4,128	4,312	5.8	2.4	1.4	1.9
	Donaldson Company (DCI)	45.03	-28%	7%	3,474	3,553	4.7	2.2	.8	1.9
	MSC Industrial (MSM)	52.54	-21%	10%	3,296	3,188	3.6	2.4	.1	2.0
Misc. Fabricated Products	Companhia Siderurgica Nac (SID)	16.4	-20%	28%	24,884	27,005	>9.9	6.5	.8	5.4
	Parker-Hannifin Corp. (PH)	68.53	-28%	6%	11,045	12,247	2.5	1.1	3.0	.9
	SKF AB (ADR) (SKFRY)	20.89	-30%	1%	9,513	10,246	4.0	1.2	1.1	.8
	Allegheny Tech (ATI)	45.31	-35%	29%	4,466	5,158	2.2	.9	.3	.7
	Timken Company, The (TKR)	37.59	-45%	0%	3,637	3,334	2.2	.6	2.3	.4
	Sealed Air Corp. (SEE)	22.5	-18%	4%	3,591	4,513	1.6	.8	n/a	.7
Misc. Financial Services	Western Union (WU)	16.98	-14%	22%	11,209	12,759	>9.9	2.0	.5	2.8
	MSCI Inc. (MSCI)	34.75	-27%	11%	4,093	3,950	7.1	4.3	.5	3.0
	Chimera Investment (CIM)	4.03	-13%	8%	3,559	7,136	1.2	.9	.7	.6
	First Pacific Company Ltd (FPAFY)	4.49	-42%	2%	3,486	6,146	1.7	.6	3.6	.5
Misc. Transportation	C.H. Robinson (CHRW)	68.45	-25%	0%	11,353	11,138	>9.9	5.6	.8	5.0
	Expeditors International (EXPD)	44.2	-29%	1%	9,379	8,418	5.8	3.2	1.0	3.1
Money Center Banks	Bank of America (BAC)	13.4	-9%	48%	134,454	395,735	.6	.3	1.5	.3
	Citigroup (C)	3.95	-21%	28%	114,445	(20,119)	.7	.3	1.4	.2
	Itau Unibanco (ITUB)	22.67	-28%	6%	102,635		n/m	n/a	.7	n/a
	Lloyds Banking (LYG)	4.68	-38%	58%	79,741	46,828	1.1	.2	2.7	.2
	Royal Bank of Canada (RY)	52.46	-12%	19%	74,139	(85,082)	2.3	.1	.6	.1
	Mitsubishi UFJ Financial (MTU)	4.81	-7%	24%	67,892	(113,036)	.7	.1	.8	.1
	Westpac Banking (WBK)	109.14	-21%	22%	64,951	35,547	1.9	.1	1.4	.1
	Toronto-Dominion Bank (US (TD)	73.41	-23%	6%	63,708	(26,261)	1.7	.1	2.0	.1
	Barclays (BCS)	19.18	-20%	33%	57,787	(274,156)	.8	.0	.3	.0
	Australia and NZ (ANZBY)	22.2	-27%	10%	55,987	35,877	1.9	.3	1.3	.3
	Bank of Nova Scotia (BNS)	52	-22%	2%	53,596	(27,437)	2.5	.1	.4	.1
	Nat'l Australia Bank (NABZY)	24.16	-24%	22%	50,244	13,046	1.4	.2	.7	.2
	U.S. Bancorp (USB)	22.81	-10%	25%	43,730	103,561	1.7	.3	1.2	.3
	Royal Bank Scotland (RBS)	14.94	-39%	24%	43,319		.4	.0	1.6	.0
	Societe Generale (SCGLY)	11.46	-38%	45%	42,524	(62,731)	.7	.0	1.3	.0
	Deutsche Bank (DB)	60.24	-10%	41%	37,224		.7	.1	.6	.1
	Can. Imperial Bank (CM)	71.81	-21%	8%	28,062	51,050	2.4	.2	1.1	.2
	HDFC Bank Limited (ADR) (HDB)	182.11	-42%	0%	27,825	26,696	6.2	.7	1.1	.5
	ICICI Bank (IBN)	47.82	-35%	2%	26,639	10,062	2.7	.4	.8	.6
	Banc Santander-Chile (SAN)	97.51	-47%	3%	17,722	25,872	5.3	.7	.8	.5
	Bancolombia (CIB)	63.31	-40%	5%	12,382	9,981	3.2	.4	.3	.3
	Swedbank (SWDBY)	12.8	-38%	1%	12,190	155,353	1.0	.7	.9	.7
	Banco de Chile (BCH)	84.35	-46%	5%	11,629	16,114	4.4	.5	.8	.4
	Bank of East Asia (BKEAY)	4.18	-22%	8%	7,729	(2,967)	1.4	.2	1.2	.2
	National Bank Greece (NBG)	2.4	-12%	249%	7,282	(8,867)	.8	.0	1.2	.2
Motion Pictures	Dolby Laboratories (DLB)	55.95	-33%	25%	6,307	5,491	4.3	3.2	1.1	2.5
Natural Gas Utilities	TransCanada Corp. (USA) (TRP)	36.77	-30%	3%	25,190	45,643	1.7	1.0	.8	.9
	Kinder Morgan Energy (KMP)	68.45	-23%	2%	21,168	33,721	3.0	1.6	.7	1.4
	Hong Kong and China Gas C (HOKCY)	2.44	-24%	5%	17,525	18,650	4.0	2.1	.5	2.8
	Sempra Energy (SRE)	53.08	-17%	8%	13,156	21,860	1.4	.8	.5	.7
	Williams Partners (WPZ)	42.79	-51%	14%	10,945	16,959	2.7	1.4	.7	1.7
	El Paso Corp. (EP)	12.08	-26%	8%	8,504	22,486	2.9	1.0	.6	1.0
	Oneok Partners LP (OKS)	72.5	-65%	0%	7,388	10,984	2.3	1.4	.7	1.1
	Boardwalk Pipeline (BWP)	31.17	-54%	5%	6,003	9,210	1.8	1.3	1.3	1.1
	Equitable Resources (EQT)	33.89	-5%	40%	5,054	6,390	1.7	1.0	1.0	1.3

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	El Paso Pipeline Partners (EPB)	32	-38%	6%	4,866		4.6	1.7	1.5	1.9
	NiSource (NI)	16.93	-24%	6%	4,706	11,608	1.0	.6	.9	.6
	ONEOK (OKE)	43.94	-33%	16%	4,676	9,594	2.0	.8	1.3	.7
	National Fuel Gas Co. (NFG)	45.28	-5%	20%	3,712	4,502	2.1	.9	1.2	1.0
	MDU Resources (MDU)	19.37	-12%	25%	3,645	5,179	1.4	.8	1.4	.9
	Regency Energy Partners L (RGNC)	24.02	-23%	11%	3,414	6,168	.9	.9	1.0	1.1
Non-Metallic Mining	Potash (POT)	147.28	-43%	4%	43,683	47,112	6.6	3.6	1.4	2.6
Office Equipment	Smith Corona Corp. (SCCO)	33.14	-23%	12%	28,169	28,739	7.4	3.8	.2	4.9
	Xerox (XRX)	10.1	-29%	16%	13,969	23,502	1.2	.7	1.4	.5
	Ricoh Company Ltd. (ADR) (RICOY)	69.58	-10%	26%	10,088	15,662	.9	.4	1.8	.4
	Pitney Bowes (PBI)	20.98	-9%	26%	4,336	8,239	n/m	1.0	.6	1.0
Oil & Gas - Integrated	PetroChina (PTR)	110.04	-10%	24%	201,401	222,310	1.5	1.0	.3	1.2
	Royal Dutch Shell (RDS.A)	58.24	-16%	9%	181,752	210,045	1.3	.7	1.1	.6
	Chevron (CVX)	78.46	-15%	6%	157,751	155,009	1.6	.9	1.6	.9
	Petroleo Brasileiro (PBR)	35.48	-12%	51%	155,652	215,761	1.9	1.0	.7	1.8
	BP (BP)	38.03	-30%	64%	119,107	136,244	1.4	.6	1.1	.8
	TOTAL (TOT)	49.32	-13%	37%	110,209	131,229	1.4	.6	2.6	.9
	ConocoPhillips (COP)	55.27	-19%	10%	84,392	106,551	1.3	.7	2.5	.6
	Eni (E)	42.05	-17%	30%	84,212	113,688	1.2	.7	.6	.7
	China Petroleum & Chemica (SNP)	83.46	-16%	11%	72,373	103,428	1.2	.8	1.1	.9
	StatoilHydro (STO)	20.33	-10%	31%	64,726	77,782	2.0	.8	1.1	1.0
	Suncor Energy (SU)	32.1	-14%	23%	50,146	62,854	1.5	.9	4.3	1.3
	Imperial Oil Limited (USA) (IMO)	37.95	-7%	15%	31,936	32,095	3.2	1.8	4.8	2.0
	Repsol (REP)	24.16	-22%	19%	29,431	49,126	1.2	.6	1.0	.7
	Marathon Oil Corp. (MRO)	31.61	-13%	13%	22,433	28,301	1.0	.6	.5	.2
	Hess (HES)	54.97	-11%	21%	18,053	21,016	1.3	.7	.3	.7
	YPF SA (ADR) (YPF)	40.7	-17%	13%	16,014	17,110	3.2	1.5	1.7	1.6
Oil & Gas Operations	Exxon Mobil (XOM)	60.78	-8%	26%	309,480	316,645	2.2	1.1	4.8	1.5
	CNOOC (CEO)	186.74	-31%	2%	83,428	79,616	2.9	1.9	1.7	1.9
	Ecopetrol S.A. (ADR) (EC)	39.31	-40%	9%	78,992		n/m	n/a	.3	n/a
	Occidental Petroleum (OXY)	76.2	-5%	19%	61,893	62,094	2.0	1.3	2.7	1.6
	BG Group (BRGYY)	85	-18%	19%	57,495	62,931	2.4	1.4	.9	2.6
	Lukoil (LUKOY)	54.95	-19%	23%	46,523	54,282	.8	.6	1.6	.7
	Canadian Natural (CNQ)	33.2	-10%	21%	36,167	45,023	1.8	1.1	.5	1.2
	Apache (APA)	94.48	-13%	17%	34,417	37,624	1.9	1.2	.2	1.3
	Surgulneftegas OAO (ADR) (SGTZY)	9.55	-18%	9%	34,118		n/m	n/a	.6	n/a
	Devon Energy (DVN)	61.97	-5%	24%	26,957	30,407	1.6	1.0	.5	1.4
	Anadarko Petroleum (APC)	54.14	-36%	39%	26,796	35,773	1.3	.7	.9	.8
	Enterprise Products Partn (EPD)	38.21	-29%	3%	24,502	36,888	2.4	1.3	.2	1.2
	EOG Resources (EOG)	89.11	-12%	29%	22,587	25,671	2.2	1.3	1.3	1.3
	Husky Energy (HUSKF)	24.84	-8%	27%	21,109	24,827	1.5	.9	.1	1.0
	EnCana (ECA)	28.17	-8%	26%	20,739	27,011	1.2	.8	.2	.6
	Talisman Energy (USA) (TLM)	16.36	-10%	24%	16,653	17,846	1.5	.8	.3	.8
	Chesapeake Energy (CHK)	21.46	-9%	40%	14,042	27,007	1.2	.9	.5	1.0
	Noble Energy (NBL)	74.06	-24%	10%	12,946	14,513	2.0	1.1	2.5	1.1
	Murphy Oil (MUR)	59.03	-18%	10%	11,322	11,349	1.5	.9	.7	.9
	Southwestern Energy (SWN)	31.44	-3%	68%	10,881	12,064	4.1	2.1	.2	3.6
	Williams Companies (WMB)	18.4	-10%	34%	10,758	17,675	1.4	.7	1.2	.7
	Nexen (USA) (NXY)	19.78	-13%	36%	10,376	15,618	1.4	.7	.5	.7
	Santos (SSLTY)	12.37	-25%	19%	10,309	10,072	1.6	.9	2.4	1.3
	OMV (OMVKY)	34.45	-13%	37%	10,293	13,806	.9	.4	1.7	.5
	Valero Energy (VLO)	16.99	-9%	28%	9,621	15,654	.6	.4	1.0	.4

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			Low	High						
	Penn West Energy (PWE)	18.87	-26%	18%	8,481	11,112	1.1	.9	.8	.7
	Plains All American (PAA)	61.14	-28%	5%	8,341	13,799	2.0	1.0	1.2	.9
	Energy Transfer Equity, L (ETE)	36.43	-27%	2%	8,122	16,987	>9.9	1.0	1.9	1.2
	Ultrapar Participacoes SA (UGP)	58.75	-34%	0%	7,996		2.7	1.2	1.1	.9
	Enterprise GP (EPE)	55.8	-49%	1%	7,767	21,037	4.1	.7	5.2	.6
	Pioneer Natural (PXD)	65.38	-49%	13%	7,584	9,917	1.9	1.1	.3	.8
	Continental Resource (CLR)	43.84	-17%	20%	7,451	8,046	6.2	2.8	.9	3.2
	Newfield Exploration (NFX)	53.01	-26%	14%	7,083	9,130	2.3	1.3	.9	1.2
	Denbury Resources (DNR)	15.49	-19%	26%	6,185	8,829	1.4	.9	.8	1.3
	Ultra Petroleum Corp. (UPL)	38.97	-5%	47%	5,942	7,115	6.4	2.5	1.3	4.4
	Concho Resources (CXO)	63.16	-47%	5%	5,801	6,482	3.3	1.9	2.6	1.4
	Cimarex Energy (XEC)	68.58	-45%	19%	5,767	5,993	2.4	1.6	.5	1.2
	Range Resources (RRC)	35.07	-8%	71%	5,612	7,305	2.2	1.3	.6	1.7
	Whiting Petroleum (WLL)	92.78	-43%	1%	4,732	5,366	1.9	1.3	1.2	1.0
	Petrohawk Energy Corp. (HK)	15.59	-11%	83%	4,714	6,871	1.3	1.0	.7	1.6
	Linn Energy, LLC (LINE)	30.33	-58%	5%	4,469	6,617	1.6	1.2	.8	.9
	Enerplus Resources Fund (ERF)	23.82	-42%	4%	4,233	4,854	1.1	.9	1.6	.8
	Sunoco (SUN)	34.25	-29%	11%	4,130	5,187	1.5	.5	1.1	.5
	Plains Exploration (PXP)	26.9	-28%	36%	3,769	6,478	1.1	.8	1.2	.8
	Cobalt International (CIE)	9.4	-34%	71%	3,348	2,391	1.9	1.3	.4	n/a
	Forest Oil Corp. (FST)	29.33	-42%	12%	3,324	4,991	2.7	1.4	1.0	1.2
Oil Well Services	Schlumberger (SLB)	58.1	-11%	27%	69,327	70,745	3.5	2.0	.6	2.1
	Halliburton (HAL)	30.96	-32%	14%	28,095	29,574	3.0	1.5	1.2	1.4
	Transocean (RIG)	60.16	-30%	58%	19,191	27,729	.9	.7	1.1	1.0
	Enbridge (USA) (ENB)	50.16	-26%	4%	19,010	32,866	2.7	1.2	.2	1.0
	Nat.-Oilwell Varco (NOV)	41.28	-22%	22%	17,300	15,483	1.2	.6	.4	.6
	Baker Hughes (BHI)	39.88	-11%	37%	17,192	19,184	1.3	.7	.1	.9
	Weatherford (WFT)	16.7	-26%	38%	12,375	18,786	1.3	.8	.5	1.0
	Cameron (CAM)	39.54	-21%	20%	9,577	9,419	2.5	1.1	n/a	1.2
	Energy Transfer (ETP)	47.8	-16%	9%	9,017	15,197	2.2	1.3	1.7	1.2
	Noble Corp. (NE)	35.08	-25%	30%	8,976	8,644	1.2	1.0	.6	1.2
	Diamond Offshore Drilling (DO)	61.9	-12%	76%	8,605	9,325	2.4	1.4	.6	2.3
	FMC Technologies (FTI)	65.17	-29%	17%	7,821	8,017	7.0	2.3	.8	2.0
	EnSCO (ESV)	44.63	-25%	17%	6,383	5,411	1.1	.8	1.3	.8
	Enbridge Energy Partners, (EEP)	52.58	-28%	14%	6,245	10,602	1.8	1.1	1.2	1.1
	Magellan Midstream Partne (MMP)	50.06	-27%	1%	5,631	7,375	4.6	2.2	1.2	1.1
	Kinder Morgan Mgmt (KMR)	60.3	-28%	2%	5,445	5,445	2.2	2.1	2.3	1.6
	Nabors Industries (NBR)	17.05	-9%	59%	4,864	7,681	.9	.7	.8	.8
	Pride International (PDE)	27.62	-22%	26%	4,851	5,718	1.1	.9	.8	.8
	Helmerich & Payne (HP)	38.56	-16%	27%	4,080	4,393	1.5	1.0	1.7	1.1
	NuStar Energy L.P. (NS)	59.59	-15%	8%	3,850	5,720	1.5	1.0	.2	.9
	Core Laboratories N.V. (CLB)	86.15	-43%	2%	3,849	3,892	>9.9	5.8	.7	4.1
	Rowan Companies (RDC)	29.59	-31%	11%	3,392	3,601	1.0	.6	.7	.5
	CGG Veritas (CGV)	22.17	-26%	51%	3,357	4,878	.9	.6	.6	.6
Paper & Paper Products	Kimberly-Clark (KMB)	66.37	-14%	1%	27,166	32,180	5.4	1.7	1.6	1.6
	International Paper Compa (IP)	23.46	-18%	25%	10,253	17,313	1.8	.6	1.0	.6
	UPM-Kymmene Corp. (ADR) (UPMKY)	16.07	-38%	0%	8,356	13,922	.9	.7	1.7	.6
	Stora Enso (SEOAY)	9.19	-39%	1%	7,247	11,306	1.0	.6	2.2	.5
Personal Services	Expedia (EXPE)	28.76	-36%	0%	8,182	7,950	3.1	1.5	.8	1.4
	Ctrip.com (CTRP)	43.21	-39%	9%	5,886	5,508	7.8	5.4	.1	7.6
	Cintas (CTAS)	27.71	-17%	11%	4,236	4,456	1.7	1.0	1.2	1.2
	H&R Block (HRB)	12.98	-8%	79%	4,005	4,025	3.9	1.2	1.1	1.6

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Photography	Fujifilm (FUJII)	31.85	-19%	11%	15,562	13,523	.8	.2	.8	.2	
Printing & Publishing	Thomson Reuters (TRI)	37.71	-19%	4%	31,364	38,077	1.7	1.2	.9	1.0	
	Reed Elsevier (RUK)	33.51	-21%	7%	10,172	10,172	7.8	7.8	2.5	>9.9	
	McGraw-Hill (MHP)	30.55	-23%	21%	9,443	9,496	5.1	1.6	2.7	1.5	
	Reed Elsevier (ENL)	25.03	-21%	7%	9,129	9,126	7.3	6.9	.2	9.2	
	Washington Post (WPO)	367.25	-20%	49%	3,367	2,726	1.1	.6	1.5	.9	
Printing Services	R.R. Donnelley (RRD)	16.81	-12%	38%	3,468	6,258	1.6	.6	3.4	.7	
Property & Casualty	Berkshire Hathaway (BRK.A)	125000	-22%	13%	206,358	236,375	1.4	.8	1.5	.7	
	Zurich Financial (ZFSVY)	23.4	-18%	12%	33,921	36,854	1.2	.1	.8	.1	
	Travelers (TRV)	52.67	-12%	4%	24,754	30,836	.9	.3	.9	.3	
	AIG (AIG)	35.64	-40%	53%	23,780	227,666	6.8	.2	1.1	.2	
	Tokio Marine Holdings (A (TKOMY)	27.65	-11%	12%	21,779	19,064	.9	.1	1.5	.1	
	ACE Limited (ACE)	57.9	-19%	1%	19,614	20,822	.9	.3	1.4	.3	
	Chubb (CB)	57.66	-18%	1%	18,137	22,062	1.2	.4	.3	.4	
	Allstate (ALL)	30.99	-13%	15%	16,675	21,873	.9	.2	.9	.2	
	Loews Corp. (L)	37.23	-19%	6%	15,572	24,537	.9	.3	.2	.3	
	Progressive Corp. (PGR)	21.12	-25%	0%	14,100	16,125	2.2	.8	2.6	.7	
	Hartford Financial (HIG)	22.5	-16%	35%	9,997	14,607	.5	.1	3.3	.1	
	Fairfax Financial (FRFHF)	389.64	-17%	6%	8,609	9,980	1.1	.4	1.6	.1	
	CNA Financial Corp. (CNA)	27.65	-26%	7%	7,443	10,625	.7	.2	.8	.2	
	XL Capital (XL)	20.89	-25%	1%	7,145	5,883	.7	.2	.7	.2	
	PartnerRe (PRE)	79.14	-13%	3%	5,982	5,939	.8	.3	.7	.3	
	Everest Re (RE)	85.05	-19%	10%	4,783	5,543	.8	.3	-.2	.4	
	Cincinnati Financial Corp (CINF)	29.21	-14%	4%	4,752	5,266	1.0	.4	3.5	.4	
	Arch Capital (ACGL)	82.41	-21%	1%	4,094	4,839	1.0	.3	5.8	.3	
	W.R. Berkley (WRB)	27.34	-15%	3%	4,058	4,862	1.1	.3	1.1	.3	
	SCOR SE (ADR) (SCRYY)	2.24	-21%	25%	4,026	2,833	7.4	.3	1.5	.1	
	Axis Capital (AXS)	32.45	-16%	0%	3,893	4,295	.8	.3	.7	.3	
	Fidelity National (FNF)	15.22	-17%	12%	3,473	3,607	1.0	.5	.9	.5	
	Markel (MKL)	338.56	-7%	16%	3,308	3,625	1.2	.4	n/a	.4	
	Railroads	American Financial (AFG)	30.21	-23%	1%	3,275	3,115	.8	.1	2.0	.1
		Union Pacific (UNP)	79.96	-32%	0%	39,785	47,833	2.3	1.1	.2	.9
		Can. Nat. Railway (CNI)	64.18	-27%	3%	29,869	35,249	2.7	1.4	1.0	1.2
		Norfolk Southern Corp. (NSC)	58.45	-27%	5%	21,546	27,175	2.0	1.0	1.9	.8
CSX Corp. (CSX)		54.9	-26%	13%	20,843	28,088	2.4	1.1	.9	.9	
Can. Pacific Railway (CP)		61.68	-32%	3%	10,404	14,041	2.2	1.1	.7	.8	
Kansas City Southern (KSU)		38.56	-41%	10%	3,955	5,577	1.7	1.0	1.3	.8	
Real Estate Operations	Simon Property (SPG)	95.32	-33%	2%	27,912	42,735	6.1	1.9	1.4	1.5	
	Public Storage (PSA)	102.71	-31%	2%	17,473	20,982	3.4	2.2	1.1	1.7	
	Vornado Realty (VNO)	86.53	-35%	1%	15,774	26,615	2.9	1.4	1.7	1.1	
	Brookfield Asset (BAM)	27.39	-27%	1%	15,748	41,736	1.3	.7	1.5	.8	
	Equity Residential (EQR)	48.87	-44%	1%	13,853	23,673	3.0	1.5	1.2	1.2	
	Boston Properties (BXP)	87.1	-34%	1%	12,137	17,663	2.7	1.5	.1	1.2	
	HCP (HCP)	37.11	-28%	1%	11,507	17,066	2.0	1.4	.9	1.1	
	Annaly Capital (NLY)	17.92	-21%	10%	11,108	68,250	1.2	.2	.3	.1	
	AvalonBay (AVB)	109.66	-39%	2%	9,339	12,914	2.8	1.7	3.2	1.3	
	Ventas (VTR)	52.88	-32%	1%	8,306	10,859	3.4	2.0	.8	1.5	
	Brookfield Prop. (BPO)	15.53	-36%	8%	7,790	14,989	1.2	.9	.7	.9	
	Kimco Realty (KIM)	16.14	-29%	4%	6,551	10,677	1.4	1.1	.9	1.0	
	Health Care REIT (HCN)	47.91	-20%	0%	5,971	9,357	1.7	1.3	1.2	1.2	
	CB Richard Ellis (CBG)	18.26	-45%	3%	5,876	8,186	9.2	1.6	.7	1.2	
	Macerich Company (MAC)	43.34	-40%	9%	5,639	8,941	1.9	1.2	.1	.7	

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	Digital Realty (DLR)	62.24	-31%	3%	5,434	7,878	4.2	1.8	1.4	1.6
	ProLogis (PLD)	11.17	-18%	35%	5,326	13,827	.8	.6	.1	.5
	SL Green Realty (SLG)	64.63	-44%	5%	5,055	9,662	1.2	1.0	.4	.8
	Federal Realty (FRT)	82.17	-30%	1%	5,047	6,730	4.4	2.0	.4	1.4
	Nationwide Health (NHP)	39.31	-24%	1%	4,865	6,218	2.2	1.6	1.3	1.4
	General Growth (GGP)	15.08	-77%	20%	4,786	21,047	6.0	.8	.5	.2
	AMB Property (AMB)	25.7	-19%	15%	4,325	7,328	1.4	1.1	1.2	1.0
	UDR (UDR)	21.58	-35%	2%	3,926	7,461	3.2	1.5	.9	1.2
	Liberty Property (LRY)	32.17	-16%	10%	3,659	5,865	1.7	1.2	.7	1.1
	Alexandria R. E. (ARE)	72.17	-29%	4%	3,608	6,599	1.7	1.2	1.2	1.0
	Realty Income (O)	33.93	-35%	2%	3,546	5,509	3.2	1.8	2.5	1.5
	Jones Lang LaSalleorparat (JLL)	81.46	-47%	4%	3,473	3,750	2.5	1.3	2.1	.7
	Hysan Development Company (HYSNY)	6.6	-27%	0%	3,471	3,776	.8	.6	.6	.6
	Essex Property (ESS)	110.75	-34%	2%	3,359	5,268	3.4	1.6	2.1	1.3
Recreational Activities	Carnival Corp. (CCL)	35.92	-20%	23%	29,666	38,832	1.4	1.2	1.0	1.1
	Carnival plc (CUK)	37.29	-18%	23%	29,528	38,694	1.4	1.2	1.3	1.1
	Netflix (NFLX)	140.46	-68%	7%	7,354	7,312	>9.9	>9.9	1.2	4.4
Recreational Products	Mattel (MAT)	22.59	-22%	9%	8,126	8,291	3.2	1.6	.6	1.4
	Harley-Davidson (HOG)	28.28	-27%	28%	6,660	10,631	3.1	.9	.7	.8
	Hasbro (HAS)	44.7	-40%	1%	6,250	6,786	3.9	1.6	.9	1.2
	Kawasaki Heavy Industries (KWHIY)	11.37	-21%	11%	4,741	9,183	1.4	.3	1.0	.3
Regional Banks	HSBC Holdings (HBC)	52.63	-18%	22%	185,345	(108,184)	1.4	.1	2.4	.1
	Wells Fargo (WFC)	26.01	-11%	32%	136,121	220,462	1.2	.3	1.5	.3
	Banco Santander (STD)	12.67	-32%	41%	104,259	(135,118)	1.1	.1	3.2	.1
	Banco Bradesco (BBD)	18.92	-27%	3%	67,496		n/m	n/a	.9	n/a
	Bank of Montreal (BMO)	58.47	-22%	12%	32,751	64,731	1.7	.1	.6	.1
	PNC Financial (PNC)	54.35	-20%	30%	28,556	43,370	1.0	.2	1.0	.2
	Mizuho Financial Group (A (MFG)	3.1	-4%	42%	23,995		n/m	n/a	.9	n/a
	United Overseas Bank (UOVEY)	27.6	-18%	11%	20,783	9,493	1.4	.2	1.3	.2
	Shinhan Financial Group C (SHG)	75.17	-16%	19%	17,866		n/m	n/a	1.2	n/a
	BB&T Corp. (BBT)	23.03	-6%	55%	15,959	38,544	1.0	.2	1.3	.2
	KB Financial Group (ADR) (KB)	42.97	-14%	29%	14,775		n/m	n/a	1.9	n/a
	SunTrust Banks (STI)	25.96	-29%	23%	12,978	26,345	.7	.2	.2	.2
	M&T Bank (MTB)	86.7	-32%	11%	10,328	20,251	1.4	.3	3.2	.3
	Fifth Third Bancorp (FITB)	12.23	-28%	30%	9,739	17,791	1.0	.2	4.9	.2
	Commerzbank (CRZBY)	8.19	-22%	62%	9,675	388,175	.3	.2	1.5	.2
	Credicorp (BAP)	115.43	-42%	2%	9,211	8,081	3.8	.5	n/a	.4
	Woori Finance Holdings Co (WF)	34.09	-4%	48%	9,181		n/m	n/a	.6	n/a
	Nedbank Group Ltd. (ADR) (NDBKY)	39.49	-28%	2%	8,803	1,317	1.5	.2	2.2	.1
	Regions Financial (RF)	6.83	-33%	37%	8,579	20,611	.6	.2	.8	.2
	CIT Group (CIT)	39.27	-37%	9%	7,864	45,127	.9	.8	1.2	.8
	KeyCorp (KEY)	8.23	-36%	20%	7,245	19,578	.9	.2	3.1	.2
	Comerica (CMA)	36.88	-28%	24%	6,503	11,185	1.1	.3	1.2	.3
	Bank of Ireland (IRE)	3.4	-9%	490%	4,505	7,465	.5	.0	.2	.1
	Huntington Bancsharesorpo (HBAN)	5.8	-40%	28%	4,158	9,190	1.1	.2	.5	.2
	Zions BanCorp (ZION)	21.45	-42%	41%	3,718	1,431	.8	.1	.9	.1
	Marshall & Ilsley (MI)	7	-29%	52%	3,692	7,998	.5	.2	2.2	.2
Rental & Leasing	ORIX Corp. (ADR) (IX)	39.11	-26%	19%	8,407	65,236	.6	.6	1.3	.6
	Hertz (HTZ)	10.99	-24%	42%	4,529	15,326	2.4	.9	1.7	.9
Restaurants	McDonald's (MCD)	74.32	-25%	3%	79,102	88,062	6.0	3.1	.9	2.5
	Yum! Brands (YUM)	45.75	-29%	1%	21,365	24,070	>9.9	3.4	1.2	2.9
	Starbucks (SBUX)	25.53	-27%	12%	18,895	18,049	5.4	3.0	.1	2.9

Industry	Company (Ticker)	Price (\$)	Δ to Reach		MV (\$mn)	EV (\$mn)	Price/ Book	Tobin's Q		
			52-Week					Now	Last Quarter	Year Ago
			Low	High						
	Sodexo SA (ADR) (SDXAY)	61.5	-17%	6%	9,664	11,673	3.1	.9	1.1	1.0
	Darden Restaurants (DRI)	44.73	-33%	10%	6,290	7,733	3.3	1.6	.9	1.4
	Tim Hortons (USA) (THI)	36.4	-25%	3%	6,286	6,569	5.5	3.2	1.6	2.9
	Chipotle (CMG)	168.31	-53%	1%	5,236	4,933	7.0	5.0	.9	3.4
Retail (apparel)	TJX Companies (TJX)	42.81	-16%	13%	17,152	16,424	5.8	2.1	.1	1.9
	Gap (GPS)	18.91	-12%	39%	11,703	10,000	2.7	1.3	2.9	1.6
	Limited Brands (LTD)	26.77	-40%	8%	8,641	9,873	4.2	1.4	.3	.9
	Nordstrom (JWN)	36.09	-21%	28%	7,910	9,573	4.4	1.1	.2	1.1
	Ross Stores (ROST)	53.91	-22%	9%	6,494	5,869	5.2	2.1	.4	2.1
	Urban Outfitters (URBN)	34.11	-16%	20%	5,631	5,040	4.1	2.8	.9	3.2
	Guess? (GES)	38.11	-20%	35%	3,499	3,035	3.3	1.7	.6	2.0
Retail (dept & discount)	Wal-Mart (WMT)	53.01	-10%	6%	192,773	231,811	3.0	1.4	.6	1.4
	Wal-mart de Mexico (WMMVY)	23.5	-30%	11%	42,071	40,780	5.0	3.1	.3	3.3
	Target (TGT)	53.74	-16%	9%	38,771	53,783	2.5	1.1	2.0	1.0
	Kohl's (KSS)	50.9	-13%	20%	15,677	15,244	1.9	1.0	.2	1.4
	Dollar General (DG)	27.42	-22%	15%	9,351	12,422	2.5	1.3	.5	.3
	Macy's (M)	21.75	-29%	16%	9,191	16,085	1.9	.7	.4	.7
	Sears Holdings (SHLD)	66.83	-11%	88%	7,395	9,388	.9	.3	1.6	.3
	Dollar Tree (DLTR)	48.38	-38%	0%	6,142	5,928	4.4	2.5	.8	1.8
	J.C. Penney (JCP)	24.4	-20%	53%	5,769	6,865	1.2	.4	.7	.6
Retail (drugs)	CVS Caremark (CVS)	29.83	-10%	28%	40,516	51,366	1.1	.7	1.1	.9
	Walgreen (WAG)	29.21	-10%	39%	28,427	28,483	1.9	1.0	4.2	1.4
	Express Scripts (ESRX)	46.37	-19%	16%	25,152	26,994	6.9	2.5	1.2	2.0
	Medco Health (MHS)	47.73	-9%	40%	20,698	23,484	4.2	1.5	2.2	1.7
Retail (grocery)	Tesco (TSCDY)	20.18	-17%	8%	53,990	68,143	2.4	1.1	1.5	1.4
	SYSCO (SYYY)	29.17	-17%	10%	17,163	19,035	4.5	1.7	1.3	1.5
	Ahold (AHONY)	13.11	-10%	9%	15,486	16,742	2.1	1.0	3.1	1.0
	Kroger (KR)	21.79	-12%	14%	13,817	20,597	2.7	.9	2.2	.9
	Mead Johnson (MJN)	55.1	-28%	4%	11,271	12,368	n/m	6.1	1.0	5.5
	Sainsbury's (JSAIY)	24.03	-26%	1%	11,206	13,659	1.5	1.0	1.8	.9
	Companhia Brasileira de D (CBD)	68.29	-22%	16%	8,515	9,583	2.2	.8	1.0	.8
	Safeway (SWY)	20.35	-8%	33%	7,766	12,568	1.6	.8	2.5	.8
	Delhaize (DEG)	71.15	-8%	20%	7,116	10,111	1.1	.7	1.1	.8
	Whole Foods Market (WFMI)	37.09	-33%	16%	6,376	6,458	2.8	1.7	1.5	1.4
Retail (home improvement)	Home Depot (HD)	29.89	-18%	24%	49,776	57,130	2.6	1.3	.8	1.1
	Lowe's (LOW)	21.02	-9%	36%	29,497	33,060	1.5	.9	.6	1.0
	Sherwin-Williams (SHW)	72.47	-22%	11%	7,884	8,961	6.0	1.8	2.1	1.6
Retail (online)	eBay (EBAY)	24.22	-21%	17%	31,780	26,883	2.2	1.4	4.9	1.7
Retail (specialty)	Amazon.com (AMZN)	148.33	-40%	2%	66,424	61,448	>9.9	5.1	.1	5.0
	Costco Wholesale (COST)	61.29	-13%	1%	26,914	23,809	2.5	1.1	.7	1.2
	Staples (SPLS)	19.49	-10%	33%	14,230	15,937	2.2	1.1	.0	1.3
	Bed Bath & Beyond (BBBY)	41.1	-36%	18%	10,846	9,202	2.9	1.5	1.3	1.7
	AutoZone (AZO)	220.88	-39%	0%	10,384	12,986	n/m	2.5	.5	2.0
	O'Reilly Automotive (ORLY)	51.95	-35%	0%	7,209	7,761	2.5	1.4	1.7	1.0
	Family Dollar Stores (FDO)	43.46	-41%	1%	5,765	5,570	4.1	2.0	2.1	1.2
	Tiffany & Co. (TIF)	44.98	-21%	16%	5,680	5,847	2.9	1.2	.3	1.2
	CarMax (KMX)	23.65	-21%	12%	5,291	9,182	2.7	1.3	.7	1.5
	Advance Auto Parts (AAP)	58.15	-38%	0%	4,900	5,085	4.6	1.5	.1	1.2
	PetSmart (PETM)	34.82	-40%	3%	4,128	4,465	3.5	1.7	1.6	1.1
	AutoNation (AN)	23.34	-29%	7%	3,417	4,682	1.7	.8	.5	.8
Retail (technology)	Best Buy (BBY)	37.15	-17%	31%	15,490	16,148	2.3	.9	1.3	1.0
Retail Financial Services	Visa (V)	68.49	-5%	42%	57,537	52,294	2.3	1.6	1.2	1.6

Industry	Company (Ticker)	Price (\$)	Δ to Reach		MV (\$mn)	EV (\$mn)	Price/ Book	Tobin's Q		
			52-Week					Now	Last Quarter	Year Ago
			Low	High						
	American Express (AXP)	41.37	-23%	19%	49,777	119,881	3.4	.8	.6	.8
	MasterCard (MA)	213.67	-11%	26%	27,960	24,526	6.8	3.4	.7	3.5
	Capital One (COF)	38.67	-16%	23%	17,663	57,036	.7	.3	.5	.2
	Discover Financial (DFS)	15.57	-22%	11%	8,471	16,071	1.4	.4	.7	.3
	Fidelity National (FIS)	27.4	-21%	12%	8,210	10,625	1.0	.8	2.8	.9
	SLM Corp. (SLM)	11.72	-32%	19%	5,694	199,525	1.5	.8	.4	.7
	Dun & Bradstreet (DNB)	69.65	-6%	22%	3,486	4,203	n/m	2.8	.9	3.1
	AmeriCredit (ACF)	24.38	-40%	9%	3,301	10,282	1.4	.4	1.7	.2
S&Ls/Savings Banks	Northern Trust (NTRS)	49.04	-8%	24%	11,872	(4,911)	1.8	.2	2.0	.2
	NY Community Banc. (NYB)	16.32	-37%	12%	7,108	8,599	1.3	.2	5.7	.1
	Hudson City Bancorp (HCBK)	12.03	-6%	23%	6,336	20,234	1.1	.1	.7	.1
	People's United (PBCT)	12.96	-3%	32%	4,807	3,456	.9	.2	.4	.3
Schools	Pearson (PSO)	15.77	-24%	4%	12,817	16,119	1.9	.9	1.8	.9
	Apollo Group (APOL)	49.1	-22%	57%	7,244	6,514	5.2	2.2	1.1	4.9
	New Oriental Edu. (EDU)	106.02	-38%	1%	4,055	3,636	9.5	6.3	-.7	5.9
Semiconductors	Intel (INTC)	18.81	-6%	30%	104,734	88,704	2.3	1.5	6.3	2.0
	Taiwan Semiconductor (TSM)	9.91	-6%	18%	51,324	45,598	3.3	2.2	1.2	2.8
	Texas Instruments (TXN)	25.72	-13%	7%	30,740	28,435	3.2	2.1	1.1	2.2
	Kyocera (KYO)	94.9	-18%	12%	17,401	13,890	1.1	.4	.7	.4
	Broadcom (BRCM)	34.16	-25%	13%	17,200	15,151	3.9	2.7	4.4	2.8
	Applied Materials (AMAT)	11.02	-7%	36%	14,727	12,585	2.0	1.1	2.4	1.5
	First Solar (FSLR)	144.88	-32%	13%	12,395	11,737	4.1	3.1	.8	4.1
	ASML Holding N.V. (ASML)	28.52	-14%	27%	12,367	11,777	4.6	1.7	2.7	2.5
	Marvell Technology (MRVL)	17.91	-25%	28%	11,652	9,274	2.3	1.6	2.5	1.9
	Analog Devices (ADI)	29.91	-16%	8%	8,916	6,803	2.9	1.6	.4	2.0
	Altera (ALTR)	28.7	-33%	1%	8,817	7,250	5.5	2.4	.9	2.6
	ARM Holdings (ARMH)	18.34	-65%	4%	8,076	7,760	6.1	5.1	1.8	2.3
	Linear Technology Corp. (LLTC)	31.53	-19%	5%	7,077	7,279	>9.9	4.5	.5	4.6
	Xilinx (XLNX)	26.45	-21%	11%	6,846	6,152	3.7	1.7	.5	1.8
	Micron Technology (MU)	6.76	-9%	69%	6,721	6,777	.9	.4	1.9	.7
	Infineon Tech (IFNNY)	6.1	-29%	20%	6,629	5,196	2.0	.9	1.0	.9
	STMicroelectronics (STM)	7.35	-11%	46%	6,477	5,619	1.0	.3	.7	.5
	United Microelectronics C (UMC)	2.57	-3%	65%	6,398	5,019	1.0	.6	1.0	1.2
	NVIDIA (NVDA)	10.55	-18%	80%	6,056	4,307	2.2	1.1	.8	2.1
	Cree (CREE)	51.2	-33%	63%	5,534	4,467	2.7	2.0	.5	2.0
	Microchip Technology (MCHP)	29.72	-21%	7%	5,526	4,552	3.5	1.6	.9	1.5
	KLA-Tencor (KLAC)	31.05	-14%	21%	5,211	4,423	2.3	1.0	1.0	1.4
	Maxim Integrated (MXIM)	16.91	-7%	26%	5,045	4,518	2.1	1.2	.2	1.4
	Lam Research (LRCX)	39.16	-18%	12%	4,863	4,059	2.8	1.5	.6	1.8
	Avago Technologies (AVGO)	20.04	-28%	18%	4,797	4,666	3.6	2.3	.3	2.2
	Advanced Semi (ASX)	3.83	-13%	24%	4,633	5,895	1.8	.8	.8	1.1
	Flextronics (FLEX)	5.55	-12%	51%	4,359	5,023	2.2	.4	1.3	.7
	Advanced Micro (AMD)	6.12	-29%	67%	4,128	4,812	5.5	1.0	1.6	.8
	Advantest (ATE)	20.27	-7%	40%	3,619	2,425	2.1	1.0	.8	1.5
	Skyworks Solutions (SWKS)	19.7	-49%	1%	3,519	3,210	2.9	2.1	.7	1.5
	Atmel Corp. (ATML)	7.11	-49%	1%	3,282	2,813	5.1	2.0	.5	.9
Software & Programming	Microsoft (MSFT)	25.22	-10%	25%	218,243	187,394	4.7	2.2	1.0	2.7
	Oracle (ORCL)	27.48	-27%	1%	138,243	131,644	4.3	2.1	1.2	1.9
	SAP (SAP)	48.14	-15%	10%	57,222	54,405	5.0	2.8	1.5	3.0
	Infosys Technologies Limi (INFY)	65.07	-30%	1%	37,159	33,713	7.0	5.4	.2	5.1
	VMware (VMW)	84.81	-56%	3%	34,926	32,596	>9.9	5.8	1.3	3.5
	Cognizant Tech (CTSH)	64.11	-43%	1%	19,290	17,638	6.3	4.6	.9	3.7

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			52-Week					Now	Last Quarter	Year Ago
			Low	High						
	Adobe Systems (ADBE)	32.78	-21%	17%	17,217	16,066	3.3	2.0	.7	2.5
	salesforce.com (CRM)	116.74	-54%	5%	15,165	14,884	>9.9	5.7	.3	4.5
	Intuit (INTU)	44.88	-39%	0%	14,252	13,628	5.1	2.7	.9	1.9
	Activision Blizzard (ATVI)	10.82	-8%	20%	13,248	10,402	1.2	.8	n/a	.9
	Citrix Systems (CTXS)	68.21	-47%	1%	12,751	11,928	5.5	3.7	.4	2.4
	Symantec (SYMC)	14.98	-20%	28%	11,824	10,982	2.6	1.2	2.1	1.5
	CA (CA)	20.44	-13%	18%	10,547	9,629	2.1	1.0	.8	1.1
	Autodesk (ADSK)	32.56	-32%	8%	7,400	6,314	4.9	2.7	.5	2.1
	Check Point Software Tech (CHKP)	35.08	-23%	4%	7,283	6,300	2.9	2.1	.9	1.9
	Red Hat (RHT)	38.34	-35%	2%	7,244	6,421	6.6	3.7	.2	2.7
	McAfee (MFE)	47.3	-38%	0%	7,186	6,398	3.7	1.9	1.1	1.8
	BMC Software (BMC)	39.35	-13%	5%	7,029	5,957	5.2	1.7	1.5	1.9
	SAIC (SAI)	15.62	-5%	27%	5,806	6,307	2.5	1.1	1.0	1.2
	Sybase (SY)	64.98	-48%	2%	5,644	5,100	5.2	2.1	1.5	1.5
	Amdocs (DOX)	27.26	-12%	19%	5,605	4,315	1.7	.9	1.9	1.0
	Verisign (VRSN)	31.45	-33%	0%	5,476	4,715	>9.9	2.0	1.1	1.7
	Electronic Arts (ERTS)	16.26	-14%	29%	5,370	3,640	2.0	1.0	.5	.9
	Nuance Communications (NUAN)	15.51	-15%	20%	4,558	4,929	2.1	1.4	1.4	1.4
	International Game (IGT)	15.05	-4%	50%	4,486	6,069	3.7	1.4	1.2	1.8
	Rovi Corp. (ROVI)	42.56	-37%	8%	4,390	4,454	2.7	1.9	.6	1.6
	Trend Micro (TMICY)	32	-21%	25%	4,273	2,814	3.6	1.4	.0	1.7
	ANSYS (ANSS)	42.83	-15%	9%	3,893	3,647	2.8	1.9	.1	1.8
	Synopsys (SNPS)	24.39	-17%	0%	3,623	2,414	1.8	1.0	.9	.9
	Informatica Corp. (INFA)	36	-42%	1%	3,332	3,170	6.3	3.2	.8	2.1
Technical Instruments	Danaher (DHR)	40.78	-21%	7%	26,614	28,206	2.2	1.4	.4	1.2
	Thermo Fisher (TMO)	47.31	-12%	21%	19,276	20,098	1.3	.9	2.2	.8
	Waters (WAT)	68.93	-22%	7%	6,344	6,347	7.8	3.0	.5	2.9
	Roper Industries (ROP)	64.06	-26%	3%	6,033	6,871	2.4	1.5	1.0	1.3
	Illumina (ILMN)	48.3	-47%	2%	6,003	5,518	5.8	3.3	.7	3.2
	Garmin (GRMN)	29.64	-12%	37%	5,768	4,576	2.2	1.2	.5	1.9
	AMETEK (AME)	46.01	-28%	1%	4,900	5,679	3.2	1.6	.9	1.4
	Pall Corp. (PLL)	40.45	-24%	3%	4,719	5,004	4.0	1.5	.5	1.2
	Qiagen NV (QGEN)	18.8	-7%	28%	4,375	4,407	1.9	1.1	1.1	1.6
	Trimble Navigation Limite (TRMB)	32.46	-36%	3%	3,878	3,769	3.2	2.0	.7	1.5
Textiles - Non-Apparel	Mohawk Industries (MHK)	48.95	-19%	37%	3,358	4,684	1.1	.6	.5	.6
Tires	Bridgestone (BRDCY)	36.45	-15%	3%	14,294	19,446	1.1	.4	.8	.5
	Continental (CTTAY)	63.1	-31%	6%	12,620	24,012	1.7	.7	.9	.7
Tobacco	Philip Morris (PM)	55.12	-48%	1%	101,028	114,675	>9.9	3.4	.9	3.1
	British Am. Tobacco (BTI)	73.9	-24%	1%	73,808	88,037	5.7	2.1	.6	2.2
	Altria Group (MO)	23.5	-26%	2%	48,973	60,303	>9.9	1.8	.5	1.4
	Imperial Tobacco Group PL (ITYBY)	59.6	-17%	14%	30,348	48,236	2.9	1.0	.3	1.1
	Reynolds American (RAI)	58.41	-33%	1%	17,028	19,826	2.6	1.2	.6	.9
	Lorillard (LO)	80.7	-13%	2%	12,244	12,238	n/m	3.9	1.8	4.2
Trucking	J.B. Hunt (JBHT)	35.26	-16%	12%	4,348	4,957	7.6	2.6	.6	2.5
Waste Management	Waste Management (WM)	35	-19%	3%	16,710	25,126	2.7	1.2	1.6	1.1
	Republic Services (RSG)	31.21	-19%	6%	11,953	19,015	1.6	1.0	1.2	.9
	Stericycle (SRCL)	69.97	-33%	0%	5,968	6,910	6.3	3.0	1.7	2.6
	Sims Metal Management Lim (SMS)	16.83	-23%	40%	3,430	3,302	1.1	.7	2.2	n/a
Water Utilities	Veolia Environnement (ADR (VE)	25.58	-10%	56%	12,320	33,188	1.2	.5	2.7	.6
	Companhia de Saneamento B (SBS)	41.21	-21%	6%	4,669	7,959	.7	.6	1.1	.7
	American Water Works (AWK)	23.14	-18%	3%	4,044	9,667	1.0	.7	.9	.6

Appendix

Calculating Tobin's Q

Tobin's Q is impossible to calculate with precision, as the concept of replacement value is inherently subjective. For example, rational investors are likely to disagree on the replacement value of The Coca-Cola Company, as investors will have divergent views on the value of Coke's brand equity. As a result, the calculation of Q requires a number of estimates and approximations. In this report, we focus on estimating Q for the market as a whole rather than any single stock.

The data used to estimate Q can be found in the Federal Reserve Board's Z.1 statistical release entitled *Flow of Funds Accounts of the United States*. Before proceeding with this brief tutorial, we suggest that you access the FRB's website and print out the relevant page from the latest Z.1 release. To do so, simply go to <http://www.federalreserve.gov/releases/z1/> and click on the date of the current Z.1 release. Then click on PDF file labeled "Balance sheet tables." The file will contain several pages, but you only need the page entitled "B.102 Balance Sheet of Nonfarm Nonfinancial Corporate Business." All references below to lines that contain certain data relate to line numbers in the B.102 table. For your convenience, we have reproduced on the next page the data used to calculate Q from 1945 thru 2008.

$$Q = \frac{\text{market value of debt \& equities} - \text{net liquid assets} - \text{land value}}{\text{replacement cost of structures, equipment \& software, and inventories}},$$

where

- The market value of debt can be estimated by using book value of debt as a proxy for market value; book value of debt outstanding in any particular year is the sum of the following line items contained in balance sheet B.102 of statistical release Z.1: Municipal Securities (line 24), Corporate Bonds (line 25), and Mortgages (line 28).¹
- The market value of equities is found in line 35 of B.102. Equity market value can be updated through the present by adjusting the value provided in the Z.1 statistical release to reflect the subsequent change in a major market index, such as the S&P 500 Index.
- Net liquid assets = total financial assets – (total liabilities – municipal securities – corporate bonds – mortgages) = line 6 – (line 21 – line 24 – line 25 – line 28)
- Land value is approximated as the market value of real estate – the replacement cost of residential and nonresidential structures, i.e., land value = line 3 – line 33 – line 34.
- The replacement cost of structures, equipment & software, and inventories is the sum of lines 4, 5, 33, and 34 of B.102.

¹ It is possible to estimate the market value of debt more accurately than by using book value as a proxy. In order to do so, long-term debt can be modeled in the form of 10-year, Baa-grade bonds with semiannual coupons. (Historical data on Moody's Baa interest rates is available on the FRB's website.) The market value of the debt outstanding in year t would then equal the sum of the market values of debt issued in years t-9 through t. The *book* value of bonds issued in year t equals the book value of debt outstanding in year t (calculated as noted in text above) minus the book value of debt outstanding in year t-1 plus the book value of debt outstanding in year t-10. The *market* value of debt issued in year t can be estimated as the book value of debt issued in year t. The market value of debt issued in years t-9 through t-1 can be estimated via a net present value formula using the applicable Moody's Baa interest rates.

The table below shows data inputs for the following formula:

$$\begin{aligned}
 Q &= \text{market value} / \text{replacement cost} = \\
 &= (\text{market value of debt \& equities} - \text{net liquid assets} - \text{land value}) / \\
 &\quad \text{replacement cost of structures, equipment \& software, and inventories} \\
 &= mv / rc = (mvd + mve - nla - lv) / (rcs + rces + rci)
 \end{aligned}$$

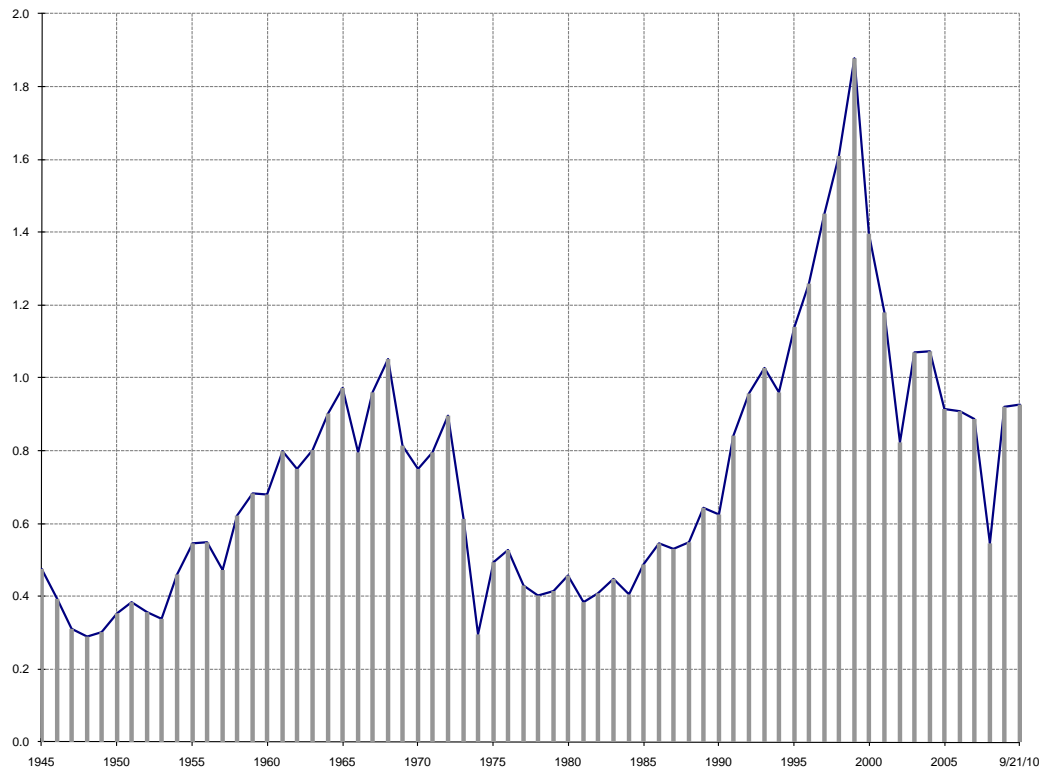
Calculating Tobin's Q — Key Variables, 1945–2010

Year	q	mv	rc	mvd	mve	nla	lv	rscs	rces	rci
	Tobin's Q	Market Value	Replacement Cost	Book Value of Debt	Market Value of Equities	Net Liquid Assets	Land Value	Structures	Equipment & Software	Inventories
1945	0.48	84	176	33	104	32	21	111	32	33
1946	0.39	81	206	35	97	22	29	130	39	36
1947	0.31	76	242	39	95	22	37	151	48	42
1948	0.29	77	266	45	94	25	37	162	56	47
1949	0.30	82	271	49	104	33	38	166	61	43
1950	0.35	106	300	52	127	31	42	178	69	53
1951	0.38	127	332	56	148	30	47	194	77	61
1952	0.36	125	348	62	147	36	48	203	83	62
1953	0.34	122	362	66	144	39	50	209	89	63
1954	0.46	170	371	71	195	46	50	215	94	62
1955	0.55	220	402	76	244	46	55	230	104	69
1956	0.55	244	444	80	268	43	62	251	117	76
1957	0.47	222	470	88	246	46	66	263	129	78
1958	0.62	297	477	96	325	56	68	269	134	74
1959	0.68	336	492	100	362	59	68	275	141	77
1960	0.68	344	505	105	365	56	70	280	146	80
1961	0.80	413	517	111	438	62	74	285	150	82
1962	0.75	400	535	119	424	66	77	292	156	87
1963	0.80	444	554	126	466	68	80	299	163	93
1964	0.90	527	583	134	546	69	84	310	173	99
1965	0.97	606	624	142	624	69	91	329	187	108
1966	0.80	544	684	157	548	64	97	350	210	124
1967	0.96	712	741	176	712	73	104	375	232	134
1968	1.05	849	807	192	843	73	114	406	257	144
1969	0.82	725	888	208	714	68	130	445	285	159
1970	0.75	726	970	232	712	74	144	489	312	167
1971	0.80	838	1,053	255	836	93	161	542	336	175
1972	0.90	1,028	1,148	275	1,049	116	180	599	360	189
1973	0.61	802	1,311	315	820	123	210	686	400	226
1974	0.29	468	1,589	338	562	186	245	802	495	292
1975	0.49	867	1,759	373	761	-8	275	896	567	295
1976	0.53	1,025	1,939	403	935	9	304	981	629	330
1977	0.43	924	2,154	447	825	7	341	1,079	709	366
1978	0.40	980	2,442	487	864	-16	387	1,213	806	423
1979	0.41	1,165	2,815	516	1,028	-67	445	1,379	934	501
1980	0.46	1,479	3,229	544	1,346	-95	506	1,574	1,087	568
1981	0.38	1,387	3,606	588	1,225	-143	569	1,773	1,212	621
1982	0.41	1,550	3,788	619	1,386	-164	619	1,896	1,280	612
1983	0.45	1,741	3,895	682	1,630	-86	658	1,930	1,332	634
1984	0.40	1,671	4,135	765	1,553	-52	700	2,032	1,400	703
1985	0.49	2,107	4,313	868	1,917	-61	739	2,115	1,485	713
1986	0.54	2,425	4,450	1,001	2,241	46	772	2,164	1,576	709
1987	0.53	2,483	4,689	1,127	2,287	120	811	2,273	1,652	765
1988	0.55	2,742	4,995	1,242	2,559	188	871	2,417	1,751	827
1989	0.64	3,389	5,258	1,333	3,145	153	936	2,536	1,854	869
1990	0.63	3,449	5,511	1,387	2,967	102	803	2,637	1,972	901
1991	0.84	4,711	5,603	1,454	4,014	171	586	2,668	2,048	887
1992	0.96	5,527	5,770	1,506	4,370	82	267	2,745	2,123	902
1993	1.03	6,211	6,041	1,585	4,852	211	14	2,886	2,220	935
1994	0.96	6,145	6,396	1,625	4,812	259	34	3,040	2,349	1,007
1995	1.14	7,694	6,743	1,738	6,435	448	31	3,172	2,501	1,070
1996	1.26	8,878	7,045	1,864	7,619	572	33	3,321	2,633	1,091
1997	1.45	10,743	7,410	2,017	9,661	677	257	3,499	2,770	1,140
1998	1.61	12,360	7,680	2,269	11,561	902	568	3,635	2,865	1,180
1999	1.88	14,890	7,922	2,553	15,160	2,239	583	3,806	2,864	1,252
2000	1.40	11,829	8,470	2,754	12,685	2,915	695	4,069	3,067	1,334
2001	1.18	10,343	8,755	3,165	10,805	3,255	373	4,322	3,167	1,266
2002	0.82	7,410	8,997	3,349	7,839	3,368	411	4,474	3,220	1,303
2003	1.07	9,870	9,231	3,593	10,845	3,834	734	4,635	3,250	1,345
2004	1.07	10,698	9,960	3,728	12,086	4,310	806	5,129	3,351	1,480
2005	0.91	9,901	10,822	3,994	12,684	4,758	2,019	5,719	3,501	1,602
2006	0.91	10,591	11,642	4,308	14,328	5,264	2,781	6,229	3,715	1,698
2007	0.89	10,860	12,230	4,727	15,252	6,017	3,102	6,532	3,896	1,802
2008	0.55	7,045	12,881	4,997	9,554	6,158	1,347	7,050	4,083	1,748
2009	0.92	11,997	13,041	5,293	12,738	6,034	0	7,123	4,255	1,662
1H10	0.85	10,923	12,838	5,323	11,454	5,854	0	7,175	3,986	1,677
9/21/10	0.93	12,146	13,116		12,281					

Source: The Federal Reserve, *The Manual of Ideas*.

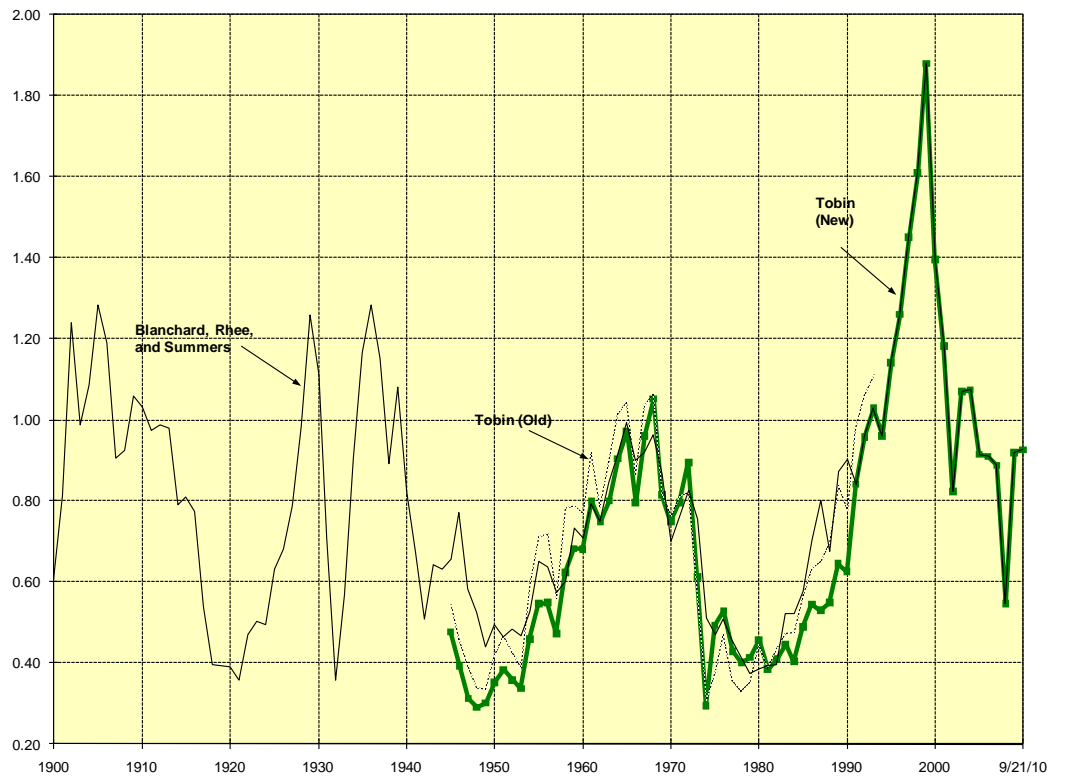
Selected Charts and Historical Data

Tobin's Q — Tobin (New) Methodology, 1945–2010



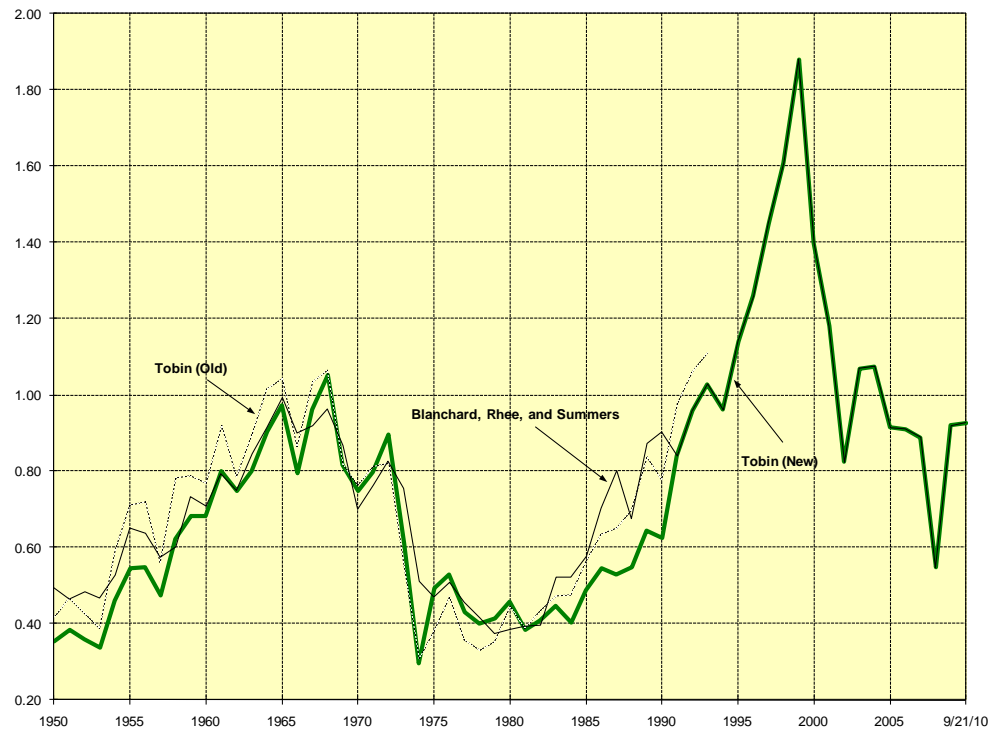
Source: Federal Reserve, The Manual of Ideas.

Tobin's Q — Comparative Chart, 1900–2010



Source: Federal Reserve, The Manual of Ideas.

Tobin's Q — Comparative Chart, 1950–2010



Source: Federal Reserve, The Manual of Ideas.

Tobin's Q — Summary Data (incl. Unadjusted Blanchard, Rhee, Summers), 1900-2010 ^{1, 2}

- Q average value: 0.80; Q median value: 0.79
- Q minimum value: 0.36 (1921); Q maximum value: 1.88 (1999)
- Q less than 1.00 (number of years): 86; Q greater than 1.00 (number of years): 25

Year	Tobin's Q	Year	Tobin's Q	Year	Tobin's Q
1900	0.61	1940	0.82	1980	0.46
1901	0.81	1941	0.67	1981	0.38
1902	1.24	1942	0.51	1982	0.41
1903	0.99	1943	0.64	1983	0.45
1904	1.09	1944	0.63	1984	0.40
1905	1.28	1945	0.48	1985	0.49
1906	1.19	1946	0.39	1986	0.54
1907	0.90	1947	0.31	1987	0.53
1908	0.93	1948	0.29	1988	0.55
1909	1.06	1949	0.30	1989	0.64
1910	1.03	1950	0.35	1990	0.63
1911	0.97	1951	0.38	1991	0.84
1912	0.99	1952	0.36	1992	0.96
1913	0.98	1953	0.34	1993	1.03
1914	0.79	1954	0.46	1994	0.96
1915	0.81	1955	0.55	1995	1.14
1916	0.78	1956	0.55	1996	1.26
1917	0.54	1957	0.47	1997	1.45
1918	0.40	1958	0.62	1998	1.61
1919	0.39	1959	0.68	1999	1.88
1920	0.39	1960	0.68	2000	1.40
1921	0.36	1961	0.80	2001	1.18
1922	0.47	1962	0.75	2002	0.82
1923	0.50	1963	0.80	2003	1.07
1924	0.50	1964	0.90	2004	1.07
1925	0.63	1965	0.97	2005	0.91
1926	0.68	1966	0.80	2006	0.91
1927	0.79	1967	0.96	2007	0.89
1928	0.98	1968	1.05	2008	0.55
1929	1.26	1969	0.82	2009	0.92
1930	1.11	1970	0.75	6/30/2010	0.85
1931	0.71	1971	0.80	9/21/2010	0.93
1932	0.36	1972	0.90		
1933	0.57	1973	0.61		
1934	0.91	1974	0.29		
1935	1.17	1975	0.49		
1936	1.28	1976	0.53		
1937	1.15	1977	0.43		
1938	0.89	1978	0.40		
1939	1.08	1979	0.41		

Source: Federal Reserve, *The Manual of Ideas*.

¹ Data shows estimated Tobin's Q ratio at each yearend, unless otherwise noted.

² Data from 1900-1944 is derived from Blanchard, Rhee, Summers series of Q estimates; data since 1945 represents Tobin's Q estimates based on Tobin's Q (new) methodology.

Tobin's Q — Summary Data (incl. Adjusted Blanchard, Rhee, Summers), 1900-2010 ^{1, 2, 3}

- Q average value: 0.71; Q median value: 0.68
- Q minimum value: 0.29 (1948 and 1974); Q maximum value: 1.88 (1999)
- Q less than 1.00 (number of years): 94; Q greater than 1.00 (number of years): 17

Year	Tobin's Q	Year	Tobin's Q	Year	Tobin's Q
1900	0.51	1940	0.69	1980	0.46
1901	0.68	1941	0.57	1981	0.38
1902	1.04	1942	0.43	1982	0.41
1903	0.83	1943	0.54	1983	0.45
1904	0.91	1944	0.53	1984	0.40
1905	1.08	1945	0.48	1985	0.49
1906	1.00	1946	0.39	1986	0.54
1907	0.76	1947	0.31	1987	0.53
1908	0.78	1948	0.29	1988	0.55
1909	0.89	1949	0.30	1989	0.64
1910	0.87	1950	0.35	1990	0.63
1911	0.82	1951	0.38	1991	0.84
1912	0.83	1952	0.36	1992	0.96
1913	0.82	1953	0.34	1993	1.03
1914	0.66	1954	0.46	1994	0.96
1915	0.68	1955	0.55	1995	1.14
1916	0.65	1956	0.55	1996	1.26
1917	0.45	1957	0.47	1997	1.45
1918	0.33	1958	0.62	1998	1.61
1919	0.33	1959	0.68	1999	1.88
1920	0.33	1960	0.68	2000	1.40
1921	0.30	1961	0.80	2001	1.18
1922	0.39	1962	0.75	2002	0.82
1923	0.42	1963	0.80	2003	1.07
1924	0.42	1964	0.90	2004	1.07
1925	0.53	1965	0.97	2005	0.91
1926	0.57	1966	0.80	2006	0.91
1927	0.66	1967	0.96	2007	0.89
1928	0.82	1968	1.05	2008	0.55
1929	1.06	1969	0.82	2009	0.92
1930	0.93	1970	0.75	6/30/2010	0.85
1931	0.59	1971	0.80	9/21/2010	0.93
1932	0.30	1972	0.90		
1933	0.48	1973	0.61		
1934	0.76	1974	0.29		
1935	0.98	1975	0.49		
1936	1.08	1976	0.53		
1937	0.97	1977	0.43		
1938	0.75	1978	0.40		
1939	0.91	1979	0.41		

Source: Federal Reserve, The Manual of Ideas.

¹ Data from 1900-1944 is derived from Blanchard, Rhee, Summers series of Q estimates; data since 1945 represents Tobin's Q estimates based on Tobin's Q (new) methodology.

² Blanchard, Rhee, Summers series of Q estimates has been adjusted to conform more closely to Tobin's Q (new) methodology used for years since 1945. The adjustment is based on an analysis of overlapping Q estimates for the period from 1945-1990, for which both methods provide a set of estimates. Our analysis found that the Blanchard, Rhee, Summers estimates exceeded the Tobin (new) estimates by 19%, on average. As a result, the original Blanchard, Rhee, Summers series from 1900-1944 used in the table above has been adjusted as follows: Each Blanchard, Rhee, Summers data point from 1900-1944 was divided by 1.19.

³ Data shows estimated Tobin's Q ratio at each yearend, unless otherwise noted.

Tobin's Q — Numerator and Denominator, 1958-2010 ¹

➤ Market value has exhibited significantly greater volatility than replacement cost

Year	Tobin's Q	Market Value	Replacement Cost	Changes in	
				Market Value	Replacement Cost
1958	0.62	\$297	\$477	34%	2%
1959	0.68	336	492	13%	3%
1960	0.68	344	505	3%	3%
1961	0.80	413	517	20%	2%
1962	0.75	400	535	-3%	3%
1963	0.80	444	554	11%	4%
1964	0.90	527	583	19%	5%
1965	0.97	606	624	15%	7%
1966	0.80	544	684	-10%	10%
1967	0.96	712	741	31%	8%
1968	1.05	849	807	19%	9%
1969	0.82	725	888	-15%	10%
1970	0.75	726	970	0%	9%
1971	0.80	838	1,053	15%	9%
1972	0.90	1,028	1,148	23%	9%
1973	0.61	802	1,311	-22%	14%
1974	0.29	468	1,589	-42%	21%
1975	0.49	867	1,759	85%	11%
1976	0.53	1,025	1,939	18%	10%
1977	0.43	924	2,154	-10%	11%
1978	0.40	980	2,442	6%	13%
1979	0.41	1,165	2,815	19%	15%
1980	0.46	1,479	3,229	27%	15%
1981	0.38	1,387	3,606	-6%	12%
1982	0.41	1,550	3,788	12%	5%
1983	0.45	1,741	3,895	12%	3%
1984	0.40	1,671	4,135	-4%	6%
1985	0.49	2,107	4,313	26%	4%
1986	0.54	2,425	4,450	15%	3%
1987	0.53	2,483	4,689	2%	5%
1988	0.55	2,742	4,995	10%	7%
1989	0.64	3,389	5,258	24%	5%
1990	0.63	3,449	5,511	2%	5%
1991	0.84	4,711	5,603	37%	2%
1992	0.96	5,527	5,770	17%	3%
1993	1.03	6,211	6,041	12%	5%
1994	0.96	6,145	6,396	-1%	6%
1995	1.14	7,694	6,743	25%	5%
1996	1.26	8,878	7,045	15%	4%
1997	1.45	10,743	7,410	21%	5%
1998	1.61	12,360	7,680	15%	4%
1999	1.88	14,890	7,922	20%	3%
2000	1.40	11,829	8,470	-21%	7%
2001	1.18	10,343	8,755	-13%	3%
2002	0.82	7,410	8,997	-28%	3%
2003	1.07	9,870	9,231	33%	3%
2004	1.07	10,698	9,960	8%	8%
2005	0.91	9,901	10,822	-7%	9%
2006	0.91	10,591	11,642	7%	8%
2007	0.89	10,860	12,230	3%	5%
2008	0.55	7,045	12,881	-35%	5%
2009	0.92	11,997	13,041	70%	1%
1H10	0.85	10,923	12,838		

Source: Federal Reserve, *The Manual of Ideas*.

¹ Based on Tobin's Q (new) methodology. U.S. dollars in billions.

Tobin's Q — Components of Numerator (Market Value), 1960-2010 ¹

Year	Tobin's Q	Market Value		Market Value of Debt ²		Market Value of Equities		Net Liquid Assets ³		Land Value
1960	0.68	344	=	105	+	365	-	56	-	70
1961	0.80	413	=	111	+	438	-	62	-	74
1962	0.75	400	=	119	+	424	-	66	-	77
1963	0.80	444	=	126	+	466	-	68	-	80
1964	0.90	527	=	134	+	546	-	69	-	84
1965	0.97	606	=	142	+	624	-	69	-	91
1966	0.80	544	=	157	+	548	-	64	-	97
1967	0.96	712	=	176	+	712	-	73	-	104
1968	1.05	849	=	192	+	843	-	73	-	114
1969	0.82	725	=	208	+	714	-	68	-	130
1970	0.75	726	=	232	+	712	-	74	-	144
1971	0.80	838	=	255	+	836	-	93	-	161
1972	0.90	1,028	=	275	+	1,049	-	116	-	180
1973	0.61	802	=	315	+	820	-	123	-	210
1974	0.29	468	=	338	+	562	-	186	-	245
1975	0.49	867	=	373	+	761	-	-8	-	275
1976	0.53	1,025	=	403	+	935	-	9	-	304
1977	0.43	924	=	447	+	825	-	7	-	341
1978	0.40	980	=	487	+	864	-	-16	-	387
1979	0.41	1,165	=	516	+	1,028	-	-67	-	445
1980	0.46	1,479	=	544	+	1,346	-	-95	-	506
1981	0.38	1,387	=	588	+	1,225	-	-143	-	569
1982	0.41	1,550	=	619	+	1,386	-	-164	-	619
1983	0.45	1,741	=	682	+	1,630	-	-86	-	658
1984	0.40	1,671	=	765	+	1,553	-	-52	-	700
1985	0.49	2,107	=	868	+	1,917	-	-61	-	739
1986	0.54	2,425	=	1,001	+	2,241	-	46	-	772
1987	0.53	2,483	=	1,127	+	2,287	-	120	-	811
1988	0.55	2,742	=	1,242	+	2,559	-	188	-	871
1989	0.64	3,389	=	1,333	+	3,145	-	153	-	936
1990	0.63	3,449	=	1,387	+	2,967	-	102	-	803
1991	0.84	4,711	=	1,454	+	4,014	-	171	-	586
1992	0.96	5,527	=	1,506	+	4,370	-	82	-	267
1993	1.03	6,211	=	1,585	+	4,852	-	211	-	14
1994	0.96	6,145	=	1,625	+	4,812	-	259	-	34
1995	1.14	7,694	=	1,738	+	6,435	-	448	-	31
1996	1.26	8,878	=	1,864	+	7,619	-	572	-	33
1997	1.45	10,743	=	2,017	+	9,661	-	677	-	257
1998	1.61	12,360	=	2,269	+	11,561	-	902	-	568
1999	1.88	14,890	=	2,553	+	15,160	-	2,239	-	583
2000	1.40	11,829	=	2,754	+	12,685	-	2,915	-	695
2001	1.18	10,343	=	3,165	+	10,805	-	3,255	-	373
2002	0.82	7,410	=	3,349	+	7,839	-	3,368	-	411
2003	1.07	9,870	=	3,593	+	10,845	-	3,834	-	734
2004	1.07	10,698	=	3,728	+	12,086	-	4,310	-	806
2005	0.91	9,901	=	3,994	+	12,684	-	4,758	-	2,019
2006	0.91	10,591	=	4,308	+	14,328	-	5,264	-	2,781
2007	0.89	10,860	=	4,727	+	15,252	-	6,017	-	3,102
2008	0.55	7,045	=	4,997	+	9,554	-	6,158	-	1,347
2009	0.92	11,997	=	5,293	+	12,738	-	6,034	-	0
1H10	0.85	12,146	=	5,323	+	11,454	-	5,854	-	0

Source: Federal Reserve, *The Manual of Ideas*.

¹ Based on Tobin's Q (new) methodology. U.S. dollars in billions.

² Generally approximated with book value of debt. Reliable market value aggregates are generally unavailable. While the market value of debt can be estimated by valuing debt tranches based on book value and an appropriate interest rate (typically Baa), such estimates can be unreliable.

³ Equals financial assets minus total liabilities (excl. municipal securities, corporate bonds and mortgages).

Tobin's Q — Components of Denominator (Replacement Cost), 1960-2010 ¹

Year	Tobin's Q	Replacement Cost	Replacement Cost of		
			Structures ²	Equipment & Software	Inventories
1960	0.68	505	280	146	80
1961	0.80	517	285	150	82
1962	0.75	535	292	156	87
1963	0.80	554	299	163	93
1964	0.90	583	310	173	99
1965	0.97	624	329	187	108
1966	0.80	684	350	210	124
1967	0.96	741	375	232	134
1968	1.05	807	406	257	144
1969	0.82	888	445	285	159
1970	0.75	970	489	314	167
1971	0.80	1,053	542	336	175
1972	0.90	1,148	599	360	189
1973	0.61	1,311	686	400	226
1974	0.29	1,589	802	495	292
1975	0.49	1,759	896	567	295
1976	0.53	1,939	981	629	330
1977	0.43	2,154	1,079	709	366
1978	0.40	2,442	1,213	806	423
1979	0.41	2,815	1,379	934	501
1980	0.46	3,229	1,574	1,087	568
1981	0.38	3,606	1,773	1,212	621
1982	0.41	3,788	1,896	1,280	612
1983	0.45	3,895	1,930	1,332	634
1984	0.40	4,135	2,032	1,400	703
1985	0.49	4,313	2,115	1,485	713
1986	0.54	4,450	2,164	1,576	709
1987	0.53	4,689	2,273	1,652	765
1988	0.55	4,995	2,417	1,751	827
1989	0.64	5,258	2,536	1,854	869
1990	0.63	5,511	2,637	1,972	901
1991	0.84	5,603	2,668	2,048	887
1992	0.96	5,770	2,745	2,123	902
1993	1.03	6,041	2,886	2,220	935
1994	0.96	6,396	3,040	2,349	1,007
1995	1.14	6,743	3,172	2,501	1,070
1996	1.26	7,045	3,321	2,633	1,091
1997	1.45	7,410	3,499	2,770	1,140
1998	1.61	7,680	3,635	2,865	1,180
1999	1.88	7,922	3,806	2,864	1,252
2000	1.40	8,470	4,069	3,067	1,334
2001	1.18	8,755	4,322	3,167	1,266
2002	0.82	8,997	4,474	3,220	1,303
2003	1.07	9,231	4,635	3,250	1,345
2004	1.07	9,960	5,129	3,351	1,480
2005	0.91	10,822	5,719	3,501	1,602
2006	0.91	11,642	6,229	3,715	1,698
2007	0.89	12,230	6,532	3,896	1,802
2008	0.55	12,881	7,050	4,083	1,748
2009	0.92	13,041	7,123	4,255	1,662
1H10	0.85	12,838	7,175	3,986	1,677

Source: Federal Reserve, *The Manual of Ideas*.¹ Based on Tobin's Q (new) methodology. U.S. dollars in billions.² Includes replacement cost of residential and non-residential structures.

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