



Valuation waltz

May 3rd 2001

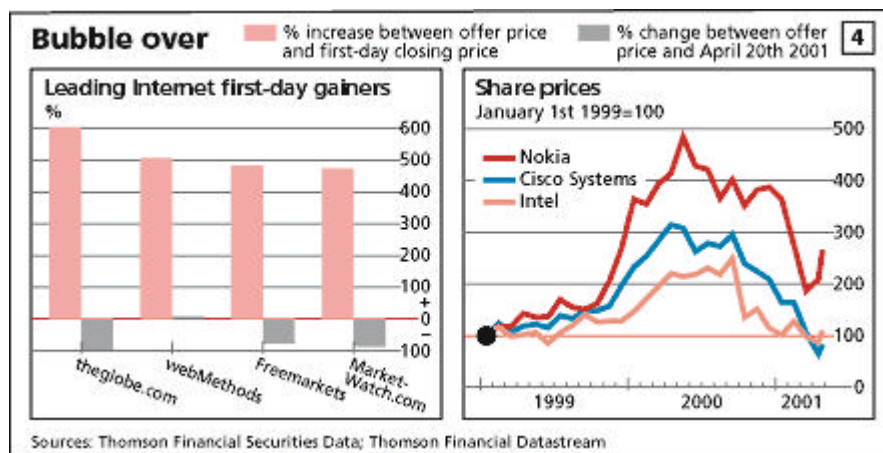
From The Economist print edition



There are many ways to value shares, but most of them suggest that Wall Street is still expensive

WHAT is a share worth? On one level, the answer is simple enough: whatever you can sell it for. Indeed, stockmarkets exist for the express purpose of price discovery, as the process is known. But to be told that a share is worth whatever price the market sets for it is not all that helpful. What investors really want to know is how and why the market arrives at that price, to provide them with clues about whether the share is likely to go up or down in future. In other words, what is the fundamental value of a share?

Given the volatility of some equities over the past two years, this is a particularly pertinent time to be asking this question. The example of dotcom shares is only the most notorious. In March 1999, for instance, Amazon was trading at \$60; in December that year, it peaked at \$106; today its shares are down to \$16. No wonder so many Internet-related IPOs proved so tricky to value in 1999-2000. And dramatic volatility has not been confined to the froth of the Internet: look at the movement in the past two years of such TMT blue chips as Cisco, Intel and Nokia (see chart 4).



If shares have a fundamental value, how is it possible to make sense of such swings? There is a classic formula that explains the underlying value of a share, and by extension of a market as a whole. It is known as the dividend-discount model, and it is a staple of the capital-asset pricing model, which in turn is a basis of corporate-finance theory. A share is worth the sum of all its prospective dividend payments, discounted back to their net present value. (Note that the relevant income stream is prospective dividends, not profits, even for companies that pay little or nothing in the way of dividends. Future profits have a value to investors only if they will be paid out one day.)

The trouble with the dividend-discount model is not that it is wrong; indeed, most economists agree that the theory is fine. The problem lies in the uncertainty surrounding both its components: the future stream of dividends and the appropriate discount rate. Yet the model remains essential. If shares change in value, that must reflect a change in investors' assessment of either the prospective dividend flow (for example, because of fears about the future level of profits) or the right discount rate (for example, because of a change in inflationary prospects or in long-term real interest rates), or both.

Another theory that is often linked to the dividend-discount model is that of "efficient markets", which argues that all existing information is automatically incorporated in a share price. Shares thus follow a "random walk", a phrase coined by Burton Malkiel, a professor at Princeton University who popularised the theory under this label. The random walk means that nobody should ever be able consistently to beat the market. As Professor Malkiel colourfully put it, you might as well be a monkey throwing darts at the *Wall Street Journal*.

Stockmarket analysts employ several other valuation tools, especially to compare the present and past values of equities and markets. The best-known is the price/earnings ratio or multiple, which divides share prices by profits, or its inverse, the earnings yield. Either can be calculated on a historical or a prospective basis. A second measure is the dividend yield on its own. Then there is the price-to-book ratio, which measures a company's stockmarket value against the book value of its assets. And there is Tobin's q, a ratio of the stockmarket value to the replacement cost of its tangible assets—an attempt to measure what it would cost to recreate a company from scratch.

Other measures are employed to compare equity values with those of other financial assets. The dividend or earnings yield, for example, can be compared with bond yields. At one time analysts liked to do this by quoting the yield gap (though this became inverted when dividend yields fell below bond yields in the 1950s) or the yield ratio, both of which relate share to bond yields. Today they talk of the "Fed model", which divides earnings yields by Treasury-bond yields. Whenever the result falls below one, equities are (comparatively) cheap.

Yet another much-cited variable is the "equity risk premium", which measures the extra return that (risky) shares must in theory offer over the (risk-free) return that is available on government bonds. The premium is generally calculated for a market as a whole. But there are also measures of volatility applied to individual shares. The best-known is "beta", which measures a share's volatility relative to that of the market as a whole. Small-company shares, in particular, usually have a higher beta, because they are riskier and less liquid. That should translate into higher returns.

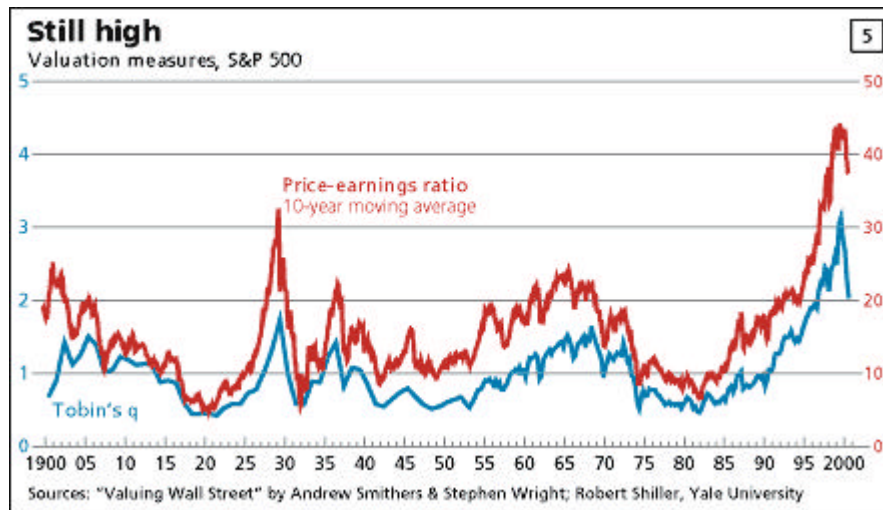
None of these indicators is, however, wholly satisfactory. Profits (or earnings), for instance, are largely an accounting concept that can easily be massaged by clever finance directors. Yield ratios may not be reliable at times of lower inflation, or when the supply of government bonds shrinks. Bonds are not, in any case, riskless, as anybody who has held them at a time when inflation was rising can testify. As for Tobin's q, it omits intangible capital, which has grown in significance as both brands and intellectual property have increased in value.

The equity risk premium can be calculated only after the event. Moreover, for many years it was seen by economists as presenting a puzzle, in that it seemed higher (it was roughly 6% for the American stockmarkets over the past century) than the apparently reliable long-run return from equities justified. Lots of theories have been produced to explain this puzzle, but the most plausible answer may be that the premium varies according to the circumstances and the markets' liquidity—which is pretty useless if you are trying to make predictions. Even beta seems to have lost some of its forecasting ability: small-company shares have not produced higher returns than big-company ones over the long bull market of the 1980s and 1990s.

Yet even if these valuation measures are unsatisfactory and sometimes contradictory, they do have at least one thing in common. Virtually all of them suggest that the two-decade bull run pushed America's stockmarkets to extraordinarily high levels by historical standards. Worse, most of the measures also suggest that, even after the sharp falls in recent months, the markets remain highly valued.

Chart 5 is based on a similar chart in "Irrational Exuberance", by Robert Shiller, a professor at Yale. The book drew its title from a famous remark about the market's heady level by Alan Greenspan, the chairman of the Federal Reserve, in December 1996 (when the Dow stood at a mere 6,500, 40% less than today). The chart shows that the p/e ratio for the broad S&P 500 remains near record levels. It also shows a similar story for Tobin's q, the preferred measure of Andrew Smithers, who runs an eponymous London research firm. Now under

the markets have fallen in recent months.



The bold souls who last year were publishing books with such titles as "Dow 36,000", "Dow 40,000" or even "Dow 100,000" have tended to assert that the equity risk premium has fallen sharply, perhaps even to zero, as investors have woken up to the long-term stability of equity returns, and also to the promise of the "new economy". As noted above, the premium has been surprisingly high in the past. But shareholders, who have no claim on a company in the event of bankruptcy, are clearly taking a bigger risk than bondholders, who not only have a reliable stream of interest but also a legal creditor claim. And if there were ever any doubt, the recent fall in the markets surely disproves the notion that the risk premium might have sunk to zero.

Squeezing the risk premium

There is, admittedly, some evidence to suggest that the risk premium might have fallen a little. Economists at the OECD reckon that it has tended to decline as inflation has come down, perhaps because this has made equity returns seem more stable. A long bull market itself also tends to push down the risk premium—as it did, although only temporarily, in the 1920s. The rise of the equity culture and the spread of the understanding that, in the long run, shares tend to outperform most other assets may also have helped to lower the risk premium. But none of these factors could possibly push the premium close to zero, so today's valuations still look unjustified.

In any case, today's bulls no longer talk so much about a disappearing risk premium. They mostly admit (at least in retrospect) that the Nasdaq, in particular, and the broader TMT sector in general, until the spring of 2000 experienced a classic speculative bubble that has now been largely deflated. The rest of the market, they say, has fallen less dramatically mainly because it never rose to such overvalued levels in the first place.

Thus most well-known equity analysts, among them Goldman Sachs's Abby Joseph Cohen, have returned to their traditional view that now is the time to buy shares (not that many ever advocated selling, even at the peaks of early 2000). Several academics share this view. Wharton's Jeremy Siegel, for one, reckons that, at least outside the TMT sector, today's market is reasonably fairly valued. He still believes that investors have nowhere better to go in the long term. As for the markets' huge climb since 1982, Mr Siegel puts it down not to a vanishing risk premium but, more simply (and more plausibly), to the fact that shares were more undervalued in 1982 than at any previous time this century.

The bears are not convinced. Jim Grant, a shrewd independent economic analyst, and Barton Biggs, of Morgan Stanley, both reckon that the deflation of the Wall Street bubble has a long way to go yet. Professor Shiller observes that the Nasdaq, which even now is trading on a prospective p/e ratio close to 100, remains hugely overvalued by all historical standards. Even the broader market, with a prospective p/e ratio of 25 or so, still looks expensive—and it does not yet take account of the impact of America's slowdown on future profits, which could cut the denominator of the ratio even as the numerator falls. He dismisses the notion that the risk premium has fallen sharply. And he sees no reason to change traditional valuation measures.

London-based Mr Smithers is more bearish still. He disagrees with Mr Siegel's argument that shares are always the best investment for the long term, noting that it is crucial to be out of the market when bubbles burst. It took 25 years for the Dow to regain its 1929 peak. Last March, Japan's Nikkei briefly fell to its lowest level for 16 years. Mr Smithers also rejects the argument that long-term investors have nowhere else to go. Such "wall of money" arguments, he notes, were also put forward in the 1920s, and in Japan in the late 1980s.

Optimists and pessimists may not agree about whether today's bear market will last. But they almost all agree that the Nasdaq, at least, experienced a speculative bubble in the late 1990s comparable to that seen in Japan a decade earlier. Even Frank Zarb, the Nasdaq's chairman, talks now of "an exuberance that was somewhat irrational." Why, though, do bubbles occur? You might have thought that efficient markets, armed with both the experience of history and the valuation tools discussed earlier in this chapter, would prick them before they are formed. There are several answers, besides the obvious one that markets may not in fact be as efficient as the theory supposes.

The madness of crowds

For one thing, markets reflect crowd behaviour; for many investors, the best guide to what may happen next is what has just happened, a belief in "momentum investing" that seems bound to turn most bull markets into bubbles. From tulips to railways to electricity to the Internet, crowd behaviour has created financial bubbles on the "bigger fool" theory: that a share is worth buying, even if it looks expensive, so long as there is reason to hope that somebody else will pay even more for it in future. Markets do not, in any case, seem to learn from history; at best, a generation that has been burnt does learn its lesson, but the next generation promptly forgets it.

Mr Shiller laments that not enough research has been done into behavioural economics, which he suspects is a far bigger influence on markets than any number of sophisticated valuation measures. John Maynard Keynes, no mean speculator himself, understood this, famously fretting about the consequences if a stockmarket became a kind of casino. He wrote of the market valuing shares "under the influence of mass psychology. It is, so to speak, a game of Snap, of Old Maid, of Musical Chairs—a pastime in which he is victor who says snap neither too soon nor too late, who passes the Old Maid to his neighbour before the game is over, who secures a chair for himself when the music stops."

As for a "new economy" justifying sharply higher stockmarket values than in the past, Mr Shiller notes that similar arguments were made in the 1920s. As he puts it, "we are in a new economy, and always have been for 150-200 years." The experience of the Internet bubble bears out his thesis. Faced with rising share prices that bore no relation to traditional valuation criteria, many analysts invented new criteria (eg, revenues instead of profits) rather than conclude that the shares were wildly overvalued, and that much of the hype about the new economy was a fiction.

Mr Smithers offers another analysis, based on the incentives held out to company bosses. He notes that the biggest (and in some years, in net terms, only) buyer of American equities in the late 1990s was the corporate sector, especially through share buybacks, which became popular as a more tax-efficient way than dividends of distributing profits to shareholders. The trouble with share buybacks is their linkage to stock options, which have become an increasingly popular way of remunerating managers. By buying back shares, a boss can, in effect, inflate his own pay—and, because stock options (absurdly) do not appear in a company's income statement, he can even do it without affecting recorded profits. This cocktail of incentives, buybacks and overstated profits was an ideal recipe for creating a bubble, argues Mr Smithers.

Although the bears may be overstating their case, there are strong arguments for believing that America's markets are still overvalued—even before factoring in a possible sharp slowdown in profits growth. Should an American recession really take hold, the markets could have a lot further to fall. Only if economic growth, and so profits, prove surprisingly robust is a sustained bounceback likely.

The resulting uncertainty is likely to slow down the spread of the global equity culture, especially in countries in which it is relatively new. There is also considerable nervousness among those who make a living from equity dealing. Investment banks have recently been taking turns to announce poor results, profit warnings and even lay-offs. And stock exchanges, which have also benefited from the long bull market, would have much to lose from further falls in the markets too—particularly at a time when they are facing plenty of new competitors.

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