



Investment Intelligence seminar - March 2010

Time versus timing

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Overview

Perhaps the most difficult choice that investors face is that between different asset classes. Whether to invest in (what are often considered to be) 'risky' equities, 'safer' government bonds or 'very safe' assets such as bank and building society deposits. The conclusions from a wide range of studies* is that over a long time horizon equities produce higher returns than bonds or bills. Furthermore, the volatility of real (inflation-adjusted) returns from equities is, over longer-term holding periods, no higher than bonds. In short, for the equity investor 'time' works.

Many investors, however, attempt to make gains from market 'timing'. They choose between broad asset classes, different sectors of the market and different fund managers on a relatively short-term basis. Recent work in the area of behavioural finance is helpful in explaining why investors behave in this way. However, those behavioural biases pose the risk that investors try to make short-term gains by market timing and that the total returns from such strategies fall short of those which are available for the longer-term, buy-and-hold investor. In short, on average, 'time' works better than 'timing' when longer-term returns are being considered.

These were the themes we explored in our March 2010 Dubai Investment Intelligence seminar.**

* See, for example, Jeremy Siegel, *Stocks for the Long Run*(McGraw Hill 2008), Barclays Capital *Equity Gilt Study 2010* and Credit Suisse *Global Investment Returns Yearbook 2010*.

** Presented by Paul Temperton, consultant to Invesco.

'Time' works: World equity market returns

Long term studies

The latest study of long-term returns from Credit Suisse¹ shows the degree to which world equity returns have exceeded those from bonds and bills over time. An initial investment of US\$100 in world equities on 1 January 1900 would, by 1 January 2010, have grown to \$33,100 in real terms (that is after adjusting for US inflation) assuming all the income from the investment had been reinvested. That represented a compound annual growth rate of 5.4% pa. Over that very long time horizon, world real equity returns comfortably exceeded those from bonds (1.7% pa) and bills (0.9% pa), as shown in Figure 1. So, as far as long-term returns are concerned 'time' works.

Clearly, however, a 110-year investment time horizon is extremely long by almost everyone's standards. When we refer to investing for the longer-term, what time horizon are we referring to? In practice, we would say that longer-term means 5 to 10 years at least.

Returns from equities vs. bonds

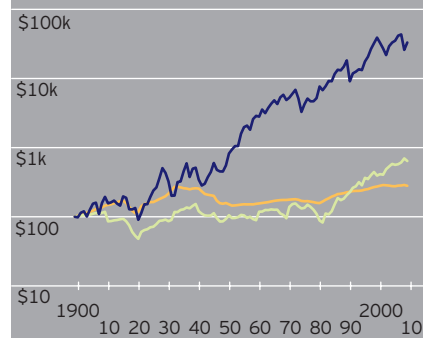
First, over a 5- to 10-year time horizon, historic data show that the proportion of years in which both US and entire world equity returns have exceeded bond returns is around 60-80% (see Figure 2). For world markets, equity returns have exceeded bond returns in 69% of all 5-year periods from 1900 to 2010; for 10-year holding periods, the proportion has been 77%; and in all 30-year periods, equity returns have exceeded bonds. Data for the US market only show a similar, to slightly higher, chance of equity returns exceeding bonds.

Second, once we reach a 10-year holding period, data over an even longer time period (from 1802 to 2006, see Figure 3) show that the volatility of real US equity returns is no higher than that of bond returns. The explanation is that over such a time horizon equities have generally provided a better hedge against inflation than have bonds. With an even longer holding period, of 20

1. Real returns on world asset classes

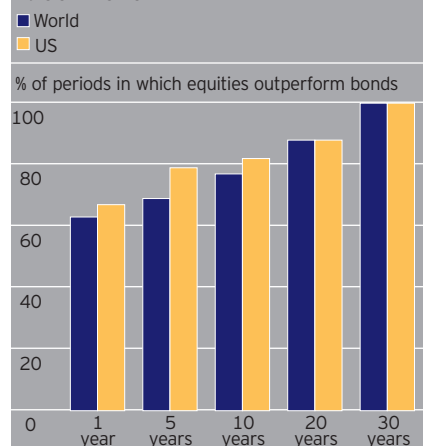
Equities, \$33,100 (5.4% p.a.)
Bonds, \$640 (1.7% p.a.)
Bills, \$280 (0.9% p.a.)

Value on, 1 January 2010, of \$100 invested on 1 January 1900 (in real terms)



Source: Credit Suisse *Global Investment Returns Sourcebook*, 2010.

2. World & US equity/bond performance 1900 - 2010

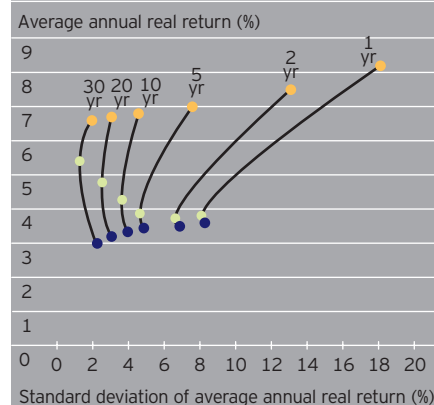


Source: Invesco Perpetual, based on *Credit Suisse Global Investment Returns Sourcebook*, 2010

3. Risk & return: US equities & bonds

Various holding periods, 1802 - 2006

100% stocks (orange dot), Minimum risk (green dot), 100% bonds (blue dot)



Source: Jeremy Siegel, *Stocks for the Long Run*, McGraw-Hill 2008.

or 30 years, average US equity real returns are not only higher than those from bonds but show lower volatility.

¹ Credit Suisse, *Global Investment Returns Yearbook*, 2010.

Loss aversion

General principles

Equity market returns are, of course, volatile, with often sharp fluctuations in returns from year-to-year. Investors do not like losing money; they are loss averse. When losses are made, this may well induce investors to think that equities are a 'poor investment' and either withdraw funds from equities or not make new investments in it.

But just how averse to losses are they? How differently do they value gains and losses? There have been several studies of this issue and the general finding is that the value that individuals place on losses is around two and a half times the value they place on gains.²

This can be described graphically, as shown in Figure 4. From the initial reference point a certain gain (labelled $x\%$) will be valued at $y\%$. Of course, in many circumstances the value of y should be close to the value of x . But, if the assets in which the individual invests are subject to an uncertain return - such as an investment in the equity market - then y may be lower than x . The investor, for example, may discount the value of the gain because of the inherent risks involved in the investment. However, the most important aspect of this work relates to how losses are valued. An equal-sized loss of $x\%$ is, according to a number of studies, valued around two and a half times more highly than the equivalent-sized gain.

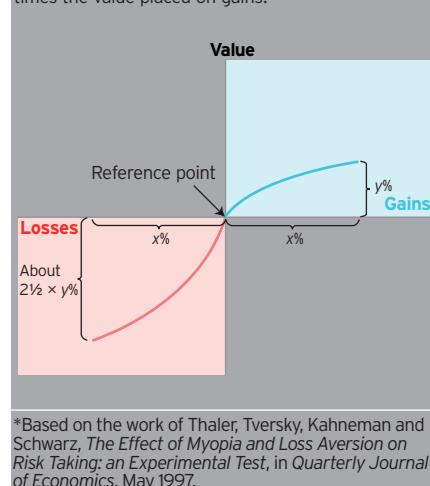
So, not only are investors averse to losses, but also the value they place on losses is considerably higher than the value they place on gains.

Loss aversion and equity market volatility

This finding can be used to help understand investor attitudes to equity market volatility. Figure 5 takes the returns from world equities, this time expressed in nominal, not real terms, and values annual losses in the equity market at 2.5 times equivalent gains. Then the 'value' placed on equity market returns looks very different to that depicted

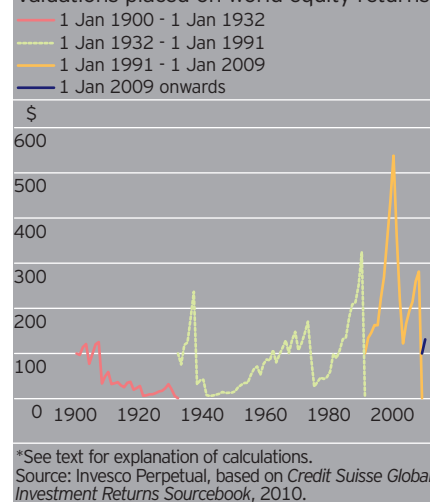
4. Loss aversion

The value placed on losses is roughly two and a half times the value placed on gains.^{*}



5. 'Behavioural finance' valuations

Valuations placed on world equity returns*



in Figure 1. For example, in the first quarter of the 20th century, the original \$100 investment would have risen to \$390 on the basis of actual returns. But if, in each year a loss was made, that loss was valued at 2.5 times the actual amount, the value placed on the accumulated amount would be only \$27. Then, of course, matters got even worse: the bear market which started with the 1929 Crash meant that an investor valuing his accumulated return in this behavioural finance sense, saw the value of his investment fall to zero by 1 January 1932. Starting out again on 1 January 1932, with \$100, the investor would find the 'behavioural finance' valuation of his stake fall to zero once more on 1 January 1991; and, then again, on 1 January 2009. In that context, the extreme

² Source: See Thaler, Tversky, Kahneman and Schwarz, 1997

pessimism in equity markets seen at the start of last year was comparable to that of the early 1930s and early 1990s.

However, any investor concluding, at those crucial points that equities were

a bad investment and failing to stay invested or to invest at all would have missed out on subsequently higher returns. In the five years after 1 January 1932 and 1 January 1991, total world equity returns were 144% and 121% respectively.

Timing the market

With the internet and 24/7 reporting, investors can access information on market movements as they unfold and this can lead some investors to attempt to time the market, moving in and out of equities depending on their assessment of short-term prospects. We think that not only is there a low chance of such a strategy proving successful; but that adopting such a strategy risks not being invested in equities on some of the best days of market performance.

Figure 6 illustrates this point by reference to the total return from the MSCI Asia ex-Japan Index (that is, with all dividends reinvested). From the 31 December 1998 to 10 February 2010, the compound annual average return from that index was 9.9% pa. However, missing the best ten days of the market's performance would have reduced that return to

6. Long-term investment in Asian markets

Value of \$10,000 invested in the MSCI Asia Ex Japan Index on 31 December 1998, all dividends reinvested

Period of investment	Average annual total return (%)	Value of initial \$10,000 on 10 February 2010
Fully invested	9.9	\$28,648
Miss the 10 best days	3.8	\$15,174
Miss the 20 best days	-0.1	\$9,844
Miss the 30 best days	-3.3	\$6,909
Miss the 40 best days	-6.0	\$5,034
Miss the 60 best days	-10.8	\$2,820

Source: Thomson Datastream on a total return basis in US dollar terms as at 10 February 2010 and Invesco calculations. Assumes no transaction costs. For illustrative purposes only.

3.8% pa; and missing the best twenty days would have meant the investor made a marginal loss over the entire time period.

Sources of return

Capital returns vs total returns

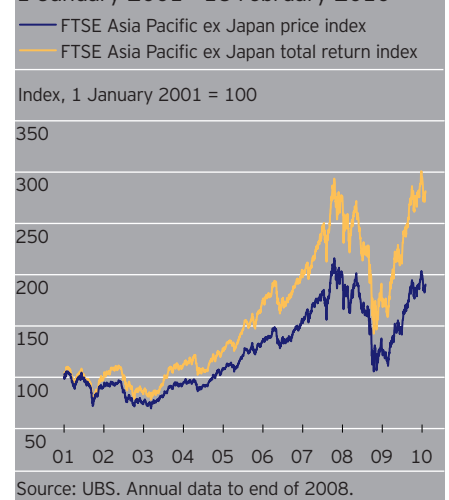
Moreover, such short-term attempts at market timing typically emphasise the importance of capital gains or losses. Longer-term investing, concentrating on total returns, sees a greater proportion of returns come from dividends and reinvested dividends. For example, the MSCI Asia ex-Japan price index on 16 February 2010 stood 80% higher than its 31 December 1998 level (see Figure 7); with dividends reinvested, the index was 180% higher.

Longer-term: UK findings

Over longer time periods dividends and reinvested dividends become a more important component of total returns than do capital gains. This point is illustrated with reference to the UK FTSE All share index over

7. FTSE Asia Pacific ex Japan

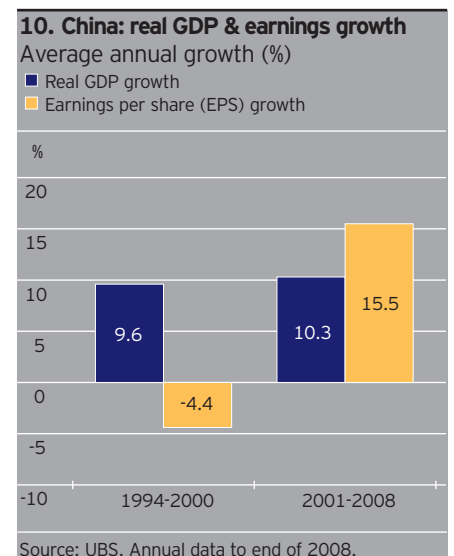
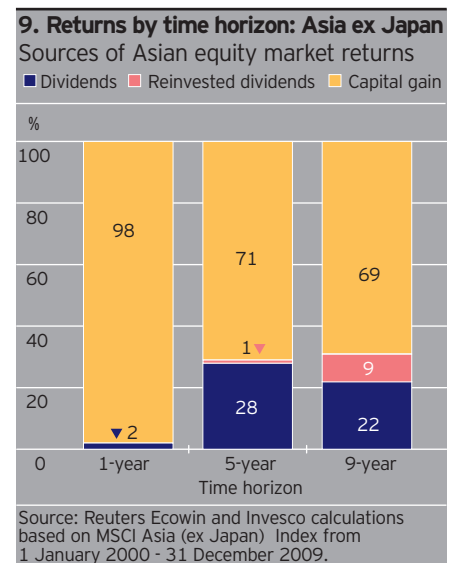
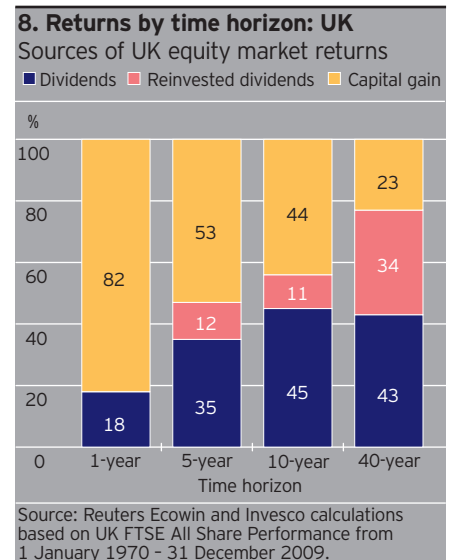
1 January 2001 - 16 February 2010



the period from 1 January 1970 to 31 December 2009 (see Figure 8). When a one-year investment time horizon is taken, changes in the valuation level of the market - that is its overall index level - account for the majority of returns (over 80%). When a progressively longer time horizon is taken, the importance of dividends and reinvested dividends increases. At a 10-year time horizon, capital gains account for less than a half of total returns; and at a 40-year time horizon that proportion has declined to less than a quarter.

Longer-term: Asian findings

In the Asian markets, such a long history of returns is not available, but the indications from the nine years of data that are available is that the composition of returns changes in a similar way - with dividends and reinvested dividends taking on a greater importance as the investment time horizon is extended (see Figure 9). The fact that, since the Asian financial crisis of 1997/98, companies have tended to place a much greater emphasis on returns to shareholders is encouraging. An emphasis on earnings growth and dividend payments will, we think, mean the importance of dividends to total shareholder returns, continues to increase. In China, there has been a notable change of corporate behaviour since the early 2000s, with overall GDP growth now translating into corporate earnings (and, we think, ultimately dividend) growth - a link that was not evident in the 1990s (see Figure 10).



Hiring and firing fund managers

As well as attempting to time short-term exposure to the equity market, another timing mistake which many investors make is to buy into successful funds at the top of the market and sell at the bottom. Take the analogy of hiring and firing the managers of football teams at the end of a season when their results are as shown in Figure 11. Each of the ten teams, A to J, has played each other twice, once at home and once away: a win gives 3 points and a draw 1 point. When asked which team manager they would fire, many understandably choose the manager of Team J. That would, however, be very unfair, because the results shown in Figure 11 are in actuality the results obtained from a purely random dice throw, not the results of actual football teams at all.³

This example demonstrates one other key factor of behavioural finance: that "The human mind is a pattern-seeking device, and it is strongly biased to adopt the hypothesis that a causal factor is at work behind any notable sequence of events even when no such factor is present".⁴

The following experience of Sir Isaac Newton emphasises the difficulties of

11. The football league analogy

Which manager would you fire?

End-season results for 10 teams, each team has played each other twice, once at home, once away; win=3points; draw=1pt.

Team	Played	Won	Drawn	Lost	Points
A	18	11	2	5	35
B	18	9	4	5	31
C	18	9	3	6	30
D	18	8	3	7	27
E	18	7	5	6	26
F	18	7	3	8	24
G	18	6	5	7	23
H	18	5	6	7	21
I	18	3	8	7	17
J	18	3	5	10	14

Source: Rob Eastaway and Jeremy Wyndham "Why do Buses Come in Threes? The Hidden Mathematics of Everyday Life" (Portico, 2008).

timing the market. Isaac Newton, who was Master of the Royal Mint, made and lost a fortune in the 'South Sea Bubble' in 1720. After taking an initial profit of £7,000 (equivalent to over £0.5 million today) he disastrously purchased more stock near the peak of the bubble, eventually losing £20,000 (equivalent to £1.5 million today). Reflecting on his losses he commented: "I can calculate the movement of the stars, but not the madness of men".⁵

Momentum investing

The tendency for the investors to herd (buying at the top, selling at the bottom) and for the market to move to extremes of valuation has led to several studies of whether 'momentum investing' can produce profitable results (notably in the ABN AMRO *Global Investment Return Yearbook 2008*). Momentum investing involves ranking stocks into winners and losers based on past returns. The strategy is to buy the winners and sell short the losers,

over a defined holding period. To ensure implementability, there is usually a wait period before investing. Strategies are thus described as 'r/w/h' for 'rank/weight/hold'. For example, the results shown in Figure 12 (overleaf) use a 6/1/6 strategy. That is, returns are ranked over the past 6 months, a one month wait is allowed for implementing the strategy and then the portfolio is held for 6 months. At that stage it is rebalanced again. A break point is used to decide

³ See Rob Eastaway and Jeremy Wyndham, *Why do Buses Come in Threes? The Hidden Mathematics of Everyday Life* (Portico, 2008).

⁴ See Kahneman, Daniel, and Mark W. Riepe - *Aspects of Investor Psychology*, *The Journal of Portfolio Management*, Summer 1998, pp. 52-65.).

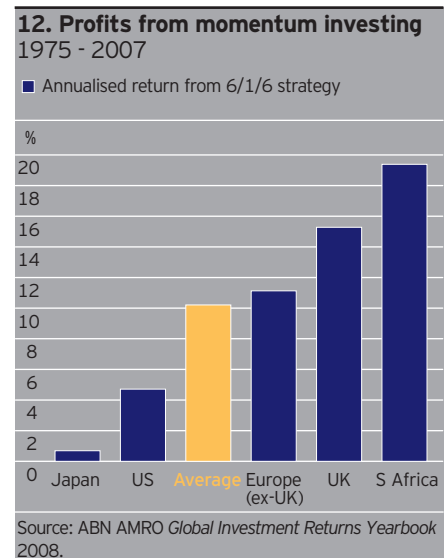
⁵ Source: William Seward "Anecdotes of Distinguished Persons" (Kessinger Publishing 2009)

which stocks in the overall universe are held long and which are shorted: the calculations in Figure 12 use a 20% breakpoint - that is the portfolio is long the highest ranked 20% of stocks and short the lowest ranked 20%.

The results show that in all the markets included in the study, momentum investing was profitable over the period 1975 to 2007. Perhaps unsurprisingly, the strategy is most profitable in the one emerging market included in the study - South Africa - and tends to be less profitable in developed markets. However, it is important to point out that the results shown in Figure 12 are for simulated data from this strategy.

We do not deny that at times momentum investing does prove profitable. Indeed, in the equity market rally since March of last year it has been cyclically-sensitive areas of the market which have been the strongest and a momentum-type strategy favouring those stocks would most likely have performed well.

However, we do not use such momentum based strategies in our approach to portfolio construction. There are three main reasons why we do not employ such techniques, despite the evidence of their success presented above. First, those studies rely on simulated data and may well



not be as profitable going forward. Second, they fail to take into account transaction cost which could well be very high, especially as such momentum strategies involved quite frequent portfolio rebalancing. Third, we do not see such strategies as consistent with the valuation-led approach to stock selection which we employ. Although over short time horizons that may mean we underperform the market when momentum strategies are in favour, we see it as a more fundamentally based, appropriate strategy for longer-term investing. Following the herd, which is the essential rationale for momentum investing, is not our approach.

Philosophy and process

If timing the markets, moving in and out of the equity market, shifting between supposedly 'good' and 'bad' fund managers, is fraught with difficulties and involves (often substantial) transaction costs; and we accept that allowing 'time' to work is the key, this requires a longer-term investment approach. However, in order to do that the investor needs to be confident in the fund manager's investment philosophy and process.

In that respect some of the key issues are: whether the fund manager's focus is on value, growth, valuation or

other factors; whether the manager's investment process is top-down (looking at broad economic and market trends and their influence) or bottom-up (concentrating company specific information) or a blend of the two; the extent to which quantitative techniques are used; and, perhaps most important of all, whether the investor can actually understand the fund manager's approach.

Conclusions

The importance of allowing time to work in generating returns from equity markets, and not trying to focus on short-term market timing decisions, is one which we think needs to be re-emphasised. In this context 'longer-term investing' means having an investment time horizon of at least 5 to 10 years: over such a horizon, the chances of equities producing a higher return than bonds are increased and the volatility of equity returns is substantially reduced.

We caution against trying to time the market, with the risk that the inherently volatile nature of equity

markets on a day-to-day basis means such a strategy risks that the best days are missed with a consequent substantial reduction of compound returns.

To have confidence in maintaining a longer-term investment strategy, understanding a fund manager's investment philosophy and process is of paramount importance.

Further information

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