Seeing beyond biases

June 2014

Supplement to the 2014 Russell Investments/ASX Long-term Investing Report

In our 2013 report, Russell observed that Australian investors have had the luxury of benefiting from 'set and forget' investment strategies over previous decades, due to a decline in bond yields and the combined 'Australian triple treat' of a resilient domestic share market, strong domestic currency and a solid residential property market. However, we reasoned that these trends would not necessarily continue over the coming decades and therefore a more adaptive and diversified investment approach should be adopted.

The start of a new paradigm or just overexcited markets?

Over the course of 2013, the following changes occurred[1]:

» Australian equities (+20%) underperformed global equities (+29% on a hedged basis) by 9%

» The Australian dollar fell 13% against the US dollar from US$1.04 to US$0.90

» Australian equities(+20%) underperformed unhedged global equities (+43%) by 23%

» Australian and global bond yields rose (dampening returns to only 2.0% and 2.3% respectively).

In hindsight, investors would have been better off with a lower domestic equity bias and holding overseas equities on an unhedged, rather than hedged, basis at the beginning of 2013, as two of the 'triple treats' did not follow the historical long-term pattern[2]. In addition, rock bottom government bond yields started to climb again in 2013, bucking the multi-decade trend of falling yields.

Thus, 2013 may potentially mark the beginning of a reversal in the triple treat and bond yield slide paradigm[2] observed in previous years. After enjoying more than 10 years of stronger economic growth relative to most of our global peers, will the end of the mining boom result in Australia's economy and share market lagging the rest of the world?

Alternatively, was 2013 just the result of overexcited markets that have run too far? Following the remarkable strength of the rallies in developed equity markets in the 18 months to December 2013 - to what extent can these figures be interpreted as the start of a new sustainable long-term trend?

More generally, in the face of lower returns and greater uncertainty, how should investors think, feel and act to achieve their long-term investment goals?

In this supplementary note:

» We explore three typical ways that even the most rational investors tend to respond when dealing with the unknown because of how the human brain is wired;

» We demonstrate how these behavioural traits are particularly pronounced in times of uncertainty and stress and explain why knee-jerk behaviour, in response to perceived threats, distorts decision-making and may lead to inferior outcomes[3];

» We offer an alternative approach to address these in-built biases that has been proven to result in better outcomes.

" ... in the face of lower returns and greater uncertainty, how should investors think, feel and act to achieve their long-term investment goals?"

1 Sources: Datastream, Russell Investments.
S&P/ASX 300 Accumulation Index; Russell Global Large Cap AUD Hedged Index; Russell Global Large Cap Index; UBS Warburg Australian Composite Bond Index; Barclays Capital Global Aggregate AUD Hedged Index.

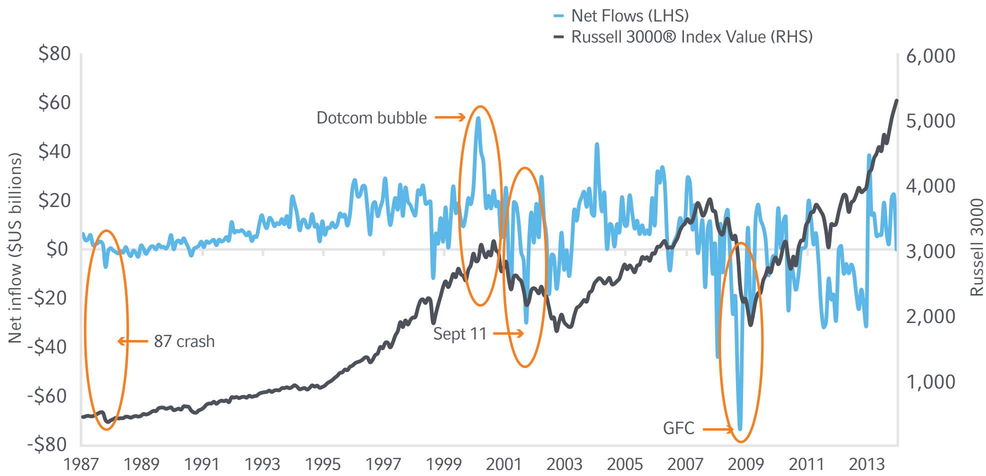
2 The third 'treat', Australian residential property, continued to boom in 2013. However, this has been accompanied by increasing fears of an overheated market, with regulators like the Reserve Bank of Australia monitoring conditions to avoid a bubble like those experienced in other countries.
See 2013 Russell Investments/ASX Long-term Investing Report.

3 Collie, B. & Ezra, D. (2007) "Resist the Amygdala!", Russell Research, May.

Behavioural Finance 101: Physical survival now vs. successful long-term investing

To help us survive, our brains have been designed to generate emotional responses with lightning speed to react instinctively to danger. If we are mistaken in our 'fight or flight' decision, there is no big loss – the most important result is that we survived.

However, when applied to investing, these quick-survival reactions often cause inconsistent and irrational behaviour, which can lead to genuine long-term negative financial consequences. Figure 1 captures one of the most common investor behavioural issues: the impulse to buy high and sell low.



Source: Russell 3000® Index with dividends: Russell Investments.
Weekly historical U.S. mutual fund cash flow data from Investment Company Institute (ICI) as of December 31, 2013.
Net flows (total equity) = equity mutual fund flows (assets, sales and redemptions as reported by fund companies to ICI).

Index returns represent past performance, are not a guarantee of future performance, and are not indicative of any specific investment. Indexes are unmanaged and cannot be invested in directly.

Extensive research in the field of behavioural finance has identified numerous behavioural traits. Focusing on their relevance to investments, we group these responses into three broad categories: fear, greed and indifference.

"Don't panic in the short term – selling into fear often becomes a way to compound the loss rather than mitigate it."

Figure 1:
Tendency to buy at market peaks and sell at market troughs

Response 1: Fear

Peril: *Selling low locks in losses and misses out on opportunities.*
Remedy: *Don't panic. Focus on long-term goals.*

When fear and panic drive decisions, even the most rational investors generalise and overestimate the extent of the 'danger'.

This can cause investors to be overly pessimistic about future trends because they put too much emphasis on limited data from their most recent experience[4] and bail out at exactly the lowest point of the market trough and crystallise losses.

De-risking a portfolio became the path of least resistance in the wake of the global financial crisis (GFC), but did that help or hinder investors in achieving their long-term goals? Did bailing out just allow investors to instinctively respond to the fear in the pit of their stomach? Market data and the flow of investor funds indicate there is a penalty for panic.

For example, after the U.S. stock market plunged more than 50% in 2008, investors who fled missed out on a 20% rebound in 2009 alone, and more as markets have since pushed past pre-GFC highs. Thus, re-risking, rather than de-risking, helped investors to get closer to their long-term investing goals.

4 Sometimes referred to as the 'law' of small numbers.

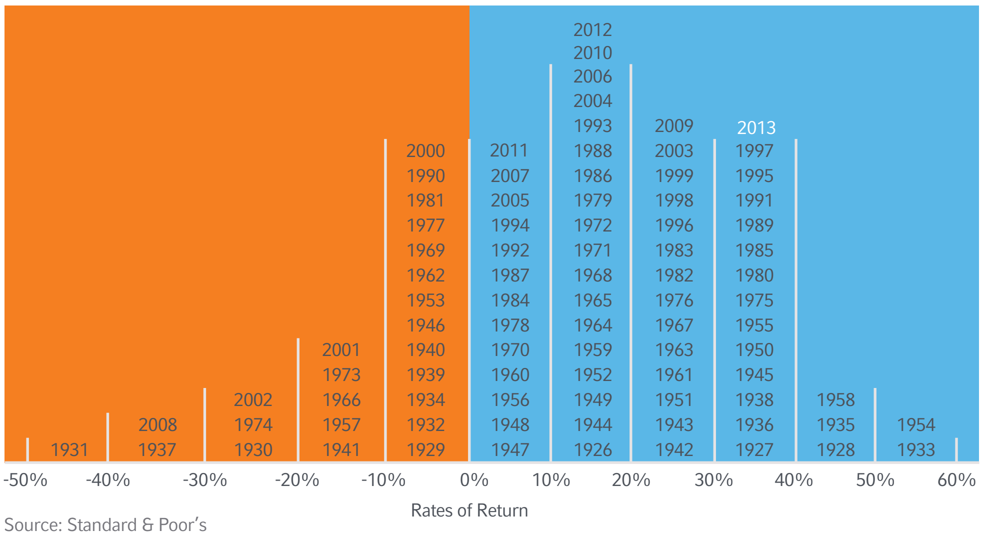
Seeing beyond biases

Figure 2 demonstrates that for 73% of the time (based on annual data), U.S. equity markets have posted annual returns above zero. Figure 3 shows how the Australian result is similar, with the market being in positive territory 67% of the time. Furthermore, the returns in the year following a significant *fall* of more than 20% in the Australian share market have averaged over +20%.

As investors and human beings, we're coached not to panic when facing risk. But when we get burned, we pull our hand away from the flame. It's self-preservation – a flight to safety. Why is that so harmful?

If your investment goal is self-preservation, you have to ask what that means in the end. A comfortable retirement in 20 years or a guaranteed good night's sleep immediately? Sometimes these things are at odds.

Fleeing from risk might feel like a protective reflex in the moment, but the self-preservation will often be temporary and can backfire. One of the most common results of this behaviour is that investors underestimate the opportunity cost of being 'safe' and stay in cash instead of taking on the investment exposures they need to achieve their goals.



Source: Standard & Poor's
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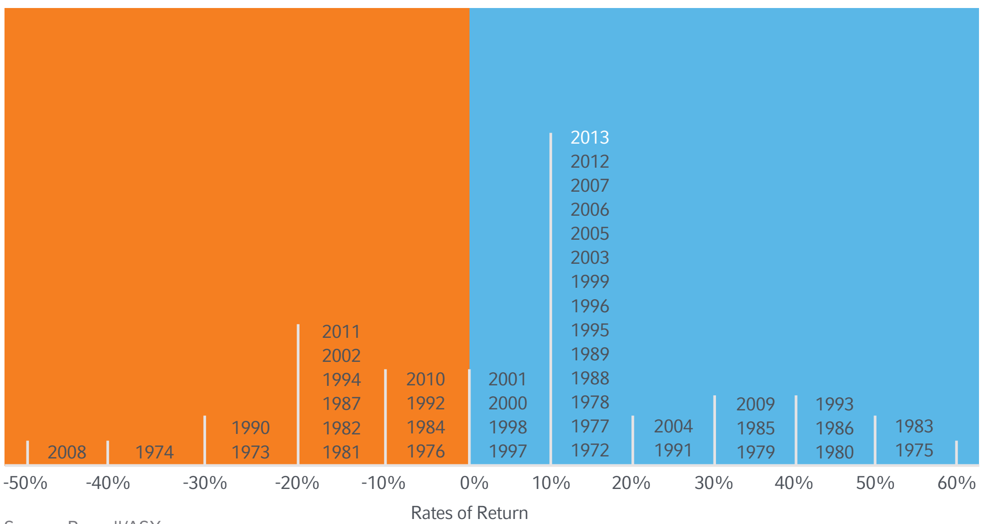
Figure 2:
Calendar year S&P 500® Index returns (1926–2013)



Source: Russell/ASX
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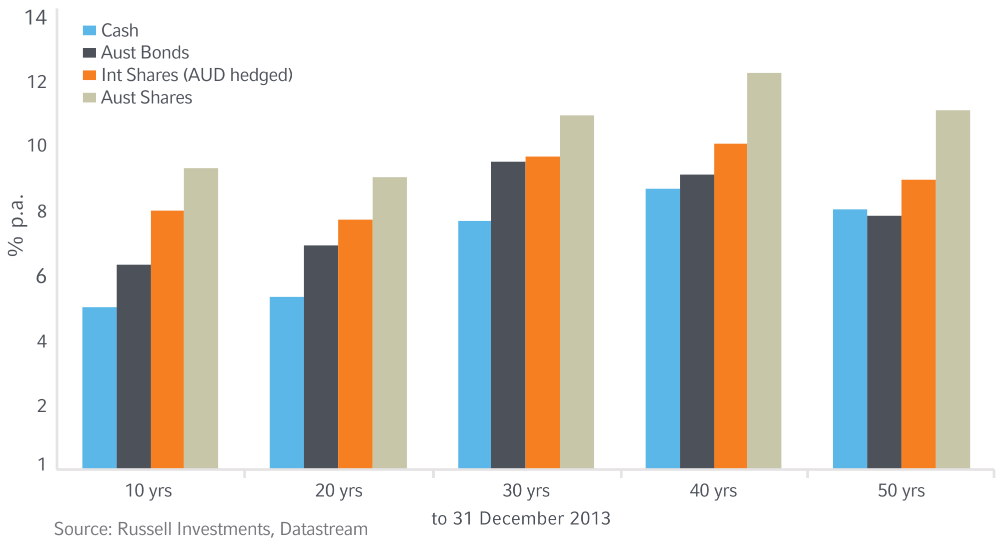
Figure 3:
Calendar year S&P/ASX All Ordinaries Index returns (1972–2013)

Seeing beyond biases

Remember that in the long term, there is a clear hierarchy of asset class returns, as illustrated in Figure 4. Over the long term, we believe investors will be rewarded for an equity risk premium, meaning equities will outperform bonds, which in turn will outperform cash. Commensurate with that, we expect equities to exhibit more volatility than bonds, which in turn provides more volatile returns than cash. Thus, an investor who remained invested and focused on their long-term goals would much more likely have realised them and benefitted from the share market recovery in 2009 and the further strength in 2012/2013, compared to an investor who bailed out and held cash until their confidence in risk assets returned in 2013.

"... after periods of very strong market performance, ... the biggest risk for investors is that they become overconfident and extrapolate that the buoyant conditions will continue indefinitely."



Source: Russell Investments, Datastream
For details on the historical index splices used in this graph, contact Russell on +612 9229 5111.

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Figure 4:
Hierarchy of long-term returns

Response 2: Greed

Peril: *Chasing past performers leads to buying high.*
Remedy: *Stay diversified. Risk is more certain than returns.*

At the other extreme, we found that after periods of very strong market performance, like the double-digit share market rallies enjoyed in the second half of 2012 and during 2013, the biggest risk for investors is that they become overconfident and extrapolate that the buoyant conditions will continue indefinitely. Better-than-expected results in one year may lead to an illusion of control and investors may be tempted to chase past performers. In doing so, they may be inadvertently reducing the level of diversification in the portfolio and taking unrewarded or greater risks than they can commit to in the longer term.

Last year's returns were abnormally high and investors should not expect them to continue. In fact, historical analysis suggests that on average, the return in the year immediately after a significant *rally* tends to be somewhat muted. In years when the U.S. stock market rose by more than 30%, the following year's average return was 11%. Similarly, in years when the S&P/ASX All Ordinaries rose by more than 20%, the following year's average return was only 5%.

Furthermore, equity markets are volatile and can fall significantly. As such, it is uncertain where the next pocket of growth, and hence returns, will come from. But what is certain, like death and taxes, is that there will always be risks along the way. Whether political, social or economic, you can be sure there will be a reasonable amount of risk involved in actually achieving the hierarchy of returns.

Seeing beyond biases

Asset class	Standard Deviation (p.a.)		Ranks	
	10 yrs	20 yrs	10 yrs	20 yrs
Aust Shares	13.9%	13.1%	4	4
Residential investment Property	6.5%	8.5%	6	6
Aust Listed Property	18.4%	14.7%	1	2
Aust Fixed Income	2.7%	3.7%	7	7
Global Fixed Income (hedged)	2.7%	3.0%	8	8
Cash	0.3%	0.3%	9	9
Global Shares (Hedged)	14.6%	14.8%	3	1
Global Shares (Unhedged)	11.3%	12.6%	5	5
Global Listed Property (unhedged)	15.9%	14.4%	2	3

Source: Russell Investments, Datastream

See Appendix of the 2014 Russell Investments/ASX Long-term Investing Report for details on the data series used in this table.

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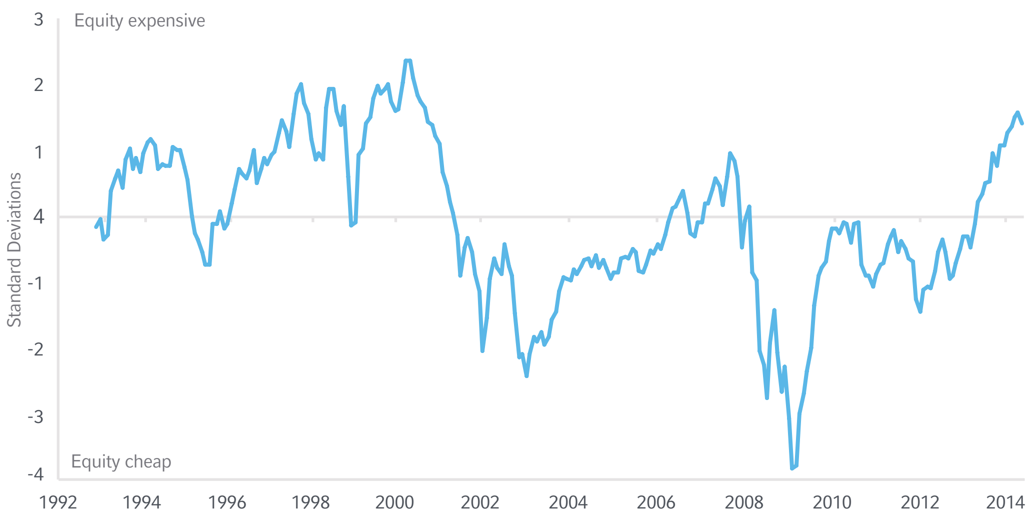
"Remember that risk is more 'certain' than returns and consider where you are in the business, valuation and sentiment cycles."

Table 1:
Historical standard deviations for periods to 31 December 2013

Table 1 shows the standard deviation (risk) of different asset classes over the last 10 and 20 years to 31 December 2013. Although the rank order of the asset classes based on this risk measure changed slightly between these periods, the following general observations can be made:

- Listed share and property securities markets were more risky (volatile) than other assets because they were more liquid and driven by sentiment in the short term, rather than by the true underlying risks.
- Historically, domestic and global listed property securities have been even more volatile than shares, especially in the lead up to, during and after the GFC.
- Shares were also more volatile than bonds and cash because their dividends tended to be variable and their supply issuance tended to increase as markets rally and vice versa, amplifying volatility compared with defensive assets.
- Unlisted assets such as residential investment property exhibited lower reported volatility as they were valued less frequently compared to the daily market pricing of listed securities.
- Over the longer 10 and 20 year periods, unhedged global shares exhibited lower volatility than hedged global shares, as the Australian currency has primarily been a 'risk on' play. This means that when global shares rallied, the AUD appreciated, decreasing the value of the (unhedged) global investment in AUD terms. Conversely, when global markets fell ('risk-off'), the AUD depreciated and boosted the value of the (unhedged) global investments.
- In both cases the opposing direction of the currency and asset movements serves to dampen the volatility of unhedged returns when translated back to AUD, leading to the somewhat surprising result that the volatility of hedged returns can in some cases be higher than the volatility of unhedged returns.

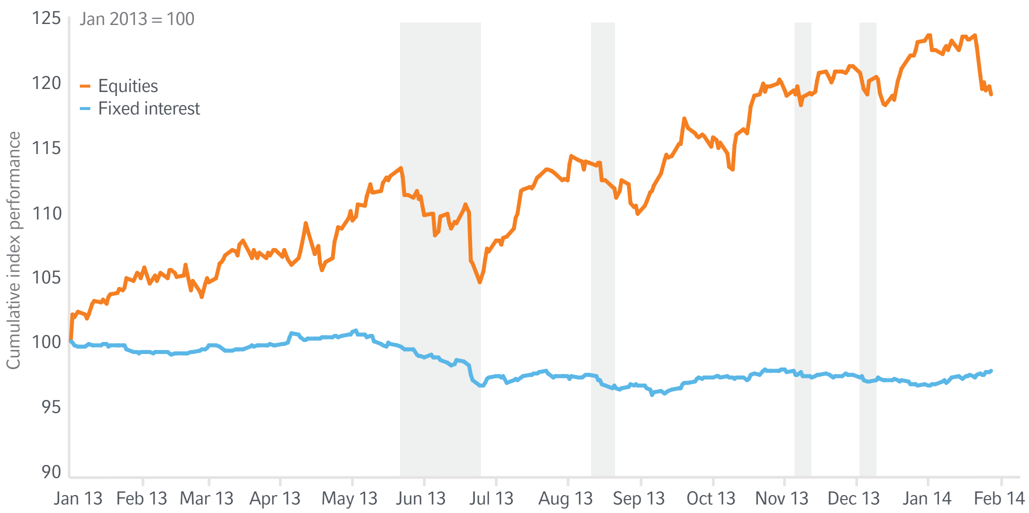
The herd mentality inherent within equity markets exacerbates volatility and can make behavioural issues even harder to resist.



Source: MSCI, I/B/E/S, Russell Investments

> *"Stay diversified across many different return sources as market stresses can undermine conventional performance patterns."*

Figure 5:
How expensive or cheap is the market? Russell's Composite Value Index for Developed World Equities



Source: MSCI, I/B/E/S, Russell Investments

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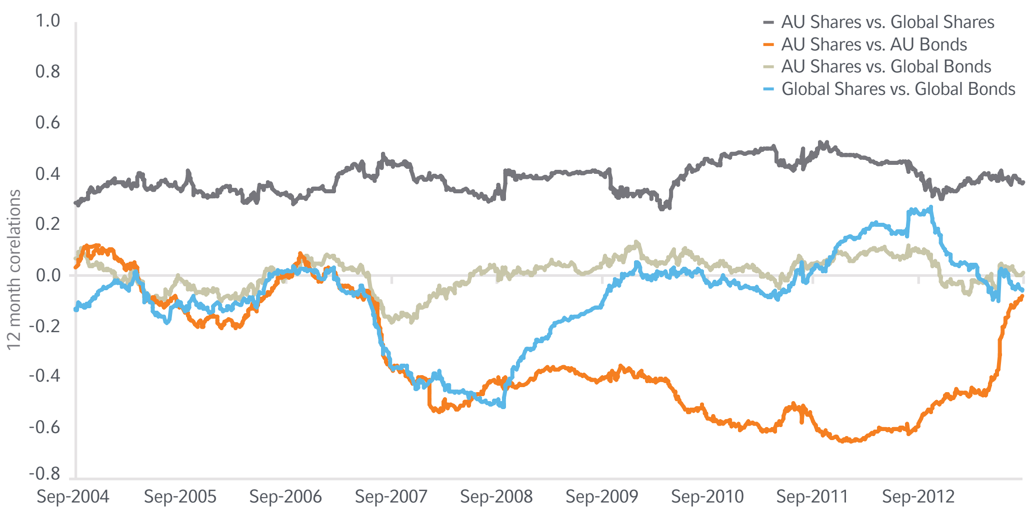
Figure 6:
Movements in global risk assets

Another way to quantify the risk involved in an investment decision is to consider how expensive or cheap a stock, country or market is, relative to some measure of long-term fair value[5]. Figure 5 illustrates how expensive markets had become by the end of the 1990s, driven by technology stocks in the U.S.. Investors who joined this trend towards the end of the dotcom bubble would have incurred a lot more downside risk than those who more objectively noted share markets were abnormally high (more than two standard deviations 'expensive'). On the other hand, the market troughs of 2008 would have felt like the riskiest time to invest in shares but in fact, counterintuitively, those troughs represented some of the most attractive times to invest (nearly four standard deviations 'cheap').

In addition, Figure 6 shows how in 2013, traditional equity and bond diversification didn't work as anticipated during the so-called 'taper tantrums' as both equities and bonds fell at the same time.

Last year's market stress events involved relatively short time periods where correlations between assets broke down. Figure 7 shows how correlations significantly changed over a longer time horizon, especially between Australian shares and Australian bonds, as well as Global shares and Global bonds.

5 Russell calculates value using a Composite Valuation Index comprised of a range of price-to-earnings ratios, book values and relative yields.



Source: Datastream, Russell Investments

"Be diligent – when things are small, small things matter."

Figure 7:
12 month correlations between asset classes changing over time

Response 3: Indifference

Peril: *Doing nothing – set and forget.*
Remedy: *Be diligent. Be adaptive.*

Another typical investor response is indifference. When confronted by high levels of uncertainty and an increasingly dynamic and changing environment, it is understandable to have responses like the following:

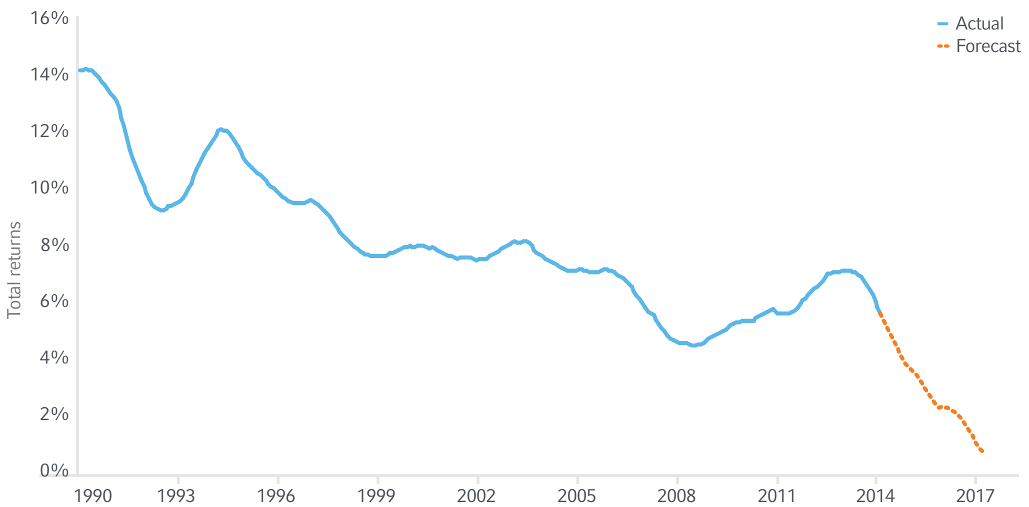
» With a day job, it's all too hard to stay on top of what is happening in the markets.

» I'll just stick with the status quo. I'm not confident and will regret my decision.

» It'll all wash out in the long run, after taking into account taxes and fees.

However, at Russell we believe that every basis point counts, particularly when we expect low returns and high volatility in the future. With bond rates rising from record lows, we expect very modest single-digit returns for bonds as projected in Figure 8.

Moreover, we are forecasting mid to high single-digit returns for equities in 2014. In an environment of lower returns, it is increasingly important to ensure investors squeeze as much out of their investments as possible, in the most cost efficient way.



Source: Russell Investments, Datastream
Projections assume rates move back into line with nominal U.S. GDP growth of 4.8% by 2017

Figure 8:
Actual and projected five-year total returns to U.S. 10-year Treasury bonds, smoothed.

Seeing beyond biases

Thus, we believe a disciplined and active 'buy low and sell high' investment approach, rather than a 'set and forget' or 'follow the crowd/chase the trend' mentality can add relatively more value to your portfolio. An extra 1% return from active management when added to a return of 6% is far more valuable than when added to a return of 43% (representing an extra 14% vs 2% of total returns respectively). Investors can also benefit by using smart beta techniques, by being exposed to different systematic factors during different parts of the market cycle, in a cost efficient manner. By carefully implementing industry-leading investment strategies, investors can increase their chances of achieving longer-term return targets in a low-return environment.

In addition, the market environment is becoming increasingly dynamic and technology is accelerating the rate at which news affects global markets. This increases the interdependence of countries and economies and the correlations between markets, especially during times of market stress. In such a rapidly changing environment, it is even more important to be adaptive and attentive to new opportunities and emerging risks, beyond traditional equities, bonds and cash. As shown in Figure 7 previously, the relative movements (correlations) between asset classes do not stay static over time.

"Be adaptive – look for new sources of returns and emerging opportunities beyond traditional assets."

Overcome behaviour that undermines successful long-term investing

While fear, greed and indifference seem like extreme responses, the reality is that every investor, no matter how rational, has experienced these emotions to varying degrees during different parts of the market cycle. The diagram in the Appendix demonstrates how investor emotions tend to be cyclical and repeat themselves through different historical market episodes.

For example, as investors' portfolios grow in value, so does their confidence. While investors don't know where markets are going, they tend to have a feeling of euphoria. They may think they need to buy more, believing markets always go up and that they can tolerate a higher level of risk. Unfortunately, this is the point of maximum financial risk for investors' portfolios.

By contrast, as portfolios lose value, investors tend to lose confidence. While they don't know where the bottom of the market will be, they may feel that they need to bail, and ultimately sell low. In reality, this is the point of maximum financial opportunity.

While the intuition may be obvious, controlling natural human behaviour when investors are experiencing these extremes is far harder, even when they are aware of the emotional pitfalls they are facing. It is as much an art as a science to strike the balance between a proactive vs. a 'set and forget' approach. Adapting to changing market conditions is important, as is avoiding behavioural biases.

This is why Russell's investment process has evolved over time to address the emotional shortcomings of any individual decision maker, or subjective behavioural biases such as 'groupthink'. Instead, we have developed rigorous processes for making decisions, including both quantitative and qualitative elements, as well as input from our global team of experienced investment professionals.

Seeing beyond biases

An alternative approach

Russell believes that investors need diversified portfolios that are responsive to market conditions, especially in a low-return, high-volatility market.

Investment strategies should look outside traditional asset classes to increase the probability of achieving targets. Such strategies include, but are not limited to: emerging market equities, emerging market debt, global credit and high-yield debt, unlisted offshore assets such as global property and infrastructure, ETFs and smart-beta strategies.

In addition, investors need to be adaptive to take advantage of emerging strategies that help achieve consistent exposure to long and short-term opportunities.

Being adaptive doesn't mean capitulating when the first bad thing happens or when things get tough. It means having a disciplined, rigorous and highly responsive (timely) process to take advantage of opportunities as they become available.

In order to do this, Russell uses a "Design, Construct, Manage" framework to develop outcome-oriented portfolios that achieve investors' long-term goals.

Design

The Design phase maps the real circumstances and needs of the investor into quantifiable investment targets. These goals and constraints are applied in the context of wider capital market assumptions and forecasts to produce a solution with objectives and asset allocations specific to the desired outcome. The resulting solution is the strategic asset allocation of the portfolio.

Construct

Asset allocation decisions are then brought to life in the CONSTRUCT phase. This stage is about faithfully implementing the portfolio design, while prudently using our full suite of tools and capabilities to make investor money work harder.

We start by considering the market exposures that we believe offer the most attractive returns in order to achieve portfolio goals. Next, we consider how to access these areas of the market, thus developing our strategic preferred positioning.

We identify third-party high conviction investment managers we believe will add excess return consistent with our beliefs. We often find that the combination of third party managers exposes the portfolio to unintended risks; or that the aggregate exposures are not precisely aligned with our strategic preferred positioning; or that allocating to a third party manager may not be the best way to obtain a specific exposure.

If any of these is the case, we integrate custom strategic positioning strategies, run directly by Russell, that aim to more precisely align the portfolio with our strategic preferred positioning.

Manage

Markets change, managers change and circumstances change and our investment portfolios need to adapt to these changes. To do so, the first step in the MANAGE stage is to clearly understand our current investments, the exposures and the sources of risk.

We use state of the art analytical tools from both market leading providers and those internally developed to support our investment process that enable our portfolio managers to monitor their portfolios daily.

We incorporate our forecasts around the current market opportunities and risks to identify the changes we may like to make to adapt to the ever-changing environment.

We then use a wide range of tools at our disposal to adapt the portfolios: adjusting manager weights, changing managers, or using a wide array of directly managed dynamic positioning strategies such as smart beta strategies, equity futures, or currency forwards to fine-tune exposures. The result is portfolios that are continually aligned to reflect our best thinking.

What does it all mean for investors?

Investors can improve outcomes by recognising humans are all prone to behavioural biases and emotional responses, and establish frameworks or safety nets to mitigate the impact of such tendencies. When making investment decisions, these questions provide a good behavioural filter:

- Is there an element of panic in the urgency of my decision?
- Am I assuming that recent market performance will continue indefinitely?
- Does the decision represent an adaptation to today's conditions?
- Will responding to this situation help me stay on track to best achieve my long-term goals or am I reacting to noise that just distracts?

At Russell, we believe that to maximise your chances of meeting your objectives in a changing market environment, portfolios should not be 'set and forget', but rather, they should be managed adaptively using disciplined, rigorous and proven processes.

This article is intended to be read alongside the **2014 Russell Investments/ASX Long-term Investing Report.** You can download the full report from www.russell.com.au or www.asx.com.au

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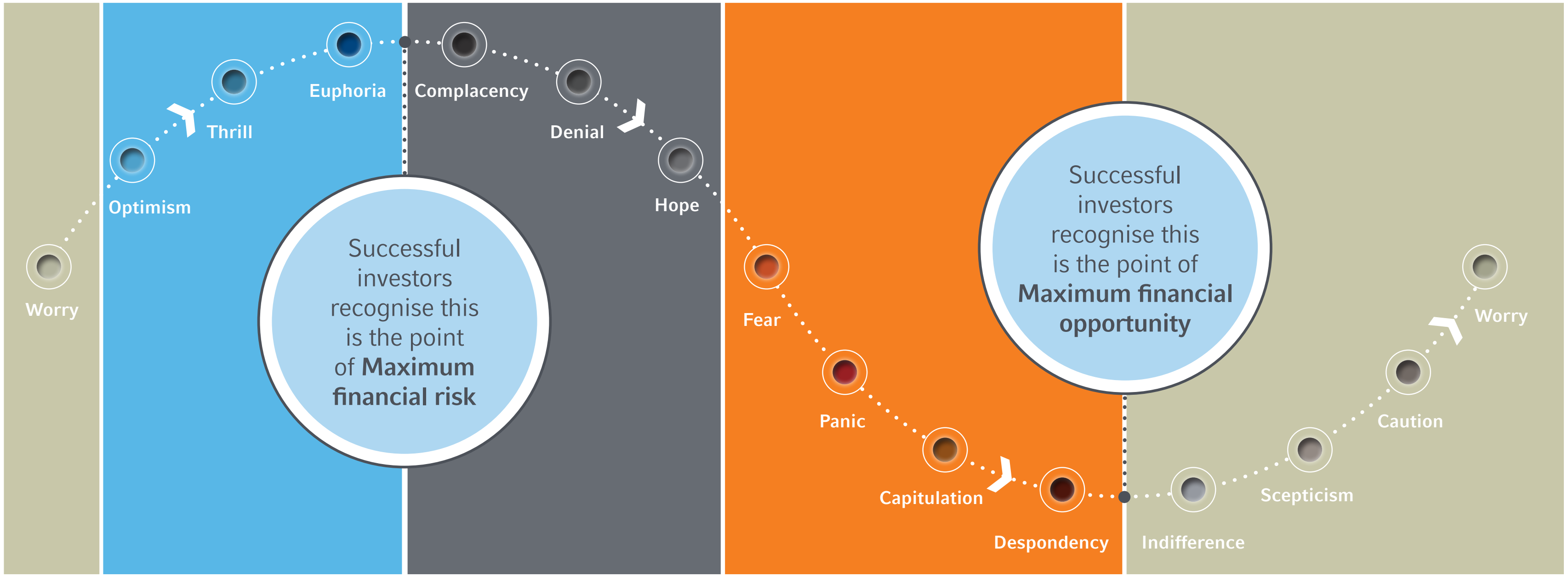
Seeing beyond biases

Appendix : Cycle of market emotions



	OPTIMISM THRILL EUPHORIA	COMPLACENCY DENIAL HOPE	PANIC CAPITULATION DESPONDENCY	SCEPTICISM CAUTION WORRY
Market Cycle 1	25% NOV 1971 – DEC 1972 › Inflationary pressures. Productivity improvements. › Rapid corporate earnings growth. › Introduction of paperless technology.	-19% JAN 1973 - NOV 1973 › OPEC Oil crisis - crude oil prices tripled. Inflation. › Credit squeeze. › Property company failures.	-27% MAR 1974 – NOV 1974 › Global recession. › Extended bear market.	36% DEC 1974 – JUN 1975 › Share market recovery despite recession.
Market Cycle 2	119% AUG 1984 - AUG 1987 › Credit Boom. › Strong world economic growth.	-2% SEP 1987 › Irrational shareholder sentiment. › Peak of overinflated share values vs historical PEs.	-28% OCT 1987 – NOV 1987 › 1987 Global stock market crash.	53% NOV 1987 – DEC 1989 › Share market recovery as value hunters sought to buy quality stocks cheaply.
Market Cycle 3	90% APRIL 97-SEP 2000 › Tech boom. Investor exuberance. › Emergence of 'new economy' sectors.	-28% OCT 2000 – SEP 2001 › Tech wreck. › September 11 Terrorist Attacks.	-24% MAR 2002 – FEB 2003 › Reduced global economic growth forecasts. › Extended bear market. › Corporate accounting scandals.	42% MAR 2003 – MAY 2005 › Geopolitical uncertainty. › Refocus on world economic fundamentals. › Boom in resources in response to industrialisation of China.
Market Cycle 4	22% JUN 2005 - JUL 2007 › US home prices hit highs. › Credit boom. › Higher interest rates.	-20% AUG 2007 – SEP 2008 › Credit crunch. Sub-prime mortgage crisis. CDO failures. › Lehman Brothers declares bankruptcy.	-37% OCT 2008 – FEB 2009 › Global financial crisis › US and European recessions. Negative real GDP reported for major developed countries in Q4 2008.	151% MAR 2009 – DEC 2013* › Global share market recovery. › Deleveraging, slow economic growth.

* Latest data available at the time of publishing. This period in Market Cycle 4 may extend past 31 December 2013.

Market cycle returns calculated using S&P500 Price Index (in USD). Indexes are unmanaged, and do not take into account any fees and costs associated with an actual investment.

Source: Russell Investments, Datastream