The Investor©

In our 29th year of service to the South African Investing Public!

Turning the screws on investors

by Richard Cluver

Though most ordinary folk were relieved that Pravin Gordhan's latest budget did not deliver the pain and suffering that most had expected, the sting was in the tail when he announced yet another increase of capital gains taxation.

The announcement raises the maximum effective capital gains tax rate for individuals from 13.7% to 16.4%, and for companies from 18.6% to 22.4% while the effective rate applicable to trusts will rise from 27.3% to 32.8%.

The problem with CGT in this country insofar as investors are concerned is that they are as a consequence of it, effectively prevented from replacing underperforming investments with better-performers. This is particularly the case when the underperforming asset has been held for many years and has as a consequence increased significantly in value. In most Developed World countries, CGT does not become applicable if the money is re-invested within a stipulated time period.

Furthermore, investors are to be prevented from using a loan account to transfer assets in and out of a trust. To understand the implications of this, it has long been customary for individuals who wish to protect their assets so that their heirs might enjoy the benefits in perpetuity, like for instance,

Thus, for example, if an individual wishes to protect his assets so that his heirs might continue to enjoy the benefits of a family business built up by many years of hard work and sacrifice, it would be customary to create a family trust in order to house these assets. Now let us assume that the trust holds shares which provide dividend income which is his widow's sole source of income. These will attract dividend taxation at a current rate of 15 percent and would normally accrue to the widow in the form of an interest-free loan. Presumably, in future, this income would now have to be taken as a taxable income which would imply that the widow's income will now be subject to double taxation and this could have crippling financial consequence for the elderly living in already constrained circumstances.

Now the worst thing that the Government can do is to alienate the very tiny group of taxpayers who collectively pay 47 percent of the tax bill and that is precisely what he is doing with his avowed dislike of trusts and the people who employ them to protect their assets. The source of this 47 percent of taxes, without which Mr Gordhan's budget would totally collapse is some 429 173 people representing six percent of taxpayers and considerably less than one percent of the total population. Furthermore, this group includes an even tinier group of 94 578 people who between them pay 23.5 percent of all collected taxes.

Furthermore, as I have reported frequently in the past, these folk are leaving the country in droves, both to escape the collapsing Rand before it is too late and to escape our rapacious tax regime. During 2015, New World Wealth reports that South Africa's dollar millionaires numbers declined from 46 000 to 38 500, departing for the UK, Australia, Canada, Mauritius and Israel.

Honing in on the group which pays 47 percent of our taxes, this group earns more than R701 301 a year and given that to derive this income from a fixes deposit with FNB yielding nine percent for a 5-year term, a net investment capital of just R7.8-million. Were they to have invested solely in Bluer Chip shares at an average current yield of 3.1 percent, then such an income would imply a net investment capital worth of R22.6-million.

Neither amounts are huge by any standard, but the interest income would attract R206 964 in tax or, as a pure dividend income R105 195. That is a monthly tax of R17 247 on the interest income or R8 766.26 on the dividend income; in either case more than enough to cover the basic living costs of an individual living in a tax-free environment. For example, you could buy a house on the Greek island of Samos for as little as R1.3-million. You could similarly buy a two bedroom condo on Grand Cayman for R3.3-million and live tax-free there or a three-bedroom apartment on Grand Baie, Mauritius for R2.4-million. Spend less that 183 days in any of these places and you will pay no tax at all.

Its no surprise people are leaving South Africa. Mr Gordhan, I hope I have your attention!

More Wealthy South Africans are leaving

Gareth Vorster reporting in Business Tech says that wealthy South Africans are leaving the country while they still have the money, as a weak local currency has taken a toll on their fortunes.

The South Africa 2016 Wealth Report shows that the end of 2015, there were approximately 38,500 HNWIs living in South Africa, with a combined wealth of US$159 billion. HNWIs are defined as people who have a net worth of US$1 million or more, according to metrics used by research firm, New World Wealth – the authors of the report.

South Africa is the largest HNWI market in Africa; however, according to NWW, South African volumes of wealthy individuals decreased by 10% during the review period (2007 – 2015). “Growth was negatively influenced by a significant depreciation of the rand against the US dollar, falling equity markets and the migration of a significant number of HNWIs out of the country,” the report said. 2015, NWW said, was a particularly poor year for SA millionaires – HNWI volumes declined by 18% during the year. The research firm report 46,800 wealthy people in 2014.

Between 2000 and 2014, approximately 8,000 HNWIs abandoned the country, New World Wealth said in a report last year. “Along with the rise in second citizenship applications, the number of people changing domicile (or immigrating) has increased dramatically since the turn of the century,” NWW said. “Major reasons for this include: turmoil in home country, security concerns and optimizing education of children.”

South African HNWIs tended to move to Australia, the UK, Cyprus, Mauritius, the USA and Canada, NWW said. Over the two year forecast period, the number of South African HNWIs is forecast to grow by 10%, to reach approximately 42,300 by 2017. “Growth is constrained by the current electricity crisis and a rising level of government regulation in the business sector,” it said.

A total of 95,158 whites have left South Africa since 2011, according to a new Statistics SA report released on Thursday. According to the 2015 mid-year population estimates, in the same period 1,067,937 Africans and 40,929 Asians migrated to South Africa. The figures took into account total departures and total arrivals over the period.

Statistician-general Pali Lehohla, speaking at the release of the 2015 mid-year population estimates in Pretoria, suggested that while Stats SA had not done any migration studies, it could be assumed the estimates were influenced by employment opportunities. “It can be assumed and working from theory, migrants tend to go where there is employment and looking at the age structure of Gauteng, you can conclude reasonably well it’s because of the supposed job opportunities that are there, that migrants are coming in,” he said.

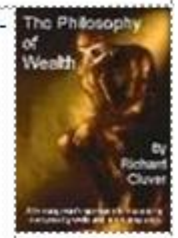
Touching on white migration, Lehohla said there was a trend among white children, who had just finished matric, to go elsewhere to gain some experience. “They are better connected and I think that’s why, and also I think there is migration of white people out for a number of reasons.” For example, a lot of white engineers had found employment in Dubai. The United States, New Zealand and the United Kingdom were among the countries South African whites had migrated too.

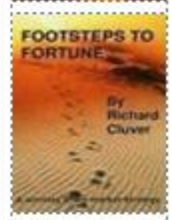
While over 95,000 whites had left South Africa since 2011, according to Stats SA’s estimates, white migration has slowed. Between 1986 and 2000, 304,112 white South Africans left the country. Between 2001 and 2005, 133,782 whites emigrated, dropping to 112,046 between 2006 and 2011. This meant between 2011 and 2015, 16,888 fewer whites left South Africa.

The immigration of Indians and Asians to South Africa had increased since 2001, with the same applying to Africans. Between 2001 and 2005, 23,335 Indians and Asians had immigrated to South Africa, with 769 038 Africans doing the same. Between 2006 and 2010, 34,689 Indians and Asians, and 922 884 Africans, had migrated to South Africa.

South Africa’s population was estimated at 54 956 900 in 2015, with 80.5% (44,228,000 people) being African. Coloureds comprised 8.8% (4,832,900) of the population, whites 8.3% (4,534,000), and Indians and Asians 2.5% (1,362,000). Among the provinces, 24% (13,200,300 people) of South Africa lived in Gauteng, the country’s most populated province.

The next most populated was KwaZulu-Natal at 19.9% (10 919 100), followed by the Eastern Cape at 12.6% (6,916,200), Western Cape with 11.6% (6 200 100), and Limpopo with 10.4% (5,726,800).





The rand and the SA economy: All about the dollar

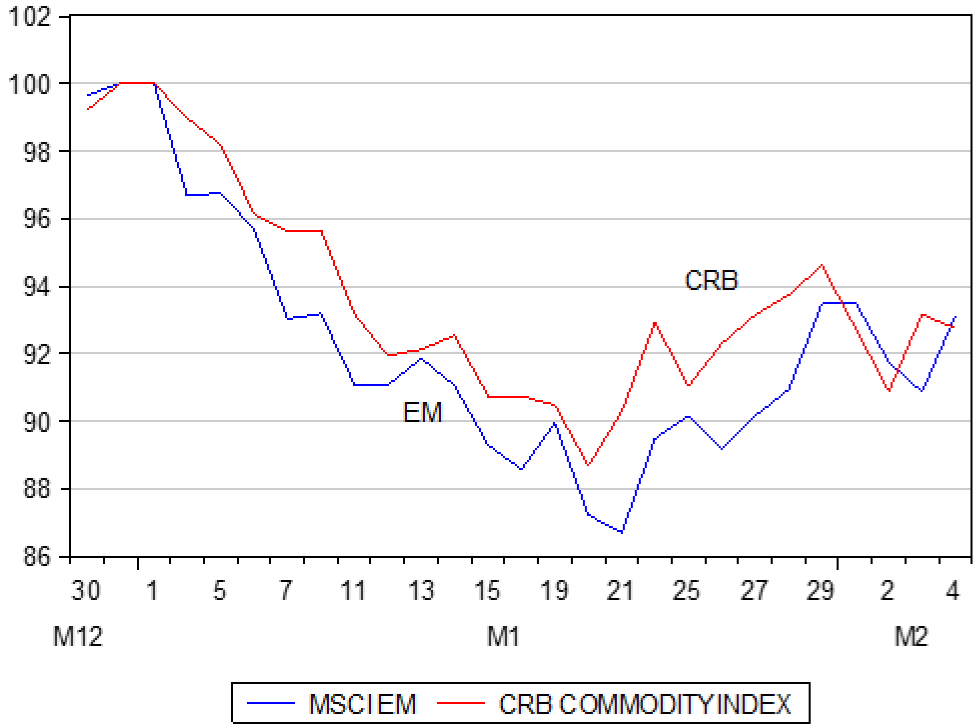
By Brian Kantor, chief economist and strategist, Investec Wealth & Investment

Markets are all about the mighty US dollar at the moment – weakness rather than strength is the hope for the SA economy. But rand strength could follow the right SA responses to our impaired credit rating

The markets this year have been most concerned about the danger of the Fed raising interest rates as US growth prospects were deteriorating. A strong US dollar, in such circumstances, posed a particular threat to emerging market currency, bond and equity markets. The presumed greater risk of a global recession was increasingly reflected by significantly lower commodity prices and the shares of the companies that produce them. Emerging market equities, bonds and currencies markets all revealed these increasingly risk averse sentiments.

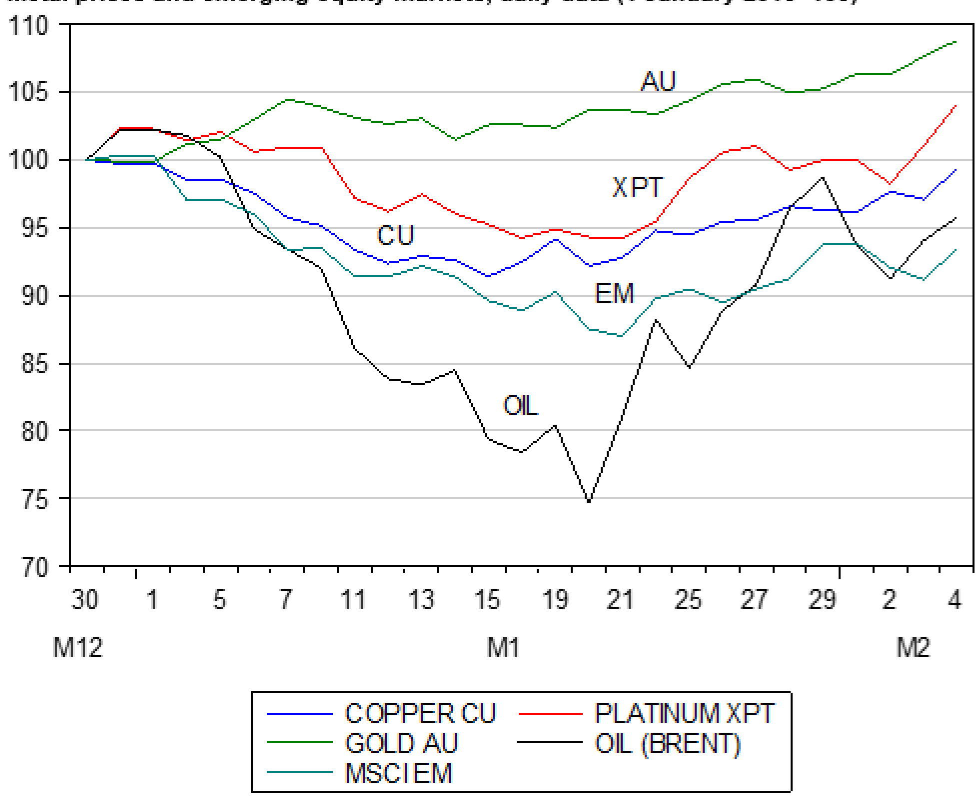
The highly correlated and not co-incidental weakness in commodity and emerging markets continued until the last week in January as we show below. The Commodity Research Bureau Index (CRB) shown below includes about a 27% weighting in oil. A further figure compares the prices of particular metals to the emerging market (EM) equity index (MSCI EM). Price weakness until late January 2016 and a recovery since is revealed in the figures below.

Emerging equity markets (MSCI EM) and CRB commodity price index (1 January 2016=100)



Source: I-Net Bridge; Investec Wealth & Investment

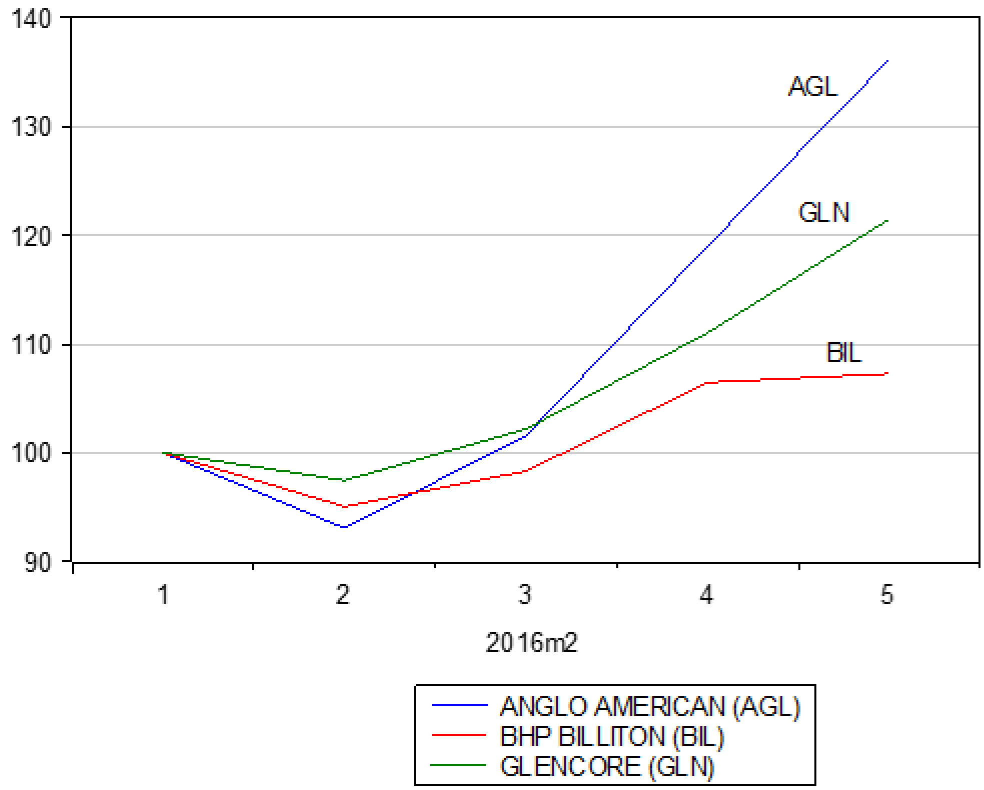
Metal prices and emerging equity markets, daily data (1 January 2016=100)



Source: I-Net Bridge; Investec Wealth & Investment

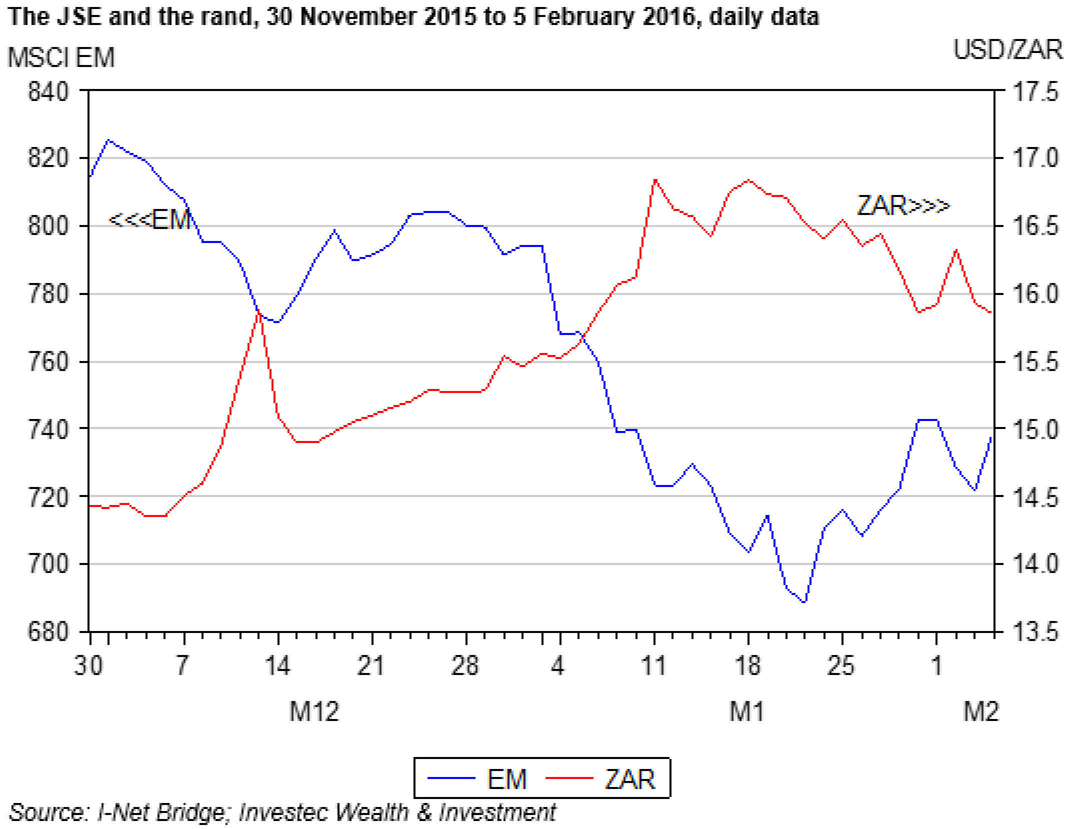
The previously strong US dollar however weakened this week, as the danger of higher interest rates in the US faded away. Dovish interest rate comments by the Chairman of the New York Fed led the dollar lower. It was a spark that lit up the shares of the mining companies. The shares of leading mining companies listed on the JSE responded dramatically to a weaker US dollar. As at Friday afternoon 5 January, Anglo leads the pack and is up about 36% since the Monday close on 1 February.

JSE mining house share prices, daily data 1 February 5 February 2016. (1 February 2016=100)



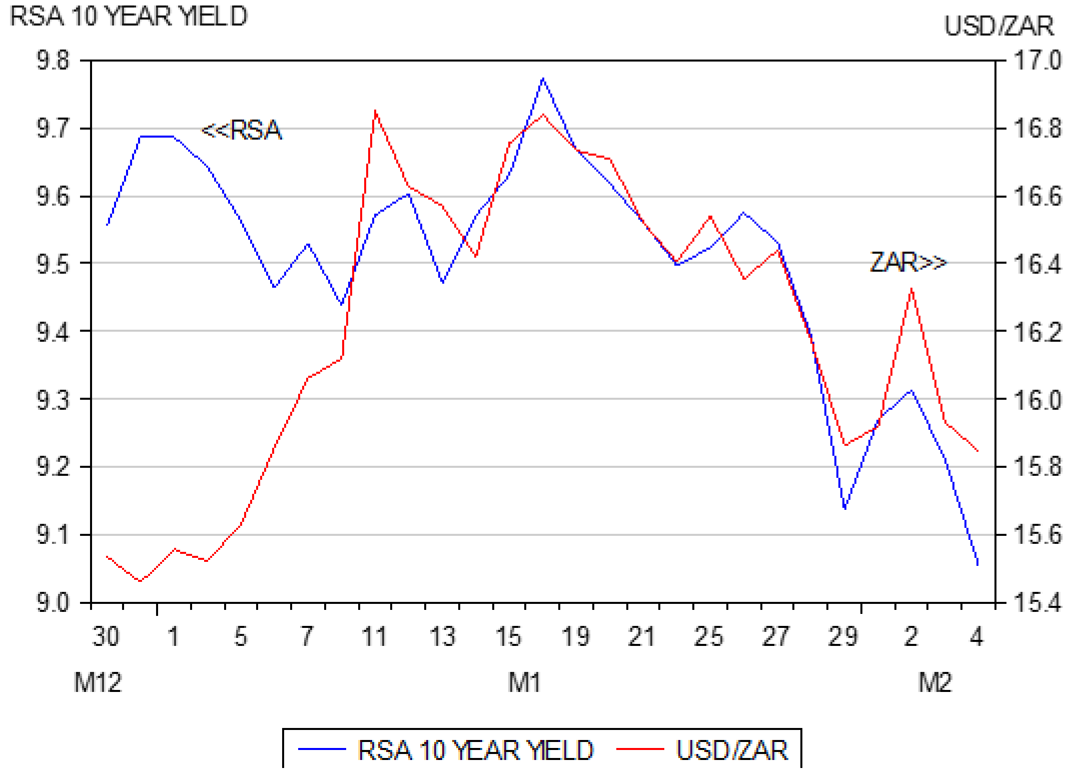
Source: I-Net Bridge; Investec Wealth & Investment

The rand and the JSE as a whole responded as it usually does to the global forces that move EM markets. SA had earlier revealed particular dangers to its policy settings that led to a significantly weaker rand and higher risk spreads, compared to its EM peers. But these SA-specific risks were a December event, though the EM influence is apparent throughout the extended December to February period with a degree of extra SA risk revealed in December.



The striking impact of the stronger rand on the long end of the RSA bond market is shown below. The rand – as influenced by global forces, as it usually does – overwhelmed the impact of higher short term rates on the bond and equity markets, as imposed by the MPC of the Reserve Bank on Thursday 28 January.

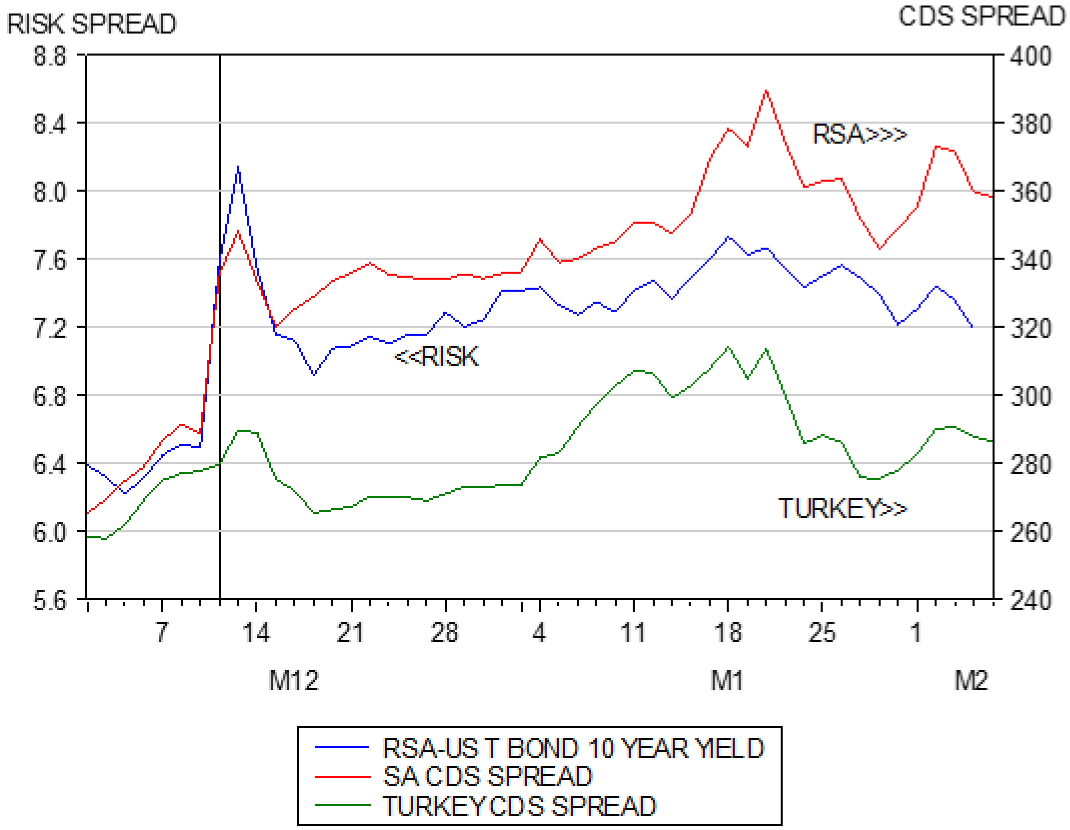
RSA yields and the rand, daily data January to February 2016



Source: I-Net Bridge; Investec Wealth & Investment

In the figure below we compare alternative measures of SA risk that reveal a very similar pattern of SA risk aversion. The difference between RSA and USA bond yields compensates investors for the expected weakness of the USD/ZAR exchange rate. This risk premium jumped up sharply on 10 December 2015 when Finance Minister Nene lost his job. The risk premium has since declined, helped by the stronger rand and lower interest rates since. Yet the SA risks priced into the markets remain highly elevated as is shown by the wider five year CDS spread, both absolutely and relative to the spread on equivalent Turkish dollar-denominated debt. This spread, equivalent to the difference between the running yield on RSA US dollar denominated debt and its US equivalent, represents the cost of insuring against RSA debt default.

SA risk measures, daily data December 2015 to February 2016



Source: I-Net Bridge; Investec Wealth & Investment

The SA economy is growing very slowly. The decision by the Reserve Bank to further increase its repo rate will add to the contractionary pressures acting on the economy. Fiscal austerity seems very likely to be introduced in the 2016-17 Budget to be presented later this month. The hope must be that the painful demonstration of fiscal conservatism will lower the risk premium attached to SA debt and equities, so attracting more capital to SA and so add to the value of the rand.

Only a stronger rand, bringing lower than expected inflation and lower interest rates, can reverse the cyclical direction of the economy. A weaker dollar and stronger flows into EMs will be a great help to the rand. But it will take more than a credible commitment to fiscal conservatism to reduce the SA-specific risks holding back the rand and the economy. A recognition by the government that the partial privatisation of underperforming state-owned enterprises would improve the performance of the economy and the quality of the RSA balance sheet, is essential to reducing the risk premium added to the returns of investments in SA.

Budget 2016: Austerity is not enough

By Brian Kantor, chief economist and strategist, Investec Wealth & Investment

Austerity will not be enough to improve the RSA credit rating. Privatisation will be essential to achieve this.

The 2016-17 SA Budget to be presented on 24 February is set to be an austere one. A mixture of higher tax rates and faster growth in tax revenues seems bound to accompany slower growth in government expenditure. The objective will be to reduce the debt to GDP ratio and to impress the rating agencies accordingly.

But fiscal austerity, accompanying higher interest rates imposed by the Reserve Bank, coupled with more inflation, will not help the SA economy to escape its growth malaise. In the short term, taken on its own, such austerity is likely to inhibit any cyclical recovery.

Fiscal austerity may be necessary for securing a better credit rating for SA and lower costs of funding government debt. But it will not be sufficient – and the rating agencies may well come to remind the Treasury that the greatest risk to the SA economy is persistently slow growth. Something more than fiscal austerity is required to improve the national balance sheet and impress the global capital markets, as well as to improve confidence in the prospects for the SA economy.

A commitment to privatisation of state owned and funded enterprises is urgently called for. Asset sales to private owners and operators would reduce national debt and interest payments while relieving the tax payer from further calls on their cash that has far more useful alternative applications.

Private ownership and responsibility for operating failures would absolve the regulators from conceding abnormally high increases in electricity or water tariffs as an alternative to the hard pressed Treasury raising additional debt or equity to keep the public enterprises going. But such higher tariffs – tariffs that are by now more than high enough to secure private capital to supply the essential services – are taxes by another name. They reduce disposable incomes by as much as any indirect tax increase would and, by lifting the rate of inflation, they unfortunately and unnecessarily encourage the Reserve Bank to add to the misery by raising interest rates even further. Exchange rate shocks, tax shocks and drought are very poor reasons for raising interest rates – but are a likely outcome given the Reserve Bank's modus operandi.

The national balance sheet would benefit greatly from a willingness to sell off (at any price) rather than continue to support failing public enterprises with bail outs in the form of taxpayer cash or guarantees of the debt issued by public enterprises. The scope for the better management of what are now publicly owned and funded enterprises is very large. The political will to do so would be very well received in global capital markets.

There would be no lack of foreign capital to access the opportunities a well-designed process of privatisation would offer.

The sale (fully or partially) of SAA comes to mind – as does a listed private share in the Airports Company of SA. The other sea ports of SA are also very valuable assets that would benefit from private owners, while their customers would benefit from competition between them. The generating capacity of Eskom could be unbundled and sold off to a variety of owners and managers, who would then be subject to the full discipline of a competitive market for energy – and a cost conscious regulator.

Such reforms would add value to the rand and reduce inflation and interest rates. A recovery in the rand and lower interest rates would be a great stimulus to the economy. An upswing in the business cycle would follow and the structural reforms of failing public enterprises would raise the long run growth potential of the economy.

The state of the markets

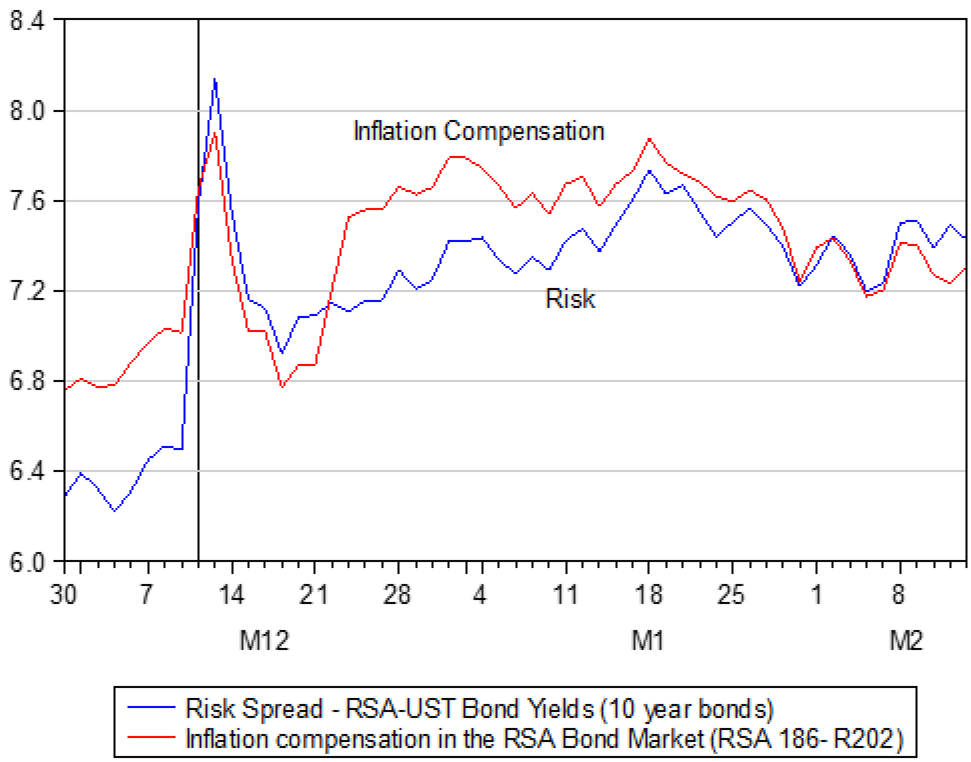
The State of the Nation speech delivered by President Jacob Zuma to Parliament on Thursday 11 February revealed a more open and pragmatic approach to the prospect of privatisation. The capital markets so far have not registered any marked approval of such intentions. The sovereign risk spreads and the outlook for inflation have not yet improved in any immediately obvious way.

The spread between RSA long term interest rates and their US equivalents remain elevated, albeit below the levels recorded when President Zuma intervened in fiscal policy and sacked the then Minister of Finance, Nhlanhla Nene, on 9 December. This risk spread, currently over 7% p.a. is, the rate at which the rand is expected to depreciate over the next 10 years. What is to be gained by a US dollar investor in the form of higher yields is expected to be perfectly off set by exchange rate weakness in the market for forward exchange. If this were not the case, then arbitrage opportunities to make certain profits in the bond and currency markets would open up.

The market is clearly expecting a high rate of further rand weakness. Consistently, given the expected weakness in the rand, the expectation of more inflation to come over the next 10 years, remains equally elevated. A weaker rand must be expected to bring more inflation with it. The compensation for inflation provided in the RSA bond market thus remains at about the same level of over 7% p.a. Vanilla bonds, which are vulnerable to unexpectedly high inflation, still offer over 7% p.a more than the inflation protected variety yields of under 3%. This yield spread can be regarded as an objective measure of inflation expected.

In the figures below we show how the gap between RSA yields and US Treasury Bond yields widened significantly on 9 December. They have since receded but spreads remain elevated, as has inflation compensation. They do not appear to have reacted favourably to the State of the Nation speech.

SA interest rate spreads and Inflation compensation, daily data to 12 February 2016

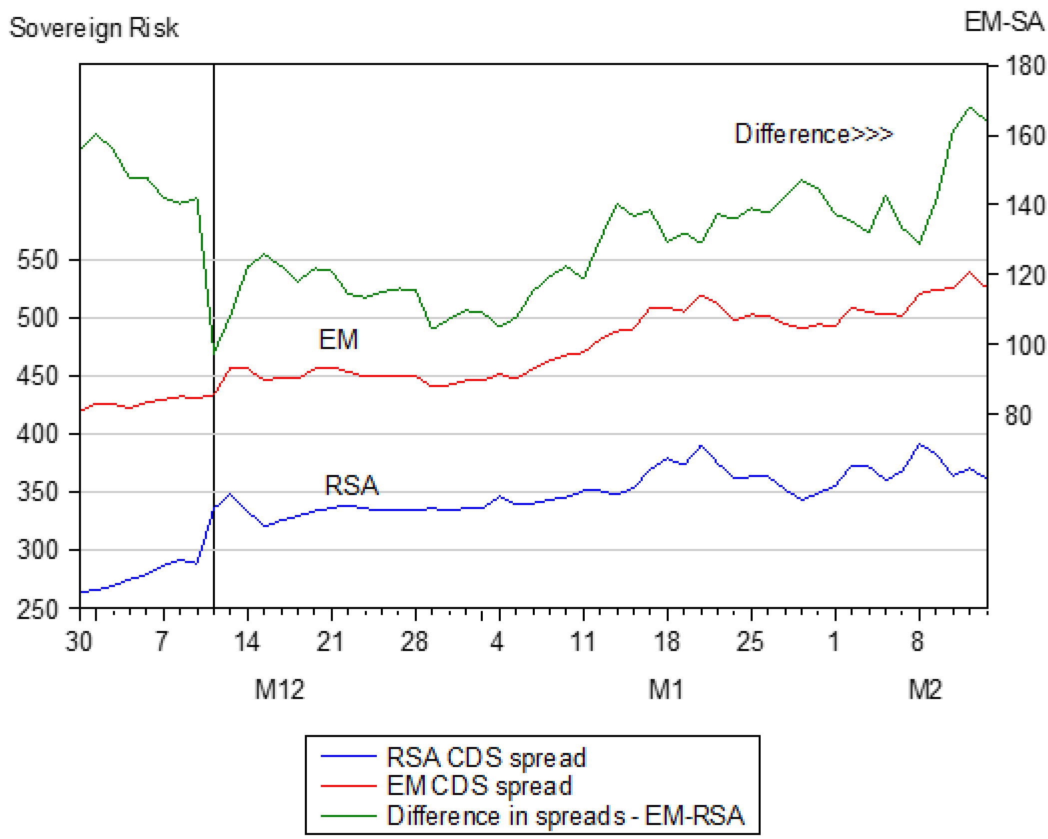


Source: I-Net, Bloomberg and Investec Wealth & Investment

A somewhat similar picture emerges when we compare the risk spreads on RSA dollar-denominated debt. The cost of insuring an RSA Yankee dollar-denominated five year bond moved sharply higher on 9 December and has widened further since then. But the risk spreads on even higher risk emerging market debt have also widened. This indicates that the higher risks associated with RSA debt have not been a purely SA event. Global risk aversion has also been an influence on credit ratings. However the current RSA credit default swap (CDS) spread of over 350bps, already effectively gives SA debt junk status.

We therefore compare the emerging market spread with the SA spread. The wider this difference the better the relative credit rating of SA debt. As may be seen on the right hand scale of the figure below, this difference narrowed sharply on 9 December, indicating an immediately inferior SA credit rating. But the SA credit rating then improved in a relative sense, given the larger difference between average emerging market yields and RSA equivalent debt. Encouragingly, this spread has increased further in recent days, indicating an improving SA credit rating – when compared to a peer group.

Sovereign risk spreads, daily data (30 November 2015 to 12 February 2016)



Source: I-Net, Bloomberg and Investec Wealth & Investment

We await with great interest the detailed Budget proposals. Not only will the plans for government spending, tax and debt issues be influential. The plans for asset sales, that is for privatisation, may prove even more important. A combination of fiscal austerity with credible privatisation plans could have a profound influence on SA's credit rating, the rand and the longer term growth prospects for the SA economy.

THIS IS FROM JAN BELOW

Thought from across the Atlantic

When Retirement Was Risk-Free

By John Mauldin

Saving money for retirement has never been easy for the average worker, but at least it was feasible if you started early and earned a middle-class living, especially if you had automatic deposits or a business or government guaranteeing you a pension. Plus, the bond market was on your side. Until the year 2000 or so, anyone could lock in risk-free 5% or higher yields in bank certificates of deposit.

Suppose you saved all through your career and accumulated a million dollars. It was a simple matter to put it all in CDs, Treasury bonds, or tax-free muni bonds and generate $50,000 a year in current income. Living costs were lower last century, too. Presumably, you also paid off your mortgage in the course of living the American Dream. Add in Social Security and you could enjoy a comfortable if not extravagant retirement. Your million-dollar principal would remain intact and could go to your children upon your death.

Again, this was relatively easy to do. It didn't require any financial sophistication or even a brokerage account. The hardest part was saving the million dollars in the first place, but you could get by with much less if you drew down the principal over a 20- or 30-year period (and didn't outlive the drawdown).

Better yet, you could do this with no risk, just by keeping your money in FDIC-insured banks. You might have to split it between a few different banks to stay within the limits. Some extra paperwork, but easily done. There were plenty of services that would help you distribute your assets over multiple FDIC-insured banks.

It was even simpler if you had an employer or union pension plan to do the work for you. Pension plans pooled people's money, calculated how much cash they would need to pay benefits in future years, and built portfolios (mainly bonds) to match the liability projections. Government and corporate bonds yielded enough to make the process feasible.

Younger readers may think I just described a fantasy world. I assure you, it was very much a reality not so long ago. Ask your grandparents if you don't believe me. However, you may find them in a state of shock today because they thought the fantasy would last forever. Indeed, their financial planner probably told them they could count on drawing down 5% of their portfolio per year to live on, because the income from the investments in their portfolio would more than make up for the drawdown.

None of this is possible today. Neither you nor a massive pension plan acting on your behalf can generate enough risk-free income to assure you a comfortable retirement.

Why not? Because our monetary overlords decreed that it should be so. Retirees and their pensions are being sacrificed for what now passes as “the greater good.” Because these very compassionate overlords understand that the most important prerequisite for successful future retirements is economic growth. And they think that an easy monetary environment is the necessary fertilizer for that growth. So, when they dropped rates to zero some years ago, they believed they would soon be able to raise them again – and get people’s retirements back on track – without risking future economic growth. The engine of growth would fire back up, and everything would return to normal.

So much for the brilliant plan. You and I, the expendable foot soldiers in the war to reignite growth, now gaze about, shell-shocked, as the economic battlefield morphs from the Plains of ZIRP to the Valley of NIRP.

Ultra-Low Rates

In fairness to our central banks, they must balance competing priorities. The Fed’s statutory mandate is to promote “maximum employment and stable prices.” Their primary tools to execute this mandate are the manipulation of the money supply and interest rates. Since 2008 they relied on near-zero interest rates to stimulate economic growth. As I wrote last week, the Fed (and much of the economics profession) sincerely believes that low interest rates will do the job they’re supposed to.

However, the hard evidence of the past few years is that ultra-low rates, combined with quantitative easing, haven’t stimulated much growth. Unemployment has fallen, which is good – but probably not as good as the numbers suggest, because people have gone back to work for lower pay and are now even deeper in debt. Personal income growth has stagnated, as we will see a little later in this letter. So, are we better off now than we were five years ago? The answer is a qualified yes. But it is not entirely clear, at least to your humble analyst, that the halting economic recovery is the result of low interest rates and not other less manipulable factors such as entrepreneurial initiative and good old muddling through. In fact, an ultra-easy monetary policy may be part of the reason we’ve been stuck with low growth. Witness Japan and Europe. Just saying…

Seriously, no one fully understands how all the moving parts influence each other. Years of ZIRP did help businesses and consumers reduce their debt burdens. ZIRP and multiple rounds of QE have also done wonders for stock prices … but not much for the kind of business expansion that creates jobs and GDP growth.

If year upon year of ultra-low rates were enough to create an economic boom, Japan would be the world’s strongest economy right now. It obviously isn’t – which says something about ZIRP’s efficacy as a stimulus tool.

What isn’t a mystery, however, is that ZIRP has created a massive problem for retirement savers and pension fund managers. NIRP will make their problem worse – and they were already facing other challenges as well.

If we get negative interest rates for a sustained period, similar to Japan and Europe, it will be because the economy is stuck at no-growth or in contraction. Stock prices will head the other direction: down. It will be the mother of all bear markets. We are getting a little taste of it right now in bank stocks. Look for much worse as the growing impact of NIRP and the threat of NIRP reaches other sectors.

Defined Failure

Employer-based retirement plans come in two flavors: defined *benefit* and defined *contribution*. A defined-benefit plan is what we usually think of as a pension. You work for employer X, who promises to let you retire at age 60 or 65 with a defined monthly pension payment – so many dollars per month, based on your salary, years of service, etc. You and your employer pay for this plan by contributing cash to it during your working years. (Unless you work for a government entity like a police force or fire department and can retire in your early 40s with full benefits after 20 years, then go to work for another government entity and retire with a second and sometimes even a third defined-benefit retirement plan. Yes, there are numerous instances of this. Not a bad gig if you can get it.)

But will the amount you and your employer contributed be enough to pay that defined benefit for all the years you survive after retirement? The answer necessarily involves guesswork and assumptions about events 20 or 30 years in the future. It also means *someone* has to be on the hook in case the guesswork is wrong. That's usually the employer … or taxpayers.

Private-sector employers realized decades ago that carrying pension liabilities on their balance sheets left them at a competitive disadvantage. They removed those liabilities by switching newer workers to defined-contribution plans – the now-familiar 401(k) and similar programs. You and (if you're lucky) your employer both deposit cash into your 401(k) account. You decide how to invest the money and hopefully do well. More to the point, a defined-contribution plan does not require your employer be on the hook for poor investment results. The one on the hook is you.

Defined-benefit plans now exist mainly in state and local governments, where unionized workers have more influence over management and elected leaders come and go. Politicians, by their nature, often think no further ahead than the next election. Their path of least resistance is to promise workers the moon and let their successors figure out how to pay for it.

Guess what? The future is here, and it turns out the guesswork and assumptions about the future were really, really bad. As in, if you are just about to retire or have only been retired a few years and have a pension, you may be seriously screwed.

Hot Potato Pensions

I get a creepy *déjà vu* feeling every time I write about public pensions. I've been preaching about them for more than a decade now, and the situation keeps getting worse. Obviously the politicians are ignoring me – and not without reason. Clearly, I underestimated their ability to postpone the inevitable. Nevertheless, I firmly believe a train wreck is coming. The math has never worked well, and now ZIRP/NIRP is making it much worse.

Fixed-income markets are tailor-made for funding future liabilities. Suppose you sign a contract in which you agree to pay your supplier $1 million exactly one year from now. How do you make sure you will have the cash on hand when the time comes?

The most conservative way would be to put $1 million in a lockbox right now, with instructions to open the box and disburse payment on the agreed date.

Back when CD and Treasury bill rates were 5%, you could just buy a series of $100,000 CDs for $1 million. When the time came, you handed over the principal and kept the interest accrued. You covered your obligation and still had $50,000 to use however you wanted.

That is roughly how defined-benefit pensions used to work, with longer time spans and much larger numbers. My example also has an advantage they don't: certainty on how much cash you will need at maturity and the exact amount the investment will make in the meantime.

A pension plan that covers thousands of retirees can make educated guesstimates as to how long those pensioners will live. Professional actuaries are uncannily good at this when the population is large enough.

The far bigger challenge is to determine the expected rate of return on the pension's assets.

That number is a hot potato, because it determines how much cash the employer must contribute each year to keep the plan "fully funded." The laws require the sponsor of a pension plan to maintain a fully funded position. However, they allow a great deal of flexibility in how "fully funded" is defined. Assume higher returns in the future and you can get away with spending less money in the present. Furthermore, because we are dealing with large numbers over long time spans, small changes can make a huge difference.

The state and local officials responsible for these plans want to assume higher returns so they don't have to raise taxes or cut other spending. So, as politicians often do, they shop around for someone who will give them the answer they want – along with plausible deniability should that answer turn out to be wrong. This is why we have a thriving "pension consultant" industry.

Almost without exception, public pension plans still assume *very* optimistic future returns. They base those projections on long-run past performance and assume the future will be like the past. CALPERS, the California public employee plan that is the nation's largest pension, is in the process of reducing its base forecast from 7.75% to 7.5%. Even this tiny change was enormously controversial. Revenue-challenged local officials all over the state looked at the difference it made in their mandatory contributions and flipped out.

I have talked to numerous board members on multiple enormous public pension boards. Many of them would privately like to reduce their projected returns, but they know it is politically impossible to do so. Other simply say, This is what my consultants tell me, so I have to go with their expert opinion, don't I?"

The return assumptions are a blend of past stock and bond market returns. This is where ZIRP starts to hurt. Bond returns have the advantage of being more predictable than stock returns, but now they are predictably low. Inflation-adjusted returns on Treasury and investment-grade corporate bonds are either zero, below zero, or not far above zero. They are certainly nowhere near the 5% or more that was once common.

If you can't assume decent bond returns, can you make up the difference with higher stock returns? That's not easy, either. Today's behemoth pension funds don't simply *invest* in the stock market; to a large extent, they *are* the stock market. It is mathematically impossible for all or even most of them to achieve above-market returns. They are just too big.

As I often say, long-run stock market returns are a function of economic, population, and productivity growth. Some companies always outperform others; but in the aggregate, stocks can't outpace the economy in which they operate. If the economy grows slowly, then over the long run stock values will, too.

Growing slowly is exactly what the entire developed world has been doing and appears set to continue doing for years to come. If 2% is the best GDP growth we can hope for, then we are not going to see stock market returns over the next 20 to 30 years at anywhere near the 8% or 10% that many pension trustees assume.

If investment returns aren't sufficient for pensions to pay the benefits they promised, all the consequences are bad. State and local governments must then implement some combination of higher taxes, spending cuts, or benefit reductions. All three hurt.

The same reality applied if you're running your own pension. If you don't save enough and/or fail to achieve your expected returns, you will face some unpleasant choices: work longer, live more frugally, or die sooner.

From Frying Pan to Fire

If ZIRP is bad, NIRP will be far worse for retirement planning. Bond-return assumptions will have to be even lower and potentially below zero. This situation would wreak havoc on every pension fund – but that's not even the worst part.

Most asset allocations are generally in the ballpark of 60% equities and 40% bonds, so that is the standard portfolio we will be discussing. Other allocations will make some differences but not change the general direction. In other words, "your mileage may vary" – but probably not by much.

In an ideal world – which is the world that pension consultants live in – equities will return 10% nominal, and bonds will return 5%. A 60/40 portfolio blend will then yield an 8% overall return after fees, expenses, and management costs.

It doesn't require a great deal of head scratching to realize that a negative interest rate environment is going to bring overall bond yields down below 2%. That paltry yield will drop the blended portfolio rate to 1.2%. How long can that low return last? Ask Japan. When we saw the advent of zero interest rates in the US seven years ago, no one thought they would be in place this long. No one.

The reality is that in our mega-debt world, long-term interest rates are going to be low for quite some time. One thing that could change that would be inflation's charging back against consensus expectations. I don't think the Fed really makes much of a move until inflation is over 3%. FOMC members would actually like to see 3% inflation for a while, though they will never say that. But then at some point they will have to make a move, and that is going to be exceedingly uncomfortable whenever it happens. But for the nonce, we are in a low interest rate environment.

Phantom Stock Market

Maybe we could just allocate more to equities? That is one possible solution, but the historical record suggests that might make our task even more challenging! When I start thinking about future possible returns, one of the first phone calls I make is to my friend Ed Easterling of Crestmont Research. He and I have collaborated on numerous papers on market cycles and future returns, most recently "It's Not Over Until the Fat Lady Goes on a P/E/ Diet." His website is a cornucopia of data and analysis. Let's look at a few of his charts and conclusions.

One of the more reliable predictors of future returns is the current price-to-earnings (P/E) level. There are only three sources of stock market growth: EPS growth, dividend yield, and the change in P/E ratios. Where you start from gives you an excellent indication of the range of returns you can expect to get over the following 20 years. For most people, 20 years can be considered the long run.

Today the normalized P/E ratio is 23, which is right up there in the top 10% of historical rankings. Even if you want to quibble and drop the ratio a few notches, it's still high. And by looking at the chart below, we find that historical returns 20 years on have ranged from 1.6% to 5.0%, with an average of 3.7%.

20 Year Periods Ending 1919 - 2015 (97 periods)

	NET TOTAL RETURNS BY DECILE RANGE		S&P500 DECILE	AVG BEGIN	AVG END
DECILE	FROM	TO	AVG	P/E	P/E
1	1.6%	5.0%	3.7%	18	9
2	5.2%	5.7%	5.5%	14	10
3	5.7%	6.0%	5.8%	14	11
4	6.1%	6.8%	6.4%	17	14
5	6.8%	7.8%	7.2%	16	19
6	7.8%	9.4%	8.7%	17	20
7	9.4%	9.9%	9.7%	15	17
8	9.9%	11.3%	10.6%	12	19
9	11.5%	12.4%	12.2%	12	22
10	12.5%	15.6%	13.9%	10	29

Note: P/E ratio based upon average 10-year real EPS (P/E10)

There is no historical instance of price-to-earnings multiples expanding from where we are today for any sustained length of time. In fact, levels like those we see today have generally indicated a brewing storm – a bear market. That doesn't mean something new can't happen this time. There are those who argue that because interest rates are so low, we can expect earnings multiples to continue to rise. Maybe, but for how long and how by how much?

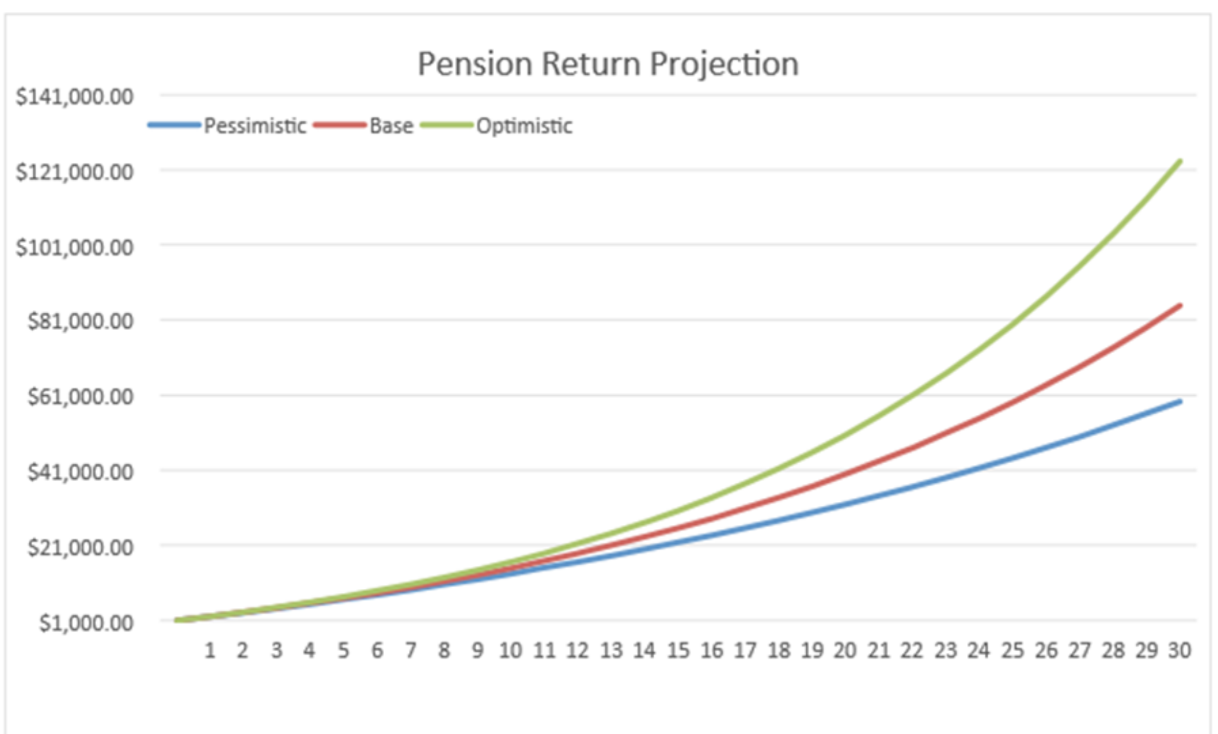
If you take the highest historical return of 5% (from our current P/E) and marry that with the bond returns we discussed earlier, you find your 60/40 portfolio can now be expected to give you 4.2%. And the average historical equities return of 3.7% leaves you with only a 3.5% total return on your investment portfolio!

And the return level makes a huge difference to the eventual success of a pension. As in, a monster difference. Most people don't realize that most of the money their pension will pay them in 20 or 30 years will come from the growth of the portfolio and not from their actual contributions. As we will see, your contributions might actually amount to as little as 20 or 25% of the total portfolio 20 years from now.

I'm going to start with a modest number, but you can add zeros to your heart's content. Let's say you save $1,000 a year for the next 30 years. Your pension consultant tells you that you can make 8%. And if you actually do, you find you have paid in $30,000, but your account has grown to $123,345.87, or over four times your contributions. Not a bad day at the office. You stick that into a 5% CD (bear in mind that we're talking a fantasy outcome here), and you make $6,000 a year, or about $500 a month. Add a zero and save $10,000 a year for 30 years, and now you're earning $5,000 a month, which, with a paid-for home and Social Security, provides you a comfortable, if somewhat frugal, lifestyle.

But what if you get only a 6% total return? Well, now you only have $84,801.68 after 30 years. Your 5% CD gets you only $4,000 a year. If you were able to save $10,000 a year, your monthly income would be roughly $3,500. Not bad, but much tighter. But that outcome depends on your being able to get 5% on your bonds or CDs. Do you want to bet your future that interest rates are going to be that much higher in 20 years? Maybe you need to save more.

Let's turn to a little graph that my associate Patrick Watson whipped up for me in Excel. The top, gray line represents the 8% scenario; the middle, orange line is the 6% scenario; and the lower, blue line is the more pessimistic (but maybe realistic) 4% return.



What does that 4% return look like 30 years down the road? Your $30,000 in contributions have not even doubled, leaving you with just $59,328.34. That's right, you don't even get a double. And in our far distant future, that 5% CD is only going to give you $250 a month. Or if you save $10,000 a year for 30 years, you'll be living on $2,500 a month.

But these numbers assume you don't have to deal with that pesky inflation thing. A mere 2% inflation will guarantee that your money will be cut by about half after 30 years. (So even that $5,000 a month if you really make 8% won't turn out to be that much of a lifestyle. And God forbid you make only 4%.)

Unicorn CDs

Well, that's okay, many financial planners will say. You just dip into your principal, and when the market turns around you make it back up. I can't tell you how many financial plans I've seen that assume the safe withdrawal rate (SWR) is 5%. As the table below (from one of Ed's essays) demonstrates, a 5% withdrawal rate has historically (as in, since 1900) only been safe 47% of the time, and on average you are out of money after 21 years. Hardly safe!

Figure 2. SWR Statistics By P/E Quartiles: 5% SWR

QUARTILES	STARTING P/E RANGE	SUCCESS RATE	AVERAGE ENDING $s	AVG YRS IF OUT OF $s
Top 25%	18.5 +	47%	$ (850,676)	21.8
Second 25%	13.9 to 18.4	70%	$ 1,607,294	21.5
Third 25%	11.2 to 13.8	80%	$ 6,326,247	26.5
Bottom 25%	below 11.2	95%	$ 7,661,859	30.0
ALL PERIODS	14.6 avg	73%	$ 3,693,376	23.0

The only way you can be "safe" is to find that magical 5% CD of the future when you're ready to retire. If the world then happens to look like it does now, though, you'll just have to keep right on working until things somehow magically recover. I hope that never happens to you, because you could find that your work experience is no longer relevant in an increasingly rapidly changing future.

I also wouldn't assume that 30 years is a reasonable additional lifespan starting from age 65. With the advances being made in medicine and biotech, your "healthspan" as well as your lifespan are going to increase, and we are going to see many people live well into their hundreds. I think people would be well advised to plan to live a great deal longer than their parents and grandparents did and to budget for retirement accordingly. For most people that means continuing to work. If the thought of working an extra five years at your current job is somehow unpleasant, then my suggestion is that you switch jobs as soon as you can and find something you can tolerate for the longer term.

The same numbers that we applied to individual returns also apply to pension funds. Pension funds are going to wake up in 10 or 15 years, find they are massively underfunded, and look to taxpayers and businesses to re-fund them. Your corporate pension plan that is guaranteed by the Pension Benefit Guarantee Corporation is not as guaranteed as you might think. If the PBGC has to take over your fund, you may be lucky to get 50% of the promised benefits. Before you get too fat and happy, I would read the fine print on that guarantee. Then I would ask the pension plan management exactly what expected return they are planning to get; and when you hear the typical "7½% for the long run (blah blah blah)," start trying to figure out how to work well past your expected retirement age so that you can supplement your pension when it fails. Then again, maybe your corporation will be there in 20 years when you need it. No need to worry – just assume it wil l all work out. Everybody else plans that way, and they all tell you everything's going to be fine – just ask your brother-in-law.

Let's step away from the unrestrained sarcasm to sum up the facts: Long before 20 years have passed and sometime after the onset of the next bear market, reality will set in, and pension fund managers will begin to plead for increased funding. And that is going to cause all sorts of repercussions. For a government plan, to obtain the needed funds, either taxes will have to go up, or other services and government expenditures will get cut. Either way, it appears that voters are in no mood to tolerate the status quo today. Imagine how much more fractious they'll be in 20 years, when it's clear that most people's pensions are down the drain.

Governmental Bubbles

The biggest bubble in the world is the one we live in without being able to see it. It's the bubble of government promises that government will not be able to fulfill. When it bursts, multiple generations will find their expectations destroyed. The politicians at ground zero had better be saying their prayers and putting their earthly affairs in order, because they aren't going to last very long after that bubble bursts and reality sets in.

This is a mathematical certainty: hundreds of pensions are seriously underfunded, and many more will be endangered if we have another significant recession. Four percent returns for 10 years in a pension plan portfolio will result in massive future underfunding, even if things eventually get back to "normal." There is going to have to be significant funding from corporations and taxpayers to make up the shortfall, at precisely the time when that money will be needed to rebuild infrastructure, retrain massive numbers of workers facing employment challenges from an ever-transforming environment, and deal with the fact that there will be more old people living than there are young people being born. This last fact is already the reality in Japan and much of Europe.