

Good afternoon Ladies and Gentlemen, it's great to have been given the opportunity to talk to you today, on what I have titled "A Crash Course in Investment Management"

If you expect to be an expert within the next half hour, I apologise in advance. Indeed, my key message is that the skills required to be a successful investment manager are wide-ranging. Perhaps I'm simply providing suggestions for further study. I'll explore the diversity of personal skills, and the benefits of a diverse team. I'll share this via career lessons, having worked in financial services for 22 years, and investment since 1999.

The stock market was introduced to me in September 1987, by my maths teacher, Jimmy Cowan, the school's deputy principal, and also my rugby coach. Our class were asked to each buy a box of Smarties and bring them to school. We were then asked to each pick 6 stocks from the financial page of our local newspaper, the Scotsman. We invested an imaginary 1000 pounds and tracked their progress, being paid in Smarties every time we made a pound in profit. My portfolio included the companies that employed my parents, Marks & Spencer and Bank of Scotland and a construction company called Douglas Holdings, because I liked the name. Within one month, we witnessed the now infamous Crash of 87 which sent markets plummeting, and led to Mr Cowan having an oversupply of Smarties.

After school, I studied Maths at Cambridge University then went back to Edinburgh to work in Scottish Equitable, a life insurance and pensions company that my grandfather had managed in the 60s and 70s, and even met my grandmother when they were both actuarial trainees in the 1930s. After time in the marketing department, while completing my actuarial exams, I moved into the Investment department in late 1999.

Now, between the crash of 1987 experienced via the loss of Smarties and joining the UK Equities team in 1999, stock markets had done one thing, and that was go up!

On joining, I was asked to look at the unfashionable Engineering companies, the ones no-one else wanted to look at, while enviously looking on at my colleague covering Technology, whose refrain was "it's going up". This was the most exuberant of times. The office car park was full of sports cars, the game was about jumping on the next big exciting thing and no-one had time for the old economy – which was anything except technology. But for context, SMS – the simple text message - was one of the hotter concepts of the time.

Perhaps unsurprisingly this was a peak in markets, and today the UK stock market is at levels close to where it was back then, over 18 years ago.

Periods of exuberance are always followed by despair - bear markets, crises, and the Tech Wreck that followed mirrored events like the Great Depression in the 1930s, the Asian crisis, the GFC, the European sovereign debt crisis, Japan's lost decades. But the pattern repeats - as recently as last Xmas, we saw a frenzy in Bitcoin, as voracious as any we had seen before.

So, in a system that has such extremes in sentiment, to gain an edge over the field, today's key message is that we must be prepared and to do this we must study widely. By studying economics, accounting and business the tools you are learning are building blocks. Supplementing these with a broader toolkit, and collaborating with a well-built team

is required to obtain a persistent edge. For investment management to be a sustainable business, it's a pre-requisite to have such an edge. After all, market access has been democratised via low cost products, run by computer models, with huge economies of scale.

We all face a daunting task - we start working in our 20s, likely with student loans to pay off to get back to the start line. Many of us will live into our 80s, 90s, even 100, and want to live with dignity in retirement, having enjoyed ourselves along the way. Meanwhile we live in one of the world's most expensive places to put a roof over our heads.

So as investment managers we help by dealing with the hard question - where to put savings to obtain a return. Long histories of data tell us the stock market offers the greatest chance of long-term success via participating in the wealth generated by corporations. Even despite the destruction of World War 2, the German stock market surpassed pre-War levels by 1954

A study of the history of markets is essential for understanding what has happened, how governments, regulators, corporates and individuals responded to particular events, providing context for what may happen in future.

Despite long-run outcomes, most people find the path taken by the stock market is daunting. There are plenty of individual bankruptcies, and bear markets can see markets fall by 50% or more. However, in modern history only the confiscation of assets in 1917 Russia and 1949 China have seen entire markets wiped out.

The emotional challenge of dealing with paper losses is however too great for many. People throw in the towel at the wrong time. Industry studies and our own client data show a general tendency to buy high, sell low. This is at odds with desired behaviour, coming at a great cost.

Our behaviour is a huge challenge, and something, as professionals, we strive to control. Economic Theory relies on the flawed concept that all human beings are profit-maximisers. To build out your toolkit, I recommend immersing yourselves in behavioural finance. A good read is 'Thinking Fast and Slow' by Daniel Kahneman. This field has been popularised in recent years, but while more people are aware of it, Bitcoin was one of the most extreme behavioural episodes in history, so the lesson is not getting through!

The concepts are a spring board to learning more about sociology, anthropology, and neuroscience. The two key components are the challenges we face from social pressure, and the challenges we face in processing information. These are derived from evolution.

First, social pressure : "safety in numbers" encapsulates this simplistically. Fitting in is very important to us. Indeed, research highlights that we feel exclusion as acutely as we feel physical pain. Sadly in today's connected world I fear the mental health consequences of being more connected, more often, to more people than ever before, via Facebook, Instagram, and whichever apps you use that 40-somethings like me haven't yet rendered uncool.

Being part of the crowd was critical to our evolution, but in market terms the frenzy of the crowd's enthusiasm, and fear of missing out, that led to investment bubbles like the 1990s Tech boom. The "madness of crowds" can also have negative consequences in the real world. Indeed when I grew up in 1980s Britain, there was violence associated with football crowds at odds with the normal behaviour of the individuals within these mobs.

Secondly, dealing with information relates to our brains' hard-wiring. We cannot process all the information presented to us, and so we make short cuts, called heuristics. Deeper study of neuroscience is helpful, but I will just make some key observations.

Primacy bias tells us first impressions matter – the first few seconds are critical – when I started today you will have made your own snap judgements, based on stereotyping, or personal experience. This is the evolutionary "friend or foe?"

But there is also availability bias - we overweight the last piece of information we receive. Thus a strong conclusion to my talk is essential!

The media focuses on the latest hot story which shapes our daily dialogue. A real but tragic example was two planes flying into the Twin Towers in New York on September 11, 2001. You would have been young at the time, but TVs were filled with images of aeroplanes flying into skyscrapers. Immediately following this, risk perceptions led to a drop in people booking flights.

The presentation of information influences the way we process it. Marketers exploit this – "95% fat free" sounds better than "5% fat content". We ran experiments using positive and negative questionnaires to influence market return forecasts. So be careful, messages often harness tools of persuasion.

Compare the way China is presented via western media, with our picture based on decades of researching it. This perception and reality gap may lead to the best investment opportunity in a generation for those willing to do the work.

Time is hard too. Most people struggle to grasp the benefits of compounding. 7% growth for 10 years, is not 70% growth, but a doubling. Consider computing power doubles every 2 years and computers are 1000X faster than in the tech boom when text messages were excited. Bill Gates noted that we overestimate short term change while underestimating long term change. This explains why my 11 year old daughter tells me she won't learn to drive because cars will drive themselves but why despite my scepticism I know she will be right about her own children.

Our world is probabilistic and non-linear suggesting merit in learning practical applications of mathematics – statistics, and work on non-linear systems like predator-prey models.

However finance students are taught to forecast. This relies on extrapolating the recent past, missing step changes. I know when hearing a forecast that it will be wrong! Academic work suggests expert forecasts are no better than coin tosses.

This leads me to Loss Aversion, which makes the market journey so hard. Humans feel losses twice as acutely as enjoying equivalent gains. If I offered to toss a fair coin for \$1,000 it is unlikely anyone would step forward. The idea of losing \$1,000 looms larger than any benefit of winning.

This is important because on the market goes up on 50.3% of days. So whether the market goes up or down, is like calling Heads or Tails. Given our mind amplifies losses this journey is unbearable for most.

We don't operate in isolation. When we buy shares, someone has to want to sell them to us. We must think about our interactions with others, who also suffer from biases. We move to the field of Psychology and my favourite analogy for Markets, the Keynesian beauty contest. Contestants are asked not who they think is most attractive but who they think other people will find most attractive. In markets concluding a company is a good one is not enough - others can see that too. Instead it's about anticipating what you think other people will think other people might think in the future.

Another example is in opinion polling. Asking "who do you think will win" or "who do you think your neighbour will vote for" have given more accurate outcomes than "who will you vote for". In the US election in close states, Trump's election was no surprise on this basis.

If you treat investing as about being right or wrong you will inevitably fail. This is hard as people entering the field are generally strong academically and used to being right. Empathy is absolutely critical – being open to and understanding others' positions is imperative.

This is not Gordon Gecko's "greed is good", or Jordan Belfort, Wolf of Wall Street. This is not an alpha male pursuit. Being flexible, open to listening to others, and having an adaptive mind are core skills.

Another helpful analogy is Per Bak's work on sandpiles. His shows that one can't predict which grain of sand will cause a sandpile to "avalanche" but one can be increasingly confident as grains are added that the collapse of the pile is inevitable. When market participants are in strong agreement, markets become increasingly fragile to a sharp reversal and hence are best avoided. FOMO, fear of missing out, makes this hard to do.

So with a backdrop to markets let's think about finding investments.

Each investment management firm has a belief system, or philosophy, about how they think markets work, about their edge and about how they might extract it. Studying the philosophies of successful investors is worthwhile – they are not all the same.

At Platinum, we believe the best opportunities are found where others are not looking. Seeking neglect has proven successful over time. A key is also trying not to lose money – clients may not have the chance to earn it back. Conceptually like building a strong defense in a soccer team, as a platform for winning matches.

Investing this way is about finding differences between perception and reality or between facts and feelings. Ideas to consider are generated when markets reactions to changes in the real world are of different size to the changes themselves.

Investments we make can be classified as either exaggerated demise, where there is over-reaction to negative news; or the alternative when the market under-reacts to positive change which we call underappreciated growth. The latter requires deep domain knowledge, but over-reactions can be more obvious and spotted from looking at price moves, or valuation metrics then asking, "is this too cheap for what has happened?"

But from the idea, we need to do the analysis, so let's think about some skills required here.

The critical aspects for analysts are a deep interest, or even a love of, business, and a high level of curiosity. Analysts deeply probe key issues facing businesses. Valuing a company, given a set of numerical inputs, is relatively simple, but generating meaningful inputs requires deep insight and is much harder. So the task is straightforward, but not easy.

Over 150,000 people globally have the CFA designation, the most recognised analyst qualification. There are about 10,000 reasonable sized listed companies globally. So there's a rugby team worth of qualified analysts for every stock! And we need to get an edge. So it's unlikely the edge can be in valuation technique. Nor can it legally be in getting information that others don't have. So the edge must be about perspective, interpretation, weighting of information, perhaps in taking a different time perspective than others. The skill to focus on here is a form of advanced comprehension. It can also be argued that the mentality that the analyst brings to the challenge is imperative.

I became an analyst in Scotland in 1999, and then joined Platinum in 2003 after a lifestyle-inspired move to Australia, and a year with CBA as an actuary. I looked at aerospace, airlines, and industrial companies. What surprised me was how often the businesses required an understanding of physics or chemistry, or had natural locational advantages, reminiscent of studying geography at school. This came before looking at the micro-economics around supply, demand and competition.

Companies should be thought of living organisms, though it would be stretching it to suggest biology is helpful here! Companies exist and adapt to their surroundings. They comprise hundreds, thousands or even hundreds or thousands of people organised in a particular way working towards a particular goal. They deal with change at a technology level, change in regulations, change in customer tastes and changes in competitor responses. Michael Porter's Five Forces is a useful framework to explore here.

But remembering Keynes' it is one thing to appraise a business, it is another to get an edge. Bear in mind the pool of talented people looking at the same problem. When looking for buy ideas, the question is often "is it as bad as other people think?", or "are the problems people are focussing on transient rather than permanent". Note that if business stories are front page news the market is already aware of the problem. We ran Google Trends which suggested that if negative topics are being searched it's likely time to buy rather than sell.

We are fortunate as professional investors that we can meet managements, or representatives of the companies we invest in. Given the law around inside information, these meetings are sanitised. A good investor meeting run by our more experienced portfolio managers can resemble a good talk show interview with Michael Parkinson or Andrew Denton. The key is not to waste the hour on the banal, on facts that can be obtained elsewhere. To do this requires intense preparation and to be clear on the key issues that you want to explore.

CEOs are companies' best salespeople - they easily lapse into mindless, well-practiced pitches. To have an insightful meetings we must avoid letting this happen. Displaying deep knowledge of a company to a level that other analysts don't can be disarming for management and tends to open up a much franker discussion.

Knowing a business inside out, from a 360 degree perspective may seem excessive but at points of stress the deeper our understanding, the more comfortable we can be in holding onto, or buying more of a stock. These points of stress are times of maximum opportunity.

My favourite meeting was with Airbus in 2004. They were about to build their double decker A380s. We noted a good Mercedes had driver seats not far off a first class seat, with electrics, range of motion and comfort features. However a first class seat cost \$100K but for that amount, Mercedes would throw in a car for free! We asked Airbus why not make seats instead of the whole plane. An oblique opening, but prompted a useful discussion on the profitability of successful suppliers as a carrot for investing in R&D. It also imprinted the meeting as memorable for the Airbus' rep.

We also went into detail on the learning curve, a key feature in manufacturing, reminding me a solid grasp of engineering would have been a useful analytical edge.

Finally we asked Airbus to confirm they wouldn't repeat the mistakes of their previous plane - the A340. Poor communication between French and German engineers had led to huge wiring problems, and hundreds of millions of cost overruns. Of course they wouldn't, we were assured.

So when the wiring issue was repeated, our memorable meeting prompted an immediate apology and an invitation to visit their facility in Toulouse, France to see the first of these amazing aircraft, including a Qantas one, being built – a great experience.

Stock analysis is like solving a puzzle against the market – triangulating information from multiple sources, remembering company reps are great self-promoters. But having generated an idea, the next challenge is convincing a portfolio manager to invest.

It is generally accepted that investment teams have analysts looking at individual companies with portfolio managers as senior, trigger-pullers who determine which of these ideas to invest in.

At Platinum, we are all in one office in Sydney – being in one office is very helpful for communication. – indeed, we value the ability to have spontaneous discussion at the coffee

machine. Analysis is carried out by teams organised in large sector groups such as Resources and Industrials, with input from Asian regional experts, Dealers and Quantitative analysts.

Our process is a “Continuous Energised Debate About Business” and worth exploring. Continuous reflects no beginning and no end to our understanding, and in essence no right or wrong. Many think its all about forecasting and prediction, but its more about anticipation and reaction.

Energised reflects the engagement within the team on prospective ideas. Analysts must make an active contribution and not just be naysayers.

Debate is critical. Here is another skill to bring to the table. The dialogue about the pros and cons of an idea lead us to a deeper understanding. We do not seek to get to a consensus, indeed we fear groupthin. The senior members of the team are empowered as decision makers – the key benefit of using their experience and insight to drive analytical process. And finally its about business – this is what we focus on understanding to determine if the market is presenting us with an opportunity. Perception versus reality. Facts versus feelings.

Teamwork is critical, so building an investment team is a key driver of success. How do you create an environment to generate ideas, where people co-operate, not criticise; how do you avoid group-think? These are hard questions. Whether by deliberate design, or an element of good fortune we have something that works, but has taken development, refining, and soul-searching along the way.

Another key element is the diverse personnel, from a wide range of geographical and industrial backgrounds, united by curioisity and love of business. We have people from North and South America, Western and Eastern Europe, Africa, Asia, Australia and New Zealand. We have people who have been engineers, lawyers, doctors and scientists. We rarely hire people with much fund management experience– they have already bought into someone else’s philosophy. Un-wiring this is harder than starting afresh. Sadly, the dimesion we have least diversity on is gender. This is an industry-wide problem – fund management is not attracting enough female applicants.

Is this due to the stereotypical Wolf of Wall Street, the Gordon Geckos’, images of all male trading desks and a sense of machismo? Certainly there is a lack of visible role models but ironically, testosterone fuelled desire for constant action does not lead to better results. Surveys of personal trading accounts show, women on average, trade less and are better investors.

Consider all the skills that I think add to, and indeed, are possibly essential to the investment management toolkit, before considering the need to develop industry domain expertise. These skills range from psychology, philosophy and history, to understanding ourselves and having acute empathy for others, co-operation and debate. I think the roles in this field are misunderstood. Our industry is less for not having more female applicants, and hence participants, and I hope that this can change. Perhaps re-framing what we do, as I have tried to do today, is a useful starting point.

In this business, I've been fortunate to learn a lot, to have worked in Scotland, Singapore and Australia and to have met some interesting people. Setting out from university back in 1996 I wouldn't have imagined this array of opportunity.

I've had ups and downs, I left Platinum in 2008 to work in Singapore. The first role there didn't work out, and I moved across to customer facing roles, firstly as an institutional stockbroker before returning to Australia and to Platinum in 2013 where I inform our clients about what we are doing with their money.

The commercial reality of fund management, is that performance is the biggest driver of business success, but supporting clients with information and insights is important part of customer support and adds value both to our customers, and the business.

I hope my message is clear that by continuing to build on the basics of finance, by being curious and studying widely could lead to an interesting career in investment management. This is not for everyone, nor is it a quick fix. You can't walk out of here today, and have results tomorrow, but thinking about your career more generally, I would like to share three things I have learned and that I do believe you can take on board and these will help regardless of the path you take.

So my three pieces of advice are as follows.

Firstly, looking for work. Work out 3 things you are good at, and 3 things you want from a job. Have these very clear in your mind. Almost every interview question can be used to emphasise these skills. Every question you ask measures the role against these things you want. While the skills and desires may change, the principle shouldn't

Secondly, the workplace. The more you succeeded at school and university the harder this can be. The workplace is not structured like educational establishments. There is much less guidance. To develop your career, you must drive this, without being a pain in the ass. It won't be driven by anyone else. I joined the company my grandfather ran, and was somehow surprised five years later that no one had tapped me on the shoulder for future greatness. Waiting for things to come to you will be a long wait.

Thirdly, always leave gracefully. Often people resign from a role, and their behaviour changes. The biggest opportunity I have been given this far, was being invited to return to Platinum in 2013, having left in 2008 to pursue other opportunities that had seemed bigger and better at the time. Leaving gracefully was part of the platform for this.

So on that note I will leave this talk gracefully, before taking up any of the time that we have set aside for Q&A.

I do hope this "Crash Course in Investment Management" has been insightful for you all in some way, and I wish you all well with your future studies, whatever path you decide to take in life.