

# Mispriced Markets



## Abstract

Analysis of previous market cycles shows that share prices can deviate substantially from reality, often for extended periods – over time share valuations are however supported by earnings which depend on sustained economic growth, and markets ultimately revert to normalised levels. It is particularly difficult to forecast the impact of new technology on earnings as initial disruptors in an industry may be unseated by newer entrants who are able to replicate a business model more competitively. In this note we examine previous instances of market mispricing and reiterate our view that current stock markets and share prices simply reflect the scale of quantitative easing rather than any longer-term common-sense considerations.

## Share price valuation – inherently a subjective process

Pricing a share is based on a number of assumptions some of which are subjective. Stocks are generally regarded as one of the best vehicles for wealth creation (and not without good reason; the empirical evidence shows that the returns on stocks as an asset class have outperformed other asset classes in the long run and coupled with other features such as ease of investment and redemption, ease of access to information for analysis, stocks represent an important building block in balanced portfolios).

While there are certain stocks whose returns have consistently exceeded expectations over the long term and investors like Warren Buffett who have been able to identify those stocks with better growth prospects, the belief that a stock or market will provide above average returns in the long run is incorrect. While it may be true for some companies it is not always the case as the return on a stock depends on various factors which can be broadly be classified as factors within the control of the company, sovereign factors and external factors. Japanese equity for instance has underperformed global markets for more than twenty years.

Those factors which are within the control of the company include management efficiency, internal controls, research and development, quality of talent, skills of employees and output maximisation among others. Management efficiency and output maximisation makes a company more competitive whereas robust internal controls help the company move steadily in the right direction and avoid fraud. Additionally companies with high quality talent and focused investment in research and development have consistently been able to outperform their competitors, this is especially the case with technology companies.



Sovereign factors include country wide issues for instance in some developing countries the valuation of pharmaceutical companies supplying products into the domestic market may be affected by government controls on pricing which disincentivises capital expenditure on research and development or government regulation in relation to prices of agricultural commodities may affect other industries. External factors include new methods of manufacturing, invention of a new and better product by competitors and introduction of disruptive technologies.

An investment in an individual stock is based on the belief that the earnings of the company will grow and the stock will yield dividends and provide capital appreciation over time. What cannot be factored in are regulatory shocks, for instance agricultural commodities in many countries have to be sold at government determined prices to contain inflation which limits the growth and earnings prospects of the company. We also cannot account accurately for civil unrest or war which could cripple a company's supply inputs or reduce its output market, or for disruptive technologies. Consider Kodak - once a leader in film photography, at its prime in 1990 it would have been inconceivable that a disruptive technology like digital photography could shake its dominant position in the market; the same happened with makers of CRT TV after the invent of LCD then LED TV / Plasma TV.

Even during the oil shocks of the 1980's no one imagined that there could be a pragmatic substitute for oil which came first as shale gas and then as more affordable and efficient electric vehicles. There is now optimism that electric vehicles will take over fuel based vehicles in times to come.

Can we accurately factor the impact of these events in our projections for the purchase of equity? The answer would be no, however history has taught us that these uncommon events do occur and when they do they change the shape and the dynamic of the industry fundamentally. It is for this reason that even with historic company data spanning 10-20 years, projecting the normalised level of earnings, which is at the heart of equity analysis, is one of the most difficult tasks to consistently get right. How much more difficult therefore is the assessment of normalised earnings for a start-up company with a limited history?



## United States – unprecedented periods of growth ultimately revert to a norm

In 1920 with the advancement in technology, the USA started manufacturing radios, automobiles and other technological goods for mass consumption. The companies were valued based on their ability to increase capacity and sell products on a wide scale; however what was not allowed for was whether the real income of the potential market allowed for the purchase of such goods. This was an example of supply exceeding demand at an industry level and while companies tried to create demand, this could not materialise due to lower levels of real income. In their quest to gain market share, companies invested more in plant and machinery and hired more people to manufacture goods but as the supply increased and the demand failed to catch up companies were forced to shut down plants and retrench workers which resulted in a further decline in real wages as labour supply increased. This led to a further decrease in consumption and a downward spiral that culminated in the Depression of the 1930's; stocks reduced to around 20% of their peak value.

After World War 2, the USA and European countries witnessed unprecedented economic growth which was aided by a pool of unemployed workers and growth in demand for products like steel and cars. During the 1950's and early 1960's the USA enjoyed almost no competition but with the



rebuilding of the economy of other countries the dominance of US firms began to end. By the early 1970's major economies around the world were facing high competition, high labour costs and high inflation. These economies were huge consumers of oil which was mostly imported from OPEC and other oil producing nations. However as oil demand grew, OPEC instead of raising production raised prices which further reduced real disposable income leading to a downward spiral in consumption spending. Unemployment increased as due to competition, profitability declined and investors were less willing to invest money in a low return environment as the cost of labour had also increased. This resulted in a state of stagflation (high unemployment, high inflation and low economic growth). The value of stocks on average increased by only 5% during the decade 1970 to 1980 substantially below what was projected during the peak in 1969.

## The Japanese experience

The equity market in Japan is a classic case in point - the Nikkei reduced to 20 000 in 1990 from 39 000 in 1989 and later to 15000. It is reported that investors when surveyed in 1989 did not believe that that Nikkei was overvalued. A year later the equity market corrected and valuations moved towards fundamental value.

The crisis in Japan was primarily a result of regulatory inefficiency which led to an unwarranted rise in prices. After World War 2 Japan's economy grew phenomenally to be the second largest economy in the world and at its peak in 1989 the market capitalisation of the stocks within the Nikkei index was one third of the total market capitalisation of all stock indices in the world. The industrial boom in Japan and it's prowess in manufacturing vehicles and electronic goods led to huge inflows into Japan which was supported by a weakening dollar, coupled with easy monetary policy, this led to increasing prices; at one point broad money growth in Japan was 10% when the economy itself was only growing at 4%. Money was borrowed by individuals and corporations at low interest rates and invested into stocks and speculative assets to get better returns (Sounds familiar?).

Land prices increased beyond reasonable levels due to cheap money being available in the market and more companies wanting to have bases in Tokyo. The regulatory failure was twofold - allowing the development of complex financial instruments with cross holding of corporations and a lack of oversight by the regulators that allowed companies to report profits on the balance sheet from speculative activities. This created a recipe for financial market instability.

In 1990 when the central bank decided to tighten monetary policy it was too late as the system was already heavily leveraged with individuals and corporations having invested heavily in speculative assets after borrowing at low rates. The combination of banking system liquidity, deregulation of financial markets and the country's export centred growth led to excessive valuations being placed on its market. Japan at its peak was second only to the US economy. Even today the Japanese economy continues to battle deflationary forces and has announced negative interest rates to increase consumer spending. Despite various rounds of Quantitative Easing (QE), the Japanese economy has yet to rebound!



## The dot-com bubble

Whenever we value a stock based on a metric; i.e. P/E, dividend discount model, an asset based valuation model or sum of the parts valuation, we assume that the earnings of the company will increase, the company will consistently pay dividends which will continue to increase in the future or that the price of the underlying assets would continue to increase in an inflationary environment. Otherwise who would invest in a company whose earnings are expected to decline more than is reflected by the current price? When the market is optimistic about company earnings growth the valuations tend to be driven more by expectations than by fundamentals which was the case with the dot-com bubble in 2000 and the commodity super cycle in 2008 (pre-crisis).

The dot-com bubble of 2000 is another example of overreliance on optimistic projections without a sound fundamental underpin. The boom in internet usage, the increased penetration of internet and the lower cost of usage led to a flood of internet companies promising every service imaginable. These companies had a primary objective of acquiring as large a customer base as large as possible. To do that they invested huge amounts of money in subsidising products and services and building logistics networks. The premise was that once they had the customers, profits would arise from bundling products and services.

These companies were accepted by consumers primarily due to their low pricing and the ease of getting work done. The valuations of these companies were done based on assumption that the company would be able to get say  $x$  million customers in a given time period and each one would be contributing say  $\$y$  per annum; therefore the company would on average have a revenue of  $\$XY$  million. One noticeable feature of these internet companies was that almost all of them had negative cash flows (which is still the case with most of the start-ups today). These companies bought in disruptive technologies which changed the way services and products were traditionally offered. However suddenly there were too many such companies offering products and services with little or no differentiation.

The only way to gain a customer was to offer huge discounts, consequently sacrificing margin. This financial model of valuation was then sold to the public via IPO's – these companies then had to burn more cash by way of more discounts to gain customers. In the end, only a few companies were able to gain those  $x$  million customers in some proportion and the remaining companies either merged or closed, leading to huge losses for investors. The valuation of securities in this context was performed on the assumption that each of the companies would be able to acquire the  $x$  million customers by offering deep discounts.

Of course the same assumption was used by all the companies for the same set of customers leading to prolonged periods of negative cash flow and high rates of cash burn. Needless to say the targeted customer base proved finite. Only the more operationally efficient companies with sound fundamentals and pragmatic business models were able to raise further capital. For companies having mostly intangible assets and negative cash flows, only those with a differentiating factor will be able to survive in the market – this is especially true in respect of companies using disruptive technologies



as a business model. The NASDAQ fell by as much as 78% from its peak wiping out close to \$ 5 trillion of wealth from the markets when the dot -com bubble eventually burst.



## The commodity super cycle – a lesson in capital allocation

Similar factors preceded the commodity boom in 2008 (pre the financial recession. China had embarked on period of massive industrialisation, and at one point its demand for commodities was considered to be virtually insatiable. Additionally investment into commodities and commodity producing companies was fuelled by the premise that the prices of commodities were influenced by the forces of demand and supply and were therefore less prone to speculation.

These assumptions led to massive investments in growth and logistics for commodities, at its peak in 2008 the price of oil was over \$ 147 a barrel. It was only after the financial crisis in 2008 that investors recognised the scale of the overcapacity that had been created and the poor capital allocation decisions that management of mining companies had taken, in the mistaken belief that commodity prices would continue to remain at elevated levels. In some cases like oil, new technologies were employed for production and alternatives like electric vehicles and shale gas have been developed, placing a ceiling on the extent of any price increases.

In this scenario, high commodity prices persisted for an extended period because:

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Investors believed that continued demand from emerging markets, particularly, India and China, which were growing at 7.5% - 9% per annum, would absorb the additional supply, and therefore spent huge amounts of money in developing supply and logistics to cash in on the commodity run (i.e. there was a failure to recognise that demand in developing nations was export driven and that a rout in developed countries would naturally result in a slowdown in the demand for commodities from developing nations)

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Investors failed to factor in alternatives being developed and that most of the commodities such as iron ore were already at their peak owing to the easy money available as a result of the quantitative easing embarked on by the Fed after the dot com bubble.

Similar exuberance characterised the real estate boom that preceded the 2008 financial crisis.



## The sub-prime mortgage crisis

Post the 2008 crisis and the government bailout of many financial institutions like AIG, CITI Group and others it was clear that the crisis occurred due to regulatory oversight which allowed lenders to extend 'liar loans', ordinary people took up these mortgage loans in the belief that house prices would continue to escalate.

As borrowers took on unviable mortgages, bankers diluted their lending practises in the quest for short term profits. Once some of the borrowers were not able to repay the high loans taken out at highly inflated prices it set a reverse trend in motion as prices of the properties moved downwards. When people realised that their property was not worth the money they would have to repay, they simply defaulted, forcing banks to take possession of the collateral which set a downward spiral in motion. The problem was compounded by banks having packaged the repayments from these sub - prime mortgages into complex financial instruments with various rated tranches sold on to investors. When people stopped paying their mortgages, the value of these CDO (Collateralised Debt Obligations) crashed leading many of the big banks to seek a bailout from the US government.

With banks unwilling to lend and people unwilling to spend, the wheels of the economy ground to a halt. It was at this point that the Federal Reserve resorted once again to Quantitative Easing i.e. flushing the economy with money so that banks start lending and the phrase is associated with zero or near zero interest rates incentivising people to spend rather than save. In extreme case negative interest rates may be used to force people to spend.



## Implications for the next few years

When we analyse the events that have destroyed wealth across nations throughout the last 100 years we can observe some common reasons which include:



1 Management and regulatory inefficiency

2 Projecting cash flows and dividends into the future without recognising that high growth industries naturally attract competition, and that as prices rise, alternatives will take hold

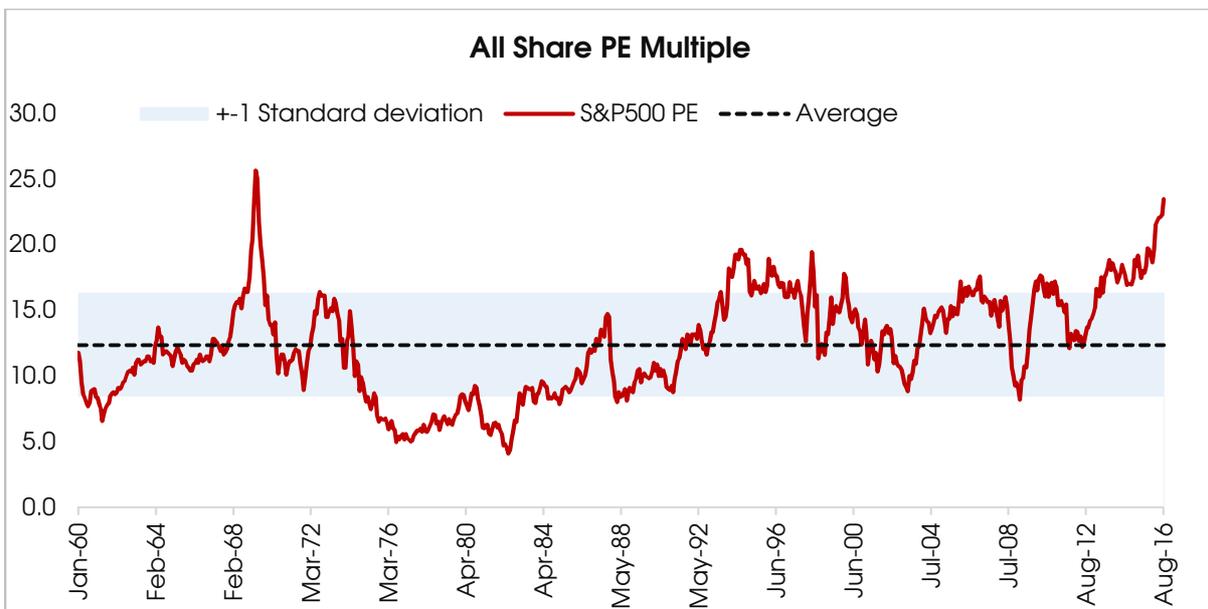
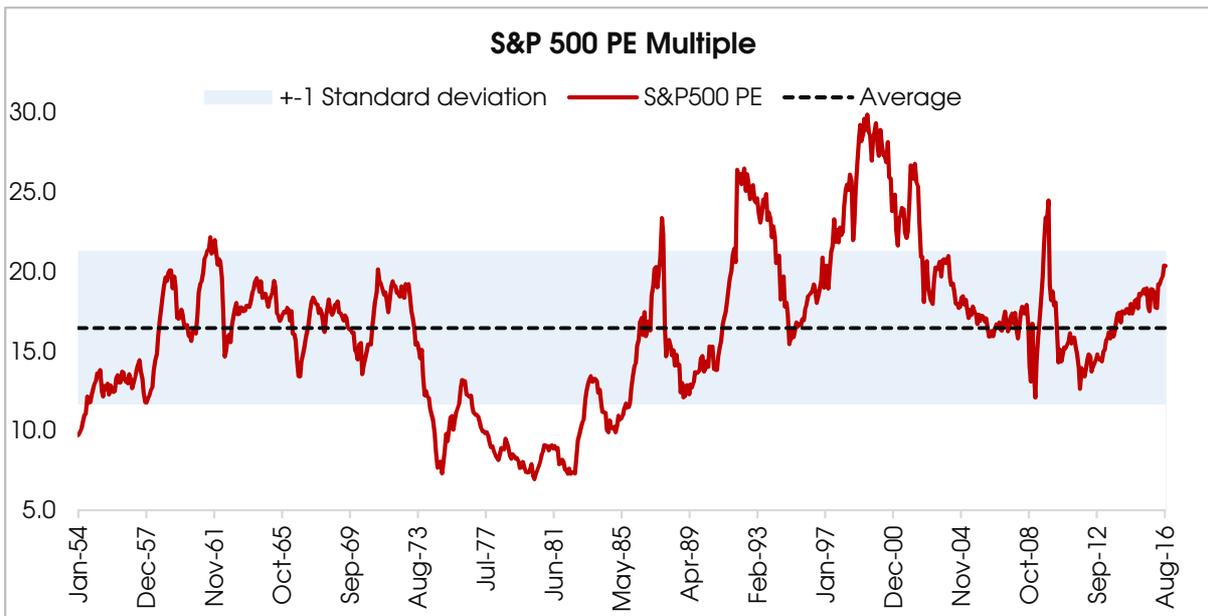
3 Failing to allow for a disruptive technology that can change the landscape altogether

4 Valuing companies based on the surrounding hype rather than fundamentals

5 Investment on a herd basis into companies without proper due diligence being performed. A management team that has a business plan to deal with contingencies and which is open to change may be able to withstand drastic changes in the competitive landscape.



Over the long term the equity market undoubtedly offers a real return ahead of other asset classes (albeit at the cost of greater volatility). As illustrated graphically below, investors are currently prepared to pay up for future earnings growth; if earnings disappoint, there is a risk that both developed and emerging markets stabilise at more normalised levels.





We have cautioned clients for some time that the Quantitative Easing undertaken by central banks across the world since the 2008 financial crisis has resulted in equity valuations departing materially from fundamentals and therefore the risk reward trade-off on a prospective 5 year basis is poor. This has also thrown up new challenges as the financial performance of firms continues to remain stagnant or deteriorates but valuations are increasing fuelled by the influx of easy money. As interest rates increase, the monopoly that stocks have as the only investment destination will reduce. This scenario may however still be some time away; although the USA has decided to reduce QE gradually, the European nations have started QE again to prop up their economy and some of this money may again result in inflated valuations.

Within our asset liability modelling process, we have reduced the expected long term domestic equity risk premium going forward to 3% per annum, this is lower than the long term historic average of between 4% and 5% per annum, primarily on account of the pricing of equity markets being on the expensive side of fair value. From a modelling perspective, the implication is that a higher equity allocation would be required to obtain the desired real yield across various portfolios – we have not given effect to the model recommendations as we recognise that valuations are extended. History has demonstrated that based on the pricing of equity and bond markets, both locally and globally, that real return objectives may not be realised over the short to medium term and that secondary considerations (assessing contribution requirements, encouraging preservation during a market downturn within a similar mandate) are as important in creating good member outcomes over the long term.

Our clients are invested in a range of risk profiled global balanced portfolios which are designed to broadly deliver real returns over a 7-10 year period, even though short term performance may come under pressure periodically. Provided that our clients stay the course (and that individual members remain invested and continue to contribute through the cycle), we believe that they would be well placed to weather the volatility ahead.

**Thiru Govender and Munya Mhoswa**  
**NMG Investment Consulting**

**October 2016**

# The Asset Consulting Team in Africa



The current consulting team works across the traditional and implemented consulting universe and has strong depth and breadth of experience.

## Hein Klee (B.Com, MBA) Principal Consultant - Head of Investments

Hein completed his B.Com Degree in Economics from the North West University in 1993 and a MBA degree in Strategic Management from the University of the Free State in 2003. Hein has 21 years' investment experience (15 years employee benefits); his career has included roles within international investment firms including Fidelity International, Templeton Asset Management, Crosby Forsyth Asset Management, Sanlam Global Investment Solutions and Glacier International across Southern Africa, Asia, the UAE and the United Kingdom. Hein has solid and varied experience through his roles in investment analysis, product development, and portfolio management, client facing interaction and advice. He joined NMG from Sanlam Global Investments Solutions where he headed up the South African business. Hein is currently a member of the NMG Actuarial and Specialised Consulting management committee, on the investment and legal committee of the NMG Smartfund and acts as a Key Individual to NMG Consultants and Actuaries.

## Thiru Govender (B.Econ Science, FASSA, FSAN) Principal Consultant and Actuary

Thiru completed her Bachelor of Economic Science degree at Wits University and is a qualified actuary (FASSA, 2011) and Retirement Fund Valuator. She has also completed Level 1 of the CFA examinations. Thiru has 13 years' experience within the financial services industry, 11 of which were served within consulting and product development roles at Towers Watson and Allan Gray. Thiru has been extensively involved in retirement fund valuation and the provision of investment advice to pension funds. She has also assisted many clients with the development of member communication programs and the implementation of best practice governance requirements. Thiru also has group risk and investment product development experience.

## Megan Bellinger (B.Com Hons) Associate Consultant

Megan completed her Bachelor of Commerce (Honours) degree at the University of the Witwatersrand in 2010, majoring in Economics and Finance. She began her career as part of the Sanlam Graduate Programme in 2012 and held roles in product development as a product manager and investment analyst at Glacier Investment Platform, where she primarily researched investments as well as completed product viability assessments. Having completed CFA Level I and Level II, she is currently a CFA Level III candidate, aiming to complete the designation next year. Megan has four years' experience in financial services industry and joined NMG Investment Consulting in June 2016.



### Munya Mhoswa Senior Investment Analyst

Munya completed a Master of Commerce degree at the University of Cape Town. He has five years of experience in the asset management industry where he specialised in quantitative, performance and fundamental research on traditional investment asset classes and institutional client servicing. He has also been involved in the development of socially responsible investment products. One of his key responsibilities within NMG Investment Consulting is Research. Munya has also completed CAIA (Chartered Alternative Investment Analyst) and CIPM (Certificate in Performance Measurement) exams.

### Linda Smet Investment Specialist

After completing a Diploma in Finance and Company Secretarial work, Linda began working at a small auditor's firm in 1995, focusing on company secretarial work, VAT returns and compiling financial statements. She then joined PWC for several years, where she primarily dealt with taxation calculations for individuals and close corporations. Following this, she held roles as office manager and financial manager of Cape Nature and Robben Island respectively. Linda joined NMG Investment Consulting in September 2011 as an Investment Analyst.

### Riëtte Pafitis Investment Analyst

Riëtte started her career in 1995 with ABSA Bank, progressing to consultant level. She also worked in the retail market where she gained experience as a bookkeeper. In 2007 she became the Administration Manager for Cape Capital Investment & Finance Co. Ltd, where she dealt with shareholder investments used to finance foreign and local trading, as well as bridging, short and long term finance. Riëtte joined NMG Investment Consulting in 2013 as an Investment Analyst.

### Roshaan Schroeder Investment Analyst

Roshaan started her career as a Personal Assistant and book keeper in the retail industry for 8 years. In 2009 she joined NMG as an Office administrator, joining the NMG Investment team in 2014. She is currently studying toward a Higher Certificate in Investment Administration through the Milpark Business School.

### Cornleigh Losper Investment Analyst

After completing her Senior Certificate in Financial Management in 2013, Cornleigh initially gained experience as a debtors clerk. She joined NMG in 2015 as a Portfolio Administrator in the Risk team; she subsequently joined NMG Investment Consulting in August 2016 as an Investment Analyst. Cornleigh is currently studying towards a degree in Management Accounting.



## Capability and service offering

Our service offering is based on the unique needs and circumstances of each Fund, and may include (but is not restricted to) advice in the following areas:

- 1 Investment Strategy
- 2 Asset liability modelling
- 3 Market research
- 4 Manager monitoring and research (ad-hoc manager/market analysis)
- 5 Annual review of ALM policy and investment policy statements
- 6 Asset manager, mandate and benchmark selection
- 7 Manager due diligence
- 8 Performance and compliance monitoring
- 9 Rebalancing/cash-flow policy review
- 10 Fund transitions/Implemented Consulting

We also consult on an ad hoc basis on current issues, legislation and market trends, as well as provide broader governance and communication consulting to Funds.

### Unique Value Proposition

Our proposition to clients is based on the following pillars, or core differentiators:

- Robust and objective investment modelling process – this ensures best in class advice on all investment matters
- A sustainable, profitable and well managed business - NMG runs profitably across its administration, consulting and actuarial divisions. This is as a result of ensuring that the services provided to clients are priced correctly with the appropriate allocation of skilled resources, and through internal cost containment. On this basis the client understands the services for which it has contracted and the correlation of the fee to these services.
- An established business with solid client base - NMG has provided services to retirement funds and medical schemes for over 20 years. Over this period, it has secured in excess of 150 clients operating predominantly as privately administered free standing funds. Included in this client base are a number of large corporates with whom exceptionally strong and lasting



relationships have developed as a result of professional and efficient servicing. These large corporates include, inter alia, blue chip companies listed on the JSE and top professional firms.

- Servicing beyond the statutory actuarial requirements – such an approach allows for strong governance and management of the Fund
- A holistic service environment, training programs and participation within industry bodies – this allows us to keep abreast of industry changes, and so assist the Fund in ensuring compliance with increasingly stringent environment.
- Clarity of strategic focus – NMG aims to identify those clients that can be provided with a personalised and professional service at a competitive price. Tailored solutions and specialised services are provided to our clients that reflect their unique circumstances, challenges and issues.
- A passionate and committed workforce - NMG is an employer of choice in the professional services environment.
- Considerable effort and input is dedicated to staff training, incentivisation and retention. Our client servicing team is skilled and experienced across actuarial disciplines and able to leverage the consulting capability within our international businesses to provide an insightful solutions-based consulting approach.



## Contact US

For a tailored pricing model, or to explore our services or discuss your requirements in more detail, please contact us:

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