
Harbour: The Future

What will happen, what could happen and what to invest in

August 2017 | Presented by:

Susanna Lee

Portfolio Manager & Quantitative Research Manager



Important Notice and Disclaimer

This presentation and any investment views expressed in this presentation handout and verbally in the presentation itself are for general information purposes only. To the extent that any such information or views constitute advice, they do not take into account any person's particular financial situation or goals and, accordingly, do not constitute personalised financial advice under the Financial Advisers Act 2008, nor do they constitute advice of a legal, tax, accounting or other nature. We recommend that recipients seek advice specific to their circumstances from their adviser before making any investment decision or taking any action.

The information in this presentation is given in good faith and has been prepared from published information and other sources believed to be reliable, accurate and complete at the time of preparation but its accuracy and completeness is not guaranteed. Information and any analysis, opinions or views contained herein reflect a judgement at the date of provision of the presentation and are subject to change without notice. The price, value and income derived from investments may fluctuate in that values can go down as well as up and investors may get back less than originally invested. Past performance is not indicative of future results, and no representation or warranty, express or implied, is made regarding future performance. Where an investment is denominated in a foreign currency, changes in rates of exchange may have an adverse effect on the value, price or income of the investment. Reference to taxation or the impact of taxation does not constitute tax advice. The rules on and bases of taxation can change. The value of any tax reliefs will depend on your circumstances. You should consult your tax adviser in order to understand the impact of investment decisions on your tax position. To the maximum extent permitted by law, no liability or responsibility is accepted for any loss or damage, direct or consequential, arising from or in connection with this presentation or its contents. Actual performance of investments managed by Harbour Asset Management Limited will be affected by management charges. No person guarantees the performance of funds managed by Harbour Asset Management Limited. Harbour Asset Management is the issuer of Harbour Investment Funds – more information can be found in our product Disclosure Statement at www.harbourasset.co.nz.

Future of growth? Future of Equity Returns?

- **Real GDP has grown at a modest pace despite:**
 - central bank cash rates at all-time lows
 - large asset purchasing programs

What do you think will happen to **GDP** over the next **10 years**?

- **Recover**
- **Stay the same**

A recent paper by the Federal Reserve that suggests that **low investment, low interest rates** and **low output growth** are here to stay - a **new normal**.

Gagnon, Etienne, Benjamin K. Johannsen, and David Lopez-Salido (2016). <http://dx.doi.org/10.17016/FEDS.2016.080>

Gagnon, Etienne, Benjamin K. Johannsen, and David Lopez-Salido (2016). "Understanding the New Normal: The Role of Demographics," Finance and Economics Discussion Series 2016-080. Washington: Board of Governors of the Federal Reserve System, <http://dx.doi.org/10.17016/FEDS.2016.080>.



Economics of growth:

$$Y = A f(K, L)$$

Output = Technology f (Capital , Labour)

GDP =

- Automation
- New Technologies
- Machinery
- Equipment
- Buildings
- Financial Assets

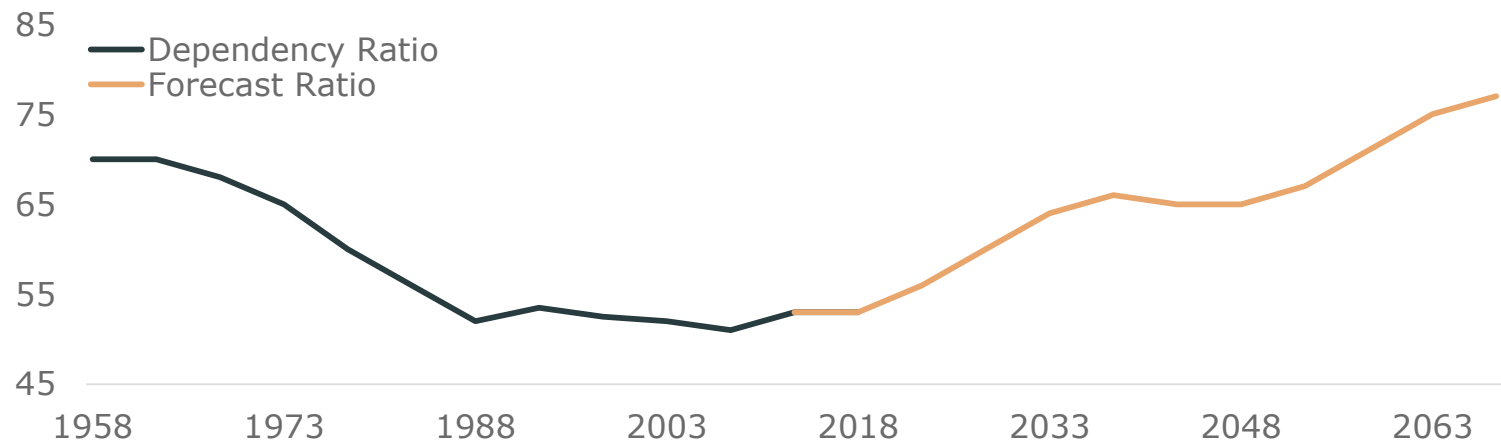
Person hours worked per year

Cobb-Douglas production function.

Cobb, C. W.; Douglas, P. H. (1928). "A Theory of Production". American Economic Review. 18 (Supplement): 139–165.



Labour: New Zealand Dependency Ratio (aged 0-14 and 65+ years):



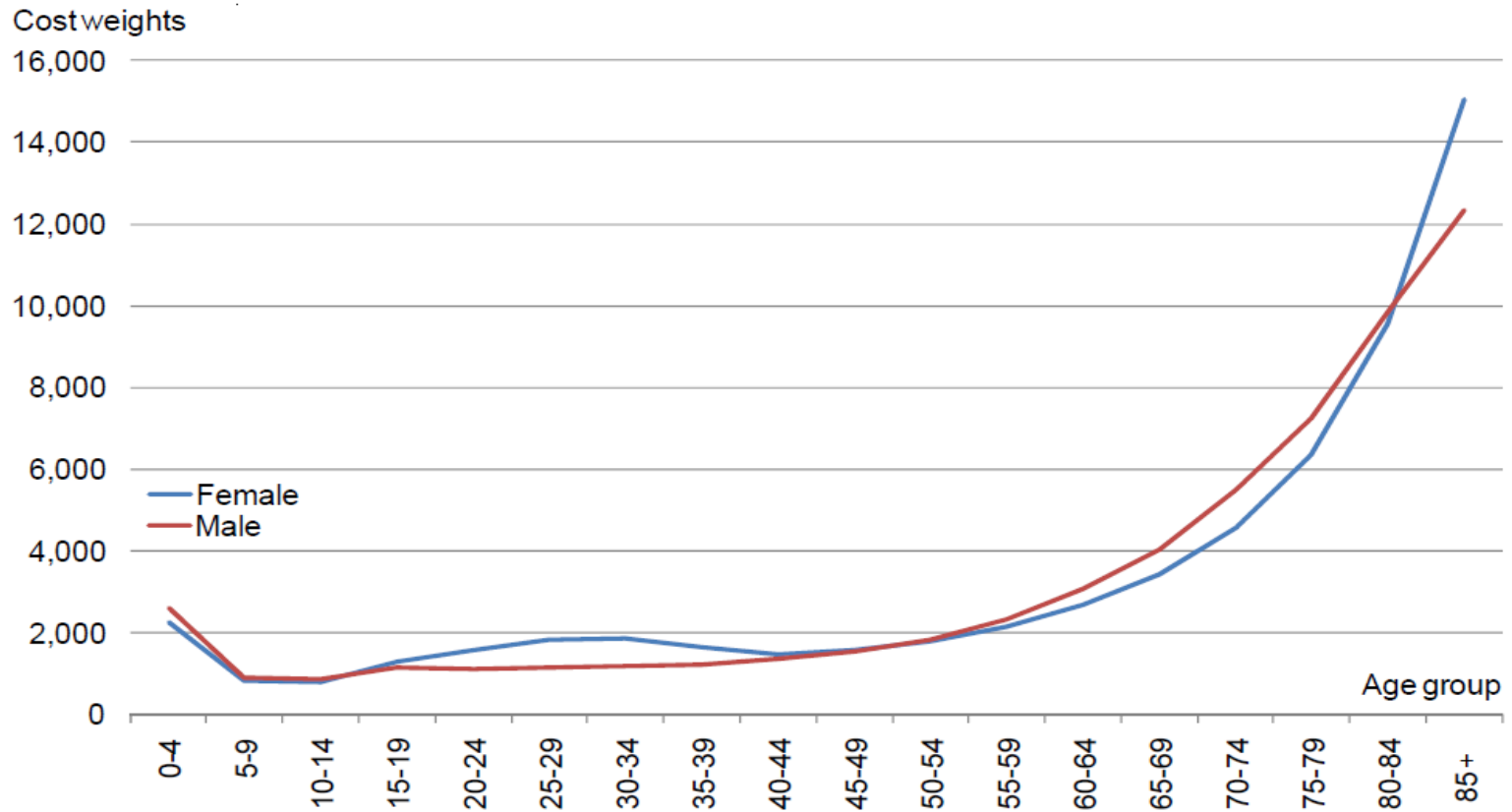
Source: Statistics New Zealand historical data, median scenario data and Harbour.

- Changes in the age structure of the workforce is found to be significantly correlated with changes in aggregate productivity (Feyrer 2005).
- If baby boomers retire at age 65, they started retiring in 2008
- **Half** of the working age population are providing for dependents expected to decrease to **one quarter**.

Feyrer, J. (2005). "Aggregate Evidence on the Link Between Demographics and Productivity", *Population and Development Review*, vol. 34, no. 1, pp. 78-99.



Healthcare Spending Rises Sharply With Age:



Source: NZ Treasury, Ministry of Health, Harbour formatting changes.

- The healthcare expense in the dependency ratio between youth and the old is not one for one



Labour



Image Source: Shutterstock.com.



Capital and Technology

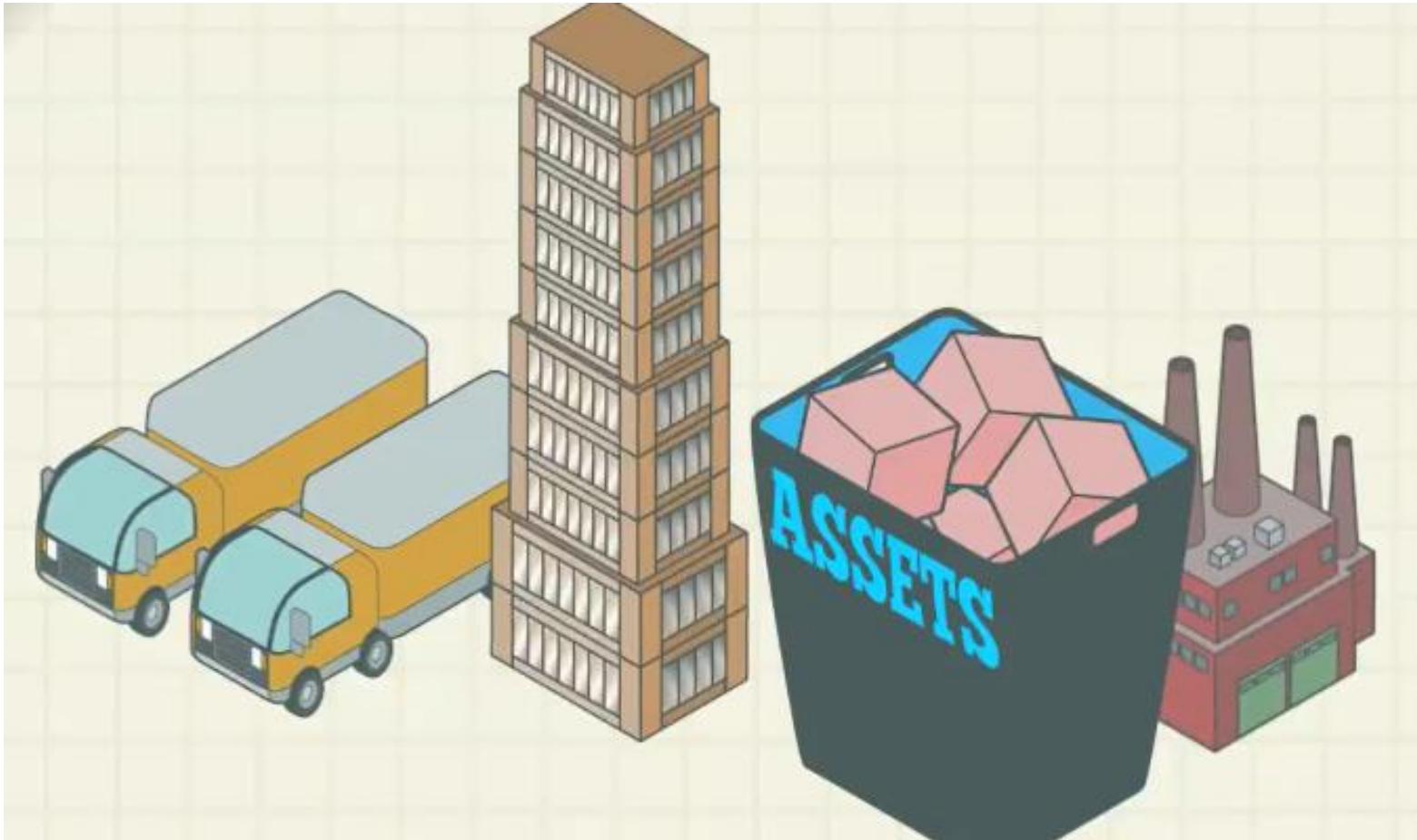
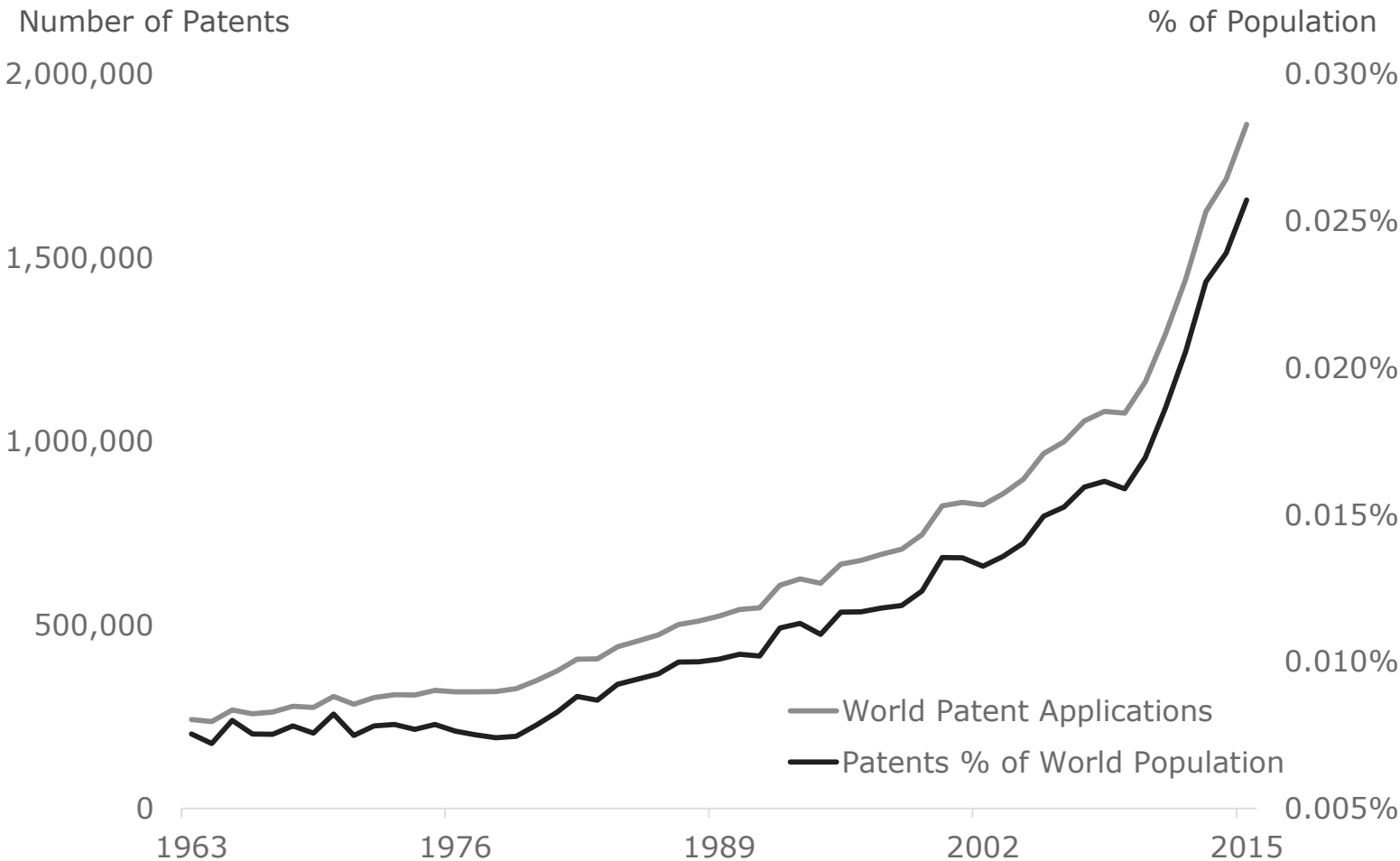


Image Source: Investopedia.



New Technologies:



Source: World Bank Data data, Bloomberg data and Harbour.



Automation:



- Frey (2013) explores 702 detailed occupations susceptible to computerisation in the US based on developments in:
 - machine learning
 - artificial intelligence
 - mobile robotics

- Automation may diminish the competitive advantage of low skilled labour. Autor and Dorn (2013)
 - May lead to reshoring

Source: Frey (2013) data and Harbour.

Autor, D. and Dorn, D. (2013). "The growth of low skill service jobs and the polarization of the US labor market." *American Economic Review*, 103(5): 1553–1597.

Frey, C. B. and Michael A. O. (2013) "The future of employment: how susceptible are jobs to computerisation." http://www.oxfordmartin.ox.ac.uk/downloads/academic/The_Future_of_Employment.pdf



Central Bank and Fiscal Policy:

Cycle between **Demographics** and **Technology**

Central Bank

- **Demographics** suggest a lower growth rate
 - Stimulatory response, low cash rate
 - Largest impact on borrowers
- **Technology** improvements to capital suggest a reasonable growth rate
 - Normal business cycle

Government

- Provide infrastructure to adapt to new technology and growth



What does this all mean for asset prices:

Behavioural Life-cycle Theory Shefrin and Thaler (1988).

Strategies

- **Yield** - quality companies, **defensive**, pay out profits and grow their dividends
- **Value** – cheap stocks, **cyclical**, correlated to the business cycle
- **Growth** – earnings growth, **structural**, related to changes in the economy
- **Size** – small stocks, **cyclical** with sensitivity to the economic cycle

Sectors and Stocks

- Healthcare, consumer staples, financial services, travel, entertainment
- Technology and other sectors that drive improvement to domestic productivity or exploit growth opportunities

Shefrin H. M. and Thaler, R. H. (1988) "Behavioral Life-Cycle Hypothesis", Economic Inquiry, 26: 609–643.



Economic drivers of top quartile equity performance

Quarterly Data New Zealand

	GDP	BOP CA	Interest Rates	Business Confidence	Consumer Confidence
Low Price/Earnings	1.54	1.89	-0.74	2.09	4.62
High Dividend yield	0.71	2.38	1.81	2.4	4.85
High Earnings EPS	1.72	0.99	0.62	2.83	4.75
High ROE	2.09	1.31	0.3	3.68	4.67
High Momentum 3m	1.63	1.34	0.95	4.89	3.23
Small Size	1.67	1.98	0.87	2.21	2.38
Market Equal Weight	2.76	1.93	-1.44	2.55	3.34

Quarterly Data Australia

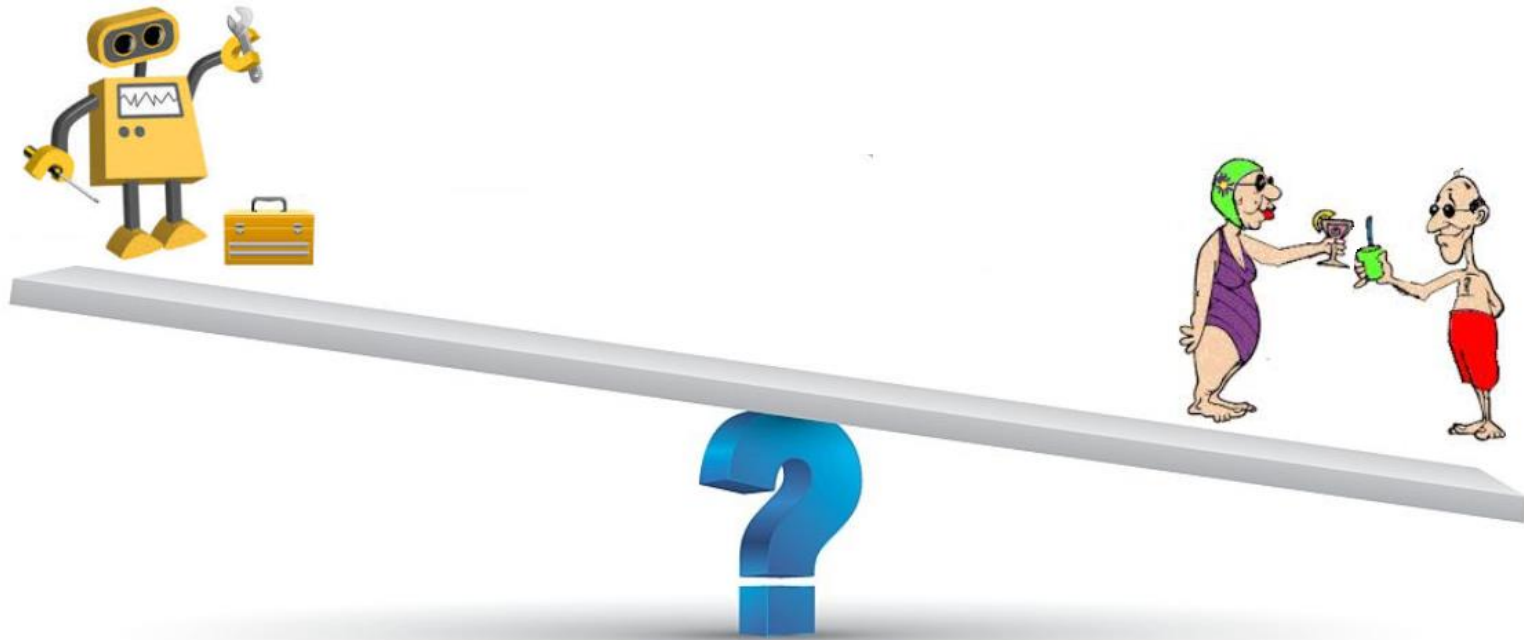
	GDP	BOP CA	Interest Rates	Business Confidence	Consumer Confidence
Low Price/Earnings	-0.3	2.98	0.43	5.05	4.12
High Dividend yield	1.09	2.65	3.19	4.91	4.37
High Earnings EPS	1.22	4.27	1.03	5.81	4.36
High ROE	2.81	3.09	1.27	5.56	4.06
High Momentum 3m	3.09	2.83	1.16	6.05	4.5
Small Size	-0.46	4.01	0.39	4.33	4.52
Market Equal Weight	0.61	3.6	0.98	5.03	4.04

- T-Statistics
- Data: 2004-Jun 2017, from Bloomberg. Quarterly.
- Universe: S&P/NZX 50 Stocks and S&P/ASX 300.

Data Source: Bloomberg.



Summary what does this mean for Equity Portfolios



Active Factor Tilts – Research into new technology and pace of adoption.

Portfolio Construction diversification – strategies perform at different times.

Leading indicators: best place to look for expected equity market returns.

Image Sources: Florida Centre for Instructional Technology, Patpowell.com and Getty Images.



Questions?



Important Notice and Disclaimer

This presentation and any investment views expressed in this presentation handout and verbally in the presentation itself are for general information purposes only. To the extent that any such information or views constitute advice, they do not take into account any person's particular financial situation or goals and, accordingly, do not constitute personalised financial advice under the Financial Advisers Act 2008, nor do they constitute advice of a legal, tax, accounting or other nature. We recommend that recipients seek advice specific to their circumstances from their adviser before making any investment decision or taking any action.

The information in this presentation is given in good faith and has been prepared from published information and other sources believed to be reliable, accurate and complete at the time of preparation but its accuracy and completeness is not guaranteed. Information and any analysis, opinions or views contained herein reflect a judgement at the date of provision of the presentation and are subject to change without notice. The price, value and income derived from investments may fluctuate in that values can go down as well as up and investors may get back less than originally invested. Past performance is not indicative of future results, and no representation or warranty, express or implied, is made regarding future performance. Where an investment is denominated in a foreign currency, changes in rates of exchange may have an adverse effect on the value, price or income of the investment. Reference to taxation or the impact of taxation does not constitute tax advice. The rules on and bases of taxation can change. The value of any tax reliefs will depend on your circumstances. You should consult your tax adviser in order to understand the impact of investment decisions on your tax position. To the maximum extent permitted by law, no liability or responsibility is accepted for any loss or damage, direct or consequential, arising from or in connection with this presentation or its contents. Actual performance of investments managed by Harbour Asset Management Limited will be affected by management charges. No person guarantees the performance of funds managed by Harbour Asset Management Limited. Harbour Asset Management is the issuer of Harbour Investment Funds – more information can be found in our product Disclosure Statement at www.harbourasset.co.nz.

