ARMILLARY
PRIVATE CAPITAL

Return on Capital Employed

Review of 2015 Returns of the NZ Listed Sector and NZ Crown Entities

June 2016

Contents

Disclaimer

Foreword

We are delighted to bring you the fifth Armillary Private Capital Return on Capital Employed (ROCE) report. This year the total number of entities in our data set of NZX, NZAX, NXT, Unlisted and selected Crown entities is one less than last year, at 160. We have also included a confidential sample of 118 non-listed companies to be compared to the overall dataset, although we have not identified these entities individually.

The ROCE methodology we use in this report was developed by Du Pont Corporation and therefore is not proprietary to us, although we are proponents. As it is simple to apply, anyone who understands the methodology can use it. We regularly use this methodology as a tool in our client engagements and in our financial training curriculum.

A benefit of the ROCE methodology is that the performance of an entity can be broken down into its components of profitability and activity, for deeper analysis. Profitability, as measured by EBIT margin, provides an indication of operational efficiency; activity, as measured by asset turn-over, provides an indication of balance-sheet efficiency. A full explanation of ROCE is included in Appendix 2.

This year's report includes an overview of the major sectors in the economy to demonstrate the effect that differences in business models has had in the subsequent profitability, activity and overall ROCE performance. Our sector spotlight this year is on the NZ retail fuel sector, which has been a sector of discussion recently due to the fall in global oil prices, increases in importer retail margin and, most recently, the acquisition of Caltex by Z Energy.

We continue to advocate the ROCE methodology in our work with businesses as a simple to use and easily understood tool for measuring business performance, identifying improvement strategies, creating incentive remuneration programs, and for testing budgets and forecasts, especially those applied in valuations. We also see the data and results in this report as providing useful benchmarks for business performance in the New Zealand market.

We trust that the insights contained in this report provide value to investors, business owners and managers alike.

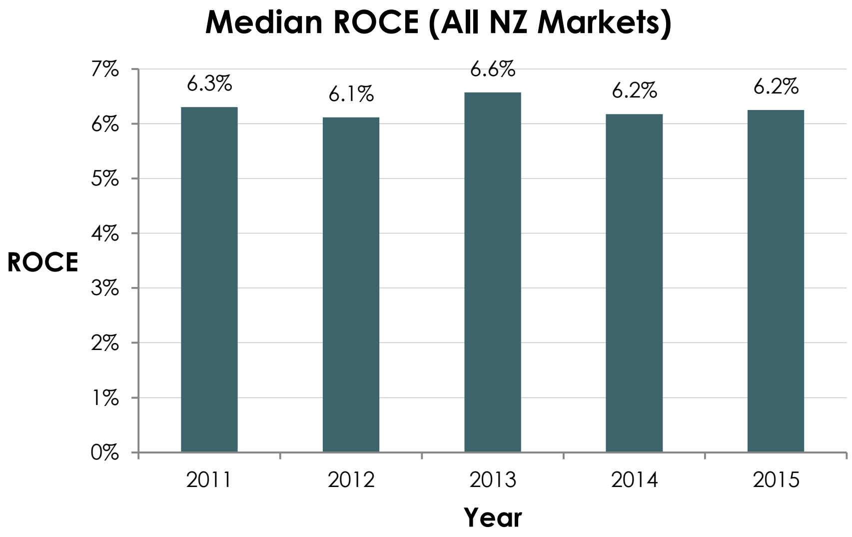
David Wallace

Joint Managing Director

Executive Summary

This year's ROCE review of the 2015 financial results included 119 companies with primary listings on the NZX, 18 NZAX listed companies, 2 NXT listed companies, 12 companies from Unlisted, and nine Crown Entities. This has resulted in a total sample size of 160 firms for 2015, which is one less than our analysis for 2014. For this report we have grouped the NZAX and NXT companies.

In addition to our sample of listed and Crown entities, we have included a sample of 118 privately held companies. These have been reviewed separately from, and compared to the main sample.



- The median performance across all NZ Markets (including the Crown Entities) has remained steady at 6.2% over the last two years. This is less than common estimates of the market weighted average cost of capital for NZX listed companies of between 8% and 9%.

- Finzsoft Solutions was the top performer in 2015 with a ROCE of 84.4%, reflecting high levels of operational leverage and profitability.

- The IT and consumer discretionary sectors continue to make up the majority of the top 10 performers. The industrials sector as a whole was the best performing sector. However, interestingly the IT sector performed poorly overall, with the lowest median 2015 ROCE of all sectors. This indicates a high variability of performance within this sector.

- The median ROCE of NZX50 constituent companies (2015: 6.5%) came out slightly below companies in comparable international indices in Europe (2015: 6.7%). Companies in comparable Australian and US indices (S&P ASX200 and S&P 500) significantly outperformed New Zealand in 2015, with median ROCE's of 10.4% and 13% respectively. This is similar to the previous year.

- For the Crown Entities, the 2015 median ROCE was 4.3% (up from 2.5% in 2014), with Airways Corporations again recording the best performance from that group, achieving a ROCE of 20.3%.

Top Performers

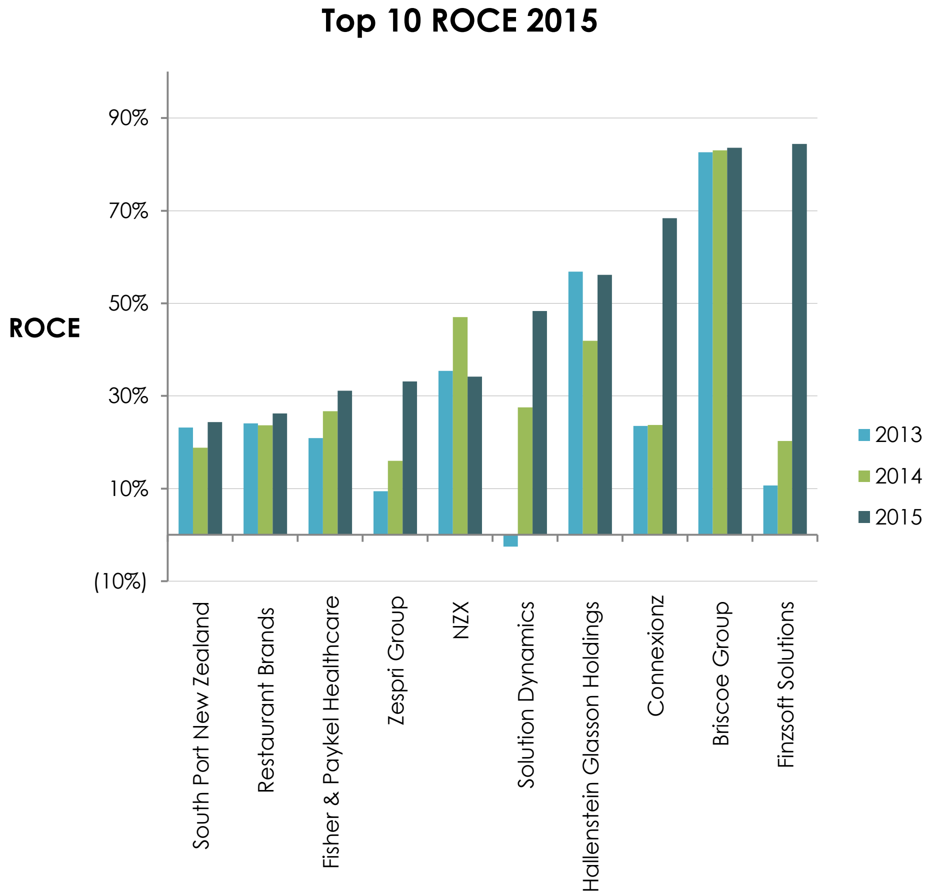
The top 10 entities by 2015 ROCE performance are dominated by businesses that in general have high levels of activity (revenue/ total net operating assets), specifically technology and retail businesses.

Finzsoft Solutions, as the top performer, had a 19.6% Profitability Ratio (up from 8.5% in 2014) and a 4.3x Activity Ratio in 2015 (up from 2.4x in 2014). Last year's top performer, Veritas Investments, failed to make the top 10 this year. Its Profitability and Activity Ratios dropped to 13.8% and 1.5x respectively, down from 53.5% and 4.4x in 2014.

The second highest performer, Briscoe Group, has had a consistently high ROCE over the last three years. This is largely due to the firm's maintenance of high activity levels. It should be noted that both Briscoe Group and Hallenstein Glasson Holdings have a large number of leases that are off-balance sheet and are thus not included in the calculation of TNA.

The top three ROCE values achieved in 2015 for each of the three markets analysed were as follows:

- For the NZX market, Finzsoft Solutions (84.4%), Briscoe Group (83.6%) and Hallenstein Holdings (56.1%).
- For the NZAX/NXT markets, Solution Dynamics (48.4%), Just Water International (12.2%) and Burgerfuel Worldwide (10.2%).
- For the Unlisted market, Connexionz (68.3%), Zespri Group (33.1%) and Skyline Enterprises (19.6%).
- Of the Crown Entities sampled the top performers were Airways Corporation of NZ (20.3%), Kordia Group (12.9%) and Meteorological Service of NZ (11.5%).



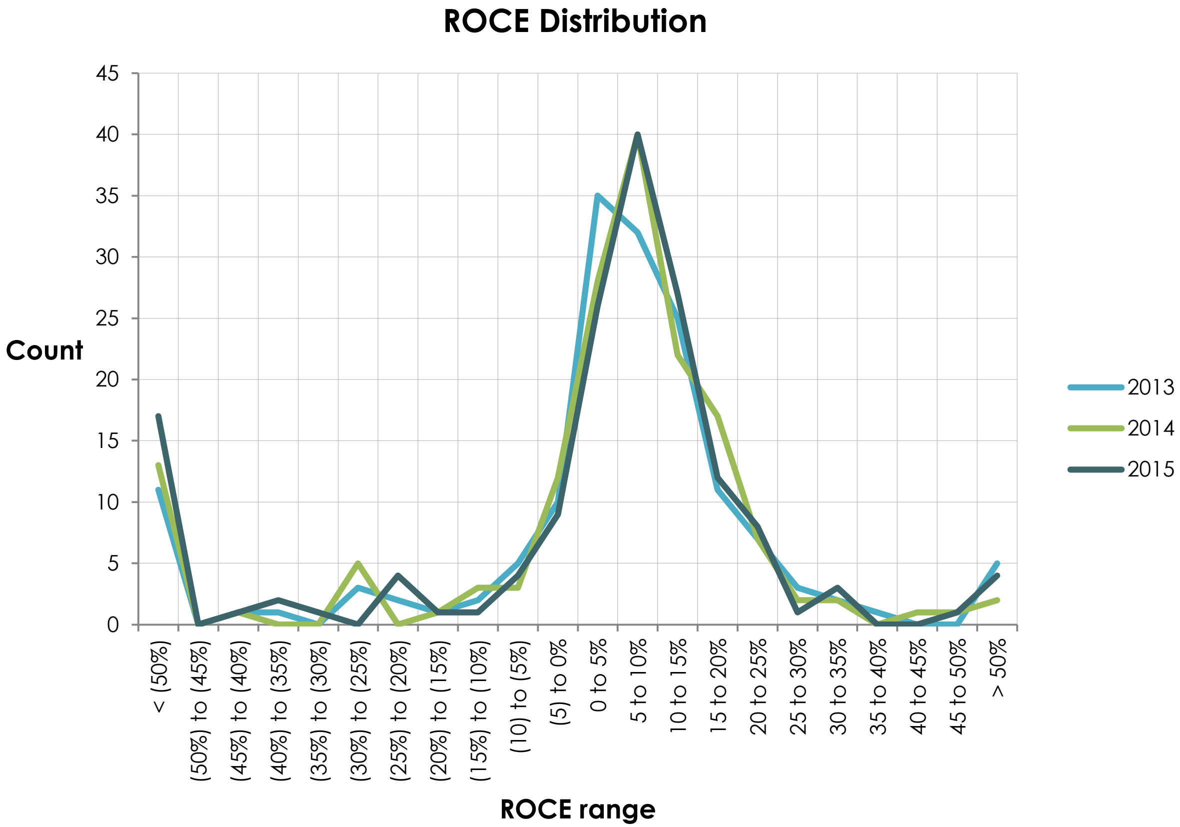
Distribution of Results

The ROCE returns for the last three years appear to follow a relatively normal distribution, with outliers at either side of a bell shaped curve.

57 companies (36%) achieved a ROCE greater than the common estimates of the market weighted average cost of capital for NZX listed companies of between 8% and 9%, down from 39% in 2014 and 41% in 2013.

17 companies (11%) achieved a ROCE of greater than 20%, up from 15 companies in 2014. Only 4 companies reached a 2015 ROCE higher than 50%.

39 companies had a ROCE less than zero in 2015 (38 companies in 2014). A negative ROCE implies negative profitability, or a net operating loss. About 10% of the sample (17 firms) had a ROCE of less than negative 50%. Unsurprisingly, 9 of these 17 firms were in the technology sector. In general these entities are likely to be focused on growth at the expense of profitability.

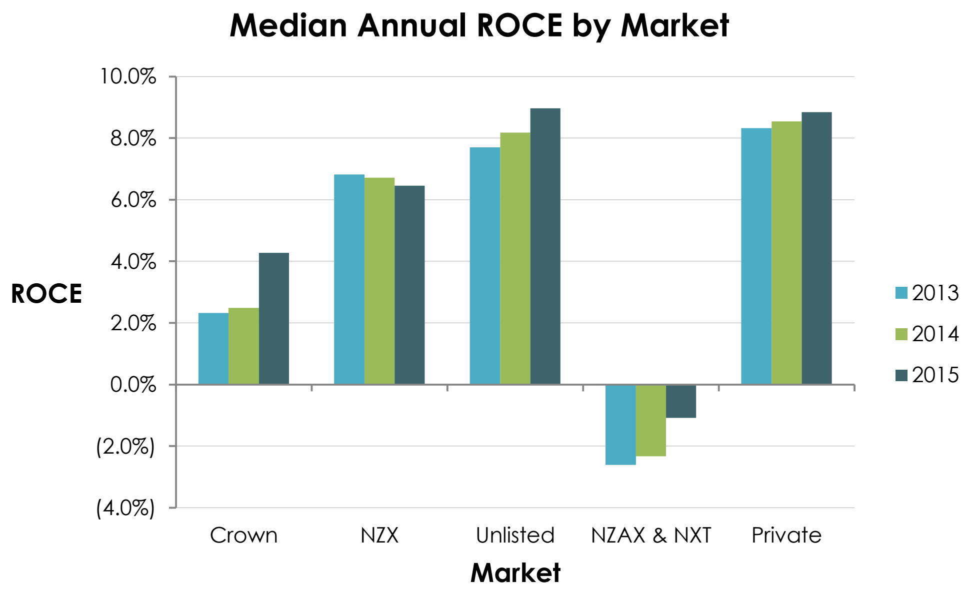


Market

The median ROCE performance by market for the last three years shows:

- The NZX listed firms had a consistent median performance slipping slightly from 6.8% in 2013 to 6.5% in 2015.

- Whilst the median ROCE for entities listed on the NZAX and NXT markets has improved steadily over the last three years, these firms have consistently underperformed in comparison to those on other markets. Note that of the 20 issuers reviewed from the NZAX and NXT, six had revenue lower than $1m and two had no revenue at all. The negative median ROCE is representative of the mix of young loss-making companies and non-operating or pre-revenue businesses present.



- Unlisted issuers' median performance has increased consistently between 2013 and 2015, from 7.7% to 9.0%. In 2015, the Unlisted market was the best median performer of all markets examined, including private firms. These firms are much smaller on average than their NZX-Listed counterparts, with a median market capitilisation of $57m versus $252m on the NZX.

- The Crown Entities have underperformed relative to all other markets, except for the NZAX. These firms did however show the best improvement in performance between 2014 and 2015, with a median ROCE increase of 1.8%.

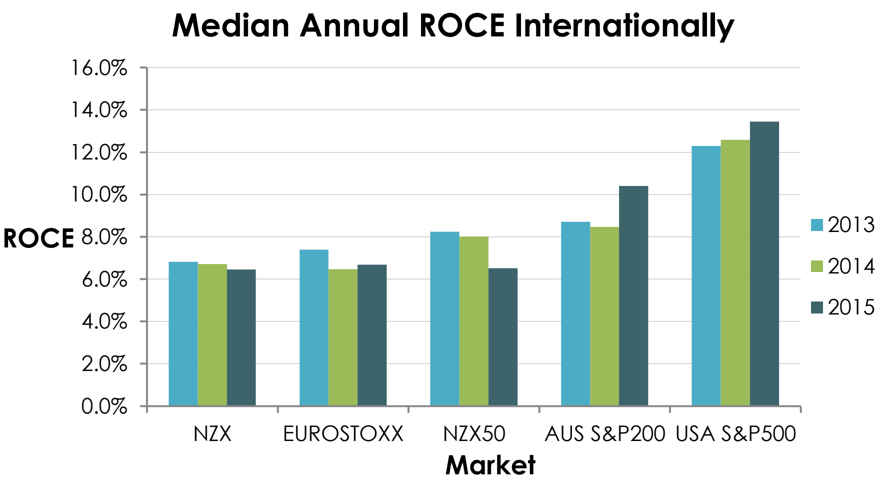
- Our sample of private, non-listed companies had a significantly higher ROCE than most of their NZ listed counterparts with a median 2015 ROCE of 8.8%; however, their performance was comparable to the Unlisted market (median ROCE of 9.0%). It should be noted that the cost of capital for private companies and firms on the Unlisted market will be higher than the more established NZX listed and Crown entities. We would therefore expect their ROCE to be higher.

International Comparison

In order to benchmark New Zealand's performance, we have also reviewed the performance of companies in the European, Australian and US markets, as selected by the EURO STOXX 50, S&P/ASX 200 and S&P 500 indices respectively. For comparability, we have isolated the performance of the NZX50 index constituents from that of the entire group of NZX listed entities.

- The **NZX50** index group of companies had a significantly higher median performance than the overall NZX main board in 2013 and 2014 (1.4% and 1.7% higher respectively). However, in 2015 the median ROCE for NZX50 firms dropped to 6.5%, which is the same as that of the main board. The NZX50 companies represent more than 85% of the NZ listed equity market capitalisation.

- The **EURO STOXX 50** index covers 50 blue-chip stocks from 12 Eurozone countries. It represents more than 50% of the entire free-float market capitalisation of all Eurozone listed equities. This index's performance was comparable to the NZX and NZX50 in 2015 (median ROCE of 6.7%), however it was outperformed by the NZX50 in previous years.



- The **S&P/ASX 200** index is recognised as the institutional investable benchmark in Australia. The index covers approximately 80% of the equity market capitalisation in Australia. Median ROCE performance improved significantly in 2015, increasing from 8.5% to 10.4%, and was noticably higher than that of the NZX and European companies. However, despite this overall improvement, the median ROCE for Australian energy and mining companies declined significantly between 2014 and 2015, from 7.5% to 1.9%. The increase in median ROCE was largely driven by a significant performance improvement in the IT, consumer staples and industrials sectors.

- THE **S&P 500** index captures approximately 80% of the total US listed equity market capitalisation. The companies in this index have consistently produced a significantly higher ROCE than the other markets examined. It is also the only index in the sample that has presented a steady improvement of median ROCE between 2013 and 2015, increasing from 12.1% in 2013 to 13.3% in 2015.

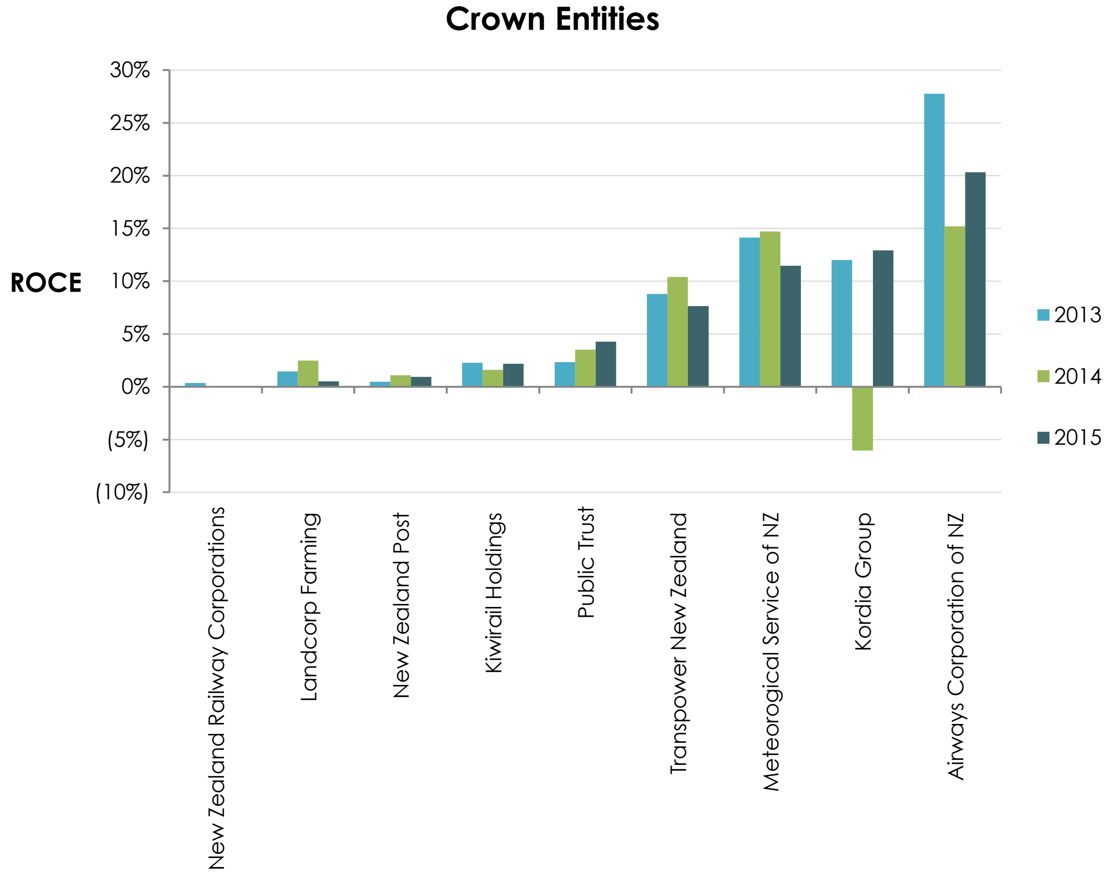
- Note that the average cost of capital in the comparison markets will vary from that of New Zealand. In general, companies in the comparison indices tend to be larger and the cost of debt in each of the markets is currently lower, therefore they will have a lower cost of capital.

Crown Entities

The nine Crown Entities in our analysis have been selected as they are generally considered among the most commercially run entities in the Crown's portfolio.

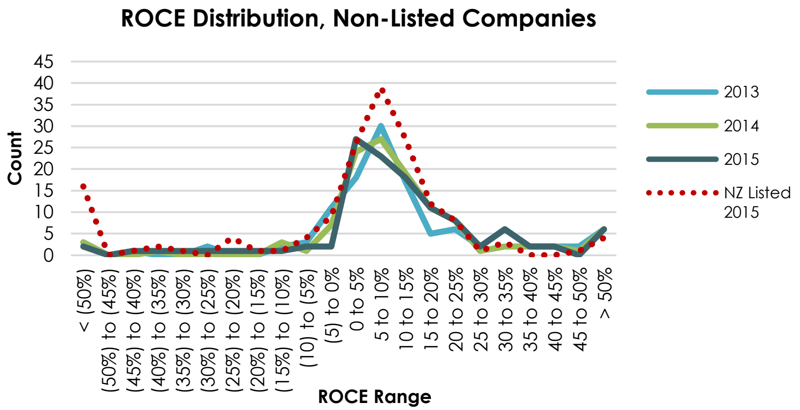
The overall performance of the Crown Entities improved significantly in 2015, with median ROCE increasing from 2.5% (2014) to 4.3% (2015). Despite this improvement, crown-owned firms delivered performance results below the median levels of publicly listed and privately held entities in general.

- Four of the nine Crown Entities reported improved ROCE in 2015 compared to 2014.
- Airways Corporation recorded the best performance, improving from its 2014 ROCE of 15.2% to 20.3% in 2015. This improvement was wholly driven by an increase its profitability ratio (from 10.7% to 15.4%). In fact, the firm's activity levels decreased slightly, from 1.42 to 1.32.
- Kordia Group regained its position in the top three performers with a 2015 ROCE of 12.9%. The company's low 2014 ROCE of negative 6.1% was the result of its operating loss.



Non-Listed Companies

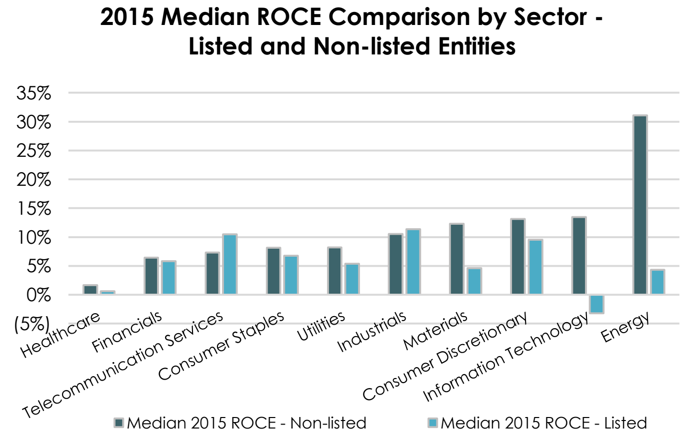
Due to our change in data providers, we now have a much more comprehensive sample of 118 private, non-listed companies (only 44 firms were examined in last year's report). These 118 companies are reviewed to see how they compare with their listed peers. The larger sample size will improve the statistical power of our analysis. However, it should be noted that we are not making any definitive conclusions regarding the nature of private companies in New Zealand, especially at the sector level wherein the sample sizes are very small.



Of the sample of non-listed companies, 25 are involved in the industrials sector, 22 in consumer staples, 20 in consumer discretionary, 16 in financials and 12 in utilities. The rest are thinly spread over the other sectors.

Analysis

- The distribution of ROCE for the non-listed companies is similar to that of the NZ listed firms; however, the NZ listed firms present more extreme outliers (ROCEs of less than negative 50%).
- All companies in the top quartile achieved a ROCE of greater than 17.5%, while those in the lowest quartile were all lower than 3.2%. This compares to an upper and lower quartile cut-off of 12.9% and 0.0% respectively for listed NZ firms.
- Interestingly, the two best performing sectors for non-listed companies in 2015 were two of the worst performing NZ listed sectors (Energy and IT). Median 2015 ROCEs in these sectors for non-listed firms were 31% and 13% respectively, compared to 4% and negative 3% for NZ listed firms.



Although the median ROCE is higher than that reported for the NZ listed sector, ROCE needs to be judged against the weighted average cost of capital of the entity. In the case of these typically non-listed companies, the capital weighting will typically be biased towards equity rather than debt. In addition to equity being more expensive than debt in general, the cost of equity for private companies is significantly higher than that of listed companies due to investors requiring a premium for higher risk. For example, higher risk relates to smaller sized, less mature firms potentially with less depth and/or quality of management, lower quality of information disclosure and lack of liquidity or marketability of the equity holding. Therefore the 2015 median ROCE of 8.8% would suggest that the majority of the private companies reviewed are not generating a return above their weighted average cost of capital, which for public companies is around 8%-9%.

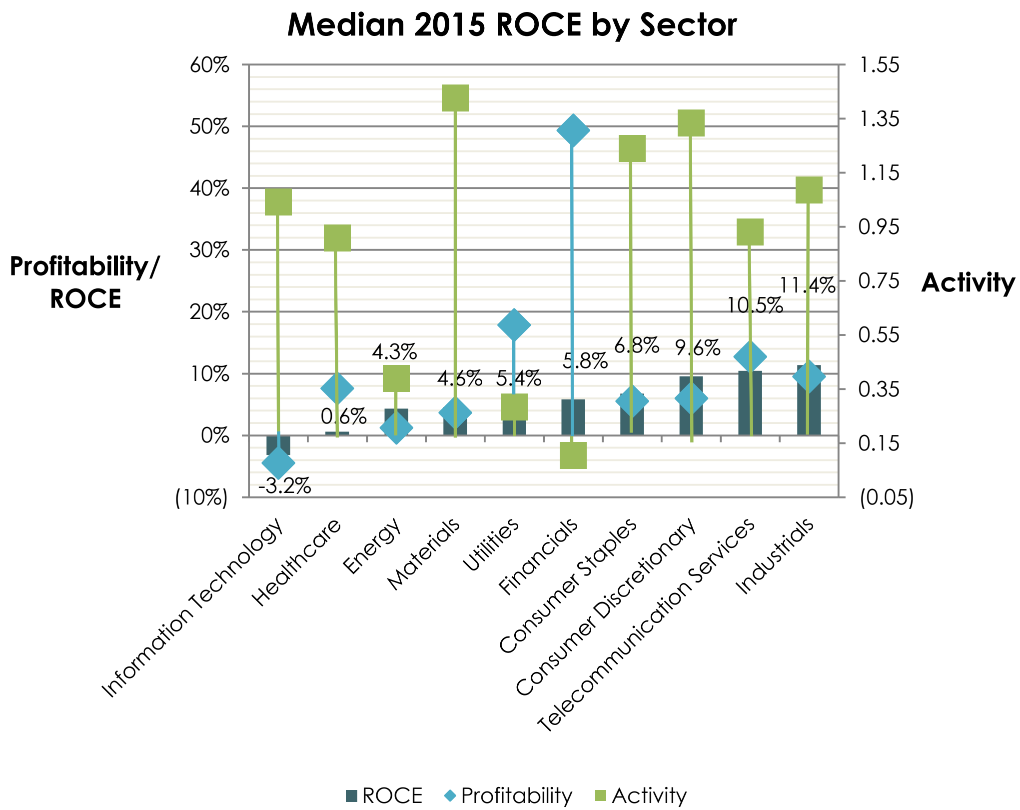
Sector Performance

The outcome of different business models can be examined by comparing the median performance of companies in different sectors. For this analysis, we have used the median profitability, activity and ROCE performance of each sector for 2015.

The top three performing sectors based on 2015 median ROCE are Industrials, Telecommuncation Services and Consumer Discretionary (11.4%, 10.5% and 9.6% respectively). These three sectors display similar business models, with moderate to high activity levels and moderate profitability. The Consumer Discretionary sector has a lower level of profitability, but makes up for this with a higher activity ratio.

The Financials sector is dominated by property investment firms, yet also includes banks and other financial companies. This sector exhibits very high profitability, but is dragged down by low levels of activity due to the capital intensive nature of the sector.

Conversely, the materials sector shows very high levels of activity yet has a moderately low median ROCE, as a result of low profitability. Companies in this sector include forestry, steel and construction material suppliers. Overall, these companies have high sales volumes but low profit margins.



The IT sector continues to have a moderately high level of activity with low or non-existent profitability, and is overall the worst performing sector in 2015. Despite this fact, the IT sector is still a popular sector in NZ. It will be interesting to see how this sector's performance will develop over the next few years.

ROCE Application: Retail Fuel Company Performance

This year we have chosen to examine the performance three NZ fuel retailers: BP NZ Holdings, ExxonMobil NZ, and Z Energy.

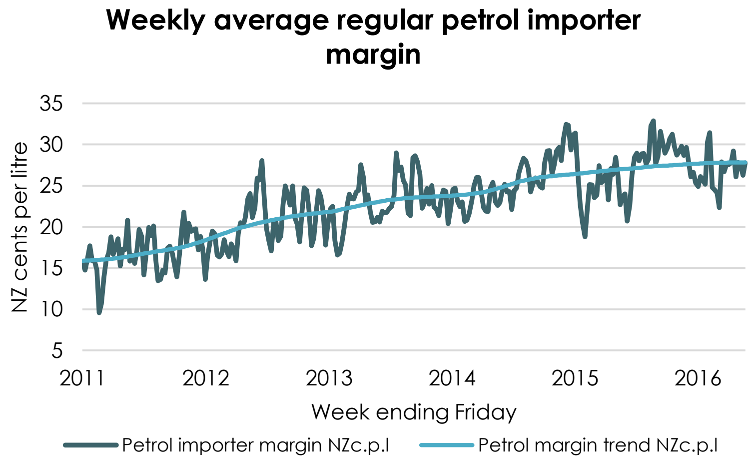
The retail fuel sector has been a sector of interest recently in New Zealand as recent information from the Ministry of Business and Innovation (MBIE) have shown a steady upwards trend in retailers' gross margins between 2011 and 2016 (from about 15c per litre to about 27c).

Fuel companies have argued that they need a bigger retail margin because they're investing more in their retail outlets. If this were the case, we would expect to see a decrease in the activity ratio due to an increase in Total Net Asset), offset by an increase in profitability from the higher margin. In fact, the opposite appears to be the case – BP NZ Holdings is the only company which has shown an increase in TNA between 2013 and 2015.

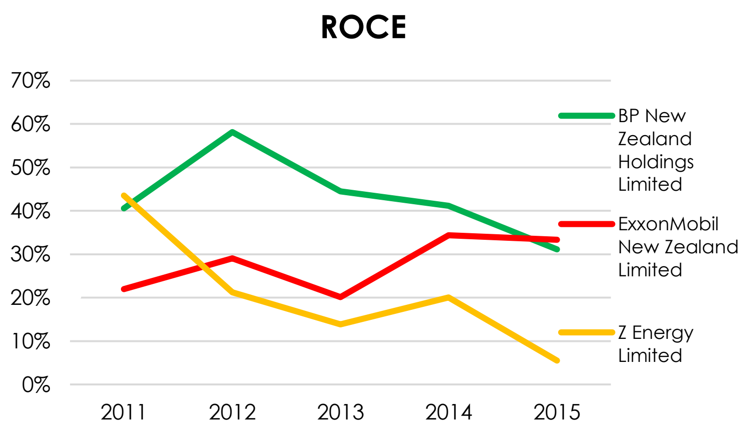
Overall, BP NZ Holdings has been the best performer since 2011 with a profitability ratio between 10% and 13%. However, after 2012 steady decreases and activity levels have dragged the company's ROCE downwards.

ExxonMobil NZ has shown no real change in profitability, however an increase in activity has bolstered the firm's ROCE performance. In 2015, ExxonMobil NZ overtook BP as the top performer based on ROCE (33%).

Z Energy has exhibited a significant decrease in ROCE since 2011. The drastic drop in activity levels in 2012 is due to a significant increase in TNA. Since then, the decline in ROCE has resulted from a decrease in profitability*. It will be interesting to see how the firm's performance changes following the acquisition of Caltex from Chevron (in June 2016).



Source: Ministry of Business Innovation and Employment -2016

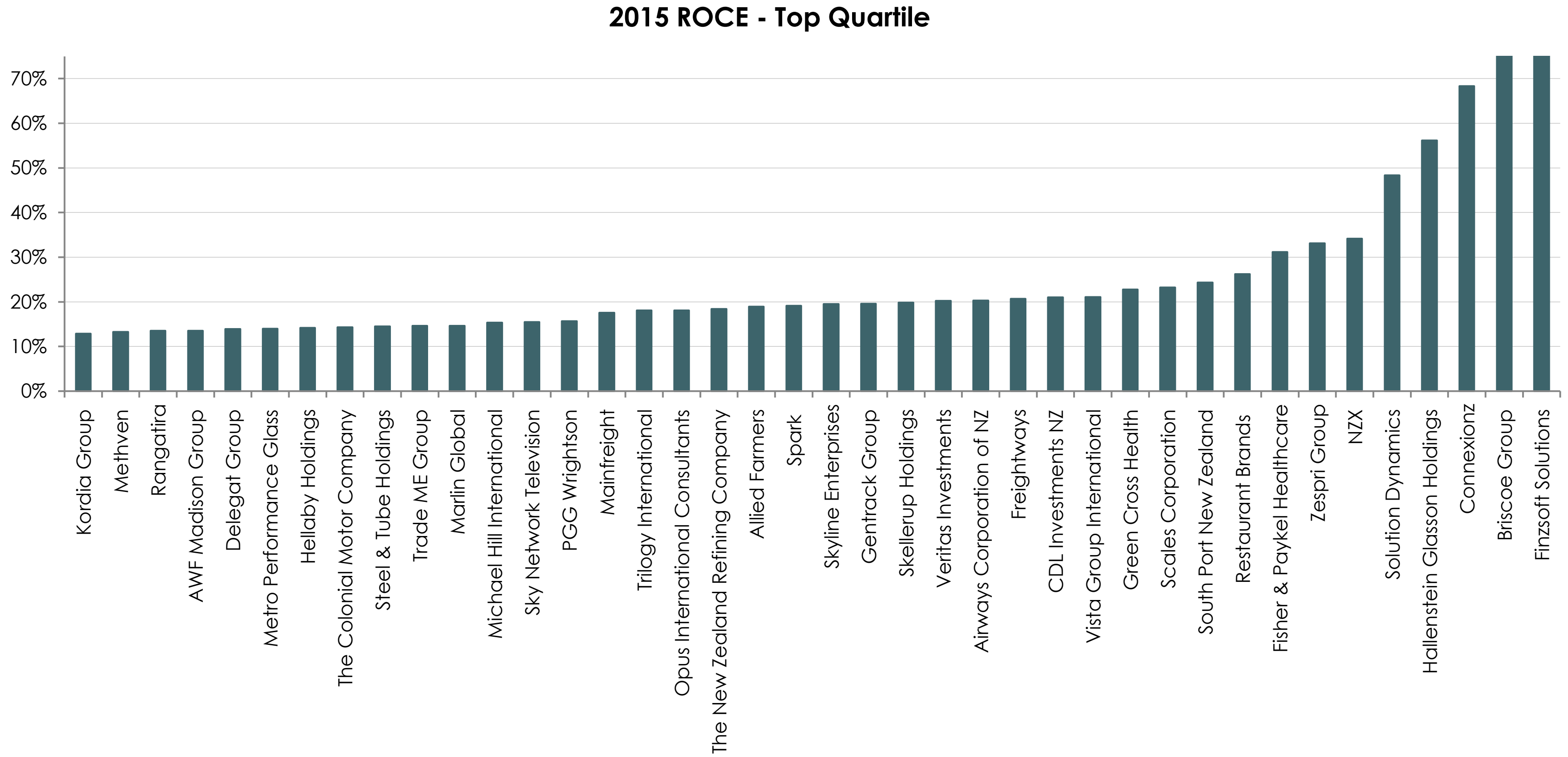


* Profitability figures are based on traditional EBIT. Z Energy's annual report uses "replacement cost EBIT", which it considers better reflects the underlying business performance.

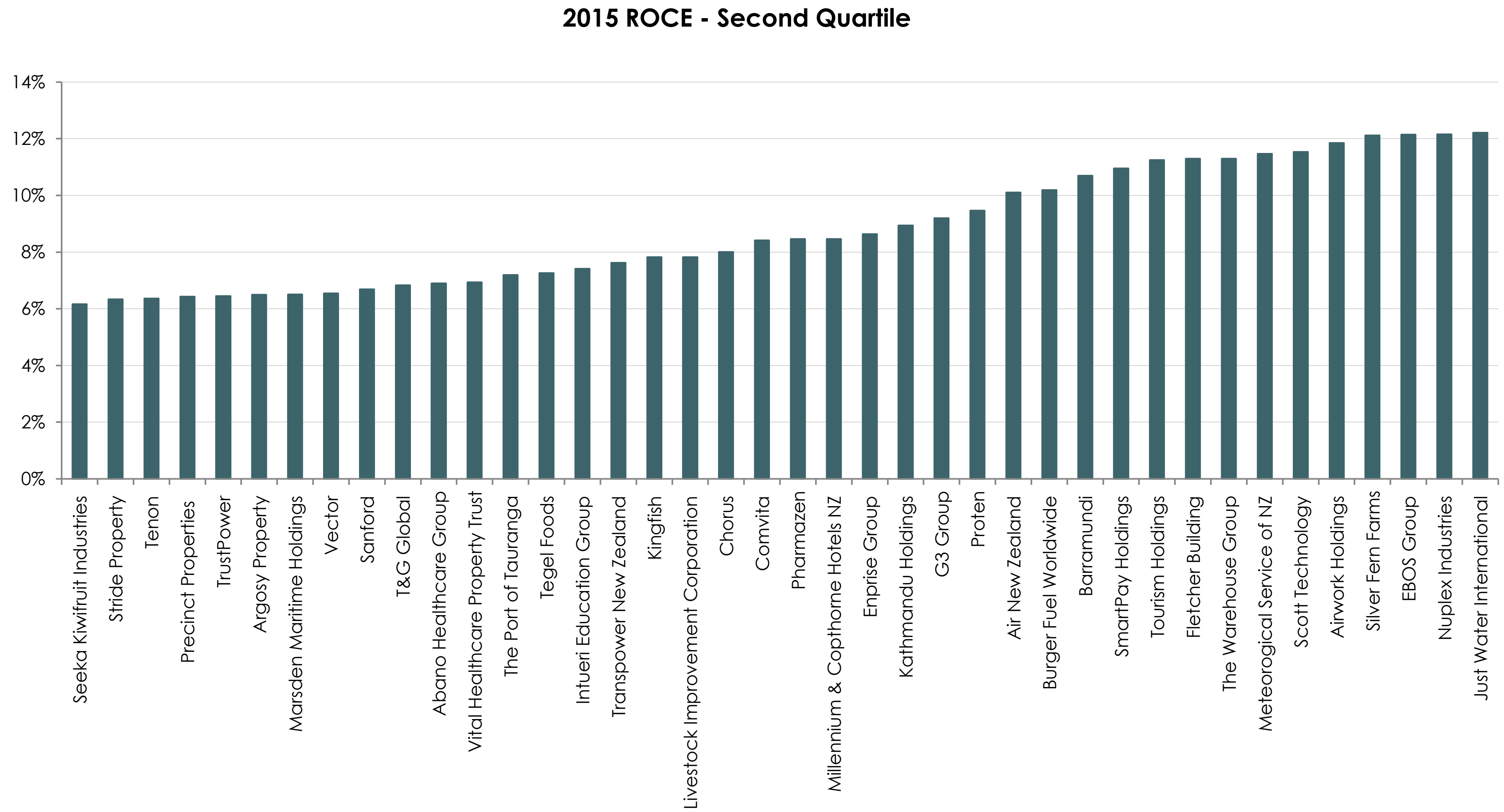
Individual Entities

The following four charts show the individual ROCE performance for each of the 160 listed and Crown Entities reviewed in 2015. Note that for the purposes of presenting this chart, entities with ROCE greater than 75% have been capped at 75% as they are relative outliers.

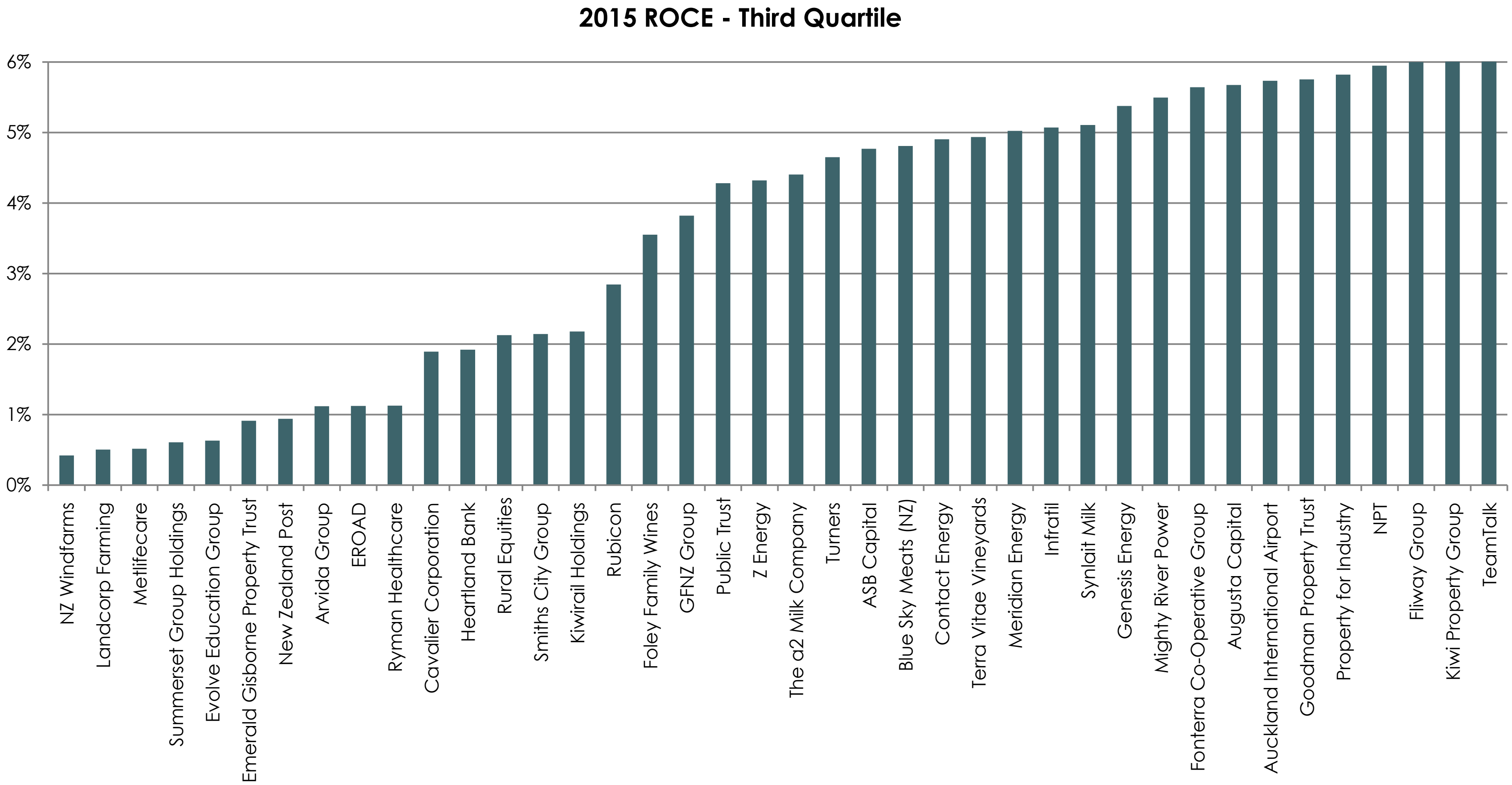
The 40 entities in the top quartile are dominated by the industrials, consumer staples and consumer discretionary sectors, which combined make up 65% of the quartile. Notably, nearly 40% of firms in both the consumer discretionary and industrials sectors fall in this top quartile. Top quartile ROCE performance ranges from 12.9% to 84.4%.



The 40 entities in the second quartile had 2015 ROCE's ranging between 6.2% and 12.2%. At this level, we estimate that only half are trading at or above their individual weighted average cost of capital, if only marginally.

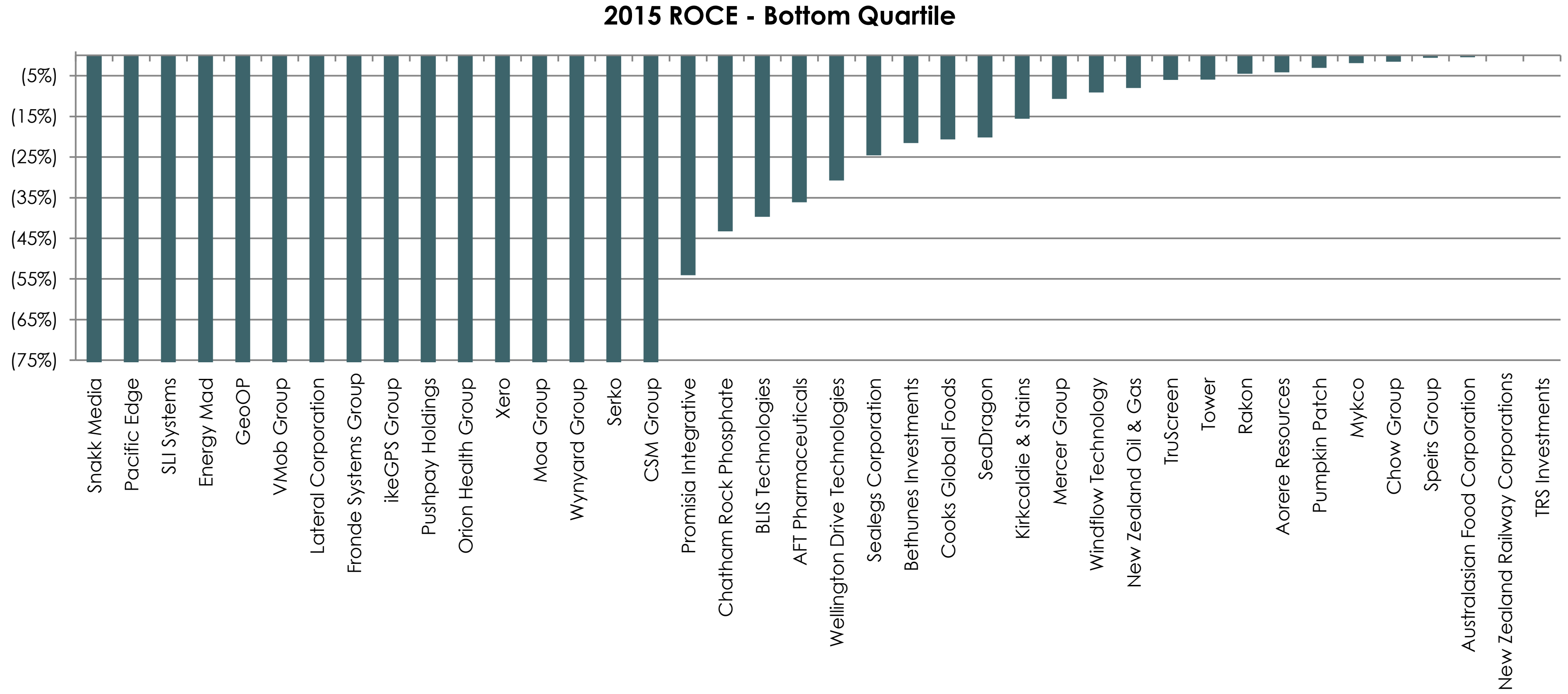


The third quartile ranges from 0.4% to 6.0%. At this level we estimate that most are trading below their individual weighted average cost of capital. Financial companies make up the largest portion of this quartile at 30%. Over 50% of the utilities companies in the sample fall in this quartile.



The fourth quartile consists of entities with a negative ROCE, ranging from 0.0% to negative 786%. Note that for the purposes of this chart those entities with a ROCE of less than negative 75% have been constrained at negative 75%. These entities with negative ROCE reported negative EBIT margins.

60% of firms in the technology sector fall into this quartile. Many of these bottom quartile firms are focused on a significant growth strategy at the expense of profitability, such as Vmob, Xero and Moa. However, those mature businesses with negative ROCE may need to reconsider the viability of their business models if their negative result is not a one-off.



Appendix 1 contains a table of individual entity results including 2014 and 2015 Profitability (EBIT margin) and Activity Ratios in addition to the 2013, 2014 and 2015 and three-year average ROCE.

About Armillary Private Capital

Armillary Private Capital is an investment bank providing investment banking, advisory and asset management services focused on the New Zealand capital markets. Our purpose is enabling success for businesses, business owners and investors.

Our approach is based on a combination of influences grounded in our culture, methodology and experiences. We have worked with a range of New Zealand businesses through all stage of the business lifecycle from start-up to maturity. Be they private, listed or government-related, we have seen and experienced the roller-coaster rides business owners and managers endure. These experiences allow us to quickly identify your needs and find the right solution.

An important part of our approach is the use of proven financial tools and methodologies to provide a concise but comprehensive view of business performance. A key methodology that underpins our work is the DuPont method. This powerful but highly practical method of analysis allows us to develop a rapid understanding of the underlying performance of a business and to identify key business drivers. This disciplined approach helps us with quality decision making in our work.

Armillary Private Capital is the manager of Efficient Market Services Limited, operator of the Unlisted market.

Sources of Data

The data for this analysis and report has been compiled by Armillary Private Capital from annual reports and data obtained through S&P Capital IQ. We note that we are reliant on the categorisation used by S&P Capital IQ for this analysis and such categorisation might vary from the categorisation we have applied to those companies for which we have sourced the data directly from their annual reports.

Appendix 1 – Detailed Results

	Market	2014 EBIT Margin	2015 EBIT Margin	2014 Activity Ratio	2015 Activity Ratio	ROCE 2013	ROCE 2014	ROCE 2015	3 Year Average ROCE
Abano Healthcare Group	NZX	7.1%	7.6%	0.87	0.91	10.6%	6.1%	6.9%	7.9%
AFT Pharmaceuticals	NZX	6.6%	(10.6%)	3.18	3.41	18.0%	20.9%	(36.1%)	0.9%
Air New Zealand	NZX	7.5%	9.9%	1.10	1.02	7.5%	8.2%	10.1%	8.6%
Airways Corporation of NZ	Crown	10.7%	15.4%	1.42	1.32	27.7%	15.2%	20.3%	21.1%
Airwork Holdings	NZX	12.9%	16.5%	0.69	0.72	8.7%	8.8%	11.8%	9.8%
Allied Farmers	NZX	9.2%	10.9%	1.15	1.74	0.7%	10.6%	18.9%	10.1%
Aorere Resources	NZX	(27.0%)	(32.6%)	0.10	0.13	(6.1%)	(2.7%)	(4.2%)	(4.3%)
Argosy Property	NZX	71.3%	71.7%	0.09	0.09	6.6%	6.7%	6.5%	6.6%
Arvida Group	NZX	NA	19.2%	0.00	0.06	NA	NA	1.1%	1.1%
ASB Capital	NZX	100.0%	100.0%	0.04	0.05	3.8%	4.1%	4.8%	4.2%
Auckland International Airport	NZX	61.8%	62.3%	0.10	0.09	6.4%	6.1%	5.7%	6.1%
Augusta Capital	NZX	67.7%	40.2%	0.10	0.14	7.1%	7.0%	5.7%	6.6%
Australasian Food Corporation	NZAX	(139.2%)	(275.9%)	0.01	0.00	(21.6%)	(0.8%)	(0.4%)	(7.6%)
AWF Madison Group	NZX	4.5%	5.0%	3.96	2.73	33.8%	18.0%	13.5%	21.8%
Barramundi	NZX	188.1%	75.7%	(0.02)	0.14	26.7%	(4.6%)	10.7%	10.9%
Bethunes Investments	NZX	18.1%	(40.8%)	0.35	0.53	0.3%	6.3%	(21.6%)	(5.0%)
BLIS Technologies	NZX	(91.6%)	(40.7%)	0.48	0.97	(27.1%)	(44.0%)	(39.7%)	(36.9%)
Blue Sky Meats (NZ)	Unlisted	3.1%	2.1%	2.40	2.29	(10.1%)	7.5%	4.8%	0.7%
Briscoe Group	NZX	9.4%	10.2%	8.88	8.18	82.6%	83.0%	83.6%	83.1%
Burger Fuel Worldwide	NZAX	3.0%	3.0%	3.70	3.38	52.1%	11.1%	10.2%	24.5%
Cavalier Corporation	NZX	4.4%	1.2%	1.28	1.52	3.5%	5.7%	1.9%	3.7%
CDL Investments NZ	NZX	43.5%	49.0%	0.48	0.43	20.7%	21.0%	21.0%	20.9%
Chatham Rock Phosphate	NZAX	NA	NA	0.00	0.00	(2.7%)	(1.9%)	(43.3%)	(15.9%)
Chorus	NZX	30.9%	27.6%	0.34	0.29	12.4%	10.4%	8.0%	10.3%
Chow Group	NZAX	69.7%	(547.7%)	0.00	0.00	NA	0.0%	(1.6%)	(0.8%)
Comvita	NZX	7.8%	7.6%	0.96	1.11	10.6%	7.5%	8.4%	8.8%

	Market	2014 EBIT Margin	2015 EBIT Margin	2014 Activity Ratio	2015 Activity Ratio	ROCE 2013	ROCE 2014	ROCE 2015	3 Year Average ROCE
Connexionz	Unlisted	9.6%	23.3%	2.47	2.94	23.5%	23.7%	68.3%	38.5%
Contact Energy	NZX	16.2%	13.1%	0.37	0.37	5.4%	6.0%	4.9%	5.4%
Cooks Global Foods	NZAX	(66.6%)	(41.0%)	0.43	0.50	11.9%	(28.4%)	(20.7%)	(12.4%)
CSM Group	NZAX	NA	(883.8%)	0.00	0.09	(128.8%)	(29.1%)	(76.4%)	(78.1%)
Delegat Group	NZX	34.4%	28.6%	0.48	0.49	17.6%	16.6%	13.9%	16.0%
EBOS Group	NZX	2.6%	2.8%	4.08	4.35	14.5%	10.8%	12.2%	12.5%
Emerald Gisborne Property Trust	Unlisted	2.6%	4.3%	0.17	0.21	0.9%	0.4%	0.9%	0.7%
Energy Mad	NZX	(30.6%)	(49.1%)	2.63	3.76	(41.7%)	(80.4%)	(184.6%)	(102.3%)
Enprise Group	NZAX	(2.8%)	4.4%	2.73	1.95	(36.4%)	(7.5%)	8.6%	(11.8%)
EROAD	NZX	10.7%	1.9%	0.50	0.58	(2.1%)	5.3%	1.1%	1.5%
Evolve Education Group	NZX	NA	2.8%		0.23	NA	NA	0.6%	0.6%
Finzsoft Solutions	NZX	8.5%	19.6%	2.39	4.31	10.6%	20.3%	84.4%	38.4%
Fisher & Paykel Healthcare	NZX	23.0%	25.3%	1.16	1.23	20.9%	26.7%	31.1%	26.2%
Fletcher Building	NZX	7.3%	7.2%	1.54	1.57	9.5%	11.2%	11.3%	10.7%
Fliway Group	NZX	7.4%	4.1%	1.43	1.45	12.2%	10.6%	6.0%	9.6%
Foley Family Wines	NZAX	19.9%	11.1%	0.29	0.32	4.9%	5.7%	3.6%	4.7%
Fonterra Co-Operative Group	NZX	1.8%	4.2%	1.85	1.35	7.5%	3.3%	5.6%	5.5%
Freightways	NZX	16.4%	16.9%	1.16	1.22	17.6%	19.0%	20.7%	19.1%
Fronde Systems Group	Unlisted	0.7%	(5.5%)	21.87	16.90	241.2%	15.0%	(93.2%)	54.3%
G3 Group	NXT	9.4%	8.7%	0.70	1.05	11.7%	6.6%	9.2%	9.2%
Genesis Energy	NZX	8.4%	8.7%	0.53	0.62	4.9%	4.4%	5.4%	4.9%
Gentrack Group	NZX	28.0%	28.9%	0.56	0.68	16.3%	15.7%	19.6%	17.2%
GeoOP	NZAX	(1282.6%)	(501.7%)	0.16	0.37	(67.6%)	(210.0%)	(184.5%)	(154.0%)
GFNZ Group	NZAX	(296.5%)	20.1%	0.05	0.19	0.2%	(14.2%)	3.8%	(3.4%)
Goodman Property Trust	NZX	73.5%	76.2%	0.08	0.08	5.0%	5.7%	5.8%	5.5%
Green Cross Health	NZX	10.1%	7.7%	3.29	2.97	33.8%	33.1%	22.8%	29.9%
Hallenstein Glasson Holdings	NZX	9.3%	10.7%	4.50	5.24	56.8%	41.9%	56.1%	51.6%
Heartland Bank	NZX	45.5%	49.3%	0.04	0.04	1.3%	2.0%	1.9%	1.7%
Hellaby Holdings	NZX	5.7%	5.6%	2.52	2.54	12.5%	14.4%	14.2%	13.7%

	Market	2014 EBIT Margin	2015 EBIT Margin	2014 Activity Ratio	2015 Activity Ratio	ROCE 2013	ROCE 2014	ROCE 2015	3 Year Average ROCE
ikeGPS Group	NZX	(117.9%)	(171.2%)	0.46	0.84	(23.4%)	(54.2%)	(144.6%)	(74.1%)
Infratil	NZX	18.0%	17.9%	0.28	0.28	6.5%	5.0%	5.1%	5.5%
Intueri Education Group	NZX	15.0%	11.7%	0.64	0.63	1.0%	9.6%	7.4%	6.0%
Just Water International	NZAX	13.3%	12.5%	0.72	0.98	13.8%	9.5%	12.2%	11.8%
Kathmandu Holdings	NZX	16.0%	8.1%	1.13	1.10	18.7%	18.1%	8.9%	15.3%
Kingfish	NZX	83.9%	78.5%	0.23	0.10	23.8%	19.0%	7.8%	16.9%
Kirkcaldie & Stains	NZX	1.3%	(13.7%)	0.47	1.14	(1.5%)	0.6%	(15.6%)	(5.5%)
Kiwi Property Group	NZX	64.5%	68.2%	0.09	0.09	5.5%	6.0%	6.0%	5.8%
Kiwirail Holdings	Crown	1.7%	2.3%	0.96	0.96	2.3%	1.6%	2.2%	2.0%
Kordia Group	Crown	(2.9%)	6.5%	2.10	2.00	12.0%	(6.0%)	12.9%	6.3%
Landcorp Farming	Crown	17.0%	3.9%	0.15	0.13	1.4%	2.5%	0.5%	1.5%
Lateral Corporation	NZAX	(1.7%)	(277.4%)	1.61	0.60	(16.3%)	(2.8%)	(166.5%)	(61.9%)
Livestock Improvement Corporation	NZAX	12.0%	9.0%	0.90	0.87	13.2%	10.8%	7.8%	10.6%
Mainfreight	NZX	6.1%	6.2%	2.89	2.82	16.6%	17.6%	17.6%	17.3%
Marlin Global	NZX	80.2%	79.1%	0.18	0.18	12.2%	14.7%	14.6%	13.8%
Marsden Maritime Holdings	NZX	75.7%	74.8%	0.08	0.09	5.7%	6.3%	6.5%	6.2%
Mercer Group	NZX	0.0%	(8.4%)	1.58	1.28	6.8%	0.1%	(10.7%)	(1.3%)
Meridian Energy	NZX	14.5%	13.1%	0.34	0.38	4.6%	5.0%	5.0%	4.9%
Meteorogical Service of NZ	Crown	11.1%	9.2%	1.32	1.25	14.1%	14.7%	11.5%	13.4%
Methven	NZX	7.5%	9.1%	1.61	1.46	13.1%	12.1%	13.2%	12.8%
Metlifecare	NZX	14.6%	10.9%	0.05	0.05	0.7%	0.7%	0.5%	0.6%
Metro Performance Glass	NZX	14.1%	14.8%	0.91	0.94	9.9%	12.7%	14.0%	12.2%
Michael Hill International	NZX	9.5%	9.0%	1.79	1.70	19.0%	16.9%	15.4%	17.1%
Mighty River Power	NZX	20.1%	18.6%	0.30	0.30	4.1%	6.1%	5.5%	5.2%
Millennium & Copthorne Hotels NZ	NZX	20.2%	29.2%	0.24	0.29	4.4%	4.9%	8.5%	5.9%
Moa Group	NZX	(119.2%)	(89.7%)	1.18	1.23	(139.4%)	(140.4%)	(110.7%)	(130.2%)
Mykco	NZAX	(2.3%)	(3.5%)	0.47	0.55	6.9%	(1.1%)	(1.9%)	1.3%
New Zealand Oil & Gas	NZX	24.5%	(22.7%)	0.37	0.35	10.8%	9.1%	(8.0%)	4.0%
New Zealand Post	Crown	10.1%	9.8%	0.11	0.10	0.5%	1.1%	0.9%	0.8%
New Zealand Railway Corporations	Crown	(2341.9%)	(1296.4%)	0.00	0.00	0.4%	(0.0%)	(0.0%)	0.1%

	Market	2014 EBIT Margin	2015 EBIT Margin	2014 Activity Ratio	2015 Activity Ratio	ROCE 2013	ROCE 2014	ROCE 2015	3 Year Average ROCE
NPT	NZX	47.5%	57.4%	0.10	0.10	4.5%	4.8%	5.9%	5.1%
Nuplex Industries	NZX	5.8%	6.8%	1.71	1.78	12.2%	10.0%	12.2%	11.5%
NZ Windfarms	NZX	(12.2%)	3.9%	0.10	0.11	(1.9%)	(1.2%)	0.4%	(0.9%)
NZX	NZX	31.3%	28.5%	1.50	1.20	35.4%	47.0%	34.2%	38.9%
Opus International Consultants	NZX	6.1%	6.7%	2.83	2.68	19.4%	17.2%	18.1%	18.3%
Orion Health Group	NZX	(0.5%)	(32.9%)	4.22	4.16	(7.1%)	(2.2%)	(136.6%)	(48.6%)
Pacific Edge	NZX	(1837.7%)	(396.4%)	0.41	1.59	(749.9%)	(756.0%)	(628.8%)	(711.6%)
PGG Wrightson	NZX	3.9%	5.1%	3.18	3.07	6.6%	12.4%	15.7%	11.5%
Pharmazen	Unlisted	2.8%	14.9%	0.60	0.57	8.8%	1.7%	8.5%	6.3%
Precinct Properties	NZX	63.9%	65.2%	0.10	0.10	6.1%	6.3%	6.4%	6.3%
Promisia Integrative	NZX	(336.9%)	(218.6%)	0.08	0.25	(28.2%)	(27.7%)	(54.0%)	(36.7%)
Property for Industry	NZX	86.4%	83.6%	0.07	0.07	6.6%	6.2%	5.8%	6.2%
Proten	Unlisted	41.8%	44.0%	0.21	0.22	8.5%	8.8%	9.5%	8.9%
Public Trust	Crown	31.0%	33.7%	0.11	0.13	2.3%	3.5%	4.3%	3.4%
Pumpkin Patch	NZX	(4.5%)	(1.4%)	2.31	2.13	9.3%	(10.4%)	(3.0%)	(1.4%)
Pushpay Holdings	NZX	(518.4%)	(473.2%)	0.12	0.29	(144.9%)	(62.3%)	(136.9%)	(114.7%)
Rakon	NZX	(14.7%)	(3.2%)	1.05	1.42	(2.8%)	(15.4%)	(4.5%)	(7.6%)
Rangatira	Unlisted	57.5%	35.1%	0.56	0.39	6.9%	32.3%	13.5%	17.6%
Restaurant Brands	NZX	8.1%	8.6%	2.93	3.04	24.1%	23.6%	26.2%	24.6%
Rubicon	NZX	1.2%	2.5%	1.23	1.12	(0.4%)	1.4%	2.8%	1.3%
Rural Equities	Unlisted	49.3%	43.5%	0.06	0.05	1.7%	3.1%	2.1%	2.3%
Ryman Healthcare	NZX	18.9%	14.7%	0.08	0.08	2.0%	1.6%	1.1%	1.6%
Sanford	NZX	12.5%	11.2%	0.60	0.60	2.9%	7.5%	6.7%	5.7%
Scales Corporation	NZX	10.8%	16.1%	1.14	1.44	12.8%	12.3%	23.3%	16.1%
Scott Technology	NZX	7.7%	10.3%	1.15	1.12	17.7%	8.9%	11.5%	12.7%
SeaDragon	NZX	(54.2%)	(29.2%)	0.50	0.69	(6.9%)	(27.0%)	(20.2%)	(18.0%)
Sealegs Corporation	NZX	(3.7%)	(9.4%)	2.57	2.60	2.4%	(9.5%)	(24.6%)	(10.5%)
Seeka Kiwifruit Industries	NZX	3.7%	5.0%	1.36	1.24	4.7%	5.1%	6.2%	5.3%
Serko	NZX	(16.7%)	(60.8%)	0.72	1.28	(14.6%)	(12.0%)	(77.6%)	(34.7%)

	Market	2014 EBIT Margin	2015 EBIT Margin	2014 Activity Ratio	2015 Activity Ratio	ROCE 2013	ROCE 2014	ROCE 2015	3 Year Average ROCE
Silver Fern Farms	Unlisted	1.4%	1.9%	3.42	6.30	(2.1%)	4.7%	12.1%	4.9%
Skellerup Holdings	NZX	14.8%	14.5%	1.49	1.37	20.2%	21.9%	19.8%	20.6%
Sky Network Television	NZX	28.6%	29.2%	0.52	0.53	12.2%	14.8%	15.5%	14.1%
Skyline Enterprises	Unlisted	31.7%	35.2%	0.55	0.56	12.7%	17.4%	19.6%	16.5%
SLI Systems	NZX	(28.9%)	(26.3%)	12.02	13.25	(790.3%)	(347.6%)	(348.9%)	(495.6%)
SmartPay Holdings	NZX	22.9%	19.8%	0.58	0.55	3.2%	13.2%	11.0%	9.1%
Smiths City Group	NZX	2.5%	1.2%	1.78	1.82	2.9%	4.5%	2.1%	3.2%
Snakk Media	NXT	(30.4%)	(45.5%)	23.25	17.27	(9843.3%)	(705.6%)	(786.0%)	(3778.3%)
Solution Dynamics	NZAX	4.8%	6.3%	5.73	7.65	(2.5%)	27.5%	48.4%	24.5%
South Port New Zealand	NZX	31.1%	33.8%	0.61	0.72	23.2%	18.8%	24.3%	22.1%
Spark	NZX	13.3%	14.8%	1.27	1.29	16.2%	16.9%	19.1%	17.4%
Speirs Group	NZAX	(1.8%)	(0.2%)	1.88	2.51	(9.1%)	(3.3%)	(0.6%)	(4.3%)
Steel & Tube Holdings	NZX	6.0%	6.6%	2.18	2.18	12.0%	13.0%	14.5%	13.2%
Stride Property	NZX	79.6%	84.5%	0.09	0.07	7.1%	6.9%	6.3%	6.8%
Summerset Group Holdings	NZX	11.4%	10.5%	0.06	0.06	0.8%	0.7%	0.6%	0.7%
Synlait Milk	NZX	9.4%	5.9%	1.49	0.86	8.0%	14.0%	5.1%	9.1%
T&G Global	NZX	1.0%	4.1%	1.86	1.69	4.8%	1.8%	6.8%	4.5%
TeamTalk	NZX	12.2%	10.6%	0.55	0.57	12.7%	6.7%	6.0%	8.5%
Tegel Foods	NZX	4.8%	7.3%	0.85	1.00	4.4%	4.1%	7.3%	5.3%
Tenon	NZX	2.0%	3.6%	1.92	1.75	0.4%	3.9%	6.4%	3.6%
Terra Vitae Vineyards	Unlisted	43.8%	40.6%	0.13	0.12	4.0%	5.7%	4.9%	4.9%
The a2 Milk Company	NZX	2.1%	1.4%	2.68	3.21	25.1%	5.6%	4.4%	11.7%
The Colonial Motor Company	NZX	4.4%	3.8%	3.68	3.72	13.2%	16.1%	14.3%	14.5%
The New Zealand Refining Company	NZX	6.5%	47.5%	0.23	0.39	(0.7%)	1.5%	18.4%	6.4%
The Port of Tauranga	NZX	41.2%	40.7%	0.19	0.18	8.0%	7.9%	7.2%	7.7%
The Warehouse Group	NZX	3.6%	3.3%	3.71	3.41	18.8%	13.5%	11.3%	14.5%
Tourism Holdings	NZX	10.0%	13.5%	0.73	0.83	4.7%	7.3%	11.3%	7.7%
Tower	NZX	13.4%	(3.7%)	1.25	1.60	2.4%	16.7%	(6.0%)	4.4%
Trade ME Group	NZX	64.6%	60.1%	0.23	0.24	14.7%	14.6%	14.6%	14.6%
Transpower New Zealand	Crown	53.7%	39.2%	0.19	0.19	8.8%	10.4%	7.6%	8.9%

	Market	2014 EBIT Margin	2015 EBIT Margin	2014 Activity Ratio	2015 Activity Ratio	ROCE 2013	ROCE 2014	ROCE 2015	3 Year Average ROCE
Trilogy International	NZX	5.7%	12.8%	1.01	1.41	2.5%	5.7%	18.1%	8.8%
TRS Investments	NZX	(700.0%)	0.0%	0.01	0.06	(5.2%)	(4.9%)	0.0%	(3.4%)
TruScreen	NZAX	(8047.8%)	(25.7%)	0.00	0.23	NA	(25.4%)	(6.0%)	(15.7%)
TrustPower	NZX	25.1%	23.4%	0.25	0.28	7.9%	6.3%	6.5%	6.9%
Turners	NZX	12.4%	14.1%	0.23	0.33	(0.5%)	2.8%	4.6%	2.3%
Vector	NZX	31.8%	31.4%	0.22	0.21	8.5%	6.9%	6.5%	7.3%
Veritas Investments	NZX	53.5%	13.8%	4.44	1.47	2081.0%	237.7%	20.2%	779.6%
Vista Group International	NZX	14.0%	17.0%	1.62	1.24	83.8%	22.7%	21.1%	42.5%
Vital Healthcare Property Trust	NZX	76.1%	71.6%	0.11	0.10	8.5%	8.1%	6.9%	7.8%
VMob Group	NZX	(546.2%)	(193.1%)	0.29	0.93	(185.1%)	(158.2%)	(179.5%)	(174.3%)
Wellington Drive Technologies	NZX	(29.3%)	(10.1%)	2.43	3.03	(58.7%)	(71.1%)	(30.8%)	(53.5%)
Windflow Technology	NZAX	(213.1%)	(67.5%)	0.24	0.14	(121.3%)	(51.1%)	(9.1%)	(60.5%)
Wynyard Group	NZX	(90.5%)	(183.6%)	0.60	0.51	(26.9%)	(54.4%)	(94.3%)	(58.5%)
Xero	NZX	(54.6%)	(60.6%)	1.90	1.87	(77.4%)	(103.7%)	(113.5%)	(98.2%)
Z Energy	NZX	5.0%	1.2%	3.61	3.58	14.1%	18.1%	4.3%	12.2%
Zespri Group	Unlisted	1.6%	2.5%	10.03	13.16	9.4%	16.0%	33.1%	19.5%

Note: For companies with no revenue, ROCE has been directly calculated as EBIT / Average Total Net Operating Assets $_{(t\ \&\ t-1)}$.

Appendix 2 – ROCE explained

What is Return on Capital Employed and what does it show?

Return on Capital Employed ("ROCE") is a measure of business effectiveness and capital efficiency. ROCE is a function of profitability, how much profit a business generates before interest on debt and tax (EBIT) and activity, how much a business has invested in operating assets to generate that level of profitability.

In the 1920's Du Pont Corporation developed what is commonly known as Du Pont accounting and ROCE as a measure of business performance to enable it to compare the performance of its many different business units. The Du Pont accounting method is a powerful and relatively simple approach to determine the impact of management decisions on financial performance. The advantage of this method is that it provides a consistent form of evaluation for a business to use when measuring performance.

At an individual business level ROCE:

- allows comparison between business units of different size over time;
- shows where to invest further and where to cut back;
- shows whether it is worth borrowing further to invest;
- shows if expectations of shareholders are being met;
- indicates the maximum sustainable growth of a business; and
- is used to track whether or not a project is performing according to plan.

ROCE can be used to test operational efficiency, balance sheet management efficiency and the adequacy of return on total capital employed to make an assessment of a business's performance.

ROCE can be used to help management improve both the profitability (EBIT) and balance sheet management. Improvements in these areas will lead to improvements in the Return on Capital Employed.

Calculating ROCE

It is important to note that some changes need to be made to traditional thinking to gain the benefits of this dynamic approach. To achieve this there are two concepts that need to be considered:

Concepts

(i) The separation of funding from operating decisions

Consider the traditional formula for presenting financial statements.

EQUITY = (Current Assets + Cash - Current Liabilities) + Non-current Assets - Debt

In order to calculate ROCE, all forms of funding need to be removed from the right hand side of the equation. Total net assets should exclude any external funding or debt thereby representing the true value of scarce resources employed in the business.

The financial analysis format can now be structured as follows.

DEBT - CASH + EQUITY = (Current Assets - Current Liabilities) + Non-Current Assets

TOTAL CAPITAL EMPLOYED (TCE) = TOTAL NET OPERATING ASSETS (TNA)

The movement in TNA reflects operating changes made to the employment of scarce resources, whilst Net Debt (debt – cash) and Equity reflects how these changes are funded. It should be noted that where the directors of a business elect to retain minimum levels of cash this cash should be included in TNA.

(ii) Balance sheet efficiency – ACTIVITY RATIO.

Definition: A measurement of how well the business manages its scarce resources

Formula: $\frac{\text{Revenue}}{\text{Total Net Assets}}$

The Activity Ratio is a measure of how many times a business turns over its TNA in a financial year.

By way of example, an Activity Ratio of 2.5 means that for every $1 invested in TNA the business produces $2.50 in sales. It answers the question of whether or not the net operating assets are being utilised efficiently in the production of income.

The activity drivers are:

– Stock, Work in Progress, Inventory: the value of raw materials, work in progress and finished goods the business holds;

– Trade Debtors: how much the business has locked up in sales revenues receivable;

– Trade Creditors: how much the business owes to its suppliers for goods and services provided; and

– Non-Current Assets: how much is invested in plant and equipment and intangible assets which are required to operate the business and produce the goods sold.

Other current assets and liabilities such as prepayments and accruals are included in trade debtors and creditors.

Adjusting one or more of the activity drivers will increase or decrease the Activity Ratio and therefore improve or worsen ROCE.

(iii) Operational Efficiency – PROFITABILITY MARGIN.

Definition: A measurement of the Return on Sales purely from an operating perspective.

Formula:

$$\frac{\text{Earnings before interest \& tax}}{\text{Revenue}}$$

The above formula ignores the impact of funding and concentrates on the entity's ability to produce a return from revenue.

The four key profitability drivers are:

– Price: how much a business receives for the goods it sells;

– Volume: how many goods the business sells;

– Cost of Goods Sold: how much it costs the business to produce the goods it sells; and

– Expenses: the overhead expenses of the business including depreciation.

Adjusting one or more of the profitability drivers will increase or decrease the Profitability Ratio and therefore improve or worsen ROCE.

(iv) Return on Capital Employed – ROCE

The link between the Balance Sheet and Profit & Loss is dynamically reflected in ROCE.

Definition: The percentage return yielded from the employment of scarce resources in the form of profit before interest and tax

Formula:

$$\frac{EBIT}{TNA}$$

OR

Profitability x Activity

The interactive nature of this ratio is seen in the alternative formula as the product of Profitability and Activity. Operational and Balance Sheet efficiency are brought to life in one single ratio. This should be the first area of review in the process of corporate performance assessment and it should be determined as to whether or not ROCE is adequate and that of its components contribute to both the strengths and weaknesses of the financial strategy.

Irrespective of the type of industry ROCE should at least be equal to or greater than the weighted average cost of capital (WACC) in order for a business to create shareholder value.

Example ROCE calculation:

Revenue	100,000
EBIT	10,000
Profitability Ratio	10%
TNA	50,000
Activity Ratio	2x
ROCE	10% x 2 = 20%

It is worth noting that average TNA for the period over that Revenue and EBIT are derived will give a better result that just considering TNA and the end of the period being measured.

It should also be remembered that ROCE does not change when EQUITY is substituted for DEBT. This highlights the impact of a true operational performance measurement.

(v) Interfacing Profit and Loss/(Cash) with the Balance Sheet

The Balance Sheet is just a snapshot of the assets and liabilities of a business at a point in time. However its interaction with profit and loss, through Earnings before Interest and Tax (EBIT), provides the platform for developing a totally dynamic analytical structure.

Two businesses, producing the same sales and return on sales can be viewed from an operational point of view as being identical even if one were funded by debt and the other by equity. This is because the cost of borrowing is purely a financial issue.

ROCE Uses

ROCE can be used in many ways by organisations and management teams as a performance measure and as a tool when preparing budgets and valuations.

One of these ways is that the management team may set ROCE goals for either the entire organisation or its sub-units and decision making in respect of investing in new projects to ensure that the business is performing at a level that is greater than WACC.

ROCE is also able to be used to set up a performance remuneration plan for management and employees. As it is simple to calculate, ROCE provides a transparent model for such programs.

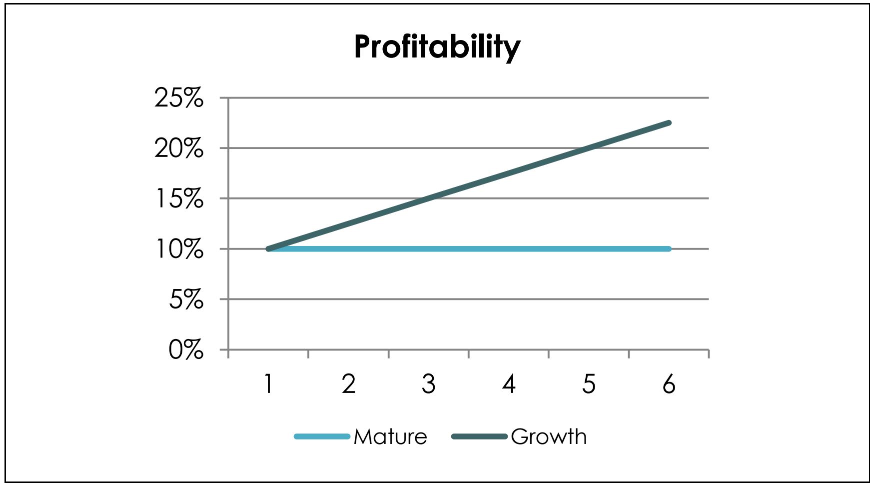
Budgeting and Valuation

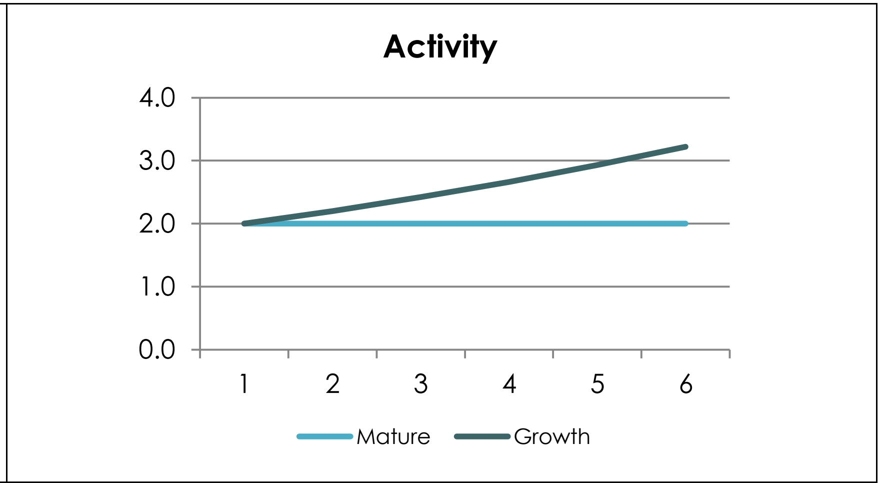
Businesses and analysts can often make an underlying error in budgeting or forecasting business performance that impacts a business valuation. When undertaking a valuation the biggest error usually arises from utilising overly optimistic forecasts. Discount rates are generally less susceptible to such errors.

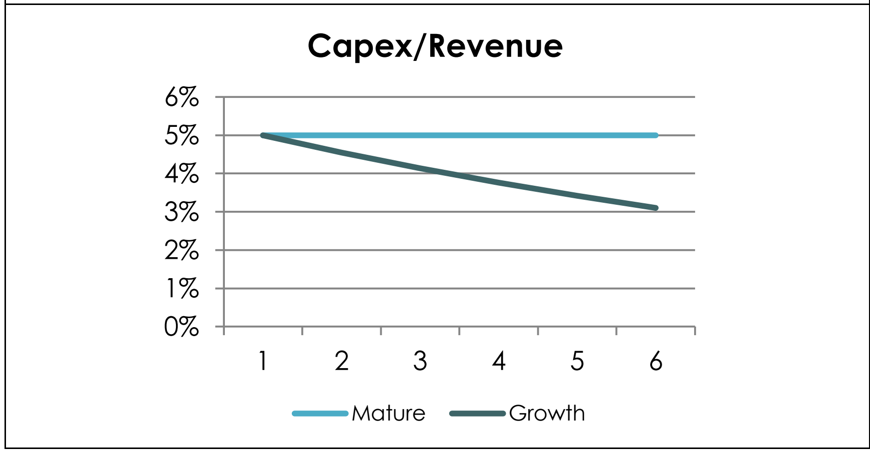
Consider the following 4 charts that simplistically compare Profitability, Activity, Capex to Revenue and ROCE ratios for a mature business and a growth business. The underlying issue is that most budgets for mature businesses more than often assume expanding profitability, increasing activity, reducing levels of capital expenditure for every dollar of sales and therefore increasing ROCE. More often than not a mature business is unlikely to see these improvements on an ongoing basis. While some improvement is always possible continuous expansion is unlikely to be experienced on an ongoing basis and the art of getting the forecasts correct is in challenging such ongoing expansion assumptions.

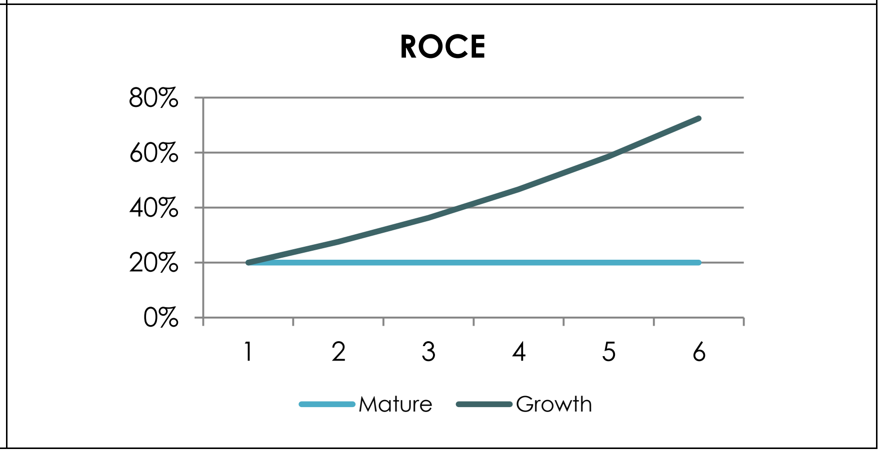
Forecasts for growth businesses often have the opposite issues. It is rare to find a business in NZ that can achieve EBIT margins in excess of 20% on an ongoing basis. At those levels competitors are likely to enter a market and customers generally start looking elsewhere or in-housing the supply. Revenue growth will also demand additional lock up in working capital and additional fixed assets to support the growth. Therefore to create robust forecasts for a growth business at some juncture these charts are likely to level out and this levelling is usually earlier than anticipated generally because the business becomes loose with expenditure.

Taking into account the ratios in the chart helps to reduce the risk of making a budget or forecast error and therefore improves the quality of the budget or forecast and by extension the quality of any valuation based off the same.









What is a "Good" ROCE

ROCE is a measure of a company's profitability and its activity. Quite simply, a good ROCE is a level that exceeds the weighted average cost of capital for the business. Where this is the case the business will be creating value for its shareholders.