



TDB
ADVISORY

A Review of the Mixed Ownership Model

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Glossary

Capex	Capital expenditure
CE	Crown entity
CPI	Consumer price index
EBITDAF	Earnings before interest, income tax, depreciation, amortisation, change in fair value of financial instruments, impairments and equity accounted earnings
FY	Financial year
Gentailer	Generator/Retailer
GWh	Gigawatt hours
ICP	Installation control point
IPO	Initial public offering
KWh	Kilowatt hours
MBIE	Ministry of Business, Innovation and Employment
MOM	Mixed Ownership Model
MWh	Megawatt hours
NPAT	Net profit after tax
NZAS	New Zealand Aluminium Smelter
SCI	Statement of corporate intent
SOE	State-owned enterprise
TSR	Total shareholder return

1. Executive summary

The Mixed Ownership Model (MOM) was implemented in New Zealand over the period 2011 - 2014. It consisted of the Government selling down its ownership in four large state-owned enterprises (SOEs), while keeping a majority control in each. Three of the SOEs were electricity generator/retailers (or gentailers): Meridian Energy (Meridian), Mercury Energy (Mercury)¹ and Genesis Energy (Genesis). The Government sold 49 percent of its ownership in each of these companies via a public float. The Government also divested a 20 percent stake in Air New Zealand, the country's largest airline, reducing its share in the company to 53 percent. Proceeds from the four sales equated to \$4.7b (nominal NZD).

The purpose of this paper is to provide a review of firm performance and the Mixed Ownership Model. The review begins with a summary of the Mixed Ownership Model and a detailed overview of all three gentailer companies.² The paper then investigates how the change in ownership structure affected the firms' performance.

The main results of the firm-performance analysis can be summarised as follows:

- In a 'before and after' analysis, Mercury and Meridian improved across both earnings metrics³ and Genesis worsened across both.⁴ There were, however, specific factors independent of ownership that have driven Genesis' results: namely the inflationary effect of the 2012 dry year on Genesis' pre-MOM earnings and the deflationary effect of the oil price slump on its post-MOM earnings. On the other hand, the 2012 dry-year will have deflated the pre-MOM earnings of Meridian and likely exaggerated any performance improvements over time. All three MOMs increased their dividends significantly, reduced their capital expenditure and lowered their debt to earnings and debt to equity ratios.
- As a group, the MOM gentailers improved across both earnings metrics: EBITDAF increased by 4 percent or \$57m p.a. and return on assets increased from 7.8 to 8.3 percent. Dividends increased by an average of 69 percent, capital expenditure decreased by 74 percent, debt to earnings ratio decreased by 20 percent and debt to equity ratio decreased by 17 percent.
- Using the two privately owned gentailers, Contact and Trustpower, as benchmarks, the privately owned gentailers improved EBITDAF to a greater extent than the MOMs. However, when earnings are standardised using return on assets the MOMs converged to the private gentailers (although not completely).

¹ At the time of listing, Mercury was then named Mighty River Power. On 5 July 2016, Mighty River Power announced it would be changing its name to Mercury NZ from 29 July 2016 (likewise the ticker symbol changed from MRP to MCY). Mercury was previously the name of Mighty River Power's major retail brand.

² As is discussed in Section 4.6, Air NZ is excluded from the MoM analysis because the company was already listed pre-MoM and the sell-down of the Crown's shareholding was relatively minor, going from 73 percent to 53 percent.

³ Earnings metrics used are EBITDAF and return on assets.

⁴ All financial performance metrics in this paper are measured in real dollars (\$2017).

- These results suggest that the MOMs increased earnings through a more efficient use of their assets and by focusing on core business. On the other hand, the private gentailers increased earnings broadly in line with their asset base.
- The performance improvements evident in the MoM companies post-partial privatisation occurred in a period where the electricity market had zero growth in demand, competition increased in generation and retail and when retail electricity prices were flat and the energy component of electricity prices fell in real terms.
- There appear to have been significant changes in the business strategies of the MOM gentailers over the period. In particular, Meridian and Mercury refocused on their core business of generation and retail of electricity in Australasia. Evidence of these strategic changes includes the divestment of investments outside Australasia and halting of new large-scale generation developments (which will have largely been a response to the slow-down in demand growth). In some cases these changes occurred after the announcement of the MOM policy and before public listing. Therefore these changes will not be fully captured by the financial analysis.

Following the firm-performance analysis is an assessment of how the partial sell-downs affected the Crown's financial position. The main results are:

- The total annualised shareholder returns (TSR) of the three MOM gentailers from their respective public listings until June 2017 were 26 percent (Meridian), 22 percent (Genesis) and 12 percent (Mercury). These returns are significantly larger than those achieved by Contact and Trustpower (both 7 percent annualised) for their shareholders over broadly the same period. This difference is partly driven by the New Zealand Power proposal (that did not proceed), which appears to have depressed the listing prices of Meridian and Genesis in particular, and thus contributed to the strong TSRs achieved. It also captures any IPO discount effect.
- The dividend path for the “control group” (ie, Contact and Trustpower) was close to flat over the entire pre and post-MOM periods. In contrast, the dividend paths of the three MOM gentailers all showed a large increase post-listing. The exact change in Crown dividend returns from pre to post-listing depends on how special dividends are treated and whether dividends paid or dividends declared are used. However, all interpretations show that total dividends received by the Crown did not fall in line with the 49 percent reduction in the Crown's holdings. On one measure – ie, when special dividends are excluded – the Crown received more in dividends post listing on its 51% holding than it did when it owned 100% of the companies.
- We also use an alternative starting valuation - the most recent commercial valuation before listing - in an attempt to provide a more accurate measure of the Crown's TSR for each company that is not influenced by the NZ Power proposal or any IPO discount. This alternative measure shows annualised TSRs to the Crown of 10, 9 and 13 percent for Mercury, Meridian and Genesis respectively.

Overall, the results of this study are consistent with the consensus of the empirical literature. The great majority of empirical studies of privatisation find significant positive effects on firm performance on average and over time.⁵ The literature also suggests that full privatisation induces larger improvements in firm performance than partial privatisation, through the further reduction of political interference, increased share market liquidity and by introducing the threat of takeover. However, any further sell down of the MOMs (or of other SOEs) should be considered on a case-by-case basis with due consideration of the Crown's objectives and the adequacy of the regulatory arrangements.

⁵ Megginson (2016).

2. Introduction

TDB Advisory Ltd (TDB) has prepared this paper for the purpose of providing an independent review of New Zealand's Mixed Ownership Model (MOM). The paper has been produced on a pro bono basis.

Chapter 3 of this paper provides a summary of the relevant literature, with a focus on how privatisation affects individual firm performance. Chapter 4 provides an overview of the MOM, including the specificities of all companies involved: Mercury Energy (Mercury), Meridian Energy (Meridian), Genesis Energy (Genesis) as well as a brief look at Solid Energy and Air New Zealand. Chapter 5 explores trends in the New Zealand electricity market as a foundation for the ensuing analysis. Chapter 6 details the individual firm performances of the three electricity generator/retailer ('gentailer') MOMs - Mercury, Meridian and Genesis - 'before and after' the change in ownership structure. Chapter 7 provides an aggregate 'before and after' analysis of the three MOM gentailers as well as a 'like for like' analysis of the three MOMs against two counterfactual private gentailers: Contact Energy (Contact) and Trustpower Energy (Trustpower). Chapter 8 discusses the effects that the MOM has had on the Crown's financial position and Chapter 9 concludes.

Annexes to this paper provide a background on the private gentailers, Contact and Trustpower, and a breakdown of respective individual firm performances (Appendix A); an annual breakdown of total, special and normal dividends for all relevant companies over the MOM period (Appendix B); a summary of New Zealand's privatisations (Appendix C) and a list of New Zealand's state-owned enterprises (SOEs), MOMs and Crown entities (CEs) as of 2017 (Appendix D).

3. Literature review

The surge in privatisations that took place in the 1980s and 1990s generated a vast number of case studies for economists (among others) who were interested in the optimal ownership structure of the firm and the optimal market structure of various industries. At a high-level (ie, private versus state ownership) the empirical literature has seemingly come to a consensus; private ownership of commercial enterprises delivers, on average and over time, improvements to firm performance over and above those achieved under full state ownership. There are of course individual exceptions to this rule. Amongst the thousands of privatisation examples across the world there are inevitably individual examples where the companies that moved to private ownership failed.⁶

The privatisation literature that focuses on firm performance can be broadly placed into two camps. The first camp focuses on individual firms or industries that experience a transformation from public to private ownership (or vice versa). The second camp takes a step back and analyses from a high level a broad pool of firms (across countries and industries).

Meggison and Netter (2001) provide a comprehensive overview of the literature on privatisation and find that privatisation, in the large majority of cases, leads to improvements in firm performance. The surveyed literature from Megginson (2016) suggests the evidence is compelling that private ownership results in operational efficiencies within the firm. All 17 firm-performance studies surveyed, including both full and partial privatisations, documented significant improvements post Government divestment. Megginson (2016) finds that, despite the apparent success of the model, privatisations have become less common over the last 15-20 years. In fact, the privatisation trend has not only stagnated but also been reversed in some countries. This is partly a result of the obvious privatisation candidates being the first to be sold and partly due to changes in political sentiment.

Gupta (2005) examines the effects of partial privatisation in India where the Government retained a controlling stake. This is relevant for our purposes as the Mixed Ownership Model left 51 percent of ownership in the hands of the New Zealand Government. Gupta is able to explore what the driver of firm performance is under privatisation while controlling for ownership (ie, government retains control while the firm is exposed to other market conditions). The two central arguments for privatisation and why it improves firm performance, that Gupta summarises, are:

- political effects: government may influence the firm's decision making so that it does not pursue outright profit maximisation (see Shleifer and Vishny, 1994); and

⁶ In New Zealand for example, both Air New Zealand and New Zealand Rail underwent privatisation before experiencing financial difficulties that resulted in them both being renationalised. That is not to say that the collapse of both companies was attributable to private ownership. A feature of competitive enterprise is that not all businesses will succeed. The question is what form of ownership is likely to be most efficient over time.

- managerial effects: government-owned firms have weak monitoring ability as there is no public share price and/or takeover threats (see Holmström and Tirole, 1993).⁷

Gupta (2005) finds strong evidence that profitability and productivity improve significantly when a firm is exposed to the stock market yet the government remains majority owner. These results suggest that partial privatisation can induce positive effects despite the potential for majority government ownership leaving room for political interference. Exposure to the market on its own, with the resulting improvements in monitoring and managerial incentives can be enough to improve firm performance. Gupta cannot, however, measure the gains foregone from not undertaking full privatisation (ie, removing both political and managerial effects).

In an analysis of 500 large firms, Boardman and Vining (1989) find that there are significant gains in firm performance under full privatisation but little difference between fully state-owned and mixed-ownership firms. Using data from 218 individual privatisations, La Porta & Lopez-de-Silanes (1999) find that the newly privatised firms (90 percent of which involved the Government selling a majority stake) quickly converge to industry benchmarks in profitability and other metrics. Further, La Porta & Lopez-de-Silanes find that improved profitability comes primarily from improved productivity and that the use of monopoly power to increase prices is not an important factor.

A 2009 study of the privatisation of the Canadian National Railway by Boardman, Laurin, Moore & Vining is important for two reasons. Firstly, the techniques used by Boardman et al to establish the effect of ownership on individual firm performance are used as a rough guideline for the approach taken in this paper. The fundamental advantage of the approach of Boardman et al. is the use of a similar firm to establish the counterfactual path of the privatised firm. The use of such a counterfactual controls for external forces over time that are independent of ownership yet nevertheless may have affected firm performance. Our study uses Contact and Trustpower for precisely this purpose. The second point of relevance that Boardman et al provide is a study of a firm in a somewhat non-competitive environment (freight rail). Their results conclude that privatisation can induce (fairly large) improvements in firm-performance without harming consumers.

Ehrlich, Gallais-Hamonno, Liu, & Lutter (1994) find that private ownership generates an unambiguous improvement in firm productivity in the long-run and these effects may or may not be noticeable in the short-run. The productivity gains hold for private versus state ownership and for private versus partially private ownership.

Zhang, Parker & Kirkpatrick (2008) conduct a high-level analysis of privatisation and competition in the electricity sector across a range of developing countries. Their main conclusions are that competition is a better stimulant of performance than privatisation on its own; although privatisation accompanied by an independent regulator can induce significant positive effects. In a similar vein, Kay & Thompson (1986) and Vickers & Yarrow (1991) are sceptical that privatisation can deliver value in non-competitive environments, and suggest regulation promoting competition is preferable to privatisation in the absence of fully competitive markets.

The empirical literature indicates the Mixed Ownership Model should improve firm performance of the three gentailers relative to 100 percent state ownership. However, some caveats should be

⁷ Holmström and Tirole, (1993) find that the greater the liquidity of the firm (ie, the greater proportion of the firm privatised), the more information there exists in the stock market.

kept in mind. In particular, it has only been three years since the MOM was introduced, whereas some of the literature suggests total gains are best evidenced in the long run. Also, because the Government has retained majority control there may be potential gains “left on the table” from lingering political interference and restrained stock-market liquidity weakening the monitoring effect of the share price.

4. Background to the Mixed Ownership Model

This chapter begins with an outline of the Government's stated purpose and goals for the Mixed Ownership Model. Next we provide an overview of how the partial privatisation processes took place with respect to Mercury, Meridian and Genesis⁸. The section continues with a brief description of Solid Energy (why the sale did not proceed) and Air New Zealand (why it is not a focus of this study) before concluding with some further industry and market information, including the regulatory environment and some salient political factors during the MOM transition period.

4.1 Purpose of the Mixed Ownership Model

In May 2011 the Government signalled its intention to pursue the partial privatisation of four state-owned energy companies as well as to reduce its shareholding in Air New Zealand. The four state-owned energy companies were Meridian, Mercury, Genesis and Solid Energy. All of which were 100 percent owned by the Government. The Government owned 73 percent of Air New Zealand. The Government's plan was to reduce its shareholding to approximately 51 percent in each of these companies, conditional on the National Party winning re-election in 2011 (that same year).

The purpose of the Mixed Ownership Model was multifaceted. The three core reasons outlined by then Finance Minister Bill English and then State Owned Enterprises Minister Tony Ryall were to:⁹

- reduce Government debt;
- increase investment opportunities for "mum and dad" investors; and
- improve the financial performance of the individual firms.

The focus of this paper is to analyse whether the third objective, to improve firm performance, has materialised. Other advantages of the Mixed Ownership Model cited by the Government included: freeing up capital to invest in schools, hospitals and broadband without requiring extra debt; the successful performance of Air New Zealand under the model; a deepening of New Zealand capital markets; allowing the companies to access capital to grow without relying solely on Government funds; and the likely increased performance that comes with increased outside scrutiny and transparency demanded by the private sector.¹⁰

Before proceeding with the partial privatisation of these firms the Government set five tests that must be met:¹¹

- the Government will maintain majority control of each company;
- New Zealand investors will have priority for shareholdings;

⁸ For equivalently styled descriptions of Contact and Trustpower see Appendix A.

⁹ <https://www.beehive.govt.nz/release/government-pursue-mixed-ownership-model>

¹⁰ Ibid.

¹¹ Ibid.

- the companies will provide good opportunities for investors;
- freed up capital will be used to fund new public assets and reduce the need to borrow; and
- the Government is satisfied that New Zealand consumers will be well protected by the relevant industry-specific legislation.

The National Party consequently won the 2011 election and after concluding that each of these benchmarks had been or could be met, proceeded with the plan to partially privatise the four SOE energy companies and reduce ownership in Air New Zealand.

As discussed in Chapter 3, the Government's goal of improving firm performance of the MOM companies was driven by clear theoretical and empirical mechanisms. Perhaps the core mechanism was improved monitoring of senior management and board decision-making. Market investors can influence the company through the share market. Under full Government ownership there is no immediate indication of company performance.

4.1.1 Estimated fiscal impact and Crown proceeds

The Crown's proceeds from the sell-downs were all allocated to the New Zealand Future Investment Fund. The fund was designed to invest in public infrastructure, such as schools, hospitals and ultra-fast broadband without the need to rely on foreign debt. The proceeds therefore displaced what would have been additional Government debt (that is, assuming all the investment would have gone ahead without the proceeds).

Table 1 below shows the Treasury's 2012 estimate of the fiscal impact of the partial sale of the five Government-held companies (before Solid Energy was excluded). Treasury based these estimates on the mid-range estimated proceeds of \$6bn (see estimated proceeds versus realised proceeds in Table 2 below).

The Crown forecast dividend revenue of \$460m would be forgone across the four years from FY 2013 to FY 2016. The dividends foregone would be offset by fiscal savings of \$575m from the lower finance costs arising from debt repayments. However, when foregone profits that are not distributed through dividends are included there was a projected net negative fiscal impact of \$325m on the operating balance across the four years.

Table 1: Treasury forecast fiscal impact of MOM

Year ending 30 June (\$million)	Forecast				Total
	2013	2014	2015	2016	
Cash/debt impact					
Forecast cash proceeds	1,500	1,500	1,500	1,500	6,000
Forecast forgone dividends	(50)	(90)	(140)	(180)	(460)
Estimated finance cost savings	55	91	173	256	575
Reduction in net debt	1,505	1,501	1,533	1,576	6,115
Accrual impact					
Forecast forgone profits	(90)	(180)	(270)	(360)	(900)
Estimated finance cost savings	55	91	173	256	575
Net decrease in the operating balance before gains and losses (OBEGAL)	(35)	(89)	(97)	(104)	(325)
Forecast gain on disposal recorded in taxpayer funds	200	200	200	200	800
Increase in net worth attributable to the Crown	165	111	103	96	475

Estimated finance costs are based on average bond yields

Profits include dividends paid in cash to shareholders and earnings that are retained by the company.

Source: Budget 2012, The Treasury.

The Treasury estimated that the full partial privatisation programme as originally outlined would generate the Crown between \$5 and \$7bn in funds (see Table 2 below). The Crown eventually raised \$4.7bn. The lower sales proceeds were partly attributable to the sale of Solid Energy not going ahead and partly due to other reasons (as are discussed later). As of 2011, Solid Energy was given a commercial value of \$2.8bn in its annual Statement of Corporate Intent and \$1.7bn by Forsyth Barr.

Table 2: Treasury estimated MOM proceeds

Year ending 30 June (\$billion)	Low estimate	High estimate	Gross proceeds	Net proceeds
Mercury	1.35	1.87	1.69	1.64
Meridian Energy	2.29	3.18	1.88	1.83
Air New Zealand	0.16	0.29	0.37	0.36
Genesis Energy	0.58	0.81	0.73	0.70
Solid Energy (did not proceed)	0.62	0.85	-	-
Total	5.00	7.00	4.67	4.53

Source: Budget 2014, The Treasury.

4.1.2 Cost of the share offer process

The cost of the partial privatisation process can be broken into two parts. The first are those costs incurred by the Crown as vendor. These costs are recognised in the Government's books. Secondly, there are costs incurred by the individual companies. The individual company costs are recognised within their financial statements. However, because the costs incurred by the individual companies took place while under full Crown ownership they are explicitly borne by the Crown in its profits. Therefore taxpayers meet both types of costs. Table 3 below shows a breakdown of the costs.

Table 3: Cost of MOM process, \$m

	Crown (Treasury) costs	Company costs	Total
Mercury	28	13	41
Meridian	26	12	38
Genesis	13	10	23
Air New Zealand	1	-	1
Solid Energy	-	0.2	0
Other	17	-	17
Total	85	35	121

Source: The Treasury (<http://www.treasury.govt.nz/downloads/commercial/mixed-ownership-model/mom-cipgso-final-20jun14.pdf>)

As Table 3 illustrates, total costs (including Crown and individual company costs) amounted to \$121m (\$2014). This comprised \$85m in costs attributed to Treasury and \$35m in costs to the individual companies¹². It should be noted that because Mercury was listed first it inevitably bore a larger share of the costs.

The costs to the Crown included \$13m in advertising and communications, \$65m in other outsourced services and \$8m in internal costs. Other outsourced costs presumably include investment bank fees and other services involved with the IPO process. Treasury notes that some of the costs incurred were for policy advice and monitoring which would have been incurred regardless of the partial privatisation process. Total costs amounted to 2.6 percent of the final Crown proceeds obtained from the share offer programme. PwC analysis shows that the average cost of large IPO's in the US (in excess of US\$300m) is approximately 5.5 percent of gross proceeds¹³. The MOM listings were not underwritten so no underwriter discount costs were incurred.

4.2 Mercury Energy

Key facts:

- Listing date: 10 May 2013
- Listing price: \$2.50 per share;
- Shares issued: 1,400,012,517;
- Retained Crown ownership: 51.75 percent
- Crown proceeds: \$1.69b (nominal)

¹² Securities law prevented the Crown from engaging with Air New Zealand during the sell down process, so Air New Zealand itself did not incur any costs.

¹³ <https://www.pwc.com/us/en/deals/publications/assets/pwc-cost-of-ipo.pdf>

Mercury (formerly Mighty River Power¹⁴) was the first of the three gentailers to be partially privatised. For simplicity we will refer to the firm as its current name (Mercury) throughout.

On 21 December 2011, Hon Tony Ryall the then Minister for State Owned Enterprises sent a letter of intent to the Chair of Mercury indicating the Government's wish to apply the Mixed Ownership Model to the SOE.¹⁵

The sale was originally expected to take place in the second half of 2012. However, the sale was delayed after a 2012 interim report by the Waitangi Tribunal highlighted concerns about the water and geothermal rights of Iwi with regard to the resources used by the state-owned energy companies.¹⁶ The Tribunal's report concluded that the Government should postpone the partial privatisation of the SOEs until the issues over water and geothermal rights were resolved.

The Waitangi Tribunal's major recommendation to address the rights issue was the idea of implementing a 'shares plus' element to the Mixed Ownership Model. 'Shares plus' referred to giving particular Iwi interests certain rights and powers that were greater than that of other shareholders. After ten days consideration the Government chose to postpone the listing of the SOEs until the issues highlighted by the Tribunal were investigated more substantially (despite not fundamentally agreeing with the conclusions of the Tribunal's report). Treasury took submissions on the 'shares plus' concept with a specific focus on reviewing the legitimacy of implementing it as part of the Mixed Ownership Model. In October 2012, Treasury concluded that 'shares plus' was not necessary because the issues it intended to address were either 'replicable by other mechanisms' or 'not practicable'.¹⁷

Nevertheless, the delay meant that the Mercury share offer did not take place until 15 April 2013, roughly six months after originally planned. The offer period for investors to apply for shares took place from 15 April to 3 May. The final price of \$2.50 per share (announced on 8 May) was within the indicative price range of \$2.35 to \$2.80. The shares were listed on the NZX on 10 May 2013.

As part of its regulatory requirements, each SOE is required to include its estimated commercial value in its annual statement of corporate intent (SCI). Mercury's 2011 SCI estimated its equity value at \$3.7b. First NZ Capital similarly valued the organisation's equity at \$3.6b in October 2011 (enterprise value¹⁸ of \$4.6b).¹⁹

Mercury's IPO in 2013 involved the issuance of 1,400,012,517 shares (51.75% was retained by the Crown). Given the announced offer price of \$2.50, the market value on offering was approximately \$3.5b, slightly below the most recent valuations recognised by Treasury (see section 4.7 for a discussion of the impact of the Labour and Green Party's proposal to establish a single-buyer of electricity and how it impacted the share value of Mercury).

The minimum application value for investors was \$1,000 (or 400 shares). All investors were guaranteed a minimum of \$2,000 worth of shares on application. The Government set a target of

¹⁴ On 5 July 2016, Mighty River Power announced it would be changing its name to Mercury NZ from 29 July 2016 (likewise the ticker symbol changed from MRP to MCV). Mercury was previously the name of Mighty River Power's major retail brand.

¹⁵ <http://www.treasury.govt.nz/downloads/commercial/mrp/mrp-le-12.pdf>

¹⁶ https://forms.justice.govt.nz/search/Documents/WT/wt_DOC_59941926/Wai2358W.pdf

¹⁷ <http://www.treasury.govt.nz/publications/reviews-consultation/sharesplus/pdfs/spc-2528609.pdf>

¹⁸ Enterprise value is equal to equity value plus debt less cash holdings.

¹⁹ <http://www.treasury.govt.nz/publications/informationreleases/valuationreports/2011>

selling 85-90 percent of the offered shares to New Zealand citizens. Also, no single individual or entity was (or still is) entitled to own more than ten percent of the company (other than the Crown).

Part of the share offer involved 'Loyalty Bonus Shares'. These bonus shares were available to any New Zealand investor who purchased the initial share offering and held those shares for two years. The bonus scheme granted one additional share for every 25 held, up to a maximum of 200 bonus shares. The bonus was not available to institutional investors or 'yet-to-settle' Iwi.

The purpose of the bonus scheme was multifaceted. Firstly, the scheme incentivised retail over institutional investing, therefore assisting in the Government's goal of promoting widespread rather than concentrated ownership. It also promoted local ownership because only New Zealand residents qualified for the bonus. And lastly, the bonus scheme incentivised long-term ownership due to the requirement for the shares to be held for two years in order to be eligible.

Mercury remains a large player in both the generation and retail arms of the electricity sector. As of 2016/17, Mercury generated 17.7 percent of New Zealand's total electricity, which made it the third largest generator. With respect to retail, Mercury primarily operates under the Mercury Energy brand but also under a few smaller brands (such as GLOBUG, Tiny Mighty and Bosco Connect). Mercury is the third largest electricity retailer, with approximately 19 percent of customers as of 2017 and 16 percent of retail volume as of 2016.

As of 2017, 100 percent of Mercury's electricity generation was renewable (up from 93 percent in 2015 and 98 percent in 2016). 62.7 percent of this electricity generation was hydro and the remaining 37.3 percent was geothermal.

4.3 Meridian Energy

Key facts:

- Listing date: 29 October 2013
- Listing price: \$1.50 per share;
- Shares issued: 2,563,000,000 shares;
- Retained Crown ownership: 51.02 percent
- Crown proceeds: \$1.88b (nominal)

In 2013, Meridian became the second of the three state-owned gentailers to be partially privatised. Of the three, Meridian had the largest market value and that remains so in 2017.

Retail applicants were guaranteed a minimum of 1,000 shares. Part of the share offer involved the Government providing investors the opportunity to pay for their shares via two instalments. The first payment (\$1 per share) was due on application for the shares. The second instalment (\$0.50 per share) was, however, not due until 18 months later. The effect of the instalment program was that investors were able to earn a higher than normal rate of return over the initial 18 month period. That is, the investor received a full dividend for just two-thirds the investment while retaining full voting rights and the ability to sell the instalment receipt. Investors were issued

ordinary Meridian shares for the 'paid-for' shares and instalment receipts for the 'not-yet-paid-for' shares. The instalment receipts were tradable on the stock exchange like ordinary shares. Once the instalment receipts had been fully paid they were cancelled and the shareholder was issued ordinary shares.

The first instalment required investors to front up \$1 per share. Because the final price had not yet been announced when the instalment plan was put forward, the second instalment was originally indicated to be in the range of \$0.50 to \$0.60 despite the indicative price range being between \$1.50 and \$1.80, because the Government set a cap on retail investors at \$1.60 per share. Therefore the second instalment was capped at \$0.60 for New Zealand retail applicants who satisfied some basic conditions.

The Meridian share offer took place on 30 September 2013. The offer period for investors to apply for shares took place from 30 September to 18 October. The final price was announced on 23 October as being \$1.50 per share.²⁰ The shares were listed on the NZX on 29 October 2013.

Meridian's 2011 SCI estimated equity value was \$6.5b. This was equivalent to the valuation by Macquarie in November 2011 (enterprise value of \$7.7b).²¹

Meridian's IPO involved the issuance of 2,563,000,000 shares (51.02% was retained by the Crown). Given the announced offer price of \$1.50, the market value on offering was approximately \$3.85b, significantly below the most recent valuations recognised by Treasury. By the end of trading on 29 October (the first day on the NZX) the share price had risen by 8 percent.

Meridian is New Zealand's largest electricity generator. As of 2017, Meridian generated around 33 percent of New Zealand's electricity and 100 percent of Meridian's electricity generation was renewable. 90 percent (or 11,974 GWh) was hydro and the remaining 10 percent (1,341 GWh) was wind. As of 2017, Meridian was the fourth largest electricity retailer, with approximately 13 percent of customers although it has the largest share of retail volume at approximately 29 percent as of 2016.²²

4.4 Genesis Energy

Key facts:

- Listing date: 17 April 2014;
- Listing price: \$1.55 per share;
- 1,000,000,000 shares issued;
- Retained Crown ownership: 51.23 percent; and

²⁰ The indicative price range for the share offer was \$1.50-\$1.80, although the price cap for New Zealand retail investors was \$1.60.

²¹ <http://www.treasury.govt.nz/publications/informationreleases/valuationreports/2011>

²² The discrepancy between ICP count and retail volume is largely due to Meridian supplying the majority of electricity to the New Zealand Aluminium Smelter (NZAS), which consumes approximately 12 percent of New Zealand's electricity.

- Crown proceeds: \$0.73b (nominal).

In 2014, Genesis became the third and final SOE gentailer to be partially privatised under the Mixed Ownership Model (and after the Air New Zealand sell-down in late 2013).

The Genesis share offer opened on 29 March 2014 and closed on 11 April. The final price announced on 28 March was \$1.55 per share.²³ The shares were listed on the NZX on 17 April 2014. Unlike the previous two sales processes, the final offer price was finalised before the offer period closed to provide investors with greater certainty. The Crown originally indicated it would not necessarily sell off the entire 49 percent. Instead, depending on demand, it would sell anywhere between 30 and 49 percent. In the end there was strong market demand, despite Genesis being the third gentailer to be sold, and the Crown did decide to sell 49 percent.

Genesis Energy's 2012 SCI estimated an equity value of \$2.12b. This was above a valuation by Macquarie in 2011, which estimated the SOE was worth \$1.76b (enterprise value of \$2.96b).²⁴

The Genesis IPO involved the issuance of 1,000,000,000 shares (51.23% was retained by the Crown). Given the announced offer price of \$1.55, the market value on offering was approximately \$1.55b, below the most recent valuations recognised by Treasury. By the end of the first day of trading, the share price had risen to \$1.81, up 16.8 percent and approximately in line with recent equity valuations. If the shares had been originally priced at \$1.81, the Crown would have generated an additional \$82m in proceeds.

Retail investors who purchased original Genesis shares were entitled to one bonus share for every fifteen purchased (up to a maximum of 2,000 bonus shares) after holding the shares for one year. This was a significantly more generous offer than the similarly styled Mercury bonus, which entitled investors to one bonus share for every twenty-five held for two years.

As of 2017, Genesis has the most retail customers (approximately 24 percent of ICPs) and the third largest retail volume at 16 percent of the market. Genesis is also the fourth largest generator, producing 6,400 GWh in 2017, or 15 percent of total New Zealand electricity. In the year ending June 2017, 49 percent of Genesis Energy's electricity generation was renewable (compared to the market average of 85 percent). 48.8 percent of generation was hydro and 0.3 percent was wind. The non-renewable generation consisted of 48 percent gas and 2.9 percent coal.

4.5 Solid Energy

Solid Energy was originally part of the Government's partial privatisation plans however the plan was abandoned after it emerged that the company was in a direr financial situation. In June 2012, Solid Energy was moved into 'intensive monitoring' by the Government.²⁵ The decline in Solid Energy's position was largely due to the falling price of coal, as well as poor cost-control and an apparent inability of management to alter the business strategy.

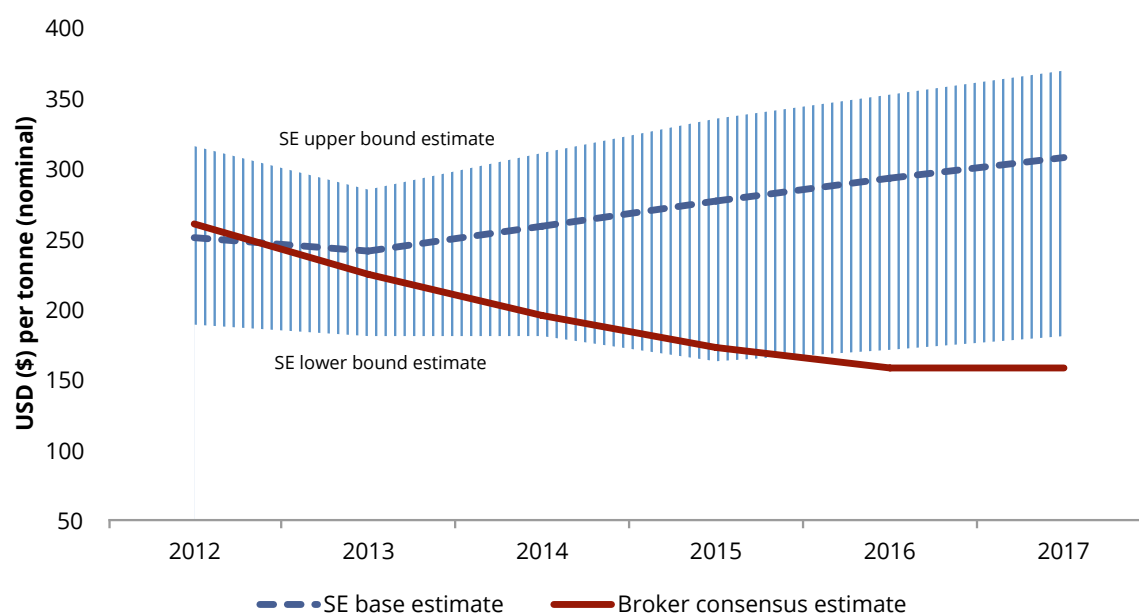
²³ The indicative price range for the share offer was \$1.35-\$1.65, although the price cap on New Zealand retail investors was \$1.60.

²⁴ <http://www.treasury.govt.nz/publications/informationreleases/valuationreports/2011>

²⁵ <http://www.treasury.govt.nz/publications/informationreleases/solidenergy/pdfs/se-2351953.pdf>

Solid Energy had pursued a business strategy based on projections of strongly growing energy and coal prices that failed to materialise. The Auditor-General undertook a review of Solid Energy's price forecasting in 2014. The Auditor-General's report compared Solid Energy's 2011 forecasts with the consensus of forecasted prices by brokers at the time and with actual coal prices in 2012 and 2013. Figure 1 below shows Solid Energy's forecast price of hard-coking coal (low, base and high case) with the broker consensus at the time.

Figure 1: Hard-coking coal price - Solid Energy forecast and broker consensus



Source: Auditor-General briefing to the Commerce Committee on Solid Energy (March 2014).

As Figure 1 shows, Solid Energy forecast prices that were much more optimistic than the broker consensus at the time. Hence its business strategy was based on an overly optimistic view of future coal prices and therefore future revenues were exaggerated. The failure to recognise the deviations illustrated above suggests a monitoring breakdown.

4.6 Air New Zealand

Air New Zealand was first privatised in 1988 to a consortium that included Brierley Investments (65 percent stake), Qantas (19.9 percent), Japan Air Lines (7.5 percent) and American Airlines (7.5 percent). As a part of the sale, Brierley Investments was required to float a portion of its stake. In 1989, 30 percent of Air New Zealand was floated.

In 1996, Air New Zealand purchased a 50 percent stake in Ansett, Australia's second largest airline at the time, before purchasing the remaining 50 percent in 2000. By 2001, Ansett had run into financial difficulties. With Air New Zealand facing collapse, the Government recapitalised the company with an \$885m capital investment and in return received 82 percent ownership.

The Government sold down 20 percent of its stake in Air New Zealand in November 2013, as part of its Mixed Ownership Model programme. The Crown's stake fell from 73 to 53 percent, with the sale raising approximately \$365m (nominal) in proceeds.

Air New Zealand is not included in the firm-performance analysis in this report as the change in Air New Zealand's ownership is less significant than the three gentailers. Air New Zealand was publically listed before and after the sell-down and the Crown's stake changed from 73 to 53 percent Crown. The three gentailers on the other hand went from 100 percent Crown ownership to 51 percent and were exposed to the market for the first time. An additional (albeit less significant) reason for excluding Air New Zealand in our firm performance analysis is that there are less obvious comparators than there are for the three MOM gentailers.

4.7 Political factors

4.7.1 *Opposition to the Mixed Ownership Model*

The main issues raised by opponents to the Mixed Ownership Model can be summarised as follows:²⁶

- increased power prices;
- increased asset inequality;
- increase in the Government deficit;²⁷
- increase in the current account deficit;
- negatively impact New Zealand's external debt situation; and
- limit the ability to invest in renewables (ie, the Government may lose the power to direct the companies toward cleaner energy technologies).

It is worth establishing that privatisation does not change the aggregate of foreign claims over New Zealanders, but merely the composition. Increased foreign investment is offset by a reduction in foreign debt. According to JBWere, the level of foreign ownership of Mercury has increased from 13.5 percent at listing to approximately 20 percent as of late-2016; foreign ownership in Meridian has increased from approximately 13.5 to 16 percent; and Genesis from 12 percent to 15 percent. All of the foreign percentage shares of the MOM companies are lower than the New Zealand share market average of 36 percent foreign ownership.²⁸

Further, the Government's fiscal position would in general be expected to be unchanged from asset sales. Although if there are improvements in the privatised firm's performance then there may be net gains in the Government's financial position as the Government receives greater tax revenue and, in the case of partial privatisation, increased dividends proportional to ownership, as well as the returns from wherever the sale proceeds were invested. Lastly, various social goals, which often underlie calls for state ownership (such as the desire for lower electricity prices

²⁶ Mixed Ownership Model Bill as reported from the Finance and Expenditure Committee: https://www.parliament.nz/resource/en-NZ/50DBSCH_SCR5494_1/a4bdfac68d1c0411e58c397a961f96714350357f

²⁷ Numbers reported at the time indicated the Crown would lose \$360m per year in dividends and save \$266m in borrowing costs (ie, net operating loss of \$94m).

²⁸ http://www.nzherald.co.nz/business/news/article.cfm?c_id=3&objectid=11890005

mentioned above), are generally better achieved through other more targeted means such as through the welfare system.²⁹

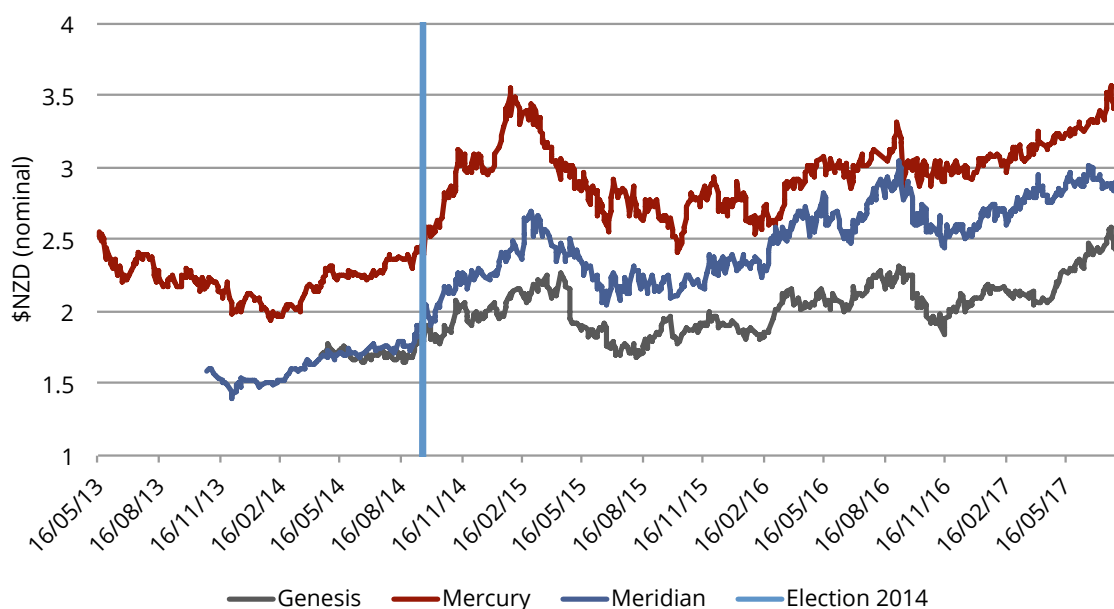
4.7.2 New Zealand Power

In April 2013, before the first gentailer listing had taken place but after the sales process of Mercury was underway and IPO documents released (with fair value price range), the Labour Party and the Green Party jointly announced that, if elected in 2014, they would establish a single buyer of electricity that would purchase wholesale electricity at a price based on the cost of production.³⁰

The reason given for the proposal was that the wholesale market was not ‘truly competitive’ and residential customers were paying too much for their power. The policy also involved forgoing dividends and tax revenue from the energy companies.

The Government accused the opposition of a deliberate attempt to undermine the success of the upcoming gentailer listings, a claim denied by David Shearer, leader of the opposition at the time.

Figure 2: Share price - Mercury, Meridian, Genesis



Regardless of its intent, there is little doubt the policy damaged the attractiveness of the energy company listings, as it effectively meant the firms would lose a significant chunk of their energy margins if the policy was implemented. There is a strong case that the initial decline and reasonably sustained slump in the share price of Mercury was attributable to the Labour-Green proposal. Mercury’s share price fell below \$2 at the end of 2013 and during the beginning of 2014. By October 2014 (ie, following the election and the return of the National Government) the price had recovered to its offer price of \$2.50 and has almost exclusively sat higher than that price ever since.

Figure 2 above plots the share price of Mercury, Meridian and Genesis Energy respectively, since public listing in 2013/2014. The light blue line indicates the 2014 election. As the graphs show, the

²⁹ As noted in Section 5, electricity prices did not rise following the MOM.

³⁰ <http://www.scoop.co.nz/stories/PA1304/S00355/labour-acts-to-bring-down-power-prices.htm>

share price of each firm increased considerably after the 2014 election with the certainty that New Zealand Power would not go ahead, amongst other factors.

A 2013 valuation of Meridian by TDB estimated the New Zealand Power proposal reduced the share price of Contact and Trustpower by 7 to 8 percent.³¹ This figure serves as a good approximation, although not a perfect one, of the effect of the New Zealand Power proposal on the listing values of the MOM companies and ultimately the cost to taxpayers through lower proceeds. The share price of Meridian and Genesis were most affected by the New Zealand Power proposal as their fair value price range incorporated the possibility of a New Zealand Power implementation, whereas Mercury's did not.

4.8 Regulation

The Public Finance (Mixed Ownership Model) Act 2012 limits the ability of the Crown to proceed with a further sell down of Mercury, Meridian, Genesis or Air New Zealand. The Act prevents the Crown from owning fewer than 51 percent of shares in each of the companies.

The Act also restricts any one individual from owning more than 10 percent of any MOM company.³² In tandem with the 51 percent Crown ownership requirement, this restriction acts to prevent concentrated ownership and fits with the Crown's original desire to promote widespread ownership among New Zealanders.

If the Crown were to relinquish its controlling stake while keeping the 10 percent ownership restriction in place, this would prevent a takeover by a majority shareholder. There is no reason why the two core elements of the Act (51 percent Crown ownership and 10 percent single shareholder restriction) need to be linked. The Crown could sell down its shares by amending the Act, and keep the 10 percent restriction on single shareholders. Likewise, the Act could be abolished altogether and the respective companies could be treated the same as other commercial enterprises and no longer be subject to any specific regulation relating to their ownership structure.

4.9 Management and governance

The Public Finance (Mixed Ownership Model) Amendment Act 2012 does not legislate the process by which the board or the chairperson is elected. Each of the MOM companies has a similarly written constitution. The key factor worth noting in the respective constitutions is the appointment process for the chairperson. The board must elect a chairperson who must be approved for this purpose by the Minister of Finance. Clearly, this is a novelty of the Mixed Ownership Model.³³ For SOEs, the shareholding ministers appoint the chair (without election by the board). For most listed companies the board elects the chair.

³¹ https://nzx.com/files/static/cms-documents/TDB_Meridian_Energy_Research_Report_131002.pdf

³² As of June 2017, the largest shareholder (aside from the Crown) had a 7.9 percent stake in Mercury, 5.2 percent stake in Meridian and a 5.2 percent stake in Genesis.

³³ The chair position for Air New Zealand also requires Minister of Finance approval.

Appointment of directors for the MOM companies is, like most listed companies, subject to an ordinary resolution by shareholders (of which the Government is a majority).³⁴ The Treasury in 2014 outlined a process as a guideline for MOM board appointments.³⁵

Despite the Government retaining majority ownership there was a clear shift in the role that it played. Treasury made clear during the MOM process that the Crown would not guarantee the shares in the companies or provide any commitment of future capital contributions.³⁶ Further, Treasury stipulated that the Company's should have a purely commercial focus and it recognised the board and management as the responsible party for company decision making, not the Government. In effect, this document indicated that the Government would behave as a passive owner. This indication, however, is not binding and does not prevent Government interference in future.

A further change that has evidently materialised under partially private ownership has been improvements in disclosure and transparency. In particular, the investor presentations provide investors with a depth of information that was not provided before listing. Ultimately, taxpayers were/are the owners of the respective companies yet were not privy to the level of information typically provided to owners. Regardless of whether more detailed information was provided to Treasury or to respective Ministers under the SOE model, the owners (taxpayers) were not privy to such information. There is of course no reason why there could not have been greater disclosure and transparency under Government ownership as Treasury could have required it of the companies. The fact remains, however, that they did not.

³⁴ In regard to the senior management and chairs of the three gentailers: The CEO of Mercury during the partial privatisation process was Doug Heffernan, who had been in that position for 16 years. Since September 2014 the CEO has been Fraser Whineray. The Chair of Mercury has been Joan Withers since October 2009. The CEO of Meridian during the partial privatisation process was Mark Binns, who was in that position from January 2012 to December 2017, when Neal Barclay became CEO. The Chair of Meridian has been Chris Moller since January 2011. The CEO of Genesis Energy during the privatisation process was Albert Brantley, who had held that role since 2008. A new CEO, Marc England, has been in the role since May 2016. The Chair of Genesis Energy has been Dame Jenny Shipley since November 2009.

³⁵ <http://www.treasury.govt.nz/downloads/commercial/mixed-ownership-model/mom-majority-companies.pdf>

³⁶ <http://www.treasury.govt.nz/downloads/commercial/mixed-ownership-model/mom-majority-companies.pdf>

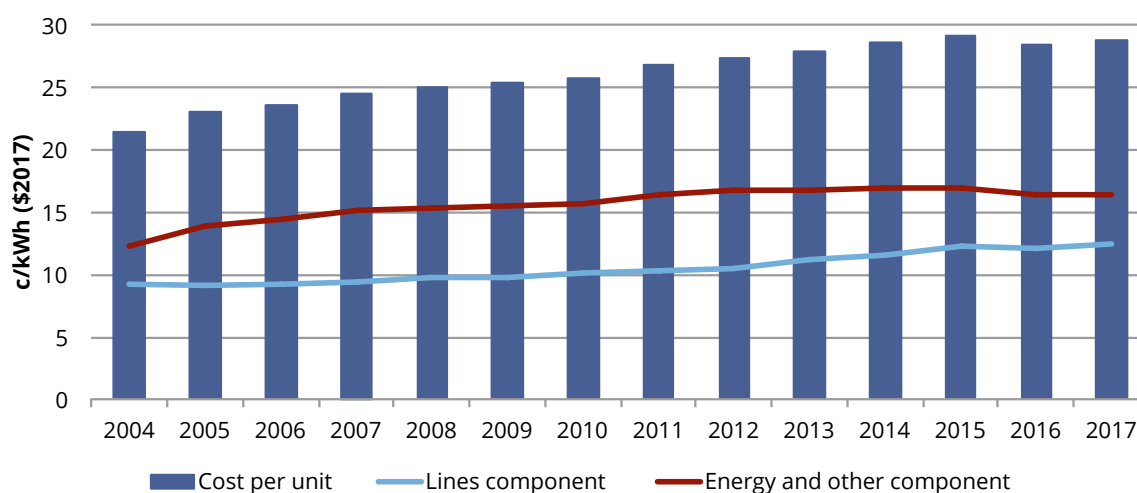
5. Electricity market information

This chapter briefly explores market trends in the electricity sector over the relevant period. The focus is on electricity prices, electricity demand and market shares in electricity generation and retail as a proxy for competition.

5.1 Electricity prices

Real (inflation-adjusted) electricity prices have been relatively constant for residential consumers since the implementation of the Mixed Ownership Model in 2013. According to the Ministry of Business, Innovation and Employment (MBIE), from 2013 to 2017 the average residential cost of electricity increased from 27.9 to 28.8 cents per kWh (3 percent increase) in real (\$2017) terms.³⁷

Figure 3: Real residential electricity prices, by component (per kWh, incl. GST)

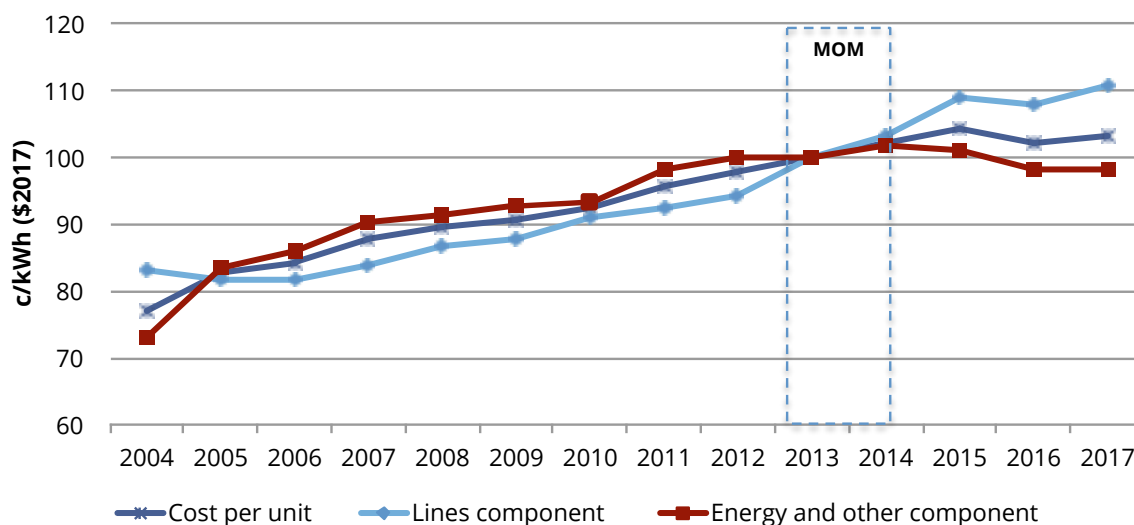


The increase in residential electricity prices was entirely driven by the lines (regulated) component of electricity pricing (ie, transmission and distribution). From 2013 to 2017, lines costs increased from 11.2 to 12.4 cents per kWh (11 percent increase). Over the same period, the energy component fell from 16.7 to 16.4 cents per kWh (2 percent decline).

Figure 4 shows the two electricity components and the total price indexed at 2013 (the beginning of the MOM period). As illustrated, the energy component of residential electricity prices has fallen since implementation of the MOM while the lines component has increased somewhat and has been the driver of the small increase in overall prices since 2013.

³⁷ This study does not purport to be a comprehensive review of electricity prices. That is currently being undertaken by the Government's Electricity Price Review.

Figure 4: Real change in residential electricity prices, by component (indexed to 2013)

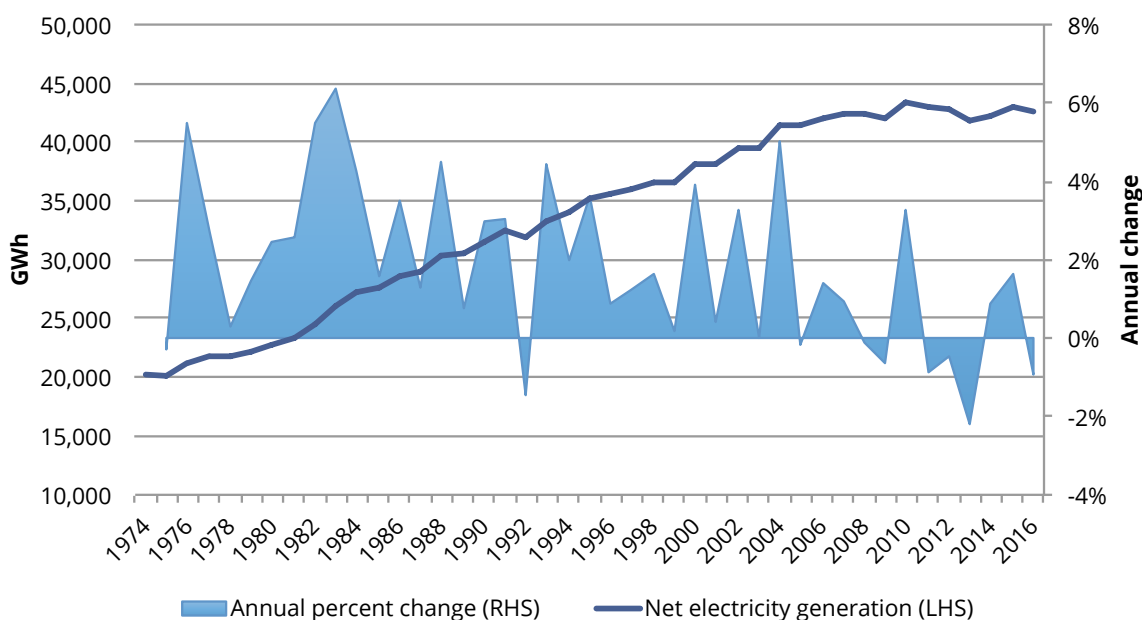


Source: Ministry of Business, Innovation and Employment

Nor has there has been an increase in commercial or industrial electricity prices. From 2013 to 2017, commercial prices fell from 17.5 to 16.6 cents per kWh (5 percent decline) and industrial prices fell from 10.7 to 10.5 cents per kWh (2 percent decline). There is no comparable information on the breakdown of the energy and lines components underlying industrial and commercial prices.

5.2 Electricity generation

Figure 5: Electricity generation in New Zealand



Source: Ministry of Business, Innovation and Employment

After growing steadily for the three decades to the mid 2000s, New Zealand electricity demand peaked in 2006/07 and has remained relatively flat since. Figure 5 below illustrates New Zealand

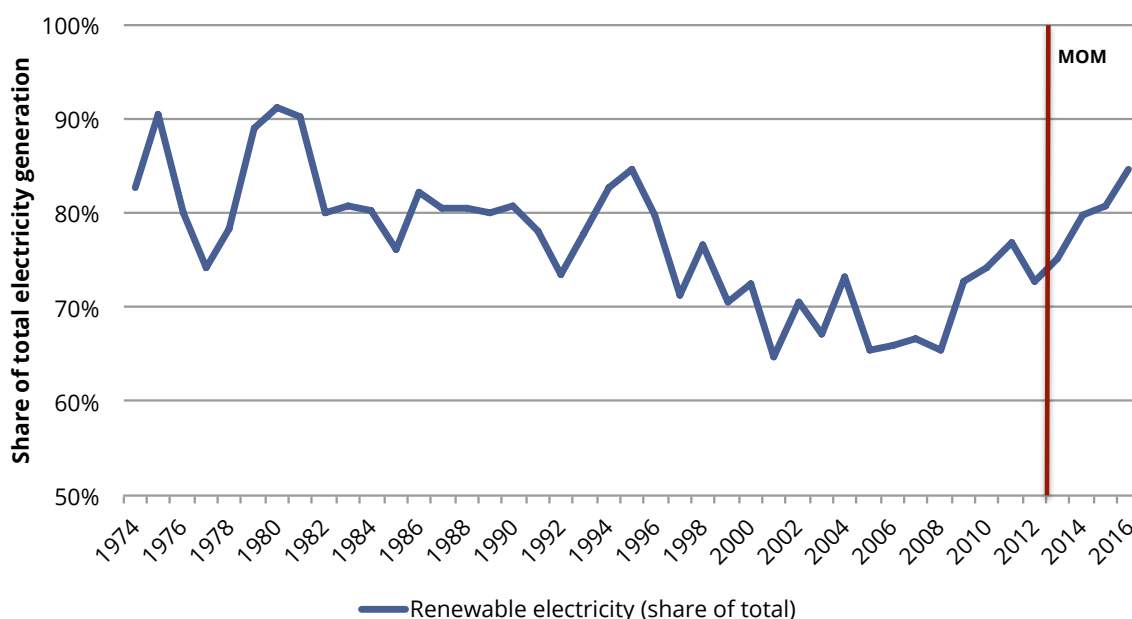
electricity generation from 1974. Between 1974 and 2004, the annual compound growth rate of electricity generation was 2.43 percent. From 2005 to 2016, the growth rate was just 0.26 percent.

There has clearly been a significant change in market dynamics over time. Until the mid 2000s, the gentailers operated in a market that was growing and encouraged increased production capacity. Since then, the market has flattened out considerably and the gentailers have had to compete amongst each other to meet existing as opposed to new demand.

Figure 6 shows the level of renewable electricity as a proportion of total electricity generated in New Zealand. One of the arguments used in opposition to the MOM was the risk of a decline in renewable electricity, as the companies would supposedly not consider non-profit objectives. As Figure 6 illustrates, the proportion of renewable electricity generated in New Zealand is higher in 2017 than it has been in over twenty years, and has grown steadily each year since the implementation of the MOM (red line).

This is by no means intended to illustrate causality (ie, the Mixed Ownership Model is the driver of increased renewables). It does however show that fears of declining renewables did not eventuate and do not appear to have been hindered by ownership.

Figure 6: Renewable electricity in New Zealand



Source: Ministry of Business, Innovation and Employment

5.3 Competition

The market shares of the respective generator/retailer firms are a reasonable proxy for the competitiveness of the respective markets. A greater dispersion of market shares will, in general, reflect increased competition and a reduced concentration of market power.

Table 4 below shows the change in generation market shares for the five large gentailers from the three-year pre-MOM period to the three-year post-MOM period. The market shares of the five large generators have, in aggregate, fallen slightly from the pre to post MOM period; declining from 91 to 89 percent of total market generation. While only a small decline, this does suggest

there has been a small increase in market competitiveness since the implementation of Mixed Ownership Model.

Table 4: Generation market share

Company	2010-2012	2014-2016	Change	% Change
Meridian	30%	31%	2%	6%
Contact	23%	22%	-2%	-7%
Mercury	15%	15%	0%	1%
Genesis	17%	16%	-2%	-11%
Trustpower	5%	5%	0%	-1%
Other	9%	11%	2%	22%

Source: Ministry of Business, Innovation and Employment. Figures may not add due to rounding.

The five main retailers are also the five largest generators. Table 5 below shows retail market share, using volume sold³⁸. Meridian's average retail market share from pre to post-MOM has increased from 26 to 28 percent; Contact has remained steady at 21 percent; Mercury has fallen from 16 to 15 percent; Genesis has fallen from 19 to 16 percent; Trustpower has fallen from 9 to 8 percent and smaller retailers have increased from 9 to 12 percent.

Table 5: Retail market share

Company	2010-2012	2014-2016	Change	% Change
Meridian	26%	28%	1%	5%
Contact	21%	21%	0%	2%
Mercury	16%	15%	-1%	-5%
Genesis	19%	16%	-3%	-17%
Trustpower	9%	8%	-1%	-12%
Other	9%	12%	3%	37%

Source: Total electricity consumption data from Ministry of Business, Innovation and Employment. Individual company volumes from broker reports. Figures may not add due to rounding.

Based on either ICP or volume share, the retail market (like the generation market) has become somewhat more competitive over the MOM period.

³⁸ Another measure of market share often used by the Electricity Authority is installation control points (ICPs). We have not used this as a measure of market share in this report as it only reflects the number of customers rather than the size of the customers and the volume sold.

6. Firm-level performance

This chapter examines the performance of the three individual gentailer MOM firms using a 'before and after' analysis. That is, comparing the performance of each company over the three years before being publicly listed (pre-MOM) with the company's performance over the three years afterward (post-MOM). Improved firm performance was one of three key objectives the Government set for the Mixed Ownership Model³⁹.

Because there are too few data points to undertake compelling econometric tests⁴⁰ the situation requires a comprehensive and detailed understanding of the New Zealand electricity market and the firm-specific effects at play over the period. Chapter 7 (and Appendix A) use the two private gentailers (Contact and Trustpower) as a proxy for the typical performance path of an equivalent competitive firm over the same period. The performance of these two private firms should capture industry effects that are independent of the ownership structure of the firm (ie, electricity demand, regulatory changes and so forth). The individual MOM 'before and after' analysis is useful, although it requires a consideration of effects independent of ownership that nevertheless influence firm performance (eg, dry years and electricity generation composition, changes in generation assets via sales or acquisitions and so forth).

The remainder of this chapter is structured as follows: section 6.1 outlines the data, the metrics used and the justification for using such metrics and sections 6.2 to 6.6 analyse the performance of each of Mercury, Meridian and Genesis in the three years before and after being publically listed, while discussing the relevant caveats and firm-specific nuances.

6.1 Performance metrics

The key performance metrics used in this chapter are the standard electricity industry metrics. These are:

- earnings before interest, income tax, depreciation, amortisation, change in fair value of financial instruments, impairments and equity accounted earnings (EBITDAF);
- return on assets (EBITDAF/average total assets);
- capital expenditure (capex);
- average total assets;⁴¹
- net debt to EBITDAF;
- net debt to equity; and

³⁹ The other objectives were debt reduction and greater investment opportunities for 'Mum and Dad' investors.

⁴⁰ There are only four post-MOM years for Mercury and Meridian and three for Genesis.

⁴¹ Section 6.1.3 covers the valuation methodology (ie, fair value vs. carrying amount) of each firm.

- dividends.

Within the electricity sector and under current market conditions (ie, stagnant demand), EBITDAF is considered one of, if not the most, important financial metric. The main reason for the preference for EBITDAF is that, from an investor's perspective, the firms are cash-flow (or yield) firms and are primarily concerned about what they can distribute to shareholders. Although some cashflow items, such as transmission fees that are set by Transpower (via the Commerce Commission), are entirely outside of the control of gentailers. This report highlights, where relevant, changes in the transmission fee that materially affect EBITDAF in order to better examine operational performance, while discounting exogenous non-ownership factors.

Return on assets (EBITDAF/average total assets) standardises returns to the size of each company's asset base. Therefore return on assets can be interpreted as the return on inputs. Adjusted EBITDAF is used as the numerator for Meridian and Genesis for reasons discussed later in the report. The main issue with return on assets is the valuation and revaluation of assets (see 6.1.3 below for a discussion).

EBITDAF per MWh of electricity generated is not used in this report despite being a common metric in the industry. EBITDAF per MWh attempts to standardise earnings to outputs and to serve as a measure of operational efficiency. The difficulty with using EBITDAF per MWh is that it can be distorted by changes in the weighting that a gentailer gives to its generation and retail arms, respectively. For example, if a gentailer increases its retail business (which consequently drives up EBITDAF) while reducing generation (and driving down EBITDAF) then despite earnings not changing (assuming they offset) EBITDAF per MWh generated will increase. Therefore EBITDAF per MWh generated is only a good metric when comparing equally weighted retail and generation firms at and across time. Because there are some changes in the weightings given to retail and generation by the companies in this report the metric is not particularly useful for our purposes.

For varying reasons the above list excludes some other metrics that are typically used in firm-level financial analysis. The main metrics not included are net profit after tax (NPAT), revenue and total expenditure. The reason for their exclusion is that gentailers are involved on both sides of the wholesale electricity market. The generation component of the business sells electricity at the spot price (which is generally hedged using derivatives). The retail component then buys electricity off the wholesale market. Therefore revenue and expenditure are naturally intertwined and largely dependent on the level of the spot electricity price (which in turn is heavily dependent on hydrological factors). NPAT takes into account non-cash measures such as depreciation and changes in the fair value of financial instruments that EBITDAF does not. As noted above, gentailers do not give much weighting to revenue as they are effectively at the mercy of the wholesale price and, because they buy and sell off that market, they do not necessarily win or lose from higher or lower prices, instead revenue and expenditure figures are inflated. Thus, a better metric for measuring operational performance is EBITDAF.

Capital expenditure (capex) is an important metric. However, given the changing market conditions (as discussed in chapter 5) it is difficult to distinguish changes in capex that are a result of ownership structure and which are a result of changes in market conditions. Trustpower and Contact are good proxies for the appropriate capex adjustments over time as they have been subject to full market incentives. However, it is still not a perfect comparison because the asset

bases of Contact and Trustpower are different to the three MOMs and therefore the respective capex levels and changes over time differ from those affecting the individual MOMs.

Net debt to EBITDAF illustrates a company's ability to service its debt payments and net debt to equity illustrates gearing strategy.

The two EBITDAF related metrics (EBITDAF and return on assets) are classified as *operating performance metrics*. The four balance sheet metrics (capex, average total assets, net debt to EBITDAF and net debt to equity) are classified as *capital management metrics* and dividends is the sole *distribution metric*. The data to calculate the above metrics is in most part extracted from each company's annual reports⁴².

6.1.1 Time periods

The firm-level analysis begins by looking at performance differentials for the three MOM companies between the three financial years prior to the Mixed Ownership Model transition (pre-MOM) and three financial years after the transition (post-MOM). The financial year immediately preceding the listing of each firm is treated as a transition year and is excluded from the three-year comparison. Because we are using financial report information, and the three firms were not listed on dates that correspond perfectly with their financial year, the transition year that is chosen is that which included the majority of the year directly before listing⁴³.

Mercury was listed on 10 May 2013 so the pre-MOM years are the financial years ending 2010/2011/2012, the transition year is 2013 and the post-MOM years are 2014/2015/2016. Mercury was listed in May (one month before the end of the financial year) so the transition year is a reasonably good fit.

Meridian was listed on 29 October 2013 so the transition year is the financial year ending 2013⁴⁴. The pre-MOM years are 2010/2011/2012 and the post-MOM years are years ending 2014/2015/2016.

Genesis was listed on 17 April 2014 so the transition year is the financial year ending 2014⁴⁵. The pre-MOM years are therefore 2011/2012/2013 and the post-MOM years are 2015/2016/2017.

6.1.2 Inflation

All the data in this report are stated in real (inflation adjusted \$2017) terms unless explicitly stated otherwise. Therefore, despite the underlying numbers being extracted directly from annual reports, the numbers presented in this report will not match those published numbers (with the

⁴² With the only exception being the capital expenditure figures for Contact. Contact inconsistently reported capital expenditure data so the figures used here are taken from First NZ Capital brokerage reports.

⁴³ For example, if the financial year of firm X is the year ending June, and firm X was publicly listed in April 2010, then the transition year will be the year ending 2010. Ideally the transition year would be April 2009 to April 2010. However, the majority of this year fits in the 2010 financial year so 2010 is designated as being the transition year. If, however, firm X were instead listed in September 2009 the transition year would be the year ending 2009. The technical transition year would be September 2008 to September 2009 therefore the majority of that period falls within the 2009 financial year (nine months in the 2009 year and three months in the 2010 year). This method is not perfect but is the best approximation given the circumstances.

⁴⁴ Eight months of the full transition year fall in 2013 year, compared to four months in the 2014 year.

⁴⁵ Ten months of the full transition year fall in 2014 year, compared to two months in the 2013 year.

exception of the 2017 numbers) as the published numbers for the other years have been adjusted for inflation. To be precise, the numbers in the annual reports have been adjusted for inflation using the CPI from the end of the quarter the reports were released⁴⁶. All figures are therefore in 2017 (end of Q2) New Zealand dollars (\$NZD).

6.1.3 *Asset valuation*

No market valuation of the three MOM companies was available before they were publicly listed therefore we cannot use market capitalisation in a pre and post-MOM comparison. Instead we use reported asset value as a proxy for firm value. It is therefore important to understand how and how often each firm values its assets. If there are discrepancies in asset valuation, or intermittent revaluations, then analysing metrics such as return on assets will be troublesome, if not misleading.

Mercury revalues its generation assets on balance day. The generation assets are reported in financial statements at fair (or market value) rather than carrying amount. Mercury contracts its valuation from an independent valuer (PwC in each of the years used in this study) using a net present value methodology. Therefore the asset valuation process is consistent over time.

Meridian uses an independent valuer and in each of the years studied in this report used a combination of capitalisation of earnings⁴⁷ and discounted cash flow methodologies to ascertain a fair value of their assets. Meridian generally revalues its generation assets periodically (on balance day) however did not do so in 2012 or 2014 – although it did carry out a review of the carrying value of the generation assets and concluded that they closely represented fair value.

Genesis uses a discounted cash flow methodology to estimate asset value. Over the years relevant to this study, a revaluation took place in 2011, 2013, 2016 and 2017. All revaluations were performed in-house and then independently reviewed by an outside organisation (generally PwC). In the years that asset valuations were not undertaken Genesis carried out a review of the carrying amount and established the value was not materially different from the fair (or market) value.

Contact recognises its assets at cost less accumulated depreciation (ie, carrying amount not fair value). Within the cost estimate, Contact capitalises the cost of purchase and the time it takes to bring an asset into service (this includes employee time, cost of obtaining resource consents and so forth).

Trustpower typically has its generation assets independently valued by Deloitte every three years (and more frequently if there is evidence of a significant change in value) using a discounted cash flow methodology. The last revaluation was in 2016 and before that 2015, 2012 and 2009. All other assets are valued at cost less depreciation (carrying amount).

Overall, while the asset valuation methodologies are not entirely identical between firms, the differences are, excluding Contact, negligible. Mercury, Meridian, Genesis and Trustpower all attempt to estimate the market (or fair) value of the generation assets. Contact is the exception as it only records the carrying amount. When comparing the relevant asset-dependent metrics, the

⁴⁶ The second quarter for all companies except for Trustpower, which has a financial year ending 31 March – hence first quarter CPI is used.

⁴⁷ Capitalisation of earnings involves taking estimated future earnings and turning that into a firm value based on the capitalisation rates of other observable firms.

Contact discrepancy is noted in the report. If the assets were reported at historic cost as opposed to fair value then the return on assets would be significantly higher.

6.1.4 Dividends

Dividends are reported in two different ways based on timing:

- dividends paid: based on the year the dividends (interim, final and special) are paid to shareholders; and
- dividends declared: the financial year in which the dividends were announced;

This report (unless otherwise specified) focuses on dividends paid, simply because dividends are a cash item so the primary concern to shareholders is when they receive that income. The dividends discussion in section 8.1 of this report considers both types of reported dividends.

What follows is the firm-level performance analysis of Mercury, Meridian and Genesis. See Appendix A for firm-level performance analysis of Contact and Trustpower, respectively.

6.2 Total shareholder return

Table 6: Total shareholder return (TSR) from listing to 30/06/17

	Mercury	Meridian	Genesis	Total
Nominal NZD				
Absolute TSR \$	2,049	5,237	1,350	8,635
Relative TSR %	59%	136%	87%	97%
Annualised compound TSR %	12%	26%	22%	-

Source: TDB analysis based on data provided in annual reports. Mercury is for period 10/05/2013 to 30/06/2017; Meridian is for period 29/10/2013 to 30/06/2017; and Genesis is for period 17/04/2014 to 30/06/2017.

Table 6 above shows the total shareholder return (TSR) of each MOM company since listing date, where TSR is the combination of capital gains on the shares and dividends received.⁴⁸ The gross aggregate TSR has been \$8.6b (nominal) since the respective listing dates of each MOM company to 30 June 2017. This compares to the sum of the market capitalisation of the firms on their respective listing dates of \$8.9b. As a proportion of aggregate listing values the TSR is equivalent to 97 percent (or 90 percent after adjusting for inflation). The annualised TSR has been 12 percent for Mercury, 26 percent for Meridian and 22 percent for Genesis (nominal).

These relatively large TSR's, in particular for Meridian and Genesis, are partly driven by the deflationary effect of the New Zealand Power proposal on listing value. As discussed, the announcement of the New Zealand Power proposal reduced the share price of Contact and

⁴⁸ TSR Formula used:

Absolute TSR = (end market capitalisation + cumulative dividends - beginning market capitalisation)

Relative TSR = (end market capitalisation + cumulative dividends - start market capitalisation) / beginning market capitalisation

Annualised compound TSR = [(end market capitalisation + cumulative dividends)/(beginning market capitalisation)]^(1/years)-1

We have taken a conservative approach and taken dividends at cash value rather than assuming they are reinvested.

Trustpower by 7 to 8 percent. While Mercury's listing price was only partially affected by the proposal as the fair value range had already been decided, Meridian and Genesis' listing value fully incorporated the effect. Chapter 8, which looks at the return to the Crown since listing, will also include a TSR analysis using the most recent commercial valuation pre-listing as the reference point, as opposed to the value on listing day. The TSR in Table 6 is the true return to market investors.

6.3 Mercury

Mercury was the first SOE gentailer to be publicly floated by the Crown. As discussed earlier, Mercury was floated on 10 May 2013 at a market value of \$3.5b and its share value remained suppressed for some time after listing.⁴⁹ Nevertheless, as of June 2017 Mercury had a market value of \$4.65b. Mercury has returned an average dividend yield of 6.3 percent in the four full years since listing,⁵⁰ a yield similar to Meridian's and slightly below Genesis'. See Appendix B for detailed dividend data from 2010-2017. Mercury's nominal annualised TSR since listing has been 12 percent.

6.3.1 Context

This section notes important events that occurred over the period under review to provide context for the assessment of the MOM with respect to Mercury.

Probably the most important development for Mercury was the exit from its international geothermal developments in Chile and Germany in 2015. Mercury started easing off its capital expenditure in Chile from 2013 until "*commercial pre-conditions are satisfied*". At the time of the exit Mercury stated it: "*no longer considered (these investments) part of the Company's strategic priorities and investment focus*". These investment exits incurred \$85m (\$2017) in non-cash impairments in order to restore the reported asset values in line with fair value. Mercury also chose to shut down its gas-fired Southdown power station in Auckland in 2015, which incurred an impairment of \$45m. Importantly the impairments do not affect EBITDAF.

Mercury paid special dividends of \$71m in 2015 and \$35m in 2016. These dividends are not excluded from the analysis below as they were paid as part of Mercury's "*ongoing focus on capital management*" rather than a one-off asset sell-down. While it is not possible to definitively say in the absence of a true counterfactual it is questionable whether these special dividends would have occurred without the demands imposed by market investors.

The special dividend of \$168m in 2010 has been included in the metric analysis below as it was paid primarily due to the good hydrological conditions in that year (although \$22m relates to the sale of Marsden B power station).

In 2013, the Ngatamariki geothermal power plant came online with a capacity of 82MW and will have some effect on post-MOM earnings. 2015 was a low rainfall year in the North Island, where all Mercury's hydro stations are located, and consequently a low hydro-generation year for Mercury. Hydro-generation was down 17 percent (or 673 GWh) on average. As a result, the post-

⁴⁹ Partly due to reasons discussed in section 4.7 (the New Zealand Power proposal).

⁵⁰ Comprised of annual dividend yields of 5.8%, 7.8%, 5.8% and 5.8% for the years ending 2014, 2015, 2016 and 2017 respectively.

MOM performance of Mercury may be slightly suppressed. 2012 was also a dry-year although it was predominantly felt in the South Island so Mercury remained fairly immune.

6.3.2 Metric analysis

Table 7: Mercury financial metrics (annual average, \$2017)

Metric	3 years before (2010-2012)	3 years after (2014-2016)	Change (2017 NZD)	Change %
Operating				
EBITDAF (\$m)	440	504	64	15%
Return on assets (%)	8.0%	8.4%	0.4%	5%
Capital management				
Capital expenditure (\$m)	339	94	(245)	-72%
Average total assets (\$m)	5,509	6,024	515	9%
Net debt/EBITDAF	2.49	2.15	(0.34)	-14%
Net debt/equity	0.37	0.32	(0.04)	-12%
Distribution				
Dividends paid (\$m)	183	226	43	24%

Source: TDB analysis based on data provided in Mighty River Power/Mercury annual reports.

Mercury has shown a general improvement across both metrics since the move to mixed ownership in 2013. EBITDAF improved considerably, increasing by an average of \$64m per year (15 percent increase). Return on assets (EBITDAF/average total assets) improved from 8.0 percent pre-MOM to 8.4 percent post-MOM.

With regard to capital management, capex decreased significantly from \$339m per year to \$94m. The net debt to EBITDAF ratio fell from 2.49 pre-MOM to 2.15 post-MOM (14 percent decline) as a result of a higher EBITDAF and constant net debt. To put the net debt to EBITDAF ratio in perspective, Mercury's net debt to EBITDAF ratio in post-MOM years is above Meridian's (1.69) and below Genesis' (2.98), Contact's (2.90) and Trustpower's (3.92). Mercury's net debt to equity ratio fell from 0.37 to 0.32 (12 percent decline) and average total assets increased by \$515m (9 percent).

Mercury's dividends increased significantly post-MOM. In the three pre-MOM years the average dividend was \$183m compared to the post-MOM average of \$226m. These figures include the \$168m special dividend in 2010 and the small special dividends of \$71m and \$35m in 2015 and 2016 respectively. These special dividends are all included as they were not a result of one-off asset sales, but more a reflection of ongoing operational performance (except for \$22m in the 2010 dividend, although this is not particularly material).

In summary, Mercury improved strongly across both operational metrics, significantly reduced capex, debt to equity and debt to earnings and significantly increased dividends.

6.3.3 Changes in strategy

Accompanying the move to mixed ownership have been some important changes in business strategy. In the case of Mercury, the most notable development was a move to refocus on core business. The decision of Mercury to withdraw from its offshore geothermal investments in Germany and Chile and close down its gas-fired Auckland power station are significant examples. Withdrawing from these non-core activities appears to have been regarded favourably by investors with Mercury's share price growing steadily since partial privatisation.

6.4 Meridian

Meridian was the second of the SOE gentailers to be listed by the Crown. Meridian had the largest commercial valuation prior to listing and its market value on listing (29 October 2013) was \$3.85b, also the largest. For a combination of reasons discussed earlier, including the New Zealand Power proposal and possible IPO discounting, this listing value was low. As of June 2017, Meridian's market value is \$7.45b (a 94 percent nominal capital gain). Meridian has provided an average dividend yield of 6.6 percent over the last four years (2014-2017). Meridian's nominal annualised TSR since listing has been 26 percent.

6.4.1 Context

In 2011 Meridian sold the Tekapo hydro stations to Genesis for \$869m. Tekapo was officially sold to Genesis on 1 June 2011, one month before the end of the financial year. This means that 2010 was the last full financial year that Tekapo operated under Meridian ownership. In 2010, the Tekapo hydro stations made up approximately 7 percent of Meridian's total generation. In 2011 Tekapo contributed 8 percent of generation despite only being under Meridian's control for 11 months of the year.

Meridian declared a one-off special dividend in 2011 of \$552m. The special dividend was paid using the proceeds from the Tekapo sale. The remaining proceeds went towards paying down debt. The special dividend has been excluded from the analysis below for comparability purposes, as it does not reflect typical and ongoing operational performance.

Another factor to consider is that 2012 was a record dry-year in New Zealand. Meridian is heavily dependent on hydro generation and therefore suffers in dry-years. Approximately 90 percent of Meridian's electricity generation was from hydro in the 2017 financial year. The 2012 dry-year will have had some effect on Meridian's 2012 (pre-MOM) performance and therefore the pre-MOM results may be slightly depressed. Meridian does however hedge its hydrology risks using financial instruments, including a swaption contract with Genesis.

6.4.2 Metric analysis

Table 8: Meridian financial metrics (annual average, \$2017)

Metric	3 years before (2010-2012)	3 years after (2014-2016)	Change (2017 NZD)	Change %
Operating				
EBITDAF (\$m)	639	631	(8)	-1%
Adjusted EBITDAF (\$m)	603	631	28	5%
Return on assets (%)	7.1%	7.9%	0.8%	11%
Capital management				
Capital expenditure (\$m)	456	179	(277)	-61%
Average total assets (\$m)	8,989	7,965	(1,025)	-11%
Net debt/EBITDAF	2.44	1.69	(0.75)	-31%
Net debt/equity	0.29	0.22	(0.08)	-26%
Distribution				
Dividends paid (\$m)**	239	392	153	64%

*Excluding Tekapo special dividend

Source: TDB analysis based on data provided in Meridian annual reports.

Meridian's EBITDAF declined by \$8m per year (1 percent decrease) from pre to post-MOM. However, if EBITDAF is adjusted for the sale of Tekapo then EBITDAF improves by \$28m per year from pre to post-MOM (5 percent increase).⁵¹ Return on assets improved from 7.1 percent pre-MOM to 7.9 percent post-MOM (11 percent increase).

Capex fell considerably from pre to post-MOM. In the three pre-MOM years capex averaged \$456m per year compared to \$179m post-MOM. The net debt to EBITDAF ratio consequently dropped from 2.44 to 1.69 (31 percent decline), the largest decline of all five gentailers.⁵² Net debt to equity also declined from 0.29 to 0.22 (26 percent fall). Meridian's average total assets decreased by \$1.03b (11 percent) from pre to post-MOM, which is partly due to the Tekapo sale and partly due to a focus on core business resulting in the sell-down in offshore investments (see below).

With the exclusion of the one-off special dividend in 2011 (as discussed above), Meridian's average dividends increased from \$239m pre-MOM to \$392m post-MOM (64 percent increase). This includes special dividends of \$89m and \$167m in 2015 and 2016 respectively as these dividends relate to operational performance as opposed to one-off asset sales.

In summary, Meridian improved in both operational metrics (using adjusted EBITDAF instead of EBITDAF). Also, Dividend distribution increased dramatically and capex, debt to earnings and debt to equity all fell substantially.

6.4.3 Changes in strategy

Meridian began to change to a more commercially minded strategy after indications were made that partial privatisation was imminent, but before the company was listed in October 2013. Meridian sold non-core investments in Right House (2011), Whisper Tech (2012) and its USA solar business (2013). Meridian's retreat from non-core investments and its renewed focus on the Australasian generation and retail markets, combined with the falloff in New Zealand demand growth resulted in the disbandment of Meridian's "Business Development Team".

Meridian also sold its 50 percent stake in its Australian Macarthur Wind Farm in 2013. Further rationalisation took place in 2013 with a number of development projects put on hold, such as the North Bank hydro project. The company signalled it would not undertake projects of such significant size unless electricity demand picked up.

The firm-performance analysis tests whether changes in performance were evident after public listing. Because Meridian began to change its business strategy before being listed (although in anticipation of becoming a listed company) our results may well understate the change in business performance that occurred because of the MOM.

⁵¹ In an attempt to account for the Tekapo distortion on EBITDAF we have estimated an adjusted EBITDAF in 2010 (a full year of Tekapo generation) and 2011 (11 months of Tekapo generation) to better isolate the operational performance of Meridian over time. We have estimated the adjusted EBITDAF data using electricity generation as a proxy for Tekapo's contribution to EBITDAF. This method reduces EBITDAF by \$50m in 2010 and \$56m in 2011. Using the adjusted EBITDAF figures in the three-year comparatives shows an EBITDAF improvement of \$28m per year (5 percent increase).

⁵² Net debt declined from a pre-MOM average of \$1.55bn to \$1.07bn post-MOM, although this is partly due to a proportion of the Tekapo sale proceeds (approximately \$317m in real terms) going toward debt repayment.

6.5 Genesis

Genesis was the third and final gentailer to be publicly floated by the Crown. Genesis had the smallest market capitalisation of the three MOMs when listed (on 17 April 2016) and remains the smallest in 2017. Genesis had a market value at listing of \$1.55b, a value considerably lower than Mighty River Power (\$3.5b) and Meridian (\$3.85b). As of June 2017, Genesis had a market value of approximately \$2.43b, representing a 57 percent capital gain in just over three years. Genesis' dividend yield has nevertheless been the highest of the three MOMs. In the three full years of Mixed Ownership (2015, 2016, 2017) Genesis has returned an average dividend yield of 7.5 percent.⁵³ From listing to 30 June 2017, Genesis had a nominal annualised TSR of 22 percent, which is below Meridian's (26 percent) and above Mercury's (12 percent).

6.5.1 Context

In 2009 Genesis indicated it would be considering the ongoing future of its coal/gas-fired units at the Huntly Power Plant due to low wholesale prices and insufficient returns in dry years to compensate for their economic unviability in normal hydrological years. In late 2012 one of the four 250 MW Huntly units was put into long-term storage and in 2013 a second unit was placed into storage before being permanently retired in 2015.

In 2011 Genesis acquired the Tekapo Power Scheme from Meridian for \$869m.⁵⁴ In 2012, the first full FY that Tekapo was part of Genesis; Tekapo contributed 885 GWh of Genesis' 8,467 GWh of total generation (10.5 percent). The Tekapo acquisition involved a large increase in debt for Genesis. Net debt increased from \$616m in 2010 to \$1,291m in 2011. The acquisition also involved a two-year dividend hiatus for the Crown (2011 & 2012). Fortunately for the sake of our analysis the entire three-year pre-MOM period includes Tekapo generation. That is, generation asset composition is close to constant throughout the pre and post-MOM years so comparability remains.

While the Crown pushed through the Tekapo transaction before the MOM process was undertaken, it is not clear that the transaction was entirely independent of the MOM. Whether the Tekapo acquisition would have gone ahead without the anticipation of MOM is a question open for debate.

Another factor to consider is that 2012 (the second year of the pre-MOM analysis) was a record dry-year in New Zealand. Genesis has the most diversified generation portfolio of New Zealand's large generators (ie, it has coal, gas and hydro) so is able to capitalise on dry years by increasing thermal generation to offset reductions from the more hydro-dependent producers. The 2012 decrease in hydro-generation pushed up wholesale prices to the benefit of Genesis. For our analysis this has the effect of inflating the pre-MOM performance of Genesis. However, when the aggregate of MOM performance is taken into account (section 7) this effect is flattened out.

Genesis' post-MOM financial performance has been negatively impacted by the declining oil price from 2014. Genesis has a large stake in the Kupe Joint Venture, which increased from 31 to 46

⁵³ Comprising dividend yields of 8.2%, 7.5% and 6.8% in 2015, 2016 and 2017 respectively.

⁵⁴ Although recognised in the 2011 annual report at a fair value of \$761m (real) after adjusting for revaluation and depreciation

percent in 2017 (see below). Genesis was negatively impacted by the oil price slump due to the long-term hedges that were entered into (at the higher prices). As these hedges have gradually wound off Genesis has slowly returned to a balanced position between its hedged price and the spot price. The negative effect on earnings is not a result of the change in ownership yet it has suppressed the post-MOM performance metrics below. We have nevertheless, in order to be conservative, not attempted to adjust Genesis' earnings to account for this. The effect of the oil price should, however, be considered a caveat on Genesis' results that is independent of ownership.

In 2017 Genesis engaged in two moderately large transactions. The first involved the purchase of New Zealand Oil and Gas' 15 percent stake in the Kupe Joint Venture, effective from 1 January 2017. The purchase cost \$168m and lifted Genesis' total stake in the Kupe Joint Venture to 46 percent. The second transaction was the acquisition of Nova's LPG business from Todd Corporation for \$192m, effective from 31 May 2017. The Nova purchase is projected by Genesis to add \$17m in standalone underlying EBITDAF, and a further \$4-6m in synergy gains within two years.⁵⁵

6.5.2 Metric analysis

Table 9: Genesis financial metrics (annual average, \$2017)

Metric	3 years before (2011-2013)	3 years after (2015-2017)	Change (2017 NZD)	Change %
Operating				
EBITDAF (\$m)	358	342	(16)	-4%
Adjusted EBITDAF (\$m)	376	342	(34)	-9%
Return on assets (%)*	10.3%	9.0%	-1.3%	-12%
Capital management				
Capital expenditure (\$m)	412	44	(368)	-89%
Average total assets (\$m)	3,657	3,790	133	4%
Net debt/EBITDAF	3.19	2.98	(0.22)	-7%
Net debt/equity	0.60	0.52	(0.08)	-13%
Distribution				
Dividends paid (\$m)**	37	160	122	326%

*Adjusted EBITDAF / average total assets

**Using projected dividends in the zero dividends years

Source: TDB analysis based on data provided in Genesis annual reports.

EBITDAF declined from \$358m per year pre-MOM to \$342m post-MOM (4 percent decrease). This decline is largely attributable to the large positive effect of the 2012 dry year on Genesis' earnings. As with the Meridian analysis, an adjusted EBITDAF has been estimated to account for the effect of the Tekapo acquisition on comparability.⁵⁶ Adjusted EBITDAF fell by \$34m per year from pre to post-MOM (9 percent decline). Adjusted EBITDAF fell by more than EBITDAF because an additional \$56m is added to EBITDAF in 2011 to match the total assets at the end of that year. As with the unadjusted EBITDAF, part of the reason for the decline in the adjusted EBITDAF can be attributed to the inflationary impact of the 2012 dry year on Genesis' pre-MOM earnings.

⁵⁵ <https://www.genesisenergy.co.nz/about-us/media-centre/news/genesis-energy-drives-customer-centric-growth-strategy>

⁵⁶ The adjusted EBITDAF adds the estimated Tekapo EBITDAF contribution in 2011 of \$56m (see workings in Section 6.4.1 above).

Return on assets declined from 10.3 percent to 9.0 percent, predominantly as a consequence of the decline in adjusted EBITDAF.

Another small contributing factor to the drop in Genesis' EBITDAF has been an increase in transmission costs paid to Transpower. Transmission fees have increased from a pre-MOM average of \$23m to a post-MOM average of \$29m (a 27 percent increase in real terms). Removing the change in transmission costs from EBITDAF reduces the negative change in pre to post-MOM EBITDAF from (approximately) 4 to 2 percent.

Capex decreased from \$412m pre-MOM to \$44m post-MOM (89 percent decline). As has been discussed previously, the drop in capex is likely to be a combination of flattening electricity demand and greater market/investor scrutiny over decision-making. Decoupling these two effects is difficult. However, that is the purpose of including Contact/Trustpower: to show the counterfactual path under consistent market pressures (assuming the Mixed Ownership Model does not have a material effect on the decision-making of the private gentailers). Average total assets increased by \$133m (four percent). Net debt to EBITDAF declined from 3.19 to 2.98. Genesis is, however, the most geared gentailer. The net debt to equity ratio declined from 0.60 pre-MOM to 0.52 post-MOM.

Genesis did not pay any dividend in 2011 or 2012 as a result of the Tekapo transaction. To mitigate the impact of these zero dividend years on pre-MOM dividends, the inflation-adjusted average of Genesis' five previous dividends supplants the actual dividend payments in 2011 and 2012 (zero dividends) in the analysis above. The artificially constructed dividend path boosts Genesis' pre-MOM average dividend from \$20m to \$37m, which compares to \$159m post-MOM (326 percent increase).

Genesis worsened across both operational metrics (EBITDAF and return on assets) although, as discussed, this is partly driven by the inflationary effect of the 2012 dry year on pre-MOM earnings and the deflationary effect of the oil price slump on post-MOM earnings. Like Mercury and Meridian, Genesis reduced capital expenditure, debt to equity and debt to earnings and significantly increased dividends.

6.5.3 Changes in strategy

A notable change in strategy at Genesis was the decision to maintain dividends and increase debt to finance Genesis' two transactions in 2017. The purchase of an additional 15 percent stake in the Kupe Joint Venture and the Nova acquisition resulted in an increase in net debt from \$899m in 2016 to \$1,232m in 2017. Despite the increase in debt, Genesis chose to sustain its dividend payment in 2017 of \$164m, compared to \$165m the previous year.

The decision to maintain dividends and acquire debt contrasts with the funding strategy when Genesis was under full Crown ownership and purchased the Tekapo Power Scheme. When that transaction took place the Treasury agreed to allow Genesis to pay zero dividends in 2011 and 2012. It should be noted that the Tekapo transaction was significantly larger than the two 2017 acquisitions. Nevertheless, the purchase of Tekapo led to a two-year dividend hiatus while the 2017 transactions had no material effect on dividends. The decision to maintain dividend levels and acquire debt, compared to suspending dividends and keeping debt lower, appears to be influenced by the divergent demands of the different shareholders. Market investors demand

strong and consistent dividend yields whereas Government (as an investor) appears to have been less demanding.

6.6 Conclusions: individual firm performance 'before and after'

This section used 'before and after' analysis to study the effect of a change in ownership structure, from full Government ownership to 49 percent publicly floated, on the financial performance of Mercury, Meridian and Genesis respectively. Across both operational metrics⁵⁷ Mercury and Meridian improved in both and Genesis worsened. Genesis' performance is partly explained by the inflationary effect of the 2012 dry year on pre-MOM earnings and the deflationary effect of the oil price on post-MOM earnings.

All three companies, however, showed significant improvements in dividend distribution in the three years post-partial privatisation compared to the three years preceding it. It is also worth reiterating that these indicative performance measures took place in an electricity market with almost zero demand growth and a 2 percent decline in the energy component of residential electricity prices, a 5 percent decline in commercial prices and a 2 percent decline in industrial prices.

It is possible that these results understate the effect of the change in ownership on firm performance as there are clear signs that each firm began to change business strategy when the Government first indicated plans of public listing, which predates public listing and will be captured in the pre-MOM data.

The improved performance is also reflected in the TSR of each company. Meridian generated an annualised TSR from listing to June 2017 of 26 percent, Genesis an annualised TSR of 22 percent and Mercury an annualised TSR of 12 percent. Although as will be discussed in Chapter 8, this return likely overstates the true TSR to the Crown since listing due to the New Zealand Power proposal and potential IPO discounting. All three companies increased dividends significantly over the period: Mercury increased dividends by 24 percent, Meridian by 64 percent and Genesis by 326 percent.

Other noticeable changes were the significant decline in capex from pre to post-MOM. As discussed, this is partly due to flattening electricity demand, although once again this trend predates partial privatisation by some time. It seems highly likely that capex would not have fallen to the same extent that it did if the companies had remained fully state-owned. The rationalisation of assets and a refocus on core-business operations support the theory, and the literature⁵⁸, that market investors can help to reign in non-commercial business decisions through share price monitoring.

⁵⁷ EBITDAF and return on assets.

⁵⁸ See Holmström and Tirole (1993).

7. Aggregate analysis

This chapter is broken into two parts. The first part compares the aggregate performance of the three MOMs before and after partial privatisation (ie, the aggregation of the previous chapter's individual firm-level metrics). The second part compares the changes in aggregate firm performance over time between the three MOMs and the two private gentailers (ie, the counterfactual).

7.1 Pre versus post-MOM

The key advantage of aggregating the three MOMs is to smooth out individual firm effects. For example, aggregating Genesis and Meridian can work to equalise out the effects of the 2012 dry year on individual firm performance. As discussed, Genesis benefited from the dry year because it is the least reliant on hydro of all gentailers and can increase generation when spot prices are high. Meridian on the other hand had a large decrease in generation in 2012 as it relies heavily on hydro. These counteracting effects are minimised when the companies are aggregated.

Table 10: MOM aggregated financial metrics (annual average, \$2017)

Metric	3 years before (2017 NZD)	3 years after (2017 NZD)	Change (2017 NZD)	Change %
Operating				
EBITDAF (\$m)*	1,420	1,477	57	4%
Return on assets (%)	7.8%	8.3%	0.5%	6%
Capital management				
Capital expenditure (\$m)	1,207	317	(891)	-74%
Average total assets (\$m)	18,155	17,779	(376)	-2%
Net debt/EBITDAF	2.67	2.15	(0.53)	-20%
Net debt/equity	0.37	0.31	(0.06)	-17%
Distribution				
Dividends paid (\$m)	459	777	318	69%
Dividends paid (\$m)**	645	777	132	21%

*Using adjusted EBITDAF for Meridian and Genesis (ie, equalising generation for Tekapo disruption)

**Not excluding tekapo special dividend for Meridian

Source: TDB analysis based on data provided in company annual reports.

Table 10 shows that, on the whole, the MOMs had reasonable growth in EBITDAF since partial privatisation. The aggregate post-MOM EBITDAF is an average \$57m per year higher than pre-MOM (4 percent). This directional shift is consistent with a positive effect of the change in ownership. Improved EBITDAF likely reflects better operational performance given that demand and electricity prices have been flat, gentailer contribution to electricity process has fallen to absorb the increases in lines costs and there has been increased competition in generation and retail. Return on assets⁵⁹ has, on average, increased from 7.8 to 8.3 percent, showing that earnings have increased without a proportional increase in the asset base.

⁵⁹ This is a weighted average return on assets and not a simple average of the return on assets: ie, sum MOM EBITDAF / sum MOM average total assets.

Capex has decreased from annual aggregated average of \$1,207m to \$317m (74 percent decline) and this is evenly distributed across the three firms. As discussed, this is likely a combination of stagnant demand, increased shareholder monitoring and a refocus on core business. Average aggregate total assets are relatively constant, down from an average \$18.2bn to \$17.8bn (2 percent drop).

Net debt to EBITDAF has also fallen from 2.67 to 2.15 (20 percent decline). Meridian had the largest debt reduction (32 percent), Genesis a moderate decline (11 percent) and Mercury remained flat (-1 percent) although all three MOMs reduced their net debt to EBITDAF ratios. Net debt to equity fell by 17 percent, from 0.37 to 0.31. The decline in net debt from pre to post-MOM took place in the lead-up to the IPOs, then have either flattened or trended back upward since. This is likely due to the Government's 51 percent ownership floor, which reduces the ability for the respective company's to raise funds through equity, as it requires the Government investing further taxpayer funds (which may be politically difficult). Therefore the MOMs were encouraged to give themselves 'headroom' for future growth by reducing debt.

On aggregate, dividends are up by an annual average of \$318m per year (69 percent increase) when excluding Meridian's Tekapo special dividend or \$132m per year (21 percent) when including it.⁶⁰

On aggregate, the three MOMs have improved on both operational metrics, significantly increased dividends and reduced all of capex, net debt to earnings and net debt to equity.

7.2 The counterfactual

This section provides a counterfactual (or benchmark) for the MOM gentailers by comparing the MOM aggregate firm-performance with the performance of the two fully private gentailers in New Zealand: Contact and Trustpower. For background on Contact and Trustpower, as well as a breakdown of the two firms' performance over the relevant period, see Appendix A. As discussed in the Appendix, the aggregated private gentailer data uses pre-MOM years 2010-2012 and 2014-2016 for both Contact and Trustpower, although an additional 2011-2013 and 2015-2017 analysis of Contact is also presented. Trustpower undertook a demerger in late 2016, which affects its comparability over time. Therefore the 2017 financial performance of Trustpower has been ignored.

7.2.1 Contact & Trustpower

Before explicitly comparing the MOMs with the private gentailers, Table 11 shows the before and after aggregate performance of Contact and Trustpower.

⁶⁰ This holds even if the zero dividend years of Genesis are accounted for by multiplying Genesis' pre-MOM dividends by a factor of three. Doing so still results in an across-the-board dividend increase of 71 percent.

Table 11: Contact/Trustpower aggregated financial metrics (annual average, \$2017)

Metric	3 years before (2017 NZD)	3 years after (2017 NZD)	Change (2017 NZD)	Change %
Operating				
EBITDAF (\$m)	798	877	79	10%
Return on assets (%)	9.2%	9.1%	-0.1%	-1%
Capital management				
Capital expenditure (\$m)	624	430	(194)	-31%
Average total assets (\$m)	8,670	9,659	989	11%
Net debt/EBITDAF	2.82	3.27	0.45	16%
Net debt/equity	0.45	0.57	0.12	26%
Distribution				
Dividends paid (\$m)	314	448	135	43%

Source: TDB analysis based on data provided in company annual reports.

Table 11 shows that Contact and Trustpower (on aggregate) saw strong improvements in EBITDAF, improving by \$79m per year (10 percent).

Return on assets however, which standardises earnings to asset size, decreased from 9.2 to 9.1 percent due to the total asset value increasing by 11 percent (\$989m). Therefore, as a proportion of assets, earnings fell over this period for the two private gentailers.

Dividends are up 43 percent, although this is largely attributable to Contact's special dividend in 2015. Trustpower's dividends declined over this period and Contact's, when excluding the 2015 special dividend, remained flat. The following chapter provides a more specific breakdown of dividends.

The two private gentailers (on aggregate) improved across one of two operational metrics. It is not altogether clear how much of the improvement in non-MOM performance, if any, is attributable to the MOM. For example, the MOMs behaving more commercially through a rationalisation of pricing and a tightening of project development may have positively affected both Trustpower and Contact and hence been partially driving these results.

7.2.2 MOMs versus 100 percent private gentailers

This section compares the aggregate performance of the three MOMs with the aggregate performance of the two private gentailers. Table 12 below summarises the changes across each financial metric for the MOMs (second column) and for Contact/Trustpower (third column). The fourth column shows the difference in the changes between the two groups (ie, column two minus column three).

Table 12: Trend comparisons

Metric	MOM Change %	CEN/TPW Change %	MOM less CEN/TPW
Operating			
EBITDAF (\$m)	4%	10%	-6%
Return on assets (%)	6%	-1%	8%
Capital management			
Capital expenditure (\$m)	-74%	-31%	-43%
Average total assets (\$m)	-2%	11%	-13%
Net debt/EBITDAF	-20%	16%	-36%
Net debt/equity	-17%	26%	-42%
Distribution			
Dividends paid (\$m)	69%	43%	26%

Source: TDB analysis based on data provided in company annual reports

The private gentailers improved more than the MOMs in EBITDAF but, when using return on assets as a measure to standardise earnings to asset size, the MOMs fared more favourably: increasing by 6 percent compared to the private gentailers 1 percent decline. However, at an absolute level the return on assets of the private gentailers (9.1 percent post-MOM) remains higher than the MOMs (8.3 percent). There has been a convergence in return on assets but a gap still remains.

Both groups reduced capex, although the MOM reduction was twice the magnitude of the private gentailers. This difference, however, is largely attributable to Trustpower's growth in the Australian market. Contact lowered capex by a similar magnitude to the three respective MOMs. The MOMs have lowered their aggregate asset base slightly since partial privatisation (2 percent decline) whereas the private gentailers have grown modestly (11 percent increase).

Each individual MOM (and hence on aggregate) has lowered its debt to earnings and debt to equity ratios. The MOMs net debt to EBITDAF has fallen 20 percent whereas private gentailers increased by 16 percent. MOM net debt to equity fell by 17 percent compared to the private gentailer increase of 26 percent.

Dividends from the MOMs improved by 69 percent compared to a 43 percent increase by Contact/Trustpower. The next section provides a more detailed breakdown of each company's dividend path.

Table 13: Gentailers' Total Shareholder Return during post-MOM period

	Mercury	Meridian	Genesis	Contact	Trustpower*
Nominal NZD					
Absolute TSR \$	2,049	5,237	1,350	1,112	381
Relative TSR %	59%	136%	87%	30%	23%
Annualised relative TSR %	12%	26%	22%	7%	7%

Source: TDB analysis based on data provided in company annual reports. Mercury is for period 10/05/2013 to 30/06/2017; Meridian is for period 29/10/2013 to 30/06/2017; Genesis is for period 17/04/2014 to 30/06/2017; Contact is for period 30/06/2013 to 30/06/2017; and Trustpower is for period 31/03/2013 to 31/03/2016 (because of demerger in October 2016 effect on 2017 share price).

Table 13 above compares the TSRs for the five gentailers over the post-MOM period. The periods in question are not perfectly identical across the five companies but broadly correspond (refer to the notes below table). The annualised TSRs are significantly larger for the three MOMs than the

two private gentailers. Mercury had the lowest TSR of the three MOMs yet was still almost twice as large as either Contact or Trustpower (both 7 percent). Meridian's TSR from listing until 2017 was approximately four times either private gentailer, and Genesis' TSR from listing until 2017 approximately three times.⁶¹ These figures do, however, capture any IPO discount as well as the effect of the New Zealand Power proposal on listing value. They also do not capture the different risk profiles of each company, although it could be safely assumed that they are comparable.

7.3 Conclusions: firm performance 'like for like'

The MOM companies on aggregate improved across both operational metrics. EBITDAF, however, grew at a lesser rate than the private gentailers. When earnings are standardised using return on assets, the MOM gentailers converged towards the private gentailers' post-partial privatisation. The private gentailers still have a higher return on assets in absolute terms (9.1 percent to 8.3 percent) although the gap is somewhat smaller than the pre-MOM period (9.2 percent to 7.8 percent).

The TSRs of the individual companies present a telling picture. Since public listing the three MOMs have had annualised TSRs of 12, 22 and 26 percent respectively, compared to 7 percent for both private gentailers. Although some of this is likely due to the IPO discount and the depressed effect of the New Zealand Power proposal.

Another notable area of difference is capex. The MOMs had a decline in capex more than twice as great as the private gentailers' decline. The difference in capex between the MOMs and non-MOMs is driven almost entirely by Trustpower as Contact had a decline in capex approximate to the MOMs. Trustpower's capex increase is predominantly through the Australian market (see Appendix A for more information).

Perhaps the starkest difference between the two groups is the relationship each has with debt. All three MOMs reduced their debt to equity and debt to earnings ratios over the period whereas the two private gentailers saw large increases. The approach to debt of the three MOM companies before they listed was evidently influenced by Government ownership. Because the Government-owned companies had limited opportunity to increase equity under full Government ownership, they held higher debt levels than they perhaps would of under a different ownership arrangement. Then, as part of the partial privatisation process, the MOMs lowered their respective debt levels in anticipation of the IPO to allow 'headroom' for future growth. Headroom was seen as important given the 51 percent floor on Government ownership. Any attempt at raising equity requires the Government to invest additional taxpayer funds (which may be politically challenging). Therefore, debt is the simpler mechanism for funding growth. Meridian and Genesis, in particular, have followed this path of downward trending levels of debt leading into public listing and upward trending afterward. Mercury has remained fairly flat over time.

⁶¹ Trustpower's TSR does not cover the 2017 period due to the effect of the demerger (October 2016) on comparability. However, it should be noted that the 2017 year was the lowest TSR year for all four of the other gentailers so excluding 2017 in all likelihood overstates Trustpower's TSR relative to the other companies.

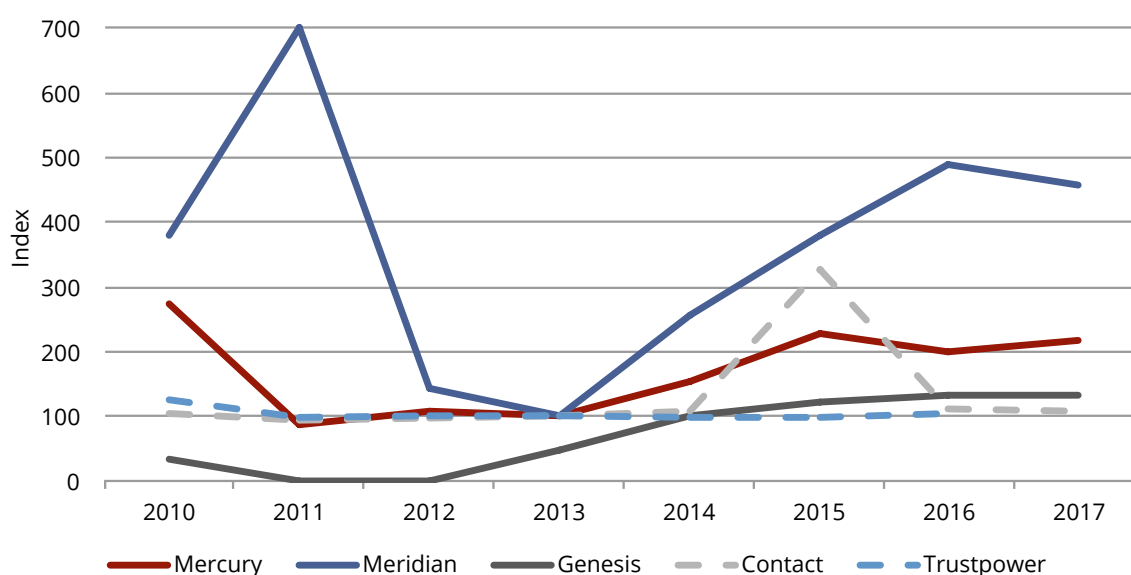
8. Returns to the Crown

This chapter discusses the impact of the MOM programme on the Crown's fiscal performance and position. As noted in Section 4.1.1 above, at the time of the sale, Treasury projected a net negative impact from the asset sales on the operating balance, and opponents consistently raised the lost dividend stream as a core argument for opposing the Mixed Ownership Model. This chapter looks at the return to the Crown, in the form of dividends, before and after partial privatisation, as well as the effect the sales have had on the Crown's balance sheet.

8.1 Dividends

The presumption underlying the partial privatisation process was that, all else being equal, the Crown would receive 49 percent lower dividend returns than it would have if it did not sell its share (equivalent to the fall in ownership share). A simple 'before and after' comparison does not of course take into account changes over time that are independent of ownership, which is why the two private gentailers act as a good proxy for the counterfactual. In other words, we wish to compare the 'with and without' privatisation rather than the 'before and after'. Contact and Trustpower were exposed to the same market effects over time as the three MOMs. Therefore, after accounting for firm-specific effects, it would be expected that the respective dividend paths would look similar.

Figure 7: Dividend paths (indexed at 2013)



Source: TDB analysis based on data provided in company annual reports.

Figure 7 above plots the indexed dividend path⁶² of each gentailer (setting 2013 as the base year for Meridian, Mercury, Contact and Trustpower and 2014 for Genesis because of its later sale

⁶² Using dividends paid and including all special dividends.

date). The dotted lines are the private gentailers (Contact and Trustpower) and the full lines are the respective MOMs.

Figure 7 shows that dividends from the three MOMs have grown considerably since partial privatisation and that the pre-MOM dividends were considerably more erratic than the dividends of the two private gentailers. Contact and Trustpower have had effectively flat dividends over the entire period (excluding Contact in 2015 after it paid a large special dividend). This indicates that the counterfactual dividend path is likely somewhere between flat to a small increase in dividends over time. Since partial privatisation the actual dividend paths of the three MOMs have been significantly higher than the counterfactual path.

The next sub-sections look at the effects of considering dividends paid or dividends declared and whether special dividends are included or excluded. Table 14 below shows dividends paid and declared when all special dividends are included. Table 15 below shows dividends paid and declared when all special dividends are excluded. Table 16 only excludes special dividends that resulted from one-off asset sales.

8.1.1 Including all special dividends

Table 14 below plots the change in the Crown's total dividends for the three years pre and post-MOM. All special dividends are included. The largest special dividend was Meridian's \$557m payout in 2011 as a result of the Tekapo sale. As discussed, assuming all else is equal over time, it would be expected that the Crown's dividends would decline by 49 percent.

Table 14: Dividend return to the Crown – including all special dividends

	3 years before (\$2017 NZD)	3 years after (\$2017 NZD)	Change (\$2017 NZD)	Change %
Dividends paid				
Mercury (\$m)	183	115	(68)	-37%
Meridian (\$m)	425	200	(225)	-53%
Genesis (\$m)	20	81	62	311%
Total (\$m)	627	396	(231)	-37%
Dividends declared				
Mercury (\$m)	114	128	14	12%
Meridian (\$m)	328	222	(107)	-32%
Genesis (\$m)	40	84	45	112%
Total (\$m)	482	434	(48)	-10%

Source: TDB analysis based on data provided in company annual reports.

Dividends paid shows that, in the three years after the sell-downs, the Crown received 37 and 53 percent lower dividends from Mercury and Meridian respectively than in the three years before. The Crown received 311 percent higher dividends from Genesis (although this figure is somewhat distorted by the two zero dividend years). The total Crown dividend return fell by 37 percent.

If we instead use dividends declared⁶³ (still including all special dividends) the Crown generated 12 percent higher returns from Mercury, 32 percent lower returns from Meridian and 112 percent higher returns from Genesis. The total Crown dividend return fell by 10 percent.

⁶³ The difference in the dividends paid and declared is simply a matter of timing.

8.1.2 Excluding all special dividends

Table 15 below removes the special dividends for all MOMs.⁶⁴ Genesis paid/declared no special dividends over this time therefore its figures are identical to Tables 14 and 16.

Table 15: Dividend return to the Crown - excluding all special dividends

	3 years before (\$2017 NZD)	3 years after (\$2017 NZD)	Change (\$2017 NZD)	Change %
Dividends paid				
Mercury (\$m)	127	97	(30)	-23%
Meridian (\$m)	239	156	(83)	-35%
Genesis (\$m)	20	81	62	311%
Total (\$m)	386	335	(51)	-13%
Dividends declared				
Mercury (\$m)	114	100	(13)	-12%
Meridian (\$m)	328	167	(161)	-49%
Genesis (\$m)	40	84	45	112%
Total (\$m)	482	352	(130)	-27%

Source: TDB analysis based on data provided in company annual reports.

As Table 15 shows, using dividends paid and excluding all special dividends, the Crown generated 23 percent lower returns from Mercury, 35 percent lower returns from Meridian and 311 percent higher returns from Genesis. The Crown's total dividend return fell by 13 percent.

When using dividends declared, the Crown experienced a 12 percent decline in returns from Mercury, a 49 percent decline in returns from Meridian and a 112 percent increase in returns from Genesis. The Crown's total dividend return fell by 27 percent.

8.1.3 Excluding special dividends from one-off asset sales

Table 16 below exclude only the special dividends that directly relate to a one-off asset sale and do not reflect ongoing operational performance. In the period analysed these was a \$22m component to Mercury's 2010 special dividend (total special dividend of \$168m) as a result of the sale of Marsden B and Meridian's \$557m special dividend in 2011 as a result of the sale of Tekapo.

Table 16: Dividend return to the Crown - excluding dividends from one-off asset sales

	3 years before (\$2017 NZD)	3 years after (\$2017 NZD)	Change (\$2017 NZD)	Change %
Dividends paid				
Mercury (\$m)	175	115	(60)	-34%
Meridian (\$m)	239	200	(39)	-16%
Genesis (\$m)	20	81	62	311%
Total (\$m)	434	396	(38)	-9%
Dividends declared				
Mercury (\$m)	106	128	21	20%
Meridian (\$m)	142	222	79	56%
Genesis (\$m)	40	84	45	112%
Total (\$m)	289	434	145	50%

Source: TDB analysis based on data provided in company annual reports.

⁶⁴ Appendix B provides a year-by-year breakdown of total, special and normal dividends paid for all five gentailers.

Using dividends paid the Crown generated 34 percent lower returns from Mercury, 16 percent lower returns from Meridian and 311 percent higher returns from Genesis. The Crown's total dividend return fell by 9 percent.

Using dividends declared the Crown experienced a 12 percent increase in returns from Mercury, a 56 percent increase in returns from Meridian and a 112 percent increase in returns from Genesis. The Crown's total dividend return grew by 50 percent.

8.1.4 Conclusions on dividend analysis

It is clear that no matter what dividend interpretation is used, and no matter how special dividends are treated, the Crown's dividend return has not fallen by the expected 49 percent. Including all special dividends, the Crown's dividend return has fallen by 37 or 10 percent whether using dividends paid or declared, respectively. Excluding all special dividends, the Crown has received 13 or 27 percent fewer dividends, whether using dividends paid or declared. And excluding only special dividends as a result of one-off asset sales, the Crown has received 9 percent fewer or 50 percent higher dividends using dividends paid or declared. This is despite the counterfactual dividend path being close to flat over this period, so the growth in MOM dividends does not appear to be an industry-wide phenomenon.

These results suggest the increase in dividends for Mercury, Meridian and Genesis are likely in part due to changes in the ownership arrangement and the effect that market exposure has on the board's dividend decision-making. These results support the majority of the literature surveyed in Section 3, suggesting market investors impose stronger financial incentives on management than the Crown/Treasury.

8.2 Capital gains

The Crown received approximately \$4.4b (nominal) in proceeds from the sale of Mercury, Meridian and Genesis in 2013/14. The sales valued the Crown's remaining 51 percent share in each company at approximately \$4.5b in total (see Table 17 below). As at 30 June 2017, the Crown's ownership of Mercury, Meridian and Genesis is valued at \$7.4b. This represents a \$2.9b (nominal) or 63 percent increase in the value of the Crown's 51 percent holding. Put differently, the value of the Crown's ownership is worth 83 percent of its 100 percent holding on sale day, despite the Crown now owning only 51 percent of its former ownership share.

Table 17: Asset value to Crown

	Value at listing	Value at 30 June 2017	Capital Gain	Capital Gain (%)
Nominal				
Mercury (\$m)	1,785	2,371	586	33%
Meridian (\$m)	1,961	3,804	1,843	94%
Genesis (\$m)	791	1,239	449	57%
Total (\$m)	4,536	7,414	2,877	63%
2017 \$NZD				
Mercury (\$m)	1,861	2,371	510	27%
Meridian (\$m)	2,044	3,804	1,759	86%
Genesis (\$m)	811	1,239	428	53%
Total (\$m)	4,716	7,414	2,697	57%

Source: TDB analysis of NZX data.

Adjusting for inflation by converting sale prices into 2017 \$NZD does little to affect the results as inflation has been low over the three-to-four year period. The total value to the Crown's 51 percent holding has increased by 57 percent in real terms.

In summary, the Crown was able to raise \$4.4b from the sale of 49 percent of Mercury, Meridian and Genesis while maintaining control through its 51 percent ownership in the three firms. Based on the firms' respective values at the time of listing, the remaining shares of these firms were worth \$4.5b to the Crown's balance sheet while as of June 2017 those same shares are worth \$7.4b (a 63 percent increase, or 57 percent in real terms).

8.3 Total shareholder return

The previous two sections detailed the Crown's returns from Mercury, Meridian and Genesis in the form of dividends and capital gains respectively. This section combines both types of returns to provide the Crown's TSR since the three companies were partially privatised.

Table 18: Crown's Total Shareholder Return since MOM listings

	Mercury	Meridian	Genesis	Total
Nominal NZD				
Absolute TSR \$	1,060	2,672	692	4,424
Relative TSR %	59%	136%	87%	97%
Annualised compound TSR %	12%	26%	22%	-

Source: TDB analysis based on data provided in company annual reports. Mercury is for period 10/05/2013 to 30/06/2017; Meridian is for period 29/10/2013 to 30/06/2017; and Genesis is for period 17/04/2014 to 30/06/2017.

Meridian has provided the Crown with the largest TSR in both absolute and relative terms. In absolute terms, Meridian has generated a TSR of \$2.7b since listing (nominal). Mercury and Genesis have generated an absolute TSR of \$1.1b and \$0.7b respectively (also nominal).

In relative terms Meridian has generated a TSR of 136 percent, or an annualised compound return of 26 percent. Mercury has generated a TSR of 59 percent, equivalent to 12 percent when annualised. Genesis has generated a TSR of 87 percent, equivalent to an annual compound rate of 22 percent.

As an alternative, Table 19 below uses the average of the most recent SCI valuations of the three MOMs before listing as the reference point for asset value. The purpose of including this alternative TSR estimate is to attempt to account for both the negative effect of the New Zealand Power proposal on Crown proceeds as well as any IPO discount.

Table 19: Crown's TSR since listing using SCI valuation as starting value

	Mercury	Meridian	Genesis	Total
Nominal NZD				
Absolute TSR \$	1,874	2,566	958	5,398
Relative TSR %	51%	39%	49%	44%
Annualised compound TSR %	10%	9%	13%	-

Source: TDB analysis based on data provided in company annual reports. Mercury is for period 10/05/2013 to 30/06/2017; Meridian is for period 29/10/2013 to 30/06/2017; and Genesis is for period 17/04/2014 to 30/06/2017.

Table 19 shows that when the most recent SCI valuations are used instead of listing value, the TSR of the three companies drop considerably. The effect is most pronounced for Meridian and Genesis. Mercury's TSR falls from 12 to 10 percent; Meridian's falls from 26 to 9 percent; and Genesis from 22 to 13 percent.

8.3.1 Conclusions on TSR analysis

Overall, the Crown has benefited from significant improvements in the returns from the three gentailer MOMs. The returns of the three MOM companies have improved relative to the benchmark 100 percent private gentailer companies. At the same time, the Crown remains the majority shareholder of each company and has therefore kept control. A fuller analysis of the Crown's net return from the MOM would involve analysing the opportunity cost and the return from the Crown's reinvested sale proceeds into the Future Investment Fund, as well as the displaced debt (ie, what would have happened without the MOM).

9. Conclusions

This paper provides an analysis of New Zealand's experience with the Mixed Ownership Model (MOM). Following a discussion of the historical background to the MOM, the focus has been on how the change in ownership structure, from full Government ownership to 51 percent control, affected the performance of Mercury, Meridian and Genesis. Supplementing this analysis is a discussion of the effects of the MOM on the Crown's financial position.

The firm-performance analysis involved three clear stages. The first stage was a positive 'before and after' analysis of the three individual MOM gentailers across core financial metrics coupled with more normative analysis of business strategy. Changes in firm performance before and after public listing differed slightly across each MOM gentailer. Mercury and Meridian improved across both operating metrics and Genesis worsened. There are, however, firm-specific caveats independent of ownership that appear to have suppressed, in particular, the post-MOM performance of Genesis: namely the inflationary effect of the 2012 dry-year on pre-MOM earnings and the deflationary effect of the oil price slump on post-MOM earnings. On the other hand, the 2012 dry-year will have deflated the pre-MOM earnings of Meridian and likely exaggerated any performance improvements over time. All three companies had significant increases in dividend payments post-MOM, large declines in capital expenditure and reductions in their debt to earnings and debt to equity ratios.

The second stage aggregated the firm performance of all three MOM gentailers before and after public listing. Aggregating all three companies smoothed out some individual firm effects, such as the 2012 dry-year that had a counteracting influence on Genesis and Meridian's performance, respectively. The aggregate before and after analysis showed that the three MOM gentailers improved across both operating metrics. This improvement has occurred despite the period having almost zero growth in demand, flat to falling retail, commercial and industrial real electricity prices and a small increase in generation and retail competition.

The third stage was a 'like for like' analysis using two large private gentailers, Contact and Trustpower, as a counterfactual benchmark (ie, a control for market-wide effects). The private gentailers improved EBITDAF at a greater rate than the three MOMs. However, when earnings are standardised using return on assets, the performance of the three MOMs converged after partial privatisation toward the private gentailers, although the gap has not entirely closed.

Perhaps the most telling difference between the private and MOM gentailers has been investor returns. The three MOMs have all increased dividends significantly post-public listing, whereas the two private gentailers' dividends have remained relatively flat over the period. The three MOMs' aggregate dividends have increased by 69 percent post-MOM. Private gentailers increased dividends by 43 percent over the same period although largely as a result of Contact's large special dividend in 2015.

The large dividend increases, accompanied by favourable changes to the respective share prices, resulted in a large total shareholder return (TSR) for all three MOMs relative to their private counterparts. From listing dates until the end of the 2017 financial year, Meridian had an annualised TSR of 26 percent; Genesis had an annualised TSR of 22 percent; and Mercury an

annualised TSR of 12 percent. Contact and Trustpower both had annualised TSRs of approximately 7 percent over broadly the same period. These MOM TSRs do, however, include factors exogenous to firm performance such as the effect of the New Zealand Power Proposal on listing value and potential IPO discounts.

The Crown would be expected to have experienced a 49 percent reduction in dividends following its 49 percent sale of the three gentailers (all other things being equal). The counterfactual dividend path (ie, for the two non-MOM companies) was flat over the period. The three MOMs, however, have increased dividends significantly since their listing. The exact change in dividend income depends on the measure used. But even on the most conservative measure, dividend income has only fallen by 37 percent and on one measure has increased by 50 percent (despite the Government only owning 51 percent of the companies and still retaining control).

All in all, the Mixed Ownership Model appears to have been a successful institutional initiative for both the individual companies and the Government. The negative consumer/environmental effects, such as increased electricity prices and a decline in renewable electricity generation, that were voiced as reasons for opposition to the Government sell-down, have not eventuated to date. In aggregate, the MOM firms' performance has improved across all the standard industry operating metrics considered in this report and the returns to shareholders have also increased significantly. Compared to the non-MOM private companies the performance of the MOM companies has been mixed. Both groups have increased earnings, albeit in different ways. MOMs have made better use of existing assets while focusing on core business. The non-MOMs appear to have increased earnings by expanding their respective asset bases (ie, Trustpower's expansion in the Australian market).

While this report has shown that the MOMs have seen some improvements since partial privatisation, it is not clear that these gains were a "one-off" catalyst of the IPO or are an ongoing and sustained effect. Longer-term reviews should help to inform such conclusions.

The literature would suggest that there are further gains to firm performance to be had from full privatisation. These gains could arise from the complete removal of political interference in the respective businesses, increased share market liquidity and takeover threat. However, any further sell down of the MOMs (or of other SOEs) should be considered on a case-by-case basis with consideration in particular of the soundness of the regulatory arrangements in place.

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Appendix A: Contact & Trustpower

A.1 Contact: background

Contact Energy was created in 1996 by splitting up the state-owned monopoly generator ECNZ into two separate SOEs: Contact Energy and ECNZ. Then, in 1998, the National Government decided to fully privatise Contact Energy and use the proceeds to repay debt.

The privatisation of Contact involved offering 60 percent of the company to the general public via a public float while the remaining 40 percent was sold to a 'cornerstone shareholder'. The successful bidder for the 40 percent stake was Edison Mission Energy, a United States energy company, which negotiated a price of \$1.21bn with the Crown.⁶⁵ This equated to a price of \$5 per share. This was substantially higher than the share price achieved in the subsequent public float of \$3.10 per share.

Using the most recent approximations of market share, Contact is the second largest electricity generator in New Zealand, comprising 20 percent of total generation. Contact is also the second largest electricity retailer with approximately 20 percent of retail volume.

As of the year ended 30 June 2017, approximately 80 percent of Contact's electricity generation comes from renewable sources. 42 percent comes from hydro, which is entirely generated from two South Island stations, Clyde and Roxburgh. A further 38 percent is generated from five geothermal stations in the North Island. The remaining 20 percent comes from four thermal stations also in the North Island. Contact's renewable proportion (80 percent) is slightly below the overall New Zealand composition of approximately 85 percent.

A.2 Contact firm-level performance

The financial analysis for Contact has been broken into two parts. The first part (Table 20 below) uses the 2010 to 2016 period. This is the same period used for Mercury and Meridian. The second part (Table 21 below) uses the 2011 to 2017 period for comparability with Genesis. The general trends in Contact's financial performance are not significantly affected by the cut-off year used.

⁶⁵ <https://www.beehive.govt.nz/release/contact-energy-sale>

A.3.1 Metric analysis

Table 20: Contact financial metrics (2010-2016) (annual average, \$2017)

Metric	3 years before (2010-2012)	3 years after (2014-2016)	Change (2017 NZD)	Change %
Operating				
EBITDAF (\$m)	493	557	64	13%
Return on assets (%)	8.4%	9.0%	0.6%	7%
Capital management				
Capital expenditure (\$m)	558	167	(391)	-70%
Average total assets (\$m)	5,854	6,198	345	6%
Net debt/EBITDAF	2.89	2.90	0.00	0%
Net debt/equity	0.42	0.49	0.07	17%
Distribution				
Dividends paid (\$m)	173	318	145	84%

Source: TDB analysis based on data provided in Contact annual reports.

As shown in Table 20 above Contact's EBITDAF improved by \$64m per year (13 percent). Return on assets increased from 8.4 percent to 9.0 percent between the two periods. However, it should be noted that Contact reports its asset values differently to the other gentailer firms. Contact records a carrying amount as opposed to attempting to record a fair/market value.

Capex decreased from \$558m per year to \$167m (70 percent decline). This is a similar magnitude drop to Meridian (61 percent) and Mercury (72 percent). This suggests all three firms responded in similar ways to the flattening off of electricity demand during this period (and preceding). While electricity demand began to flatten from 2006/07 it appears there was a time lag before the significance of the change was realised. For projects underway it may also have been too late to suspend investment.

Net debt to EBITDAF ratio remained constant at approximately 2.9 and debt to equity increased from 0.42 to 0.49 (17 percent increase).

Contact paid a special dividend of 50c per share (or \$375m) in 2015. This special dividend has not been excluded, as it was not generated from a one-off asset sale or other rare event. The reason for the special dividend was that Contact had been anticipating new capital expenditure then decided there were no viable options. Therefore Contact chose to distribute the accumulated funds to shareholders.

Table 21: Contact financial metrics (2011-2017) (annual average, \$2017)

Metric	3 years before (2011-2013)	3 years after (2015-2017)	Change (2017 NZD)	Change %
Operating				
EBITDAF (\$m)	522	521	(1)	0%
Return on assets (%)	8.6%	8.8%	0.2%	3%
Capital management				
Capital expenditure (\$m)	495	114	(381)	-77%
Average total assets (\$m)	6,101	5,928	(173)	-3%
Net debt/EBITDAF	2.71	3.14	0.43	16%
Net debt/equity	0.40	0.55	0.16	39%
Distribution				
Dividends paid (\$m)	170	317	148	87%

Source: TDB analysis based on data provided in Contact annual reports.

The 2011 to 2017 analysis of Contact in Table 21 above produces very similar trends to the 2010 to 2016 analysis. All metrics are approximately going in the same direction, although there are slightly different magnitudes.

Compared to Genesis (which has the same 2011 to 2017 period), Contact has a slightly better EBITDAF trend. Contact's EBITDAF is effectively constant (down \$1m) compared to a 4 percent decline (or 9 percent decline in adjusted EBITDAF) for Genesis. However, as discussed, the Genesis pre-MOM figures are inflated due to the 2012 dry year boosting wholesale prices for Genesis' diversified generation portfolio.

Contact's return on assets is up from 8.6 to 8.8 percent over this period, compared to a decline from 9.2 to 8.8 percent for Genesis (bearing in mind Contact values its assets in a different way to Genesis and the other major gentailers).

Contact's net debt to EBITDAF increased from 2.71 to 3.14 compared to a decline from 3.19 to 2.98 for Genesis.

A.3 Trustpower: background

Trustpower was established in 1923 with the construction of a power station in Tauranga. The organisation was originally a local-authority-owned entity.

Trustpower is now a listed company on the NZX with 51 percent of Trustpower's voting rights owned by Infratil Limited, 26.8 percent by the Tauranga Energy Consumer Trust and the remaining 22.2 percent held by smaller owners. The ownership structure of Trustpower is in many ways similar to the Mixed Ownership Model companies. There is one single controlling entity with a 51 percent stake and the remaining ownership being more widely distributed. However, there is clearly a significant distinction between a private company like Infratil and the Crown.

Trustpower is the smallest of the five largest gentailers in both the generation and retail arms. As of 2017, Trustpower generates 5 percent of total New Zealand electricity, down from 6 percent in 2011. Over 99 percent of Trustpower's electricity generation comes from renewable sources. Trustpower operates 29 hydro-electricity schemes and a total of 48 power stations in New Zealand, as well as three schemes and six stations in Australia. Trustpower has a larger share of the retail market, with approximately 8 percent of total retail volume in 2017.

A.4 Trustpower firm-level performance

A.4.1 Context

Trustpower demerged into two separate entities in October 2016. The majority of the existing organisation remained under the same Trustpower name while a small fraction of the business became Tilt Renewables Limited. Tilt Renewables was allocated the former Trustpower's Australian and New Zealand wind generation assets and its multi-product retail business.

For ease of analysis, the 2017 financials for the new Trustpower have been excluded due to the complications the demerger has on comparability over time. Therefore the Trustpower information will be most useful for comparing performance with Meridian and Mercury and less

relevant for Genesis (although it is not completely redundant as the Contact data suggests that the one-year cut-off difference is likely to have only a small effect on the results).

A.4.2 Metric analysis

Table 22: Trustpower financial metrics (annual average, \$2017)

Metric	3 years before (2010-2012)	3 years after (2014-2016)	Change (2017 NZD)	Change %
Operating				
EBITDAF (\$m)	305	320	15	5%
Return on assets (%)	10.8%	9.3%	-1.6%	-15%
Capital management				
Capital expenditure (\$m)	66	263	197	297%
Average total assets (\$m)	2,816	3,460	644	23%
Net debt/EBITDAF	2.69	3.92	1.22	45%
Net debt/equity	0.52	0.70	0.19	36%
Distribution				
Dividends paid (\$m)	141	130	(11)	-8%

Source: TDB analysis based on data provided in Trustpower annual reports.

Trustpower experienced a small increase in EBITDAF from \$305m to \$320m per year (5 percent increase) and return on assets declined from 10.8 percent to 9.3 percent. This is the largest decline of all the gentailers. However, Trustpower's return of 9.3 percent is still higher in absolute terms than Meridian's (7.9 percent) and Mercury's (8.4 percent) and similar to Genesis' (9.0 percent) and Contact's (9.0 percent).

Trustpower is the only gentailer to have increased capex over the two periods: from \$66m to \$263m per year. Almost all of Trustpower's asset growth has happened in the Australian market. From 2012 to 2016, Trustpower increased its Australian generation from 376 GWh to 1,451 GWh per year (286 percent increase) while New Zealand generation has fallen from 2,582 GWh to 2,312 GWh (10 percent decrease). Trustpower's total assets have grown substantially from \$2.8bn to \$3.5bn (a 23 percent increase).

Net debt to EBITDAF has increased from 2.69 to 3.92 and net debt to equity has increased from 0.52 to 0.70.

Dividends are slightly down, from \$141m to \$130m (8 percent decline). Trustpower is the only gentailer to reduce its dividend payout over this period.

Appendix B: Dividends

Table 23: Total, special & normal dividends by company (\$2017)

	2010 (\$m)	2011 (\$m)	2012 (\$m)	2013 (\$m)	2014 (\$m)	2015 (\$m)	2016 (\$m)	2017 (\$m)
Total dividends								
Mercury	320	102	127	117	178	267	233	253
Meridian	395	732	149	104	268	395	512	477
Genesis	44	-	-	60	124	150	166	164
Contact	184	164	171	174	189	572	193	186
Trustpower	162	128	133	131	129	128	134	-
Special dividends								
Mercury	168	-	-	-	-	71	35	55
Meridian	-	557	-	-	-	89	167	125
Genesis	-	-	-	-	-	-	-	-
Contact	-	-	-	-	-	377	-	-
Trustpower	35	-	-	-	-	-	-	-
Normal dividends								
Mercury	152	102	127	117	178	196	198	198
Meridian	395	174	149	104	268	306	345	352
Genesis	44	-	-	60	124	150	166	164
Contact	184	164	171	174	189	196	193	186
Trustpower	127	128	133	131	129	128	134	-

Source: TDB analysis based on data provided in company annual reports. Trustpower's 2017 dividends have been excluded because of comparability issues following the demerger.

Appendix C: New Zealand privatisations

<i>Year¹</i>	<i>Business</i>	<i>Sale Price (\$m)</i>	<i>Buyer(s)</i>	<i>Principal domicile of buyer(s)^{2*}</i>
1988	NZ Steel	327	Equiticorp	M
	Petrocorp	801	Rossport Inv Ltd	M
	DFC	111	NPF (80%)	D
1989	Postbank	678	ANZ	M
	Shipping Corp	31	ACT (NZ) Ltd	F
	Air NZ	660	BIL, Qantas, JAL, AAL	M
	Landcorp mortgages	49	Mortgagors	M
	Rural Bank	687	Magnetron Holdings Ltd	M
1990	Govt Print	38	Rank Group	D
	State Insurance	735	Norwich Union	F
	Tourist Hotel Corp	72	Southern Pacific	F
	Synfuels	-90	Fletcher Challenge	M
	Telecom	4,250	Bell South, Ameritech	F
	Forestry cutting rights	1,025	Various	M
1992	Timberlands	366	ITT Rayonier	F
	Export Guarantee Ltd	20	State Insurance	F
	Housing Corp Mortgages	2,404	Various banks	M
	Petroleum Mining Licenses	120	Petrocorp/Sthn Petroleum	M
	Bank of NZ	850	NAB	F
1993	NZ Rail	328	Wisconsin, Berkshire, Fay Richwhite	M
	Fletcher Challenge Shares	418	Financial Institutions	M
1994	Govt Computer Services	47	EDS Holdings	F
1996	Maori Development Corp	21	Maori Dev. Corp	D
	Forestry Corporation	1,600	FCL, Citifor, BIL	M
	Works Development Services	108	Downer; Kinta Kellas	M
1998	Auckland Airport Ltd	460	Public Share Float	M
	Wellington Airport Ltd	96	Infratil NZ led consortium	M
	Capital Property Services	119	Public Share Float	M
1999	Contact Energy Ltd	2,331	Edison and Public Float	M
	Vehicle Testing NZ	19	Motor Trade Inv	D
2013	Mighty River Power	1,686	Public Share Float (49%)	D
	Meridian Energy	1,884	Public Share Float (49%)	D
	Air New Zealand	365	NZ Stock market	D
2014	Genesis Energy	733	Public Share Float (49%)	D

Notes:

1. Date of first settlement.
2. D = 75% or more domestic owner.
F = 75% or more foreign owned.
M = mixed: i.e. more than 25% domestic and foreign ownership.

*Indications of domicile are TDB's estimates. Other minor assets that have been sold are not included in the above table.

Source: <http://www.treasury.govt.nz/government/assets/saleshistory/index.htm#refNo14>

Appendix D: New Zealand SOEs, MOMs & CE's

<i>Business</i>	<i>Principal Activity</i>	<i>Assets \$m</i>	<i>Equity \$m</i>
State Owned Enterprises			
Airways Corporation of New Zealand Ltd	Air traffic services	194	100
AsureQuality Ltd	Meat inspection services	107	50
Landcorp Farming Ltd	Farming	1,786	1,411
New Zealand Post Group	Banking and postal services	20,235	1,293
KiwiRail Holdings Ltd	Rail and Ferry operators	1,756	1,315
Transpower New Zealand Ltd	Electricity transmission	5,563	1,115
Kordia Group Ltd	Media and technology services	163	97
New Zealand Railways Corporation	Rail ownership	3,363	3,363
Mixed Ownership			
Air New Zealand Limited	Airline	7,807	2,667
Genesis Energy Limited	Electricity supply	3,744	1,961
Meridian Energy Limited	Electricity supply	8,499	5,050
Mercury Energy Limited	Electricity supply	6,081	3,315
<i>Total SOEs and MOMs</i>		<i>58,919</i>	<i>21,258</i>
Crown Entities			
Accident Compensation Corporation	Personal injury insurance	38,291	-1,865
Crown Fibre Holdings Limited	Broadband infrastructure	664	633
Crown Research Institutes	Research	764	579
Callaghan Innovation	Business innovation	151	60
District Health Boards	Healthcare providers	7,416	2,796
Earthquake Commission	Natural disaster insurance	2,051	-457
Housing New Zealand Corporation	Residential housing provision	23,390	19,164
Museum of New Zealand Te Papa	Museum	1,341	1,330
New Zealand Fire Service Commission	Fire services	829	723
New Zealand Lotteries Commission	Lottery operations	146	23
New Zealand Transport Agency	Land transport development	32,684	31,656
Otakaro Limited	Christchurch development	310	91
Public Trust	Professional services	524	44
Schools	Schools	3,163	2,231
Southern Response Earthquake Services	Canterbury earthquake	736	-68
Tamaki Regeneration Limited	Urban development project	1,770	1,732
Tertiary Education Commission	Tertiary education provider	643	71
TEIs	Universities	10,669	10,669
Television New Zealand	National broadcaster	297	238
<i>Total CEs</i>		<i>127,129</i>	<i>70493</i>
<i>Total SOEs, MOMs and CEs</i>		<i>186,048</i>	<i>91,751</i>

**Values are nominal as of 30 June 2016*