Deloitte.

Essential Services Commission

Desalination capitalisation scenarios

21 June 2013

Contents

Glossary

DSE	Department of Sustainability and Environment
ESC	Essential Services Commission
EBITDA	Earnings before interest, tax, depreciation and amortisation
FAL	Financial Accommodation Levy
FFO	Funds from operations
GL	Gigalitres
PPP	Public Private Partnership
PWC	PricewaterhouseCoopers
RAV	Regulated Asset Value
TCV	Treasury Corporation of Victoria
VDP	Victorian Desalination Plant
VWI	Victoria Water Industry – Performance reporting framework
WACC	Weighted Average Cost of Capital
WP3 / WP4	Water Plan period 3 or 4

Executive Summary

- The ESC has engaged Deloitte to review Melbourne Water's capacity to re-profile the regulatory treatment of payments for the Victorian Desalination Plant (VDP), potentially through capitalising a portion of the payments for regulatory purposes.
- This is our final report on the issue and follows a Preliminary Report in April 2013. This report takes into account a large number of changes to Melbourne Water's financial position since the Preliminary Report. These changes, which include amendments advised by Melbourne Water as well as some applied by the ESC, have the effect of materially worsening Melbourne Water's financial position. They include:
  - Reduced developer contributions of $74m across WP3
  - A 4.5% WACC rather than a 4.7% WACC. This reduces revenue by around $104m across WP3
  - A higher financial accommodation levy (FAL) charged on Melbourne Water's borrowings from Treasury Corporation of Victoria
  - A number of adjustments made by Melbourne Water to its cash flow position. In net terms these total $335m across WP3, and are driven by an aggregate reduction in cash flow associated with GST timing issues of $482m
  - Other changes to capital and operating expenditure associated with the ESC's views on the level of prudent and efficient expenditure in WP3, as well as changes to 2012-13 capital expenditure.
- As Melbourne Water assumes substantially all the risks and benefits associated with the VDP, payments are treated as a finance lease:
  - **The annual payments** are split into three components – interest, depreciation and operating costs
  - The future value of payments is treated as a **liability in the balance sheet**
  - An equivalent amount to the future value of payments is established as **an asset in the balance sheet.**
- Key aspects of the finance lease are as follows:

Finance lease implications for Melbourne Water ($m, nominal)

	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18
Finance lease interest	299.90	471.05	464.82	457.84	451.89	447.53
Operating costs	99.65	137.91	141.79	145.88	150.08	154.48
Depreciation	42.99	93.39	93.39	93.39	93.39	93.39
Balance sheet impact - finance lease liability	4069.26	3975.87	3882.49	3789.10	3695.72	3602.33

- Even if the VDP payments are treated entirely as an operating expense for regulatory purposes, the existence of the VDP payments places significant pressure on Melbourne Water's financial position, and in particular some of its accounting-based ratios. Melbourne Water's net profit before tax reduces by around $80m per year across WP3. As a result its net profit is close to zero in most years.

Summary profit and loss – without desalination plant ($m, nominal)

	2013-14	2014-15	2015-16	2016-17	2017-18
Revenue	1,087	1,130	1,167	1,211	1,249
Total expenditure	984	1,012	1,073	1,128	1,198
Profit before tax	**103**	**117**	**95**	**82**	**52**
Tax	31	35	28	25	15
Return to Government	67	76	61	54	34
Retained earnings	5.1	5.9	4.7	4.1	2.6

Summary profit and loss – with desalination plant (no capitalisation) ($m, nominal)

	2013-14	2014-15	2015-16	2016-17	2017-18
Revenue	1,698.3	1,755.7	1,810.5	1,878.4	1,934.0
Total expenditure	1,698.4	1,732.0	1,797.1	1,858.6	1,935.9
Profit before tax	**(0.0)**	**23.7**	**13.4**	**19.8**	**(1.9)**
Tax	(0.0)	7.1	4.0	5.9	(0.6)
Return to Government	**-**	**15.4**	**8.7**	**12.9**	**-**
Retained earnings	-	1.2	0.7	1.0	(1.4)

- We have examined Melbourne Water's operating environment and cash and accounting position through modelling the impact on cash flows and accounting position. We have also undertaken a comparison of Melbourne Water's financial position with its peers across a range of financial metrics, both those used within the industry and those adopted by credit ratings agencies.
- When considering Melbourne Water's capacity to capitalise the desalination plant for regulatory purposes, in addition to considering Melbourne Water's credit metrics it is also important to have regard to a number of factors:
  - Melbourne Water's general operating environment
  - The regulatory environment
  - Financial risks
  - Government support available to Melbourne Water.
- Capitalising a small portion of the VDP payments worsens Melbourne Water's financial metrics to a marginal extent, however because the ratios are in a poor state to begin with, these marginal reductions have implications for its financial position.
- We have modelled a relatively narrow range of capitalisation scenarios, ranging from a total of $55m (Scenario 2) to $140m (Scenario 1) across WP3. This represents a range of 1.4% to 3.5% of the total desalination payments across WP3. Both Scenario 1 and Scenario 2 were proposed in Melbourne Water's response to the Draft Decision.

Capitalisation scenarios ($m, 2012-13)

	WP3					WP4
	2013-14	2014-15	2015-16	2016-17	2017-18	(Per annum, all years)
No capitalisation	0	0	0	0	0	0
Scenario 1 (MW)	0	0	22.5	45	72.5	72
Scenario 2 (MW)	0	0	0	25	30	30
Scenario 3	0	0	0	45	72	72
Scenario 4	0	0	0	25	75	75

- The capitalisation ranges modelled are much lower than our Preliminary Report, because as identified above, a number of factors have combined to worsen Melbourne Water's base case financial position. By far the most significant factor is the GST timing adjustments of $482 million. This change was not explicitly identified in Melbourne Water's response to the Draft Decision and it has not been possible to verify the reason for the change in the time available.
- It is possible to contemplate some level of capitalisation only on the basis of Melbourne Water's stable regulatory environment, government ownership and government sourced debt financing. In the absence of these factors its 'stand-alone' financial ratios are clearly too poor to consider any capitalisation at all.
- While noting that the differences between the modelled scenarios are very small, we suggest that a capitalisation range of $50-100m in WP3 (i.e. a range across Scenarios 2 to 4) represents the largest level of capitalisation that Melbourne Water could reasonably be expected to bear. This range:
  - Provides some prospect for Melbourne Water to make a net profit each year
  - Achieves a FFO/Interest Cover ratio slightly above 1.5
  - Reduces Melbourne Water's financial risks compared to higher levels of capitalisation
  - Provides for a strong recovery in financial position across WP4.
- In the absence of the GST timing adjustments to the cash flows made by Melbourne Water, Option 1 ($140m capitalisation) could be accommodated. At this level of capitalisation the FFO/Interest Cover ratio averages almost 1.7 across WP3 and the FFO/Debt ratio improves to 6.6%. Profit-based ratios would remain unchanged.

1 Background

1.1 Victorian Desalination Plant

- The Victorian Desalination Plant (VDP) was built to provide up to 150GL per year of water (around 30-40% of Melbourne's total annual water use). It was delivered by DSE as a Public Private Partnership (PPP). Melbourne Water has entered into an agreement with DSE in relation to its obligations for the VDP, which include both an annual security charge and supply costs, the latter which vary depending on the annual volume of water ordered from the plant, if any.
- The duration of the desalination plant PPP post final reliability testing is 27.75 years (Melbourne Water will own the asset when the PPP ends). On average the actual assets will have a life closer to 50 years (with some aspects of the plant such as the transfer pipeline and the marine tunnels having a 100 year design life).
- The VDP costs associated with a zero GL water order are significant, comprising more than 40% of Melbourne Water's total annual operating expenditure in the 2013 Water Plan period, at around $700m per year (including interest, operating costs and depreciation).
- Melbourne Water's base proposal is to treat the cost of the VDP as an operating expense for regulatory purposes which would mean that VDP payments will be met 1:1 by increases in revenue. However, in its response to the ESC's Draft Decision it provided two scenarios in the event that the ESC determined that a portion of the payments must be capitalised. As discussed below, we have modelled these plus an additional two scenarios.

Melbourne Water potential capitalisation scenarios ($m, 2012-13)

	2013-14	2014-15	2015-16	2016-17	2017-18
Scenario 1	0	0	22.5	45	72.5
Scenario 2	0	0	0	25	30

1.2 Scope of work

- The ESC has engaged Deloitte to review Melbourne Water's capacity to re-profile the regulatory treatment of the desalination payments. In particular we were asked to examine the potential for some of Melbourne Water's VDP payments to be capitalised, rather than treated as an operating expense. The scope of our Phase 1 work has encompassed:
  - Examination of Melbourne Water's financial position including and excluding the VDP.
  - Preliminary modelling of the potential re-profiling that is possible having regard to a range of broadly accepted financial measures such as interest cover, gearing, cash, and profitability.
  - Taking into account the regulatory and statutory accounting impacts.

2 Our Approach

2.1 Our Approach

Our approach has incorporated the following key factors:

- For modelling purposes we have based our analysis on a model provided by the ESC which includes the submission template provided by Melbourne Water.
- We have used this to examine various capitalisation scenarios and the impact on key financial outputs and metrics.
- We have spoken with Australia Ratings, a credit ratings firm, with regards to their views on the key factors that should be taken into consideration when conducting an assessment of the financial position of a water business such as Melbourne Water.
- We have discussed our model with Melbourne Water. Although our model does not exactly align with Melbourne Water's, the differences are relatively minor.

2.1.1 Modelling Approach

- As noted, we have used the ESC's regulatory model as the basis for our calculations and scenarios.
- This model includes operating and capital expenditure and WACC forecasts provided to us by the ESC following its consideration of Melbourne Water's response to the Draft Decision. It also includes the VDP payment.
- To understand Melbourne Water's financial position without the VDP, we have 'backed out' the effects of the VDP using a range of assumptions. This is somewhat the reverse of a standard modelling approach which would start with the 'no VDP' position, and then add the VDP payment on top.
- Our analysis focusses on the WP3 period as this is when Melbourne Water faces the greatest financial stress. In order to provide a slightly longer term perspective the charts in section 5 of this report show a 10 year timeline. However it should be noted that some information beyond WP3 is incomplete, meaning that (a) figures beyond WP3 may be inaccurate (b) in some of the charts there is a 'step change' in outcomes between 2017-18 and 2018-19 that more reflects data issues than actual changes in financial outcomes between the two years.
- We have compared our modelling results with those provided by Melbourne Water. The results/outputs are different, although not substantially so, and most of the differences are due to different input assumptions.
- We have generally accepted without review a number of 'hard-coded' changes to cash flows made by Melbourne Water since the Draft Decision. This includes an item relating to the timing of GST payments which, as discussed in Chapter 4, has a significant effect on modelled outcomes.

2.2 Limitations to our work

- We have utilised the ESC's regulatory model as the base for our scenario analysis work. This does not have a fully integrated income statement, Balance Sheet and Cash Flow which would make it easier to identify any issues with adjustments that have been made to the model.
- There are numerous macros throughout the model which drive calculations including price increases for Melbourne Water and retail customers. The use of these macros is understood but a detailed line by line code review has not been completed.
- Although we have raised some issues that we identified with the model with the ESC, we have not completed a formal model integrity audit. Hence, to the extent that our conclusions rely on the ESC's regulatory model and this model contains errors, our conclusion may be in error. We are therefore unable to accept any liability in this case.

3 Key issues to be considered

3.1 The finance lease

- Regardless of how the VDP payments are dealt with from a regulatory perspective, the fact that Melbourne Water incurs them puts pressure on its financial position over WP3.
- In part this is because of the way the VDP payments are treated from an accounting perspective. As Melbourne Water assumes substantially all the risks and benefits of the VDP, payments are treated as a finance lease (see the box below for a more fulsome description of a finance lease):
  - **The annual payments** are split into three components – interest, depreciation and operating costs
  - The future value of payments is treated as a **liability in the balance sheet**
  - An equivalent amount to the future value of payments is initially established as **an asset in the balance sheet.**
- Key aspects of the finance lease are as follows:

Finance lease implications for Melbourne Water ($m, nominal)

	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18
Finance lease interest	299.90	471.05	464.82	457.84	451.89	447.53
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Note: figures in this table are in nominal terms.

- One of the implications of the finance lease is that Melbourne Water's debt roughly doubles. In the absence of the finance lease liability Melbourne Water's debt is currently around $4.5b.
- Because the regulatory treatment, accounting treatment and cash-flow implications of the VDP payment are all quite different, regardless of the regulatory treatment it is impossible to get all three to align.

What is a finance lease?

Accounting Standard AASB117 deals with the treatment of leases.

A **finance lease** is a lease that transfers substantially all the risks and rewards incidental to ownership of an asset. Title to the asset may or may not eventually be transferred.

Lessees are required to initially recognise finance leases as assets and liabilities in their balance sheets at amounts equal to the 'fair value' of the leased asset or, if lower, the present value of the minimum lease payments. The discount rate to be used in calculating the present value of the minimum lease payments is the interest rate implicit in the lease. The amount of the asset and liability will be the same at the start of the lease period, but will move apart over time.

The lessee's profit and loss statement will reflect three types of expenses associated with the finance lease:

- A finance charge (interest expense) which is allocated to each period during the lease term so as to produce a constant periodic rate of interest
- An operating expense which reflects the 'contingent rent' associated with the lease
- Depreciation of the asset. If there is reasonable certainty that the lessee will obtain ownership by the end of the lease term, the asset is depreciated over its useful life; if not it is depreciated over the shorter of the lease term and its useful life.

3.2 Assessing Melbourne Water's capacity to deal with reprofiled VDP payments

- As noted, the key objective of our brief has been to assess Melbourne Water's financial capacity to absorb regulatory capitalisation of VDP payments.
- This question is ultimately one of judgement. With the exception of when an entity runs out of funds and sources of funds to pay its obligations, there is ultimately no single tipping point or credit metric at which it can be said that any business becomes 'financially unviable' or reaches an 'unsustainable' financial position.
- We have therefore undertaken our task by examining the following:
  - A range of credit metrics
  - Melbourne Water's operating environment
  - Benchmarking of Melbourne Water's financial position with:
    - A range of peer domestic water utilities
    - A rage of peer domestic energy businesses and overseas water utilities
- A brief discussion of these factors is set out below.

3.3 Credit metrics

- There are numerous metrics that can be used to examine financial viability. For the purpose of this exercise we have selected a sample of these based on:
  - Our discussions with Australia Ratings
  - Data availability
  - The existence of benchmarking and peer information
  - Our views on the most important ratios
- The metrics which are highlighted within this report include:
  - FFO / Interest
  - EBITDA / Interest
  - Debt to EBITDA
  - FFO / Debt
  - Debt / RAV
- An important consideration is whether, when examining Melbourne Water's financial position and capacity to deal with re-profiling, the VDP payment should be considered as either:
  - A finance lease, including the capitalisation of desalination payments as a liability in the balance sheet (i.e. as per the accounting treatment); or
  - A simple operating expense (as per the proposed regulatory treatment)
- Financial ratios are generally much worse under the 'accounting' treatment the 'regulatory' treatment, because from an accounting perspective:
  - The desalination payments are capitalised as a liability in Melbourne Water's balance sheet
  - A large proportion of the desalination payment is considered to be an interest payment
- In our view it is appropriate to consider the payment in line with its accounting treatment. This is because, similar to a standard loan, the VDP payment is long-term, largely fixed, and must be paid regardless of business conditions.
- We have confirmed that this is also how a ratings agency would consider the desalination payment. Accordingly, all financial ratios are in this report are shown on this basis.
- The financial model assumes that Melbourne Water holds an immaterial level of cash for the purposes of the credit metric calculations and therefore the debt ratios above can be compared to total debt or net debt metrics. However, it is worth noting that while net debt comparatives are useful, they do not highlight any 'trapped' cash that would not be immediately available to offset debt.

3.4 Melbourne Water's operating environment

- When considering Melbourne Water's capacity to capitalise the desalination plant for regulatory purposes, in addition to examining financial metrics it is also important to review factors including:

- Melbourne Water's operations
- The regulatory environment
- Financial risks
- Government support available to Melbourne Water.

- Our view of these factors is that together they suggest for a given set of financial metrics Melbourne Water will be in a stronger and less risky financial position than an 'average' private sector business which, unlike Melbourne Water, is not (a) government owned, (b) regulated, and (c) effectively a monopoly supplier. However, Melbourne Water still faces a number of risks and uncertainties that cannot be ignored.

3.4.1 Melbourne Water's operations

- Melbourne Water is a bulk supplier to the Melbourne retailers and a number of regional water businesses. As a regulated, monopoly water utility with a defined customer base and limited opportunities to earn non-regulated income, it faces the same type of operational issues risks as most other water businesses, together with a number that reflect its position as a bulk supplier. In no particular order, some of these risks include:
  - In the short term a large proportion of Melbourne Water's costs are fixed, with exceptions including treatment costs (both water and wastewater) and energy costs
  - In the short to medium term, there is capacity to reduce both capital, maintenance and administrative expenditure in the event that it was necessary to respond to strong financial pressures
  - In some, but not all, areas any reduction in expenditure is unlikely to adversely affect service standards in the short term, although it will impact relationships with stakeholders.
  - We understand Melbourne Water expects to earn around 60% of revenue from variable charges in WP3. Under Melbourne Water's proposed price cap, it is therefore financially vulnerable if usage is lower than forecast, which given the VDP is in place, is now more likely to occur under a high- than low-rainfall scenario
  - Aside from treatment and energy expenditure, operating expenditure is relatively predictable
  - Melbourne Water's proposed capital program, at approximately $2.5b over WP3, is significant from a financial perspective and the usual risks exist in relation to capital expenditure over-runs

3.4.2 Regulatory environment

- The regulatory environment is well-known and stable. The ability to seek a re-opening exists in the event that that Melbourne Water comes under significant financial stress, particularly if it is as a result of an external and uncontrollable event.
- Melbourne Water has proposed a 'price cap' form of regulatory price control. Under this approach it bears the revenue risk of water sales being higher or lower than forecast. To the extent that water volumes are 10% lower than forecast around $50m per annum revenue may be lost.

3.4.3 Financial risks

- There appears to be limited financial risk associated with the VDP payments. Although payment amounts are yet to be finalised, Melbourne Water has proposed a price adjustment mechanism to account for the differences between forecast and actual costs associated with the desalination plant which the ESC appears to have accepted in principle in its Draft Decision.
- Melbourne Water faces the usual risk associated with changes in interest rates.
- However Melbourne Water's refinancing profile is relatively smooth.

3.4.4 Government support

- Another relevant matter when considering Melbourne Water's future financial position is the level of government support. This includes government's willingness and ability to, for example:
  - Step in and provide additional capital in the event that Melbourne Water faces difficulties paying its creditors/debt
  - Agree to lower dividend payments in order to preserve cash flows
  - Provide additional borrowings through TCV
- When assessing the creditworthiness of a government owned entity, strong government support usually means either a 1-2 notch[1] increase in ratings can be applied (compared to a situation with limited or no government support) or the Government's overall rating can be applied.
- The willingness of government to 'step in' to support Melbourne Water financially if required is unknown, however this is clearly an undesirable position to be reached.

3.5 Benchmark and peer comparatives

- In order to compare Melbourne Water's forecast financial performance we have gathered comparable data from a number of sources.
- In our preliminary report we used the following sources of information:
  - Victoria Water Industry – Performance reporting framework (VWI)
  - Victorian Auditor General's Report on Water Entities 2011-12
  - IPART NSW Sydney Water pricing review 2012 – 2016
  - NSW Treasury: Capital Structure Policy for GTEs (2002)
  - Standard & Poor's: US Utilities – Corporate Finance Criteria (1995)
- Current peer review of domestic and international water and utility companies including:
  - Australia
    - AGL Energy Limited
    - APA Group
    - DUET Group
    - Envestra Limited

[1] For example, Standard and Poor's credit ratings are AAA, AA, A, BBB, BB, B, CCC, CC, C and D. A one 'notch' increase would take an entity that is otherwise rated as BB, to BBB.

        - SP AusNet group
        - Spark Infrastructure Group
        - ERM Power Limited
    - United Kingdom
        - United Utilities Group PLC
        - Severn Trent plc
        - Dee Valley Group plc
    - USA
        - American Water Works Company, Inc.
        - California Water Service Group
        - American States Water Company

- In general the credit metrics of the overseas entities are better than those of the Australian entities. This may reflect a range of factors, and it should be noted that regulatory regimes overseas, and particularly in the USA, are quite different to Australia. Comparisons therefore need to be made with caution.

- In addition, a comparison was made against the following Australian water companies:
    - SA Water
    - WA Watercorp
    - Sydney Water
    - Yarra Valley Water

3.5.1 Response to the Draft Decision

- In response to the ESC's Draft Decision and our Preliminary Report Melbourne Water provided a report by KPMG Corporate Finance[2] which examined the desalination capitalisation issue.
- Amongst other things the KPMG report:
    - Advocated the use of the Moody's rating methodology for regulated water utilities. This approach provides a relatively formulaic approach to determining ratings, noting that credit metrics only account for 40% of the rating
    - Concluded that on a stand-alone basis, Melbourne Water's key metrics are well below that of investment grade, suggesting limited capacity to capitalise any portion of the VDP payments
    - Noted that for entities which are below investment grade, potential adverse impacts include:
        - Restricted access to debt markets and the inability to roll-over debt facilities
        - Potential breaches of financial covenants which require the business to maintain an investment grade credit rating
        - 'Dividend' lock up events where financiers restrict the ability of businesses to pay distributions to equity holders

[2] This report is available on the ESC's website at: http://www.esc.vic.gov.au/getattachment/cc825c64-f697-4df6-8dfc-8be1688d985f/Melbourne-Water-(Desalination-Capitalisation-issue.pdf

- Diminished ability to sustain shocks and maintain adequate liquidity ratios.
- An upward pricing in debt given the credit risk.

- We have found the submission to be useful and have had regard to the Moody's approach, ratings and credit metrics in Chapter 4.
- However, we note that:
  - The first three adverse impacts noted by KPMG will, in practice, not be an issue for Melbourne Water given its government ownership and government agency provision of debt facilities
  - As KMPG points out, under the Moody's approach credit metrics account for only 40% of a rating. Melbourne Water would be expected to rate highly against the majority of the remaining criteria which represent 60% of the rating.
- This means that Melbourne Water can sustain a poorer financial position than an assessment based purely on credit metrics would suggest.

4 Financial analysis

4.1 Impact of the desalination plant

- The discussion below compares Melbourne Water's financial position with and without the VDP payments. As noted in section 2, in order to remove the desalination payments from the model:
  - Melbourne Water's debt has been reduced by the value of the finance lease liability. We have used Melbourne Water's assumed 2013-14 opening debt position as the starting point for our modelling scenarios.
  - Interest has been reduced by the interest component of the finance lease.
  - Operating expenditure has been reduced by the operating expenditure component of the finance lease.
  - Depreciation has been reduced by the depreciation element of the finance lease.
  - We have not made any amendments to the MW hardcoded adjustments when running this scenario.
- The 'with VDP' scenario modelled below assumes that the VDP payments are treated as an operating expense for regulatory purposes.

4.1.1 Outcomes

- As noted earlier, even if the VDP payments are treated entirely as an operating expense for regulatory purposes, the existence of the VDP payments places significant pressure on Melbourne Water's financial position, and in particular some of its accounting-based ratios. Melbourne Water's net profit before tax reduces by an average of $80m per annum over WP3 with the VDP in place, and reduces such profits to near zero. A summary profit and loss statement both with and without the VDP payments is provided below.

Summary profit and loss – without desalination plant ($m, nominal)

	2013-14	2014-15	2015-16	2016-17	2017-18
Revenue	1,087	1,130	1,167	1,211	1,249
Total expenditure	984	1,012	1,073	1,128	1,198
Profit before tax	**103**	**117**	**95**	**82**	**52**
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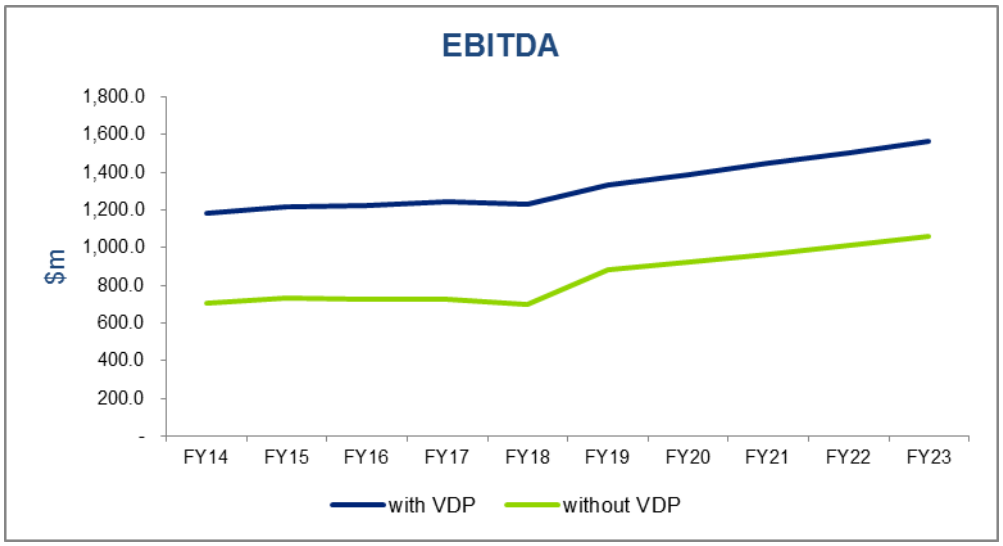
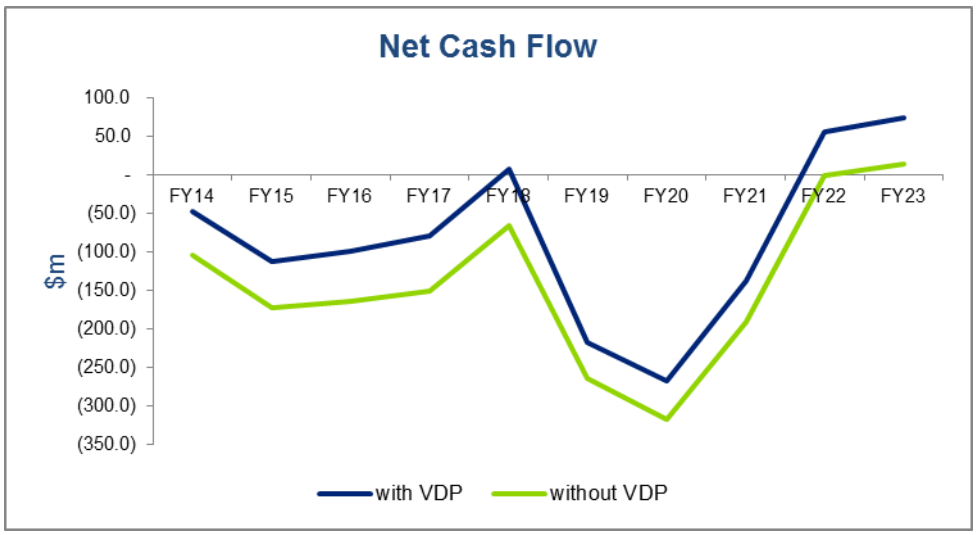
Tax	(0.0)	7.1	4.0	5.9	(0.6)
Return to Government	**-**	**15.4**	**8.7**	**12.9**	**-**
Retained earnings	-	1.2	0.7	1.0	(1.4)

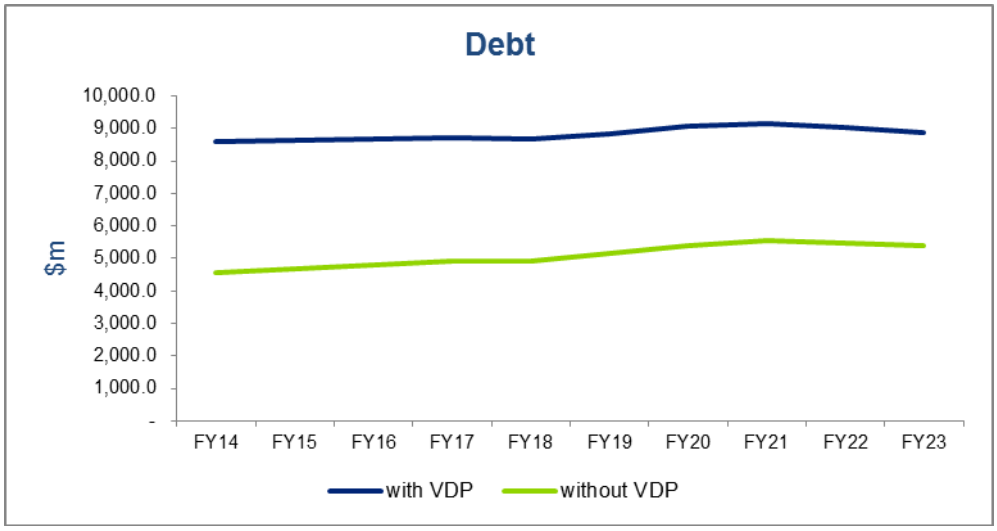
- EBITDA is actually higher with the VDP payments than without them. This is primarily because, using 2013-14 as an example, revenue will increase by $631m but operating expenditure will only increase by $138m. This will mean that EBITDA will increase by $493m. However, the other finance lease components will be accounted for after EBITDA with interest expense of $471m and depreciation of $93m.



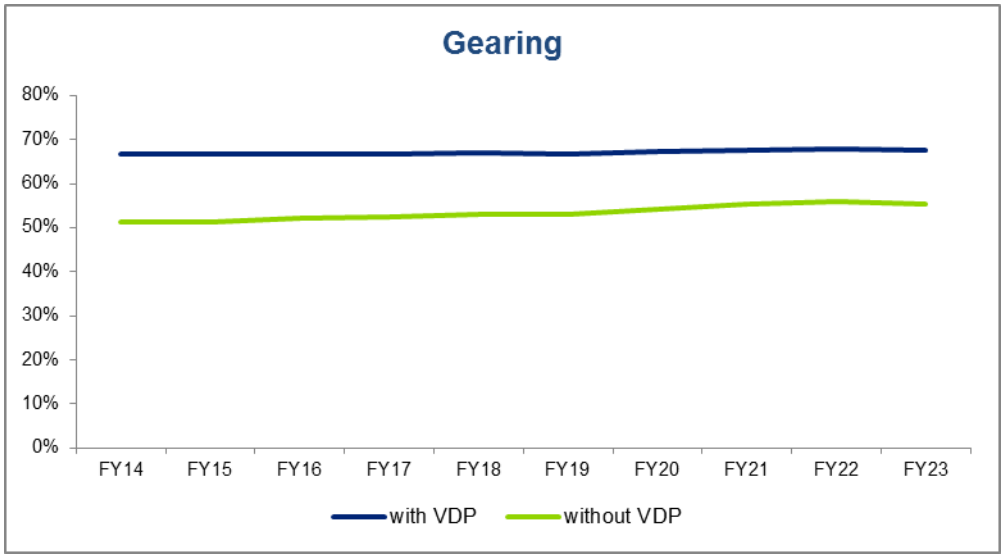
- Melbourne Water's net cash flow position also improves with the VDP payments although it remains negative as Melbourne Water has substantial capital expenditure programme (with the exception of a positive cash flow of $8.2m in 2017-18).
- The improvement under the VDP scenario is because it receives cash equivalent to the VDP payments, but its accounting profits and hence payments to government through tax and dividends fall, leaving it in an improved cash position.



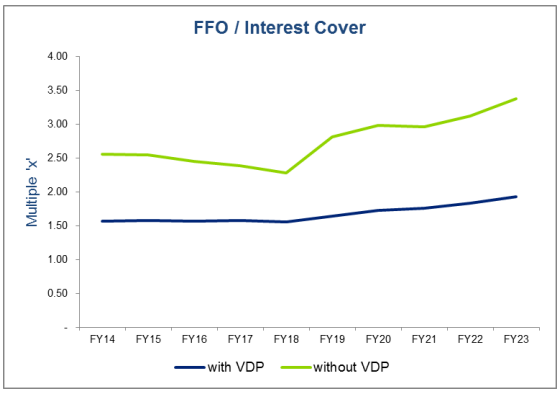
- Melbourne Water's debt position is significantly worse with the VDP payments in place, increasing from $4.6b in 2013-14 in a no-desalination scenario to $8.6b.

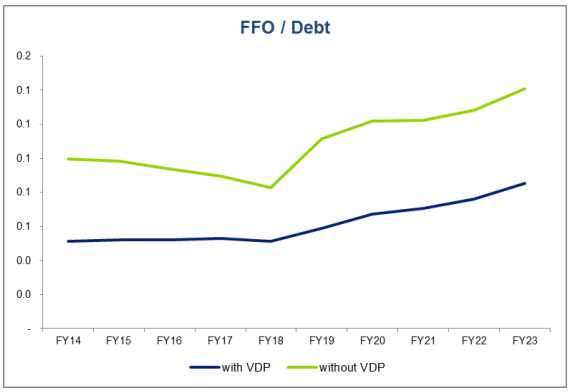


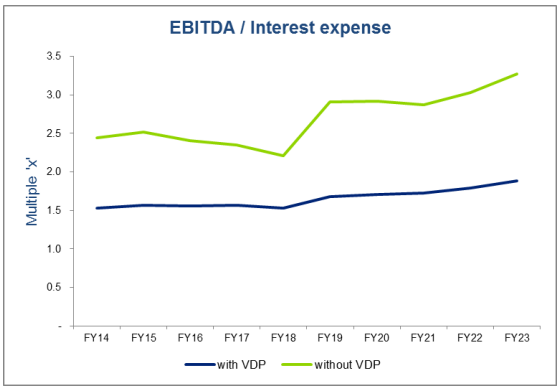
- Reflecting the higher levels of debt, gearing is much higher with the VDP payments and sits at around 67% across the outlook period.



- A range of metrics which measure debt levels and the capacity to repay debt are all worse under the VDP scenario. For example, the Funds from operations to interest cover ratio reduces by 38% from 2.6x to 1.6x as interest payments increase.







4.2 Capitalisation scenarios

4.2.1 Capitalisation ranges

- We modelled a range of VDP capitalisation levels for regulatory purposes. The scenarios discussed below are as follows:

Capitalisation scenarios ($m, 2012-13)

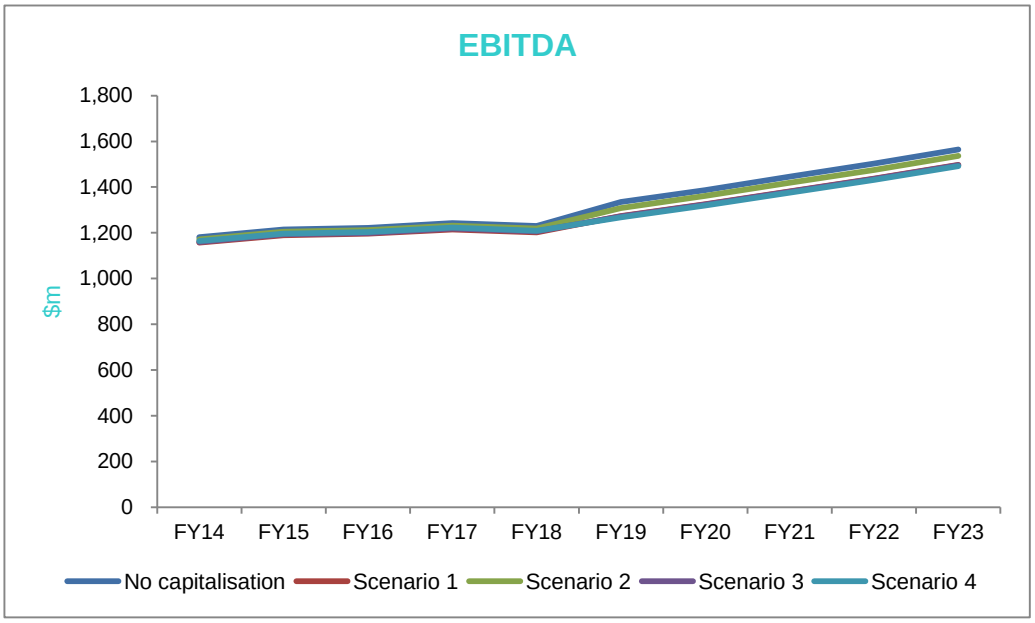
	WP3					WP4
	2013-14	2014-15	2015-16	2016-17	2017-18	(Per annum, all years)
No capitalisation	0	0	0	0	0	0
Scenario 1 (MW)	0	0	22.5	45	72.5	72
Scenario 2 (MW)	0	0	0	25	30	30
Scenario 3	0	0	0	45	72	72
Scenario 4	0	0	0	25	75	75

- The first two scenarios are as proposed by Melbourne Water in its response to the ESC's Draft Decision, albeit under a range of different assumptions regarding operating and capital expenditure and the WACC. The other two scenarios model capitalisation levels between the two amounts Melbourne Water has suggested. Scenario 3 is Melbourne Water's scenario 1, with the first year of capitalisation removed.
- Although we did model greater levels of capitalisation than the scenarios above it was clear that Melbourne Water's financial capacity to deal with such capitalisation was extremely limited. Accordingly, we have not shown these in our analysis. Instead our analysis has focussed on a relatively narrow range of scenarios, ranging from a total of $55m (Scenario 2) to $140m (Scenario 1) across WP3.
- The modelled scenarios involve much lower levels of capitalisation than contemplated in our Preliminary Report. This is primarily because since our Preliminary Report there have been a number of changes to the base case.
- These changes include amendments advised by Melbourne Water as well as some applied by the ESC. They have the effect of materially worsening Melbourne Water's financial position and include:
  - Reduced developer contributions of $74m across WP3
  - A 4.5% WACC rather than a 4.7% WACC. This reduces revenue by around $104m across WP3
  - A higher financial accommodation levy (FAL) charged on Melbourne Water's borrowings from Treasury Corporation of Victoria. This FAL is currently 1.1% but Melbourne Water has assumed it will increase to 2.52%
  - A number of adjustments made by Melbourne Water to its cash flow position. In net terms these total a reduction of $335m across WP3, and are driven by an aggregate reduction in cash flow associated with GST timing issues of $482m
  - Other changes to capital and operating expenditure associated with the ESC's views on the level of prudent and efficient expenditure in WP3, as well as changes to 2012-13 capital expenditure.

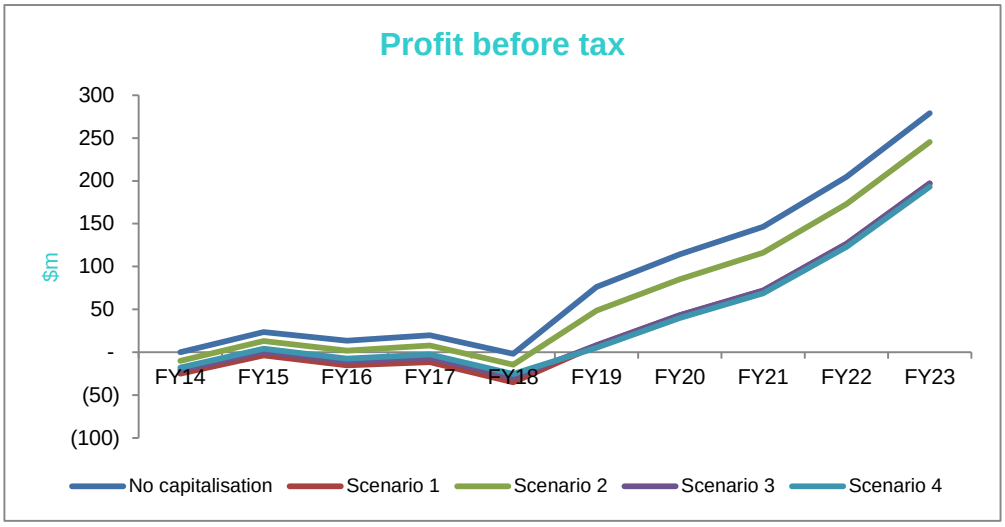
- By far the most significant factor is the GST timing adjustment of $482 million. This adjustment was not explicitly identified in Melbourne Water's response to the Draft Decision and due to its relatively late identification it has not been possible to verify the reason for the change in the time available.
- For our modelled scenarios the following amendments were made using the finance lease and marginal interest figures provided by Melbourne Water:
  - We confirmed that the closing 2011-12 debt position matched Melbourne Water's 2011-12 financial report
  - We overlayed the starting debt position in the regulatory model with the 2012-13 forecast closing debt position provided by Melbourne Water that includes the finance lease.
  - The regulatory model uses a marginal rate of debt of 6.5%. We have used the average Melbourne Water forecast cost of variable debt that it has used in their corporate plan for WP3 of 7.0%. This includes a financial accommodation Levy (FAL) of 2.52%.
  - All of the amendments flow through the model to drive other changes such as tax, dividends, retained earnings, RAV, Debt etc.
- This section examines the impact of capitalisation on a metric-by metric business, and then draws together our conclusions at the end. Where relevant we have referenced benchmarks including:
  - Benchmarks set out in the Victorian Water Industry Performance Reporting Framework
  - The BBB benchmark set out in the 1995 Standard and Poor's US Utilities Corporate Finance Criteria
  - The Moody's investment grade benchmark set out in the KPMG report which accompanied Melbourne Water's response to the Draft Decision.

4.2.2 Profitability

- As capitalisation of the VDP payment for regulatory purposes directly reduces revenue, any capitalisation has a direct impact on Melbourne Water's EBITDA, although the impacts are small given the relatively high level of EBITDA.
- Larger capitalisations in WP3 lead to a greater increase in prices in WP4 due to the increase in the RAB - this is part of the causes for the increase in EBITDA from 2018-19.

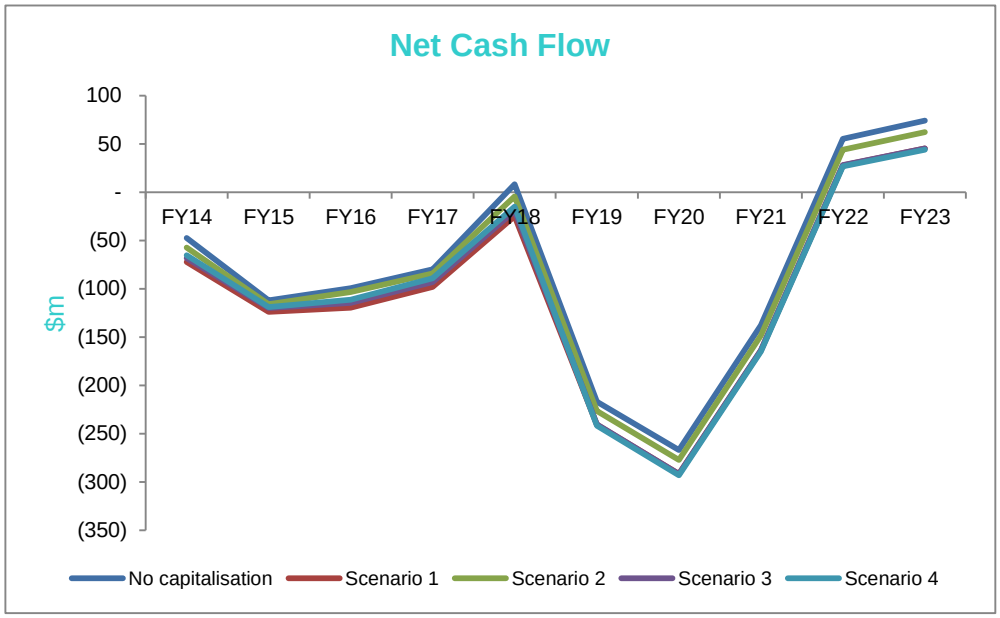


- However the capitalisation turns net profit before tax from a level at which small profits are made in most years, to a net loss making position in aggregate across WP3 in all the scenarios.
- Increases in statutory depreciation are a feature of the base case, with the depreciation element of the VDP payments being a key reason for the increase. To the extent that Melbourne Water has some capacity to reduce its statutory depreciation this could improve profit outcomes.



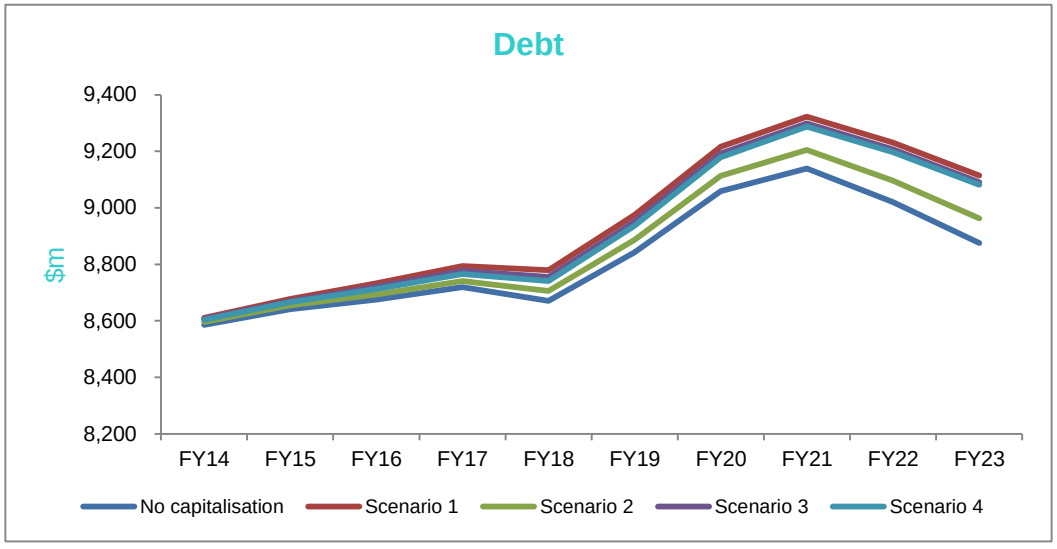
4.2.3 Net Cash Flow

- Capitalisation of the VDP payments worsen Melbourne Water's net cash flow in WP3 as it reduces its cash revenue, but leaves cash payments unchanged. The impact on cash flows becomes proportionately larger at higher levels of capitalisation.



4.2.4 Debt

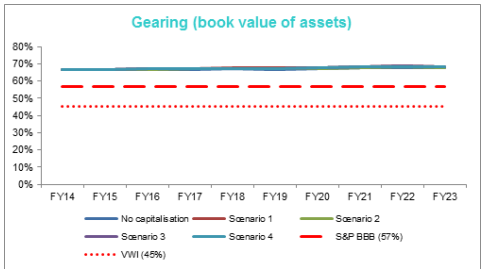
- As noted above, the inclusion of the finance lease as a liability for accounting purposes immediately increases Melbourne Water's debt.
- It is assumed that any cash shortfall in any period is funded through increasing debt. Therefore any capitalisation that reduces revenue and increases the negative net cash flow causes debt to increase and the interest charge to increase also.

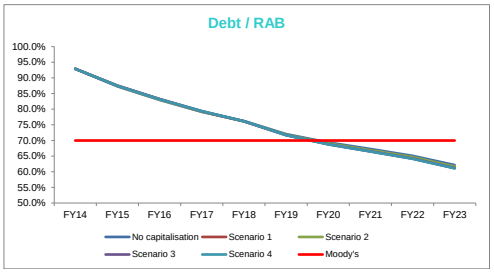


4.2.5 Gearing ratios

- As debt increases over the years due to capital expenditure, gearing increases marginally each year even without any capitalisation of desalination payments.

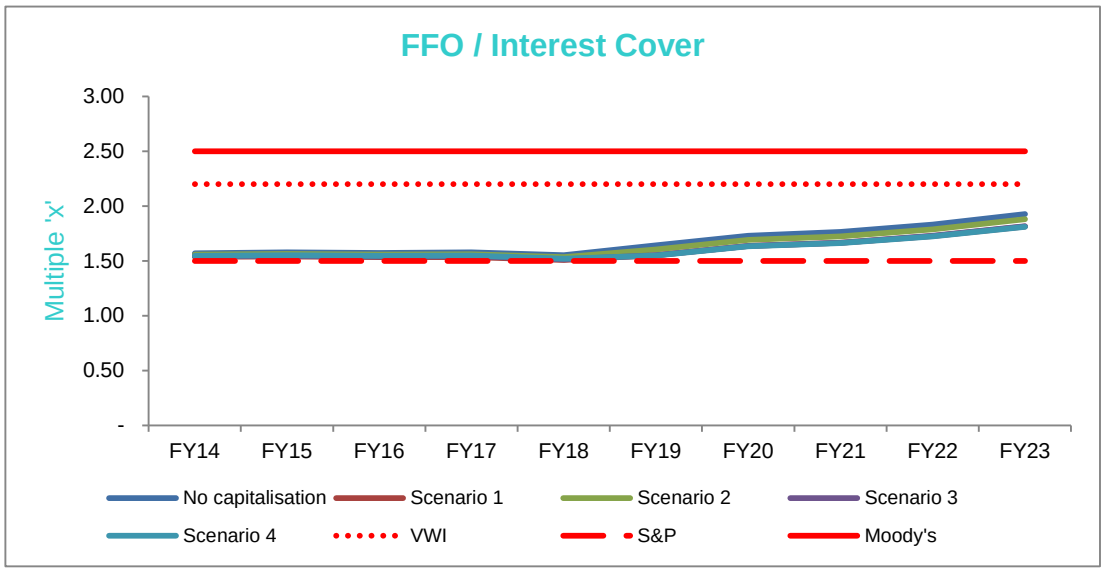
- However the capitalisation scenarios make little difference to the gearing ratio as the amounts to be capitalised (a maximum of $140m under Scenario 1) is small compared to the total level of debt ($8.6b).
- Under the accounting gearing ratio (debt divided by debt plus equity) gearing is around 67%, which is higher than the VWI and Standard and Poor's BBB levels. The regulatory gearing ratio (debt divided by regulatory asset base, RAB) is 93% in 2013-14 (and is well above the Moody's benchmark of 70%) , but falls rapidly over time as capital expenditure and inflation increase the RAB while debt is relatively unchanged.





4.2.6 FFO / Interest Cover

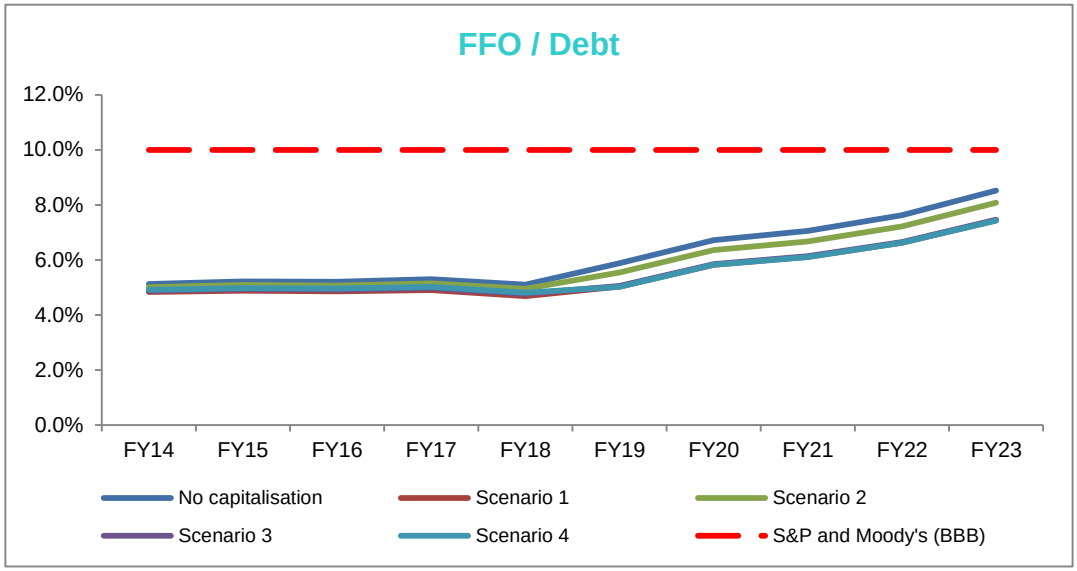
- We have compared the FFO/Interest cover to the VWI, Standard and Poor's and Moody's benchmarks. The VWI states that their 'reference point / target' is 2.2x whereas the low risk BBB range from Standard and Poor's is 1.5x and for Moody's the investment grade criteria is 2.5x.
- With the finance lease, Melbourne Water's ratio drops to 1.57x in 2013-14. Capitalising the VDP scenarios worsens the ratio, although for all scenarios it remains above 1.50. Under Scenarios 1 it falls to 1.51x in 2017-18, just above the Standard and Poor's benchmark.



4.2.7 FFO / Debt

- The Standard and Poor's BBB FFO / Debt floor for low risk companies is 10%.

- All scenarios which include the finance lease are below 10%, with no capitalisation averaging 5.2% during WP3. For the modelled scenarios this falls to 4.8% to 5%.

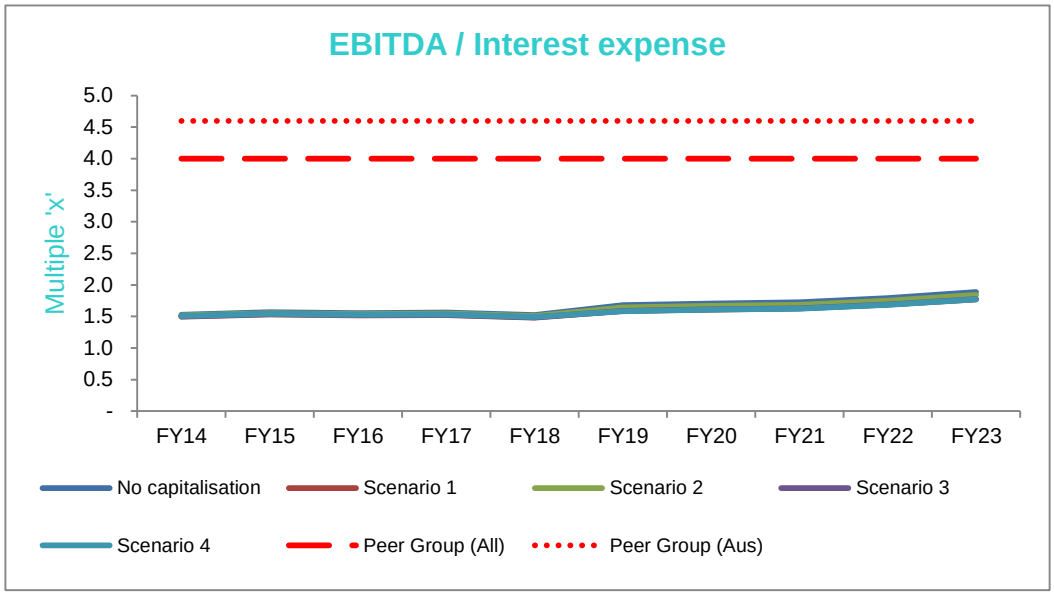


4.2.8 EBITDA[3] / Interest Expense

- There are no Standard and Poor's or VWI benchmarks for this indicator but under all scenarios Melbourne Water's EBITDA / Interest Expense ratio is below the average of the peers that we have reviewed.
- The lowest ratio of all of the 13 peer companies reviewed was DUET[4] at 1.4x and the second lowest was APA Group at 2.0x. The level below which the Standard and Poor's BBB- rating begins for the peers is 3.5x.
- Including the finance lease, even with no capitalisation Melbourne Water's ratio is 1.53x and this falls marginally below 1.5x for scenarios 3 and 4 in 2017-18.

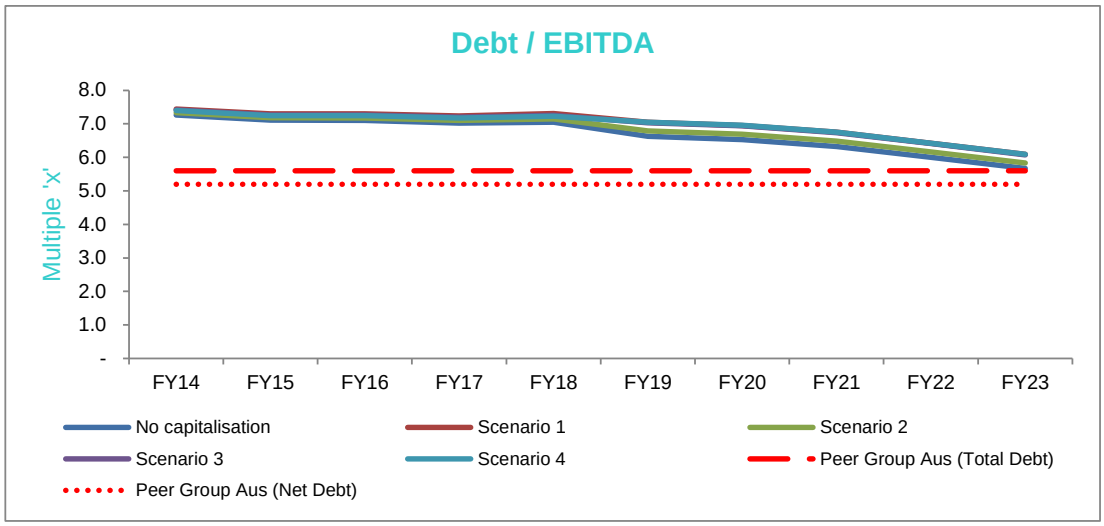
[3] Note that EBITDA ratios are provide in nominal terms.

[4] DUET is the Diversified Utility and Energy Trust.



4.2.9 Debt / EBITDA

- We have compared debt to EBITDA to the same group of peer companies.
- Excluding the finance lease, under almost all scenarios this ratio is better than the average of the peers at both a net debt and total debt level.
- However, when the finance lease is included, at an average 7.1x across WP3 this ratio is higher than the average even with 0% capitalised and would place Melbourne Water in at the upper echelon of its 13 peers. Under most of the capitalisation scenarios it increases to 7.3.
- Debt to EBITDA does improve over time as EBITDA increases and debt is stable (or increases at a slower rate than EBITDA).



4.3 Comparison with Australian peers

The table below Melbourne Water's position with its peer water utilities - with other large government-owned and similarly regulated entities in the Australian water sector. It is clear that even with zero regulatory capitalisation Melbourne Water's 2013-14 metrics are poorer, and significantly more so, than the (2011-12) metric for all peer entity across every metric. The only utility which has ratios approaching that of Melbourne Water is Sydney Water.

	Watercorp 2011-12	SA Water 2011-12	Yarra Valley 2011-12	Sydney Water 2011-12	Melbourne Water 2011-12	Weighted Ave.	Melbourne Water 2013-14 0% capitalisation
Credit metrics							
FFO / Interest	4.3	3.8	2.2	2.0	3.2	3.0	1.57
EBITDA / Interest	6.4	3.5	2.6	2.1	4.8	3.5	1.53
Debt to EBITDA	3.5	4.3	6.2	4.6	3.2	4.0	7.3
FFO / Debt	21.9%	25.5%	13.6%	15.8%	20.2%	19.7%	5.1%
Debt/(Debt + Equity)	33.3%	30.0%	55.5%	47.7%	45.8%	39.5%	67%
Debt / Total Assets	31.3%	24.7%	44.4%	38.6%	38.2%	33.6%	

4.4 Discussion and conclusions

- Regardless of how the VDP payments are dealt with from a regulatory perspective, the fact that Melbourne Water needs to make them puts pressure on its finances over the next regulatory period.
- For example, the requirement to make the VDP payments:
  - Reduces Melbourne Water's profit before tax by an average of $70m per annum across WP3
  - Reduces Melbourne Water's FFO/Interest cover ratio from around 3 in WP2 to 1.57 in 2013-14
  - Increases Melbourne Water's gearing ratio from 46% in 2011-12 to 67% in 2013-14.
- Melbourne Water's credit metrics become worse than a broad range of comparator entities both overseas and in the Australian water sector. They are significantly worse than Watercorp, SA Water, Yarra Valley Water and Sydney Water and generally less than 'investment grade' across most indicators, as measured by either Moody's or Standard and Poor's metrics
- The only positive from a credit metric perspective is that in absolute terms, Melbourne Water's net cash flow actually improves (becomes less negative) with the VDP as its reduced accounting profit means that payments to government for taxes and dividends are lower.

- Melbourne Water's general operating environment, including the regulatory environment and the financial risks that it faces, are materially less than a comparable entity in the private sector. The existence of potential government support also reduces the possibility of it falling into a financially unsustainable position.
- While Melbourne Water can sustain poorer financial ratios than a privately owned organisation in a competitive market, this can only occur up to a point.
- Capitalising a small portion of the VDP payments worsens these ratios to a marginal extent, however because the ratios are in a poor state to begin with, these marginal reductions are important.
- We have modelled a relatively narrow range of capitalisation scenarios, ranging from a total of $55m (Scenario 2) to $140m (Scenario 1) across WP3. This represents a range of 1.4% to 3.5% of the total desalination payments across WP3.
- The capitalisation ranges modelled are much lower than our Preliminary Report, because as identified above, a number of factors have combined to worsen Melbourne Water's base case financial position. By far the most significant factor is the GST timing adjustments of $482 million.
- It is possible to contemplate some level of capitalisation only on the basis of Melbourne Water's stable regulatory environment, government ownership and government sourced debt financing. In the absence of these factors its 'stand-alone' financial ratios are clearly too poor to consider any capitalisation at all.
- While noting that the differences between the modelled scenarios are very small, we suggest that a capitalisation range of $50-100m in WP3 (i.e. a range across Scenarios 2 to 4) represents the largest level of capitalisation that Melbourne Water could reasonably be expected to bear. This range:
  - Provides some prospect for Melbourne Water to make a net profit each year
  - Achieves a FFO/Interest Cover ratio slightly above 1.5
  - Reduces Melbourne Water's financial risks compared to higher levels of capitalisation
  - Provides for a strong recovery in financial position across WP4.
- In the absence of the GST timing adjustments to the cash flows made by Melbourne Water, Option 1 ($140m capitalisation) could be accommodated. At this level of capitalisation the FFO/Interest Cover ratio averages almost 1.7 across WP3 and the FFO/Debt ratio improves to 6.6%. Profit-based ratios would remain unchanged.

4.5 Limitation of our work

General use restriction

This report is prepared solely for the use of the ESC. This report is not intended to and should not be used or relied upon by anyone else and we accept no duty of care to any other person or entity. The report has been prepared for the purpose of the ESC as outlined in our engagement letter dated 28 February 2013. You should not refer to or use our name or the advice for any other purpose.

Appendix A – Detailed output

EBITDA	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23
0 No capital	1,181.5	1,214.9	1,221.8	1,241.9	1,229.6	1,334.2	1,387.2	1,444.9	1,502.5	1,564.3
1 Scenario 1	1,156.6	1,189.4	1,195.6	1,214.7	1,201.7	1,273.6	1,325.1	1,381.1	1,437.1	1,497.1
2 Scenario 2	1,171.7	1,204.9	1,211.4	1,231.2	1,218.6	1,308.9	1,361.3	1,418.3	1,475.2	1,536.2
3 Scenario 3	1,160.5	1,193.5	1,199.7	1,219.0	1,206.2	1,272.4	1,323.8	1,379.8	1,435.8	1,495.7
4 Scenario 4	1,163.5	1,196.5	1,202.9	1,222.3	1,209.5	1,268.2	1,319.5	1,375.3	1,431.2	1,491.0
Probit before tax										
0 No capital	(0.0)	23.7	13.4	19.8	(1.9)	76.2	114.3	146.6	204.7	278.8
1 Scenario 1	(24.9)	(3.5)	(15.4)	(11.4)	(35.1)	8.1	42.9	71.8	126.4	196.9
2 Scenario 2	(9.9)	13.0	2.1	7.8	(14.5)	48.5	85.3	116.2	172.8	245.5
3 Scenario 3	(21.0)	0.8	(10.7)	(6.2)	(29.4)	8.4	43.3	72.2	126.7	197.2
4 Scenario 4	(18.0)	4.1	(7.2)	(2.4)	(25.3)	5.3	40.0	68.6	123.0	193.2
Net Cash Flow										
0 No capital	(47.6)	(112.1)	(99.5)	(79.9)	8.2	(216.9)	(267.0)	(137.8)	55.2	73.9
1 Scenario 1	(72.4)	(123.9)	(119.5)	(98.2)	(25.0)	(240.7)	(292.0)	(163.9)	27.8	45.2
2 Scenario 2	(57.4)	(115.9)	(103.4)	(84.1)	(4.4)	(226.6)	(277.2)	(148.4)	44.0	62.2
3 Scenario 3	(68.5)	(120.1)	(114.8)	(93.1)	(19.3)	(240.6)	(291.9)	(163.8)	27.9	45.3
4 Scenario 4	(65.5)	(119.0)	(111.4)	(89.3)	(15.2)	(241.7)	(293.0)	(165.1)	26.6	43.9
Debt										
0 No capital	8,586.1	8,640.6	8,675.4	8,719.4	8,670.9	8,842.5	9,058.8	9,139.7	9,020.7	8,875.3
1 Scenario 1	8,611.0	8,677.3	8,732.2	8,794.4	8,779.0	8,974.5	9,215.8	9,322.8	9,231.3	9,114.5
2 Scenario 2	8,595.9	8,654.1	8,693.0	8,741.1	8,705.1	8,886.4	9,112.9	9,204.4	9,096.6	8,962.8
3 Scenario 3	8,607.0	8,669.5	8,719.8	8,776.8	8,755.7	8,951.1	9,192.2	9,299.1	9,207.5	9,090.6
4 Scenario 4	8,604.0	8,665.4	8,712.2	8,765.5	8,740.3	8,936.7	9,179.0	9,287.2	9,196.8	9,081.4
Debt / RAB										
0 No capital	92.9%	87.3%	82.9%	79.1%	76.2%	72.0%	69.3%	67.3%	65.1%	62.1%
1 Scenario 1	92.9%	87.5%	83.2%	79.3%	76.1%	71.7%	68.8%	66.6%	64.2%	61.2%
2 Scenario 2	92.9%	87.4%	83.1%	79.2%	76.1%	71.9%	69.1%	66.9%	64.7%	61.7%
3 Scenario 3	92.9%	87.5%	83.2%	79.4%	76.1%	71.7%	68.8%	66.5%	64.2%	61.2%
4 Scenario 4	92.9%	87.5%	83.2%	79.4%	76.1%	71.7%	68.7%	66.5%	64.2%	61.1%
Moody's	70.0%	70.0%	70.0%	70.0%	70.0%	70.0%	70.0%	70.0%	70.0%	70.0%
Debt / EBITDA										
0 No capital	7.27	7.11	7.10	7.02	7.05	6.63	6.53	6.33	6.00	5.67
1 Scenario 1	7.45	7.30	7.30	7.24	7.31	7.05	6.95	6.75	6.42	6.09
2 Scenario 2	7.34	7.18	7.18	7.10	7.14	6.79	6.69	6.49	6.17	5.83
3 Scenario 3	7.42	7.26	7.27	7.20	7.26	7.03	6.94	6.74	6.41	6.08
4 Scenario 4	7.39	7.24	7.24	7.17	7.23	7.05	6.96	6.75	6.43	6.09
Peer Grou	5.60	5.60	5.60	5.60	5.60	5.60	5.60	5.60	5.60	5.60
Peer Grou	5.20	5.20	5.20	5.20	5.20	5.20	5.20	5.20	5.20	5.20
FFO / Interest Cover										
0 No capital	1.57	1.58	1.57	1.58	1.55	1.64	1.73	1.76	1.83	1.93
1 Scenario 1	1.54	1.54	1.53	1.54	1.51	1.55	1.64	1.66	1.73	1.81
2 Scenario 2	1.56	1.56	1.56	1.56	1.54	1.61	1.69	1.72	1.79	1.88
3 Scenario 3	1.54	1.55	1.54	1.54	1.52	1.55	1.64	1.67	1.73	1.82
4 Scenario 4	1.55	1.55	1.55	1.55	1.52	1.55	1.63	1.66	1.72	1.81
VWI	2.20	2.20	2.20	2.20	2.20	2.20	2.20	2.20	2.20	2.20
S&P	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50
Moody's	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50
FFO / Debt										
0 No capital	5.1%	5.2%	5.2%	5.3%	5.1%	5.9%	6.7%	7.1%	7.6%	8.5%
1 Scenario 1	4.8%	4.9%	4.9%	4.9%	4.7%	5.0%	5.8%	6.1%	6.6%	7.4%
2 Scenario 2	5.0%	5.1%	5.1%	5.1%	5.0%	5.5%	6.4%	6.7%	7.2%	8.1%
3 Scenario 3	4.9%	4.9%	4.9%	5.0%	4.8%	5.1%	5.8%	6.1%	6.7%	7.5%
4 Scenario 4	4.9%	5.0%	5.0%	5.0%	4.8%	5.0%	5.8%	6.1%	6.6%	7.4%
0 S&P and I	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%
EBITDA / Interest expense										
0 No capital	1.53	1.57	1.55	1.56	1.52	1.68	1.71	1.73	1.79	1.89
1 Scenario 1	1.50	1.53	1.52	1.52	1.48	1.59	1.61	1.63	1.69	1.77
2 Scenario 2	1.52	1.55	1.54	1.55	1.51	1.64	1.67	1.69	1.75	1.84
3 Scenario 3	1.50	1.54	1.52	1.53	1.49	1.59	1.61	1.63	1.69	1.77
4 Scenario 4	1.51	1.54	1.53	1.53	1.49	1.59	1.61	1.63	1.69	1.77
Peer Grou	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
Peer Grou	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
Gearing										
0 No capital	67%	67%	67%	67%	67%	67%	67%	68%	68%	68%
1 Scenario 1	67%	67%	67%	67%	67%	67%	68%	68%	69%	68%
2 Scenario 2	67%	67%	67%	67%	67%	67%	67%	68%	68%	68%
3 Scenario 3	67%	67%	67%	67%	67%	67%	68%	68%	69%	68%
4 Scenario 4	67%	67%	67%	67%	67%	67%	68%	68%	68%	68%
0 S&P BBB	57%	57%	57%	57%	57%	57%	57%	57%	57%	57%
0 VWI (45%	45%	45%	45%	45%	45%	45%	45%	45%	45%	45%
Cost of project for pricing (inclusive of opex)										
0 No capital	633.1	619.3	606.7	563.8	555.1	550.6	540.2	530.0	519.9	510.8
1 Scenario 1	633.1	619.3	585.0	521.7	489.2	489.3	483.4	477.7	472.0	467.2
2 Scenario 2	633.1	619.3	606.7	539.6	527.7	525.0	516.5	508.1	499.9	492.6
3 Scenario 3	633.1	619.3	606.7	520.2	488.3	488.3	482.5	476.7	471.0	466.2
4 Scenario 4	633.1	619.3	606.7	539.6	484.1	484.4	478.7	473.1	467.6	463.0

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