HOUSTONKEMP Economists

Memo

To	Michael Black – Port of Melbourne
From	Brendan Quach, Johnathan Wongsosaputro
Subject	Port of Melbourne 2023/24 cost of debt update
Date	30 April 2024

1. Port of Melbourne 2023/24 cost of debt update

We have previously prepared a report for Herbert Smith Freehills dated 15 May 2023, which sets out our independent estimate of the 2023/24 weighted average cost of capital (**WACC**) for Port of Melbourne (**PoM**) using data up to 31 March 2023, consistent with clause 4.3 of the Pricing Order made under section 49A of the *Port Management Act 1995* (Vic).[1]

In its 2023/24 tariff compliance statement (**TCS**), PoM draws on the advice from our report to state that its approach for the next regulatory period will involve:[2]

- annually updating its estimate of the cost of debt and applying a true-up in the next regulatory period for annual differences in the cost of debt from the previous period; and
- continuing to use the current averaging period, ie, 20 trading days to 31 March of each year, consistent with clause 27(b)(iii) of its undertaking to the Essential Services Commission Minister (the Undertaking).[3]

In this memorandum we use methods consistent with the Pricing Order, the Undertaking, and our report dated 15 May 2023 to calculate an updated 2024/25 cost of debt estimate using data up to 31 March 2024.

We calculate a benchmark BBB prevailing cost of debt of 5.82 per cent as at 31 March 2024, excluding debt raising costs. This translates to a trailing average cost of debt of **4.93 per cent**, consisting of:[4]

- debt raising costs: 10 basis points; and
- trailing average cost of debt excluding debt raising costs: 4.83 per cent;
  - 2017/18 prevailing cost of debt (30 per cent weight): 5.35 per cent;
  - 2018/19 prevailing cost of debt (10 per cent weight): 4.48 per cent;
  - 2019/20 prevailing cost of debt (10 per cent weight): 4.11 per cent;
  - 2020/21 prevailing cost of debt (10 per cent weight): 3.32 per cent;
  - 2021/22 prevailing cost of debt (10 per cent weight): 3.02 per cent;
  - 2022/23 prevailing cost of debt (10 per cent weight): 5.08 per cent;
  - 2023/24 prevailing cost of debt (10 per cent weight): 6.43 per cent; and
  - 2024/25 prevailing cost of debt (10 per cent weight): 5.82 per cent.

This 4.93 per cent cost of debt estimate for 2024/25 is 5 basis points higher than our 4.88 per cent estimate for 2023/24.

[1] HoustonKemp, *Estimation of the weighted average cost of capital and forecast inflation for the Port of Melbourne*, 15 May 2023, p 1.

[2] Port of Melbourne, *2023-24 Tariff Compliance Statement*, General statement, 31 May 2023, pp 92-93.

[3] Port of Melbourne, *Undertaking to the Essential Services Commission Minister*, April 2022.

[4] HoustonKemp, *Estimation of the weighted average cost of capital and forecast inflation for the Port of Melbourne*, 15 May 2023, p 30.

A1. Cost of debt methodology

We have made one modification to our cost of debt methodology compared to that set out in our report dated 15 May 2023. This modification arises because of changes to data published by the Reserve Bank of Australia (**RBA**).

Specifically, our BBB prevailing cost of debt estimate as at 31 March 2023 was calculated as the average of estimates from:[5]

- Bloomberg's AUD Australian corporate BBB yield curve (BVCSAB10 Index); and
- the RBA's yield curve for non-financial corporate BBB rated bonds.

We obtained a daily series of 10-year BBB RBA yields using the Australian Energy Regulator's (**AER**) approach, which involves:[6]

- linearly extrapolating the seven- and 10-year BBB spread to swap estimates to obtain month-end ten-year BBB yields with a ten-year effective tenor; and
- linearly interpolating the month-end 10-year BBB spread to CGS (Commonwealth Government Securities) to obtain a daily BBB yield series.

However, the RBA has since changed its published data. RBA table F3 continues to include seven- and 10-year BBB yields, but no longer sets out the corresponding BBB spread to swap estimates.[7]

Consequently, we add an additional step when calculating the prevailing 10-year BBB RBA cost of debt yields as at 31 March 2024, which now involves:

1. calculating month-end seven- and 10-year RBA BBB spread to swap estimates by taking the seven- and 10-year BBB yields published in RBA table F16 and deducting the month-end seven- and 10-year swap rates from Bloomberg;
2. linearly extrapolating the seven- and 10-year RBA BBB spread to swap estimates from step (1) to obtain month-end ten-year BBB yields with a ten-year effective tenor; and
3. linearly interpolating the month-end 10-year BBB spread to Commonwealth Government Securities (CGS) to obtain a daily BBB yield series.[8]

Steps (2) and (3) above are part of the cost of debt methodology from our report dated 15 May 2023, while step (1) is an additional step. We then combine the resulting estimates of the prevailing 10-year BBB RBA cost of debt with Bloomberg's AUD Australian corporate BBB 10-year cost of debt before calculating a ten-year trailing average.

This approach continues to be consistent with clause 27(b)(iv)(1)-(2) of the Undertaking, which requires PoM to calculate the on-the-day cost of debt as the average annualised yield on benchmark debt from:

- RBA published estimates of the Australian corporate debt yield; and

[5] HoustonKemp, *Estimation of the weighted average cost of capital and forecast inflation for the Port of Melbourne*, 15 May 2023, pp 29-30.

[6] HoustonKemp, *Estimation of the weighted average cost of capital and forecast inflation for the Port of Melbourne*, 15 May 2023, p 30.

[7] RBA, https://www.rba.gov.au/statistics/tables/changes-to-tables.html#d20231229, accessed 29 April 2024.

[8] Consistent with our report dated 15 May 2023, we obtain 10-year CGS yields from RBA table F2. See: HoustonKemp, *Estimation of the weighted average cost of capital and forecast inflation for the Port of Melbourne*, 15 May 2023, p 30.

- Bloomberg AUD BVAL curve.

As a sense check on our modified approach, we compare historical seven- and 10-year spreads to swap published in RBA table F3 from January 2005 to March 2023 against the corresponding spreads to swap that we calculate using step (1) above.

In the figure below we show the differences between the RBA's spread to swap estimates compared to the spreads to swap that we calculate using step (1) above. We observe that compared to the RBA's estimates, our monthly spread to swap estimates:

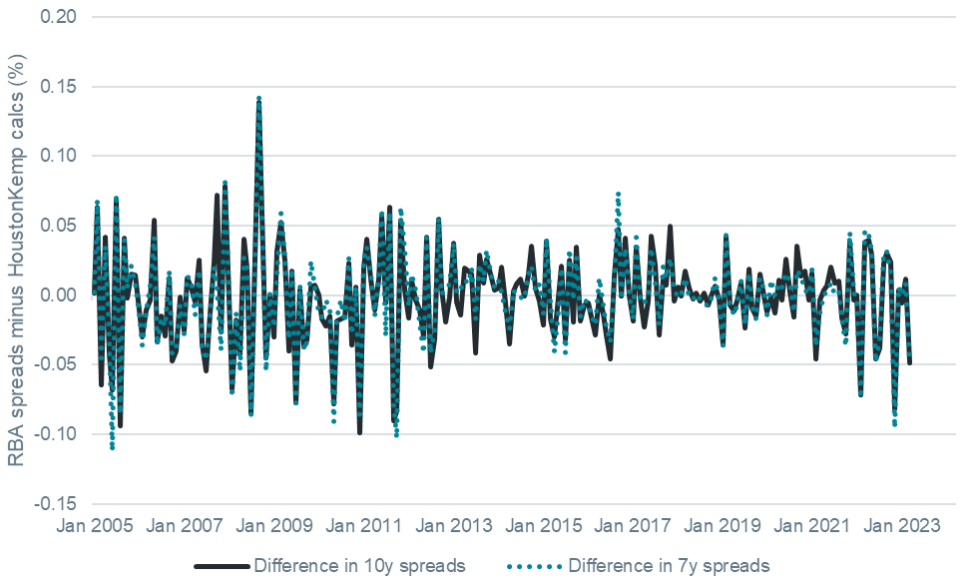
- tend to be within five basis points from the RBA's estimates;
- have a 12-month average difference that is less than one basis point as at March 2023; and
- have a long-run average difference that is less than one basis point between January 2005 and March 2023.

In addition, we observe that any differences between the RBA's spreads to swap and the corresponding spreads to swap that we calculate using step (1) above will only have a small impact on PoM's benchmark cost of debt, since:

- we calculate the prevailing BBB cost of debt as the average of Bloomberg and RBA estimates; and
- we calculate benchmark cost of debt using as a 10-year trailing average.

As such, if our spread to swap estimates in a particular year were to differ from the RBA's by 20 basis points, then this would translate to a difference of approximately one basis point when calculating PoM's trailing average cost of debt.[9] Thus, we conclude that the approach we have used to update PoM's cost of debt remains consistent with the Pricing Order, the Undertaking, and our report dated 15 May 2023.

Figure A.1: Difference between RBA spreads to swap and HoustonKemp calculations



[9] This difference is likely to be even smaller than one basis point because we only use the spread to swap estimates to extrapolate the RBA's yields to a 10-year tenor. Since the RBA's month-end 10-year BBB yields as at February 2024 and March 2024 are estimated with effective tenors of approximately nine years, the impact of extrapolating the RBA's yields to a 10-year tenor is relatively small.

Source: Bloomberg; RBA; HoustonKemp analysis.

We note that other Australian regulators have also adjusted their cost of debt estimation approaches in response to the RBA ceasing to publish its spread to swap estimates. In particular:

- the AER no longer relies on RBA data when calculating the return on debt, consistent with the contingencies set out in its 2022 rate of return instrument;[10]
- the New South Wales Independent Pricing and Regulatory Tribunal's (**IPART**) cost of debt approach does not involve extrapolating RBA estimates, so IPART calculates the 10-year spread to Commonwealth Government Securities by taking RBA 10-year yields from table F3 and deducting 10-year yields on Commonwealth Government Securities from RBA table F2;[11] and
- the Queensland Competition Authority (**QCA**) previously extrapolated RBA yields to a 10-year tenor using the RBA's spread to swap estimates, but has since switched to extrapolating using spreads to yields on Commonwealth Government Securities.[12]

We do not adopt these approaches since they contradict clause 27(b)(iv)(1)-(2) of the Undertaking that specifies the on-the-day cost of debt will be derived from RBA and Bloomberg data. Instead:

- the AER's prevailing cost of debt approach now relies exclusively on Bloomberg data; and
- the prevailing cost of debt approaches by IPART and QCA rely exclusively on RBA data, and thus do not consider the potential to use Bloomberg swaps data to calculate spread to swap estimates consistent with the RBA's BBB yields.

Our modified approach for calculating the 2024/25 cost of debt update is consistent with the approach that we have used to calculate PoM's 2022/23 and 2023/24 cost of debt estimates, in that we continue to extrapolate the RBA's cost of debt estimates based using seven- and 10-year spread to swap estimates.

Nevertheless, we observe that our modified approach generates cost of debt estimates that are not materially different from those that we would have obtained if we instead generate RBA cost of debt estimates using IPART's and QCA's approaches, ie:

- adopting IPART's approach of not extrapolating RBA estimates results in 5.81 per cent prevailing cost of debt (one basis point lower) and 4.93 per cent trailing average cost of debt (unchanged); and
- adopting QCA's approach of extrapolating using spreads to yields on Commonwealth Government Securities results in 5.81 per cent prevailing cost of debt (one basis point lower) and 4.93 per cent trailing average cost of debt (unchanged).

[10] AER, https://www.aer.gov.au/industry/registers/resources/guidelines/rate-return-instrument-2022/update-0, accessed 29 April 2024.

[11] IPART, *WACC biannual update*, Fact sheet, 22 February 2024, p 8.

[12] QCA, *Rate of return review | version 3*, February 2024, p 46.