Introduction

Both Commonwealth Bank and Westpac Banking Corporation are well-known financial institutions. They are Australia's two leading ASX-listed firms and mortgage lenders. They have both given consistent share price in the course of the most recent twenty years, in the midst of the worldwide monetary emergency, and they're likewise of the top profit paying ASX stocks. Despite the fact that they are probably going to be foundation resources in numerous venture portfolios, would we say we are too dependent on these stalwarts notwithstanding administrative changes and moderate credit development? In this paper, we take a gander at the new outcomes and possibilities for these two enormous banks.

The production function principle is used in microeconomic theory to define an organization's input-output relationship. The production function portrays the greatest number of yields produced from a given arrangement of sources of info. Then again, the info arranged DEA model indicates the base number of information sources needed to accomplish a given level of yield (Seiford and Thrall, 1990). Charge, Grosscopf, and Logan (1983) and Banker, Charnes, and Cooper (1984) proposed models with variable re-visitations of scale after Charnes et al. (1978) proposed an information direction model accepting fixed re-visitations of scale (CRS) (VRS). This report is based on the DEA model.

The DEA approach addresses the first study query by measuring the mean efficiency score of the sample banks. The essence of efficiency movements will be investigated using the Malmquist indices to address the second research issue. Three key topics will be examined in this analysis:

1. Deciding the main cause of gain/loss due to improvement/failure of technological efficiency or scale efficiency by further decomposing the catching-up effect.

2. Decomposing these productivity improvements into the catching-up and frontier shift effects.
3. Determining the fundamental driver of gain/misfortune because of

progress/disappointment of specialized effectiveness or scale proficiency by further breaking down the getting up to speed impact.

Parametric methodologies endeavor to isolate shortcoming from arbitrary blunder by assessing a utilitarian design that interfaces the sources of info and yields. The main flaw in this method is that the model form must be measured, leading to model misspecification (Berger and Humphrey 1997). Furthermore, Thanassoulis (2001) claimed that incorporating a combination of inputs and outputs is impossible. In light of these issues, nonparametric approaches are often used to assess the performance of financial institutions.

Company Overview

The Commonwealth Bank of Australia (CBA) is the largest retail bank in Australia and an ASX-listed firm. It provided financial services under well-known brands such as Commonwealth Bank, Bankwest, Colonial First State, and CommSec until 1996, when it was privatized in three phases (commbank.com.au). The company's operations are mainly based in Australia, New Zealand, and the Asia-Pacific region. Retail, corporate, and institutional banking and wealth management are among the services it offers.

The second-largest bank is Westpac (WBC). Westpac, like CBA, has a strong retail banking activity, which distinguishes them from ANZ Banking Group and NAB, which focus on commercial banking and institutional banking (westpac.com.au). Westpac, St George Bank, Bank of Melbourne, and BT Financial Group are all Westpac names. Australia and New Zealand it has a similar range of financial services. Brian Hartzer recently took over as CEO from Gail Kelly, resulting in a change in strategic direction.

Financial Health

CBA is well-capitalized, with an APRA Common Equity Tier One (CET1) ratio of 9.2%, higher than the industry average. Although capital levels are expected to rise due to the recent financial market investigation, we think Australia's major banks are well-positioned, considering their strong capital generation. Continued adherence to APRA regulations would suffice to maintain solvency. As a result, we believe CBA is in good financial shape. When it was last published, Westpac was in a similar strong spot, with a CET1 ratio of 9%.

Management Assessment

CBA posted a $6.4 billion cash profit before tax for the December half-year, owing to strong retail banking, above-framework loaning development in business banking, a lower cost-to-pay proportion, and lower impedance charges. By and large, it expanded income per share (EPS) by 8.6% on an annualized premise. The annualized return on value (ROE) expanded to 24.6%.

Westpac's financial year ended September 30, 2020, with a strong performance, with cash profit before tax rising to $10.9 billion. St George benefited from the addition of the Lloyds business and lower impairment charges, while Westpac retail and business banking delivered solid revenue growth and good cost control. Compared to the previous financial year, this result resulted in a marginal increase in ROE to 22.2% and a 7.2 percent increase in EPS.

Outlook and forecast

Despite slowing machine credit expansion, CBA's prospects remain bright. When combined with signs of growth in business banking, its lead in home loan provision places it well. However, we expect margins to be squeezed and injury costs to level off due to competition. The company has kept costs under control, and we expect the cost-to-income ratio to continue to increase, resulting in modest performance.

Westpac's comparable high exposure to home loans could be a plus, though a regulatory emphasis on investor lending may be a worry. In the current climate, BT Financial Group has been performing well and is well-positioned for expansion. However, we conclude that the institutional banking future will be more difficult and that impairment charges have reached a bottom. Brian Hartzer, the new CEO, may change the policy and has already made management changes.

Share Price Value

CBA has consistently exchanged along with some hidden costs over its greatest rivals' rates. Notwithstanding, Westpac's stock has progressed nicely, and its forward value income proportion (P/E) of 15.1 is lower than CBA's 16.2. Westpac's end cost of $37.72 on February 23 addresses a 9.6% premium to our Lincoln Valuation, while CBA's cost of $90.41 addresses a 6.8% premium.

After Westpac's rally, it isn't easy to pick between the two, though CBA seems to be somewhat more appealing in light of our Lincoln Valuation. However, based on fundamentals and historical multiples, the banking sector seems to be overvalued. This, we suppose, is due to the low-interest-rate setting and the appeal of comparatively strong, steady yields.

Total Returns

Both banks have a reputation for paying out big dividends regularly. Westpac has historically paid a higher dividend yield to buyers due to the price premium on CBA. Westpac's franked dividend yield has been between 5% and 7.5 percent in recent years, while CBA's has been between 4.5 and 6.5 percent. Both banks, in our opinion, are capable of maintaining payout levels of 70% to 80%. The main concern associated with this viewpoint is that authorities will impose higher capital thresholds.

Over the last year, CBA has generated a capital gain of 20.26 percent, outperforming the industry. Westpac, on the other hand, delivered 13.24 percent during the same period. CBA and Westpac had similar three-year results, with CBA up 82.57 percent and Westpac up 82.58 percent. This compares favorably to the economy, which has returned 37.55 percent during the same period. However, over five years, CBA's 65.74 percent price increase outperforms Westpac's 43.10 percent.

Reasons for disparities in the financial ratios of the two banks

1. There could be bad loans accrued as a result of banking transactions that go unreported by banks. As a result, this problem would result in higher productivity scores.
2. The DEA system does not use statistical ratios to calculate the firm's performance. Rather, it explores the inefficiency of a specific firm in comparison to similar firms. As a result, the technique's possible outliers can impact analytical outcomes, especially in studies with limited sample sizes.
3. The value of the total assets shown in the balance sheet is used as the institutional size in this analysis to determine the relationship between the organization's size and its performance. This identification is dependent on the author's preference, and any other monetary value will be important in determining the scale.

Conclusion

Though we are satisfied with the financial risk faced by both firms, we believe CBA is slightly ahead of Westpac. Although it's impossible to blame any score, CBA's EPS growth was better, and it has a higher ROE. Both companies have larger market positions in the mortgage lending and asset management industries. However, the payoff is likely to be limited by slowing credit expansion, margin pressure, and the normalization of impairment charges.

Westpac has reliably beated CBA regarding profit yield lately, but the difference is closing. The fact that the dividends are often completely franked (or around 40% higher) adds to the stock's attractiveness for income-seeking buyers. Although Westpac has outperformed the market in the medium term, CBA has delivered more stable and better returns over the long term.

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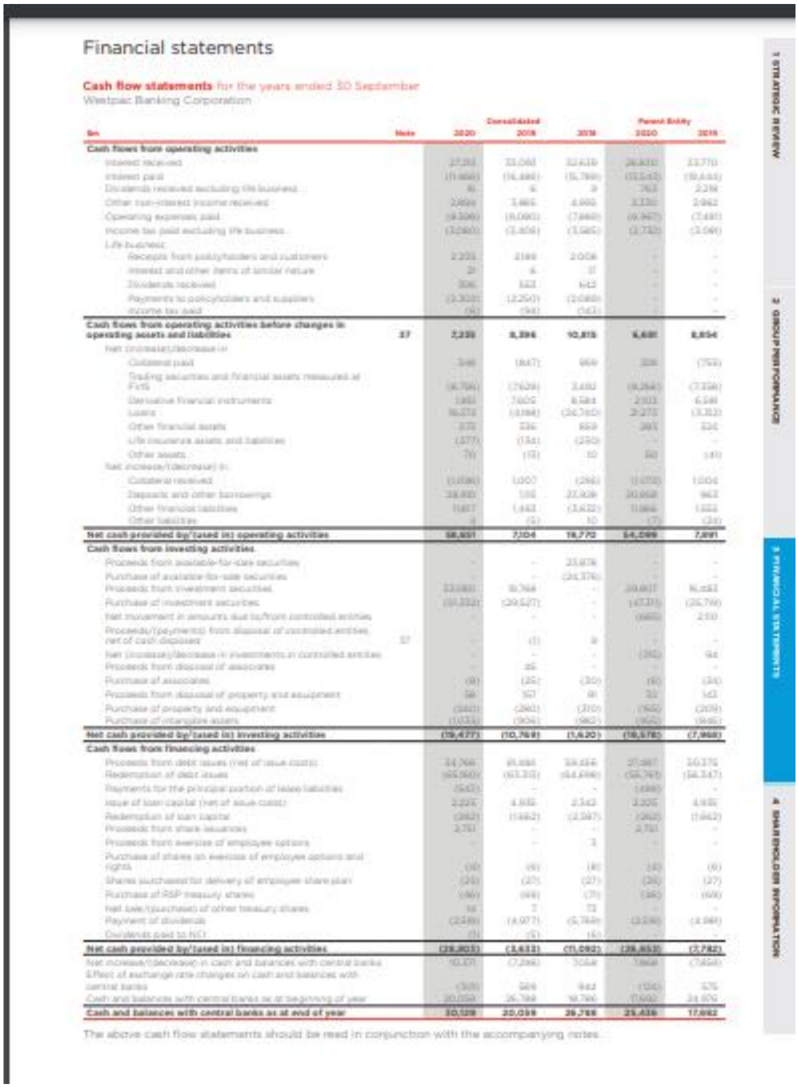
Appendix

Appendix I: Westpac financial report



Financial statements

Cash flow statements for the years ended 30 September

Westpac Banking Corporation

The above cash flow statements should be read in conjunction with the accompanying notes.

Appendix II: Commonwealth Bank financial statement

Five-year financial summary

	30 Jun 20 $M	30 Jun 19[1] $M	30 Jun 18[1] $M	30 Jun 17 $M	30 Jun 16 $M
Net interest income	**18,610**	18,224	18,465	17,546	16,858
Other operating income[2]	**5,151**	5,355	5,646	6,831	7,043
Total operating income	**23,761**	23,579	24,111	24,377	23,901
Operating expenses	**(10,895)**	(10,824)	(10,653)	(10,129)	(9,957)
Loan impairment expense	**(2,518)**	(1,201)	(1,079)	(1,095)	(1,256)
Net profit before tax	**10,348**	11,554	12,379	13,153	12,688
Income tax expense	**(3,052)**	(3,321)	(3,779)	(3,752)	(3,497)
Non-controlling interests	**–**	(12)	(13)	(13)	(20)
Net profit after tax from continuing operations ("cash basis")	**7,296**	8,221	8,587	9,388	9,171
Net profit after tax from discontinued operations	**153**	485	825	493	274
Net profit after tax ("cash basis")	**7,449**	8,706	9,412	9,881	9,445
Treasury shares valuation adjustment	**–**	6	2	(23)	4
Hedging and IFRS volatility	**93**	(79)	101	73	(199)
(Loss)/gain on disposal of controlled entities/investments	**2,092**	(61)	(183)	–	–
Bankwest non-cash items	**–**	(1)	(3)	(3)	(27)
Net profit after income tax attributable to equity holders of the Bank "statutory basis"	**9,634**	8,571	9,329	9,928	9,223
Contributions to profit (after tax)					
Retail Banking Services	**3,997**	3,907	4,465	4,423	4,540
Business and Private Banking	**2,654**	2,931	3,134	2,736	1,522
Institutional Banking and Markets	**655**	1,117	1,226	1,360	1,190
Wealth Management	**–**	–	–	201	400
New Zealand	**811**	1,059	975	871	785
Bankwest	**–**	–	–	–	778
IFS & other	**(821)**	(793)	(1,213)	(203)	(44)
Net profit after tax from continuing operations ("cash basis")	**7,296**	8,221	8,587	9,388	9,171
Investment experience after tax	**(4)**	(3)	(2)	(7)	(24)
Net profit after tax "underlying basis"	**7,292**	8,218	8,585	9,381	9,147
Balance Sheet					
Loans, bills discounted and other receivables	**771,547**	755,173	743,744	731,762	695,398
Total assets	**1,014,060**	976,502	975,165	976,318	932,946
Deposits and other public borrowings	**701,999**	636,040	622,234	626,655	588,045
Total liabilities	**942,047**	906,853	907,305	912,658	872,437
Shareholders' Equity	**72,013**	69,649	67,860	63,660	60,508
Net tangible assets (including discontinued operations)	**64,359**	59,580	56,844	53,090	49,630
Risk weighted assets – Basel III (APRA)	**454,948**	452,762	458,612	437,063	394,667
Average interest earning assets	**897,409**	871,418	861,884	834,741	790,596
Average interest bearing liabilities	**771,982**	761,115	759,583	755,612	733,754
Assets (on Balance Sheet) – Australia	**855,219**	824,651	811,491	817,519	783,114
Assets (on Balance Sheet) – New Zealand	**103,531**	99,661	94,622	89,997	83,832
Assets (on Balance Sheet) – Other	**55,310**	52,190	69,052	68,802	65,999
Other information					
Full-time equivalent employees from continuing operations[3]	**41,778**	41,458	41,024	42,359	43,178
Full-time equivalent employees including discontinued operations	**43,585**	45,165	45,753	45,614	45,129
Branches/services centres (Australia)	**967**	1,014	1,082	1,121	1,131
Agencies (Australia)	**3,547**	3,560	3,589	3,664	3,654
ATMs	**3,542**	3,963	4,253	4,398	4,381
EFTPOS terminals (active)	**190,118**	217,608	219,245	217,098	217,981

1 Comparative information for 2019 and 2018 has been restated and presented on a continuing operations basis, and to reflect the change in accounting policy detailed in Note 1.1 of the 2020 Annual Report as well as refinements to the allocation of customer balances.

2 Includes investment experience.

3 Comparative information for 2019 and 2018 has been restated and presented on a continuing operations basis, and to reflect the change in accounting policy detailed in Note 1.1 of the 2020 Annual Report.