



Wealth Creators Report 2005 Bank of Queensland

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Stern Stewart has been commissioned to report on the economic performance of Bank of Queensland as seen through the lens of Stern Stewart's Value Management Framework.

Questions regarding this analysis are welcome and can be directed to:

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Comments made in this report reflect the views of its author, Justin Bown and are not necessarily endorsed by Bank of Queensland.

The report should be read in conjunction with the disclaimer on the final page.

The Wealth Creators Report attempts to answer the most fundamental questions in business



- How much wealth has this business created or destroyed for investors over the past 12 months?
- What returns does the business generate on capital?
- How much growth is built into the company's current valuation?

This report looks at the most fundamental questions in business:

- How much wealth has BOQ created or destroyed for investors over the past 12 months?
- What returns does BOQ generate on capital?
- How much growth is built into BOQ's current valuation?

Agenda

- Refresher on the Stern Stewart Value Management Framework
- Bank of Queensland's 2005 MVA and EVA performance
- Details of the EVA calculation

Wealth creation is a function of cashflows and appreciation in the value of the company

BOQ

Wealth creation 12 months to 31 August 2005

	<u>2005</u>	<u>2004</u>
	\$'000	\$'000
<i>Free Cash Flow</i>		
Dividends paid	\$43,800	
Capital raised*	(\$72,600)	(\$28,800)
<hr/>		
<i>Growth in value of company</i>		
31 August 2005 Market cap	\$1,177,817	
31 August 2004 Market cap	\$909,175	\$268,642
<hr/>		
Wealth created		<u>\$239,842</u>
Total Return to Investors (TRI)**		<u>26%</u>

* Includes dividend reinvestment plan

** TRI is calculated as wealth created as a percentage of opening market capitalisation. It is analogous to Total Shareholder Return (TSR)



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Page 4



The wealth created by BOQ during the 12 months to 31 August 2005 is a function of the net cash paid out by the business and the appreciation enjoyed in the firm's market valuation.

This slide details the calculation of Wealth created for BOQ for the 12 months to 31 August 2005.

Free Cash Flow, the net cash paid out by BOQ, is calculated based on the ordinary dividends ⁽¹⁾ paid by the Group less the Capital raised during the period. Capital raised includes through share placement, dividend reinvestment and the exercise of options.

The growth in the market capitalisation is based on the share price close as at 31 August. For 2004: \$9.72 x 93,536,542 shares, for 2005: \$11.65 x 101,100,189 shares.

The net Wealth Created is therefore \$240m: if all equity was held by the same group of investors throughout the 12 month period, they would have been \$240m wealthier at the end of the year than at the start of the year.

Wealth Created expressed as a percentage of the opening market capitalisation (TRI or Total Return to Investors) is 26%. This is analogous to the Total Shareholder Return metric.

(1) Preference share dividends are not FCF to ordinary equity investors.

Of course thought should also be given to how much wealth should have been created

BOQ

Wealth added 12 months to 31 August 2005

	<u>2005</u>	<u>2005</u>
	\$'000	\$'000
<i>Wealth created</i>		
Free cash flow	(\$28,800)	
Growth in value of company	\$268,642	\$239,842
<hr/>		
<i>Expected return</i>		
31 August 2004 Market cap	\$909,175	
Expected return	13.4%	(\$122,102)
<hr/>		
Wealth added		<u>\$117,740</u>
Wealth added as % of opening market cap*		<u>13.0%</u>

*this is analogous to excess return



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Page 5



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While the Wealth Created by BOQ is significant, investors have entrusted substantial amounts of their funds with the Group and they have an *expectation* of a return.

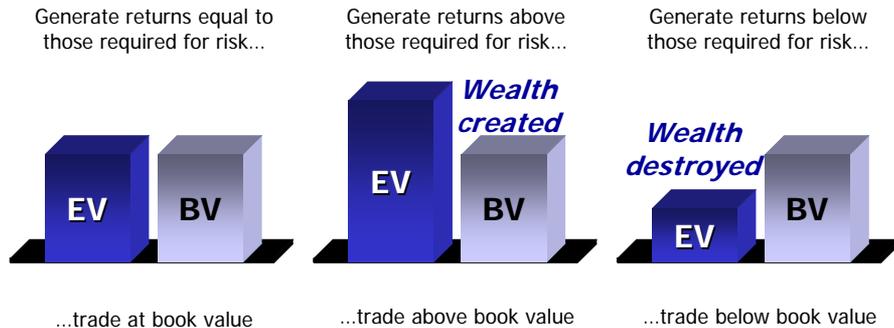
We can estimate the dollar value of the expected wealth creation by applying the cost of capital as at 31 August 2004 to the Market Capitalisation as at that date. This implies that for the risk of the business, equity investors expected the business to generate \$122m of wealth.

During the year BOQ generated \$240m of wealth, well in excess of the expected return, generating a positive Wealth added.

An alternative way to interpret this result would be to express the Wealth created in terms of a percentage return on the market capitalisation as at 31 August 2004. This translates to a total return, net of capital raising of $(240\text{m}/909\text{m}) = 26\%$, well in excess of the risk adjusted expected return of 13%.

Expressed as a percentage of the opening market capitalisation, the Wealth Added is 13%. This is analogous to 13% of excess return.

Wealth is created when funds are invested for good returns



Leaving the question of price aside, the best business to own is one that over an extended period can employ large amounts of incremental capital at very high rates of return. The worst business to own is one that must, or *will*, do the opposite – that is, consistently employ ever-greater amounts of capital at very low rates of return.

Warren Buffett, letter to shareholders, 1992



EV = enterprise value
BV = book value



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Page 6



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Having reported on the wealth that BOQ has created in the past year, we can move on to examine the underlying drivers of that wealth creation.

Analysis conducted by Stern Stewart over the past 20 years suggests that wealth is created when funds are invested at good rates of return.

Businesses that can generate good rates of return well into the future will be more highly valued than those that can not.

These high return businesses will be bid up to a premium above their book value. Businesses that are expected to generate returns equal to those required for risk will tend to trade at book value and businesses that are expected to generate returns below that required for risk will tend to trade below book value.

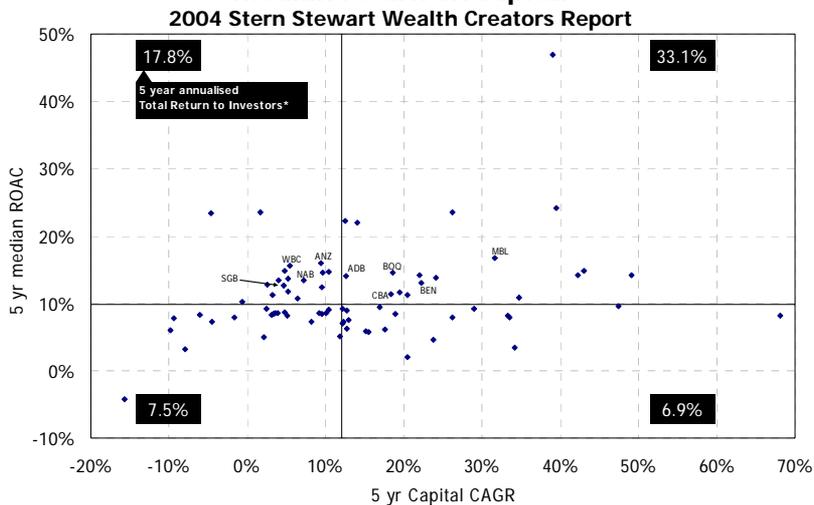
Of course takeover premiums often mean that low return businesses trade closer to book value than their fundamental performance suggests is appropriate.

Mr Buffett makes this point far more eloquently.

Buffett's insights play out in practice among Australia's largest companies

5 year capital growth and median return on capital

n = 76



*Total Return to Investors is wealth created as a percentage of opening enterprise value

Each year, Stern Stewart analyses the top 100 Australian industrial businesses in preparing the 'Wealth Creators Report' for fund managers and equity analysts.

This database allows us to test Mr Buffett's proposition that, 'the best business to own is one that over an extended period can employ large amounts of incremental capital at very high rates of return'.

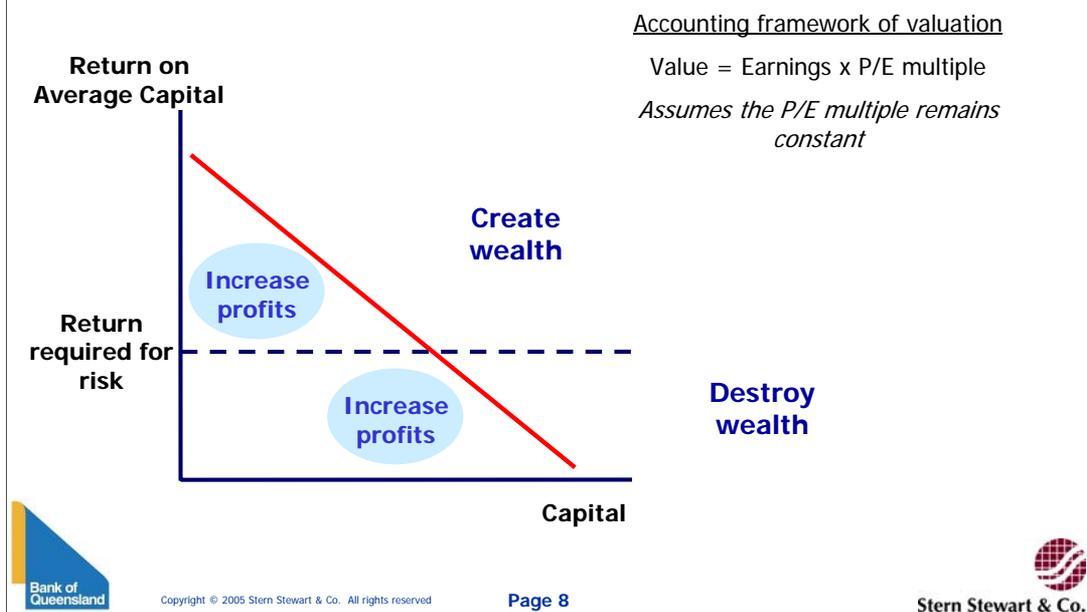
We plot on the diagram above the results of this analysis, highlighting the nine banks covered in the 2004 Wealth Creators Report. On the horizontal axis is the five year cumulative average growth rate in capital of the business. On the vertical axis, the 5 year median return on average capital. The axes represent the median of the 76 companies plotted.

We use a consistent EVA definition of profit and capital as detailed in section three of this report.

Each of the quadrants also lists in the black square, the median for that quadrant of the annualised Total Return to Investors (TRI) over the five year period⁽²⁾. Those in the top right quadrant fit Mr Buffett's definition of the best businesses to own and have enjoyed the highest TRI.

(2) TRI is similar to Total Shareholder Return (TSR: the dividends and capital appreciation enjoyed by a stock expressed as a percentage of the opening stock price), but for non-banking stocks it includes returns to *all* investors – debt & equity - hence removing the impact of leverage from TSR analysis.

But the accounting framework most businesses follow includes a major trap



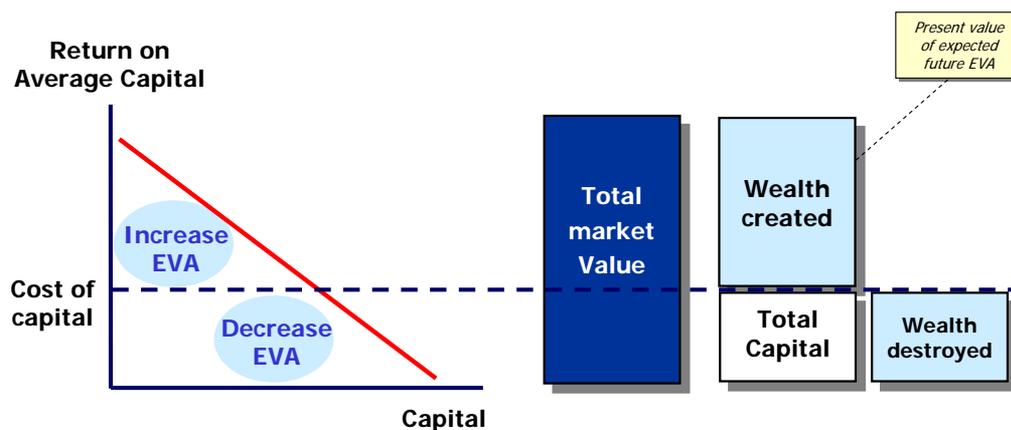
We have established the fairly obvious point that that wealth is created when funds are invested at high rates of return.

The accounting framework that most businesses follow however ignores this fundamental tenant of investment. It fails to differentiate between profits that are derived at high rates of return and profits that are derived at low rates of return. As a consequence, many managers chase every last dollar of profit, investing funds at low rates of return to achieve their pre-stated goal of X% earnings growth.

The diagram above illustrates the point. In allocating capital to investment opportunities, common sense would suggest that you start at the left hand side of the diagram where the rates of return are highest and work your way to the right. While we have established over the past few pages that no further investment should be made below the dotted line, the accounting framework sees any investment that grows profits as a good thing and hence encourages managers to go below the dotted line, increasing profits but decreasing the wealth of investors.

The accounting framework of valuation assumes that the P/E multiple will stay constant, even as low quality investments are taken on. In reality the P/E multiple is variable, not constant and it reflects the quality of the investment portfolio of the business.

To rectify, we developed EVA[®]



Take on all positive NPV investments, or...

Maximise EVA



To rectify this fundamental flaw of accounting, we developed an adjusted measure of profitability: EVA (for Economic Value Added).

EVA just makes the dotted line in the diagram above explicit. It signals clearly to managers and investors alike that investing funds at low rates of return is 'unprofitable' in economic terms and should be discouraged.

As such, the premium that a business trades at above its book value is a function of investor expectations of future EVA.

A business that can only generate returns equal to those available elsewhere at a similar level of risk will have a breakeven EVA and tend to trade at book value.

A business that has the ability to generate returns well in excess of those available elsewhere at a similar level of risk will tend to trade at a premium above book value as investors bid up the value of its shares to reflect the premium quality of its business.

Businesses that continually invest funds at poor rates of return will have negative EVA and eventually trade at a discount to book value, creating an opportunity for a raider to buy the company return the assets to more productive use and make a profit.

Readers familiar with the Net Present Value (NPV) concept will recognise that EVA is just a reworking of NPV, the directive 'Maximise EVA' being an operational version of 'Take on all positive NPV investments (and no negative NPV investments)'.

For BOQ, EVA was positive during the most recent financial year

BOQ

Economic Value Added (EVA) Most recent financial year to 31 August 2005

	<u>2005</u> \$'000
NOPAT	\$73,500
/ Average Capital invested	<u>\$581,504</u>
= Return on capital	12.6%
- Expected return (Cost of equity)	<u>11.2%</u>
= EVA spread	1.4%
x Average Capital invested	\$581,504
= Economic Value Added (EVA)	<u>\$8,255</u>



So how did BOQ perform in 2005 through the lens of EVA?

The adjusted profit (NOPAT) of the Group was \$73.5m. This represents a 12.6% return on average capital invested during the year.

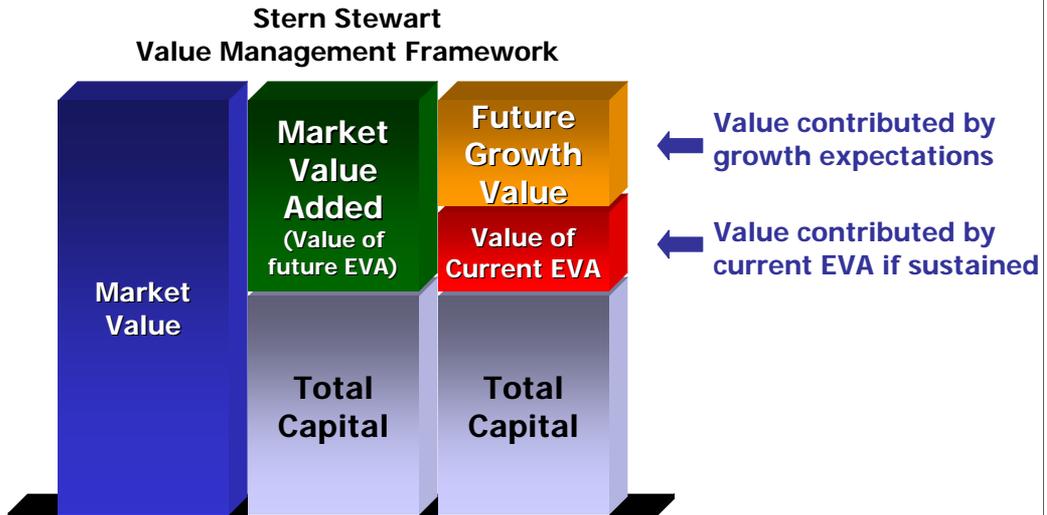
The expected return was estimated at 11.2%, hence the EVA spread was 1.4%.

1.4% EVA spread on \$582m of capital translates to \$8.3m of EVA.

On the face of it, Bank of Queensland has invested funds under its control for a good rate of return during the year.

In Section 3 we discuss the adjustments made to profit and capital for the purposes of EVA, but they include adding back significant items and carrying provisions and taxes on a cash, rather than accrual basis.

In practice, valuations look purely at future returns



We have seen that the enterprise value of the business can be expressed as a function of its invested capital base (its book value) and investor expectations of future EVA or Market Value Added (MVA).

It is helpful in analysing changes in a company's market value to break out the value of future EVA into two parts: the value contributed by the current level of EVA and the value placed on the company's EVA growth expectations or FGV[®] (for Future Growth Value[®]).

Put together these components represent the Stern Stewart Value Management Framework.

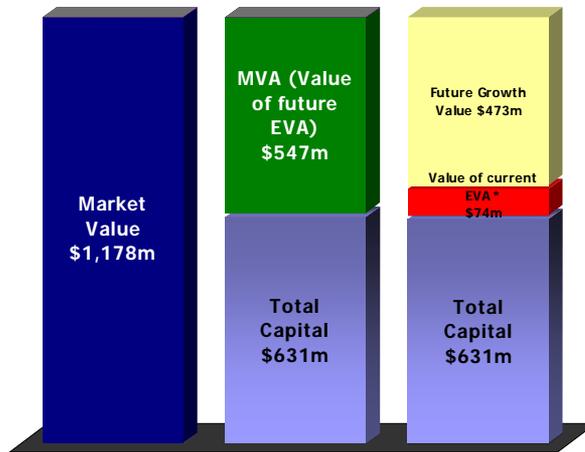
FGV can be compared to an individual investor's forecasts for future EVA or compared as a percentage of market capitalisation against its peers and the broader market.

Investors are expecting BOQ's current EVA to grow strongly

BOQ

Based on 31 Aug 2005
share price of \$11.65

Value Management Framework As at 31 August 2005



* Current EVA of \$8m divided by cost of equity of 11.2%

Looking at BOQ at 31 August 2005, the Group has a market value of \$1,178m, based on the Group's ordinary equity and a share price of \$11.65. The adjusted balance sheet reveals \$631m in capital. This implies investors are expecting future EVA worth \$547m in present value terms.

If we assumed the current \$8m of EVA was to be repeated in perpetuity (ie every year BOQ would make \$8m in EVA), then the value of all future EVA would be \$74m ($\$74m = \$8m$ divided by the cost of capital of 11.2%).

Clearly investors are expecting more, otherwise the MVA premium would be only \$74m, instead of \$547m.

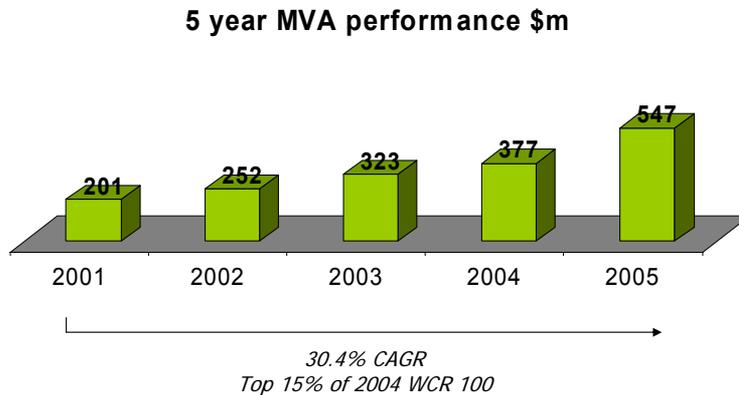
The rest of the MVA premium must be explained by investor expectations of EVA growth: FGV.

Agenda

- Refresher on the Stern Stewart Value Management Framework
- Bank of Queensland's 2005 MVA and EVA performance
- Details of the EVA calculation

It helps to put the result of the Stern Stewart Value Management Framework in context.

Bank of Queensland has an impressive history of MVA growth

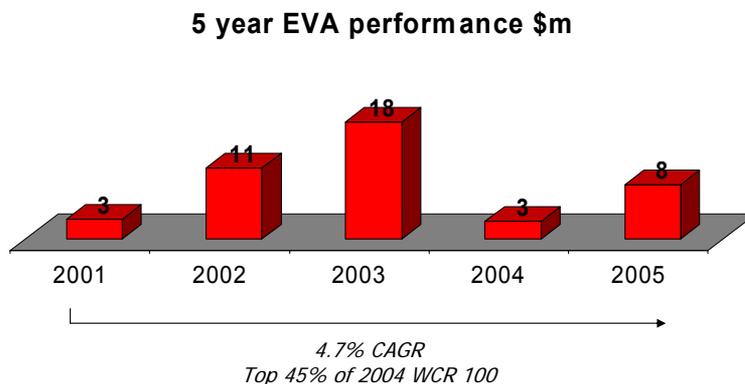


The \$547m MVA result is a substantial improvement on the prior year and is part of a steady growth trend enjoyed by BOQ.

In fact the 30.4% cumulative annual growth rate in MVA puts BOQ in the top 15% of the companies surveyed in Stern Stewart's 2004 Wealth Creators Report.

The constant growth in MVA reflects increases in expectations of future EVA: earnings above the cost of capital.

...driven in part by EVA growth...



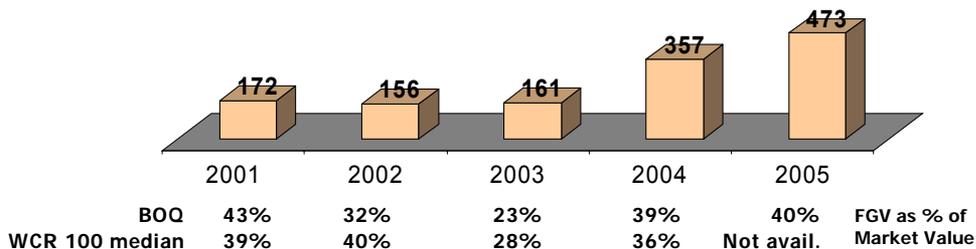
Underlying EVA has improved over the past five years, but has been impacted by:

- a spike in BOQ's cost of equity in 2004, driven in turn by a spike in the Group's beta: the measure of relative risk that underlies the cost of capital calculation (see further detail in Section 3); and
- the lumpy nature of the Group's capital growth, with capital necessarily raised in advance of loan volumes and earnings growth.

Nonetheless, EVA growth has been in the top 45% of the companies surveyed in Stern Stewart's 2004 Wealth Creators Report.

...but more aggressively by expectations of future EVA growth

5 year FGV performance \$m



If MVA growth has been in excess of 30% pa over the past five years, but EVA growth has been closer to 5%, then the MVA growth must be being driven by FGV: the market's expectations of future EVA growth.

The graph shows the expansion in BOQ's FGV, particularly over the past three years as it has increased from 23% of the Group's market capitalisation to 40%. This is close to the market median of 36% in 2004.

For investors and management alike, the question is, 'Does BOQ have EVA growth opportunities worth \$473m?' The rise in the value of the business post 31 August 2005 suggests investors believe there is even more EVA growth to come.

Agenda

- Refresher on the Stern Stewart Value Management Framework
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The underlying numbers reveal strong growth in profits and capital employed

Economic Value Added

Bank of Queensland

Dollars in Thousands

August	<u>2000</u>	<u>2001</u>	<u>2002</u>	<u>2003</u>	<u>2004</u>	<u>2005</u>	<u>5 Year CAGR/ Median</u>
<u>Performance Summary</u>							
NOPAT	28,224	24,207	35,683	50,889	63,030	73,500	21.1%
Avg Capital	193,672	201,436	219,332	301,906	448,989	581,504	24.6%
NOPAT/Avg Capital	14.6%	12.0%	16.3%	16.9%	14.0%	12.6%	14.3%
Cost of Capital (C*)	11.2%	10.5%	11.3%	11.0%	13.4%	11.2%	11.2%
<u>Spread Method</u>							
Profit Spread R-C*	3.4%	1.5%	4.9%	5.9%	0.6%	1.4%	2.5%
x Avg Capital	193,672	201,436	219,332	301,906	448,989	581,504	24.6%
EVA = (R-C*) x Average Capital	6,552	3,063	10,833	17,800	2,731	8,255	4.7%
<u>Residual Income Method</u>							
NOPAT	28,224	24,207	35,683	50,889	63,030	73,500	21.1%
Cost of Capital (C*)	11.2%	10.5%	11.3%	11.0%	13.4%	11.2%	11.2%
x Avg Capital	193,672	201,436	219,332	301,906	448,989	581,504	24.6%
Capital Charge	21,672	21,144	24,850	33,089	60,299	65,245	24.7%
EVA = NOPAT-Capital Charge	6,552	3,063	10,833	17,800	2,731	8,255	4.7%
Increase in EVA	(1,095)	(3,489)	7,770	6,967	(15,069)	5,524	

Looking more closely at the composition of the EVA calculation, we see NOPAT (the adjusted profits of the Group) have grown at 21%pa over the past five years, while the average capital has grown by 25%. The median Return on Capital (NOPAT/Average Capital) has been 14.3% and the median cost of capital has been 11.2%, spiking in 2004.

So BOQ has been growing capital rapidly, at good rates of return. The growth in FGV that has accompanied this growth reflects investor belief that this process can continue for many years to come and/or that rates of return will increase substantially.

The table also illustrates the two ways of calculating EVA. The 'EVA spread' method, as discussed earlier and illustrated at top and the 'Residual Income' method that levies a charge for the use of capital in calculating the EVA profits of the Group.

The cost of equity capital has returned to its five year average reflecting a fall in BOQ's comparative risk or 'beta'

Cost of Equity Capital Bank of Queensland

as at 31 August	2001	2002	2003	2004	2005
Sharpe-Lintner Methodology					
Risk Free Rate (R _f)	5.82%	5.87%	5.32%	5.69%	5.34%
Market Risk Premium (MRP)	6.00%	6.00%	6.00%	6.00%	6.00%
Equity Beta - Bank of Queensland (β)	0.78	0.91	0.94	1.29	0.98
Bank of Queensland Risk Premium	4.68%	5.46%	5.64%	7.74%	5.88%
Cost of Equity Capital (K_e)	10.50%	11.33%	10.96%	13.43%	11.22%

$$\text{Cost of Equity} = \text{Risk Free Rate} + (\text{Beta} \times \text{Market Risk Premium})$$

Note: Beta data is from the AGSM Centre for Research in Finance.



This table details the calculation of the cost of equity applied to calculate EVA for BOQ over the past five years.

The risk free rate is approximated by the yield on Australian 10 year Government bonds during the year.

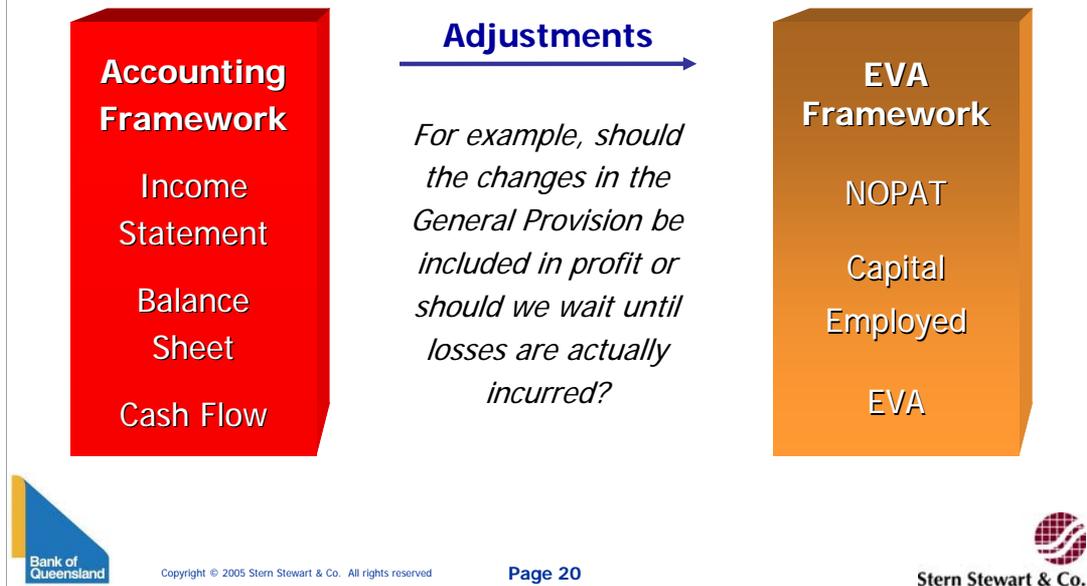
Beta measures the relative risk of BOQ against all stocks listed on the ASX. A beta of 1.0 suggests BOQ is of average risk, a beta higher than 1 suggests higher risk and a beta of less than one, less than average risk. Data is taken from the AGSM Centre for Research in Finance risk measurement service.

A market risk premium of 6% is used. Our analysis and that of leading academics in the field of financial economics suggest that this is the long run additional return required by equity investors over a risk free investment to compensate them for equity risk.

The methodology for calculating the cost of equity is the Sharpe-Lintner (CAPM) methodology. The Sharpe-Lintner formula for the cost of equity (K_e) is:

$$\begin{aligned} K_e &= R_f + \beta \times \text{MRP} \\ &= \text{risk free rate} + (\text{beta} \times \text{market risk premium}) \end{aligned}$$

We need to make adjustments to accounting numbers to determine an economic picture of Bank of Queensland's performance



To improve the usefulness of the EVA analysis, we make a number of adjustments to the financial statements in an attempt to reflect the underlying performance of the business.

These adjustments include:

- Preference dividends (included as an operating expense as EVA is calculated from the perspective of ordinary equity holders for the banking sector)
- Significant items (stripped out of profit and added back to retained earnings to provide a better picture of long run returns on capital)
- Taxes (treated on a cash rather than accrual basis to recognise the economic benefit of constant deferral of tax payments not captured under the accrual tax approach).
- Loan provisions (reversing the balance of the provision and movements in the provision out of the P&L to reduce judgement and better reflect the long run actual loss rates).
- Asset revaluation reserves (taken out of the capital base to better reflect the long run returns achieved on capital contributed to the business).
- Goodwill amortisation (under IFRS no longer an issue, but adjustments are made to historical numbers to add back amortisation and carry the goodwill at cost, again better reflecting long run returns on capital).

The key difference between accounting profit and economic NOPAT is the treatment of significant items

2005 NOPAT Calculation

Bank of Queensland

Dollars in Thousands

<i>Operating Profit</i>		<i>NOPAT</i>
713,700	Interest revenue	713,700
497,000	- Interest expense	497,000
0	- Preference share dividends	7,700
216,700	Adjusted Net Operating Profit	209,000
116,400	+ Non-interest income	116,400
(13,400)	+ Provision for bad and doubtful debts	(13,400)
(215,300)	+ Other Income	(215,300)
23,600	+ Unusual Income	
	- (Incr) in Doubtful debt reserve	(3,200)
128,000	Adjusted Income Before Tax	99,900
36,300	- Taxes / Cash Operating Taxes	26,400
91,700	Net Income / NOPAT	73,500

This table reconciles BOQ's reported accounting profit to the adjusted NOPAT. Variations are highlighted.

The NOPAT calculation includes preference dividends, ignores significant items, adds back the increase in the loan provision and uses a cash, operating basis for determining taxes. The latter calculation is detailed later in this section.

There are a number of differences between accounting and Economic Capital

Capital - Financing Approach

Bank of Queensland

Dollars in Thousands

August	2000	2001	2002	2003	2004	2005
Common Equity, excl. preference shares	179,660	171,295	200,495	320,300	482,100	594,400
Revaluation Reserve	(1,036)	(1,036)	(1,036)	(200)	(200)	0
Deferred Taxation Asset	(9,754)	(9,671)	(11,444)	(15,000)	(33,300)	(36,400)
Deferred Taxation	7,293	10,330	11,137	14,200	21,600	23,700
Net Deferred Income Taxes	(2,461)	659	(307)	(800)	(11,700)	(12,700)
Cumulative abnormal AT	1,983	5,638	10,074	10,074	7,204	(8,296)
Doubtful debt reserve	23,800	24,371	28,511	36,700	53,000	56,200
Accum Goodwill Amortization	0	0	0	0	1,500	1,500
Other Adjustments	25,783	30,009	38,585	46,774	61,704	49,404
Adjusted Common Equity	201,946	200,927	237,737	366,074	531,904	631,104
Total Capital	201,946	200,927	237,737	366,074	531,904	631,104
Capital	201,946	200,927	237,737	366,074	531,904	631,104

To calculate Economic Capital we start with Common Equity, excluding preference share capital, which comprises Contributed Equity (Ordinary Shares) plus retained profits and reserves.

The Asset Revaluation Reserve is excluded as this is not capital that is contributed by shareholders and its inclusion muddies the picture of the returns the business is achieving on its capital base.

Because we are taking taxes on a cash basis, the balance of the deferred tax accounts is removed from capital. For example, in 2005 BOQ has a net deferred tax asset. This implies retained earnings have been increased due to a tax deduction that is yet to be enjoyed on a cash basis. As we are calculating taxes on a cash basis, the expected future tax deduction (the net tax asset) is removed, reducing retained earnings.

Retained earnings also include various significant items. We remove the cumulative effect of these items after tax.

Finally, the balance of the loan provision is added back to retained earnings as is the cumulative goodwill expense incurred.

Cash operating taxes fell in 2005

Analysis of Cash Taxes

Bank of Queensland

Dollars in Thousands

August	<u>2004</u>	<u>2005</u>
Tax paid as per the cashflow statement	29,100	34,500
Less Taxes on:		
Unusu	1,230	8,100
Cash Operating Taxes	27,870	26,400

Cash taxes actually paid to the tax department are used in the calculation of NOPAT rather than the income tax expense.

As significant items are not part of the operating activities of the Group, we adjust the tax paid for the shield provided by these items to arrive at 'Cash Operating Taxes'.

Discussion

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