

# The Cost of Capital Report

As at 30 June 2004

## Taxation and the Cost of Capital

We all have a personal interest in tax rates. It is a rare person who would not like to pay less tax and it is hard to imagine many people volunteering to pay more tax. It is reasonable to expect to pay your fair share but what is fair and how much is enough are not easy questions to answer.

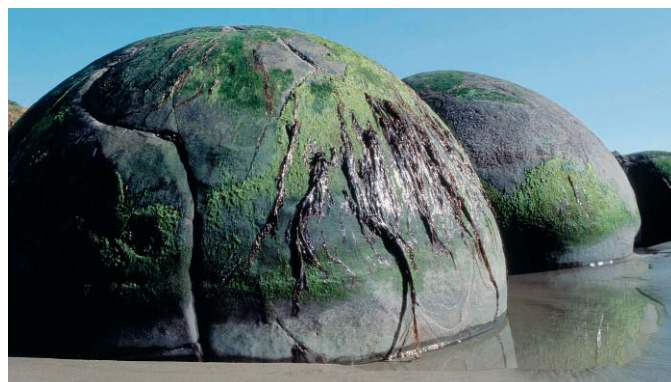
Politicians' interest in tax and tax rates waxes and wanes, but they are never far from the headlines. The strong performance of the economy and the consequential government surpluses are fuelling the debate on what are appropriate levels of company and personal tax rates. The government's tax take has been running ahead of expectations for some time. Low levels of unemployment and strong company profits are contributing to increasing tax revenues.

The debate about tax rates, and in particular whether they should be reduced, has wider consequences than the direct impact on our disposable incomes. Tax rates, personal and company, are inputs to the cost of capital and influence investment decisions and the value of businesses. Lower company taxes means more money to reinvest and more money to distribute to shareholders. Lower personal taxes means more money in the hands of shareholders.

On the face of it, lower company and personal tax rates should mean an increase in the value of shares and businesses. However, determining the magnitude of any change in value due to changes in tax rates is complicated by factors, such as the mix of investors in the shares or business, the range of marginal tax rates applying to the different classes of investors, the differential tax treatment of capital gains and dividends for some investors and imputation credits having more value to some investors, for example New Zealand residents, than others.

Turning first to the company tax rate, what would be the impact if the company tax rate was reduced from 33% to 30%? The most obvious impact would be an increase in after tax profits of companies. The direct effect on the WACC calculation is in the after tax cost of debt.

Cost of debt in the WACC calculation is expressed after allowing for the tax shield it provides in determining tax at the company



Moeraki Boulders photographed by Hubert Stadler

level. Interest expense is tax deductible and so reduces the amount of tax paid at the company level. A reduction in the company tax rate reduces the tax shield provided by interest and so the after tax cost of debt in the WACC calculation would increase.

Normally, an increase in WACC would have a negative impact on business values but in this case the negative effect of the after tax cost of debt increase would be offset by the increase in the proportion of the company's after-tax cash flows that are financed by debt.

Further, the change in the after tax cost of debt for a reduction in the company tax rate from 33% to 30% would not have a significant impact on WACC. The change itself is small and the direct impact on WACC is further reduced by the effect of gearing.

The cost of equity will also be affected by a reduction in the company tax rate but the impact is more complicated than the change in the after tax cost of debt. Our cost of equity specification takes into account dividend imputation and allows for different investor tax rates on interest income, dividend income and capital gains. The impact of a reduction in the company tax rate depends on the relationship between the company tax rate, investors' ability to utilise imputation credits, investors' marginal tax rates on dividends and the level of dividend payout.

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Input Assumptions:			
Market Risk Premium	7.5%	Marginal Tax Rate On Debt	33.0%
Risk Free Rate Of Return	6.3%	Investor Tax Rate On Equity	28.0%

Company	NZX Code	EBIT Multiple	NPAT Multiple	Equity Beta	D/(D+E) Ratio	WACC
<b>Agriculture</b>						
Affco Holdings Ltd	AFF	13.1	13.5	0.48	17%	7.8%
Pyne Gould Guinness Ltd	PGG	12.1	13.9	0.65	49%	7.8%
Richmond Ltd	RHD	8.1	10.5	0.58	48%	8.1%
Sanford Ltd	SAN	6.3	9.5	0.36	5%	7.2%
Williams & Kettle Ltd	WKL	7.5	10.2	0.37	18%	7.2%
Wrightson Ltd	WRI	7.8	10.4	0.89	6%	10.9%
						8.0%
<b>Building Materials &amp; Construction</b>						
Fletcher Building Ltd	FBU	9.2	11.9	0.99	34%	9.8%
Nuplex Industries Ltd	NPX	11.1	16.7	0.82	37%	8.7%
Steel & Tube Holdings Ltd	STU	11.4	17.0	1.04	7%	11.9%
						9.9%
<b>Consumer</b>						
Briscoe Group Ltd	BGR	7.5	11.1	0.69	1%	9.7%
The Colonial Motor Co Ltd	CMO	6.7	9.0	0.39	22%	7.1%
Hallenstein Glasson Holdings Ltd	HLG	10.0	15.0	0.54	1%	8.6%
Kirkcaldie & Stains Ltd	KRK	12.6	12.9	0.66	55%	7.9%
Michael Hill International Ltd	MHI	14.2	20.0	0.51	16%	8.0%
Pacific Retail Group Ltd	PRG	9.3	7.3	0.87	65%	8.8%
Restaurant Brands New Zealand Ltd	RBD	7.7	10.9	1.08	19%	11.4%
Turners Auctions Ltd	TUA	16.5	24.6	0.79	0%	10.5%
Vending Technologies Ltd	VTL	15.2	11.1	2.34	55%	14.1%
Wakefield Hospital Ltd	WFD	18.2	29.8	0.36	16%	7.1%
The Warehouse Group Ltd	WHS	12.0	17.2	0.69	17%	9.0%
						9.1%
<b>Energy</b>						
Contact Energy Limited	GEN	18.7	28.6	0.49	27%	7.3%
Horizon Energy Distribution Ltd	HED	11.2	17.2	0.50	24%	7.7%
Infratil Ltd	IFT	17.5	28.8	0.86	31%	9.3%
NGC Holdings Ltd	NGC	5.3	8.6	0.97	0%	11.9%
The New Zealand Refining Co Ltd	NZR	7.8	12.7	0.54	0%	8.6%
Powerco Ltd	PWC	21.5	17.3	0.80	63%	6.9%
Trustpower Ltd	TPW	19.1	31.1	0.78	14%	9.7%
						8.4%
<b>Food &amp; Beverages</b>						
DB Breweries Ltd	DBB	11.7	16.3	0.37	6%	7.2%
						7.2%
<b>Forestry &amp; Forest Products</b>						
Carter Holt Harvey Ltd	CAH	-8.0	-5.5	1.31	24%	12.1%
Evergreen Forests Ltd	EVF	-6.9	-1.7	0.71	58%	7.9%
Tenon Ltd	TEN	-0.8	-0.7	1.64	41%	12.8%
						12.0%
<b>Intermediate &amp; Durables</b>						
EBOS Group Ltd	EBO	13.8	17.2	0.68	16%	9.1%
Fisher & Paykel Appliances Holdings Ltd	FPA	13.5	16.3	0.74	19%	9.2%
Fisher & Paykel Healthcare Corporation Ltd	FPH	12.2	18.5	0.65	1%	9.4%
Provenco Group Ltd	PVO	-12.9	-9.3	2.66	15%	22.1%
Scott Technology Ltd	SCT	9.3	14.0	1.01	0%	12.1%
						9.7%
<b>Investment</b>						
Genesis Research & Development Corp Ltd	GEN	-1.4	-1.4	1.05	2%	12.3%
Hellaby Holdings Ltd	HBV	13.8	11.5	0.79	16%	9.8%
Sealegs Corporation	SLG	-5.5	-5.5	1.98	0%	19.4%
						10.0%

Company	NZX Code	EBIT Multiple	NPAT Multiple	Equity Beta	D/(D+E) Ratio	WACC
<b>Leisure &amp; Tourism</b>						
CDL Hotels New Zealand Ltd	CDL	9.4	15.6	0.96	25%	10.4%
Kingsgate International Corporation Ltd	KIN	20.5	34.3	0.92	23%	10.3%
Sky City Entertainment Ltd	SKC	12.6	18.7	0.69	23%	8.6%
Tourism Holdings Ltd	THL	10.7	20.2	1.23	20%	12.3%
						9.1%
<b>Media &amp; Telecommunications</b>						
GDC Communications Ltd	GDC	38.9	-43.4	1.51	34%	13.0%
Independent Newspapers Ltd	INL	4.7	4.5	1.38	17%	13.3%
Sky Network Television Ltd	SKY	84.8	2937.5	1.30	16%	12.9%
Telecom Corp of New Zealand Ltd	TEL	10.8	16.1	1.54	30%	12.7%
						12.8%
<b>Mining</b>						
New Zealand Oil & Gas Ltd	NOG	-130.3	-120.9	0.70	0%	9.8%
						9.8%
<b>Ports</b>						
Auckland International Airport Ltd	AIA	17.1	24.6	0.82	21%	9.5%
Lytelton Port Co Ltd	LPC	10.8	14.5	0.65	18%	8.7%
Northland Port Corporation (NZ) Ltd	NTH	25.4	34.0	0.40	0%	7.6%
Ports of Auckland Ltd	POA	11.2	15.7	0.69	18%	8.9%
Port of Tauranga Ltd	POT	15.1	22.2	0.38	21%	6.9%
South Port New Zealand Ltd	SPN	9.3	13.5	0.32	7%	6.9%
						8.8%
<b>Property</b>						
AMP NZ Office Trust	APT	7.4	6.4	0.40	25%	7.1%
CDL Investments New Zealand Ltd	CDI	5.4	8.2	0.80	0%	10.6%
Calan Healthcare Properties Trust	CHP	14.0	16.8	0.54	27%	7.9%
Capital Properties New Zealand Ltd	CNZ	17.5	14.1	0.64	53%	7.5%
Kiwi Income Property Trust	KIP	16.2	17.0	0.41	26%	7.0%
Macquarie Goodman Property Trust	MGP	14.6	19.5	0.46	34%	7.3%
The National Property Trust	NAP	21.2	17.7	0.67	55%	7.7%
Property for Industry Ltd	PFI	9.9	10.1	0.41	26%	7.1%
Trans Tasman Properties Ltd	TTP	9.8	9.0	0.78	59%	8.4%
						7.5%
<b>Finance &amp; Other Services</b>						
Abano Healthcare Group Ltd	ABA	13.4	13.2	1.91	61%	11.8%
Metlifecare Ltd	MET	15.5	14.9	0.62	17%	8.7%
Ryman Healthcare Ltd	RYM	18.9	17.8	0.57	16%	8.4%
Taylors Group Ltd	TAY	10.5	15.6	0.52	7%	8.3%
Waste Management NZ Ltd	WAM	16.1	26.2	0.96	14%	11.0%
						9.7%
<b>Textiles &amp; Apparel</b>						
Cavalier Corporation Ltd	CAV	11.4	17.3	0.65	9%	9.1%
Designer Textiles (NZ) Ltd	DTL	7.7	8.7	0.96	27%	10.4%
						9.2%
<b>Transport</b>						
Air New Zealand Ltd	AIR	10.4	7.2	1.74	56%	11.2%
Mainfreight Ltd	MFT	13.3	22.7	1.03	18%	11.2%
Owens Group Ltd	OWN	13.2	-101.2	0.45	28%	7.4%
Toll NZ Ltd	TRH	20.0	-261.2	1.34	50%	10.2%
						10.9%
<b>Overseas</b>						
Guinness Peat Group Plc	GPG	16.9	26.3	0.51	10%	8.1%
BIL International Ltd	BRY	-144.3	-15.9	1.48	67%	9.2%
Lion Nathan Ltd	LNN	14.2	21.9	0.41	27%	7.0%
						7.8%
<b>Market Weighted Average</b>						<b>10.1%</b>



Burning Moorland photographed by Paul Harris

For example, if a company pays out all its surplus cash to its shareholders such that it regularly distributes all of its imputation credits, shareholders on a marginal tax rate below the company rate will benefit from a reduction in the company tax rate because the company will have more money to pay dividends but they will not have to pay any more tax on the extra cash distributed (assuming adequate imputation credits).

On the other hand, shareholders with a marginal tax rate on dividends above the company tax rate will receive no benefit from a reduction in the company tax rate. A shareholder on the top marginal tax rate will have to pay tax on dividends at the rate of 39% regardless of whether the company tax rate is 33% or 30%. That investor will be indifferent to the reduction in the company tax rate and his or her perception of the value of the company will not change.

However, if the company does not pay out 100% of surplus cash but instead reinvests cash in value enhancing opportunities that generate capital gains then all shareholders who are taxed on capital gains at a rate below the company tax rate will benefit from a lowering of the company tax rate. Using the extra cash, due to the tax rate reduction, to produce capital gains as opposed to providing taxable dividends will be value enhancing.

Our research on investor tax rates suggests that the weighted average marginal tax rate on dividends, across the spectrum of investors in New Zealand equities, is 28% and so is below the current company tax rate. Further, while New Zealand companies have relatively high dividend payout ratios, it is not, on average, near 100% of free cash flow. Therefore, it is reasonable to conclude that, on average, there will be a positive benefit to investors from a reduction in the company tax rate, all other things being equal.

Turning now to personal tax rates, which are important to cost of capital and the measurement of value, what would be the impact of a reduction in personal income (i.e. dividend) tax rates?

If we lived in a simple world with one class of investor and one personal tax rate, a reduction in that rate would result in a reduction in tax on dividends and a reduction in the cost of capital, with a consequential increase in the valuation of shares. The after investor tax cash flow would increase and hence share values would increase, all other things being equal.

However, we live in a complex world where there is a range of investors in New Zealand shares, including a significant representation of international investors, who are subject to a range of marginal tax rates. The consequences of a reduction in personal tax rates is not straightforward. It will depend on the particular tax bands that are changed and for which taxpayers.

The prevalence of institutional investors in New Zealand listed equities would likely dampen the stock market effects of any reduction in personal tax rates. The impact would likely be greatest among privately held, unlisted companies – in terms of positive effects on business values and in terms of the incentive effects that would be beneficial to the growth of our economy.

A reduction in personal tax rates would increase the attractiveness of higher dividend distribution policies. While this might be seen as reducing the pool of funds existing companies have for reinvestment, this would have the benefit of facilitating the flow of shareholders' investment capital to new and emerging businesses.

In summary, the impact of reducing company and personal tax rates on the cost of capital and on the value of businesses is complicated. However, our analysis suggests that on average investors will benefit from tax rate reductions through increased cash in their hands from dividends and/or increases in the value of their shares. To what extent this will result in a net benefit to the economy is another debate altogether.

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Disclaimer: The Cost of Capital Report is intended as an overview of WACC as at June 2004. Readers are advised that before acting on any matter arising in this report, they should consult PricewaterhouseCoopers Corporate Finance.

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