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profiting from confusion?

Firms sometimes offer what seems like a bewildering range of products or services. Does this reflect a genuine desire to provide maximum flexibility to consumers – or is it a strategy designed to increase a firm's profits by confusing customers? And even if it is the latter, does anything need to be done? Eugenio Miravete considers these issues.¹

A few months ago, United States President George Bush observed that while it wasn't the government's job to bail out those who'd become entangled in the US sub-prime mortgage market upheavals: 'there are many American homeowners who could get through this difficult time with a little flexibility from their lenders or a little help from their government.'

This was not the first call from an American politician to implement some sort of bailout policy to correct for the failures of the sub-prime mortgage market. Six months earlier, presidential candidate Hillary Clinton remarked: 'we need to ... issue more mortgages at better rates to these

homeowners ... to give consumers more counselling and information, prevent families from being trapped in high interest loans with pre-payment penalties, and in some cases allow more breathing room from foreclosure.'

Perhaps such statements indicate a belief that consumers are inherently incapable of making the right decision (particularly in relation to high-stakes economic matters) and thus need protecting from themselves, or perhaps they reflect a fear that the mortgage troubles may trigger a wider financial crisis. Either way, two very different politicians have suggested that the government should bail out households, at least partially.

More interesting, however, is the justification offered by Senator Clinton for implementing such a policy: 'we have to put ourselves in the shoes of a parent signing a mortgage product, unaware of a complicated escalating payment formula that has ... balloon payments and pre-payment penalties ... and other added on costs that the owner doesn't really understand ... Clear and easy to understand disclosure, plain talk meant to inform not to confuse, must be the starting point.'

In other words, policymakers should prevent and remedy the effects of business practices that take advantage of consumers' inability to

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adequately and rationally take account of complex product features, particularly when these features vary across products.

Buying into rationality

This political view echoes a long-standing debate among economists. The work of 'behavioural economists' has not only integrated many of the tools and concepts of psychology into the analysis of individual choice, but also questioned the basic rationality assumption at the core of all modern economic modelling. Their fundamental conclusion is that individuals make systematic errors and hence need ongoing assistance in order to make the right decisions.

One oft-cited piece of evidence that supports behavioural economic models is that of individuals who renew their monthly gym membership despite being infrequent users.² In most cases, paying on a per-visit basis would cost them less. They intend to get fit – but tomorrow, once they have paid, they discount the benefits differently and exercise less than expected. This suggests that consumers suffer from inertia, or have time-inconsistent preferences, or are otherwise prone to irrational tendencies.³

What is the relevance for business strategy of such observations? One stands out: if consumers have a limited ability to compare products or contract options, firms may find it profitable to engage in so-called deceptive strategies – actions that seek to profit from consumer confusion while not being openly illegal.

To illustrate this point, consider the case where a consumer must choose among several telephone plans – a repeated decision faced by a larger fraction of the population than gym-goers and one that does not carry any consideration of social interaction or status. The telephone plan choice is typically characterised, even within the same company, by a large number of competing plans that differ from one another along a significant number of (often complex) dimensions. In

these circumstances, the potential for customer confusion and error is high.

The current evidence bears this out: it finds that consumers often fail to subscribe to the least expensive plan for their usage profile. But it also finds that these mistakes are not systematic, and that subsequent plan-switching is best explained as an explicit attempt to reduce monthly bills.⁴ This case is challenging for behaviouralists because consumers appear to respond to what are quite small financial gains from switching, thus implying a very low threshold for deliberation costs (at least in a situation where decisions are made repeatedly).

more options ... may induce greater confusion amongst consumers

Competitive diffusion

Is this conclusion affected by industry structure? Going from monopoly to competition often increases the number of options available to consumers – and this is certainly the case in telecommunications. On the one hand this would seem to be good news, as more options allow the different needs of consumers to be targeted more accurately;⁵ on the other hand, it may induce greater confusion amongst consumers and make it easier for firms to profit at their expense. In practice, however, truly deceptive options (that is, those whose features clearly aim at benefiting from consumer confusion) are less common in competitive environments for obvious reasons – although it can take some time after the entry of competing firms for such deceptive strategies to disappear.

Thus, despite the uproar she created in the New Zealand media at the time, former

CEO of Telecom New Zealand Theresa Gattung might have been fairly describing deceptive strategies and what is needed (or not needed) to correct them when she said: 'Think about pricing. What has every telco in the world done in the past? It's used confusion as its chief marketing tool ... customers know that's what the game has been. And that's fine.'

In other words, although deception may indeed be a business strategy designed to take advantage of customers' limited cognitive abilities, consumers are fully aware of this and eventually learn whether or not they are being unfairly taken advantage of. In general, consumers judge firms by the price and quality of their product or service. Deceptive behaviour is just one of many such quality characteristics – and, in the presence of competition for their custom, consumers who are unhappy with this particular characteristic can choose to take their business elsewhere. So long as sufficient inter-firm competition exists, there is no evidence suggesting a need to impose standards of behaviour on firms or to provide step-by-step guidance to consumers in making their decisions: consumers are quite capable of making sensible decisions for themselves.

1 This article is based on: E Miravete. 2007. 'The Doubtful Profitability of Foggy Pricing' (available at www.iscr.org.nz). See also 'Profiting from Confusion: The Economics of Deception' (presentation slides available at www.iscr.org.nz).

2 S Dellavigna and U Malmendier. 2006. 'Paying not to go to the gym' *American Economic Review* 96 pp694-719.

3 Of course, for those sceptical about behavioural motivations, this behaviour may simply reflect a desire for social opportunities, or that the user's employer is paying the bill.

4 See: E Miravete. 2003. 'Choosing the wrong calling plan? Ignorance and learning' *American Economic Review* 93 pp297-310; and S Narayanan, P Chintagunta and E Miravete. 2007. 'The role of self-selection, usage uncertainty and learning in the demand for local telephone service' *Quantitative Marketing and Economics* 5 pp1-34.

5 See: 'Variety is the spice of life' *Competition and Regulation Times* this issue p 3.

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Variety is the *Spice* of Life

The 1980s reforms allowed New Zealanders to trade more freely with the rest of the world. Not only did this allow the purchase of lower-priced and/or higher-quality goods, it also saw the consumption of new goods and varieties that were previously unavailable. As William Taylor points out, greater variety can have significant implications for welfare.¹

If you enjoy French wine, Italian leather shoes, European cheese, or eating strawberries in winter, then you're one of the many New Zealanders to have gained from the increased choice of goods that the liberalisation of trade policies has allowed. The benefit of variety to the economy stems from the simple idea that consumers have different tastes: greater variety therefore allows consumers to choose the bundle of goods that best matches their individual preferences.

Just what do we mean by 'variety' in goods? Although various interpretations are possible, the simplest measure is just the number of 'country goods' available for purchase, where each product imported from a different country is a country good.² So, for example, French and Italian red wines represent two separate country goods.

Using this measure, Figure 1 summarises the trend in imported goods variety in New Zealand over the last 25 years. After 1985 there was an immediate surge in variety, followed by steady growth right through to 2005. The sole exception to this climb occurred in 1989, when the number of imported varieties actually fell. An obvious contributor to this phenomenon is fallout from

the 1987 stockmarket crash: because import orders tend to be made well in advance of consumption, the post-crash demand decline did not show up in import variety until 1989. However, there is also likely to be another, more subtle, factor at work here: following trade liberalisation, importers were subsequently able to bring in goods from almost anywhere and could have 'overshot' by importing varieties for which there subsequently turned out to be little demand. Learning about consumer tastes takes time.

While Figure 1 shows that New Zealand's variety has increased significantly in absolute terms, a comparison with our major trading partners indicates that our choices are still relatively limited. In 2005, the average number of varieties per good imported into New Zealand was 10, only one third of the 1997 OECD average (30) and even well behind the 1972 OECD average (22).

Some lives are spicier than others

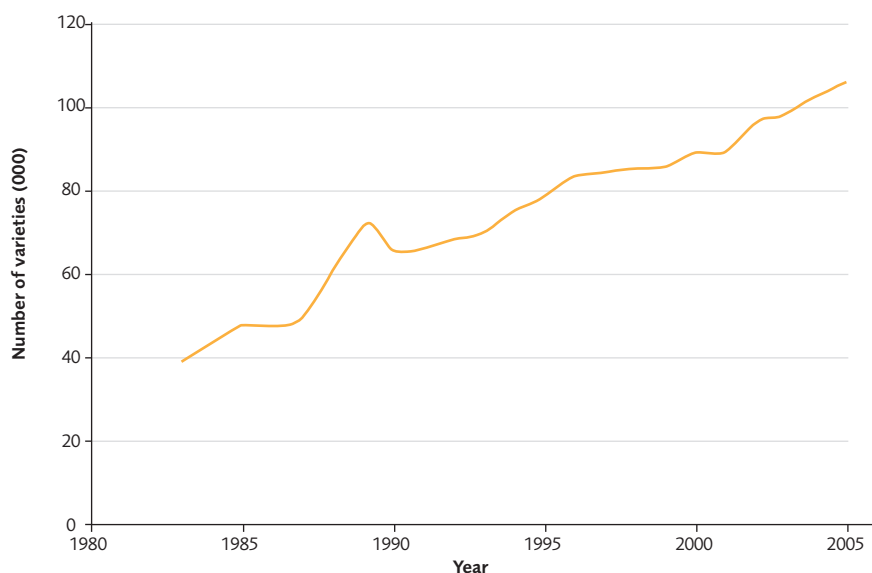
What are the welfare implications of this increase in choice? By better matching the availability of goods to individual consumer preferences, greater variety in goods must make it possible for at least some consumers to

achieve the same level of 'utility' as previously, but at a lower cost. Calculating this cost differential offers a simple way of quantifying (in dollar terms) the benefits of greater variety.

The extent of these benefits depends on a number of factors, perhaps the most important of which is the actual variation in country goods. For example, consumers will care much more about increased variety in wine than they would about variety in petrol: the latter is generally quite similar no matter which outlet it comes from, whereas wines from different countries have very different characteristics. Another important factor is the quality of the different country goods: wine from Iceland does not have the same benefit to consumers as wine from France. Because of this, methods have been developed to account for the substitutability and quality of country goods when calculating how much consumers benefit from increased variety.

Undertaking such a calculation for New Zealand, we estimate that the benefit to consumers between 1983 and 2005 was between 4 and 14 billion New Zealand dollars (corresponding to 3-9% of 2005 GDP). By comparison, the same calculation previously undertaken for the United States between 1972 and 2001 revealed a gain of US\$260 billion (3% of US GDP).³ Although the New Zealand gain appears significant, it may represent only the tip of a very large iceberg. Our relatively poor position in terms of goods variety suggests there are further gains available.

Figure 1: Total variety of New Zealand imports 1983 – 2005



1 This article is based on ISCR research-in-progress by Lewis Evans, William Taylor and Shunming Zhang.

2 Given that countries are likely to produce more than one variety of a given good, this method will tend to underestimate the extent of variety. But, if trade liberalisation drives out locally produced versions of a good, it may overstate variety.

3 Christian Broda and David Weinstein. 2006. 'Globalization and the Gains from Variety' *Quarterly Journal of Economics* 121(2).

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HAPPY 5TH BIRTHDAY!

Do the SOX fit?

Brought about largely by the Enron and WorldCom scandals, the Sarbanes-Oxley Act (SOX) was signed into law on 30 July 2002. It was controversial at the time, and the ensuing years have produced a plethora of academic studies examining its effects. Eli Grace-Webb summarises the results of this research.¹

In going well beyond the usual disclosure and governance requirements of modern capital markets, SOX was a far-reaching piece of legislation. Broadly speaking, it sought to restructure the way that executives, directors and auditors (the three pillars of corporate governance) combine to provide shareholders with maximum information about company performance and financial health and to give them control over the incentive structures used for aligning the interests of management and shareholders. In particular, SOX required:

- company executives to personally certify financial accounts and internal reports (with increased and additional criminal sanctions for known departures from these requirements)
- boards of directors to take responsibility for monitoring firm auditors (with greater liability for improper governance practices)
- auditors to forgo providing non-audit services for audit clients, to attest to the accuracy of internal control reports (Section 404), and to follow detailed procedures on how to detect fraud.

SOX's over-riding objective was to ensure that

the corporate scandals of 2001 and 2002 could never be repeated. But can good practice actually be mandated by regulation? And have there been unintended adverse consequences from trying to do so?

Going up ...

On the one hand, there is little doubt that SOX has had some beneficial effects. In particular, the accuracy of financial disclosures has increased, capital markets have become more efficient, and auditor performance has improved.

One goal of SOX was to improve the reliability of financial disclosures. This has had some success: the increased scrutiny of company executives appears to have reduced the manipulation of accounting earnings. For example, the use of discretionary accruals (as a proportion of total assets or cash flows from operations) has decreased significantly following the adoption of SOX.

In apparent reaction to this improvement in the reliability of information, capital markets in the United States have become more responsive to information disclosures – and firms' costs of equity have decreased by between 50

and 150 basis points as investors perceive lower risk from these disclosures.

Finally, auditors have become more diligent in their fraud-detection efforts. Since SOX's inception, external auditors have increased their detection of fraud (as a percentage of all fraud detected) from 7 to 29 percent.

... coming down

On the other hand, the implementation of SOX has been far from costless. Firms have had to sharply increase spending on the development of new IT processes and other internal-control procedures. They have also had to provide greater compensation for auditors, directors and executives because of the increased risk exposure of those who hold such positions.

Given the nature of SOX's genesis, it is ironic that the three governance pillars have been among its major beneficiaries. In response to Section 404 and its prohibition against obtaining non-audit business from audit clients, auditors have been successful in achieving substantial increases in audit and SOX compliance fees: it's estimated that the average annual compliance cost (including audit fees) for listed firms went from US\$1.93 million to

US\$4.36 million following the imposition of Section 404.

As could have been foreseen from a brief reading of agency and incentives theory, the greater risk imposed on company executives has resulted in a restructuring of executive pay: base salaries have increased at the expense of performance-based compensation. For example, option-based compensation (as a percentage of total pay) declined from 48 percent in 2001 to 37 percent in 2003 among executives of S&P 500 firms. As a result, executives' incentives may now be less aligned with shareholders' interests than previously.

Nor have directors been left out: the median compensation for directors of S&P 1500 firms increased from US\$52,000 to US\$81,000 over the period 2001-2004, reflecting substantial increases in all components of remuneration.

Getting out of the firing line

Some firms have avoided the direct costs of SOX by 'going dark' – voluntarily deregistering from major exchanges. As one study notes, it seems that 'an important consequence of (SOX-like regulation) is to push smaller firms with lower outside financing needs into a less regulated market, rather than to compel them to adopt higher disclosure standards.'²

Similarly, large numbers of non-American firms have voluntarily relinquished their cross-listings on United States capital markets. Such a practice is troubling for at least two reasons. First, the depth and breadth of capital markets is eroded. Second, the delisting firms henceforth have a reduced ability to raise capital for investment – which may constrain aggregate economic growth.

When SOX was introduced, the Securities and Exchange Commission gave an 'initial' exemption from Section 404 to firms with a public float below US\$75 million. (This exemption ceases in December 2007.) As a result, some of these firms have maintained their public float below the threshold by taking various value-destroying actions – such as paying excess cash dividends, making fewer and smaller equity offerings, postponing or abandoning investment, reporting bad news, and engaging in insider selling. Although avoiding the clutches of SOX undoubtedly makes life easier for managers, none of these actions seems likely to be in the best interests of shareholders.

Let's avoid all risk

SOX significantly increases the exposure of executives and auditors to liability for improper governance practices. Although this has undoubtedly forced these officers to fully concentrate on their assigned tasks, it has also reduced their appetite for taking necessary and totally justifiable risks. For example, they can become so preoccupied with protecting themselves that they lose sight of their principal role – which is to create wealth for shareholders. More worryingly still, investment decisions can be corrupted: investment in risky activities (such as R&D) appears to have declined significantly post-SOX.

Audit firms have responded similarly. Following the introduction of SOX, they reduced the financial, litigation and earnings-manipulation risk profiles of their clients. Top-tier auditors in particular have tended to shy away from clients who are considered risky. This has an obvious perverse consequence: lower-quality firms are now being audited by lower-quality auditors.

In the long run

Markets initially responded positively to SOX, with the share prices of weakly governed firms rising significantly – presumably in expectation of stronger future governance.³ However, this optimism may have been misplaced. Weakly governed firms subsequently did little to change their governance structures, while some firms with good governance arrangements actually weakened the protection they offered investors. It seems likely that these firms interpreted the mandatory SOX corporate-governance provisions as making anything above this level a redundant form of monitoring.

As noted above, SOX does seem to have reduced the propensity for 'massaging' accounting earnings. Unfortunately there appears to have been a corresponding increase in the management of expectations and forecast earnings, suggesting that information quality may not have improved to the extent initially envisaged by investors. There's also evidence indicating that an undesirable tradeoff has taken place between information reliability and frequency: financial disclosures are more reliable, but there are fewer of them. As a result, any effect of SOX on overall information quality seems to have been temporary – one year after enactment,

the quality of private, public and total information had all declined below their pre-SOX levels.

Finally, although auditor fraud-detection has improved, the share of fraud detected by employees has decreased – despite supposedly improved protection for employee whistleblowers. In practice, neither the procedures for dealing with whistleblowing, nor the forums offered to whistleblowers, are sufficiently robust for SOX to provide much comfort to workers who observe fraudulent actions.

Putting the best foot forward

The regulatory regime that SOX represents aims to mandate corporate behaviour directly. But, as United States legislators have discovered, this is easier said than done. To a large extent, SOX has simply replaced one set of doubtful incentives with another – and it has imposed significant deadweight costs in the process.

Are there any lessons in this for New Zealand? The principles-based approach adopted by the New Zealand Securities Commission, which was recently incorporated into the NZX Listing Rules in the form of a Corporate Governance Best Practice Code, is significantly different from the rules-based approach incorporated in SOX and it places greater emphasis on market discipline. One concern voiced in the United States has been the disproportionate effect of SOX on small firms, particularly in terms of compliance costs and the implications for risk taking. Given that all New Zealand firms are relatively small by United States standards, a principles-based approach may well be superior here.

¹ This article is based on: G Boyle and E Grace-Webb. 2007. 'Sarbanes-Oxley and its aftermath: A review of the evidence' (available at www.iscr.org.nz).

² B Bushee and C Leuz. 2005. 'Economic Consequences of SEC Disclosure Regulation: Evidence from the OTC Bulletin Board' *Journal of Accounting and Economics* 39(2) pp233-264.

³ Although the reverse was true in bond markets. There prices not only fell in general (suggesting that SOX was expected to impose greater costs on creditors); they also fell more for weakly-governed and risky firms (suggesting that these costs were likely to be highest for the firms that SOX was intended primarily to benefit).

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is CLIMATE CHANGE bad news and should NEW ZEALAND bother to fight it?

OPINION



In 1798, Thomas Robert Malthus forecast global disaster as a result of population growth outstripping arable land; but he overlooked the redemptive impact of technical progress. Today's modern Malthusians predict similar catastrophes from climate change – and the government seems to agree, having recently proposed an emissions-trading scheme as the cornerstone in New Zealand's fight against it.¹ All this has prompted Richard Meade to ponder the wider implications of climate change for New Zealand.

Climate change predictions for New Zealand have been available for some time.² While all are subject to significant uncertainty, some are less uncertain than others. For example, very high confidence is placed on increases in New Zealand's mean temperatures (though there's less confidence about their size). Similarly high confidence is placed on fewer frosts and cold temperatures, more high-temperature episodes, and sea level increases of 9-88cm between 1990 and 2100. Confidence is only 'medium' for increased mean rainfall and episodes of heavy rain in some regions (and declines in others), declines in snow cover and glaciers, increased westerly winds, and more frequent heavy sea swells in areas exposed to westerly winds. Low confidence is placed on increased severe winds and storminess.

These predictions suggest that climate change is bad news – but clearly its impact will

vary by region. Increased drought and fire risk in the east and Northland will be bad for some existing activities. Increased flooding and storms will also sporadically impose extra costs, though less so to the extent that communities adapt to these greater risks (like the Dutch and their improved flood defences). Rising sea levels and risk of higher sea swells may spell trouble for coastal populations; but how many New Zealanders live in low-lying westerly coastal areas? And how many people living further inland would love to end up with a coastal section?

The silver lining

There's good news for some: increased rainfall and snow melt, fewer frosts, and warmer temperatures (of perhaps 1.5-2C). Climate change should also allow more widespread winegrowing further south and at higher altitudes than at present, and result in a

switching of grape varieties as temperatures and rainfall change (an adaptation assisted by vineyards having lives of only 20-30 years).

Additionally, the UN climate panel group's predictions for New Zealand include: longer growing seasons for agriculture and forestry in western and southern areas; better inflows for hydroelectric generation, especially during the times of peak winter and spring demand (with warmer temperatures also reducing this demand); and increased pine-forest growth in the south and west (but less in Northland and some eastern regions).

It should be clear that the effects of climate change are not one-way traffic – and so, on balance, fighting it might even be counterproductive.

But supposing climate change was all bad news, what should New Zealand do about it? Let's address this by first asking how much New Zealand contributes to the problem.

According to the latest available UN data on greenhouse gas emissions, New Zealand ranks 58th: we contribute less than 0.2% to global emissions.³ The top five emitters – the US, China, Brazil (largely via deforestation), China, and India – account for half of all positive net emissions and ongoing strong growth in China and India will increase this share. It takes another 12 countries to account for the next 25% of emissions, and the remaining 150 countries to account for the last 25%. While New Zealand's emissions are almost double the 0.1% average share of each of the 132 countries contributing the last 10% of positive net emissions worldwide, they are a mere 2% of the top five countries' average emissions (and not even 10% of Australia's). Eliminating 100% of New Zealand's emissions will not of itself halt climate change – and it would take China just two months to build new coal-fired power stations producing emissions equal to all of New Zealand's annual emissions.

Do I hear a protest that New Zealand's per capita emissions rank relatively high (even if not as high as the US or Australia)? You could say the same thing about Robinson Crusoe if he ran a diesel generator on his desert island – his miniscule emissions still wouldn't matter for climate change. Developing countries argue that developed countries with high emissions have enjoyed the growth advantages of pollution and therefore should bear the greater share of mitigation costs. But this argument holds less weight for New Zealand, particularly when its virtually negligible emissions are compared with those of China. Besides, there are more millionaires in China than there are people in Manukau.

Dark clouds

Climate change is still a problem for New Zealand, however. If Siberia warms as predicted, expect stiff future competition for New Zealand's forestry sector – and surely other competitive threats will arise. More worryingly, politicians around the world are flocking to become disciples in the new Al Gorian Church of Climate Changetology, so the international political agenda is rapidly shifting towards doing something to combat climate change and put pressure on those who don't. Worse still, New Zealand's richer customers are becoming more concerned at 'food miles', 'air miles', and even some legitimate measures of sustainability. Thus the country's tradables sector – including not just

agriculture and forestry, but also tourism – has a perception problem it will have to address. That problem will only worsen if climate change results in better growing conditions and hence greater profitability for agricultural producers: 'carbon butter' anyone, to go with your 'blood diamonds'?

With the increasing multinationalisation of New Zealand's agri-businesses (exporters like Fonterra, ZESPRI and ENZA now source product much closer to destination markets) this perception problem may diminish over time – as will these companies' ability to benefit from the '100% Pure New Zealand' brand (because of the 'New Zealand' bit, not just the 'Pure' bit).⁴ Moreover, if biofuels or other clean technologies become viable for long-distance shipping and air travel, then the problem will shrink even further. For now, however, such companies face significant downside from being seen as not responding to rapidly changing political and consumer preferences. The present question is whether the whole economy should bear the cost of climate change mitigation so that the tradables sector can enjoy a branding advantage.

Blowing hot and cold

But supposing that New Zealand should do something about climate change, what can it *actually* do? As mentioned earlier, limiting New Zealand's paltry emissions will have no discernable direct impact on the climate itself. And the idea of New Zealand holding itself out to be a 'moral beacon' didn't work in terms of its nuclear-free policy – nuclear might even become the new green, in which case that policy would conflict with the country's new sustainability branding.

Moreover, the real polluters are only likely to 'blink' on climate change when forced by self-interest to do so. China is conveniently choking its way towards doing something, in which case the US may one day lose its excuse for not acting first (although state-level initiatives are rapidly undermining federal opposition to the pricing of emissions). Such considerations aside, perhaps New Zealand has to put up with climate change policies that are more transparent than the emperor's new clothes? Even though such policies make no real difference, at least the country has something to parade on the international stage when trying to influence the real players.

The much-discussed 'Stern Review' of climate change suggested that the costs of

inaction on climate change far outweigh the costs of action. In part this conclusion rested on controversial assumptions about the rate at which to discount future generations' benefits and costs.⁵ Malthus had good reasons for his views but came up with the wrong answer; perhaps Stern has the right answer for the wrong reasons. If in the absence of early and significant emissions reductions there is a significant risk of irreversible runaway climate change, then international measures to reduce emissions are sensible from a precautionary (real options) perspective. New Zealand would doubtless see itself as trying to lead such initiatives – vainly or otherwise – which once again necessitates (if not justifies) its new climate change policy 'clothes'.

This post-hoc justification of Stern rests, though, on there being a genuine scientific risk of runaway climate change. Forecasting short-term local weather is hard enough when we know the climate model; trying to predict long-term global climate change when the underlying model is not yet known, and almost certainly changing, may therefore be a fool's errand. But perhaps the development of such models will lead to technological breakthroughs – the sort that Malthus hadn't anticipated and which saved the day. But then again, maybe climate change is just Y2K without a deadline?

1 Ministry for the Environment and The Treasury. 2007. *The Framework for a New Zealand Emissions Trading Scheme* (available at www.climatechange.govt.nz).

2 Ministry for the Environment and The New Zealand Climate Change Office. 2004. *Climate Change Effects and Impacts Assessment: A Guidance Manual for Local Government in New Zealand* (available at www.mfe.govt.nz).

3 http://unfccc.int/ghg_emissions_data/items/3800.php

4 L Evans and R Meade. 2007. *The Effect of Industry Structure and Institutional Arrangements on Growth and Innovation in the New Zealand Agriculture Sector* (a report prepared for the Ministry of Agriculture and Forestry; available at www.iscr.org.nz).

5 See also: 'A Stern look at the economics of climate policy' *Competition & Regulation Times* issue 23 p6. For a more detailed critique see: M Weitzman. 2007. 'The Stern Review of the Economics of Climate Change' *Journal of Economic Literature* 45(3) pp703-724.

Richard Meade is a research principal of ISCR. As well as having a longstanding interest in the effects of climate change policy on forestry value and deforestation rates, he has recently done work on the impact of New Zealand's proposed emissions-trading scheme on Māori economic interests.

Responding to failures in *retail investment markets*



The Australia-New Zealand Shadow Financial Regulatory Committee (ANZSFRC) comprises academic experts who meet twice a year to critically analyse aspects of the regulatory framework for financial institutions and markets. Its most recent *Statement*, issued in Melbourne on 25 September 2007, addresses the problem of retail investment product failures.¹

Both Australia and New Zealand have recently experienced a number of high-profile failures of non-prudentially-regulated finance companies and property development financiers. While retail investors in debenture or deposit-like products issued by these borrowers have incurred significant losses, the stability of the financial system at large has not been under threat. Nevertheless, the losses have grabbed headlines and prompted both Australian and New Zealand authorities to develop proposals for strengthening investor protection.

In New Zealand, these proposals include licensing all 'deposit-takers' (which, unlike Australia, includes finance companies), imposing requirements for minimum capital, capital adequacy and restrictions on lending to related parties, as well as stricter requirements for disclosure and formal credit ratings. Australian authorities have proposed a set of minimum 'benchmark' conditions on capital, liquidity, lending arrangements and other matters (including credit ratings), that borrowers would be required to disclose whether or not they are met, and if not, to explain why not. Increasing the threshold value (currently \$50,000) above which promissory notes are not regulated under the Corporations Act has also been suggested.

ANZSFRC urges authorities in both countries to proceed carefully in regulating suppliers of riskier investment products. Failure of financial institutions and the attendant losses must be expected as part of the normal operation of efficient and innovative financial systems. Risk taking, risk transformation and risk management are core parts of the business of financial intermediation. By its very nature, risk involves the prospect of loss as well as gain, and losses must occasionally occur. When investors knowingly accept exposure to high-risk financial assets in the expectation of improving their returns, they should bear the consequences of failure. Ensuring that retail investors are appropriately informed about investment risk is, of course, an important policy challenge.

Historically, Australia and New Zealand have adopted different approaches to prudential supervision, with New Zealand relying more on disclosure requirements and market discipline rather than formal regulation. Indeed, it is somewhat ironic that New Zealand authorities propose to intervene more heavily in response to recent developments than their counterparts in Australia. But in both countries there is a spectrum of deposit or debt instruments available to retail investors, ranging from minimal to high default risk. At the low-risk end

of the spectrum are deposits of banks and other deposit-taking institutions. At the higher-risk end are claims on non-prudentially-regulated borrowers, including finance companies and property development financiers.

Investors who seek higher returns must stray beyond the prudentially regulated sector, and in so doing accept a higher risk of default. They should not be prevented from doing so. Balancing the safety of individual investors and the system as a whole against the need for efficiency and choice is best served by clearly delineating highly regulated from less regulated financial institutions and products. In many countries, deposit insurance arrangements (in addition to prudential regulation) serve to demarcate the outer limit of the financial safety net. Australia and New Zealand, which at present have no explicit deposit insurance schemes in place, have been considering their own variants on such arrangements. In our December 2006 *Statement*,² ANZSFRC advocated finalisation and introduction of such schemes as soon as possible, and we now repeat that call.

Enlarging the prudentially regulated sector at the expense of the less regulated sector compromises efficiency and choice. It may not even reduce risk if the perception arises that there will be intervention by government to bail

out investors and this exacerbates moral hazard. The proposals to bring finance companies in New Zealand under the purview of the Reserve Bank, and subject to its possible intervention in times of financial crisis, should be questioned in this regard.

While the proposed regulatory responses to the recent failures are constructive, ANZSFRC believes that there is a range of alternative proposals that warrant consideration. Government and regulatory action can potentially occur on four fronts: information provision and disclosure requirements; prevention of unlawful or unethical behavior by those raising funds or advising investors; measures to prevent retail investors participating in certain markets or investing in certain high-risk products; and compensation schemes for, or bail-outs of, retail investors who suffer loss. We do not regard either of the latter two approaches as appropriate (to preserve consumer sovereignty and avoid moral hazard) nor should prudential regulation be extended beyond its current ambit. In the remainder of this *Statement*, we put forward a range of issues relating to the former two approaches for consideration in formulating appropriate regulatory responses.

Financial literacy

In both Australia and New Zealand there are ongoing and developing government and private sector initiatives to enhance consumer financial literacy. A key benefit of financial literacy is that it enables investors to evaluate risk-return tradeoffs sensibly. We endorse such initiatives, although we recognise that implementing effective strategies is no simple matter. But understanding how consumers interpret financial information is a useful first step.

Consumer testing of disclosure proposals

Governments often propose additional disclosure requirements as a solution to perceived regulatory failures. However, typically we do not see proposals for such new disclosure requirements being road-tested by consumer focus groups to see how well they are understood. This is particularly important when the issue relates to investments that are complex and sold to relatively unsophisticated investors. Hence, we recommend that such testing should be considered as part of the regulatory impact assessment processes required for proposed regulatory changes.

Financial adviser incentives

Financial advisers are an increasingly important part of the financial decision making processes of retail investors. A matter of concern is that financial advisers can be conflicted and have unsuitable incentives because of commission payments from issuers of securities. In these circumstances the actual risk taken on by retail investors may be significantly greater than what they believe to be the case, and this is the problem that warrants addressing. Better ways are needed of linking remuneration of advisers to the quality of advice and ultimate outcomes for their clients, to promote improved incentives.

... understanding how consumers interpret financial information is a useful first step

Potential value of secondary markets

Debenture or 'deposit-like' investments that have caused such grief recently have the characteristic that they are not traded in a secondary market. This means that investors have limited ability to exit their investments if they perceive a decline in credit quality or increased risk, and that there is no mechanism (other than press publicity) for information about changing quality and investment value to be conveyed to investors. Furthermore, continuous disclosure that has been suggested in both countries is most useful for existing investors if they can act upon that information by exiting their investments via a secondary market. Promoting further development of markets for the secondary trading of such products thus has significant merit.

Limitations of credit ratings

One common recommendation in both countries is that institutions raising funds from retail depositors through debentures or 'deposit-like' securities be required to obtain a credit rating from an established international ratings agency. However, the recent round of global financial volatility has been marked by the failure of ratings to provide any reasonable prediction of company failure. Most of the

time the models work well but they tend to break down just when they are most needed. As a result, credit ratings may provide a false sense of security.

What role for trustees?

Regulatory suggestions in both countries involve continuation or enhancement of trustee roles in overseeing these borrowers. It is interesting that in Australia, following a joint report of the Australian Law Reform Commission and the Companies and Securities Advisory Committee in 1993, the requirement for trustees for managed investment schemes was abolished. Is it time to revisit the arguments as to the circumstances under which trustees are required for the protection of unsophisticated investors in debenture issues? If there are to be credit ratings, the value added by trustees for debenture issues needs to be considered, and on past experience there may be some interesting answers to this question. Are there alternative, more efficient and less costly arrangements possible for protecting retail investors? For example, would a structure that requires the borrowing institutions to have a minimum number of independent directors – who have incentives to protect debenture holders because of the risks they face due to directors' liabilities – be superior?

The 'if not why not' approach to disclosure

The Australian suggestions have taken the concept of 'if not why not' disclosure which has been valuable in the corporate governance field and suggest applying it to financial 'benchmarks' for these borrowers. Examples include minimum capital and liquidity requirements. New Zealand has taken an alternative approach of suggesting exemptions for small entities, although it might be argued that this is where risk to retail investors could be most severe. However, before suggesting that New Zealand should consider the 'if not why not' approach, it may be necessary to further consider the implications of this approach for a small market and to have more discussion about the relevance and appropriate values of proposed benchmark financial ratios.

1 Abridged. For a full version, more information about ANZSFRC, and copies of its other *Statements*, see www.iscr.org.nz/n364,47.html

2 *Managing Bank Failure in Australia and New Zealand: Rapid Access Matters* (available at www.iscr.org.nz/n364,47.html).

Pendulous progress

20 years of NZ telcoms regulation

The passing of the Telecommunications Act 1987 marked the beginning of a new era in New Zealand's telecommunications policy: regulatory protection of the government-owned monopoly provider was removed; a stand-alone corporate entity (Telecom) was created in 1989; and in 1990 that entity was sold to private owners. But despite considerable success, this era was short lived and was replaced in 2001 by a competition-focused regulatory regime. Bronwyn Howell assesses the consequences.¹

Twenty years ago in New Zealand – whose small size, low population and population density, and distance from trading partners made the pursuit of efficient production difficult without creating highly concentrated markets – the prevailing philosophy was that the mere holding of a dominant position should not be sufficient to warrant costly industry-specific regulation. Dominance would be permitted to capitalise upon economies of scale and scope, but its use to foreclose competition would be subject to court action under the Commerce Act 1986. This philosophy was still in place at the time of Telecom's privatisation; in addition, its new owners inherited the requirements of the Telecommunications Act and the set of contractual obligations known as Kiwi Share. The overriding objective was to create the most efficient market possible, trading off the costs of industry-specific regulation, the pursuit of efficient scale, and (only where feasible) the benefits of competition.

From there to here

This bundle of legislative and contractual obligations came to be known as New Zealand's 'light-handed' regulatory approach – a loosely regulated (but far from unregulated) telecommunications market. Contractual agreement between market participants rather than regulatory impositions determined sector outcomes, as the costs of maintaining a stand-alone regulatory agency were assessed as higher than the risks and costs of exertion of dominance. During this 'light-handed' period, only a handful of actions were brought against Telecom for exertion of its dominant position, and none was found to have proven that such actions had occurred.²

After a Ministerial Inquiry in 2000, the 'light-handed' regime was replaced by an industry-specific regulator with cost-based pricing of some services being imposed as a means of creating a more competitive market. More recent decisions have confirmed this

fundamental shift in New Zealand's telecommunications policy: from competition being pursued only as a conditional means towards the desired end of increased efficiency, to pursuit in its own right as the pre-eminent sector objective.

The second mobile-termination decision states: 'where there is a tension between the net public benefits and promotion of competition, the statutory context indicates that the primary consideration is the promotion of competition' and 'the Telecommunications Act is focused on regulating access to promote competition. It does not provide a mechanism that specifically allows for efficiency considerations to take precedence over the promotion of competition. Nor is there anything in the statutory scheme to suggest that this should be the case.'³ The government's 2006 *Telecommunications Stocktake* was precipitated principally by Telecom's 'failure' to sell an agreed share of broadband connections via its wholesale and bitstream arrangements with its competitors (33%), even though it had exceeded the target of total connections sold by 11% (that is, the efficiency target was exceeded but the competition target wasn't met).

This change in emphasis appears to have its origins around the time of the 2005 election. The Labour Party Manifesto referred to 'the destructive period of ultra-light-handed regulation that stifled competition, growth and consumer choice in ICT markets' and promised to 'closely monitor and enforce commitments made by Telecom New Zealand under the local loop unbundling decisions and ensure targets for broadband uptake for the next three years as outlined in the Digital Strategy are met.'⁴ The Governor-General's speech at the opening of the post-election Parliament stated: 'my government will be advancing policies to ensure that the telecommunications sector becomes more competitive and that we achieve faster broadband uptake in line with our competitors.'⁵

Has this change in regulatory approach led to increased benefits for New Zealand consumers relative to that achieved under the efficiency-based 'light-handed' regime? And have the changes adopted actually resulted in increased competition?

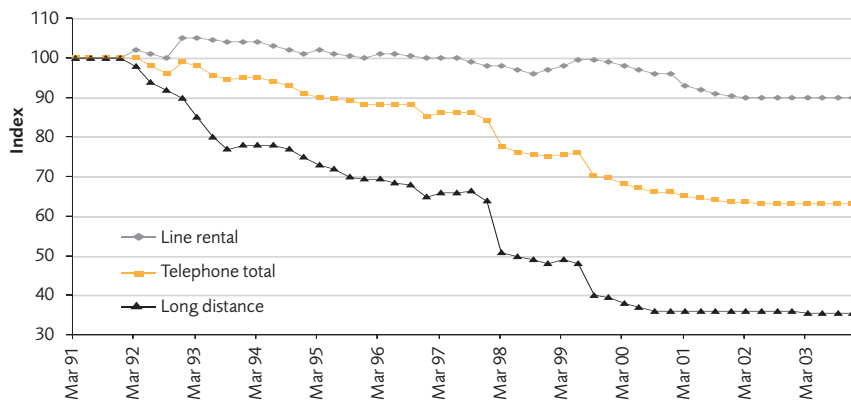
The ricochet effect

Figures 1 and 2 contain price indexes for residential telecommunications services in New Zealand (1991-2003) and in the OECD (1990-2006) respectively. Figure 1 shows that New Zealand prices overall fell by more under the 'light-handed' regime (to 65% of 1991 levels, by 2001) than the OECD average (to 80% of 1990 levels, by 2001). In particular, New Zealand's fixed line prices fell by 10%, whereas the OECD average actually rose by nearly 20%. Proportional reductions in New Zealand call prices are also greater.⁶ New Zealand's light-handed regime appears to have outperformed the OECD's industry-specific regulatory regimes, in terms of the relative benefits delivered to consumers.⁷

Figure 1 also shows that, for residential (fixed) lines, consumer price gains ceased immediately after the creation of the Telecommunications Commission – even though cost-based interconnection prices were imposed. Instead, the Commission's decision to allow regulated access to Telecom's products contributed to TelstraClear's suspension of its fibre roll-out and the consequent reduction in fixed line and broadband infrastructure competition. This suggests either that the 1990s regime had already succeeded in extracting most of the inefficiencies from the market, thus making regulatory intervention unnecessary, or that the regulatory changes which reduced prices to cost had succeeded primarily in transferring any efficiency gains to Telecom's competitors, rather than to its consumers.

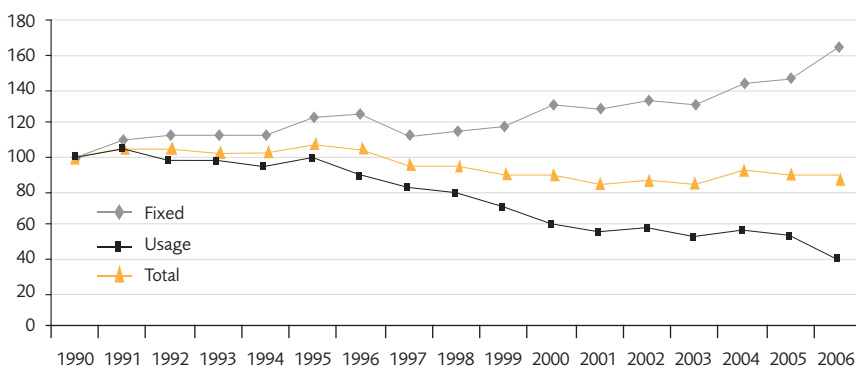
Furthermore, it is difficult to conclude that increased regulation in the pursuit of a more competitive market has succeeded in increas-

Figure 1: Index of New Zealand residential phone charges 1991-2003



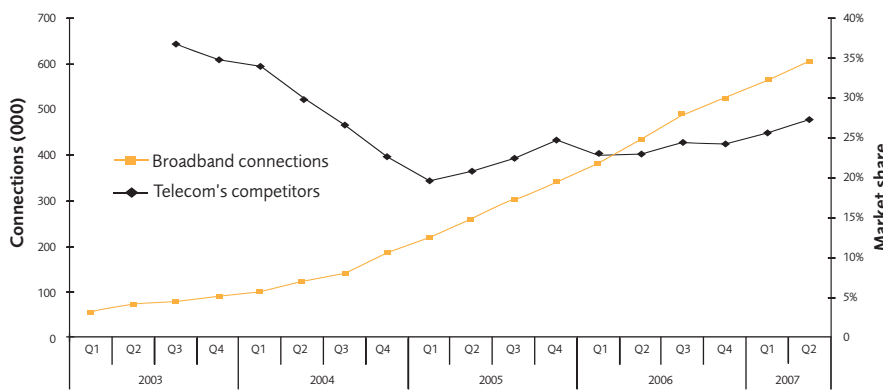
Note: March 1991 = 100 Source: Statistics New Zealand.

Figure 2: Index of OECD residential phone charges



Note: March 1990 = 100; OECD average. Source: OECD time series.

Figure 3: New Zealand ADSL market 2003-2007



Source: B Howell (from Telecom's management commentaries).

ing the market share of Telecom's broadband competitors. Under the 2001 Act, Telecom's broadband services were sold to competitors using 'retail-minus' rather than cost-based pricing. This led to a vibrant resale market where, in December 2003, 37% of connections were retailed by firms other than Telecom. However, as part of the 2003 LLU (local loop unbundling) decision aimed at increasing broadband competition, cost-based access to a limited bitstream service was required. Figure 3 shows that by September 2004, when

regulated bitstream became available, Telecom's competitors' market share had plummeted to 19%. Subsequently, whilst broadband uptake has surged ahead (3rd highest growth rate in the OECD in 2006, after Denmark and the Netherlands), the competitors' market share has hovered persistently around 25%.

Lastly, and most tellingly, the post-2006 ratcheting up of regulatory pressure (through mandatory LLU and operational separation in the pursuit of competition at any cost)

appears to have resulted in the sacrifice of most of Telecom's incentives to invest in next-generation fibre-based networks. In 2003, following the Commissioner's recommendation not to fully unbundle, the firm committed to continue investing; in 2007, Telecom stated that it could justify only one-third of the investment required to build the network required by the Government's Digital Strategy. Its threat to withhold investment was made credible with the return of \$1.1 billion from the sale of Yellow Pages.

Taking the pulse

New Zealand's 'light-handed' regime may not have led to a perfectly competitive market – but the evidence since 2000 strongly suggests that industry-specific 'pro-competition' regulation has stifled both competition and investment, and has failed to deliver benefits to consumers comparable to those enjoyed in the 1990s. It is thus difficult to conclude that New Zealand's 'light-handed' regime was a failure, at least compared with the model that supplanted it. As other countries now face the dilemma of how to regulate markets where oligopolistic competition occurs between a small number of networks in highly concentrated markets, New Zealand's experience is instructive. Efficiency, and not pursuit of a predetermined form of competition, should govern the regulatory process.

- 1 Based on B Howell. 2007. 'A Pendulous Progression: New Zealand's Telecommunications Regulation: 1987-2007' (available at www.iscr.org.nz).
- 2 The notable ones being: the 1991-94 case by Clear Communications regarding its local interconnection agreement with Telecom, where ultimately the Privy Council found that Telecom had not exerted its dominance to reduce competition; and the case brought by the Commerce Commission regarding the 0867 number package (currently sub judice).
- 3 www.comcom.govt.nz/IndustryRegulation/Telecommunications/Investigations/MobileTerminationRates/ContentFiles/Documents/Mobile%20Termination%20Reconsideration%20Final%20Report%2021%20April%202006%20.pdf (para 47).
- 4 www.labour.org.nz/policy/jobs_and_economy/2005policy/Pol05-Comms/index.html
- 5 [www.dia.govt.nz/Pubforms.nsf/NZGZT/Speech187Nov05.pdf/\\$file/Speech187Nov05.pdf](http://www.dia.govt.nz/Pubforms.nsf/NZGZT/Speech187Nov05.pdf/$file/Speech187Nov05.pdf)
- 6 Figure 1 actually understates the real gain to New Zealand consumers, as it does not capture the increase in consumption generated by 'free' dial-up internet access (which resulted in local traffic volumes trebling between 1996 and 2003).
- 7 Some of the gains could have been transferred as product differentiation, which is not well-captured in price indexes. But as differentiation is minor in fixed line markets (largely confined to voice messaging and similar services), this is unlikely to have played a significant role.

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INSIDER TRADING LAWS

what works and what doesn't



The bulk of academic and policymaker opinion leans towards the view that insider trading must be regulated in order to ensure the equitable treatment of shareholders and to maintain confidence in sharemarket integrity. To date, little has been known about the optimal form of such regulation – but now a new multi-country study has yielded some insights. Bart Frijns, Aaron Gilbert and Alireza Tourani-Rad report.¹

The importance of finance to modern corporations means that a country's financial regulations can have a profound effect on its business environment. In this context, insider trading laws have been shown to have a number of beneficial consequences: an increase in sharemarket liquidity and ownership; a reduction in the volatility of share prices; and minimisation of both the cost of capital for firms and the cost of trading for investors. Of course, these benefits accrue only when the insider trading laws are effective – when the regulatory regime makes the cost of insider trading sufficiently high and/or the benefit sufficiently low that the incentive for insiders to trade is significantly reduced.

Unfortunately, little is actually known about the relative effectiveness of different kinds of insider trading regulations. The result has been a large amount of ad hoc lawmaking based on anecdotal experiences from other markets, irrespective of the actual success or failure of those systems. The question

therefore remains: what is the most effective combination of insider trading regulations?

Getting the best from the regulatory buck

We attempted to shed some light on this important issue by examining the experiences of 18 countries that differ in their approaches to controlling insider trading. In particular, we sought to identify the specific elements of financial regulation that have the greatest impact on minimising the costs associated with insider trading.²

In doing so, we needed first to come up with a measurable proxy for the prevalence of insider trading. One candidate is the bid-ask spread embedded in securities transactions. The more insider trading is a problem, the greater the risks of participating in markets; and so liquidity providers require a higher spread as compensation for accepting this risk. To the extent that regulation is effective in restricting insiders, spreads will thus be lower in markets where regulation is both effective and enforced.

We examined the bid-ask spreads associated with the shares of 1073 companies between September 2004 and August 2005 and asked whether these were related to specific and quantifiable aspects of the insider trading regimes within their respective countries. The results produced three principal findings.

Firstly, the most effective laws for minimising bid-ask spreads, and hence for curtailing insider trading problems, are those that:

- (i) prohibit the passing-on of confidential price-sensitive information; and
- (ii) allow for financial penalties above the potential level of any gain obtained from insider trading.

Finding (ii) could be of particular relevance for New Zealand, given the proposals in the Securities Legislation Bill that seek to make significant changes to the penalties for insider trading.

Secondly, strength of enforcement is key to any insider trading regime. Countries that have regularly enforced their insider trading laws tend to have lower trading costs.³

Finally, allowing private enforcement (that is, court action by shareholders) has little effect on spreads. But public enforcement does seem to have an impact.

Overall, our findings suggest that insider trading laws do matter – but that some matter more than others. Careful consideration therefore needs to be given to the design of such laws: only those that are most effective in controlling insider trading should be enacted. Others impose costs while providing few benefits in return.

¹ This article is based on: B Frijns, A Gilbert and A Tourani-Rad. 2007. 'Elements of Effective Insider Trading Laws: A Comparative Study' which was awarded the ISCR Best Paper Prize at the 2007 NZ Finance Colloquium (and is available at www.iscr.org.nz).

² See also: L Beny. 2005. 'Do insider trading laws matter? Some preliminary comparative evidence' *American Law and Economics Review* 7 pp144-183.

³ See also: U Bhattacharya and H Daouk. 2002. 'The world price of insider trading' *Journal of Finance* 57 pp75-108.

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