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IT'S JUST COMPENSATION: the economic consequences of New Zealand's last unprotected human right



Politicians from across the political spectrum talk about 'transforming' New Zealand's economy to one focused on investment in technology-based and high-value-added businesses developed and owned within this country. But Lewis Evans, Neil Quigley and Kevin Counsell argue that New Zealand's current approach to protection of property rights (and especially protection from the state's taking of these rights without compensation) runs contrary to such an ideal – and to New Zealand's more general objective of economic and social progress.¹

New Zealand is distinguished by having among the weakest protection of property rights in OECD countries. It has maintained this position by rejecting legislation that would promote some consideration of these rights in legislative and court processes. This weak protection limits investment in resources and assets in New Zealand, increases the cost of contracting and the level of expenditure on lobbying the government (whether to protect property rights or to promote private interests by having the government confiscate the rights of others), and reduces accountability in the management of resources – including natural resources and the environment.

New Zealand's history of confiscation of private property rights and its failure to provide constitutional or statutory recognition of the fact that private property rights constitute a basic human right materially affects the potential for the economy to grow and our standard of living to be increased. Our economic performance will be greatly enhanced when a government moves to fill that gap in the basic human rights enjoyed by all New Zealanders. It can do so by providing effective legal mechanisms for individuals to seek just compensation should any property rights owned by them be appropriated by the state.

Properties of rights

The definition of property rights considered here is not that narrowly associated with ownership of real property such as land, but that associated with any property to which property rights are joined. Property rights are rights to use resources for certain purposes, and the holder of a property right is the person or group with the ability to exercise the relevant rights.

The holding of a property right does not of itself imply ownership. It is possible to hold property rights in a resource owned by another person. For example: a lease to use land gives the lessee use rights in the land, while

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the lessor continues to own the land and at the expiry of the lease continues to control it. Ownership is often associated with the holding of a bundle of property rights – in particular the right to occupy and use the property, to enjoy the income generated from the legally permitted uses of the property, to exclude others from using the property, and to transfer control of some or all of the property rights to other owners and for whatever consideration is available. In practice, however, it is the last of these rights that most clearly defines ownership, since ownership could be retained even where use and exclusion rights were transferred through a lease or impaired by government action.

Understanding the application of property rights has been assisted by the fact that the term 'intellectual property', and the associated wide recognition of the property rights in ideas and creative works, has entered popular language. There is, nonetheless, little recognition that there are property rights in:

- (i) the choice among all legal uses of the asset and the freedom from politically imposed constraints on these uses of the asset
- (ii) the choice among all legal means of generating income from an asset, and the ability to retain all residual income generated by those uses
- (iii) the freedom to exclude some or all third parties, and some or all uses that they might make of the asset
- (iv) the freedom to sell the asset to the highest bidder, or to otherwise enter into contracts to transfer and create legally permitted rights over the asset.

The breadth of these definitions, and the wide range of local and national government policies and decisions that may affect the value of rights so defined, is the basis for the proposition that legal protections are required for holders of all property rights, not just for the protection of rights associated with ownership.

Government rules – not OK

Many New Zealanders will be familiar with the existence of the Public Works Act and its

provisions for compensation for the taking of private property rights when ownership of land is compulsorily acquired for public works such as the building of roads. But there is much less public awareness of the range of takings of private property rights for which there is no explicit legislative provision requiring the government to pay just compensation. For example:

- The government leases land to farmers in perpetuity on the basis of a rental formula that is enshrined in legislation. It later issues an instruction to the valuers of this land, requiring them to adopt a valuation approach markedly different from that used over the preceding 60 years. The new valuation approach substantially increases rental values and rents, and has the effect of raising the rent that farmers are required to pay. The practical result is government confiscation of net farm income that lessees would reasonably have assumed was available to them at the time they entered into the lease.
- A valuable commercial use is discovered for a mineral found under the ground. This creates a windfall gain for landowners who, at common law, own the minerals beneath the land for which they hold the fee simple. However, government passes legislation that establishes government ownership of the mineral. This represents government confiscation of a property right without creating a change of land ownership of the type that would be covered by the Public Works Act.
- The government exercises exclusive rights to acquire Māori land on the constitutional grounds that only the Crown can extinguish native title. But the price it pays is less than the market value of the land (as determined by the price at which the land is on-sold to settlers). This represents confiscation of value in the property acquired from Māori.
- The government reacts to a court finding that ownership of the foreshore and seabed is a substantive matter that should be decided by the courts; and it pre-emptively empties any court determination, by legisla-

tively vesting the land in the Crown. This example illustrates the state's unwillingness to have rights honed by the courts, and poses issues about the level of compensation required when property rights are not settled.

- The government signs the Kyoto Protocol and assumes ownership of carbon sequestered in privately owned forests that were planted before 1990. Unless they plan to replant or to allow the land to regenerate, at harvest the owners of those forests must purchase permits for the deforestation resulting from harvesting – and no credit for the carbon sequestered in the forest is available to offset their purchase of permits. This regime in effect imposes a special tax on any private landowner who harvests pre-1990 forest in order to implement an alternative land use. The effect of it, to date, is to limit investment in forestry.
- In response to a foreign entity bidding for an equity share in a privately owned infrastructure asset, the government deems that asset to be of strategic importance to New Zealand and issues regulations prohibiting the sale of the asset to overseas persons or entities. The prohibition reduces demand for the asset and thus reduces the market value of the asset in the hands of its current owners. This represents confiscation without compensation; and it signals to all owners of infrastructure assets in New Zealand that they face the risk of similar confiscatory actions.
- A local authority proposes that, to preserve the rural ambience of its urban fringe, some privately owned farmland be designated as landscape protection area. This effectively limits – and possibly precludes – future development of the land for urban or other uses. Whatever the social merits of the proposal, it represents state taking of private property rights without just compensation. It is also an example of a wider issue: the devolution, from central government to a wide variety of regulatory agencies, of the ability to attenuate property rights.

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In each of these examples the imposition by government occurred without the government acquiring ownership of the assets – and thus without it triggering a requirement, under the Public Works Act, to provide compensation.

Our concern with the above examples is not with the exercise by governments of the power of 'eminent domain' (the power of government to take property rights regardless of whether compensation is paid); in some cases, government taking of property rights can be in the public interest. Rather, our concern is that New Zealand lacks constitutional provisions or clear legal precedents which would support a requirement for just compensation to be provided to the owner of the property rights confiscated in each of the above examples.

Truth and consequences

Internationally, a large literature has considered the economic efficiency of just compensation and has focused on five complementary ways of thinking about this issue:

(i) The absence of a requirement for just compensation will result in public officials failing to consider the true cost of the regulations, policies or legislation that they have the power to implement. Unless they are required to provide compensation for the rights impaired or taken, the only costs that they will consider are the political costs associated with confiscating the rights of some group in society; and if that group

does not have substantial electoral clout the costs will be small.

- (ii) Failure to provide compensation will result in over-use of the government's power of eminent domain, since compulsory acquisition of property will be cheaper than alternative means of achieving the desired outcome.
- (iii) The threat of acquisition by government without just compensation will result in owners of property investing in the development of their property at less than the optimal level, or seeking investment opportunities overseas. Either of these actions will be to the detriment of the economy as a whole.
- (iv) Taking private property required for a public purpose without compensation is equivalent to funding that public purpose with a specific tax on a small number of individuals. Economists generally accept that such specific taxes have much higher economic costs than the broader taxes that would be required to pay just compensation.
- (v) Compulsory acquisition may be motivated by government responsiveness to the wishes of particular influential groups within society, and it may impose very high costs on a small number of individuals. Just compensation inhibits the ability of politically powerful groups within society to persuade the government to take the property and destroy the livelihood of groups with less political power.

The United Nations' Universal Declaration of Human Rights posits that human rights include the right to freedom of speech, the right to own property, and protections of these rights. In a democratic society that aspires to economic prosperity, protection of property rights is no less important than protection of freedom of speech.

Democracy is in itself no guarantee of the protection of rights – because it is precisely when democratically elected governments make popular changes to legislation, or when they introduce policies which deprive a minority in that democracy of some right or freedom, that the existence of constitutional safeguards enforceable by the courts (rather than by politicians or officials) are most important. It is therefore our view that the protection of, and a requirement for, just compensation for government takings of property rights should be incorporated into the New Zealand Bill of Rights.

¹ This article is based on: L Evans, N Quigley and K Counsell (2009) 'Protection of Private Property Rights and Just Compensation: An Economic Analysis of the Most Fundamental Human Right Not Provided in New Zealand' (available at www.iscr.org.nz).

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Lew Evans, Graeme Guthrie and Steen Videbeck 'Assessing the integration of electricity markets using principal component analysis: network and market structure effects' *Contemporary Economic Policy* 26 pp145-161.

Glenn Boyle 'Academic salaries: where angels fear to tread' *Chartered Accountants Journal* 87 pp30-33. (This article was published in *Competition and Regulation Times* issue 22 and was reprinted in CAJ at the request of the CAJ editor.)

Lew Evans and Graeme Guthrie 'How options provided by storage affect electricity prices' *Southern Economic Journal* (forthcoming).

Glenn Boyle 'Pay peanuts and get monkeys? Evidence from academia' *The B.E. Journal of Economic Analysis & Policy* 8 pp1-26.

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Glenn Boyle, Graeme Guthrie and Neil Quigley 'Estimating unobservable valuation parameters for illiquid assets' *Accounting and Finance* (forthcoming).

Richard Meade 'Valuing the impact of climate change policies on forestry' *Deforestation: Issues and Challenges*. ICFAI University Press (forthcoming).

Graeme Guthrie's proposal for a book on real options for practitioners has been accepted by Oxford University Press. It should be available in bookstores sometime in 2009.

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(Some) vertical integration

may not be so bad after all

Many electricity sectors, including New Zealand's, don't fit the textbook picture of a liberalised market: vertical integration between generation and retail is prevalent; and contract markets are thin. Contrary to popular belief, this needn't be a cause for competition angst. Seini O'Connor and Richard Meade explain why.¹

Here's a textbook view of electricity sector liberalisation. Competition is essential for good market outcomes – particularly for efficient pricing and investment decisions. In order to achieve competition in wholesale and retail, policymakers need to ensure that generation, transmission, distribution and retail are separately owned or 'vertically unbundled'. Once unbundling is complete, long-term contracts are important for 'making the market work' because they help generators and retailers manage the risks inherent in competitive wholesale and retail trading and thereby support investment. Thus a liquid market in contracts both indicates and supports ongoing competition.

This view suggests there's cause for alarm in electricity markets such as New Zealand's having a high degree of vertical integration (between generators and retailers) but not very liquid contracts markets: surely this means that large integrated players can wield wholesale or retail market power?

Recent research suggests that such alarm is misplaced – the textbook view has some important limitations.

The story so far

Since liberalisation, several countries have experienced low or decreasing levels of long-term contracting and high or increasing levels of vertical integration in their electricity markets.²

New Zealand is a prime example: participants in the generation and retail sectors are almost all 'gentailers' (vertically integrated generators and retailers); and there are relatively few long-term contracts bought and sold between the sectors (such contracts represent only 25 percent of total demand, compared with approximately 500 percent in Scandinavia's Nordpool).³

Other countries which initially had low levels of vertical integration and which began to develop apparently robust contracting markets, such as Australia's NEM and the UK's NETA (now BETTA), are also experiencing increases in vertical integration and have less long-term contracting than expected.

Some commentators and policymakers are concerned about this. They argue that the combination of low contracting levels and market domination by gentailers makes retail energy costly and difficult, leading to decreased

competition and thus threatening efficient pricing and investment.

Too much of a good thing?

Recent research challenges the notion that high levels of contracting and competition are essential for good market outcomes.⁴ Excessive retail entry may threaten the viability of the very contracts that were thought to promote competition (and so threaten, rather than promote, generation investment and supply security). This can happen because excess entry creates critical 'hold-up' risks. A retailer entering into a long-term contract at an agreed price is at risk of retail competitors entering at subsequently lower wholesale spot prices. Over time, this increases the risk that the original retailer will renege on its contracts (which is a problem for generators who use contracts to manage investment risks) or that it will rapidly lose market share to the new entrant(s) – or even that it will 'go under'. A similar situation occurs with industrial customers who make direct electricity purchases: they too face output market competition and so may present a hold-up risk

for generators if they cannot pass the (high) contracted electricity prices through to their customers.

Anticipating such risks, incumbent retailers and generators will enter into fewer long-term contracts (which shows that vertical integration is not the sole cause of low contract-levels: competition can also lead to fewer contracts). The decreased number of contracts will then mean that risk-management, investment, and security of supply all fall short of efficient levels.

Quick fixes fall short

To solve the low-contracting problem, the government could introduce a contracting obligation for generators – for example, requiring that contracts be issued for at least ten percent of output. But this begs the question of who, in the absence of a natural customer base, would buy such contracts.

If too few retailers entered the market after the government imposed such an obligation, then the generators would be overcommitted. This would raise their incentives to increase wholesale prices, thus defeating one of the intentions of forcibly increasing contract levels. Conversely, if the generators are already integrated, why force customers dislodged by such obligations to re-contract with intermediaries purely to restore their position?

As an alternative, some prominent economists advocate restoring retail franchise areas.⁵ This would ensure that retailers are able to lock into long-term contracts with generators without fearing customer losses, and that generators can safely invest knowing they have retailers locked-in. But this proposal seems severe. Franchising conflicts with the competition principles that underlie electricity liberalisation; it would also introduce a new regulatory burden (and related risks). An analogous idea would be to grant monopolies to otherwise exposed industrial customers – but few would suggest going that far, so why go there for retail?

In New Zealand, introducing a franchise to protect against 'hit-and-run' retail entry and to boost security of supply seems particularly unnecessary. Our market has 'in-built protection' from excessive retail entry in the form of transmission constraints and locational pricing, which complicate contracting and mean that retail competition is more regionally defined. Our hydro-exposed system also provides a natural

source of scarcity rents, which support investment even in the absence of contracts.

Vertical integration a better bet

In New Zealand and many other countries, allowing generators to vertically integrate downstream into retail (or allowing large industrial customers to integrate upstream into generation) is a more palatable alternative to the imposition of new regulations or franchises in the face of deficient contracting. Vertical integration has three important advantages over fully-unbundled competitive markets that rely solely on contracting:

- *It protects against hold-up risks resulting from excessive entry.* By thinning contract markets, vertical integration immediately reduces the scope for retail-only entry, since any new entrant of scale would need to also invest in generation capacity. Furthermore, generators (and hence gentailers) are often much larger and more diversified than retailers – so even if new retailers do enter the market, they will only be able to access limited contract capacity (a mere portion of a generator's customer base). This automatically reduces a gentailer's exposure to hold-up and failure, should the new-entrant retailer succeed.
- *It marginalises the integrated firm's exposure to wholesale price risk and reduces incentives to exercise wholesale market power.* Since the role of contracting under vertical integration is reduced to covering any remaining uncommitted or over-committed capacity, wholesale prices play a much reduced role⁶ and hence the level and volatility of wholesale prices are of less consequence.
- *It enables a better matching of capacity and demand characteristics.* Vertical integration can provide a better long-term match between generator and customer preferences on supply security and load matching. For example, retailers who fear short-term wholesale price spikes, and who can't enter into contracts to hedge against these, can instead invest in peaking plant. Similarly, large customers with unusual or seasonal load profiles (such as dairy or pulp-and-paper processors) can invest in co-generation plant whose output correlates with their production patterns and affords them greater control over supply security.

The combination of these attributes means that, compared with contracting, vertical integration is more effective at managing wholesale price risks. Moreover, vertical integration does this on a secure long-term basis. Contracting achieves effective risk management (to the extent that it does) only for the horizon of the contract; beyond that horizon the contracting parties are exposed to renegotiation risks not shared to the same degree by integrated firms. Internalising the limited wholesale price risks to the firm thus provides a more durable hedge.

Significantly, although vertical integration does decrease the scope for retail-only entry, it does not preclude retail entry *per se*. Rather, it changes the way that such entry happens: new retail entry is driven more by generators undertaking capacity expansions and extending into retail (and, albeit less frequently, by wholly new gentail entry). Vertical integration may even be better than long-term contracts at supporting retail competition, because it diminishes wholesale price and retail hold-up risks.

Rather than being a cause for concern, vertical integration can both diminish the use of wholesale market power and sustain retail competition – and so it presents an effective solution for managing market risks while also supporting supply security. Its endogenous rise, even in electricity systems with relatively liquid contract markets, may suggest it has a 'natural' and important role to play in liberalised electricity systems.

1 This article is based on the working paper 'Comparison of Long-Term Contracts and Vertical Integration in Decentralised Electricity Markets' prepared by Richard Meade and Seini O'Connor for the 'Efficiency, Competition and Long Term Contracts in Electricity Markets' workshop organised by LARSEN and the Loyola de Palacio Chair of the European University Institute: Florence 15-16 January 2009.

2 For example see: EJ Anderson, X Hu and D Winchester (2007) 'Forward contracts in electricity markets: The Australian experience.' *Energy Policy* 35(5) pp 3089-3103.

3 Electricity Commission Hedge Market Development Steering Group (2006) *Hedge Market Development – Issues and Options: Overview Paper*.

4 For example see: D Finon and Y Perez (2008) 'Investment Risk Allocation In Restructured Electricity Markets: The Need of Vertical Arrangements'. LARSEN and Groupe Réseaux Jean Monet Working Paper (available from: www.grjm.net).

5 For example see: D Newbery (2002) *Mitigating Market Power in Electricity Networks* Cambridge University Press; and Hung-Po Chao, Shmuel Oren and Robert Wilson (2005) *Restructured Electricity Markets: Reevaluation of Vertical Integration and Unbundling* Electric Power Research Institute (EPRI) Technical Paper.

6 This is because they are both an input and an output price for the gentailer.

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Doing the HOKEY-TOKEY in ASSET MARKETS

Assume that a government uses its policies and influence to favour the views of its supporters ... does this lead to differing outcomes in asset markets, as power switches between right- and left-leaning parties? Chris Malone, Ben Marshall and Hamish Anderson summarise some recent research.¹

It's a conventionally held belief that right-leaning governments are pro-business while left-leaning governments are pro-worker. If governments reflect their constituencies' views and attempt to reward their faithful followers, then left-leaning governments would promote policies such as full employment, unionism, minimum wage levels, and social justice. By contrast, right-leaning governments would promote policies that favour the business community – such as market deregulation, minimisation of regulatory constraints, and promotion of wage restraint.

You put your left hand in, your left hand out

If we look at New Zealand's first Labour and National governments, we see this conventional belief played out. Michael Joseph Savage's first Labour government of 1935 introduced the 40-hour working week, a minimum wage, and compulsory unionism. In social policy it established the state-housing and welfare systems. The first fully National government of Sid Holland (1949) campaigned on reducing trade union power, abolishing unnecessary regulation, increasing consumer choice, and moderating Labour's welfare state.

You put your right hand in ... and shake it all about

If political parties like to keep their 'faithful followers' faithful, it is not surprising that they

use policy and influence to manage the economy for their own political goals.² It is also not surprising that these practices should feed through into economic outcomes, particularly in regard to unemployment and inflation. If (as is often argued) there is a trade-off between inflation and unemployment, then left-leaning governments will have a disposition to push for full employment and wage growth – and so inflation would appear to be a natural by-product of the political cycle.³

This is exactly what we found.

You do the Hokey-Tokey and you turn around

We conducted a study of political cycles in both New Zealand (from 1931 to 2006) and Australia (from 1910 to 2006) and found that inflation was significantly higher during terms governed by the left of the political spectrum in both countries.⁴ This led on to the primary focus of the study: if the amount of inflation varies with a government's political persuasion, this variation should flow through into asset markets.⁵ We know that inflation affects asset classes differently. Some assets are natural hedges against inflation, whereas inflation simply increases the costs of owning other assets.

... in the sharemarket

In general, the sharemarket does not like unexpected inflation. During these periods businesses tend to suffer, because of increased costs of capital and inputs. Businesses are also faced with increased uncertainty in forecasting

and valuation errors, as well as misallocation of resources through speculative trading behaviour. The increased costs and greater uncertainty of doing business is consistent with the negative relationship between inflation and stock returns.⁶

Thus, if we know inflation is higher under left-leaning governments and lower under right-leaning governments, we would also expect sharemarket performance as a whole to be superior during periods when the country is governed by the right-of-centre (that is, when the rate of inflation is lower). Our test results are consistent with this view. There are significantly better sharemarket performances under right-wing governments in both New Zealand and Australia. These findings hold under a variety of robustness checks.

The details in Figure 1 show that annual sharemarket returns (capital gains plus dividend yields) in New Zealand during periods of right-leaning governments were 5.1 percentage points higher than they were during periods of left-leaning governments. In Australia (which is not included in Figure 1) they were 3.7 percentage points higher. To restate this effect in terms of annualised average returns: in New Zealand the return was 13.7% under National governments compared to 8.6% under Labour; in Australia it was 13.5% under Liberal (right-leaning) governments and 9.8% under Labor.

When we drill down the results to real returns (returns after an inflation adjustment), the contrast becomes even more pronounced.

In New Zealand, the average real return under National is 8.4% versus 3.2% under Labour. In Australia the average real return under Liberal governments is more than double that under Labor governments.

... in the property market

In general, the property market is considered to be a good hedge against unexpected inflation. There are good reasons for this: the rent review process compensates landlords fairly quickly for inflation; and higher rentals then translate to higher property values via the capitalisation rate. Furthermore, inflation increases construction costs and these are another driver of real estate values.

If inflation is higher under left-of-centre governments and if the policies of these governments are more supportive of the housing sector, then property prices and income should act as a natural hedge against the higher inflation during these terms. Thus we would expect to see higher property returns under left-leaning governments.

Our test results confirm this proposition in New Zealand, where clearly superior property returns accrued during Labour-led governments. This can be seen in Figure 1: the average total return (capital gains plus rental yields) on residential property was 16.5% per annum during Labour governments and 12.2% during National governments.⁷

In Australia, however, the political cycle did not appear to influence property market returns: there the returns were 14.9% per annum under Labor and 15.5% under Liberal.

... the bond market

In general, the bond market (like the sharemarket) does not like unexpected inflation because it increases the opportunity cost of owning bonds. However, the relationship between political cycles and total bond returns is less clear: while inflation leads to higher nominal interest yields on bonds, it also leads to capital losses on existing bonds. Therefore there are offsetting effects at work in terms of total nominal bond return (capital gains and interest yields). So we would expect to see, under left-leaning governments, higher interest yields but capital losses. Conversely we would expect to see, under right-leaning governments, capital gains but falling yields.

As expected, we found that total returns on ten-year government bonds produced mixed results. Figure 1 shows that, in New Zealand, bond returns under National governments averaged 7.9% per annum versus 6.8% under Labour. In Australia, however, bond returns under Liberal governments averaged 6.4% versus 7.4% under Labor.

Nevertheless we found that, on average in both countries, capital gains on bonds accrued under right-leaning governments and capital losses accrued under left-leaning governments.

That's what it's all about

A consequence of a political system that alternates between left-leaning and right-leaning governments is that different inflationary and asset market outcomes may occur under each type of government.

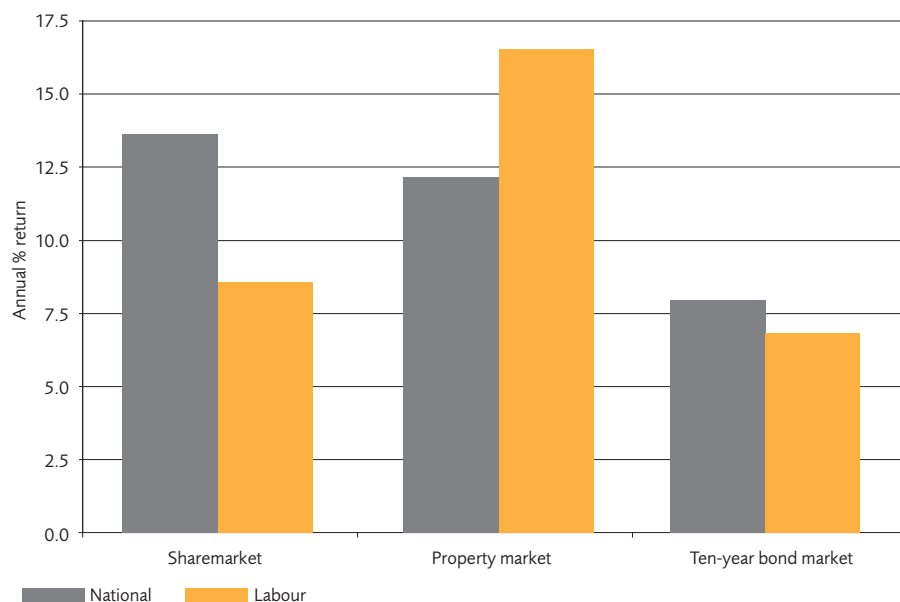
We found evidence of these processes in New Zealand and Australia:

- Inflation tends to be higher under left-leaning governments than right-leaning governments.
- The sharemarket is a superior investment when parties from the right of the political spectrum are in power.
- Evidence in the bond and property markets in the two countries is mixed – but in New Zealand the bond market has significantly higher returns under right-leaning governments and the property market significantly higher returns under left-leaning governments.

New Zealand's and Australia's political cycles influence inflation; and this flows through to sharemarkets, bond markets, and property markets. But while these influences are statistically significant, they are subject to considerable variation. Furthermore, any future changes to the governance of monetary policy could reduce the impact of these influences. Changes to the electoral system might also affect the strength of the political cycles – but despite New Zealand's move to a proportional voting system in 1996 its governments still tend to be formed on a right versus left divide.

- 1 This article is based on: HD Anderson, CB Malone and BR Marshall (2008) 'Investment Returns Under Right- and Left-Wing Governments in Australasia' *Pacific Basin Finance Journal* 16(3) pp252-267
- 2 The links between monetary and fiscal policy and political cycles is explored in: JC Heckelman and JH Wood (2005) 'Political Monetary Cycles under Alternative Institutions: The Independent Treasury and the Federal Reserve' *Economics and Politics* 17 pp331-350.
- 3 NG Mankiw (2001) 'The Inexorable and Mysterious Tradeoff Between Inflation and Unemployment' *The Economic Journal* 111 pp45-61.
- 4 New Zealand and Australia are useful 'laboratories' to observe political cycle effects because the party in office usually has clear control of the political system.
- 5 The inflation, sharemarket and bond series are from 1910 to 2006 for Australia and from 1931 to 2006 for New Zealand. Property series, however, are only available for New Zealand from 1962 and Australia from 1970.
- 6 NB Cultekin (1983) 'Stock Market Returns and Inflation: Evidence from Other Countries' *Journal of Finance* 38(1) pp49-65.
- 7 When returns are adjusted for inflation all of the sharemarket, property market, and bond market results continue to hold.

Figure 1 Average nominal returns in asset classes during National and Labour governments in New Zealand



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Are competition and regulation two sides of the same governance coin?

Good-quality corporate governance helps ensure that suppliers of capital receive a fair return on their investments – and so it promotes confidence in capital markets. But what factors determine the quality of corporate governance? Do a country's competition and regulatory frameworks affect the governance choices of its firms? Chandrasekhar Krishnamurti describes the results of some recent research.¹

In general the principal objective of competition is to promote business efficiency via market mechanisms, thus leading indirectly to greater investor welfare. By contrast, regulation seeks to directly promote investor protection in a prescriptive way. Although their relative merits along many dimensions have been widely debated, the influence of competition and regulation on corporate governance choices has received little attention. This is surprising, for two reasons. First, a firm's governance structure typically reflects a number of factors that are likely to be influenced by a country's competition and regulation policies – the availability of human capital, existence of conflicts of interest, strength of institutions, and awareness of ethical considerations.² Second, previous research indicates that country characteristics are much more important than firm characteristics when it comes to explaining governance choices.³

Some insight into this issue can be obtained by observing the governance choices of firms from a variety of countries that differ in the emphasis that they place on regulation vis-à-vis competition. For this task, governance data were drawn from the 2001 Credit Lyonnais Securities Asia report, covering 463 firms from 15 countries. Firms were scored on their corporate governance choices through a questionnaire filled out by analysts familiar with the firms and the key tenets of best practices of corporate governance. The questionnaire addressed 57 topics including management discipline, transparency, accountability, responsibility, fairness, and social responsibility.

Each country was also scored as 'strong' or 'weak' on the two dimensions of regulation and competition.⁴ The regulation measure is based on 73 criteria that emphasise the existence, strength and efficiency of various governmental entities, their functions, and

The paper on which this article is based was joint winner of the ISCR Best Paper Prize at the 2008 NZ Finance Colloquium.

their regulatory activities that are relevant to business. The competition metric is based on 79 factors relating to economic performance (these include basic economic and competitive elements such as foreign and domestic trade, foreign investment, economic health, the potential for growth, and threats to factors of production).

Table 1 shows the distribution of firms over the various countries and their associated competition-regulation nexus. About 48% of sample firms come from China, Hong Kong, Malaysia, Singapore, Taiwan, and Thailand and thus face both strong regulation and strong competition. Another 18% come from countries with strong regulation and weak competition – such as Brazil, Chile, Mexico,

Table 1: The international competition-regulation environment

Environment	Country	Number of firms in sample
Weak regulation/ weak competition	Indonesia	18
	Philippines	20
	Turkey	17
Weak regulation/ strong competition	India	79
	Korea	24
Strong regulation/ weak competition	Chile, Brazil	45
	Mexico, South Africa	40
Strong regulation/ strong competition	China	25
	Hong Kong	38
	Malaysia	47
	Singapore	43
	Taiwan	47
	Thailand	20
Total		463

and South Africa. India and South Korea fall into the category of strong competition and weak regulation and account for 22% of the sample. The final 12% of the sample comprises Indonesia, the Philippines and Turkey – which have both weak regulation and weak competition.

Across countries

In countries where regulation is strong, one would expect firms to comply with the best practices of corporate governance so as to minimise the chances of punitive action from the regulator – that is, regulation should have a positive impact on the quality of corporate governance.

Similarly, when competition is strong, one would expect high-quality governance choices to attract favourable attention and to enhance company legitimacy in the eyes of investors. Consequently firms may use corporate governance as a means of gaining a competitive benefit such as a lower cost of capital or better access to resources. So competition should also have a positive impact on the quality of corporate governance.

These hypotheses are only partly supported by the data. Firms in strong-regulation/weak-competition countries have the highest average corporate-governance score (64.47). They are followed by firms in strong-regulation/strong-competition countries (57.81), then by firms in weak-regulation/strong-competition countries (53.4) and finally by firms in weak-regulation/weak-competition countries (41.43).

Once other factors are taken into account, stronger regulation does indeed have a positive effect on governance scores at the firm level. But country-level competition scores actually have a negative effect. Moreover, the joint effect of regulation and competition on governance scores is negative. Thus, stronger competition may have a perverse effect on standard measures of governance quality.

Within countries

Also of interest is the variation in the quality of governance choices within a given country. Where regulation is strong, its coercive nature should ensure higher compliance with prescribed behaviour (including governance choices) and consequently should reduce diversity in corporate governance within a given country. On the other hand, a competitive business environment is characterised by an efficient and rapid transmission of information – an environment in which firms have incentives not only to exhibit good governance but also to display governance that is better than that of their competitors. The relative quality of governance is important; and a typical firm in this environment seeks to derive significantly more benefits from corporate governance than its competitors do. Such searching for an 'edge' should lead to greater diversity in governance choices.

It turns out this is exactly what happens. Holding all else equal, variation in corporate governance scores is significantly greater in

strong-competition countries than in weak-competition countries, but it is significantly smaller in strong-regulation countries than in weak-regulation countries.

There appear to be two distinct forces at work, acting in opposite directions. One of them arises from regulatory strictures and engenders convergence – that is, a tendency for firms to race to the top in corporate governance scores. The other force occurs because of competitive pressures and produces a divergence in corporate governance scores.

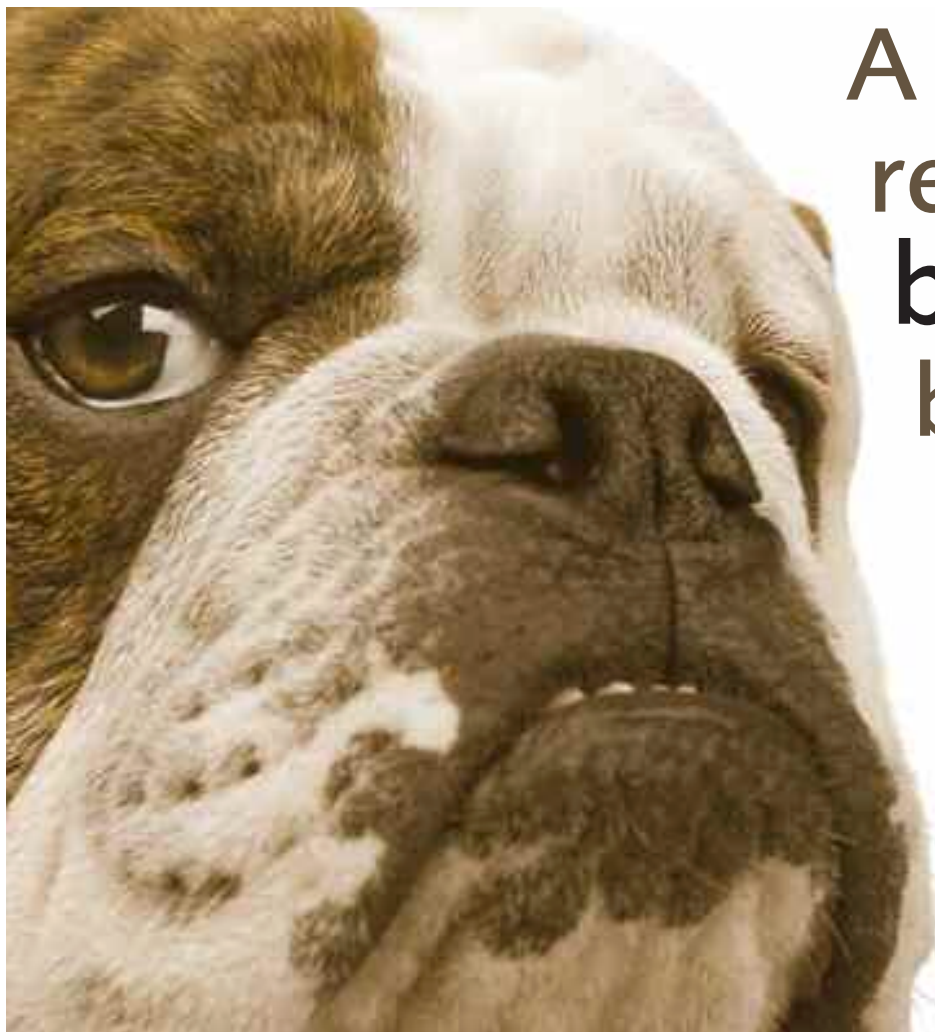
Our empirical work suggests that, in order to gain access to resources and enhance their credibility, some firms operating in a competitive environment need to display a corporate governance quality which is superior to that of their peers. This pressure on firms to increase their relative corporate-governance score is the underlying driving force for the observed divergence.

Heads versus tails

Internal (firm-level) governance choices are significantly influenced by external (country-level) choices. This suggests that governance choices are likely to converge across countries while simultaneously diverging within countries. For example while firms in the top governance-score cluster of each country will be different from lower-scoring clusters of firms in the same country, the similarity of the competition-regulation environment in which they operate means that these firms are likely to be very similar to firms in other countries' top governance clusters.

- 1 This article is based on K Udayasakar, S Das and C Krishnamurti (2008) 'When is two really company? The effects of competition and regulation on corporate governance' (available at www.iscr.org.nz/research).
- 2 These factors are the respective subjects of four popular theoretical frameworks of governance: resource dependency, agency, institutional, and stakeholder.
- 3 See C Doidge, G Karolyi and R Stulz (2007) 'Why do country characteristics matter so much for corporate governance?' *Journal of Financial Economics* 86 pp1-39.
- 4 See *World Competitiveness Yearbook 2000*. IMD International. Lausanne.

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A regulator's bark can be more effective than its bite

Regulators often act. But they can also simply threaten to act. Laura Hubbard outlines some general principles associated with such a strategy – and explores particular case studies.

Governments impose regulation on industry in an attempt to correct market failures associated with monopolies and externalities. Such active intervention can itself involve substantial costs, however. An alternative approach is to rely on the *threat* of regulation (which is likely to be less expensive and commercially intrusive) in order to constrain firms that have market power. The idea, of course, is that such firms will 'behave' in order to preclude the threat from becoming real.

Obviously, such an approach will be effective only to the extent that the threat is credible – that is, when the incentives to comply (on the part of industry) and enforce (on the part of government) are sufficiently strong. Evidence from the 'light-handed' regulatory regime applied to New Zealand network industries until 1999 highlights some of the issues involved.¹

The pre-1999 regime focused on the use of general competition-law provisions, with the Commerce Act 1986 allowing the government to maintain a threat of further

action through price regulation. Although this approach was associated with some price and efficiency improvements, progress was not always as strong as had been hoped at the outset.

One potential roadblock to effective pure regulation-by-threat appears to be the presence of a single major firm that has multiple mechanisms for preserving its dominant position. If a firm is sufficiently powerful to manipulate contracts with other suppliers and to restrict its level of service to other providers while at the same time charging them on a cost-plus basis, then regulatory threats may have relatively little impact. In effect, the threat is unlikely to be seen as credible because of the time and financial costs that litigants would face if forced to resort to court action in order to enforce the threat.

Another factor to be considered is the relationship between threat and action. If the regulatory threat is widely considered to be nothing more than a certain precursor to

eventual action, then fundamental discount-rate considerations mean that firms are likely to wait for the regulation itself – and meanwhile they 'make hay while the sun shines'. So regulatory threats need to be credible, but not too credible.

Nevertheless, as the three case studies below highlight, regulatory threats can induce changes in firm behaviour (both desirable and undesirable). This is especially so when effective regulatory tools are already in place.

Barking loudly can work

The US credit card industry is one sector where a regulatory threat has worked effectively.² In this case, credit card issuers were warned by the US Congress to reduce interest rates or face rate caps. This action had a number of interesting ramifications:

First, the credit card firms experienced stockmarket underperformance during the five-month period the threat was in place. This suggests that the market viewed the threat as credible.

Second, firms that announced interest rate cuts subsequent to the threat announcement saw a reversal of this underperformance trend (which is consistent with the market viewing voluntary compliance as reducing the threat of regulation). Moreover, firms that experienced the largest losses when the threat was announced had the greatest recoveries after cutting their rates: this suggests such firms had the most to gain from compliance.

Third, and most interestingly, interest rate cuts by any one firm had a systemic effect. Such cuts were followed by stock price recoveries for *all* credit card firms – which suggests that cuts in individual firms' rates were perceived as lessening the threat of industry regulation.³

But a sharp nip is sometimes needed

Might regulatory threats sometimes need a bit of a kick start, in order to concentrate the minds of industry participants? The experience of environmental regulation in US electricity industries suggests so.⁴

By the 1990s, the US's Clean Air Act of 1963 had long limited emissions from modified older power plants. But this provision of the Act was not enforced and the industry apparently felt no credible threat of enforcement.

In 1999, the Environmental Protection Agency announced that it would begin to enforce this provision; and, to persuade everybody that it was serious, it began suing the owners of non-complying high-emission plants. The threat of being sued caused an active decrease in emissions by the firms most likely to be targeted – or at least a decrease relative to the emissions levels of firms that were not likely to be targeted.

By 2000, the reality of the threat (the owners of 46 plants had been sued) had resulted in all at-risk plants reducing their emissions. More interestingly, the reduction at this point had become more or less uniform across all firms – both sued and non-sued. This suggests the perceived threat of intervention was sufficient to achieve industry-wide compliance, although only after examples had been made of some non-complying firms. However, and somewhat perversely, being sued discouraged the most highly polluting firms from making further significant changes

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in emissions; instead they simply reduced levels to those of the non-sued firms.

Knowing when to do neither

Like regulation itself, the threat of regulation can sometimes have unexpected (and undesirable) consequences. An example of such a situation appeared in the US pharmaceutical market, which was threatened with regulation in 1993.⁵ The regulatory threat came in the form of a proposed bill, the Health and Security Act, which would monitor and limit drug prices.

Although the bill never passed into law, its temporary existence had some rather alarming consequences. First, as investors realised the detrimental effects the bill could have on industry profits, pharmaceutical stock prices fell. This then led to a fall in research and development investment by pharmaceutical firms, since much of this investment could no longer expect to earn its cost of capital (which is high at the best of times, because of the high risk of such investments). Instead, in an attempt to reassure investors, firms increased patent filing – a cheaper indicator of research activity. They also ramped up the marketing of existing pharmaceutical products.

Pharmaceutical firms' stock prices and their research and development investment did not recover until several years after the bill was defeated. In this case, although the threat of regulation did see some initial slowing of price increases, the overall impact was strongly negative for both investment and welfare.

The bottom line

When is the threat of regulation most likely to work as intended? The cases above suggest they work when the following three conditions exist.

First – and most importantly – the government or regulator has both the capacity and the will to follow through on any threats it issues. In the continued absence of enforcement, threats eventually become empty.

Second, the industry being threatened has little reliance on risky and expensive investment: such investment is threatened by the loss of future profits and hence is likely to be undesirably sensitive to the threat of regulation, resulting in unintended overshooting.

Third, there is sufficient competition in the industry – only then will threats have a systematic effect on the behaviour of all firms in that industry.

- 1 J Haucap, U Heimeshoff and A Uhde (2005) 'Credible Threats as an Instrument of Regulation for Network Industries' (available at <http://ssrn.com/abstract=890107>).
- 2 V Stango (2003) 'Strategic Responses to Regulatory Threat in the Credit Card Market' *Journal of Law and Economics* 46 pp427-452.
- 3 An intriguing manifestation of this effect involved Citibank – the largest card issuer at the time the threat was made. Although it clearly had a lot to lose from any actual regulation, Citibank was the last bank to cut its rates – but its doing so elicited the largest industry stockmarket response.
- 4 NO Keohane, ET Mansur and A Voynov (2006) 'Averting Enforcement: Strategic Responses to the Threat of Environmental Regulation' (available at <http://ssrn.com/abstract=935083>).
- 5 J Golec, S Hegde and J Vernon (2008) 'Pharmaceutical R&D Spending and Threats of Price Regulation' (available at <http://ssrn.com/abstract=1106963>).

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GIVING IT AWAY?

How open source software competes in the marketplace

Open source software (OSS) such as Linux, Firefox and Apache – along with OSS-based IT companies like Red Hat and Catalyst – is becoming increasingly prevalent. So how can an ostensibly 'free' product survive and thrive in a market? Network externalities are a major reason, says David Hume, but other factors are also important.

Contrary to a common misconception, OSS is not public-domain material that anyone can use as they wish: terms of use can simply require free access to the underlying source code, oblige any modification of that code to be distributed under the same license as the original, and/or require any subsequent redistribution to be free of charge. This may promulgate the software much faster and more widely than the 'proprietary' pay-per-license approach, where users are typically unable to share or adapt the software. But this alone does not explain how OSS competes with proprietary software for market share.

Microsoft's success with proprietary software is largely due to network externalities in the software industry. The more people who use a particular operating system, the more popular that system will be as a platform for useful applications. And the more applications available to the consumer, the greater the consumer's utility from using the 'popular' operating system – a virtuous circle of demand. Since the marginal cost of software reproduction is near zero, almost all revenues go directly to the company's bottom line and so provide resources which can then be used to stave off competition. Ultimately Windows achieved network monopolist status, with competitors discouraged from innovation by the high costs of both establishing a parallel network and dealing with litigation. Why, then, has Linux recently emerged as a credible competitor?

Follow the money

Since OSS licenses tend to impose free availability, the usual costs of software development will not be met through licensing fees. But this has not stopped proprietary software companies from spending huge sums

to support OSS projects: an estimated US\$1 billion in 2004.¹

In the case of Linux, funding the OSS program is an indirect means of deriving profit through a value chain. IBM profits indirectly from improvement and dissemination of Linux, by offering products designed for use with Linux: the greater the use of Linux, the greater the demand for IBM's complementary products.

This support, however, is not limited to proprietary companies. Firms like Catalyst, whose business model is based on providing technical support for OSS programs, have an incentive to support such development. Improved and more popular OSS programs result in greater use of Catalyst services.

Alternatively, where a proprietary firm is too small to compete commercially or where it lags far behind the market leader, it might release some of its own software as OSS (like Netscape did with the Mozilla web browser). This allows its complementary proprietary products to take advantage of the potential network effects – although the value generated by these must exceed the profits from simply keeping the software proprietary.

My competitor's competitor is my ally

Another explanation for this largesse is that support of OSS decreases the monopoly power of Microsoft. Preserving a network monopolist's competitor minimises the risk of being locked into that vendor. By investing in unprofitable software development that directly competes with Microsoft, donor firms seek to lessen Microsoft's future capacity to extract monopoly rents from markets in which they might participate.

Moreover, if a firm such as IBM believes it can exploit innovative shifts more rapidly than

Microsoft, then it has an incentive to encourage such innovation.

Some things are bigger than money

Beyond producer incentives lie those of the program's contributors and users. In the former case, an OSS programmer's opportunity cost is typically wages foregone as a salaried programmer. But incentives other than remuneration could be in play: OSS programmers may reap additional human capital skills that assist in career advancement or achieve ego gratification through peer recognition within the OSS community – or they may simply enjoy the work.²

Consumers also have incentives to use OSS: cost, adaptability, and lack of vendor lock-in are the most commonly cited factors. However, the cost of transferring from an accepted standard means that the greatest diffusion of OSS will usually occur in markets where end users are more sophisticated. Such users are more likely to tolerate retraining costs in exchange for the ability to adapt source code to their needs, as in the classic example of system administrators' adoption of the OSS Apache server, which now accounts for 50% of the web server software market.

1 Ronald J Mann (2006) 'Commercializing Open Source Software: Do Property Rights Still Matter?' *Harvard Journal of Law & Technology* 20 pp3-24.

2 Josh Lerner and Jean Tirole (2002) 'Some Simple Economics of Open Source' *Journal of Industrial Economics* 50 pp197-213.

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