

## NEW ZEALAND ECONOMICS ANZ AGRI FOCUS

SEPTEMBER 2011

### INSIDE

Feature Article	2
The Month in Review	9
Rural Property Market	10
Economic Indicators	12
Key Commodities	14
Borrowing Strategy	20
Education Corner	21
Key Tables and Forecasts	27

### CONTRIBUTORS

#### Cameron Bagrie Chief Economist

Telephone: +64 4 802 2212  
E-mail: Cameron.Bagrie@anz.com

#### Con Williams

##### Rural Economist

Telephone: +64 4 802 2361  
E-mail: Con.Williams@anz.com

#### Khoon Goh

##### Head of Market Economics and Strategy

Telephone: +64 4 802 2357  
E-mail: Khoon.Goh@anz.com

#### David Croy

##### Senior Interest Rate Strategist

Telephone: +64 4 576 1022  
E-mail: David.Croy@anz.com

#### Sharon Zöllner

##### Senior Economist

Telephone: +64 4 576 1062  
E-mail: Sharon.Zollner@anz.com

## KICK-OFF

### FEATURE ARTICLE: FISCAL SUSTAINABILITY

With attention centred on global developments this month's research piece looks at the challenges facing various nations, including their vulnerability, fiscal sustainability issues and financial conditions – with the latter having the potential to quickly escalate problems. All signal a long period of challenging conditions for pockets of Europe in particular.

### THE MONTH IN REVIEW

As the new season and Rugby World Cup have kicked off, on-farm conditions have been patchy of late compared with the stellar end to the 2010-11 season. Combined with the high but volatile exchange rate this has reduced expectations for the 2011-12 season and farmer confidence.

### RURAL PROPERTY MARKET

Momentum in the rural property market continued in the winter-spring period for livestock-aligned properties, even though this is the traditional lull period for farm sales. REINZ figures portray a more moribund feeling in the horticultural sectors. Weighing on sales are PSA concerns in the kiwifruit industry and poor orchard-gate returns in viticulture and pipfruit.

### ECONOMIC INDICATORS AND KEY COMMODITIES

To-date the events of the last two months on financial markets have had a limited effect on in-market prices for NZ's key commodities. Globally the situation has been similar, with most consumption-based commodities taking cues from demand and supply fundamentals. Grain markets will be a key bellwether for how the continued deterioration offshore will affect consumption-based commodities. Recent events have seen some softening.

### BORROWING STRATEGY

The rural floating rate remains on hold at 7.00 percent, reflecting the RBNZ's decision to leave the OCR on hold. By contrast, fixed rates have fallen dramatically, particular for longer terms, "flattening" the yield curve. This makes fixing considerably more attractive, particularly for terms 2 years and less, which are below the floating rate.

### EDUCATION CORNER: THE CHANGING FACE OF WATER MANAGEMENT IN NEW ZEALAND

In this month's *Education Corner*, we look at the changing face of water management in New Zealand, and the implications for rural water users and the wider New Zealand economy. One of New Zealand's key comparative advantage resides in an abundance of water. There are a host of issues in regard to water so one article cannot hope to do the topic justice; hence a series of articles is pending. The focus in this piece is on water management and recent developments in this space, as this sets the scene, or framework, for the primary sector. The key message is that changes are in the wind for water policy and its management in New Zealand.

## FEATURE ARTICLE: FISCAL SUSTAINABILITY

### ASSESSMENT

With the global economy on a knife-edge, this month's research piece looks at the challenges facing various nations, including their sovereign vulnerability, fiscal sustainability issues and financial conditions – with the latter having the potential to quickly escalate problems. All signal a long period of challenging conditions for pockets of Europe in particular. With politics in the fray as well, it may well require an accident before the required leadership steps are taken to address the market's fundamental solvency concerns. For the NZ rural scene, this adds up to a heightened period of volatility, wobbles in commodity markets, and a currency that will do more somersaults than a gymnast.

### BACKDROP

**It has been a brutal few weeks for the global economy.** We have seen equities drowning in a sea of red ink, commodity prices retreat, measures of risk capitulate, and growing fears of another financial crisis around the corner. Markets have been extremely volatile. If there has been a silver lining it's been the decline in the NZDUSD, though it remains expensive on our fair value metrics.

On some levels, we are hardly surprised by global developments.

- **Our sovereign risk analysis had been warning of further problems**, especially for some big nations in Europe such as Italy (refer page 3).
- Deleveraging (debt reduction) has always been a precondition to the global economy returning to a sustainable recovery path. However, **there is now more debt in the global economy than prior to the 2008 event.**
- **Markets are notorious for "tipping"**. Throw together the combination of slowing US growth, a credit downgrade for the US, and European sovereign debt concerns that go well beyond Greece, and we seem to have simply "tipped".
- We are putting some of the volatility down to the market finally "getting it". The post-financial-crisis trend rate of growth for a host of Western nations must by necessity be lower than seen previously. That's the reality of a deleveraging environment. **A different trend growth rate means a different secular outlook for earnings and asset prices in general.**

That said, there are some disconcerting signs that this will be more than a "correction":

- **Policymakers' arsenals have been seriously depleted over the past few years.**

- **There are signs of stress in money markets** (though not yet dislocation as we saw in 2008).
- **Political gridlock is not helping things.**

**Markets are looking for solutions.** The US Federal Reserve is promising to keep the Fed Funds Rate low until the middle of 2013. Most now seem to be waiting for the European Central Bank to do its part as well and expand its balance sheet further. This is both logical and illogical. It's logical because it seems inevitable. The cupboard looks pretty bare otherwise. It is illogical because **central banks should not be expected to bail out fiscal irresponsibility**, which is effectively what is happening in huge parts of Western society at present.

**Getting the correct balance between the two arguments is one reason we are seeing a game of chicken play out around the globe.** Markets are demanding solutions. Central banks know they need to act. But it is not their job to bow to market demands, nor to support fiscal profligacy. Pump priming is hardly the "structural" solution to ensure sustained economic recovery; it has been done in various forms since the 1990s. All it seems to have achieved is to lead to increasing indebtedness in both the private and public sectors, and a larger problem to eventually confront.

**We now need to see decisive leadership.** Big fiscal deficits need to be addressed. And you do not address such challenges by minor tinkering and bowing to populism.

This research piece looks at various angles, including:

- Who is really vulnerable?
- Who faces the biggest fiscal sustainability challenges?
- Where are financial conditions flagging problems?
- What does game theory tell us about the political dimension?

**The relevance to the rural sector is material.** Global developments are a critical influence on the path of commodity prices. Poor risk sentiment has seen offshore funding costs rise. The "tallest pygmy" challenge (between the Euro and the USD) is determining the broad direction of the NZD, in association with risk sentiment. The path chosen by policymakers – leadership versus populism in addressing global challenges – will be key for just how messy this gets. We could see more protectionism (populism) or less if some nations are really forced to bite the bullet, which they will eventually. The removal of supplementary minimum prices (SMPs) in the 1980's is an example of forced

## FEATURE ARTICLE: FISCAL SUSTAINABILITY

structural changes when the game is up. A host of nations seem to be heading for such an endpoint.

### LOOKING AT VULNERABILITY

**In 2008 there was a credit crisis across the financial system.** At the heart of it was unsustainable levels of debt relative to income or GDP. Between 2008 and 2011 the private sector has been improving its balance sheet. However, **the ratio of debt to GDP in most Western societies is now higher than in 2008.** Private sector deleveraging has been replaced by sovereign and government leveraging. Some of this has been forced socialisation of the 2008 crisis. Indeed, the Irish Government's net liabilities were actually zero at the end of 2007, but ballooned to over 70 percent of GDP as it nationalised some of its banks. But it's more than that. The average level of net debt across OECD countries has risen from 43.5 percent of GDP in 2008 to a projected 62.6 percent in 2011.

**With attention now focused on sovereigns, we developed a model to assess sovereign debt vulnerability in an objective manner.** Without having the massive resources of a rating agency, we simply assessed each country on the basis of two broad criteria. First, we looked at "bad" or "worry" variables – things like government debt, the fiscal balance, the current account, net external debt and the unemployment rate. But we also recognised that there would be offsets, and looked at things that may buy you a bit of time – GDP per capita, population, the existence of a floating exchange rate, political

stability, competitiveness etc. By comparing one set of criteria against the other, we arrived at a "net" score giving a simple metric of vulnerability for key nations.

**The obvious candidates rank poorly** – countries like Greece, Portugal and Spain. However, **our sovereign debt vulnerability rankings have consistently placed Italy, Belgium and France at the wrong end of the spectrum, and these are nations to which attention is now turning and a key reason the EURUSD (and also the NZDUSD) has rolled over.** These countries have always had high levels of debt, but it was manageable when interest rates were low and investors were prepared to lend. Indeed, markets had given Italy room to breathe on account of its size and wealth, but with debt to GDP at 119 percent at the end of 2010, rising interest rates were always going to be an Achilles heel.

Looking at our rankings you can see that Europe dominates the wrong end of the scale. This reflects not just poor bad metrics but also less positive good measures. However, it seems favourable metrics can only buy you so much time. Witness the US losing its AAA status. When the market calls time, it's a case of time's up.

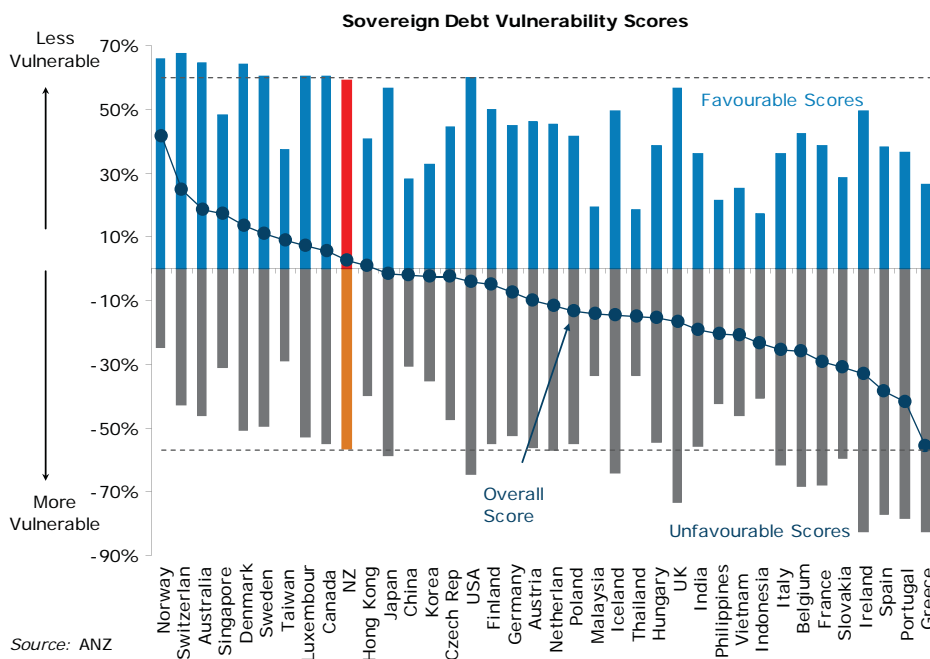
### FISCAL SUSTAINABILITY

In this section we examine **the primary balance** (i.e. the fiscal balance excluding interest payments) **required to return net debt to a "sustainable"**

**position.** Any fiscal position is sustainable until the market decides it is not. We define it, for illustrative purposes, as the lowering of current levels to 60 percent of GDP, or, if current debt is less than that, keeping it at current levels, given markets are currently wary of rising trajectories.

High growth and low interest rates lessen the pressure on the primary balance. Conversely, having interest rates above a nation's growth rate can quickly develop into a debt spiral. For simplicity we assume here that real GDP growth averages 2 percent over the next ten years.

**Based on our analysis Italy faces an uphill battle.** At real



## FEATURE ARTICLE: FISCAL SUSTAINABILITY

Primary (ex-interest) fiscal balance needed each year to stabilise sovereign debt at 60% of GDP, or current levels if lower, in 10 years assuming real GDP growth of 2% p.a.

Real 10yr Yields	Greece	Spain	France	Italy	Portugal	Ireland	US	NZ <sup>1</sup>	UK	Belgium
5.0	9.4	1.4	1.8	6.6	3.6	3.0	3.5	0.1	2.1	4.2
4.0	8.4	0.9	1.2	5.7	2.9	2.3	2.8	0.1	1.5	3.5
3.0	7.4	0.5	0.6	4.9	2.2	1.7	2.2	0.0	0.9	2.8
2.0	6.5	0.0	0.0	4.1	1.5	1.0	1.5	0.0	0.2	2.1
1.0	5.5	-0.5	-0.6	3.2	0.9	0.3	0.8	0.0	-0.4	1.4
0.0	4.6	-0.9	-1.2	2.4	0.2	-0.3	0.1	-0.1	-1.0	0.7
2011 primary balance	2.6	-0.9	-1.4	2.3	0.6	-2.2	-6.8	-7.9	-4.4	0.3

<sup>1</sup> In NZ's case we use an updated estimate of the current fiscal deficit taking into account earthquake costs. We also use the more commonly used definition of total government debt, i.e. excluding the Superfund, giving a 2011 net debt position of 22% of GDP (vs. OECD estimate of 4.2%).

Sources: ANZ, National Bank, OECD

interest rates north of 3 percent, some hefty primary surpluses are required. Given the safe-haven status of US Treasuries, US borrowing costs are likely to remain very low. At growth of 2 percent, **the US government needs to run a roughly balanced budget** to return net debt to a more sustainable level over the next decade. However, while the numbers shown in the table tell us where countries need to be, we need to be mindful of the starting position too. Running a roughly square budget might not sound too hard an ask for the US, but quickly turning around a deficit of 6.8 percent of GDP is an extremely difficult challenge, particularly in the context of a lacklustre economy.

**The UK's and France's** long-run situation is not so bad, but both countries need to turn around their current deficits quickly. **Greece's position is not tenable.** Even with generous bailout terms, reaching sustainability would require massive surpluses. And these numbers are wildly optimistic, given the massive economic contraction currently occurring due to the severe austerity measures. **Spain needs to deliver surpluses over coming years.** The main risk for Spain is a sustained increase in their borrowing costs. **Finally, New Zealand's net debt position is good.** But given the challenges of earthquake repair over the next few years, this means at likely interest rates unavoidable near-term deficits will need to be offset by surpluses further out.

There are many complicating factors to this simple analysis:

- **A near-term deterioration in the net debt position in many countries is a done deal.** And fiscal balances are a slow ship to turn. In

practice, then, the job at hand is tougher than our numbers indicate.

- **Demographics (aging population) are deeply unfavourable** for government debt in nearly all Western nations.
- What interest rate will be payable and what funds are available for some of these nations is becoming a political question rather than a market one.
- **Severe austerity can cause a marked reduction in GDP growth that can cause the debt to GDP ratio to blow out even more** than a bit more spending might have done. But too slow a fiscal consolidation risks undermining credibility with markets, and when credibility is lost, the situation can blow up quickly. It can be difficult to strike the right balance.
- **When the real interest rate on a significant debt stock starts to outpace GDP growth, you're fighting an uphill battle.** Maintaining market confidence is therefore of primary importance. Any debt position is sustainable as long as markets are in a relaxed, generous mood. But when the tide goes out, some nations can find themselves a long way from their towel.

### FINANCIAL CONDITIONS

**Countries with better growth prospects have the ability to navigate through a period of uncertainty more smoothly.** The nightmare scenario is the combination of weak growth and rising interest rates. This risks sending nations into a downward spiral where a crisis of confidence

## FEATURE ARTICLE: FISCAL SUSTAINABILITY

stymies economic performance (think the tax take) but also leads investors to demand a higher interest rate. Financial conditions measures can also be used to highlight the frictions and diverging signals that a common currency can place on nations. Put simply, one size (or euro) does not fit all!

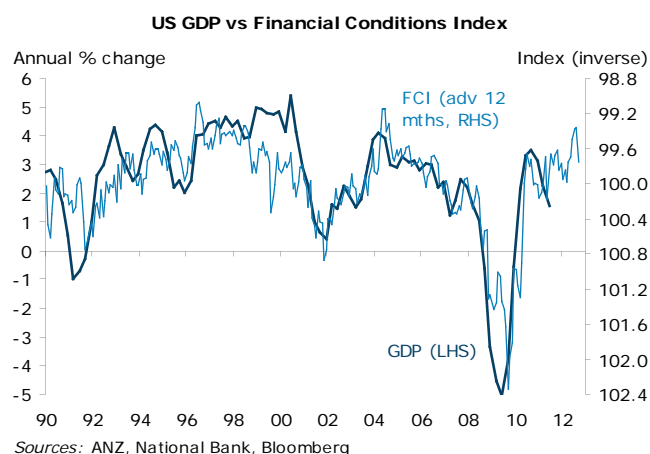
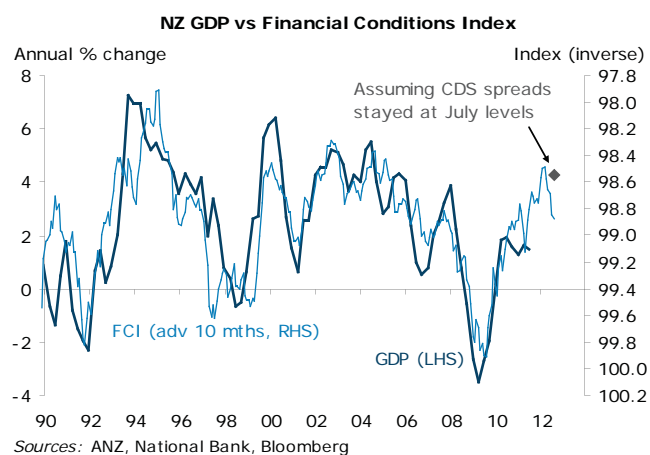
**We track financial conditions across an array of countries.**<sup>1</sup> While they do not track perfectly we generally find that the historical relationship between financial conditions and GDP has been quite good for the countries we monitor. Not only that, but financial conditions tend to give a reasonable lead on turning points in the cycle.

The relationship between the financial system and general economy is changing rapidly, and is set to continue doing so given the emergence of alternate policy tools and growing use of prudential policy. In such an environment. **Our FCI measures should be seen as an indicator of the level of base momentum within an economy, and a potential turning point indicator.**

**So what are the messages from our financial conditions gauges?**

- **NZ looks OK.** Very low interest rates and strong commodity prices form the basis of supportive financial conditions offsetting a higher than average currency and a deteriorating credit (read: borrowing cost) environment.
- **Prospects for the US also look better** though this contrasts with the more circumspect tone implied by forward indicators and concerns voiced by US policymakers.
- **Momentum in China is slowing but financial conditions are still pointing to 7 percent growth by the end of this year!** Driving this has been a combination of factors, including the rising real exchange rate, rising real lending rates and slowing rates of annual credit growth.
- **Zero growth looks in prospect for the Eurozone, but with massive country divergences.** Financial conditions in the Eurozone economy tightened in September. A lower euro and falls to government bond yields were countered by falling equity values, lower credit growth, and widening swap spreads.

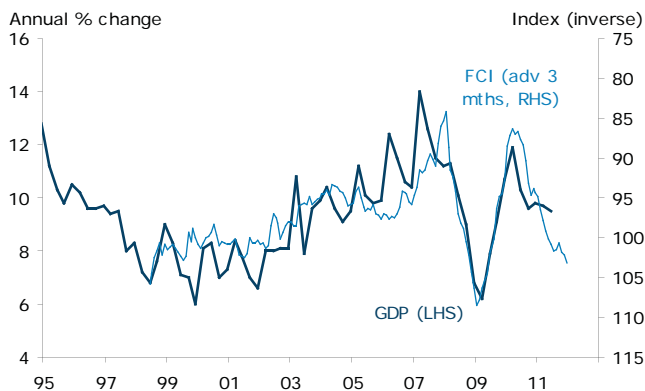
- By virtue of their more challenging fiscal positions, government bond yields remain higher in Spain and Italy, with last week's downgrade of Italy by S&P likely to add to future challenges. **Our FCI for Italy is clearly pointing to a fairly sizeable recession in the Italian economy.** The outlook is likely to be more dire than this, given that it does not directly incorporate the impact of the planned fiscal austerity measures. This is precisely the situation where death-spirals can unfold. For example, Italian 10 year bond yields are currently 6 percent. Even if we are "upbeat" and say the economy is flat, this is still a massive -6 percent gap between potential tax growth and borrowing costs!



<sup>1</sup> A Financial Conditions Index (FCI) summarises a range of financial variables into a single series that can be used to predict the future path of the economy. Where available, our FCI includes the currency adjusted for commodity prices or terms of trade movements, interest rates, asset prices, credit growth and proxies for the cost and availability of credit.

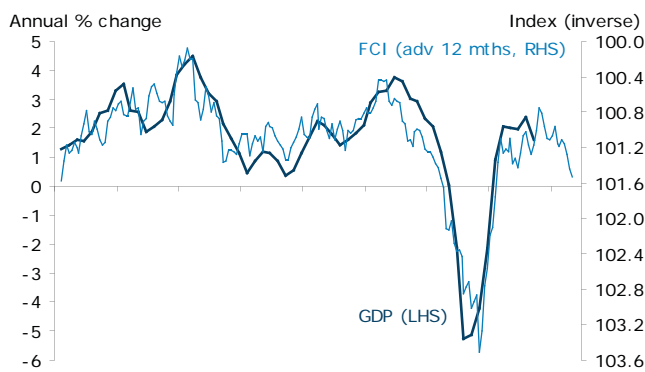
## FEATURE ARTICLE: FISCAL SUSTAINABILITY

China GDP vs Financial Conditions Index



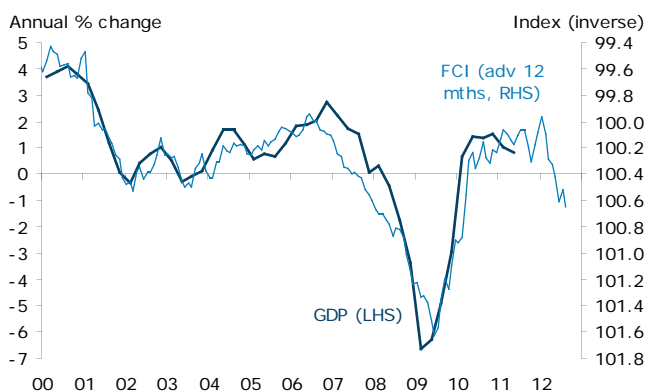
Sources: ANZ, National Bank, Bloomberg

Eurozone GDP vs Financial Conditions Index



Sources: ANZ, National Bank, Bloomberg

Italy GDP vs Financial Conditions Index



Sources: ANZ, National Bank, Bloomberg

### TOUGH DECISIONS INVOLVE TRADE-OFFS

We chose three simple measures, namely **sovereign vulnerability, fiscal sustainability and financial conditions to highlight current challenges**. All are partial indicators at best and highlight a complicated path going forward.

**Facing global problems, we need concerted global solutions.** None of the solutions are straight forward and it won't happen overnight. All involve trade-offs. The options include:

- **Greece defaulting**, but this risks another repeat of a banking crisis which is not limited to the sovereign in question.
- **Deleverage with scrooge-like behaviour.** This will be negative for economic growth and unemployment. But there are political and social consequences from entitlement cuts as well. This is the "tough love" scenario and is difficult for politicians who are looking to get back into office.
- **Grow your way out via increasing income.** This is difficult when Western countries balance sheets are weak and debt needs to be repaid, limiting internal demand compared with the debt-fuelled consumption binge of yesteryear.
- **Inflate the debt away.** This is difficult when deleveraging is deflationary, a lot of assets are still overvalued, and the banking system is weak.
- **Repression**, via caps on interest rates and directed lending to Government by captive audiences (i.e. banks, pension funds). This is the "do as you are told" approach to fiscal mis-management.

**In reality a combination of all these solutions is needed.** Re-engineering requires fixing legacy issues such as debt, and the appropriate pricing of risk with credible plans and policies. Areas of strategic advantage and excellence need to be identified and then a plan needs to be formulated to re-engineer capital and labour into these areas.

**The global economy is desperately looking for leadership.** While the necessary leadership requires significant fiscal austerity – a negative for growth (and Keynesian economists argue for more as opposed to less fiscal stimulus as this juncture) – businesses and markets also need certainty. Lacking such certainty, hiring and investment decisions go on hold. While providing certainty is not without challenge (i.e. less government spending or higher taxes detract from aggregate demand) it also leaves the business sector and markets with greater confidence over the medium term, crucial to investment and hiring decisions.

**Will politicians make the hard decisions?** There are challenges here. The Eurozone crisis unfolding at present, if left unchecked, will quickly engulf the US next. Doing nothing is not an option. But this does not necessarily mean the "right" thing will be done.

## FEATURE ARTICLE: FISCAL SUSTAINABILITY

Rather than go into the ins and outs of the various challenges in a political sense – which are huge – we turn to game theory, and in particular the prisoners' dilemma, which illustrates the tension between group and self-interest – a dynamic that is being played out time and time again around the globe. Remember, global problems require truly global solutions.

This is how it works. Two men are arrested on suspicion of robbing a bank. But the police do not possess enough information to lay charges. Following the separation of the two men, the police offer both a deal – if one testifies against his partner (defects), and the other stays quiet (cooperates with the other prisoner), the betrayer goes free and the cooperator receives the full 5 year sentence. If both remain silent (cooperate), both are sentenced to only 6 months in jail for a minor charge. If each 'rats out' the other (defect), each receives a 2 year sentence. Each prisoner must choose to either betray the other or remain silent; the decision of each is kept quiet. What should they do?

	Prisoner 2 stays silent (cooperates)	Prisoner 2 confesses (defects)
Prisoner 1 stays silent (cooperates)	Each serves 6 months in jail	Prisoner 1 gets 5 years Prisoner 2 goes free
Prisoner 1 confesses (defects)	Prisoner 1 goes free Prisoner 2 gets 5 years	Each serves 2 years

In theory, both prisoners would stay silent as this minimises their jail time. However, a closer look at the payoff matrix reveals a different probable outcome. Consider prisoner 2. He doesn't know what prisoner 1 will decide. If prisoner 1 stays silent, prisoner 2 receives either 6 months or walks free. If prisoner 1 confesses, he gets five years or two years. In either case, the optimal strategy for prisoner 2 is to confess (0 is less than 6 months and 2 years is less than 5). And the same is true for the other prisoner. It is highly likely both will confess.

### Politicians face a similar situation when trying to agree on solutions to the global problems.

Tension between a country's own best interests and that which is best for all will inevitably lead to a less than optimal solution. This is especially the case in Europe where the monetary union exacerbates the situation, limits the available solutions and heightens the trade-offs between the optimal and actual outcomes of decisions. Magic potions do not exist; tough decisions are required, which requires

more leadership than populism. History shows that "accidents" or economic calamities are required before decisive changes are made. Europe may be seeing one unfold.

### WHAT TO WATCH OUT FOR

**The rural sector should be mindful of a few key things.**

- The direction of commodity prices looks biased lower.** The historical pattern has been for commodity markets to follow big shifts in global growth. To date the events of the last two months on financial markets have had only a limited effect on in-market prices for New Zealand's key commodities. Broadly, most consumption-based commodities have been taking cues from demand and supply fundamentals, rather than the financial markets. A softening in prices had been expected as farmers responded to the higher prices earlier in the year by increasing the area planted in key crops such as corn and wheat. Rampant food inflation in Asian and Middle Eastern markets was also a concern. These markets have been a key source of growth in the demand for soft and hard commodities over the last three years. High food inflation has prompted officials to use a range of policy tools to try to quell it. These measures are expected to further moderate demand from China and surrounding countries in the near future.
- The NZD.** The NZD's directional bias is being determined by a) risk appetites, b) commodity prices, and c) the broad direction for the EURUSD. **Moves lower are certainly welcome though the reasons for it are not.** The lowering of the NZDUSD from 0.88 to below 0.80 will benefit farm/orchard-gate returns in 2011-12. This is one of the benefits of a floating exchange rate, which helped many export sectors during the Global Financial Crisis of 2008.
- More volatility.** We can't see a quick solution to decades of exuberance. The only true healing process is time. Along the way we will no doubt see more gyrations. Plan and position your business accordingly.
- Borrowing costs.** When risk appetites are flaky, investors demand more for handing over their cash. This means nations such as NZ that are dependent on offshore funding will end up paying more. The past few weeks have seen funding costs rise to 2008 levels. This is more theoretical than real at present because no funding is actually being done – NZ banks are awash with cash. However, if markets don't settle down by

## FEATURE ARTICLE: FISCAL SUSTAINABILITY

early 2012, theoretical rises in funding costs will become reality, driving lifts in borrowing costs. Should financial market confidence deteriorate further, leading to an escalation in bank funding costs, then we would expect to see domestic deposit rates move higher as banks try to source more funding onshore. This will be a telltale sign that some of the impact from the global scene is starting to flow through. The next leg would be the passing-on of the higher funding costs into retail lending rates, affecting farm borrowing costs. However, with the OCR still a way from zero, the RBNZ does have some more ammunition up its sleeve.

- **The slow-down in economic growth – and inevitable sustained period of penance – will lead to softer consumer demand in the US and Europe for higher-value food products.**

This will be challenging for those sectors that are more reliant on these regions and food segments, such as lamb, venison, skins and hides, and apples. **Consumers in these regions spend on average between 10-15 percent of their disposable income on food. Therefore, they are less likely to change eating habits, or cut spending on essential food items.** Lower economic growth and higher unemployment often leads to consumers trading down to different food segments, or eating in instead of out. This tends to benefit lower-value food products, providing an offset for lower spending in higher-value food segments. **Therefore, the net impact on the weighted in-market prices that farmers are exposed to is not as bad.**

**KEY EXPORT SECTORS EXPOSURE OF EXPORT EARNINGS FROM EUROPE (JUNE YEAR ENDED 2011)**

Sector	Total Export Earnings (\$m)	% from Eurozone	% from PIIGS
Meat	5,409	37%	4%
Dairy	12,452	3%	0%
Wool	845	25%	10%
Skins & hides	512	41%	37%
Apples	370	45%	2%
Kiwifruit	983	33%	11%
Wine	1,100	34%	1%
Horticulture	2,519	26%	5%
Processed Agriculture	2,929	15%	1%
Forestry	3,900	1%	0%
Aquaculture	1,489	14%	6%
All primary	30,478	14%	2%

## THE MONTH IN REVIEW

### ASSESSMENT

As the new season and Rugby World Cup have kicked off, on-farm conditions have been patchy compared with the stellar end to the 2010-11 season.

The cold snap in the middle of August delivered snow to most parts of the country, reducing pasture quality and utilisation and checking pasture growth rates. Luckily the weather event was signalled well in advance by forecasters, which allowed farmers to act early. It also did not hang around too long. However, feed reserves were reduced.

The southerly blast was early enough in lambing that only 4 percent of breeding ewes were giving birth that week (North Island 7 percent, South Island 1.5 percent). Therefore, total lamb losses were minimal compared with the wet month of September 2010. Road conditions stopped dairy tankers in several regions from picking up farmers' milk. Lost production was estimated at around 0.2 percent of national annual production.

Since then weather conditions have been milder, with blue skies, a lift in daytime temperatures and the lengthening of sunshine hours. This caused some nervous murmurs from some regions that things were drier than usual until rain in late September relieved concerns. **The patchier pasture growing conditions and the high but volatile exchange rate has reduced expectations for the 2011-12 season and farmer confidence.**

### DAIRY

Fonterra announced their financial results and final milk payout. **The final milk price for 2010-11 was \$7.60 per kg MS, with a dividend of \$0.65 per share before retentions.** All up \$8.25 for a farmer who is 100 percent share backed. This represents an all-time record and is \$0.20 above previous expectations. This represents nearly \$270 million extra for the dairy sector and more than double that for the NZ economy by the time multiplier effects are taken into account. After retentions the total cash payout to farmers was \$7.90 for a farmer who is 100 percent share backed. This is the highest ever total cash payout to dairy farmers, 3.1 percent above the previous peak in 2007-08. **Fonterra also confirmed their 2011-12 forecast at \$6.75 per kg MS with a dividend of \$0.45 per share.** With the world looking shaky and commodity prices easing somewhat, we're taking the reaffirmation as confidence in the underlying dairy demand story. **However, our forecasts have a slightly negative outlook at \$6.60 per kg MS for the milk price component of the payout, given the fickle global scene.** The dairy co-operative looks in good health having reduced its gearing below 40 percent, providing opportunities for investment in high returning ventures.

**New Zealand milk production has started the 2011-12 season very strongly, currently running around 8.5 percent ahead of last year.**

Milk production growth was particularly strong in the central South Island (+15 percent), reflecting very good pasture conditions and an expansion of dairying in the area. North Island milk production is nearly 8.0 percent ahead of last year and the South Island is up 12.5 percent.

### MEAT AND FIBRE

**The 2010-11 meat processing year has just drawn to a close with lamb export production down 8.5 percent to 19.2 million head.**

Mutton export production finished at 4.3 million head, up 19 percent on last year. This has reduced opening breeding ewe numbers as at 30 June 2011 to 21.2 million head, down 2.5 percent on last year. The retention of a few more ewe lambs for future breeding, combined with a reasonably solid outlook for lamb and wool should see the national flock stabilise around 21.4 million, down nearly 26 percent, or 7.6 million head, since 2000.

**Total beef export production finished at 2.28 million head, up 1.3 percent on last year.**

Beef production was lifted by the largest cow slaughter since 2003-04 of 855,000 head, up 4.4 percent on last year. Surprisingly, bull and heifer slaughter also managed to increase slightly despite a reduction in beef breeding cows over the last several years.

Latest industry forecasts have **export lamb production lifting to 20.1 million head in 2011-12, an increase of 5.7 percent.** A reduced breeding flock is offset by better expected lambing percentages. Mutton export production is forecast to reverse this year, down 20 percent to 3.4 million head. **Beef production is expected to increase 1.8 percent to 2.32 million head,** courtesy of a further increase in cow slaughter from an expansion of the dairy herd.

### HORTICULTURE AND VITICULTURE

**The focus in the horticultural sector continues to be on the spread of PSA symptoms in the Bay of Plenty and further afield.**

The identification of PSA in Waihi has led to the expansion of the PSA priority zone where containment strategies are being applied. While this year's crop of kiwifruit was above 110 million trays, **industry expectations are now that production could fall to 75 million trays over the next several years,** with Gold production expected to be the worst hit. Any possible solution is not expected for 3-5 years, which makes for a very difficult period ahead.

# RURAL PROPERTY MARKET

## SUMMARY

Momentum in the rural property market continued in the winter-spring period, even though this is the traditional lull period for farm sales. Expectations are for the momentum in dairy, dairy support and meat and fibre sales to continue to the end of 2011. This will be underpinned by expectations of solid cash returns in 2011-12 and lower interest rates for longer. Prices are likely to be contained by offshore uncertainties, a potential lack of quality properties on the market and continued deleveraging. Horticultural properties are under pressure from the spread of PSA in the kiwifruit industry and softer orchard-gate returns elsewhere.

## COMMENT

**REINZ figures portray a two-speed rural property sector. There is good momentum in properties aligned with the livestock sectors, but a moribund feeling in the horticultural sectors.**

The three-month period ended August saw 300 farms change hands, continuing a tick-up in turnover that extends back six months. In the 12 months to August

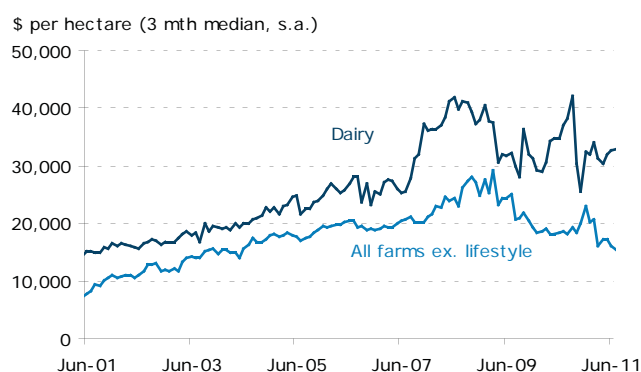
2011 just over 1,000 farms changed hands, the first time since October 2009 that the annual number of farm sales has hit four figures.

Although there has been a notable pick-up in the turnover of properties, **the median price for all farm sales has moved lower since the start of 2011.** However, the types of farms sold overtly influences the median price meaning these numbers can be volatile. Grazing properties accounted for 55 percent of all farm sales in the three months to August, up from 40 percent at the end of last year. Dairy properties accounted for 16 percent, finishing 16 percent, horticulture 7 percent and arable 6 percent.

The table and charts below show the official statistics from REINZ for the three-month period ended August (i.e. June, July and August farm sales). The table is broken down into farm sales by each of the main farm types, for the number of sales during the three-month period and the median price per hectare. The figures have also been seasonally adjusted and therefore the components may not necessarily add to the total. While the data is volatile, it is the best available regarding current market conditions.

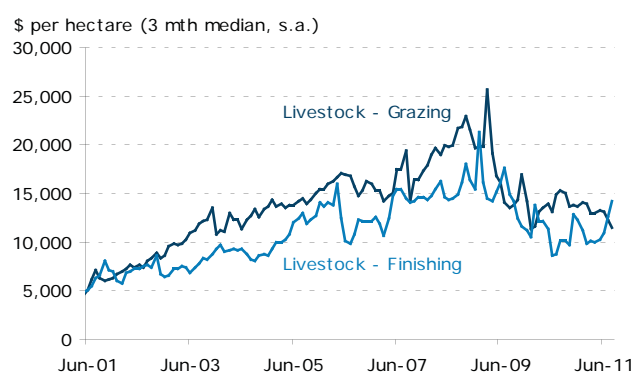
FARM SALES BY FARM TYPE								
3-Month Seasonally Adjusted		Current Period	Previous Period	Last Year	10-Year Average	Chg. P/P	Chg. Y/Y	Chg. P/10yr
Dairy	Number of Sales	45	40	27	90	↑	↑	↓
	Median Price (\$ per ha)	32,100	32,900	38,100	26,500	↓	↓	↑
Livestock – Finishing	Number of Sales	45	39	26	74	↑	↑	↓
	Median Price (\$ per ha)	14,200	12,500	10,100	11,200	↑	↑	↑
Livestock – Grazing	Number of Sales	149	148	104	254	↑	↑	↓
	Median Price (\$ per ha)	11,400	12,300	15,000	13,800	↓	↓	↓
Horticulture	Number of Sales	17	18	34	61	↓	↓	↓
	Median Price (\$ per ha)	75,300	111,300	162,600	142,000	↓	↓	↓
Arable	Number of Sales	16	14	5	20	↑	↑	↓
	Median Price (\$ per ha)	16,400	18,200	38,500	23,400	↓	↓	↓
All Farms ex. Lifestyle	Number of Sales	300	289	216	536	↑	↑	↓
	Median Price (\$ per ha)	16,200	15,400	18,200	18,100	↑	↓	↓
Lifestyle	Number of Sales	1,338	1,325	1,096	1,655	↑	↑	↓
	Median Price	450,000	454,000	443,000	364,000	↓	↑	↑

Farm Sales, Median Price



Sources: ANZ, National Bank, REINZ

Farm Sales, Median Price



Sources: ANZ, National Bank, REINZ

## RURAL PROPERTY MARKET

**The two-speed momentum in the rural property market is now starting to come through more clearly in the statistics.** There is clear momentum in livestock-aligned properties, with the turnover of all the different livestock-aligned property types increasing two/three-fold since the last quarter of 2010, albeit off very low levels. Although the last quarter of 2010 was particularly soft, current turnover is still well above early 2010 when momentum was better. The low turnover in the last quarter of 2010 was largely due to adverse weather conditions that affected production, as well as lower farm-gate price expectations.

**Even though momentum for livestock-aligned farm types has picked up over the last 6 months, median prices have not moved up with the same degree of enthusiasm.** This reflects the new type of buyer who is heavily focused on cash returns. So expect the direction of land values over the next 2 years for these farm types to be heavily governed by expectations of cash returns for dairy and meat/fibre. The good news is things still look solid for the new season. Although commodity prices will not reach the heady highs of 2010-11, they will still be at good levels, with lower interest rates for longer and better production expected to provide an offset.

Looking at the components of the table on page 10 shows there was a **4 percent increase in the number of farm sales in the three-month period ended August (excluding lifestyle blocks) compared with the previous period. The median price for all farm sales also moved higher, but is distorted by a spike-up in the average price for finishing land during this period.** There has been a clear softening in the median price for all farms sold since the Global Financial Crisis. However, this has been influenced by the composition of sales, as most of the individual farm types have shown stability since the end of 2009, albeit with month-to-month ups and downs. In total 300 farms were sold in the three month period ended August 2011. After a lean end to 2010, the continued slow grind higher in the total number of farm sales over 2011 is encouraging, and we expect this has further to run into the end of 2011. Nevertheless, the turnover of 300 farms for the three-month period ended August **is still only just over half of the average level seen over the last 10 years.**

**The median price for a three-month period for dairy properties is showing some stability around the \$32,000/ha mark.** While there is considerable variability around the median price from month-to-month, depending on the quality of properties being sold and region, this has now been the median price for six of the last nine three-month periods, with prices only dipping lower during the dry period at the end of 2010. August saw 8 dairy

farms sold at an average sale value of \$26,755 per hectare and \$31 per kg MS. The average farm size was 238 hectares and the average production per hectare across all dairy farms sold in August was 861 kgs of MS. There were 45 dairy farms sold in the three-month period ended August, up five from the July period and on par with June. The forecast 2011-12 \$7.15-7.25 per kilogram of MS (in total) gives an investment multiple of 5-5.5, which is in line with historical averages. We are, admittedly, sceptical that historical averages that precede the GFC will be a good guide going forward. The continued paying down of debt in the dairy sector is also likely to constrain potential price increases for the next several seasons.

**Anecdotal evidence suggests that confidence in the dairy sector is also spilling over into demand for dairy support blocks and possible conversions, especially in the South Island.** Combined with higher returns for meat and fibre products this is starting to filter through to grazing, finishing and arable land sales, with turnover increasing markedly over the last four months. However, month-on-month median values have been a little more down than up. Grazing land had stabilised around the \$13,000 per hectare level earlier in the year, but has softened toward \$12,000 per hectare during the winter/early spring period. While volumes have increased on this time last year, prices are probably back by \$2,000 per hectare on the same period last year. Finishing had been trading in the \$10,000-\$11,000 per hectare range over the last year, but has recently spiked higher. Some one-off sales but also the dairy factor – possible conversion, or dairy support – probably influenced this. Arable land had stabilised earlier in the year but has moved lower over the winter months into the \$16,500-\$20,000 per hectare range. Median values are now well back on this time last year and below 10 year averages. The bright spot is that turnover is nearing pre-GFC and 10 year average levels, the first farm type to show such an increase.

**Horticultural sales continue to be hit hard by lower returns and confidence in the pipfruit and viticulture industries and by PSA concerns in the kiwifruit industry.** The turnover in sales since the start of this year has halved and is now less than a third of the 10-year average. The average price per hectare plunged to \$75,000 in the three-month period ended August. While one-off factors would no doubt have been at play, sentiment in the kiwifruit industry and the impact of PSA on yields for the next crop will also be having an influence. The August median price per hectare is now half what it was this time last year. There has also been a clear weakening trend in prices over the last four months. Where things will stabilise is difficult to say but at the moment the lower turnover indicates sellers are looking to stay put until the storm passes.

## ECONOMIC INDICATORS

### EXCHANGE RATES

	Current Month	Last Month	Last Year	Chg. M/M	Chg. Y/Y
NZD/USD	0.80	0.84	0.73	↓	↑
NZD/EUR	0.58	0.59	0.56	↓	↑
NZD/GBP	0.51	0.51	0.47	↓	↑
NZD/AUD	0.80	0.80	0.78	↑	↑
NZD/JPY	0.63	64.7	61.4	↓	↓
NZD/TWI	0.72	73.0	66.3	↓	↓

### NZD Buys USD

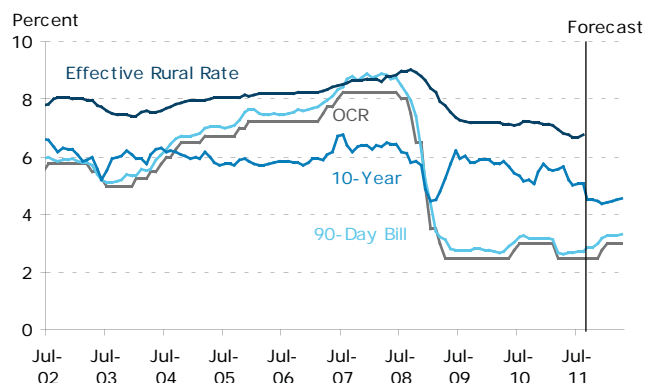


Sources: ANZ, National Bank, Bloomberg

### NZ INTEREST RATES

	Current Month	Last Month	Last Year	Chg. M/M	Chg. Y/Y
Official Cash Rate	2.50	2.50	3.00	↔	↓
90 Day Bill Rate	2.85	2.72	3.18	↑	↓
1 yr	2.98	3.07	3.54	↓	↓
2 yr	3.30	3.39	3.88	↓	↓
3 yr	3.03	3.76	4.16	↓	↓
5 yr	3.64	4.33	4.62	↓	↓
10 yr	4.50	5.05	5.22	↓	↓
Effective Rural Rate	6.76	6.70	7.22	↑	↓
Agricultural Debt (\$b)	46.50	46.25	46.61	↑	↓

### Key NZ Interest Rates



Sources: ANZ, National Bank, RBNZ

Despite a run of stronger economic data from NZ in recent months, still high commodity prices and supportive interest rate differentials, **the direction of the NZD has been hijacked by offshore events.**

The schizophrenic nature of currency markets, where the NZDUSD has traded in a 10 cents range, is being dictated by events in Europe and US. The roller-coaster ride started with US politicians' inability to agree to a credible plan to reduce their fiscal debt, which was quickly followed by S&P's downgrade of the US credit rating in early August. During and after these events there was a run of softer US economic data. **More recently, the focus has swung back to debt issues in peripheral European countries and the possible default by Greece, as austerity measures cut into economic growth. These events saw the safe-haven USD come back into favour, sending the EUR and NZD lower.**

While the NZD was previously seen as a safe haven, this view has changed as downside risks to global economic growth have intensified. With the RBNZ kicking for touch on the official cash rate, the NZD will be at the mercy of global developments. Markets will reward currencies where policymakers are active in providing credible stimulus. In this regard, the US seems to be ahead of Europe, so expect to see a stronger USD and by default a lower NZDUSD.

**The RBNZ left the OCR unchanged at 2.5 percent in September.** If not for the global scene, the RBNZ would likely have hiked rates on the back of a stronger domestic economy. But given the turmoil, for now the RBNZ is in no hurry.

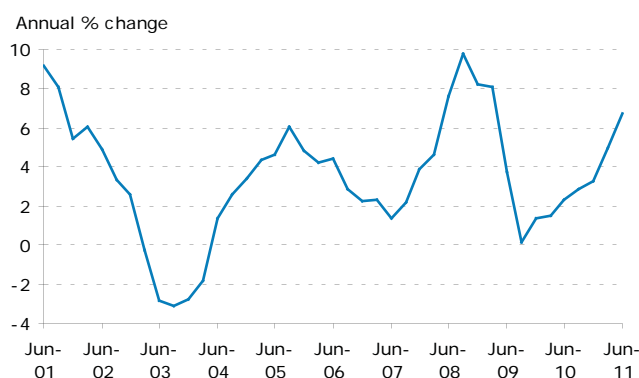
The impact from the global scene on New Zealand has been minimal to date, though it is early days yet. There is a high degree of uncertainty over how the global situation will evolve, and what impact it will have on New Zealand. A key judgement the RBNZ have made is that bank funding costs will stay elevated throughout the projection period, and together with a higher NZD, result in tighter financial conditions. The key things to watch closely are commodity prices, confidence, and domestic deposit rates. To date, these have not seen much impact from global wobbles. But should financial market confidence deteriorate further leading to an actual escalation in bank funding costs, then we expect to see domestic deposit rates move higher – which will be a telltale sign that global wobbles is starting to flow through. If all three remain stable and show no material signs of being affected by global developments, then there is little reason to keep the OCR at 2.5 percent for too long. **Suffice to say the bias for interest rates is up but the timing for the first hike is uncertain. When it finally starts, the tightening cycle will be slow and gradual, full of fits, stops and starts. Borrower's shouldn't panic.**

## ECONOMIC INDICATORS

### INFLATION GAUGES

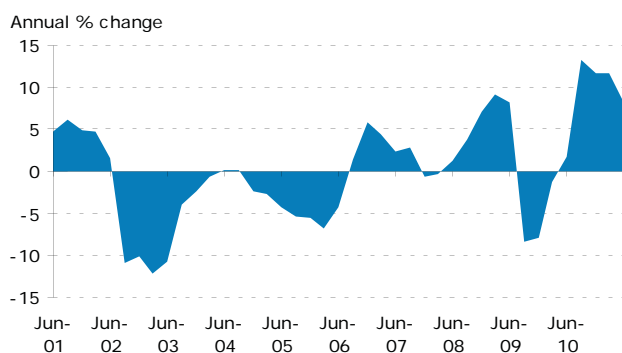
Annual % change	Current Qtr	Last Qtr	Last Year	Chg. Q/Q	Chg. Y/Y
Consumer Price Index	5.3	2.0	1.7	↑	↑
Farm Input	6.7	5.0	2.3	↑	↑
Net Imp. Margins PPI	8.2	11.7	1.8	↓	↑

#### Farm Input Inflation Gauge



Sources: ANZ, National Bank, Statistics NZ

#### Net Implied Margins PPI Ag/Forestry/Fishing (Outputs - Inputs)



Sources: ANZ, National Bank, Statistics NZ

**The sacrificial lamb in keeping the OCR lower for longer looks likely to be inflation.** Headline on-farm inflation has leaped to 6.7 percent over the last year. While the headline figure has been influenced by GST and several other one-off policy changes such as the ETS, even excluding these core inflation still looks challenging.

A lot of the pressure on core inflation has been through on-farm basics such as fuel, electricity and fertiliser. In the last quarter half the increase in the headline CPI was through food, petrol and electricity prices, up 1.1, 4.0 and 2.7 percent respectively. Some of these increases may be seasonal in nature but many of the price pressures in the last 12 months have been of the cost-push variety rather than demand-pull. Cost-push inflation is more difficult for the RBNZ to target via monetary policy and is usually viewed as temporary in nature. Temporary or not, the tight-rope that is being walked by policymakers around the globe with the aim of providing more stimulus to ensure we don't experience a double-dip recession means lower interest rates for longer. **This means headline inflation closer to 2.5-3.0 percent, the top of the RBNZ's target range.**

**Key areas to watch for price increases will be fertiliser, labour and service-related sectors.** With the labour market improving and inflation expectations at elevated levels, the risk is that we see further acceleration in service-related prices. An improving labour market will put upward pressure on wages. Fertiliser prices across the two main companies are now similar, with one recently lifting prices for nitrogen-based products. Ongoing demand out of China and India is expected to provide further upside and should be factored into budgets.

The chart to the left measures the annual percentage change between the prices received for rural outputs and price changes in costs of production (excluding labour costs and interest charges). This provides a good proxy for the relative change in margins received for the primary goods produced and manufactured by the rural sector.

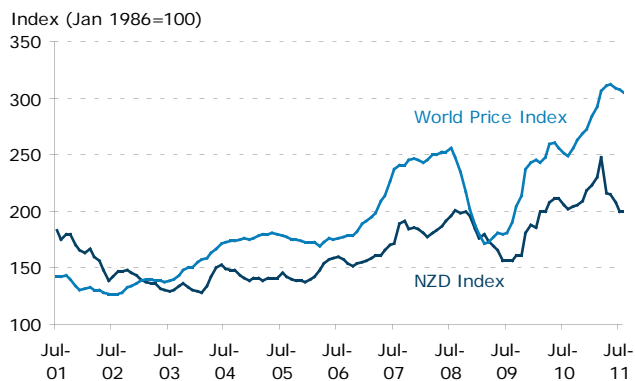
The higher prices received for most of our commodities over the last 12 months continues to lend support to margins for most primary sectors. In the last quarter livestock and cropping outputs led the way, up 5.7 percent. Dairy decreased 2.8 percent as international prices came off their peak in March. On the inputs side the largest increase in the last quarter was for cropping and fishing, which were affected by higher petrol and electricity prices. Overall net margins for the livestock sector posted the strongest gains in the last quarter, up 3.0 percent. Dairy net margins experienced the largest fall, down 5.5 percent due to the decrease in output prices.

## KEY COMMODITIES: OVERALL INDEX AND DAIRY

### ANZ COMMODITY INDEX

	Current Month	Last Month	Last Year	Chg. M/M	Chg. Y/Y
NZ Index	200	200	202	↓	↓
World Index	304	308	249	↓	↑

### ANZ Commodity Price Index



Sources: ANZ, National Bank

**Globally most consumption-based commodities have been taking cues from demand and supply fundamentals, rather than financial market gyrations.** There are a number of reasons why NZ's main commodities have experienced record prices over the last 12 months. Some of the reasons are structural in nature, while others are more temporary. **The dissipation of some of the temporary support factors is the main reason why some commodity prices have softened, not the wobbles in financial markets.**

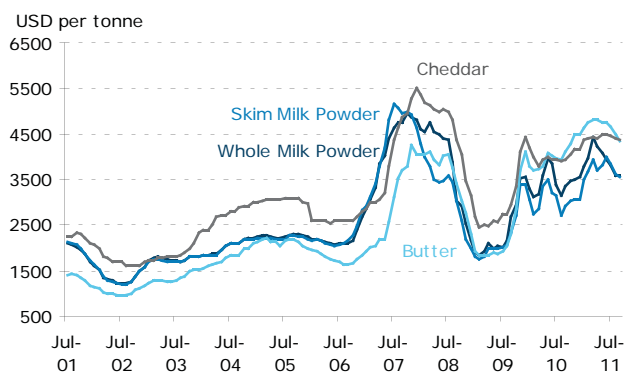
**Broadly, we expect soft commodity prices to come off their highs posted earlier in the year by 15-20 percent, but remain at elevated levels.**

There is still some way to go. The complicating factor now is what the wobbles in financial markets and subsequent slower global economic growth will mean. The historical pattern has been for big shifts in global growth to result in the same for commodity markets. However, as discussed earlier, during recessions in rich countries, higher demand for cheaper food products often provides an offset for lower spending in higher value food segments, meaning the net impact on the weighted in-market prices that farmers are exposed to is not as bad. If anything the wobbles in financial markets and the lowering of the NZDUSD from 0.88 to below 0.80 has benefited farm/orchard gate returns.

### OCEANIA DAIRY PRICE INDICATORS

USD per tonne	Current Month	Last Month	Last Year	Chg. M/M	Chg. Y/Y
Whole Milk Powder	3,594	3,584	3,356	↑	↑
Skim Milk Powder	3,563	3,622	2,925	↓	↑
Butter	4,350	4,500	4,122	↓	↑
Cheddar	4,375	4,405	3,950	↓	↑
World Basket	3,971	4,028	3,590	↓	↑

### Dairy Products - Oceania Export Market Prices



Sources: ANZ, National Bank, USDA

**Dairy markets have picked up a softening tone over the last 6 months.** Strong prices for fat-based products earlier in the year encouraged a tilting of production towards these (and SMP as the residual), allowing inventory levels of milk-fat based products such as butter to be rebuilt from very low levels at the start of the year. Strong prices also saw an increase in exports from the US, EU and Australia.

**Current price differentials are likely to see this product mix continue to be favoured over WMP.**

This is likely to lead towards further price softening for SMP and milk-fat based products. However, the increase in inventory levels has flattened out recently, indicating the market is finely balanced, so any further softening shouldn't be substantial. WMP showed its first sign of stabilisation in the latest GDT, up 1.1 percent, with increases across all contracts. Demand from China for WMP has eased in recent months as they work through existing stock after a 22.5 percent increase in the volume of WMP imported in the first seven months of 2011. Expectations are that WMP prices may increase slightly as the Chinese re-enter the market, which is traditionally September-October. Overall, global milk production is running ahead of last year. Southern hemisphere milk production has started the season strongly, but inventory levels are not building. **Therefore, the market seems nicely poised and is still better placed than this time last year.**

## KEY COMMODITIES: BEEF AND LAMB

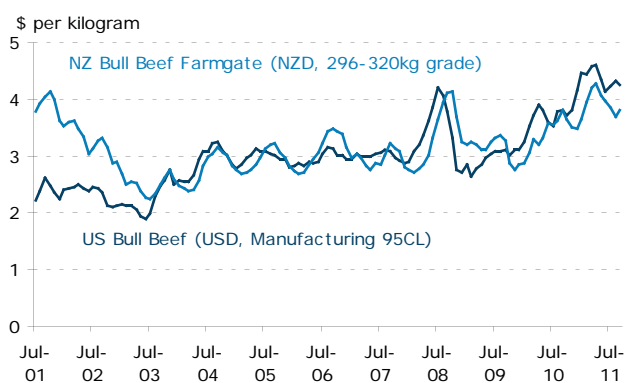
### BEEF PRICE INDICATORS

\$ per kg	Current Month	Last Month	Last Year	Chg. M/M	Chg. Y/Y
US Bull Beef <sup>1</sup>	4.26	4.32	3.80	↓	↑
NZ Bull Beef <sup>2</sup>	3.80	3.70	3.80	↑	↑
NZ Steer <sup>2</sup>	4.00	3.86	4.09	↑	↓
NZ Heifer <sup>2</sup>	4.00	3.83	4.06	↑	↓

<sup>1</sup> USD, Manufacturing 95CL

<sup>2</sup> NZD, 296-320kg Grade Bull & Steer, NZD, 195-220kg Grade Heifer

### Beef Indicator Prices



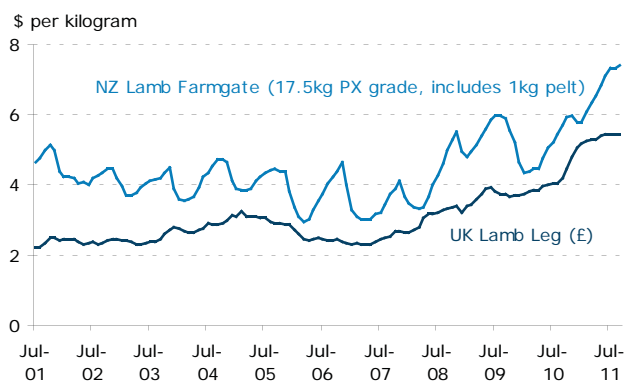
Sources: ANZ, National Bank, Agrifax

### LAMB PRICE INDICATORS

\$ per kg	Current Month	Last Month	Last Year	Chg. M/M	Chg. Y/Y
NZ Lamb <sup>1</sup> (NZD)	7.38	7.32	5.71	↑	↑
UK Lamb Leg (£)	5.42	5.42	4.18	↔	↑

<sup>1</sup> 17.5kg PX grade, including 1kg pelt

### Lamb Indicator Prices



Sources: ANZ, National Bank, Agrifax

**New Zealand's main beef export markets remain fickle.** US beef demand for the rest of the year is unlikely to follow last year's strengthening pattern. **Retail beef prices have increased substantially and are expected to increase further as supplies ease following the marketing of the substantial numbers of cattle placed on feed due to climatic pressures in the Southern and Mid-Western States.** There has also been a build-up in chicken and pork inventories, which will need to be cleared in the short term. Beyond the end of 2011 a reduction in breeding cows will keep US supply low until at least 2014. The US government has also announced that it is expanding its testing of E. coli in meat. The most common strain has been tested for since 1994, but beef trimmings will now be tested for six additional strains from March 2012. This will add cost to the system and may prove something of a deterrent to exporting to the US.

Elsewhere in South America the growth in domestic consumption continues to limit Brazilian exports. Farmers in Argentina are reluctant to reinvest in cattle due to negative government policies over the last 4 years, and any rebuild is likely to take 10 years. Paraguay has reported an outbreak of foot & mouth, leading to Brazil and Argentina suspending beef imports. Australia has resumed live exports to Indonesia but numbers are reported as well down on normal volumes. **Overall a stronger USD and weaker in-market prices are likely to offset one another until the end of 2011. Beyond that, tighter supplies should lend support to farm-gate prices.**

The weighted all-season price for lamb in 2010-11 is likely to have hit close to \$120 per head, well up on the previous two seasons of \$81 and \$90 respectively. **Early indications are that prices for Christmas contracted lamb will continue to reflect where the market is currently placed. Beyond this things are uncertain,** with there still being no sign of real recovery in UK lamb consumption. Month-on-month the volume of fresh and frozen lamb purchased by UK households was 20-25 percent lower than the corresponding period in 2010. This has been driven by a significant increase in retail prices compared to other proteins such as beef and pork in recent months. However, the significantly higher prices that have been paid makes the total spend on lamb only slightly lower. How sustainable this is has to be questioned.

**Total NZ lamb production is expected to lift 5.2 percent in 2011-12.** An increase in supply and softer demand from higher retail prices mean we are unlikely to see a repeat of this year's unusual price pattern where prices in the January/February period were comparable to pre-Christmas.

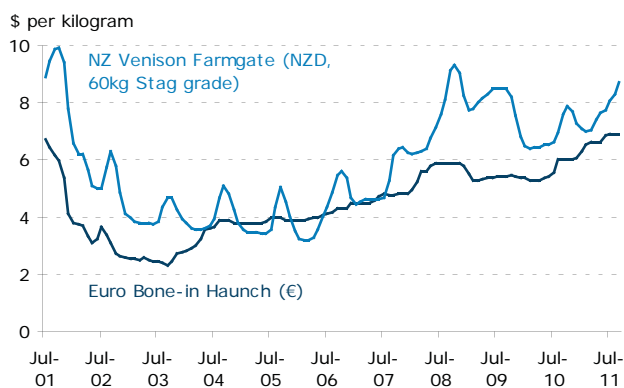
## KEY COMMODITIES: VENISON AND WOOL

### VENISON PRICE INDICATORS

\$ per kg	Current Month	Last Month	Last Year	Chg. M/M	Chg. Y/Y
NZ Venison <sup>1</sup>	8.70	8.27	7.58	↑	↑
Euro Bone-in Haunch (€)	6.90	6.90	6.00	↔	↑

<sup>1</sup> 60kg Stag AP grade

#### Venison Indicator Prices



Sources: ANZ, National Bank, Agrifax

The current sovereign debt issues in Europe are expected to weigh on demand for expensive food items such as venison. However, this is within the context of a two-speed economy in the region, where some of NZ's main venison markets, such as Germany, Sweden, Switzerland and the Netherlands, are outperforming other countries.

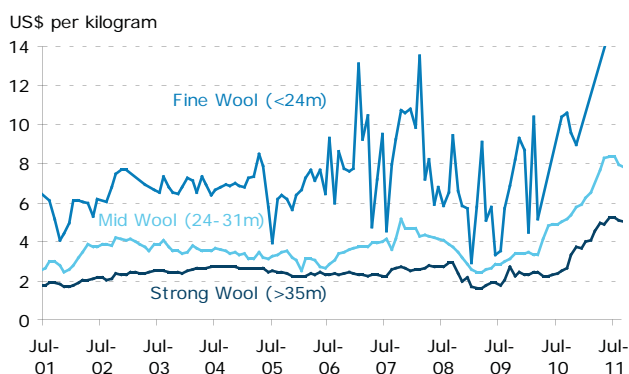
Over the last four years the industry seems to have finally stabilised supply; improved marketing structures and partnerships with more contracted supply, built more trust between exporters and importers providing a sharing of risk, and started to slowly diversify markets into different food segments and products, i.e. increased the proportion of product sold chilled to supermarkets. These changes mean that venison is not as reliant as it once was on the seasonal frozen game trade into Germany, which used to be the major cause of volatility. These changes should also help to provide some level of support through a deteriorating outlook for Europe.

**Early indications for in-market prices have been positive, with chilled contracts for 2011-12 reportedly negotiated at 10-15 percent ahead of last year. These stronger in-market prices were reflected in contract prices offered to farmers and are now being reflected in the spot market.** This is expected to continue until Christmas.

### CLEAN WOOL INDICATOR PRICES

\$ per kg	Current Month	Last Month	Last Year	Chg. M/M	Chg. Y/Y
NZ Fine Wool (>24m)	21.20	NA	14.58	↓	↑
NZ Mid Wool (24-31m)	9.57	9.50	7.14	↑	↑
NZ Strong Wool (>32m)	6.10	6.04	3.69	↑	↑
USD Fine Wool (>24m)	17.38	NA	10.60	↓	↑
USD Mid Wool (24-31m)	7.85	7.97	5.19	↓	↑
USD Strong Wool (>32m)	5.00	5.07	2.68	↓	↑

#### Wool Indicator Prices (Clean)



Sources: ANZ, National Bank, Beef + Lamb NZ, Wool Services

**Wool prices are proving very resilient in the face of a number of challenges, with strong wool continuing to trade above \$6 per kg.** World raw wool demand increased during 2010-11, supported by stronger demand for wool products as a result of recovering economic growth in key wool-consuming countries and increases in the cost of substitute fibres. In 2011-12, growth in wool demand is expected to moderate, in response to slower economic growth in key apparel and textile importing countries and increased competition from alternative natural fibres, such as cotton.

NZ shorn wool production is forecast to decrease 1.3 percent in 2011-12, largely due to a 2.1 percent decline in the total number of sheep. The total supply of wool (production and inventories) is expected to be down further in 2011-12 because wool stocks have been run down during the past year in response to favourable prices. The 2.1 percent decline in the number of sheep is expected to be offset by higher yields per head.

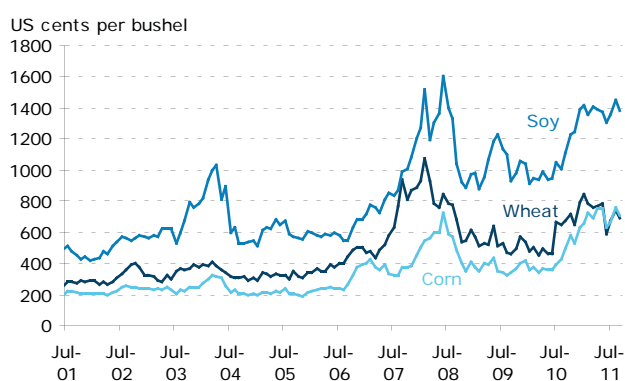
The offset if prices do drop from current levels is that this would encourage farmers to hold onto wool, as the current season enabled many to off-load stock that had been on hand for some time. This potentially could see a drop-off in supply pretty quickly.

## KEY COMMODITIES: GRAIN AND FERTILISER

GRAIN & OILSEED PRICE INDICATORS					
USD cents per bushel	Current Month	Last Month	Last Year	Chg. M/M	Chg. Y/Y
Wheat	6.9	7.5	6.7	↓	↑
Soy	13.8	14.5	11.1	↓	↑
Corn	7.1	7.6	5.0	↓	↑
Australian Hard Wheat <sup>1</sup>	307	310	360	↓	↓

<sup>1</sup> NZD per tonne

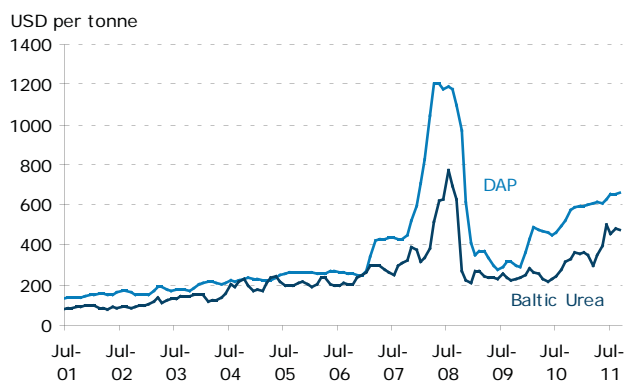
CBOT Future Grain & Oilseed Indicator Prices



Sources: ANZ, National Bank, Bloomberg

FERTILISER PRICE INDICATORS					
USD per tonne	Current Month	Last Month	Last Year	Chg. M/M	Chg. Y/Y
DAP	659	651	525	↑	↑
Urea	477	480	320	↓	↑

Fertiliser Indicator Prices



Sources: ANZ, National Bank, Bloomberg

**Global grain markets will be the bellwether market for how the softening in the outlook for the global economy will affect consumption-based commodities.** Prior to the last two weeks of September grain markets had been trading off supply/demand fundamentals. However, during the last two weeks the sea of red in financial markets has provided a softening tone, **with speculative funds liquidating positions and analysts revising down consumption estimates.** This has been despite low stock-to-use ratios for most grain types and Northern Hemisphere crop production being only in line with historical averages, despite an increase in the area planted. This is largely due to reduced yields for US crops, offset to some degree by improved yields in Eastern Europe, although these were badly affected by drought last year.

Higher grain prices feed into the cost of production for dairy and other livestock industries in competing countries that are more reliant on feed-based systems. US livestock and poultry producers have, so far, handled higher-priced feed by becoming more efficient. How long these efficiency gains can be maintained remains to be seen.

**Domestically the grain market is taking a hit from imported feed grains as the spread that opened up between Australian and New Zealand grain over the last three months has become too wide.** This is especially the case in the North Island where the feed grain market has been taken over by imports. In the South Island the market is being supported by the dairy industry. With current domestic prices so high, pasture conditions reasonable in most regions and increasing competition from imports, it is likely domestic prices will move lower over the coming months to shift volumes.

**Fertiliser prices have taken a breather over the last two months, after an upwards march that started in the first quarter of 2010.** Prices are expected to remain elevated in the short term. Supply remains tight across all eight of the major fertilisers. In addition, many farmers are looking to capitalise on high soft commodity prices, meaning demand will remain supportive of current pricing.

Over the next five years demand for fertiliser from emerging countries such as China and India will continue to increase, to improve farming efficiency and produce better-quality food. A limited ability to expand supply quickly, combined with increasing demand from emerging countries, will probably mean the upward trend in fertiliser prices still has some way to go. Political uncertainty in the North Africa/Middle East region is also likely to continue to provide ups and downs for products such as phosphate where the large majority of supply comes from.

## KEY COMMODITIES: HORTICULTURE

### HORTICULTURE PRICE INDICATORS

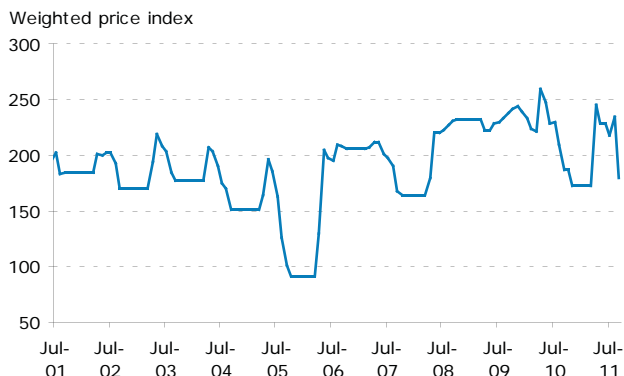
	Current Month	Last Month	Last Year	Chg. M/M	Chg. Y/Y
Kiwifruit (USD per kg)	3.3	3.3	2.1	↓	↑
Apples (Weighted Index)	180	235	187	↓	↓

Kiwifruit Indicator Prices



Sources: ANZ, National Bank, Zentrale Markt- und Preisberichtsstelle

Apple Indicator Price Index



Sources: ANZ, National Bank, Zentrale Markt- und Preisberichtsstelle

**Average wine grape prices for the 2011 season declined 9 percent to \$1,172 per tonne**, with the Marlborough region softening to \$1,178 per tonne. Prices in Hawkes Bay fell 7 percent to \$1,192 per tonne but Gisborne fared better, rising 9 percent to \$879 per tonne. Overall, there was a reduction in prices for most white varieties in most regions, apart from a few more boutique varieties in Gisborne and Hawkes Bay. The prices for red varieties held up better due to more stable supply.

**The monthly volume of bulk wine shipments has jumped recently as wine companies continue to manage down inventory levels from the record 2011 vintage.** Consequently, prices have decreased further. If the industry continues to experience high yields like this season, then it's forecast supply will continue to overshoot demand until well into 2014-15. Average yields would see the balance between sales and supply reached next year. If inventory levels and the oversupply of wine from the 2011 vintage and future seasons is not properly managed by the industry this has the potential to suppress market prices for at least another two years.

**Zespri has had cautious messaging on early demand for the 2011 kiwifruit crop**, with food safety concerns in some markets (E coli in Europe negative for fresh vegetables and fruit) and increased competition in others. **This cautious demand combined with the stronger NZD has been reflected in Zespri's August forecasts** with the orchard gate return for Zespri Green back \$0.60 per tray to \$3.59 (-15 percent). Gold is back \$1.55 per tray to \$7.34 (-17 percent). Organic Green is back \$0.55 per tray to 5.52 (-9 percent).

**The offset to lower per-tray returns is higher yields from the bumper crop.** The higher yields actually leave per hectare orchard gate returns for Gold higher than last year and Green and Organic Green only marginally lower. Average yields per hectare for Green increased from 7,660 to 8,752 trays (+14.3 percent). Gold increased from 9,428 to 11,873 trays per hectare (+25.9 percent). Organic Green increased from 6,180 to 6,429 trays per hectare (+4.0 percent). Combining returns and yields leads to Green returns per hectare decreasing 2.5 percent to \$31,400. Organic Green decreases 5.4 percent to \$35,500 per hectare, while Gold increases 4.0 percent to \$87,100 per hectare. Out beyond this year the identification and spread of PSA over the last 10 months has led to production estimates being significantly scaled back. The kind of reductions being talked about will lead to an increase in grower prices through a larger proportion of kiwifruit being sold to the higher-paying markets and increased competition for limited supply from packhouses.

## KEY COMMODITIES: OIL AND FREIGHT

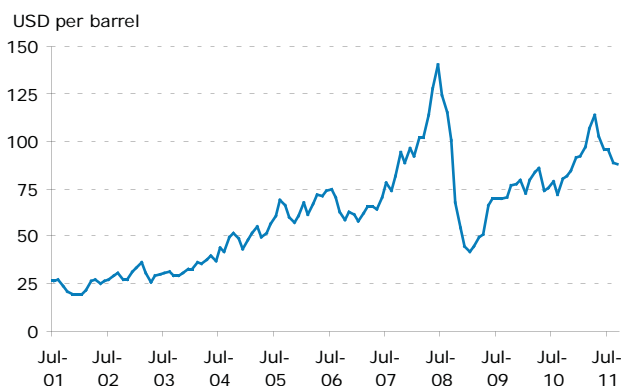
### OTHER COST INDICATORS

	Current Month	Last Month	Last Year	Chg. M/M	Chg. Y/Y
Crude Oil <sup>1</sup>	88	89	80	↓	↑
Ocean Freight <sup>2</sup>	1,750	1,619	2,446	↑	↓

<sup>1</sup> USD per barrel, grade WTI

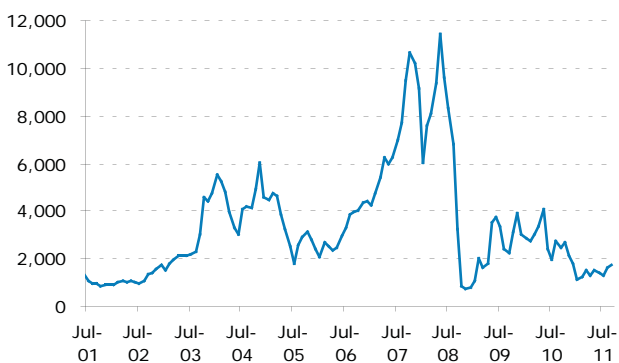
<sup>2</sup> Baltic Dry Index

#### Crude Oil Indicator Price (WTI)



Sources: ANZ, National Bank, Bloomberg

#### Ocean Freight (Baltic Dry Index)



Sources: ANZ, National Bank, Bloomberg

**The upside from the global economic woes is lower prices for oil.** However, a lower NZDUSD means things will not fall too far in NZD terms. In recent weeks a higher USD and downgrades to economic growth forecasts by the US Federal Reserve have seen crude oil move from US\$90 to US\$80 per barrel.

The slower economic growth in the US (the world's largest consumer) and Europe has seen analysts revising back their consumption growth forecasts, with oil demand expected to fall via people cutting back on the number of trips they make, shippers moving fewer goods and holiday makers staying closer to home.

On the supply side **the stabilisation in Libya is expected to see supply increase over the next six months.** Production of oil from Libya is tipped to rise to 0.5m bbl/day in October. This would take output to around one third of the 1.6m bbl/day output level prior to the war. Reports suggest the major challenge is restoring accommodation and other worker facilities, with damage to the fields' infrastructure and equipment seen as minimal. However, OPEC producers that raised output to compensate for the shutdown of Libyan oil production are likely to cut back on production. The International Energy Agency is also expected to put an end to its release of oil reserves intended to cover the shortfall in supply from Libya. US crude oil inventories have also fallen 7.34m bbl in the week ending 16 September to 339.1m bbl, the lowest level since January, according to the US Energy Information Administration.

**Therefore, with supply looking better placed and demand and inventory levels less so, expect oil prices to remain lower but more volatile.** This volatility will be headline-dictated, with economic growth prospects in the US and Europe key.

The Baltic Dry Index is an assessment of the price of moving a range of commodities including coal, iron ore and grain for 26 major shipping routes by different types of vessels. The index has been steady at low levels, helped by modest iron ore sales to China, although rising fleet growth and softer global economic conditions continue to overhang the market.

Growing fears for the world economy signal more pain and even bankruptcies among dry bulk ship owners who are getting rock-bottom rates to carry cargos like coal and now face a glut of new vessels ordered when times were good. The tougher climate has hit the sector hard this year and confidence is at a record low.

## BORROWING STRATEGY

### SUMMARY

The rural floating rate remains at 7.00 percent, reflecting the Reserve Bank's decision to leave the OCR on hold at the September *Monetary Policy Statement (MPS)*. By contrast, fixed rates have fallen dramatically, particularly for longer terms, "flattening" the yield curve. This makes fixing considerably more attractive, particularly for terms 2 years and less, which are below the floating rate. However, while 4-5 year rates have fallen by the most, we would caution against fixing for such an extended period, particularly with global uncertainty so high.

### OUR VIEW

**Although the Reserve Bank warned in its September MPS that "it is likely that the OCR will need to increase", this is conditional on a stabilisation of the global economy, and on NZ escaping reasonably unscathed. Here we are now, less than two weeks later, and this is already looking like a shaky assumption.** To be fair New Zealand has had far greater momentum than most peers over the first half of 2011, and various one-offs including the Rugby World Cup and earthquake rebuild along with a record terms of trade (a 37 year high) suggest a fair bit of growth is still in the pipeline. China – our second largest trading partner – remains strong. However, global confidence has all but capitulated in Western nations, commodity prices are starting to ease (albeit from very elevated levels) and international funding costs have risen sharply. With interest rates already close to zero in the world's biggest nations, and fiscal policy hitting its limits, there is little ammunition left to cope with an adverse event. This portends challenges and massive downside risks around the corner.

**It's also worth considering two other aspects of the Reserve Bank's message.** The first was the Bank's deliberate removal of any references to March's "insurance" rate cut. Not only was this wording confusing, but it gave the impression that there was somehow a need for that cut to be reversed. It made no sense to maintain this stance given global developments. The second aspect was the lower 90-day bank bill projections. In short, these had the bill rate peaking at just 4.3 percent, well below the June projections. This adds weight to our long-held view that domestic interest rates will be lower for longer. That's what you get when the economy undergoes structural changes amidst a fickle global scene.

**But let's get realistic – as we hinted at in the first paragraph, what really matters is what's happening offshore.** Europe continues to "muddle through" its mounting debt issues, and while there is talk of an imminent "shock and awe" style plan to deal with it, the reality is that anything concrete needs to be approved and voted upon before it can be put

into action. We've been here before, and experience tells us that talk has not always been followed by action. But even if a comprehensive and credible plan is put in place, it's hardly a silver bullet. Belts need to be tightened. Greece may be small enough that the global system could cope with a partial default, but that option is unthinkable for the big countries. Suffice to say growth will be slow in Europe for a while yet.

**But Europe is a long way away from NZ – so why is it so important?** For one, it's a financial hub. Greece may be half a world away, but if it stumbles, we will inevitably get caught up in the ripples emanating from it, for risk is being repriced everywhere. And here's the rub – instability and nervousness in Europe has led to an increase in funding costs for all banks – including NZ banks. Nervousness in Europe and the US is starting to see questions asked regarding how long China (and hence commodity prices) can remain immune. These are key transfer mechanisms, and areas we will be keeping a close eye on.

**Bringing it all together, what this means is that the outlook is fraught with risks – locally and globally.** And that means that interest rates are not likely to rise any time soon. At this stage it's probably a bridge too far to say that the RBNZ may cut rates, but we would not be surprised to see the market gunning for cuts if the situation deteriorates.

**Ordinarily, we would favour remaining on a floating rate in such an environment. However, with 6 month, 1 year and 2 year rates all below the floating rate, and odds of a rate cut minimal at this stage, there is value in considering fixing for any of these periods.**

**But how do longer terms stack up? Now that long term rates have fallen, is it worth fixing for a much longer period, like 5 years? It could be, but we doubt it,** and this is based on the view that it will be some time before clarity with regard to the global outlook emerges. As our breakeven table below shows, you would need to see the broad level of interest rates rise fairly quickly. With a global recession on the cards, this seems like a tall order.

Rural Lending Rates		Breakeven rates in			
Term	Current	in 6mths	in 1yr	in 2 yrs	in 3 yrs
Floating	7.00%				
6 mths	6.75%	6.85%	7.10%	7.63%	8.30%
1 year	6.80%	6.98%	7.20%	7.75%	8.45%
2 years	7.00%	7.22%	7.48%	8.10%	8.63%
3 years	7.25%	7.51%	7.80%	8.33%	
4 years	7.55%	7.79%	8.05%		
5 years	7.80%				

# EDUCATION CORNER: THE CHANGING FACE OF WATER MANAGEMENT IN NEW ZEALAND

## SUMMARY

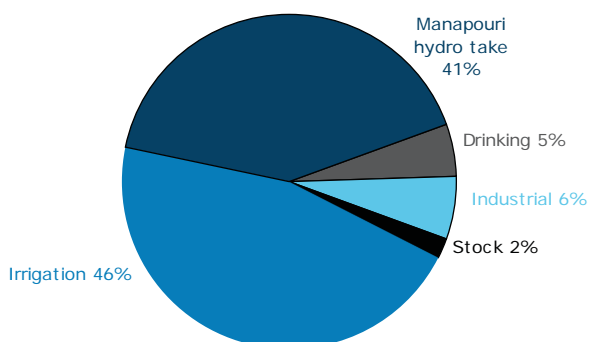
In this month's *Education Corner*, we look at the changing face of water management in New Zealand, and the implications for rural water users and the wider New Zealand economy. One of New Zealand's key comparative advantage resides in an abundance of water. There are a host of issues in regard to water so one article cannot hope to do the topic justice; hence a series of articles is pending. The focus in this piece is on water management and recent developments in this space, as this sets the scene, or framework, for the primary sector. The key message is that changes are in the wind for water policy and its management in New Zealand. Therefore, landowners should make sure they are up to speed with what regional councils are doing in their area. Ensure you have access to current and future water needs via a resource consent, even if it costs now. Factor the ability to access water and any other possible water quality restrictions into financial decisions. And if in doubt, seek professional advice.

## BACKGROUND

**Water is one of New Zealand's key natural resource advantages.** Each year over 500 billion cubic metres of water falls on New Zealand as either rain or snow. Directly and indirectly, it is the fuel for much of our business activity. Outside of primary production, water drives much of our electricity generation, features heavily in tourism activities, and plays a significant part in much of our social, cultural and recreational identity.

**Irrigation and hydroelectric generation are the two main users of water.** Together these two uses account for 87 percent of the total 27 billion cubic metres of water consumed in New Zealand each year – the equivalent to almost half the volume of Lake Taupo and slightly more than 5 percent of the total that falls as rain and snow each year.

Use of weekly allocated water in NZ, 2010

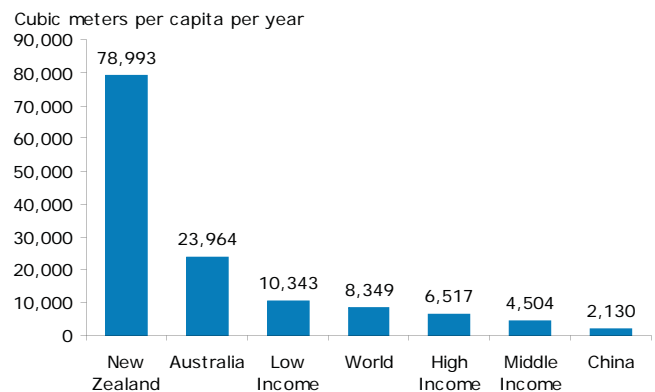


Sources: ANZ, National Bank, Ministry for the Environment

**As a country we have access to large volumes of water. New Zealand is ranked 4th out of 30 OECD countries for the size of its renewable freshwater resource on a per capita basis.**

Historically this has placed New Zealand at a distinct advantage; we could, did and continue to export large quantities of primary produce that are reliant on water for their production.

Renewable water resources (2007)



Sources: ANZ, United Nations ESCAP

**Now we find ourselves in a world where an inability to access renewable water is proving to be a constraint on growth, productivity, and lifestyle in an increasing number of countries.** Population growth and increased urbanisation are seeing water shifted away from food production in some first world countries to other competing priorities such as urban drinking water and sanitation. The transfer of water to urban California from its neighbouring states is one example of this. Less fortunate countries find themselves on the brink of war to maintain access to the water they need for their basic needs, with dams and water diversion schemes considered to have the potential to lead to armed conflict between nations in Asia and North Africa in the next decade.

**Changing community objectives, increased competition for water, and quality and allocation limits being reached in some New Zealand catchments have pushed the Government into reviewing the framework for how we manage our water resources.** Both the previous and current governments have made the review and refresh of water policy a key focus. With the work of the Land and Water Forum, everything points towards a significant shift in water policy in the short to medium term. **The timeframe in which any change in policy occurs and the manner in which various water users prepare and respond to this change will have major impacts on the primary sector and its support industries.**

## EDUCATION CORNER: THE CHANGING FACE OF WATER MANAGEMENT IN NEW ZEALAND

Beyond that there are complicated issues in terms of funding water infrastructure development, the economics of on-farm irrigation infrastructure for different regions and farm types, ownership of water rights, the negative externality changing land use can have on water quality, market mechanisms for trading water and nutrients, water use efficiency, and co-governance arrangements of water with Iwi and local community. All are full-blown research topics in themselves and we plan to highlight the issues and options in future work. For now we've limited our analysis to water management and recent developments in this space, the first part of what promises to be a long journey.

### CURRENT WATER MANAGEMENT REGIME

Water in New Zealand is managed by Government and regional councils as a public resource. This is done via the Resource Management Act 1991 (RMA). The taking, damming and diversion of freshwater are activities which are expressly managed by the RMA. In general, to do one of these three things requires permission, usually from the relevant regional council. Permission to access water is gained in one of three ways:

- **"Allowed" takes.** These are also known as "Section 14(3)(b) takes" and provide for the taking of sufficient water for domestic or stock drinking water purposes as long as no environmental impacts occur. It does not, as has commonly been assumed, allow for water to be taken for dairy shed use.
- **"Permitted" takes.** These are takes, usually of a small volume (e.g. 15-30m<sup>3</sup> in many cases, depending on the region and water source – ground or surface water) that can be taken by a property owner for any purpose without the need for a consent. Specific conditions are often required to be met when accessing water via a permitted take. Often these relate to a maximum flow rate, the intake structures of the take, or, for ground-water takes, the proximity to other similar takes.
- **"Consented" takes.** All other water takes require a resource consent. These provide the consent holder with a right to access a certain volume of water for a set period of time, often between 10 and 30 years. Most consents come with specific conditions attached to them on volumes and flow rates of water to be taken, intake structures, measuring and reporting requirements, and when restrictions on takes may occur. There are currently approximately 20,500 consents to take water.

**Permitted and consented takes are controlled by the provisions of regional plans and these provisions are open to amendment over time.** In fact even individual consents may be reviewed before their expiry. While providing some degree of certainty to access water, they do not allow for any greater right than any other fixed-term licence. **They certainly do not provide an open-ended property right – in the same way that having water available on your property provides very limited rights to its take or use.**

There has been an underlying expectation that a resource consent would always be able to be renewed at its expiry; the water was yours forever to use, or in some cases trade, as you wanted. **This has seen land valued with an expectation that any further water needs will be met and that the currently accessed water will remain available in perpetuity.** Therefore, access to water and the resultant lift in productivity has seen the value of water access capitalised into the value of the asset.

**The impacts of our primary sectors on water quality are also increasingly in the spotlight.** While controls have been in place on activities that have had detrimental impacts on water quality, these have been focused on point-source pollution, often described as those where the discharge comes out of a pipe. Prime examples of these have been discharges from sewage plants of industrial facilities. Again, these discharges have generally been managed via the RMA. To date controls on pastoral farmer for water quality impacts have been minimal and limited to a couple of specific catchments such as Taupo.

**Finally, there has tended to be no direct volumetric charge associated with access to water.** Where charges have been applied, these have been based on meeting the costs associated with storage and reticulation infrastructure, such as reticulated stock-water supplies and irrigation schemes.

**Many argue that the existing framework of first in-first served (where access to the water resource went to the first in line who applied for it until the resource was fully allocated) is flawed.** While this approach has worked in the past, what has now changed is the realisation that water resources are at their limits in some areas, and any further demand for water will need to be addressed either by water storage, better management and use of the existing resource, or by providing priority of use to specific water users. **The conflicting demands of recreationalists, environmentalists, existing water users and those who need access in the future also place significant strain on regional councils when allocating water. While science-**

## EDUCATION CORNER: THE CHANGING FACE OF WATER MANAGEMENT IN NEW ZEALAND

based decisions on the resource are (relatively) simple, political pressures driven by growing populations, or the needs of key industries, make the situation one of conflict. Water is so vital to so many different groups that direct conflict between many users is already apparent, and is likely to become more so as demands on allocable water and water quality intensify over time.

### THE CHANGING FACE OF FRESH WATER MANAGEMENT IN NEW ZEALAND

Increasing community concerns over the management of New Zealand's waterways and a realisation of the strategic importance of water resources to our future economic success have seen both the current and previous governments focus on improving water management in New Zealand. The recent activities of the Land and Water Forum, and a desire to see economic growth enabled through access to increased water in the Canterbury region, have seen this programme of work deliver its first concrete outcomes. **Two recent policy changes are already beginning to impact the primary sectors:** the National Policy Statement for Freshwater Management, and the Measurement and Reporting of Water Takes Regulations 2010.

**The Measurement and Reporting of Water Takes Regulations 2010 has had the smallest impact at this stage.** The aim of this regulation is to provide enough information to allow councils to manage water resources appropriately and within limits.

**By November 2016 all consented water takes of greater than 5 litres per second will be required to measure and annually report to the regional council on the volume and rate of water taken.**

This works out to 432 cubic metres per day, enough drinking and shed water for over 3,000 cows – but not much irrigation-wise. At that time this will mean 98 percent of consented water takes will be operating under this system. The provision of this information will allow regional councils to better understand the impacts of water takes on individual waterways and catchments, and ensure water is being taken within the bounds of consent conditions.

**For the individual water user affected, generally those taking volumes of water for irrigation or processing purposes, this will mean ensuring they have the appropriate water measurement device(s) in place in order to report their water use.**

The National Policy Statement for Fresh Water Management (NPS) was released in May of this year and is likely to have a much more obvious effect on

rural water users. **It has several objectives, all of which will have direct impacts on rural water use:**

- safeguarding the life-supporting capacity of freshwater;
- maintaining or improving freshwater quality, including where the quality has been degraded by human activities to the point of being over-allocated;
- avoiding over-allocation of water, and phasing out any existing over-allocation;
- improving and maximizing the efficient allocation and use of water; and
- protecting significant wetlands.

**Regional councils are now required to implement a range of policies to achieve these objectives. Some requirements have immediate impacts, while others can be phased in over the next 19 years at each council's discretion.**

### WHAT DOES THIS MEAN FOR RURAL WATER USERS?

So what do these two freshwater policy changes mean for the farm or orchard? Potentially quite a lot.

**It is likely to mean water users will need to operate within very clear limits as to the volume they can access, and that once allocation limits have been met, increased productivity can only occur through greater water use efficiency. In those regions where limits are already being exceeded, the ability of land users requiring high levels of water to operate at current levels will be at risk.**

It is also likely to mean a greater Regional Council interest in how the primary sector operates as users of the land to ensure the impacts on water quality are acceptable. Operating within limits may require changes to farm systems, and may mean some land uses are unable to take place in certain areas.

**Water will become a key driver of the potential of land use, its productivity and therefore its value.** While this has always been the case, this will now become explicit. The absence of an ability to legally access more water will affect more people, while limits on impacts on water quality will require greater consideration of the potential management practices available to mitigate off-site losses. Rather than being taken for granted, water will need to become one of the first considerations when thinking about the suitability of rural land for specific uses.

## EDUCATION CORNER: THE CHANGING FACE OF WATER MANAGEMENT IN NEW ZEALAND

**In the short term the primary sector will need to grapple with the issue of “allocation” – either accessing water or the ability to negatively impact water quality.**

Being able to show that you are using water efficiently will become a necessity to maintain ongoing access to water. Where reasonable and responsible water use is not shown, others wanting to access more water will argue they are the more responsible user of the public resource. Efficient water use will also become necessary to allow for increased production. Therefore, making the water you have now go further will be the way to grow if no further water is available.

**A key question is whether the primary sector, especially at the landowner and rural professional level, have the tools and information to meet the coming challenge at this time.**

### RECENT EXAMPLES

#### VARIATION 6 – WAIKATO REGION

Over the past 5 years Waikato Regional Council has been developing and implementing a new water allocation plan, known as Variation 6. The aim of Variation 6 is to ensure that the water allocated within the Waikato did not exceed set limits. Key issues for the groups involved in Variation 6 were:

- the impact of regional councils providing some water users with higher priority access than others; and
- the potential impacts of setting limits where current water use exceeds those limits.

As a highly developed dairy region, also containing the majority of the North Island's hydro-generation capacity and a large number of growing urban areas, the Waikato provides an example of the issues water resource managers will commonly face in the future.

**In the Waikato a decision was made by the Regional Council to favour hydro-generation and municipal water use over all other water uses.** As a consequence, no further water would be made available for use in the catchment between the Karapiro Dam and the Huka Falls control gates at Taupo. **The resulting loss of the potential for land use change within that catchment was fundamental. There could be no change to current land uses that would require access to additional water, such as pine to pasture dairy conversion.** The potential to increase stock numbers and access to water for shed use for dairy conversions was problematic, if not impossible, as was any increase in the area under irrigation.

It was estimated that there is approximately 120,000 hectares of land suitable for conversion to un-irrigated dairying within this catchment alone, but which could not be converted without access to both stock and shed water. A further 40,000 hectares of expected irrigated dairy conversions was also at risk. At current national stocking rates of 2.8 cows per hectare this equates to potentially 450,000 fewer dairy cows. At a long-run farm-gate milk price of \$6.50 per kg MS, this is about \$1 billion less in gross farm-gate returns that the local community and wider New Zealand economy forgoes. **At the time, the net economic impact was assessed at \$800 million when the loss of other economic activity associated with forestry was deducted.**

In catchments where water allocation limits are met, increased population growth mean the water available for non-municipal needs will have to decline. The ability to intensify or change land use to industries with higher water demand in the future would be constrained and business certainty diminished.

**In other catchments, modeling showed that current water use exceeded the proposed water allocation limits, in some instances by a massive 200 to 500 percent.** Often this occurred in highly productive catchments where land uses with high water demand and asset values such as dairying and horticulture occurred. **Evidence provided during the related Environment Court case showed that in the Piako catchment alone, the expected reduction in dairy cow numbers required to operate within the water limits would have seen 65,000 cows removed from the catchment, for a loss of 21 million kg MS per annum in production.** Such a loss would have significant impacts on the viability of continuing to operate a dairy farm in the region, through a decrease in farm incomes and land values.

During this process it also became **evident how few rural water users within the Waikato region had confirmed their authority to access water through a resource consent.** While it was conservatively estimated that **2,000-3,000 dairy farmers alone would need a consent to access the volumes of water needed for their herd, only 65 consents had been issued across the entire region for farm-related water takes.** This left those farmers without consents highly exposed to losing access to water to other users who had a consent in fully or over-allocated catchments.

The conflicting needs of water users within the region saw the Plan changes reach the Environment Court, where the case was heard earlier this year. It is estimated that the various parties to the case, who include Mighty River Power, the district and city

## EDUCATION CORNER: THE CHANGING FACE OF WATER MANAGEMENT IN NEW ZEALAND

councils of the Waikato, iwi, industrial and farming interests, would have spent several tens of millions of dollars on the case in an effort to protect their current and future water interests. The Environment Court is expected to release its decision in November of this year.

### HORIZONS ONE PLAN

**Achieving water quality targets will be another key issue for the primary sector.** With point source discharges under control, regional councils are turning their attention to diffuse discharges i.e. those that come from general land use, such as nutrient loss from horticulture or pastoral farming.

Within the Whanganui/Manawatu region, the regional council proposed a regional plan seeking to achieve specific water quality targets in a number of catchments. These would be met by reducing the levels of nutrients lost in those catchments from land use. An acceptable volume of loss was proposed for each catchment and then allocated to the landowners within the catchment on the basis of Land Use Capability. **While both the effectiveness of the process and the level of nutrient loss were questioned by the primary sector, two key issues were highlighted:**

- how do you fairly allocate nutrient loss across land uses in a catchment; and
- what is a reasonable expectation of a farmer when they need to change farm practices to achieve their limits?

#### **The question of allocation remains unanswered.**

If you allocate proportionally against current land use then you reduce the opportunity for land use change to higher intensity uses (e.g. it is harder to change from a low loss land use such as sheep production to a higher loss land use such as dairying). If you allocate proportionally on the basis of land area, then high loss land uses are likely to receive a smaller allocation than they need and be required to make more significant changes to their farm systems or purchase allocations from others.

**Either allocation method favours one group over another, impacting on the potential to increase productivity, and hence land values.** For example, a drystock property unable to access sufficient nutrient loss allocation may no longer be able to convert to dairying, reducing its potential value significantly.

Operating within limits may also require changes to farm systems to ensure those limits are not breached. **There are a number of actions that can be taken to reduce nutrient loss from pasture,**

**at different levels of cost. At certain nutrient limits the cost of mitigation will begin to impact bottom lines to an unsustainable degree. But how the competing economic objectives of the individual land owners, local community and the country are to be balanced is unclear.**

### WHAT SHOULD THE RURAL SECTOR AND INDIVIDUAL LANDOWNERS BE DOING?

**Ensuring ongoing access to water should be a key risk management focus for all rural water users.** Those sectors that require reliable access to large volumes of water, especially irrigators (pastoral and horticultural) and dairy farmers, are probably at the greatest risk. The primary sector as a whole, and individual land owners and their representative bodies especially, need to ensure they are actively engaged in water management decisions at a national and regional level.

**Those without a legal authority to the water they require are more likely to miss out on water, either in part or altogether, if water allocation limits in their catchment are reached or breached.** The economic sustainability of the farm/orchard at that point becomes questionable. **All water users should ensure they understand the rules of water access as they apply to them, and have the legal authority necessary to access the water they need.** While obtaining resource consents comes at a cost, it also offers a key risk management opportunity. Rural professionals can play a key role through the provision of advice and information.

**Water use efficiency should become a consideration on farm.** Knowing how much water is being used, what is being produced from that use and how that can be improved will become a more important management consideration. Being able to demonstrate your water use efficiency against sector benchmarks, or minimizing losses is likely to become necessary for continued access.

**Possible policy changes to water management and its potential impact will need to be factored into asset (land) values.** The changes to asset values will come through current or possible future income streams for a property, which will influence rates of return and debt carrying capacity. Most of the suggested policy changes would limit intensification, making future growth reliant on new technology or water infrastructure. Therefore, the impact on incomes and asset values in many cases is likely to be negative.

## EDUCATION CORNER: THE CHANGING FACE OF WATER MANAGEMENT IN NEW ZEALAND

**Weighing this economic cost against the possible erosion of a natural resource such as water, which all New Zealanders are dependent upon, is a difficult choice for the local community and country. Ultimately it involves trade-offs for all involved.**

As an example, consider whether or not we want to forgo the irrigation potential on the eastern seaboard of New Zealand, where there is approximately one million hectares of potential irrigable land. Assuming that 50 percent of the area is irrigated for dairy use, at an average production level of 1,200 kg MS per hectare, this represents a potential opportunity of 600 million kg of extra MS production (i.e. a 40 percent increase in national milk production compared with the 2010-11 season). Assuming the vast majority of this land is currently operating as meat and fibre, the additional net farm-gate revenue for the country from such land use change **would be \$3.5 billion per annum** based on a \$6.50 per kg MS milk price. To put that in perspective, this is nearly sufficient income (i.e. exports) to fund all our car imports 1.3 times over. But at what cost? Land-use changes have to be sustainable or everybody loses from wasted investment.

**Ultimately, changes to the management of water by each regional council comes down to a community's willingness to pay, either directly or through forgone opportunities.** However, the benefits from addressing water issues flow directly to the local community also. In a world of over-stretched budgets, there are no easy choices. But water is **one natural resource where finding solutions and a path forward is particularly important. No one can ignore the cost of the erosion of a natural resource such as water.** Assessment of the costs to a large degree comes down to an ethical consideration on the state in which we want to leave such natural resources for future generations.

### CONCLUSIONS

**Farmers collectively have been treating water as if supplies were infinite. They are not, and change is in the wind for water policy.** The timeframe in which any change in policy occurs and the manner in which various water users prepare and respond to this change will have major impacts.

**Land owners should be proactive by:**

- Ensuring they are up to speed with what regional councils are doing in their area.
- Ensuring they have access to current and future water needs via a resource consent, even if it costs now.

- Factoring in the ability to access water and any other possible water quality restrictions into financial decisions (e.g. when purchasing a new block of land in a 'sensitive' catchment for possible intensification).
- Asking for professional advice if in doubt.

While science-based decisions on water resources are (relatively) simple, political pressures driven by growing populations, or the needs of key industries make the situation one of conflict. **How the competing economic and environmental objectives of the individual land owners, local community and the country are to be balanced is unclear and involves trade-offs.**

## KEY TABLES AND FORECASTS

FX RATES	ACTUAL			FORECAST (END MONTH)						
	Jul-11	Aug-11	29-Sep	Dec-11	Mar-12	Jun-12	Sep-12	Dec-12	Mar-13	Jun-13
NZD/USD	0.879	0.854	0.772	0.80	0.82	0.85	0.85	0.83	0.82	0.80
NZD/AUD	0.799	0.798	0.794	0.82	0.82	0.83	0.83	0.81	0.82	0.82
NZD/EUR	0.610	0.594	0.571	0.62	0.62	0.63	0.61	0.59	0.59	0.59
NZD/JPY	67.54	65.48	59.09	60.0	61.5	63.8	64.6	63.1	63.1	61.6
NZD/GBP	0.536	0.526	0.496	0.52	0.52	0.53	0.52	0.51	0.50	0.49
NZ\$ TWI	74.2	73.0	68.9	71.7	72.8	74.4	73.8	72.2	72.0	71.0

INTEREST RATES	ACTUAL			FORECAST (END MONTH)						
	Jul-11	Aug-11	29-Sep	Dec-11	Mar-12	Jun-12	Sep-12	Dec-12	Mar-13	Jun-13
NZ OCR	2.50	2.50	2.50	2.50	2.75	3.00	3.25	3.50	3.75	4.00
NZ 90 day bill	2.95	2.99	2.86	2.80	3.20	3.30	3.70	3.80	4.20	4.30
NZ 10-yr bond	4.93	4.52	4.32	4.40	4.50	4.60	4.80	4.90	5.00	5.00
US Fed funds	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25
US 3-mth	0.26	0.33	0.37	0.35	0.35	0.35	0.35	0.35	0.35	0.35
AU Cash Rate	4.75	4.75	4.75	4.75	4.75	4.75	4.75	4.75	4.75	4.75
AU 3-mth	5.07	4.87	4.80	4.90	4.90	4.90	4.90	4.90	4.90	4.90

ECONOMIC INDICATORS	Dec-10	Mar-11	Jun-11	Sep-11	Dec-11	Mar-12	Jun-12	Sep-12	Dec-12	Mar-13
GDP (% qoq)	0.6	0.9	0.1	<b>0.9</b>	<b>1.5</b>	<b>0.4</b>	<b>1.0</b>	<b>0.9</b>	<b>0.8</b>	<b>0.7</b>
GDP (% yoy)	1.3	1.7	1.5	<b>2.5</b>	<b>3.4</b>	<b>2.9</b>	<b>3.9</b>	<b>3.9</b>	<b>3.1</b>	<b>3.4</b>
CPI (% qoq)	2.3	0.8	1.0	<b>0.8</b>	<b>0.7</b>	<b>0.6</b>	<b>0.8</b>	<b>0.7</b>	<b>0.6</b>	<b>0.8</b>
CPI (% yoy)	4.0	4.5	5.3	<b>5.0</b>	<b>3.3</b>	<b>3.1</b>	<b>2.9</b>	<b>2.8</b>	<b>2.7</b>	<b>2.9</b>
Employment (% qoq)	-0.3	1.3	0.0	<b>0.7</b>	<b>0.6</b>	<b>0.7</b>	<b>0.5</b>	<b>0.5</b>	<b>0.4</b>	<b>0.4</b>
Employment (% yoy)	1.3	1.8	2.0	<b>1.7</b>	<b>2.6</b>	<b>2.0</b>	<b>2.5</b>	<b>2.3</b>	<b>2.1</b>	<b>1.8</b>
Unemployment Rate (% sa)	6.7	6.5	6.5	<b>6.2</b>	<b>5.9</b>	<b>5.6</b>	<b>5.5</b>	<b>5.3</b>	<b>5.3</b>	<b>5.3</b>
Current Account (% GDP)	-3.5	-3.6	-3.7	<b>-4.0</b>	<b>-3.7</b>	<b>-4.1</b>	<b>-4.3</b>	<b>-4.6</b>	<b>-4.9</b>	<b>-5.0</b>
Terms of Trade (% qoq)	0.8	0.8	2.3	<b>3.0</b>	<b>1.0</b>	<b>-0.9</b>	<b>-0.8</b>	<b>-0.8</b>	<b>-0.8</b>	<b>-0.8</b>
Terms of Trade (% yoy)	12.3	6.7	7.0	<b>7.1</b>	<b>7.3</b>	<b>5.5</b>	<b>2.3</b>	<b>-1.4</b>	<b>-3.3</b>	<b>-3.1</b>

Figures in bold are forecasts. Quarter-on-Quarter yoy: Year-on-Year

# NEW ZEALAND'S 20 LARGEST EXPORT MARKETS

## NZ'S TOP EXPORT MARKETS FOR THE 12 MONTHS ENDED AUGUST 2011

	Global Total	Australia	China	USA	Japan	Korea	UK	Germany	India	Taiwan	Indonesia	Malaysia	Singapore	Hong Kong	Philippines	Thailand	Saudi Arabia	Netherlands	Canada	UAE	Venezuela
Sheepmeat	2,974	10	179	321	66	5	583	284		57		68	14	35	1	6	92	151	116	13	
Beef	2,064	16	12	796	191	173	39	22		129	117	14	44	37	40	8	9	36	122	20	
Other Meat	447	23	10	20	43	26	32	71		2	17	3	7	17	2	2	8	26	5		
Milk Powder	6,632	75	1,809	3	23	12			46	169	239	322	224	42	275	274	292	3		279	450
Butter	2,490	91	189	82	28	27			45	80	49	57	47	21	87	49	136	2	28	46	4
Cheese	1,342	270	68	10	303	112	23		2	40	46	27	9	19	49	16	41	23		18	16
Whey/Casein	1,635	61	181	679	212	43	4	105	4	10	25	16	47	4	21	3	22		22		5
Kiwifruit	1,045	62	89	27	304	70		217	3	72	7	11	9	26	1	5			2	4	
Apples	368			43			46	51	16	26	5	10	9	25			53	6	11		
Other Fruit/Vegetable	597	268	4	31	143	21	3	3	2	16	2	18	10	6	1	12		3	2		
Wine	1,110	351	19	233	11	1	290	7	1			2	14	19	1	1	28	58	4		
Wool	690	75	213		92	91			12	27	91	26	9		7	34					
Skins/Hides	687	41	291	24	-68	-68	65	42	57	-14	-81	-23	-9	47	-7	-17		1	4		
Logs	1,767		1,068		171	310			197	12						4				1	
Sawn Timber	1,096	332	135	159	86	49	2	3	8	40	25	14	4	1	47	30	11	8	1	6	
Fibreboard/Plywood	360	67	28	17	174	1			5	4	18	6	1		4	2	5		1		
Wood Pulp	690	75	213		92	91			12	27	91	26	9		7	34					
Fish/Seafood	1,472	283	254	167	116	42	15	38	1	9	2	9	31	158	2	23	2	7	13	3	
Crude Oil	2,245	2,153			46								7			17					
Aluminium	1,261	101	28	74	652	128	57		22	2	2	1		11			80	6			
Remainder	15,575	6,140	975	1,228	692	484	356	158	496	187	211	227	296	300	194	193	78	174	180	83	7
<b>TOTAL</b>	<b>46,548</b>	<b>10,495</b>	<b>5,765</b>	<b>3,915</b>	<b>3,374</b>	<b>1,618</b>	<b>1,515</b>	<b>1,002</b>	<b>929</b>	<b>897</b>	<b>867</b>	<b>833</b>	<b>782</b>	<b>768</b>	<b>731</b>	<b>717</b>	<b>697</b>	<b>597</b>	<b>565</b>	<b>489</b>	<b>483</b>

## NZ MERCHANDISE EXPORTS ANNUAL CHANGE BETWEEN THE 12 MONTHS ENDED AUGUST 2011 AND A 12 MONTH SPAN A YEAR EARLIER

	Global Total	Australia	China	USA	Japan	Korea	UK	Germany	India	Taiwan	Indonesia	Malaysia	Singapore	Hong Kong	Philippines	Thailand	Saudi Arabia	Netherlands	Canada	UAE	Venezuela
Sheepmeat	235	-2	68	79	11	2	-37	20		-9		21		-31		3	-24	67	13	-1	
Beef	226	4	3	58	-4	30	11	8		17	-22	2	3		6	1	4	14	28	3	
Other Meat	19	3	5	3	7	5	-4	-3			-5		1	-1		1	-1	5	3		
Milk Powder	1,585	14	522	1	3	8			-17	32	19	43	-8	19	18	83	113	-2		46	153
Butter	672	10	100	-23	26	10		-1	-24	29	-3	19	8	5	6	23	59	2	21	18	
Cheese	-63	-36	4	-6	23	16	-28		2	4	7	-1	-2		-10	6	-4	-8			10
Whey/Casein	180	13	53	121		8	2	30		4	-11	5	15	1	-1	-3	3	-3	-14		3
Kiwifruit	38	14	14	-6	10	2		-2	1	6	2			3					-2	1	
Apples	32			-17			6	3	7	4	1	4	2	8				1			
Other Fruit/Vegetable	31	18	1		9	2	-2	-1	1	3	1	-4	-3	-3		4		1			
Wine	59	21	1	13	1		1	2				1	1	6			6	-3	1		
Wool	26	-13	77		-12	4				-5	-33	2	9		-4	1					
Skins/Hides	268	9	78	1	18	1	14	14	-9	7	34	-1	-10	2	4	-3			2		
Logs	506		387		23	27			75	1						1		-2		-5	
Sawn Timber	-28	12	-2	-45	-5	12	1	1	4	12	1	2	-1	-1	15	5	-15	-4	1	-9	
Fibreboard/Plywood	18	1	-5		24	-1			1	-1	1	1								-1	
Wood Pulp	26	-13	77		-12	4				-5	-33	2	9		-4	1					
Fish/Seafood	95	2	120	2	-5	-1	2	8		-6	1	2	-10	-95	-3	12	1	2	1	-1	
Crude Oil	100	375			-19								-224			-32					
Aluminium	139	-25	1	30	52	23	13	-8	11	-11	-1	-3		-1		-9		35	3	-1	
Remainder	946	216	44	39	61	97	-6	3	113	-5		5	-115	18	19	34	31	4	43	19	-7
<b>TOTAL</b>	<b>5,110</b>	<b>623</b>	<b>1,550</b>	<b>247</b>	<b>212</b>	<b>250</b>	<b>-27</b>	<b>73</b>	<b>168</b>	<b>76</b>	<b>-40</b>	<b>98</b>	<b>-324</b>	<b>-71</b>	<b>46</b>	<b>132</b>	<b>167</b>	<b>118</b>	<b>94</b>	<b>71</b>	<b>159</b>

## NZ MERCHANDISE EXPORTS ANNUAL CHANGE BETWEEN THE 3 MONTHS ENDED AUGUST 2011 AND A 3 MONTH SPAN A YEAR EARLIER

	Global Total	Australia	China	USA	Japan	Korea	UK	Germany	India	Taiwan	Indonesia	Malaysia	Singapore	Hong Kong	Philippines	Thailand	Saudi Arabia	Netherlands	Canada	UAE	Venezuela
Sheepmeat	114		9	17	2	1	4	16		5		-2		1		3	24	3	-1		
Beef	20	1	3	3	-13	-1	3	2		-2	-1		2	-1	2	-1		7	5	1	
Other Meat		3	1					-5			-2			1			-1	3	1		
Milk Powder	114	1	-65		1	1			2	5	23	9	6	5	15	-19	22	1		11	12
Butter	122	-1	24	10	4	2				-4	4	3	4	1	3	17	2	12	2	-1	
Cheese	-29	-20	-2	-3	20	-3	-1			-3	-3	-2	-1	-1	1	1			-2	4	
Whey/Casein	31	2	15	11	-2	4		-4	-1	1	-5	2	7		2		-1		3		
Kiwifruit	54	9	8	-4		6		16		12	2	1		4					-1	1	
Apples	2			-6			1	2	2	-2	1	1	1	1		-1					
Other Fruit/Vegetable	11	16		-2	4							-6	-3			2					
Wine	17	14	3	1			-3	2					1	1				2	-3		
Wool	-19	1	6		-8	-2			-1	-3	-9	-2	4		-1	-3					
Skins/Hides	63	-6	29	-1	9	1		3		2	9	1	-4	-1	1	1					
Logs	89		88		-1	7				-1										-3	
Sawn Timber	-64	-7	-11	-13	-7	3		-1		2	-1	-1	-1		1		-16	-3		-2	
Fibreboard/Plywood	1	-1	-3		5					-1		1			1		-2			-1	
Wood Pulp	-19	1	6		-8	-2				-1	-3	-9	-2	4		-1	-3				
Fish/Seafood	-23	-5	17	-12	-9		1	-2		-1			-3	-33		5		1	-1		
Crude Oil	195	211														-17					
Aluminium	-2	-8	3	-6	15	-6	-3	-3	3	-1				-2		-1		12	-1		
Remainder	598	131	138	50	-71	14	3	23	127	7	-4	26	60	-79	27	-7	17	36	33	8	12
<b>TOTAL</b>	<b>1,274</b>	<b>343</b>	<b>268</b>	<b>46</b>	<b>-58</b>	<b>25</b>	<b>5</b>	<b>49</b>	<b>131</b>	<b>16</b>	<b>4</b>	<b>29</b>	<b>77</b>	<b>-101</b>	<b>50</b>	<b>-37</b>	<b>41</b>	<b>84</b>	<b>50</b>	<b>16</b>	<b>27</b>

## IMPORTANT INFORMATION

### NEW ZEALAND DISCLAIMER

This publication is for information purposes only. Its content is intended to be of general nature, does not take into account your financial situation or goals, and is not a personalised adviser service under the Financial Advisers Act 2008. It is recommended you seek advice from a financial adviser which takes into account your individual circumstances before you acquire a financial product. This publication does not constitute an offer to sell or solicitation to buy any security or other financial instrument. No part of this publication can be reproduced, altered, transmitted to, copied to or distributed to any other person without the prior express permission of ANZ National Bank Limited (the "Bank").

This publication is a necessarily brief and general summary of the subjects covered. The information contained in this publication is given in good faith, has been derived from sources perceived by it to be reliable and accurate and the Bank shall not be obliged to update any such information after the date of this publication. To the extent permitted by law, neither the Bank nor any other person involved in the preparation of this publication accepts any liability for the content of this publication (including the accuracy or completeness thereof) or for any consequences flowing from its use.

### UNITED STATES DISCLAIMER

This publication is being distributed in the United States by ANZ Securities, Inc. (Member of FINRA [[www.finra.org](http://www.finra.org)] and registered with the SEC) ("ANZ S") (an affiliated company of Australia and New Zealand Banking Group Limited ("ANZBG") and the Bank), which accepts responsibility for its content. Further information on any securities referred to herein may be obtained from ANZ S upon request. Any US person(s) receiving this publication and wishing to effect transactions in any fixed income securities referred to herein should contact ANZ S 277 Park Avenue, 31st Floor, New York, NY 10172 USA, Tel: 1-212-801-9160, Fax: 1-212-801-9163, not its affiliates.

This publication is issued on the basis that it is only for the information of the particular person to whom it is provided. This publication may not be reproduced, distributed or published by any recipient for any purpose. This publication does not take into account your personal needs and financial circumstances. Under no circumstances is this publication to be used or considered as an offer to sell, or a solicitation of an offer to buy.

In addition, from time to time ANZBG, the Bank, ANZ S, their affiliated companies, or their respective associates and employees may have an interest in any financial products (as defined by the Australian Corporations Act 2001), securities or other investments, directly or indirectly the subject of this publication (and may receive commissions or other remuneration in relation to the sale of such financial products, securities or other investments), or may perform services for, or solicit business from, any company the subject of this publication. If you have been referred to ANZBG, the Bank, ANZ S or their affiliated companies by any person, that person may receive a benefit in respect of any transactions effected on your behalf, details of which will be available upon request.

The information herein has been obtained from, and any opinions herein are based upon, sources believed reliable. The views expressed in this publication accurately reflect the author's personal views, including those about any and all of the securities and issuers referred to herein. The author however makes no representation as to its accuracy or completeness and the information should not be relied upon as such. All opinions and estimates herein reflect the author's judgement on the date of this publication and are subject to change without notice. No part of the author's compensation was, is or will be directly or indirectly related to specific recommendations or views expressed in this publication. ANZBG, the Bank, ANZ S, their affiliated companies, their respective directors, officers, and employees disclaim any responsibility, and shall not be liable, for any loss, damage, claim, liability, proceedings, cost or expense ("Liability") arising directly or indirectly (and whether in tort (including negligence), contract, equity or otherwise) out of or in connection with the contents of and/or any omissions from this communication except where a Liability is made non-excludable by legislation.

This document has been prepared by ANZ National Bank Limited. ANZ (part of ANZ National Bank Limited), Level 7, 1 Victoria Street, Wellington 6011, New Zealand Phone 64-4-802 2000 Fax 64-4-496 8639  
<http://www.anz.co.nz> e-mail [nzeconomics@anz.com](mailto:nzeconomics@anz.com)