

The significance of dairy to the New Zealand economy

*A speech delivered to DairyNZ
in Hamilton on 7 May 2014*

By Graeme Wheeler, Governor

When Charles Wilson, the CEO of General Motors, was being reviewed by the US Senate in 1953 for the position of Secretary of Defence in President Eisenhower's Administration he commented:

"For years I thought what was good for our country was good for General Motors and vice-versa".

At the time, General Motors accounted for around 2 percent of US GDP.

Many might express a similar sentiment about our dairy industry. Dairy farmers have experienced some of the greatest prosperity, and also most difficult adjustments, that our economy has seen. Prosperous periods, like the introduction of refrigerated shipping, the post WWII commodity boom, and the current flourishing trade with China. And difficult times, when the sector had to adjust to Britain's accession into the EEC, the constant restructuring of co-operatives, the removal of subsidies in the mid-1980s, and periods of exchange rate pressure that were not necessarily accompanied by strong underlying commodity prices.

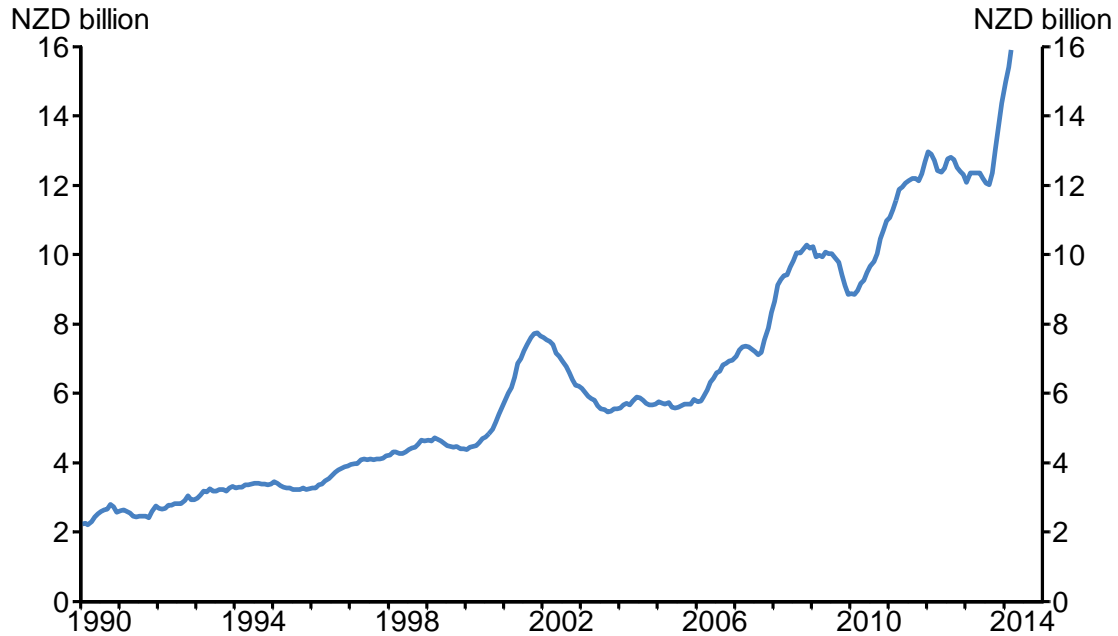
Today, I would like to discuss the critical economic contribution that the sector makes to the New Zealand economy, and comment on three issues:

- the impact of commodity prices on New Zealand's exchange rate;
- the importance of our dairy export trade with China; and
- the level of dairy farmer debt

I will begin by talking about the sector's export performance.

Dairy export revenue has risen dramatically over the past two decades (figure 1). At \$15.5 billion, dairy exports make up almost a third of New Zealand's annual merchandise exports.

Figure 1: NZ Dairy exports (annual, New Zealand dollar terms)

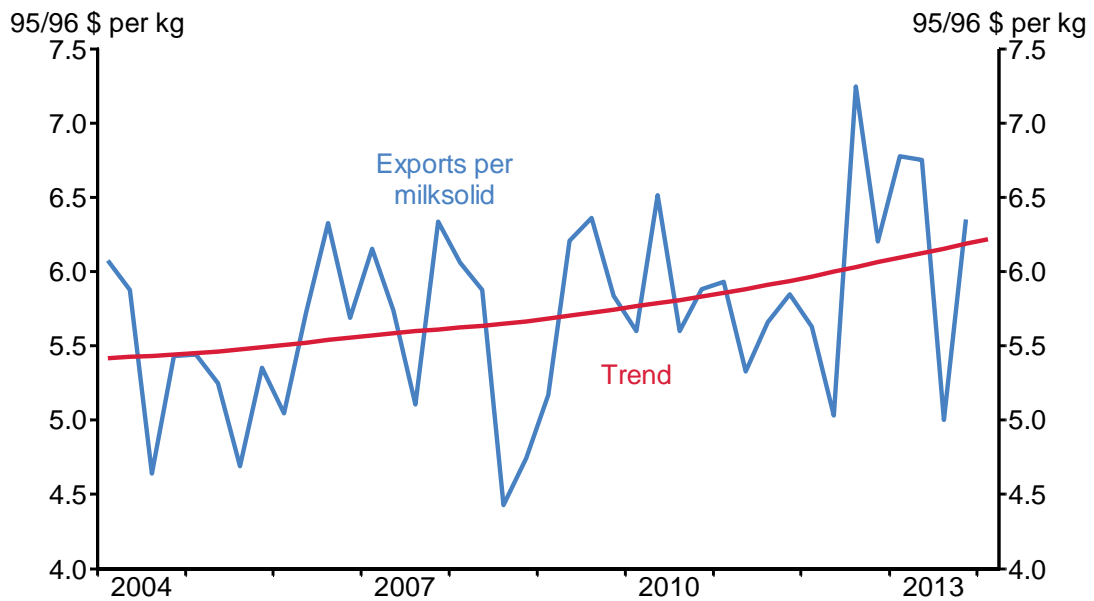


Source: Statistics New Zealand.

Growing export receipts have been driven by higher prices and increasing animal numbers. Over the past eight years, dairy prices in NZ dollars were, on average, 65 percent higher than in the previous two decades and dairy cattle numbers increased by 30 percent.

Productivity growth has also been impressive. During those eight years, improved stock management and supplement use helped generate farm productivity growth (measured by production per hectare) of 1.9 percent per annum. Productivity beyond the farm gate (as measured by the volume of exports per kilogram of milk solids produced) increased by a third as dairy processors became more efficient, reduced wastage, and shifted towards more lucrative products (figure 2).

Figure 2: Volume of exports per kilogram of milk produced



Source: Statistics New Zealand, DCANZ, RBNZ estimates.

Strong growth in dairy receipts creates benefits for others, such as rural communities, rural service providers, machinery retailers, and financial institutions. There are also significant indirect effects on the broader economy through additional spending and upward pressure on the exchange rate.

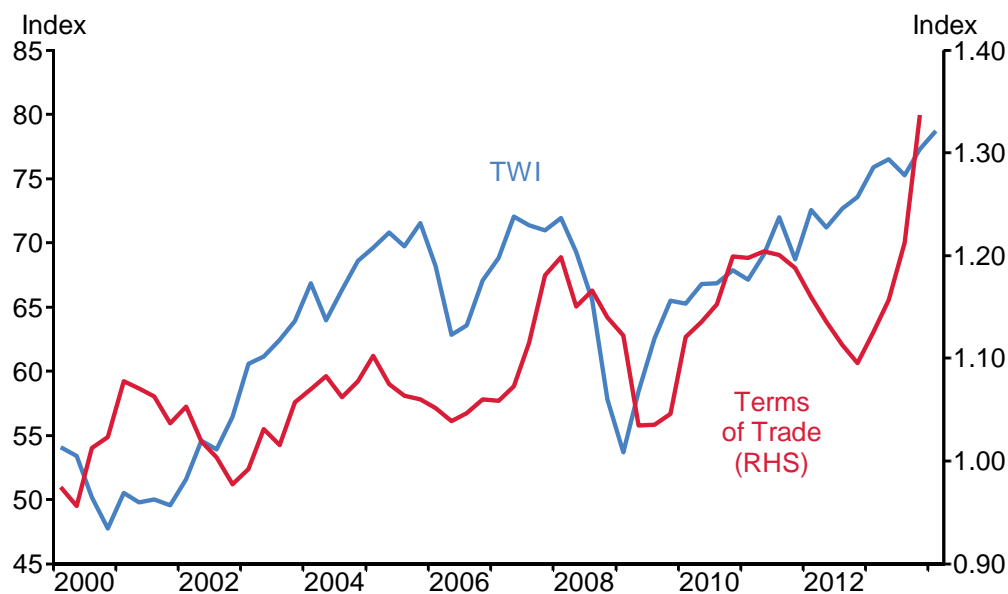
i) **New Zealand's exchange rate**

An important factor behind the rise in New Zealand's exchange rate has been the strength of the terms of trade (which measures the ratio of export prices to import prices, both in NZ dollar terms). Our terms of trade are at their highest level since 1973 and are 20 percent above the average level of the 1990s. Dairy prices account for just under half of the ANZ commodity price index (though a smaller share of goods and services exports) so changes in global dairy prices have a major effect on the terms of trade and, in turn, the NZ dollar exchange rate. Figure 3 shows the close relationship between movements in the terms of trade and the exchange rate.

Other factors also affect the value of our currency. An important structural factor affecting the long term level of the exchange rate has been the persistent gap between national savings and investment. Over the past 40 years New Zealand has demanded more capital for investment in housing, infrastructure, and other assets than its national savings could finance. This has meant an ongoing reliance on foreign saving via inward capital flows, placing upward pressure on interest rates and the exchange rate.

Our current high exchange rate also reflects the relative strength of New Zealand's economic performance and the consequent upward pressure on our interest rates relative to those in other advanced economies.

Figure 3: TWI and Terms of Trade



Source: Statistics New Zealand, RBNZ.

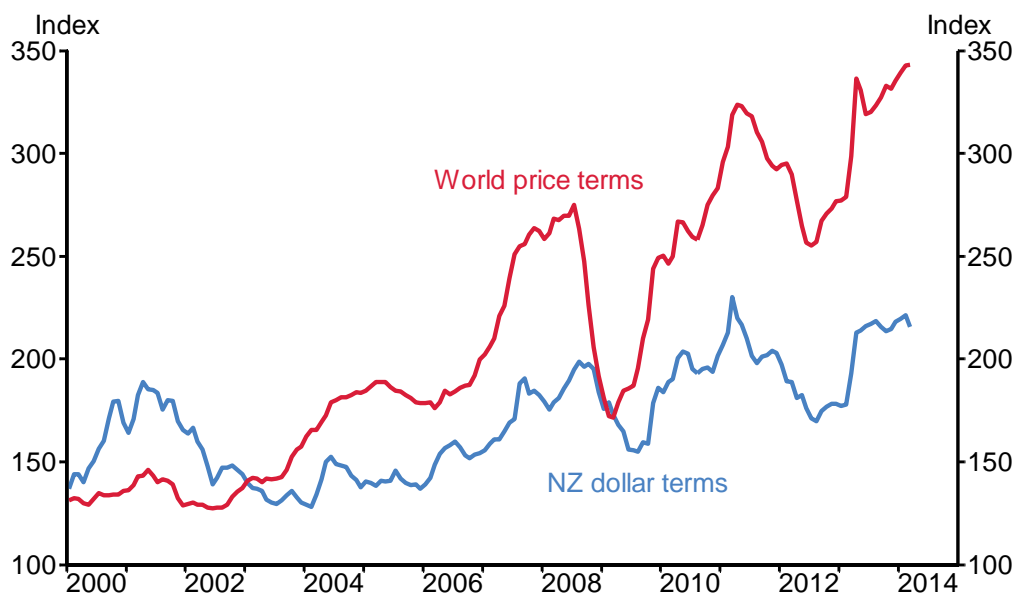
A key issue is whether the strong increase in global dairy prices represents a permanent shift, or whether it reflects cyclical elements. We believe both factors are

present. Structurally, the demand for protein is rising rapidly in middle income countries as per capita incomes and urbanisation increase. China's 50 percent increase in dairy imports in 2013 reflects this structural change, as well as sluggish growth in Chinese milk production as small, inefficient producers leave the sector as part of the Government's efforts to raise the quality of raw milk production.

But cyclical or temporary factors are also in play. These include the 2013 drought in New Zealand, severe climatic conditions in Asia, and an outbreak of foot and mouth disease in China. The strong supply response from the US, Europe and New Zealand, as a result of the high global dairy prices, is expected to exert downward pressure on international dairy prices over the next two to three years.

The high exchange rate has three major effects. First, it reduces income gains to New Zealand commodity exporters, but even allowing for this, commodity export prices are well ahead of those received in the 2008 commodity price boom (figure 4).

Figure 4: ANZ commodity price index



Source: ANZ banking group.

Second, part of the benefit of increased dairy prices accrues indirectly to all New Zealand households, rather than specifically to dairy farmers. Appreciation in the New Zealand dollar lowers import prices, and significantly boosts the real disposable incomes of many consumers. Third, currency appreciation adversely affects the tradable sector, and especially export and import-competing firms that are not exposed to the dairy industry or other sectors enjoying high international prices.

The Reserve Bank considers that the exchange rate is overvalued and does not believe its current level is sustainable. Many analysts consider that the positive news on the economy and the forecast tightening in interest rates is fully priced in and believe that there is considerable downside risk for the currency. Our exchange rate could be expected to weaken if one or more of the following occurs: the US economy continues to improve; global dairy prices continue to come off their recent highs; China's growth slows; financial market volatility begins to rise; or if there is a global 'risk off' event such as a correction in global equity prices.

If, however, the exchange rate does remain strong, it is likely to be reflected in continued low or negative tradables inflation. In such circumstances, the high exchange rate, along with new economic data, will be a factor in our assessment of the extent and speed with which the Official Cash Rate (OCR) needs to be raised.

Further, if the currency remains high in the face of worsening fundamentals, such as a continued weakening in export prices, it would become more opportune for the Reserve Bank to intervene in the currency market to sell NZ dollars.

ii) **New Zealand's Dairy Export Trade with China**

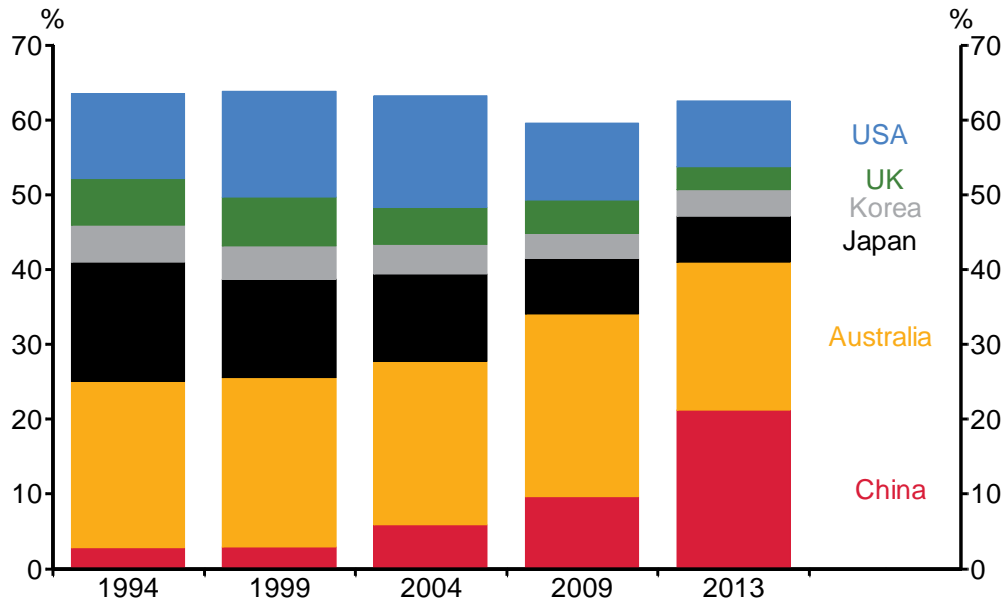
China's economic growth over the past 35 years is unparalleled in modern times.

China achieved average annual growth of 10 percent in the three decades to 2010, and although growth has slowed, the Government's target is for annual growth of 7-and-a-half percent over the medium term.

China's growth has been driven by several factors: high domestic investment and savings ratios, sizable foreign direct investment, the impact of catch up technologies, the massive shift of labour from subsistence agriculture to higher productivity roles in urban industrial production, and on-going market based reforms including, importantly, those associated with its membership of the World Trade Organisation since 2001.

China is the world's second largest economy, and the largest trading nation. It is the second largest trading partner for the United States and the European Community, and the largest trading partner for the 11 countries of ASEAN, as well as Australia and New Zealand. China takes 21 percent of our merchandise exports – up dramatically from 4 percent a decade ago (figure 5).

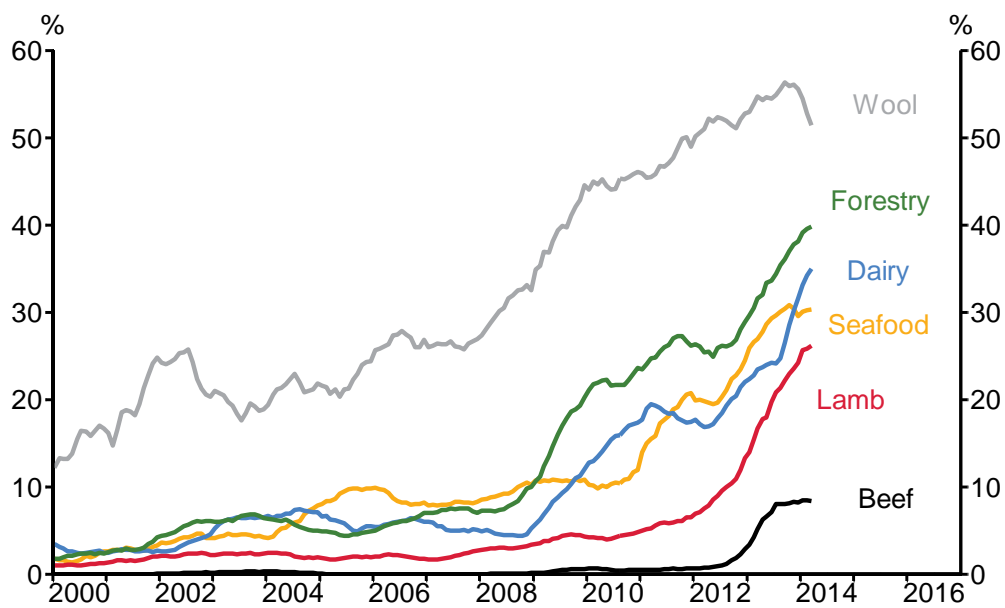
Figure 5: Export market shares (average annual percentage for given year)



Source: Statistics New Zealand.

China is our largest export market for every agricultural commodity except beef (where it is our second largest market behind the United States). It purchases a third of New Zealand's dairy exports (figure 6).

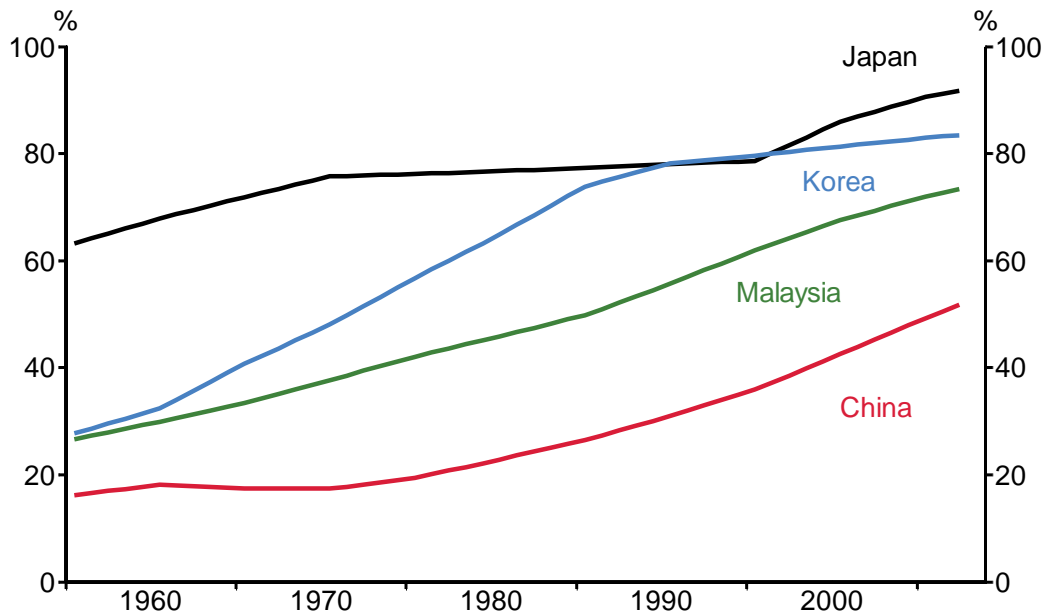
Figure 6: Share of primary exports to China (annual total)



Source: Statistics New Zealand.

Provided China's economy continues to expand at around current rates, growing demand for protein-based commodities looks assured. China's current rate of urbanisation, which is around 50 percent and well below the more industrialised Asian economies, could trend higher for another two or three decades (figure 7). Higher incomes, and greater access to refrigerated products, mean that urban dwellers' per capita consumption of dairy products in China is about three times higher than that of rural dwellers.

Figure 7: Urbanisation rates in industrialised Asian countries



Source: World Bank.

An important issue is whether China can maintain a 7-8 percent growth rate over the long term. Such growth rates would continue to make China an outlier compared with the development of other middle income economies. China has achieved outstanding economic growth for over 30 years, but it faces several difficult challenges in the years ahead. These include: a declining labour force and aging population; rebalancing the economy towards stronger consumption and higher value added exports; meeting infrastructure demands; addressing

income inequalities in the central and western regions; tackling corruption and environmental issues; implementing the ambitious set of reforms announced in the third Plenum; and managing the very rapid build-up in local government and corporate debt over the past five years.

So while the long term future dairy trade with China seems assured, there are risks of temporary disruption along the way. Two particular issues are firstly, whether we have diversified our dairy export markets sufficiently, and secondly, could we find that our market leadership in respect of exports of whole milk powder is challenged?

There are grounds for optimism on the diversification front. Fifty years ago, nearly 90 percent of our dairy exports went to the United Kingdom, today it's 0.3 percent. Currently, Fonterra operates in more than 100 countries, several emerging market economies are growing rapidly, and new trading opportunities are being opened up through international trade agreements, and possibly through a trans-pacific partnership if negotiations are successful.

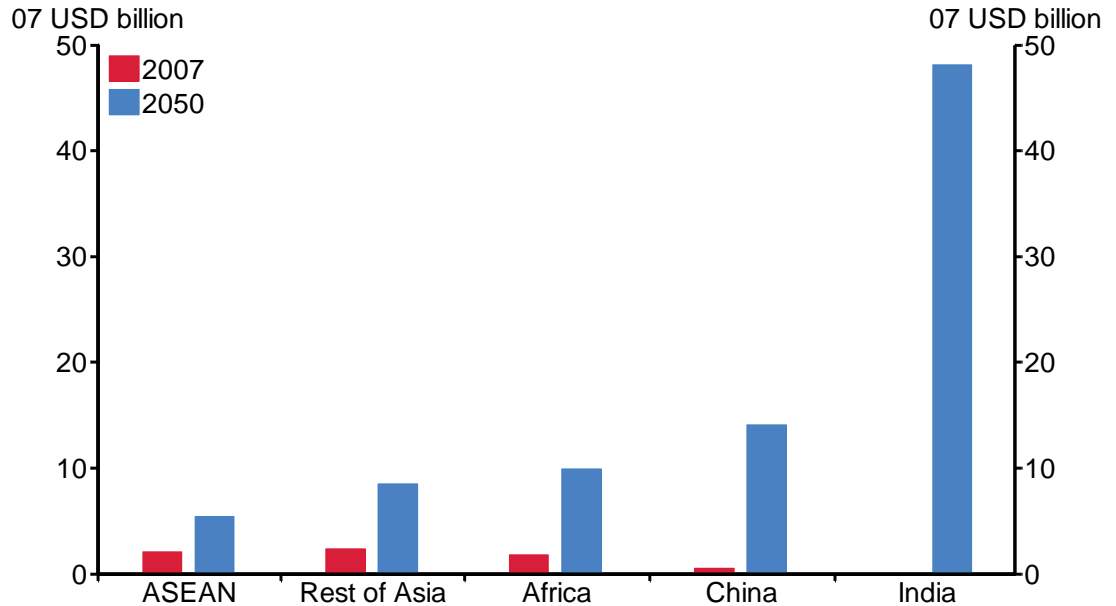
India, rather than China, is forecast by the Australian Bureau of Agricultural and Resource Economics and Sciences to be the major new market opportunity for dairy exports in the future. The Bureau projects global demand for dairy products to increase from USD7 billion in 2007 to USD85 billion in 2050 (in 2007 USD)¹.

By 2050, India's import demand for dairy products is projected to be USD48 billion – more than three times China's USD15 billion, given the projected growth in

¹ Linehan v, Thorpes, Andrews N, Kim Y, Beaini F, March 2012 Food demand to 2050. Opportunities for Australian agricultural research by the Australian Bureau of Agricultural and Resource Economics and Sciences. Conference paper 12.4

China's domestic production. World Bank projections suggest that China and India could be the world's largest and third largest economies at that time.

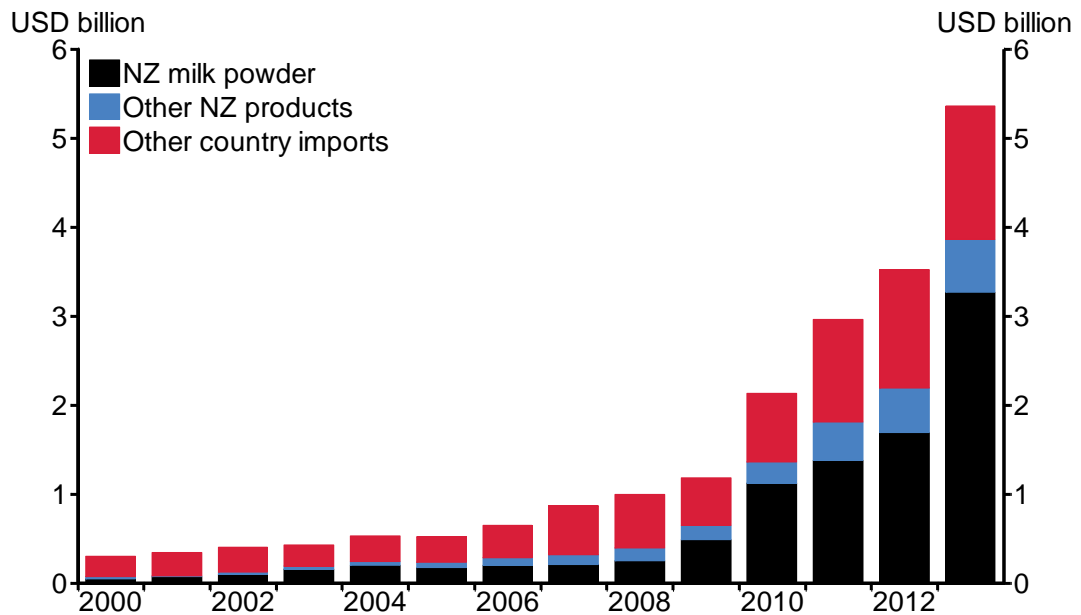
Figure 8: Projected global demand for dairy imports



Source: ABARES.

A second risk is that a strong competitor enters the Chinese market and threatens our market share. New Zealand supplied over 70 percent of China's dairy imports in 2013 (figure 9).

Figure 9: Chinese imports of dairy products



Source: UN comtrade.

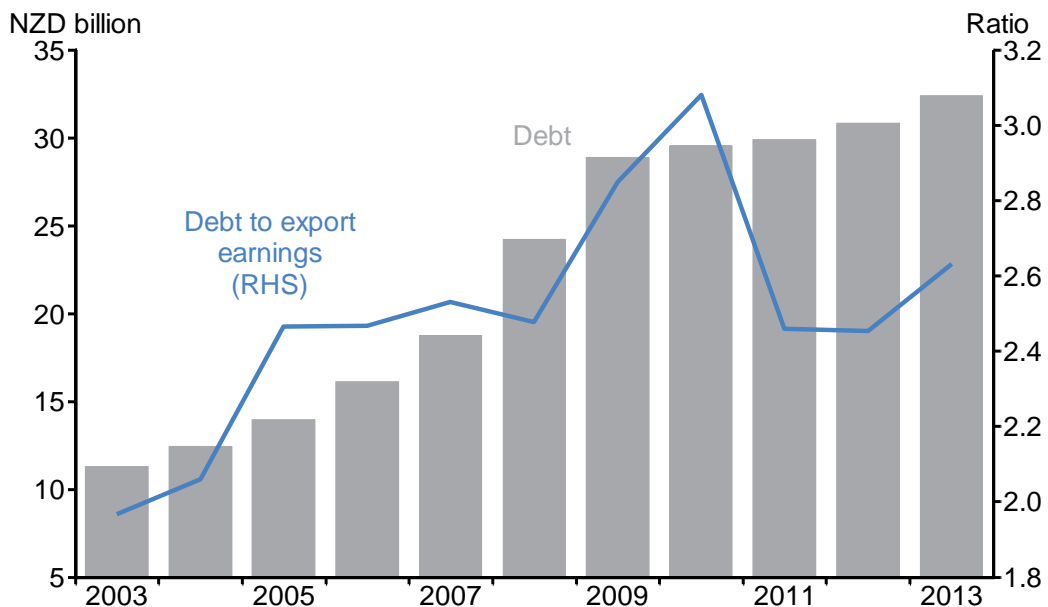
This high market share reflects the high quality of our product, in terms of nutritional value and safety, and the marketing skills in achieving major inroads into a market that others have found difficult.

But other countries also produce clean milk and these producers have seen the high returns and market share that New Zealand enjoys in China. Some, like the US producers, are investing in whole milk powder driers. While New Zealand is likely to continue dominating global milk powder export production for many years, we should expect competitors to more aggressively target the Chinese market. This reinforces the need for further diversification in export products and markets, including positioning for the opportunities that are expected to open up in the Indian market.

iii) Dairy farmer indebtedness

Dairy debt almost trebled over the past decade, and currently stands at \$32 billion. It is concentrated among a small proportion of highly leveraged farms with around half of the dairy debt being held by only 10 percent of dairy farmers. Strong export earnings saw the sector's debt to income ratio improve between 2010 and 2012, although for the decade as a whole this ratio tracked steadily upward (figure 10).

Figure 10: Dairy debt (June years)



Source: Statistics New Zealand, RBNZ.

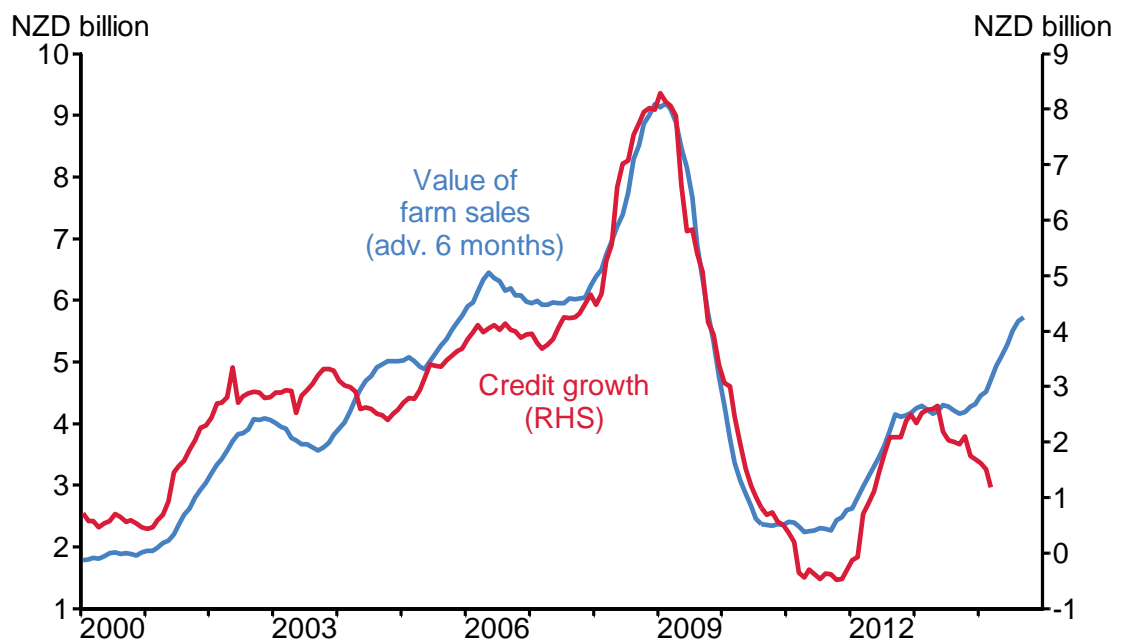
The elevated debt level means that some farmers are potentially highly exposed if there are substantial declines in the milk price pay-out, or if land prices fall. With dairy production techniques becoming more intensive and with a higher cost structure, the implied 'breakeven' pay-out for individual farm profitability has increased over time. A significant decline in the milk pay-out, for example, could place some highly indebted farmers under financial strain, particularly with the

market for farmland being more illiquid in times of stress. Higher debt levels mean that farmers are also exposed to rising interest rates, especially with close to 70 percent of dairy debt comprising floating rate mortgages.

Many dairy farmers however, are being cautious in the current cycle and are using their higher net incomes to acquire additional property and undertake farm improvements without taking on new debt - and in many cases are repaying debt. Farm building consents have been rising steadily and dairy conversions are increasing, while dairy farm prices remain well below 2008 levels and farm credit growth remains moderate (figure 11).

Dairy farmers are therefore generally taking a cautious approach in the knowledge that the current high prices can turn around quickly. This is encouraging to see given the vulnerability of the sector and its already high debt load.

Figure 11: Value of farm sales and credit growth



Source : REINZ, RBNZ

Conclusion

I began with a quote from Charles Wilson about what's good for General Motors. He could not have imagined 56 years later that the US government would have a 60 percent ownership stake in the company. But it does illustrate how even the most dynamic enterprises can lose competitiveness and suffer major losses in market share.

The New Zealand dairy industry is experiencing prosperous times, continuing the strong growth in export earnings of the past eight years. Animal numbers and prices have increased and on and off farm productivity growth has been impressive.

And the future looks bright. There seem to be important structural reasons behind the rise in dairy prices that should continue into the medium term. But cyclical elements were also present and it would not be surprising to see a continuation of the correction in auction prices that we have seen in recent months.

Looking ahead there are important challenges to manage. On the external front these include the oscillations in global dairy prices, the competition that dairy farmers will increasingly face from other international suppliers, and the need to continue diversifying our export markets and position ourselves for the enormous longer term opportunities that are expected to emerge in the Indian market. On the domestic front, dairy farmers should be conscious that high dairy prices can turn around quickly, and will need to continue managing their cash flows and borrowings in a prudent manner.