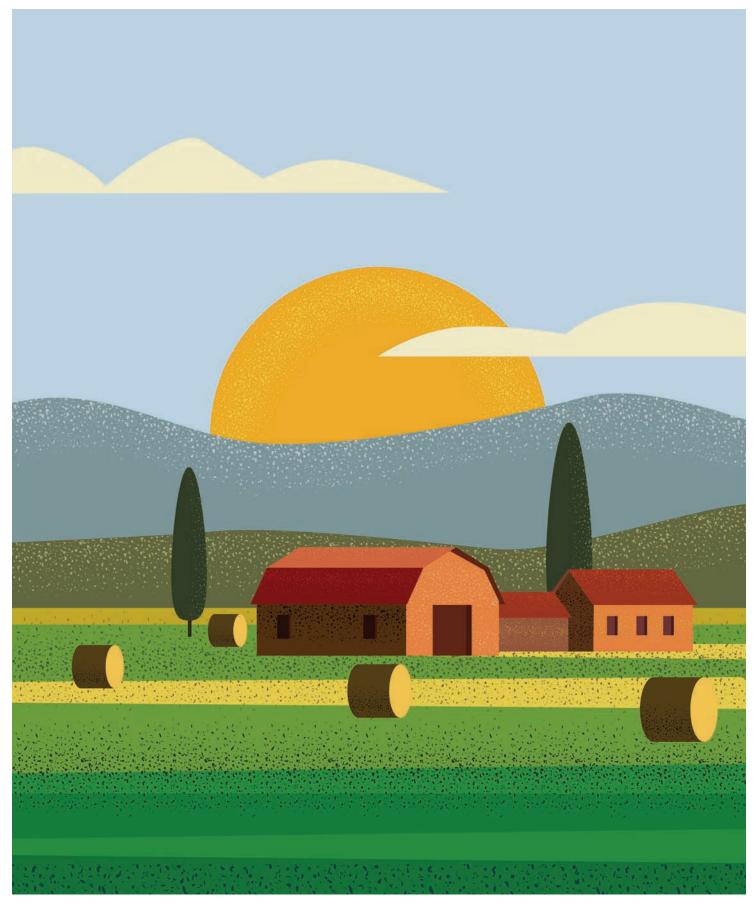




Global Farmland Index





9

of 15 countries recorded annual value gains above 3%

10.8%

Agriculture's contribution to global greenhouse gas emissions (FAO, 2017)

Welcome to the 2020 edition of Savills Global Farmland Index. At this time of worldwide uncertainty, there is an underlying sense of confidence across global farmland markets that historically have been reliable performers in economically turbulent times. While the full effect of the pandemic on global farmland values is still yet to be determined, the sector's performance over the last decade can be described as a game of two halves. The first, a post Global Financial Crisis (GFC) bounce as high commodity prices and rising institutional interest spurred growth of farmland. The second, a period of "treading water", where growth stagnated as income returns were challenged by lower commodity prices and higher capital bases.

At Savills we monitor global farmland markets with our partners and in this publication seek to dissect some of the structural drivers of farmland value that can be hidden in the veil of agricultural policy and taxation. Through a series of regional summaries, we highlight the key influencers on farmland performance and value trends.

We hope you find this publication interesting.

Richard Binning

Director of Farms and Estates

SAVILLS GLOBAL FARMLAND INDEX

The Index is based on data from the average value of crop/arable land in US\$ per hectare from 15 key farmland markets – Argentina, Australia, Brazil, Canada, Denmark, France, Germany, Hungary, Ireland, New Zealand, Poland, Romania, United Kingdom, United States and Uruguay. Converting to US\$ per hectare gives potential investors a good starting point for comparable analysis. It is a common denominator that corresponds to the currency of global markets. The values are relative to those in the year 2002 (2002 = 100). Exchange rates will affect the performance in domestic currency.

Currency movements disguise global farmland performance

Farmland continues to demonstrate long term growth and stability across different jurisdictions and sectors

Savills Global Farmland Index tracks capital value performance for crop/arable land types across the world. During the past 17 years (2002-2019) the index has recorded an 11% compound annual growth rate.

In 2019 the index recorded its first negative year since 2015 with a 0.8% decrease in global farmland value growth (figure 1). A closer look reveals almost all of this decline can be attributed to a stronger US\$ that exaggerated value movements downwards. In domestic currency, nine of the 15 countries analysed showed annual value gains of 3% or higher, with only four recording a negative annual performance.

In domestic currency terms, Australia and New Zealand witnessed the largest appreciation in farmland value growth of 14% and 13% in 2019. Brazil, Hungary and Canada also showed strong growth rates with reports of substantial gains across smaller localised areas. In contrast, rates of growth slowed in Argentina (-5% US\$) and Romania (-3.6%), with Ireland and the US recording a small (less than 1%) depreciation in values

The index also continues to perform strongly against the downward trend of key commodity markets (*figure 2*). The relationship between high commodity prices driving farmland values is particularly evident in the run-up to the peak of the market in 2014-15. Since then, weaker commodity prices represent one of a number of factors limiting capital appreciation.

Behind the numbers:

what is happening on the ground?

The global investment case for farmland is a complex equation of productivity, markets, cost bases, subsidy and risk – be it political, currency, weather or financial. All carry varying degrees of weight depending on the setting. Minimising or mitigating these risks usually comes at a cost, but it is no secret that a large part of the investment success comes from getting these fundamentals right and then optimising returns through good management.

The latter half of the decade to 2019 showed a stabilisation of farmland values with the index rising 1% over the period. In some regions, farmland values corrected to levels more in line with productive capacity, while in others values

plateaued as investors refined and consolidated holdings for future success.

While the index focuses on the arable farmland sector, it is important to put the data in context and understand the key influences on global values. The research highlights three key themes emerging across many of the markets.

Flight for security

"Security" is not universal when it comes to farmland, particularly on a global scale. There is the relative security of the jurisdiction with respect to land titles and enforceable contract rights and that which is associated with reliability of income returns.

For the former, there is evidence that farmland investors have softened their interest in higher risk regions in favour of those with a stronger legislative framework. While opportunities do remain for those investors with an appetite for risk, the slowdown does suggest growth is potentially capped in the current market.

Investors have instead turned to more developed markets and in particular, shown greater appetite for quality farmland in reliable climatic zones. In Australia, extensive drought periods have driven many farmers to higher rainfall or irrigated regions. Brazilian landowners are showing similar sentiment by consolidating land holdings across regions where the value proposition has been tried and tested over time. We expect this trend to continue, particularly as the effects of climate change exacerbate weather pattern variability and land degradation.

Highest and best use
It is common for farmland to be used for a range of enterprises and uses – each impacting relative earning capacity and, in turn value.

Development and adoption of ag-tech has significantly changed how land is used and performance optimised over the past 50 years and further pressure to innovate is likely to continue this progression.

The expansion of higher value crops and horticulture enterprises across many regions has demonstrated the growth potential of

66 The latter half of the decade to 2019 showed a stabilisation of farmland values analysed with the index rising 1% over the period 99

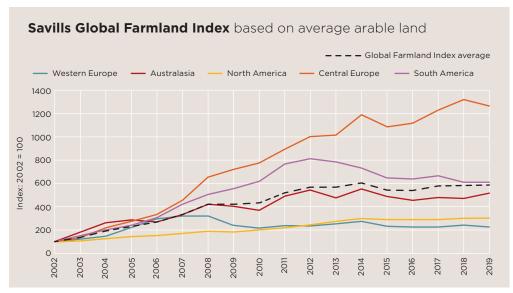


figure 1

Source Savills Research and USDA, Eurostat and various other data sources/estimates

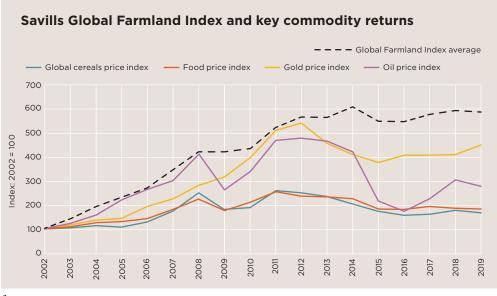


figure 2

 $\textbf{Source} \ \mathsf{Savills} \ \mathsf{Research}, \mathsf{FAO}, \mathsf{OPEC}, \mathsf{KitCo}$





pairing otherwise less productive land with water. This land use change is not necessarily reflected in our index analysis of arable farmland, however it does reveal the appetite for arbitrage and value added opportunities.

Also on the horizon are emerging environmental service markets, or the recognition of land for provision of net environmental gain. Whether by public market or private agreement, the development of these markets will add an additional or alternative income stream and it is likely we will see the triple bottom line (net position of financial, environmental and social factors) adopted as best practice. While carbon farming may seem outside the realms of the current commercial reality, it is not unreasonable to think that someday, a carbon sequestration gross margin may be worth more than its wheat comparison.

Localisation of land value growth
Reporting on high level average
land values can often disguise what
may be happening at a local or
regional level. The rate of growth
varies considerably across the globe and
farmland values will be influenced by many local
factors. It is imperative to consider the local
characteristics.

In Brazil's Mato Grosso region, farmland values display a high degree of correlation to proximity of sealed roads or market access infrastructure. Here values and growth potential are influenced by inflated freight costs and all-weather access, with significantly cheaper land often found in places where roads do not yet exist.

Farmland in New Zealand is showing isolated growth among sectors where the expansion of forestry and permanent plantings lend to premiums for extensive livestock and arable land respectively. Dairy land, however, has been under pressure as foreign investment regulation and environmental regulation cloud the sector's longer term prospects.

Overall, farmland continues to demonstrate long term growth and stability. However, as capitalisation rates have been stretched over recent times, investors have naturally begun refining their objectives and targeting opportunities with greater total return potential. Current indications suggest the next value added prospect will come from environmental markets.

11% compound annual growth rate recorded by the index 2002-2019

66 Canadian provinces are responsible for legislating matters of farmland ownership, leading to complex and varied rules and regulations 99

Investing in global farmland

Overseas ownership, taxation and subsidy have influenced farmland markets

North America

OVERSEAS OWNERSHIP UNITED STATES

- The US does not restrict foreign ownership of farmland at a federal level other than requiring full disclosure of the asset's details and the foreign entity involved to the United States Department of Agriculture.
- A number of US states impose their own restrictive laws including outright restrictions on the acquisition of certain property types, limitations on the total amount of land that can be acquired, and/or limitations on the length of time a property can be held.
- Approximately 2.2% of US farmland by area is in overseas ownership.

CANADA

- Canadian provinces are responsible for legislating matters of farmland ownership, leading to complex and varied rules and regulations. Most provinces limit the size of any acquisitions to less than 40 acres and maintain control over land and its primary use through land commissions.
- British Columbia and Ontario are exceptions, where overseas ownership is not restricted.

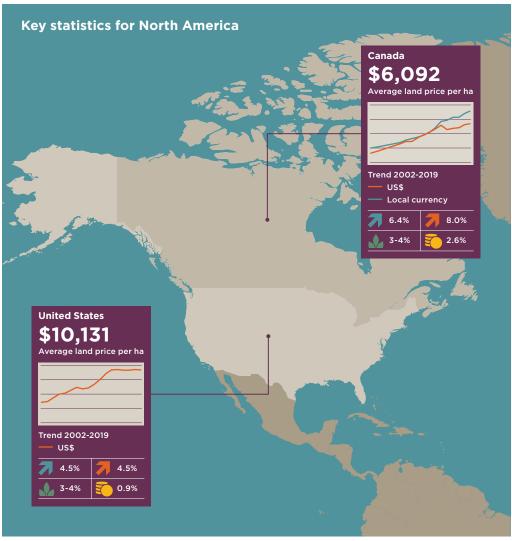
TAXATION

UNITED STATES

- Farmland owners are entitled to significantly reduced state and local property taxes whereby land can be valued at a "farm use value" rather than its fair market value with the discount typically 40-70% lower than the market value.
- This discount can also be applied to inheritance transfers of farmland.

CANADA

- A lifetime capital gains deduction is available to small farm businesses, which exempts each farmer up to one million CA\$ in realised capital gains. Farmers are also exempt from a portion of the capital gain if the land is sold to a direct decedent and allows the averaging of capital gain payments over a 10-year period.
- Cash accounting methods and inventory adjustments can be used to adjust income tax obligations.



Sources for North America summary OECD, US Department of Agriculture, Bonnefield, Farm Credit Canada

SUBSIDY

UNITED STATES

■ Farm subsidies have almost tripled in recent years as the Trump administration compensates farmers hit by trade war tariffs with direct support payments and market guarantee measures. Despite this, Organisation for Economic Co-operation and Development (OECD) data estimates producer support makes up 12% of gross incomes in 2019, down from 20% in the early 2000s.

CANADA

■ Most agricultural commodities are aligned with world prices with the exception of dairy, poultry and eggs, which operate under supply management quotas regulated by government to cap the amount produced in a region. OECD producer support estimates have reduced from 17% in 2000 to 8% in 2019, with funding directed towards business risk management programmes.

MARKET FACTORS

UNITED STATES

■ Many US farmers have borne the brunt of the trade war over the past four years and despite signs this may be resolving, the scars of rising agricultural debt and record loan default rates are evident. Some sectors have been hit harder than others, particularly with the added collapse of oil markets and the exporting and processing bottlenecks caused by the Covid-19 outbreak.

CANADA

■ Canadian farmers have not escaped trade war impacts with over 50% of agricultural produce exported (by value) and much of their agricultural trade linked to US markets. A weaker Canadian dollar has worked in their favour, as have domestic supply management quotas and high food import tariffs. Demand for farmland remains strong from those looking to achieve scale and those in supply managed sectors.

2.2%

of US farmland by area is in overseas ownership

\$23.6bn

government support for US farmers in 2019

1,000

hectare cap on overseas ownership in an arable region of Argentina

South America

OVERSEAS OWNERSHIP BRAZIL

■ Overseas investors must first obtain authorisation from two separate federal government agencies. The Ministry of Agriculture assesses the impact of the investment to the sector, while the National Institute of Land Settlement and Agrarian Reform is responsible for national land reform. Further restrictions on overseas investors limit the rural property owned to less than 25% of a municipality for the individual or 40% for persons/entities of the same nationality.

ARGENTINA

KEY

7

US\$

10 vear

Compound

CAGR local

Average dryland arable

crop lease rate

Agriculture's

contribution to GDP

currency

annual growth rate (CAGR)

■ A changeable history on foreign ownership with previous laws limiting the density of overseas land ownership in specified regions and capping the area to a maximum of 1,000 hectares in arable zones. This was relaxed in 2016, but approval is still needed from the National Land Registry to buy rural land. Figures from the Registry suggest 5.6% of farmland in Argentina is in overseas ownership.

URUGUAY

■ The country largely welcomes overseas capital and is often the beneficiary of capital that leaves Argentina during periods of political and economic turbulence.

TAXATION

BRA7II

■ The tax system is very complex with a large number of taxes imposed across three levels of government. Capital gains and

transfer taxes are paid in line with other real estate sectors, meaning farmland assets do not receive favourable treatment.

ARGENTINA

■ Overseas owners are subjected to an annual wealth tax on rural assets held and a higher withholding tax rate is applied to presumed net income (asset sales included).

URUGUAY

■ The adoption of tax territoriality (taxable income can only be applied to income generated in Uruguay) makes the country an attractive destination for overseas capital.

SUBSIDY

BRAZIL

■ Farmers benefit from an administration that values the sector's contribution to the national economy. Farm subsidies are low, reflecting Brazil's globally competitive exports. However, concessional credit and crop insurance schemes are available in some instances.

ARGENTINA

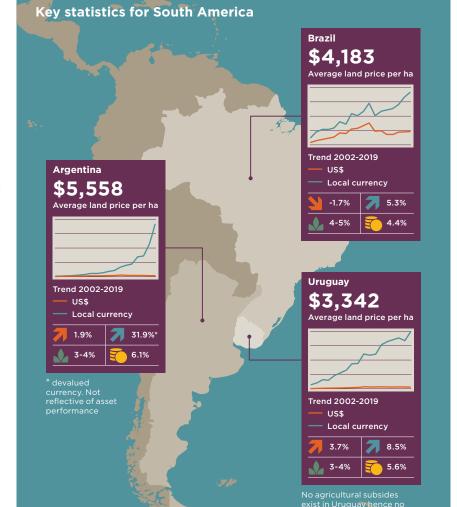
■ The producers of agricultural products effectively receive negative support due to export taxes that depress domestic prices. The sector has shown dynamic growth in spite of this, with an innovative private sector combining with public services to promote research, education and productivity improvements.

MARKET FACTORS

■ The region struggles with volatile currencies and political instability, however the risks are different across countries. Brazil remains a heavyweight of agricultural production and trade. The agricultural lobby is robust and with major infrastructure projects promoting market access, the case for growth and expansion is strong. Argentina battles an administration that limits the global competitiveness of its farmers and devalues domestic currency. As a result, income yields are under pressure in US dollars and land market activity is paralysed by very low liquidity. Farmland in Uruguay has corrected to levels more reflective of productive capacity. The market trades in US dollars, reducing the currency risk, but with no capacity for domestic debt funding, growth prospects may be restricted.

5.6%

of farmland in Argentina is in overseas ownership



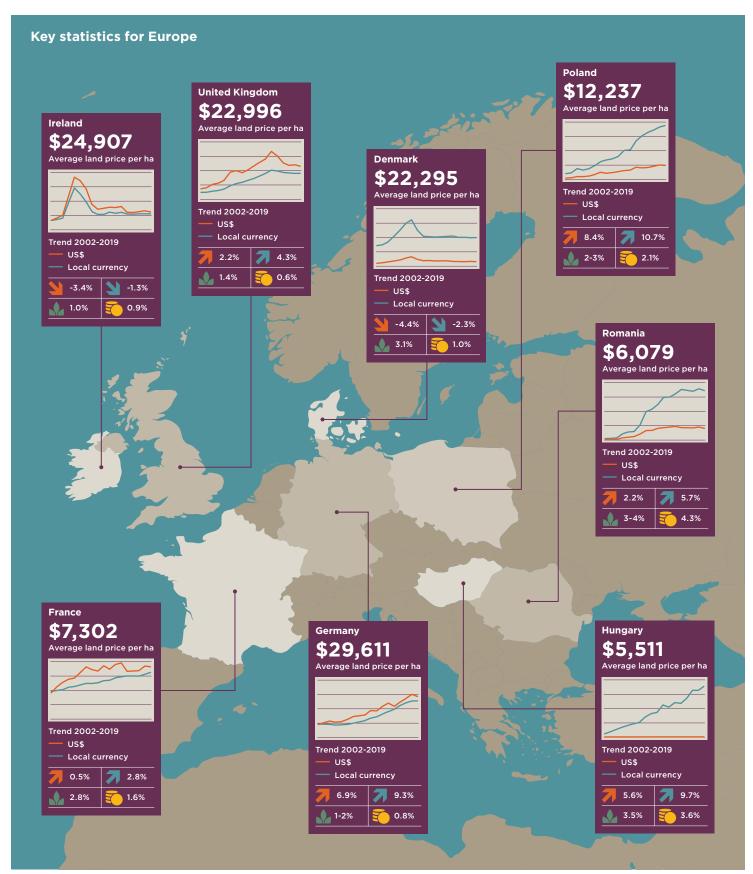
Sources for South America summary OECD, Newfoundland Capital Management, Agrifex, Farmland Uruguay

€58,450 19%

farmland market in 2006

of EU producers gross income comes from subsidy on average

Policy expenditure in 2018



Sources for Europe summary Savills Research, OECD, European Commission

66 Varying degrees of historical influence and wealth make for highly localised farmland markets (in Europe) 99

Europe

OVERSEAS OWNERSHIP

- The UK has no restrictions on inward investment and is among the few developed markets not to have some form of government involvement when buying.
- Germany treats all farmland buyers the same. However, local farmers are given preference over non farmers, where the terms are the same.
- The French market operates under the French land regulator SAFER, which maintains the first right of refusal to any land transactions.
- Ireland requires all non-EU nationals to get written consent from its Land Commission before acquiring agricultural land.
- Denmark requires permission from the Danish Ministry of Justice, if not investing through a company registered in Denmark.
- Poland requires prospective purchasers to reside in the municipality for more than five years before buying and purchasers are not allowed to accumulate more than 300 hectares in total.
- Romania sets pre-emption rights in order of co-owners, lessees, neighbours and the Romanian state before overseas buyers. It also requires buyers to prove residence for a minimum of three years prior to purchase.
- Hungary permits all EU and Hungarian nationals without farming experience to own up to one hectare of farmland. However, non-EU nationals are prohibited from ownership altogether.

TAXATION

PROPERTY TAXES

- Tax breaks related to the ownership of farmland tend to favour keeping land within families or at least within farming. The UK, France, Ireland, Poland and Hungary reduce inheritance or capital gains taxes on this principle.
- Many countries also allow the valuation of agricultural land to be lower than the market price, to create a preferential tax basis for annual property taxes and inheritance transfers.

OTHER TAXES

- Polish and Romanian farmers' income tax is based on a set unit price for rye multiplied by the area of an individual's holding.
- Fuel tax rebates are one of the most valuable annual tax exemptions for many European farmers, somewhat contrary to the emergence of pesticide and fertiliser use taxes implemented in France and Denmark.

SUBSIDY

- The majority of European farms operate under the Common Agricultural Policy (CAP), a scheme that enables farmers to compete on a level playing field while protecting against volatility in agricultural prices, and to provide food security across the EU.
- The OECD estimates suggest on average 19% of producers' gross income comes from subsidy. However, this does vary depending on

when specific countries joined the trading block and their relative input contributions.

MARKET FACTORS

■ Europe's farmland markets are extremely diverse. Varying degrees of historical influence and wealth make for highly localised farmland markets with ownership motives ranging from subsistence farming to wealth maximisation strategies. Land consolidation continues to be a theme across markets where active landowners are looking to achieve commercial scale. The French farmland market recently recorded its highest level of area turnover on record, as a wave of retirements and pressures on profitability catalysed transactions. On the contrary, the UK market is experiencing reduced activity as concerns over the trading environment post-Brexit impact sentiment. Future CAP reform intends to simplify and shift the scheme from compliance to a results based framework. Some form of subsidy payments will continue however, aligning these with the EU's expanding environmental agenda will be the focus of new policy. It is believed the scheme will mirror a public money (tax revenue) for public goods (clean air, water, carbon capture) policy similar to that proposed in the UK. The EU's Green New Deal and Farm to Fork strategies are expected to become the mechanisms behind this progression.

KEY



10 year CAGR (US\$)



Average dryland arable crop lease rate



Agriculture's contribution to GDP



VALUING NATURAL CAPITAL

Evidence suggests the next opportunity across many developed countries lies in the realisation of the value stored in the natural environment. Farmers and land managers are responsible for one-third of the world's land mass and protecting this asset is essential to maintaining its long term value in food production and climate change mitigation. Developing markets aim to monetise and reward land managers for the environmental service they provide. Carbon sequestration and nitrate neutralising potential are examples of these markets whereby farmers sell audited environmental credits to buyers needing to offset a polluting practice.

1/3

of the world's land mass is managed for agriculture

\$3.6bn

capital raised by farmland funds in 2019

13.8%

of Australian farmland is under overseas ownership

48%

of New Zealand's Greenhouse Gas Emissions come from agriculture



Sources for Australasia summary OECD, Rural Bank, Australian Bureau of Agricultural and Resource Economics and Sciences, Australian Taxation Office,

Australasia

OVERSEAS OWNERSHIP AUSTRALIA

■ Overseas ownership is regulated by a government agency depending on the value and prospective buyer (sovereign wealth, private investors, trade partner). Farmland assets must have been offered to the market for a minimum of 30 days in order for a sale to be agreed with an overseas based buyer.

Overseas Investment Office New Zealand, Craigmore Farming, Rabobank

■ Approximately 13.8% of Australia is in overseas ownership.

NEW ZEALAND

- Farmland is classed as a sensitive asset, meaning all overseas applications to purchase land are reviewed by the Overseas Investment Office on the grounds of substantial and identifiable benefits to the nation.
- Approximately 3.3% of New Zealand is overseas owned.

TAXATION/SUBSIDY AUSTRALIA

■ Under a state based system in Australia, primary producers are exempt from property taxes. Capital gains taxes are payable on net profits from the sale of farmland depending on how long the asset has been held and the

beneficiaries' income tax obligations. Producer support is limited with incentives and schemes geared to help farmers manage finances through seasonal variability.

NEW ZEALAND

■ Farmland remains largely free of taxation and producer subsidy, following major reform and the phasing out of farm subsidy in the late 1980s.

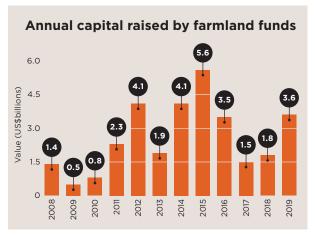
MARKET FACTORS

■ Low currency volatility and political stability promote a comparatively stable investment environment. Both nations are heavily reliant on exports of agricultural products, meaning domestic currency movements against the US dollar are more likely to impact operating profits. For most sectors, domestic prices tend to reflect international pricing. Many regions of Australia are feeling the effects of prolonged drought, which will likely restrict growth potential over the coming years. For New Zealand, uncertainty over environmental regulation and restricted bank lending has negatively impacted sentiment but as wider understanding of the compliance requirements becomes more common the sector is ripe for alternative funding options.

8

ENVIRONMENTAL REGULATION AND FARMLAND VALUE

New Zealand farmers face uncertainty over the coming years as the government progresses both its freshwater and climate change reform and increases environmental regulation. Under the reform, farmers are required to account for the environmental cost of their operation and will incur the economic cost of reducing and mitigating water contaminants (nitrates and phosphates) and carbon emissions. While it is clear that this will impact business profitability, the magnitude of it will largely depend on the land use, land type and the location of the land. High intensity farming operations and those with low levels of natural capital (limited capacity to mitigate polluting activities) remain at high risk, as do those in locations where the effects of such pollution are acutely felt. Dairy, sheep and beef sectors also face a price on methane emissions from 2025, further pressuring gross margins. Specific detail is being developed, however these changes are expected to accelerate land use changes into low-carbon emitting sectors such as forestry and horticulture.



Source Pregin

THE DEVELOPING PRESENCE OF INSTITUTIONAL CAPITAL IN FARMLAND

One of the most significant drivers of global farmland values over the last decade has been the developing presence of new institutional capital. After a brief hiatus during the global financial crisis (GFC) and a number of land grabbing headlines, global farmland fundraising grew from US\$0.8bn in 2010 to a peak of US\$5.6bn in 2015, according to financial data service Preqin. Since then, fundraising efforts have softened slightly to average US\$2.6bn per annum, as the combination of rising land values and lower commodity prices put pressure on income yields.

Outlook: Land of opportunity?

Despite Covid-19 related uncertainty challenging many assets classes, the outlook for farmland remains positive. Low supply of quality farmland and the present low cost of debt should continue to support values across many regions. The renewed focus on food security bodes well, providing farmers can access fully functioning markets. The flight to safe and tangible assets following recessionary periods remains a factor that cannot be discounted.

That is not to say the sector does not have its challenges. An ageing farmer population, increasing water shortages and other severe climatic events, dependence on energy intense inputs and the ever increasing pressure on profitability will continue to be both hurdles and sources of innovation for landowners and managers. Changes in policy that govern market access or "how" farming can be carried out does expose an element of vulnerability for

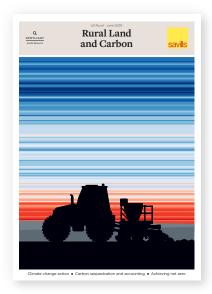
primary producing businesses. However, the sector should be comforted by an increasing number of competing land uses that reduce stranded asset risk.

How the farmland sector adapts to both the threat and opportunity of climate change is pivotal to its sustainable success. Farmers will play an increasingly important role in protecting and promoting the natural environment as part of their business. Development of environmental markets will help accelerate change, particularly across more developed markets where investor interest may grow as the range of investment opportunities presented by land are acknowledged. Policy evolution must stay ahead of the curve here to ensure the structures are in place to enable effective and productive change that balances the requirements of food production with carbon reduction on a global scale.













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