

WESTCHESTER
from nuveen

Why farmland now? An update since the COVID-19 crisis

10 June 2020

Nuveen Real Assets
Westchester Group Investment Management, Inc.

NOT FDIC INSURED | NO BANK GUARANTEE | MAY LOSE VALUE

Agenda

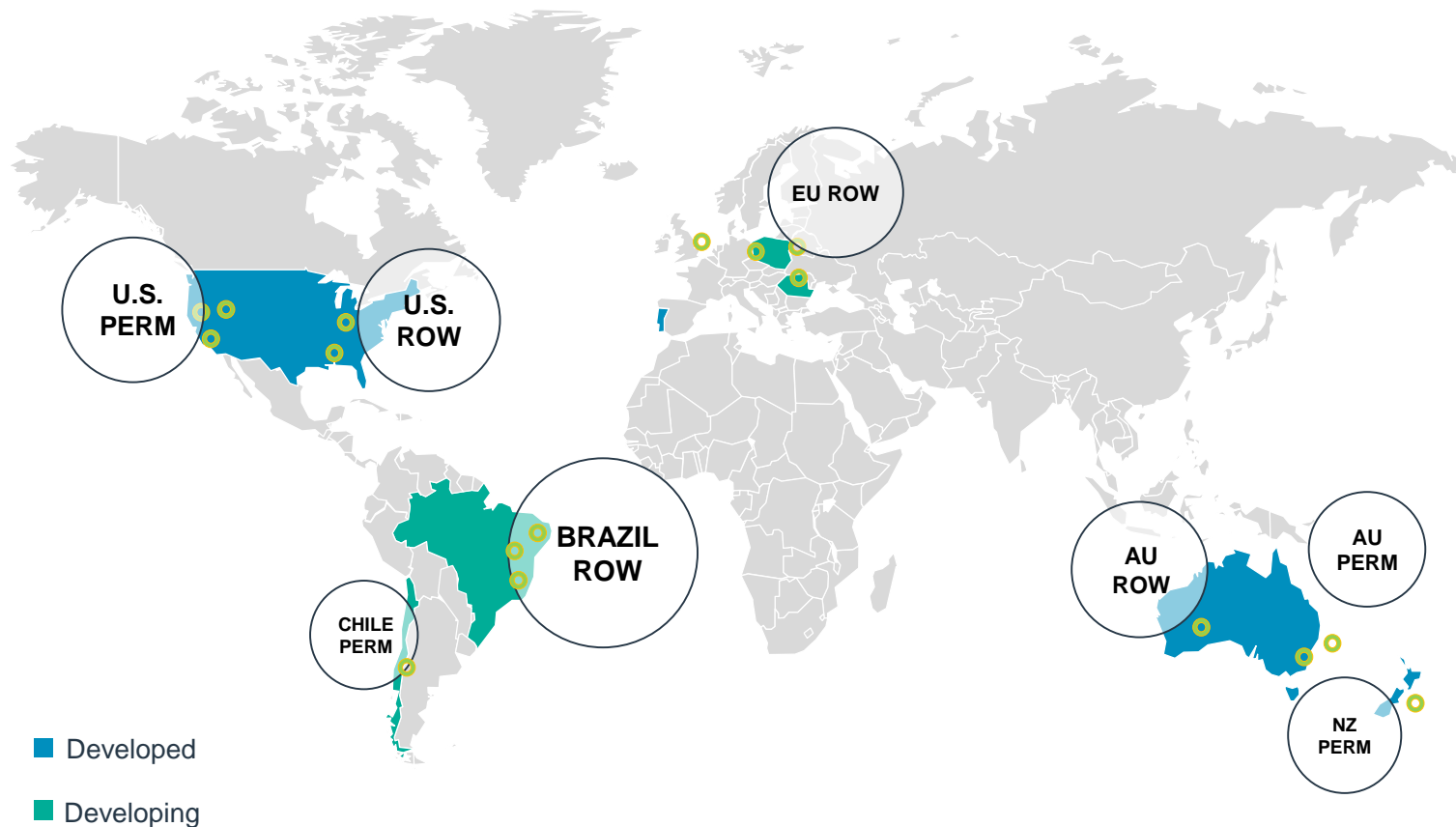
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Westchester overview

Westchester: investing globally since 2007

Our investments are anchored around developed markets, with opportunistic investment in developing markets



\$7.6B

AUM¹

#1

largest manager of farmland globally²

120+

employees

24

local offices

500+

properties across seven countries

170

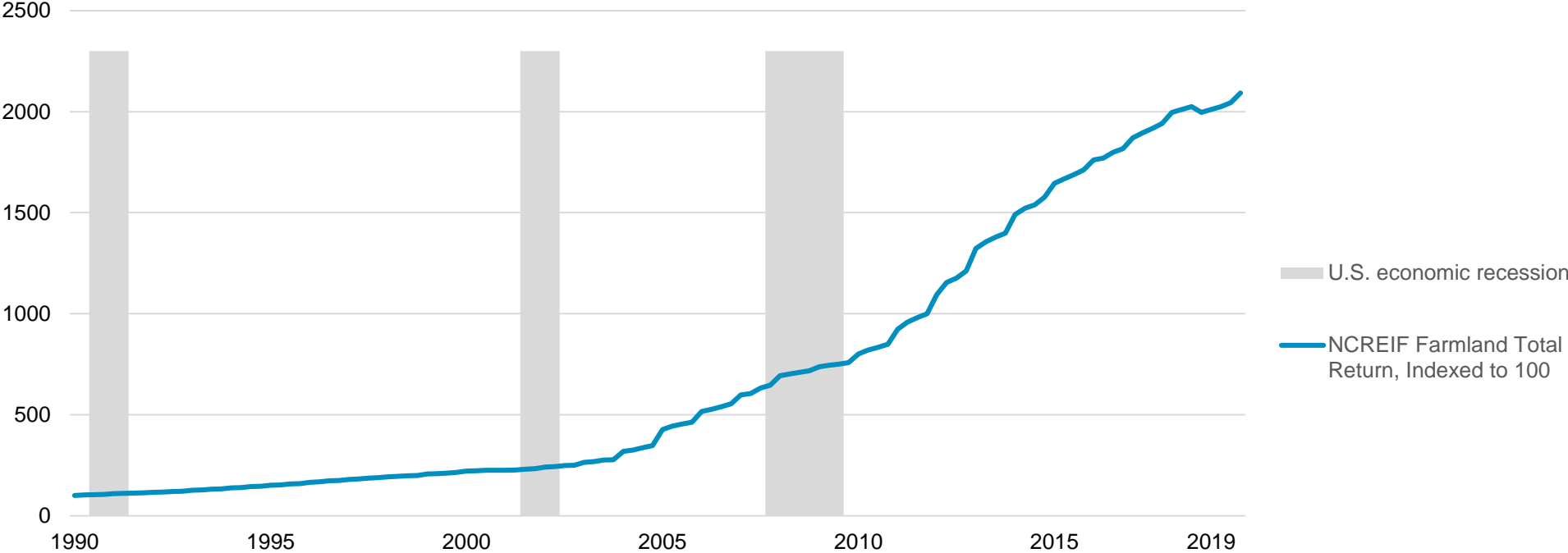
assets divested since 2007³

¹ As of 31 Mar 2020. ² Pensions & Investments, 30 Sept 2019. ³ Includes partial property divestitures

Why farmland now?

Farmland has a history of preserving capital

Resilience to the economic cycle

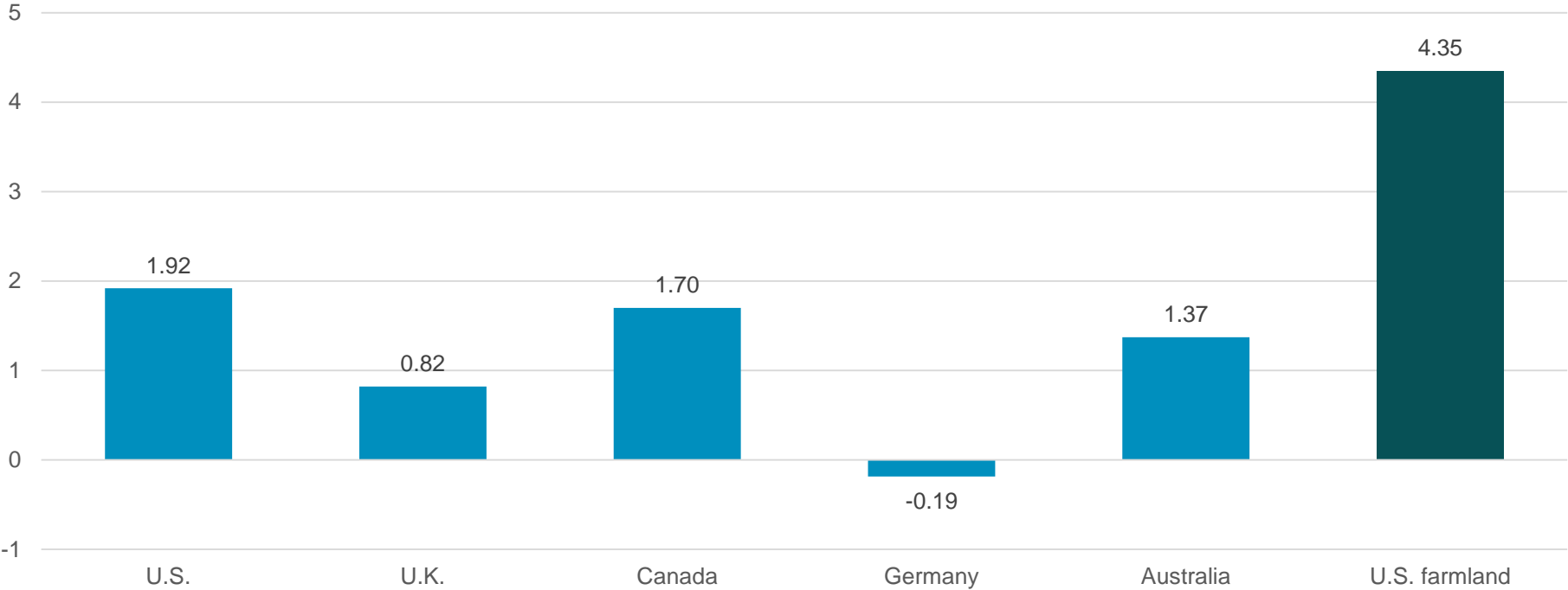


Source: Macrobond, National Council of Real Estate Investment Fiduciaries (NCREIF) Farmland Index, data to 31 Dec 2019.

NCREIF Farmland Index: The NCREIF Farmland Index is a quarterly time series composite return measure of investment performance of a large pool of individual farmland properties acquired in the private market for investment purposes only. All properties in the Farmland Index have been acquired, at least in part, on behalf of tax-exempt institutional investors - the great majority being pension funds. As such, all properties are held in a fiduciary environment.

Farmland offers attractive yields relative to government bonds

10-year government bond rates relative to U.S. farmland yield (%)

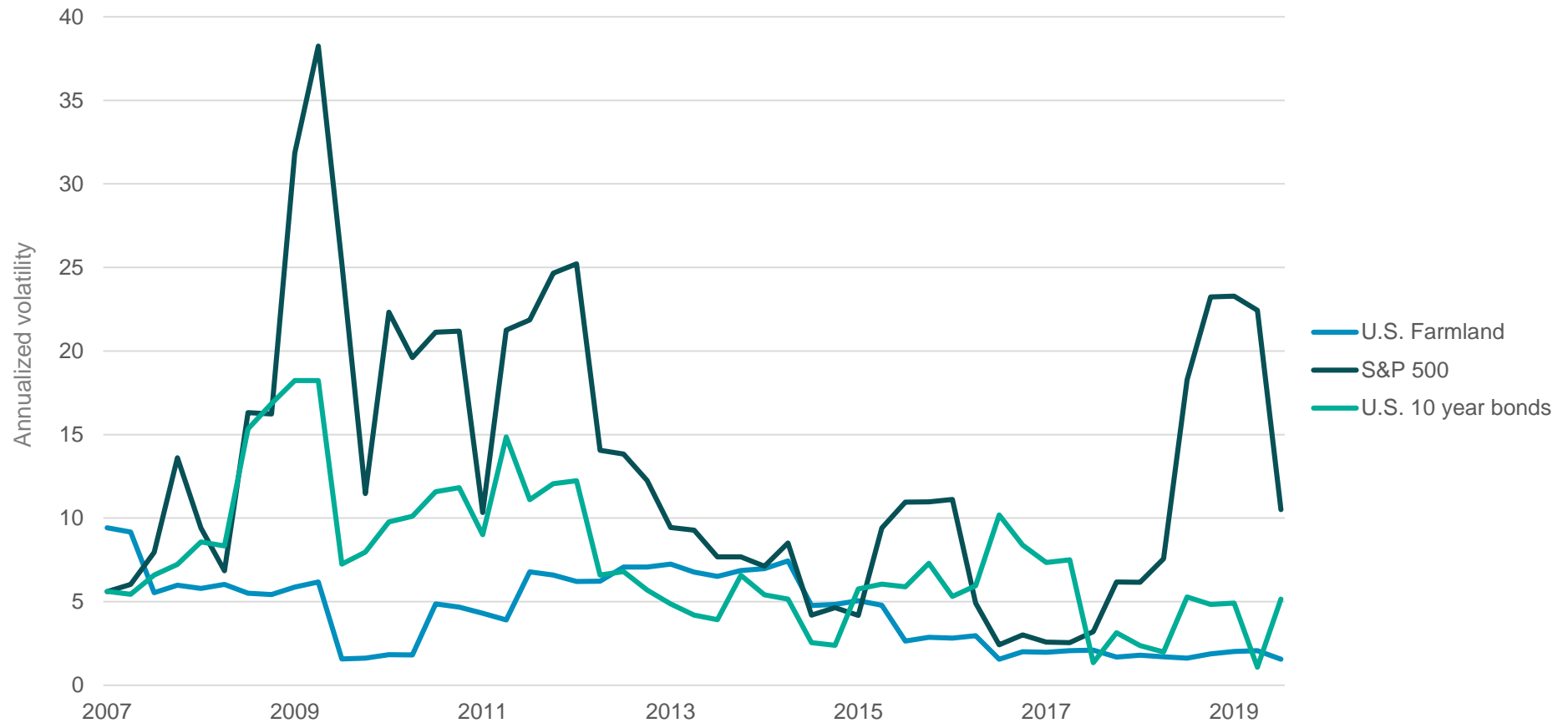


Source: U.S. Farmland National Council of Real Estate Investment Fiduciaries (NCREIF) Annual data to 31 Dec 2019, bond yields as of 31 Dec 2019

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Farmland's relative return volatility

Farmland as an asset class offers lower volatility in a rising volatility world

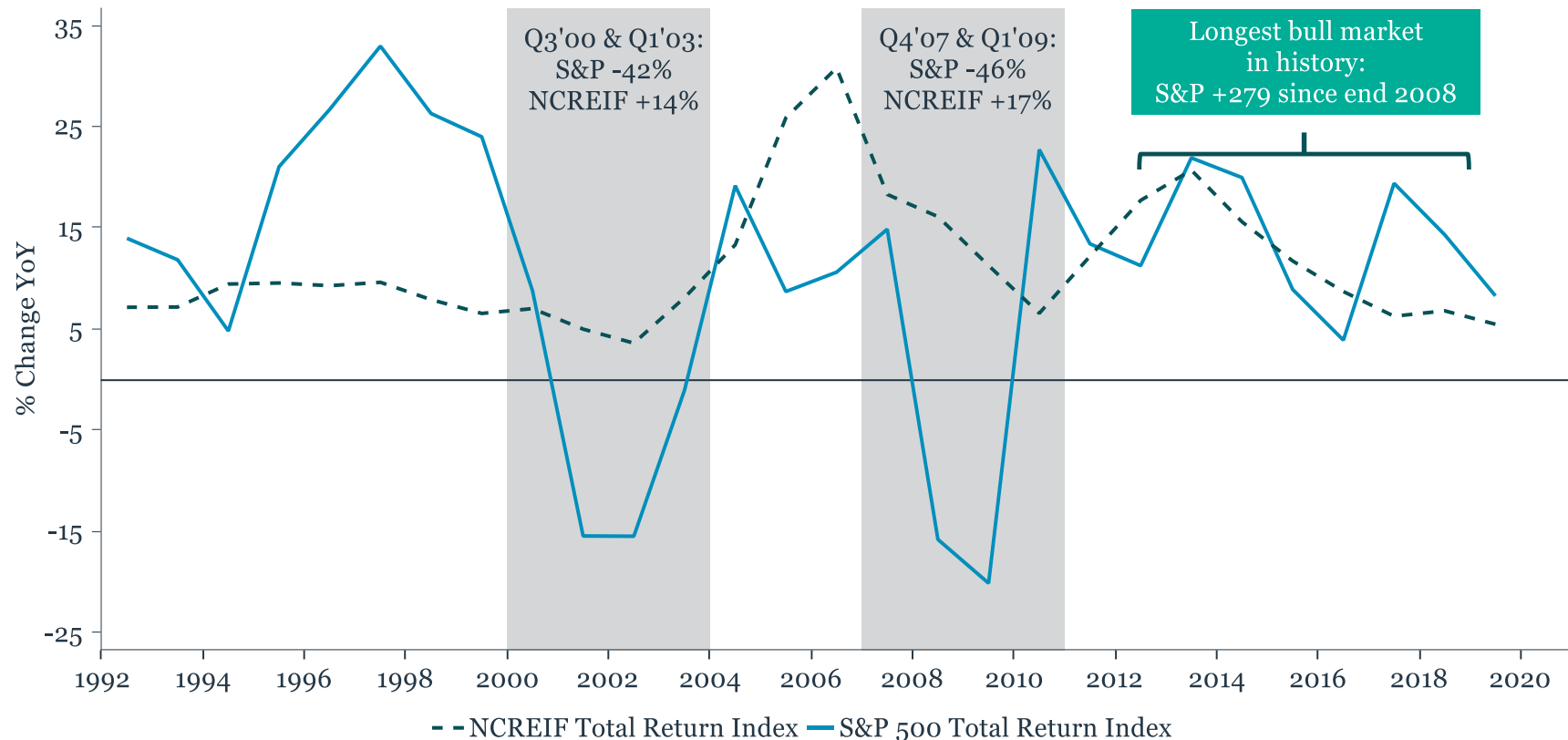


Source: Bloomberg, LTM data to 12 Aug 2019, National Council of Real Estate Investment Fiduciaries (NCREIF), LTM data to 31 Dec 2019

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Farmland has been a reliable store of value & return throughout market cycles

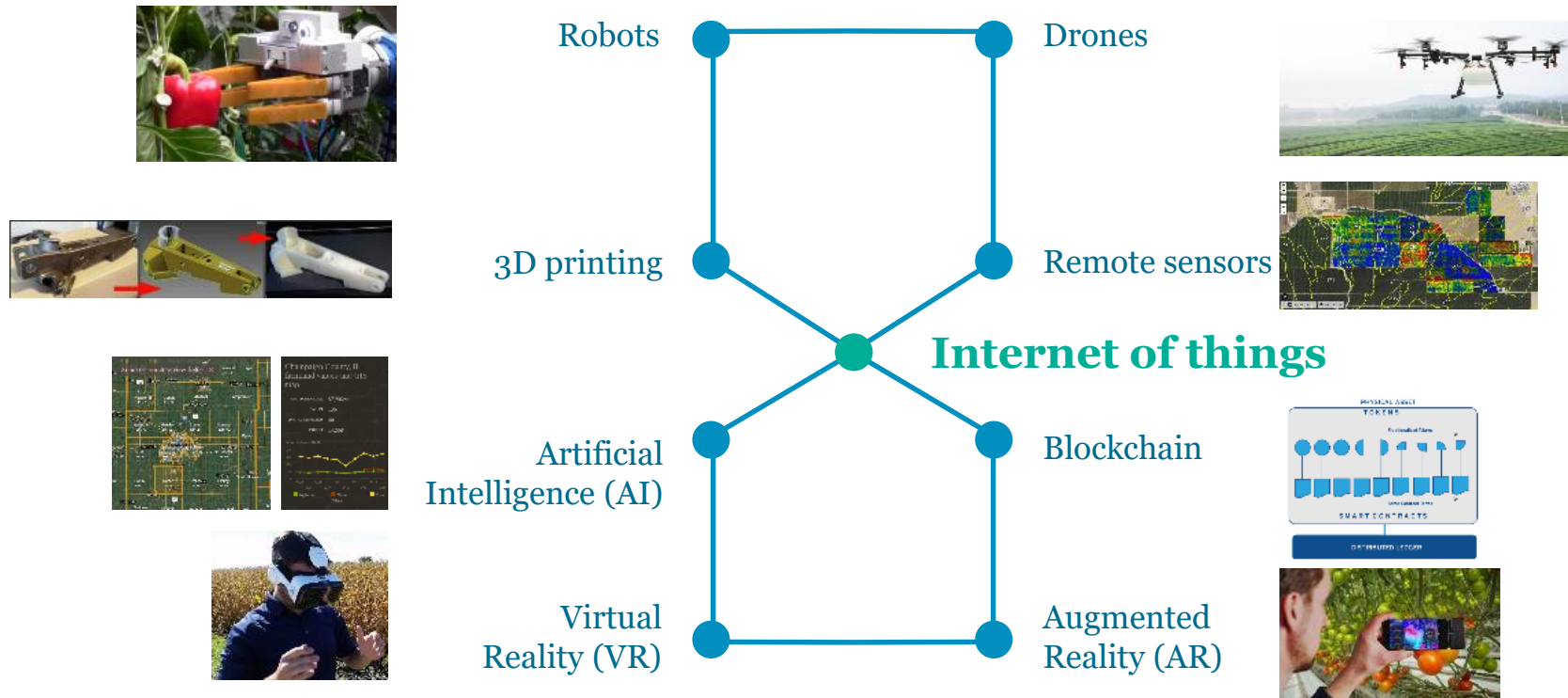
National Council of Real Estate Investment Fiduciaries (NCREIF) total returns vs. S&P 500 composite



Sources: National Council of Real Estate Investment Fiduciaries (NCREIF), Macrobond, data to 31 Dec 2019. It is not possible to invest in the National Council of Real Estate Investment Fiduciaries (NCREIF) index. Performance for indices does not reflect investment fees or transactions costs

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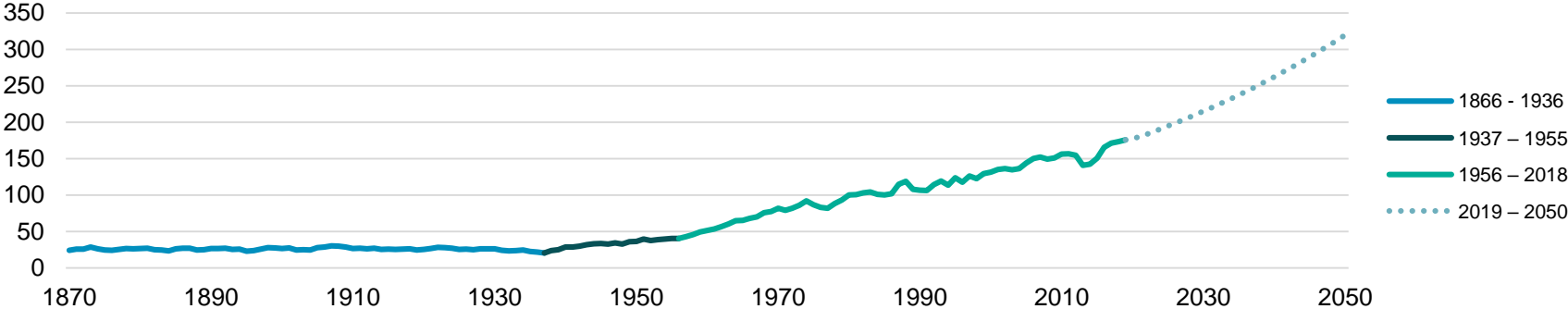
Eight disruptive digital technologies



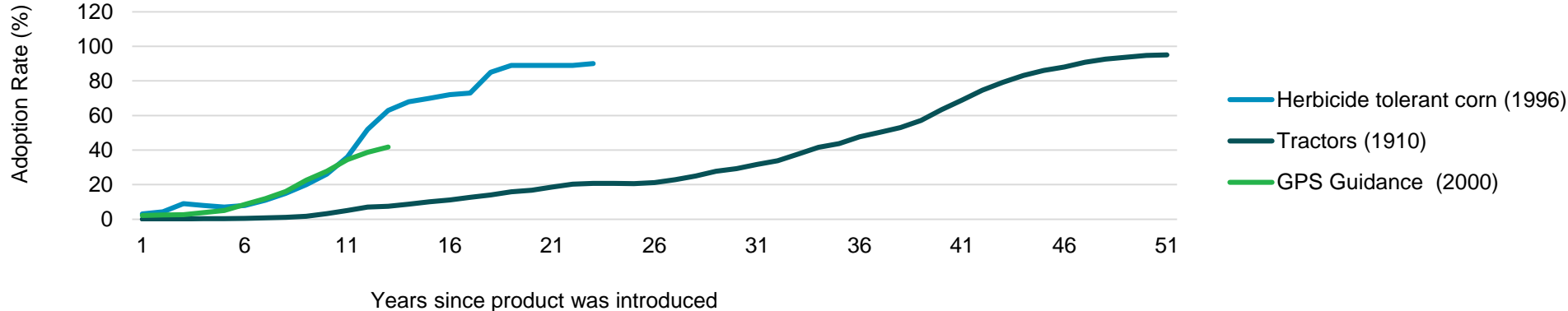
Sources: AcreValue, Citi Business Services, Sculpteo, Real Agriculture.com, Into Robotics.com

The impact of agricultural technologies

U.S. corn yield (bushels/per acre)¹



Adoption rates of technology in U.S. agriculture²



¹ <https://www.agry.purdue.edu/ext/corn/news/timeless/yieldtrends.html> ² USDA Economic Research Service, American Economic Association

TFP growth projections reflect expectations for productivity growth in agriculture. Productivity growth is generated by such innovations as precision agriculture technology and improved seeds and best practices for nutrient management and animal health. The GAP Report looks at the powerful combination of agricultural technology, best farm management practices, and attention to ecosystem services in supporting productivity growth, sustainability, and resilience, and creates TFP projections from that analysis.

Tracking productivity: GAP index™

Data revolution required – efficiency will drive returns

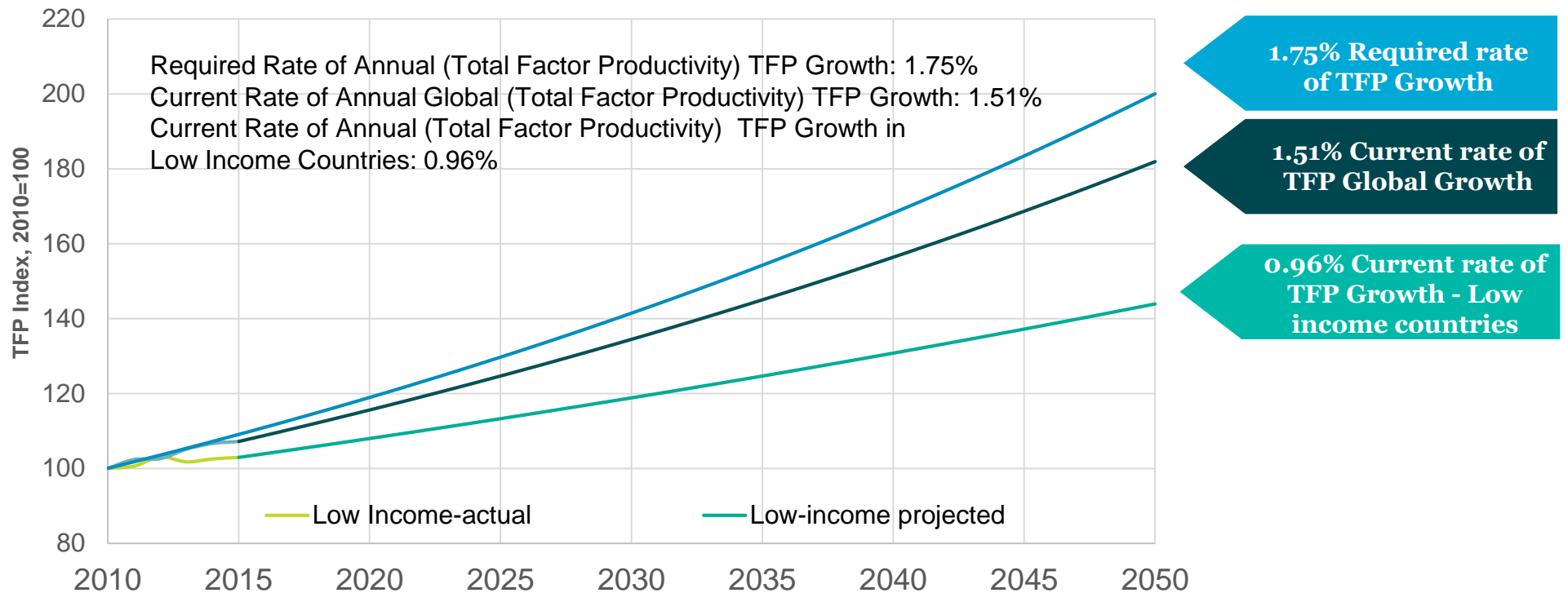


Chart copyright: 2018 Global Agricultural Productivity Report (GAP Report)/Virginia Tech College of Agriculture and Life Sciences with data from USDA Economic Research Service (2018)

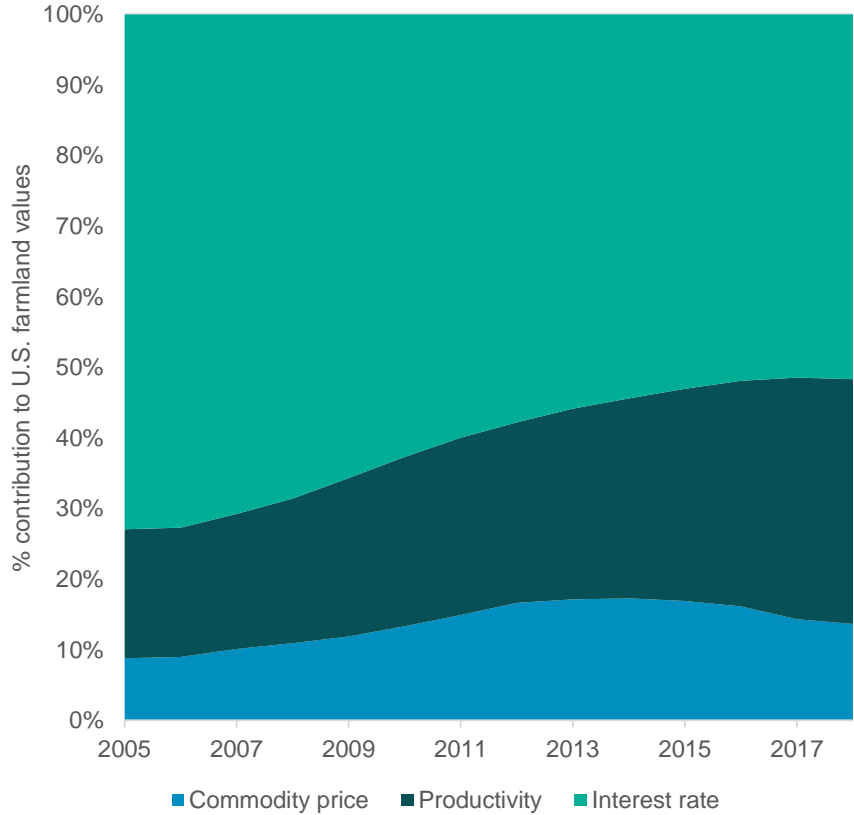
Source: Food Demand Index from Global Harvest Index (GHI)(2018)

Agricultural Output from TFP Growth: USDA Economic Research Service (2018.)

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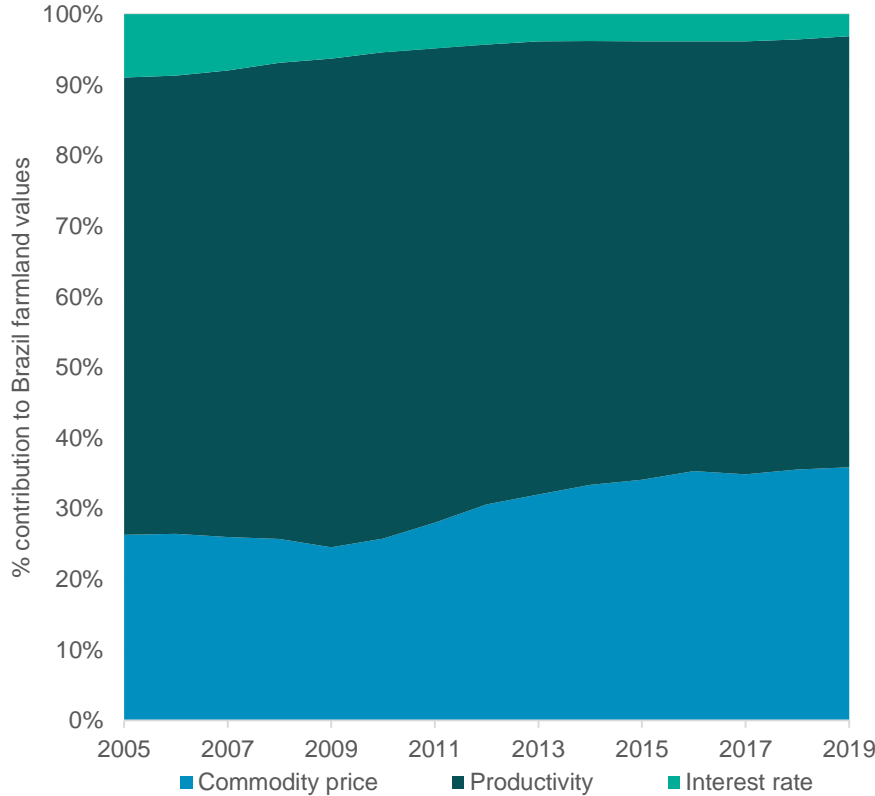
What drives row crop farmland values?

Relative magnitude of farmland value drivers in the U.S. Midwest



Source: USDA, Macrobond, University of Illinois, Illinois Farm Bureau, data from 2005 to 2018.

Relative magnitude of farmland value drivers in Brazil

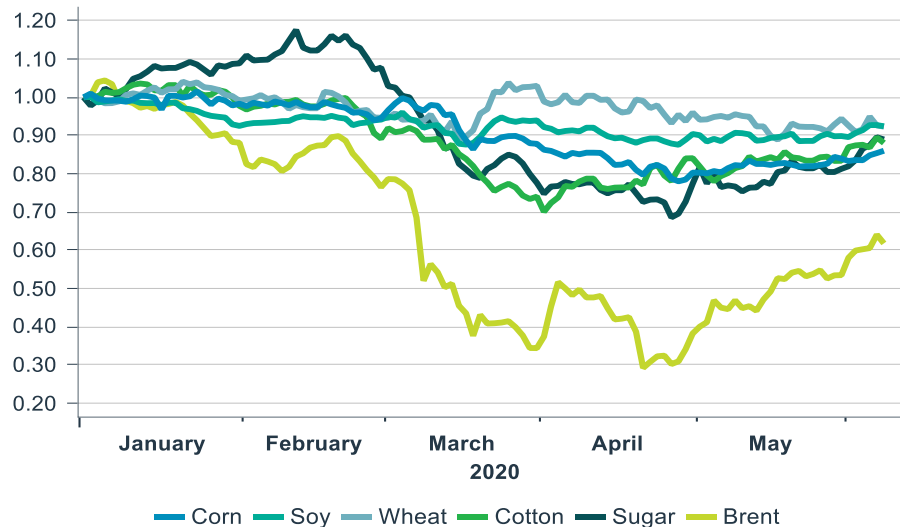


Source: Agroconsult, Informa FNP, IMEA, Macrobond, data from 2005 to 2018.

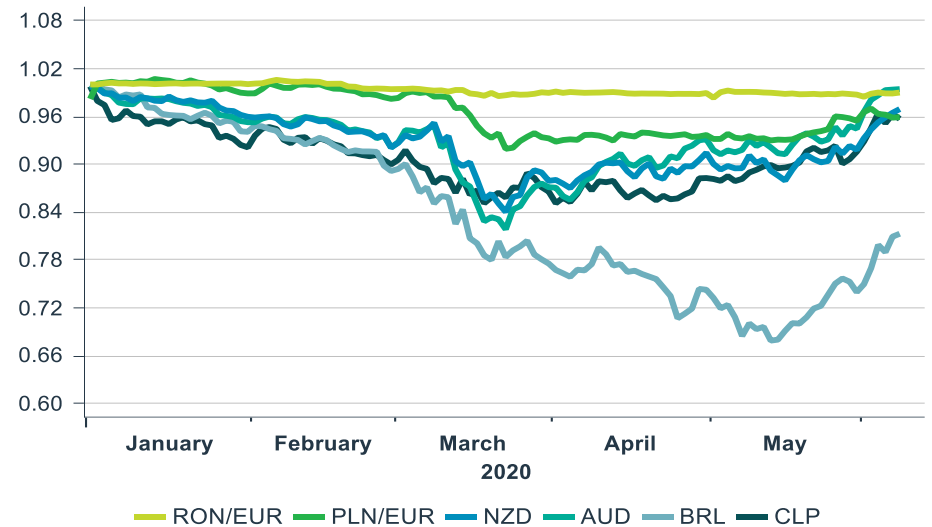
COVID-19 update

Commodity and foreign currency movements

YTD commodity indices



YTD currency indices



- The oil price decline has put pressure on ethanol prices and impacting both corn and sugar.
- Cotton prices have declined due to direct linkage with consumer activity.
- Wheat and soybean prices have been supported due to concerns around government stockpiling and export restrictions.

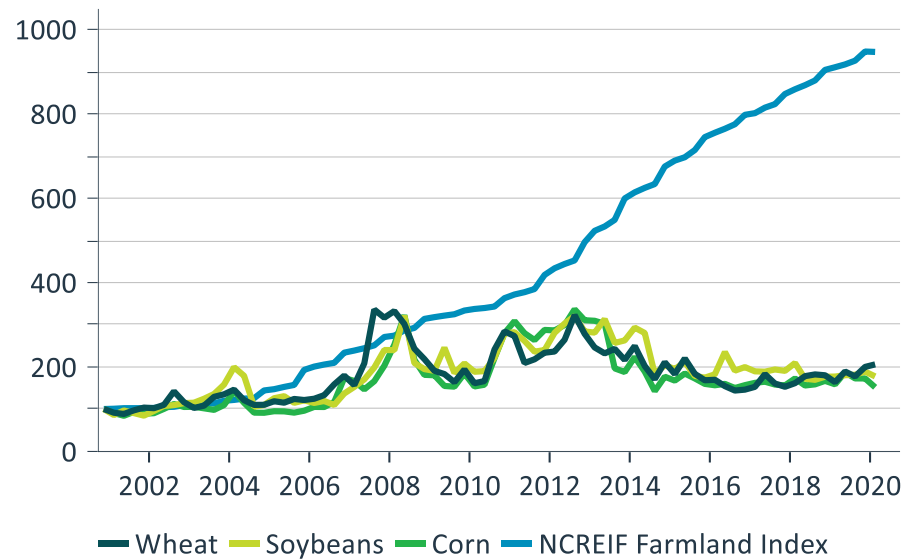
- The US dollar has risen against most currencies, seen as a safe haven in periods of uncertainty.
- The Brazilian Real has been the hardest hit with recent political turmoil resulting in the currency falling approximately 20% YTD.

Source: Macrobond, 8 Jun 2020

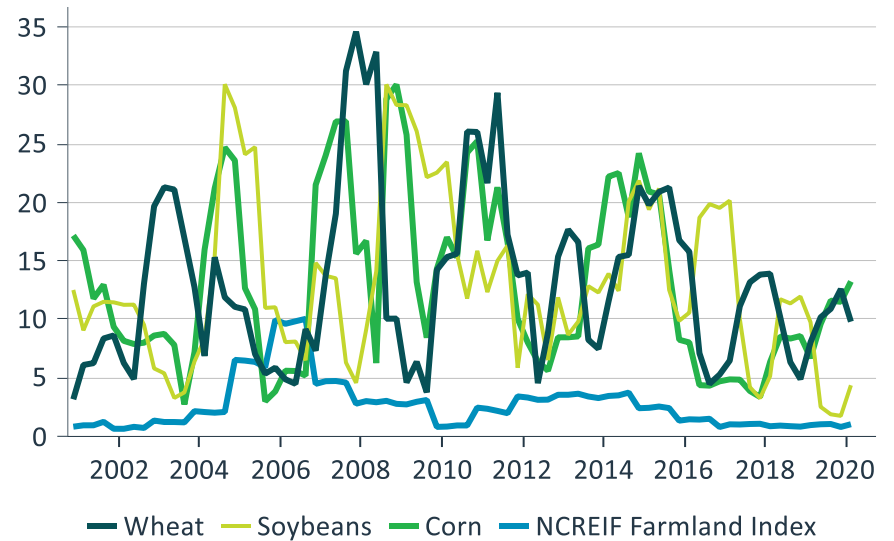
Historic farmland and commodity performance

Commodity price performance is only one component of farmland values, diversified farmland exposure means no one commodity price is likely to have a large impact on a fund's returns.

Performance indexed to 100 in 2000



Annual volatility (%)



Source: Macrobond, 31 Mar 2020

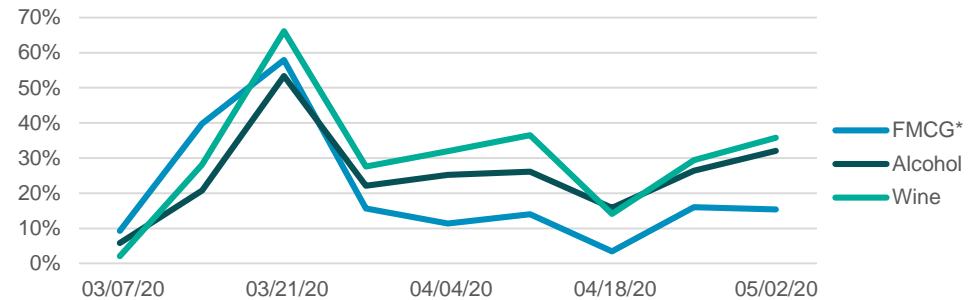
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Data points – Operations, sales and prices

U.S. spring planting progress: remains ahead of 5 year average

	Week Ended 31 May 2019	Week Ended 31 May 2020	2015-2019 Average
Corn	64%	93%	89%
Soybeans	36%	75%	68%
Cotton	67%	66%	66%
Rice	89%	93%	96%

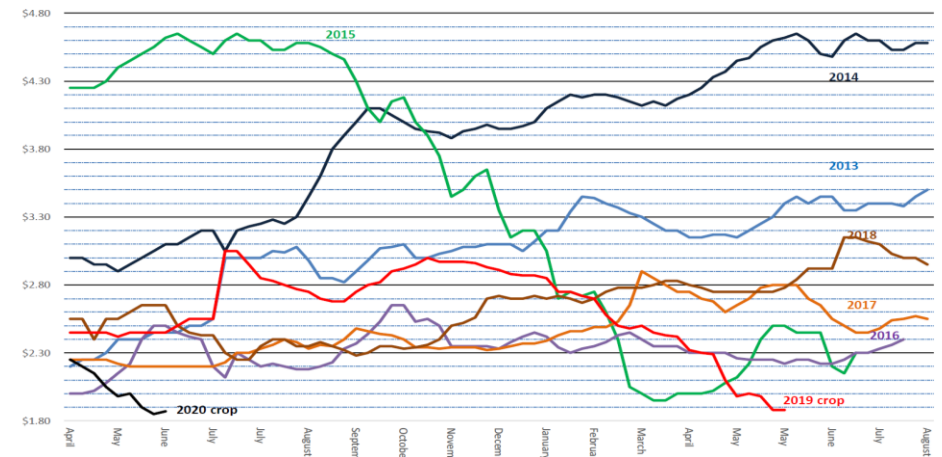
COVID-19 impact on U.S. off premise sales: wine sales are 30% higher than 2019



2020 California almond production: estimates are for a record after good bloom conditions

Year	Production (bn lbs)	Growth YoY
2016A	2.14	12.6%
2017A	2.27	6.1%
2018A	2.28	0.4%
2019A	2.55	11.8%
2020E	3.00	17.6%
10 Year Average	2.19	6.7%

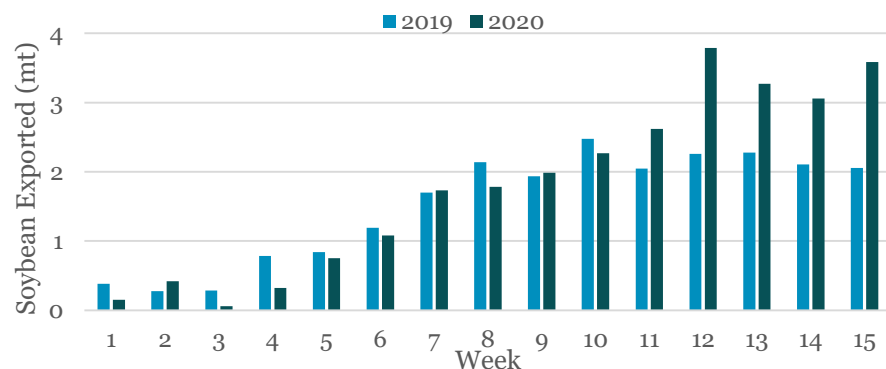
Blanchable standard: Almonds by crop year (FAS CA Port)



Source: USDA 31 May 2020 Crop Progress Report; USDA NASS California Almond Production 12 May 2020, ANEC 30 Apr 2020; Nielson 2 May 2020. *FMCG: Fast moving consumer goods, Treehouse
The information presented on this slide reflects data for the entire portfolio managed by Westchester in the sectors and geographic regions indicated; a particular Fund may experience slightly different outcomes

Data points – Exports and returns

Brazil soybean exports: YTD exports 4.1mt higher than 2019



Record year for Brazilian agriculture

- Agriculture and Livestock Confederation of Brazil (CNA) state Brazilian agricultural gross domestic product (VBP agro) will increase 8.6% in 2020 to R\$ 697 billion - largest increase in 31 years.
- The value of the Brazilian crops increased 10.4% to R\$ 462 billion while the value of livestock increased 5.4% to R\$ 235 billion.

March 2020 National Council of Real Estate Investment Fiduciaries (NCREIF) returns: stable in volatile macro and market conditions

	Total Farmland	Row Crops	Permanent Crops
Total	-0.10%	0.66%	-1.35%
Income	0.38%	0.93%	-0.51%
Appreciation	-0.49%	-0.27%	-0.84%

Comparison for context

Index	Q1 2020
S&P 500	-19.6%
MSCI EMU	-26.8%
MSCI AC Asia (ex Japan)	-18.4%
Nareit (T-Tracker)	-9.0%

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Thoughts on COVID-19 potential impacts

Supply chain and consumer trends

Resilience and redundancy: panic buying highlighted that just-in time supply chains cannot handle a change in consumer demand but changing this could be more expensive ultimately for the consumer.

Provenance: this was a trend prior to COVID-19 but a move to want to support local farmers and producers may lead to an increase in consumer demanding locally sourced where possible. This could reduce global trade of certain commodities.

Convenience: if more people work from home in the future, the trend towards convenient food solutions may diminish as people have more time to cook at home.

Shortages: the impact of shortages of certain product e.g. animal based protein in the U.S. could lead to a more permanent shift towards vegetable proteins as consumer become more familiar with them, as well as lead to higher prices.

Technology and consolidation

Technology adoption will be paramount: low commodity prices will force the primary producers to continue to adopt technology to improve their efficiency and remain profitable.

Consolidation: low commodity prices will continue to place pressure on marginal producers to leave the industry and larger farmers will want to expand their acreage to capture efficiencies with their capital investments.

Q&A

Thank you for attending!

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