



Global farmland investing – Considerations for trustees and investors



October 2, 2023

A word on risk

As an asset class, agricultural investments are less developed, more illiquid, and less transparent compared to traditional asset classes. Agricultural investments will be subject to risks generally associated with the ownership of real estate-related assets, including changes in economic conditions, environmental risks, the cost of and ability to obtain insurance, and risks related to leasing of properties.

As an asset class, timberland investments are less developed, more illiquid, and less transparent compared to traditional asset classes. Timberland investments will be subject to risks generally associated with the ownership of real estate-related assets, including changes in economic conditions, environmental risks, and the cost of and ability to obtain insurance. Market forecasts are subject to uncertainty and may change based on varying market condition, political, and economic developments.

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Responsible investing incorporates Environmental Social Governance (ESG) factors that may affect exposure to issuers, sectors, industries, limiting the type and number of investment opportunities available, which could result in excluding investments that perform well.

Past performance is no guarantee of future results.

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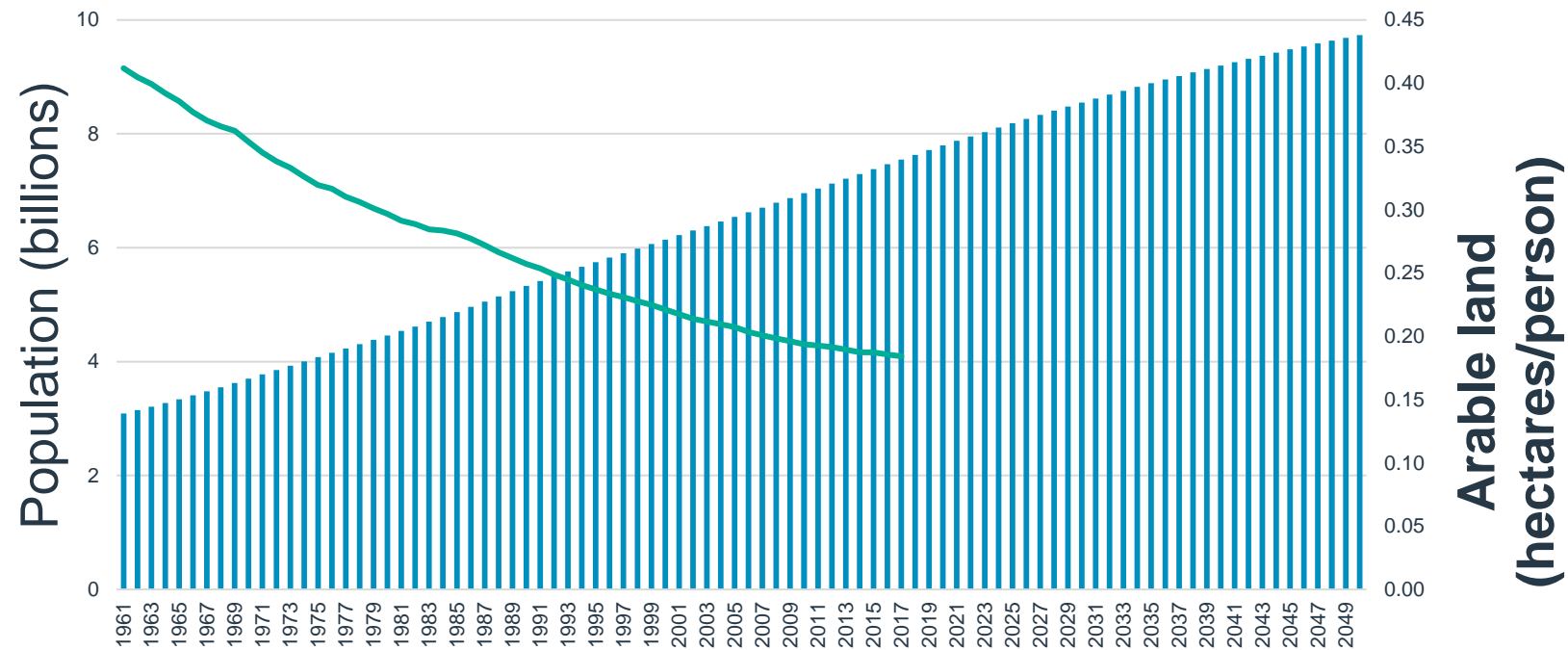
Why consider farmland?



Farmland macro tailwinds

Rising global population; limited farmland...

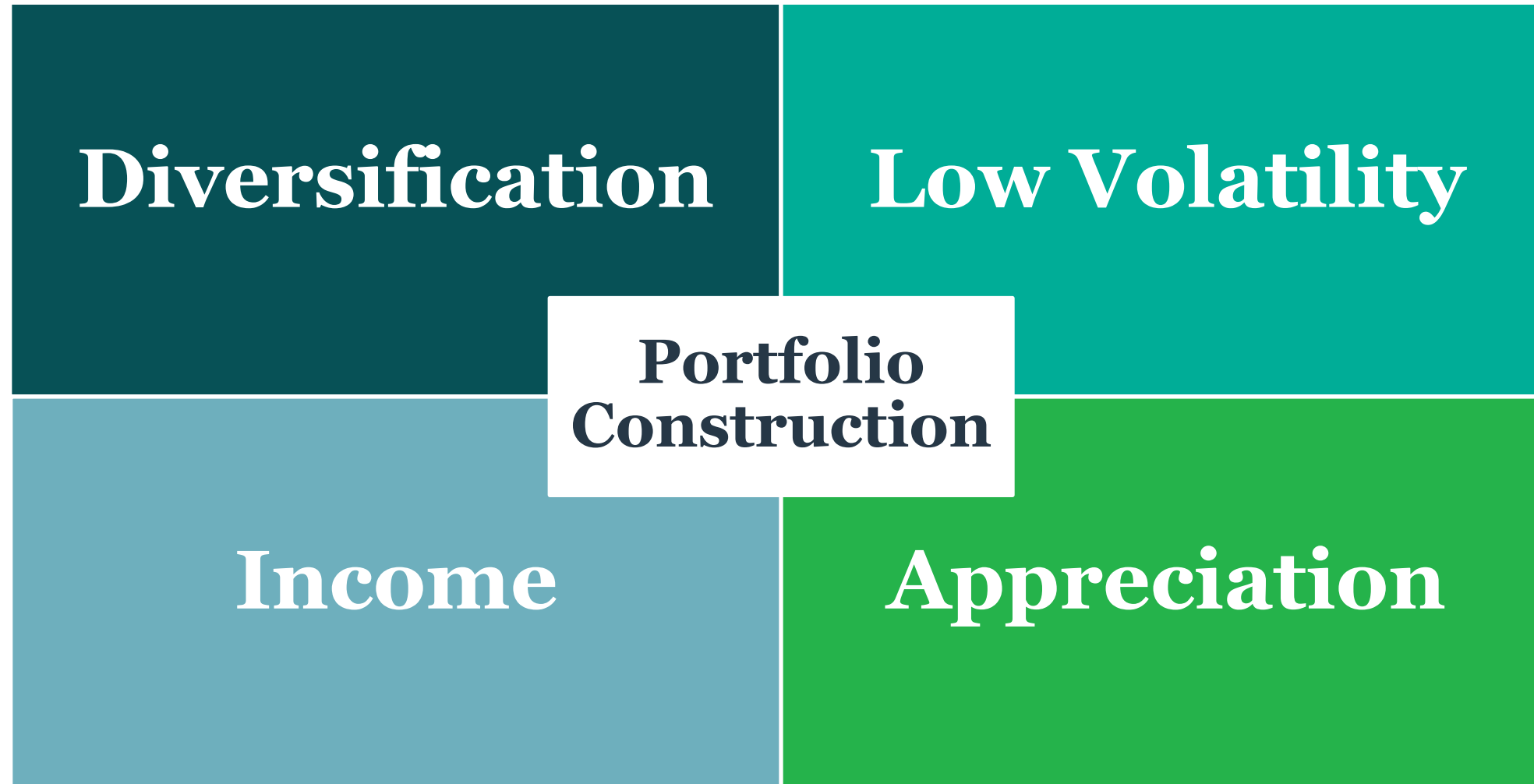
Population growth and land availability¹



PPP-2248901PE-00622X

1. Sources: United Nations World Population Forecast 2017 and Food and Agriculture Organization of the United Nations (FAOSTAT).

Potential farmland benefits



Farmland – low correlation

Correlations vs. traditional asset classes (Annual returns, 1992-2021)¹

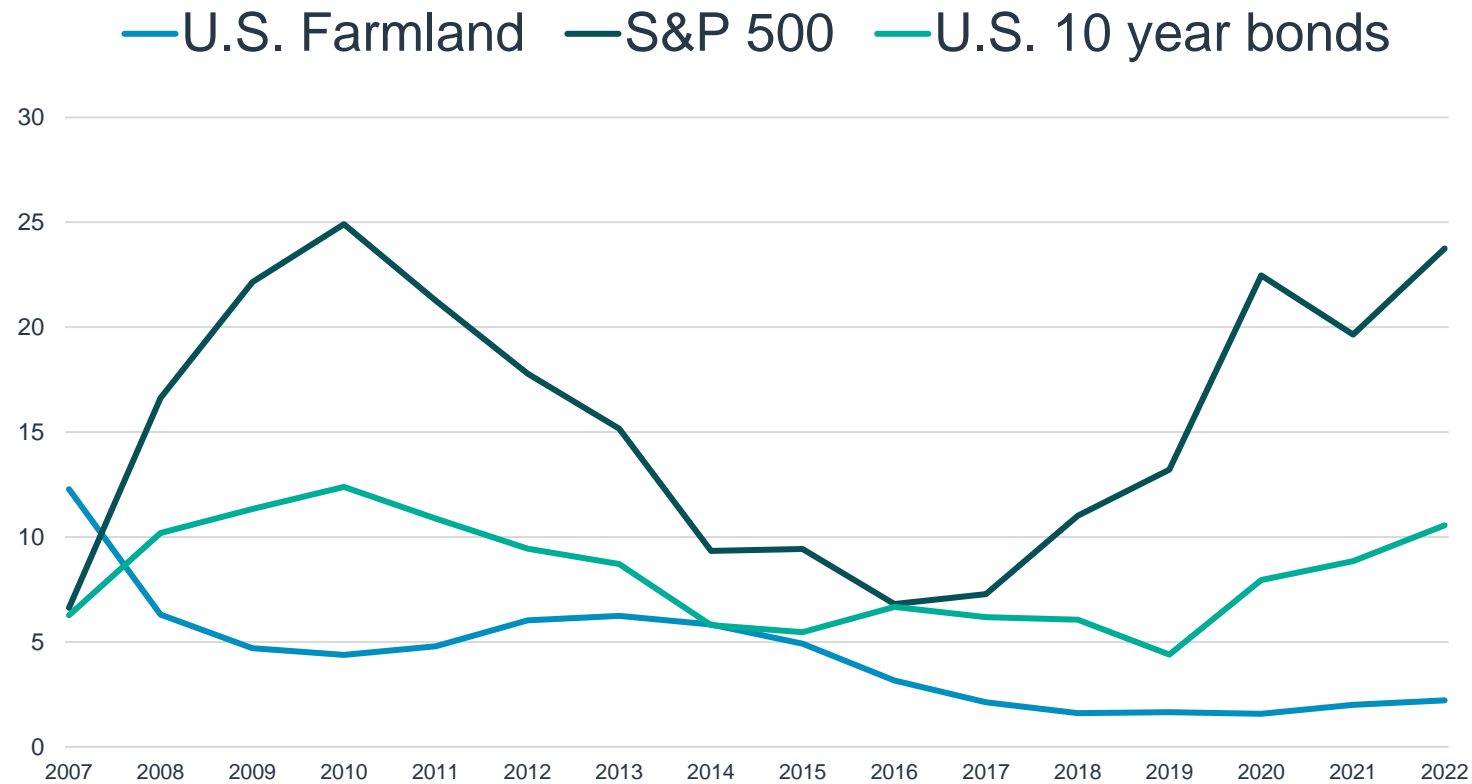
	FARMLAND	TIMBERLAND
U.S. Equities	-0.03	0.13
U.S. Fixed Income	-0.27	0.19
Global Fixed Income	-0.21	0.17
Global Equities	0.15	0.14

Data are based on rolling one-year total returns, calculated on a quarterly basis for periods ended 31 Mar 1992 through 31 Dec 2021.

¹Sources: Standard & Poors, MSCI, Factset, NCREIF, Federal Reserve, Commodity Research Bureau, Consumer Price Index. The inception date of the NCREIF Farmland Index is 4Q 1990. The CPI-U produces monthly data on changes in the prices paid by urban consumers for a representative basket of goods and services since 1913. NCREIF Farmland and Timberland Indexes are used for the time frame above to demonstrate income and capital appreciation components of total return.. It is not possible to invest in an index. Performance for indices does not reflect investment fees or transactions costs. Asset classes reflect the following indexes: U.S. fixed income: Bloomberg US Aggregate Index; Global fixed income: Bloomberg Global Aggregate ex-USD Total Return Index, value unhedged USD; U.S. equities: Russell 3000 Index; Global equities: MSCI ACWI ex-US Index; Commodities: S&P GSCI Agriculture Index; Listed Real Estate: FTSE NAREIT Public Equities Real Estate ; Timber REIT: S&P Global Timberland Index; Real Estate: NCREIF Real Estate Index; Farmland: NCREIF Farmland Index; Timberland: NCREIF Timberland Index. All returns in USD. There is no guarantee that the returns illustrated will be achieved.

Farmland – low volatility

Annualized volatility vs. average U.S. farmland^{1,2}



1 Bloomberg, 31 Dec 2022.

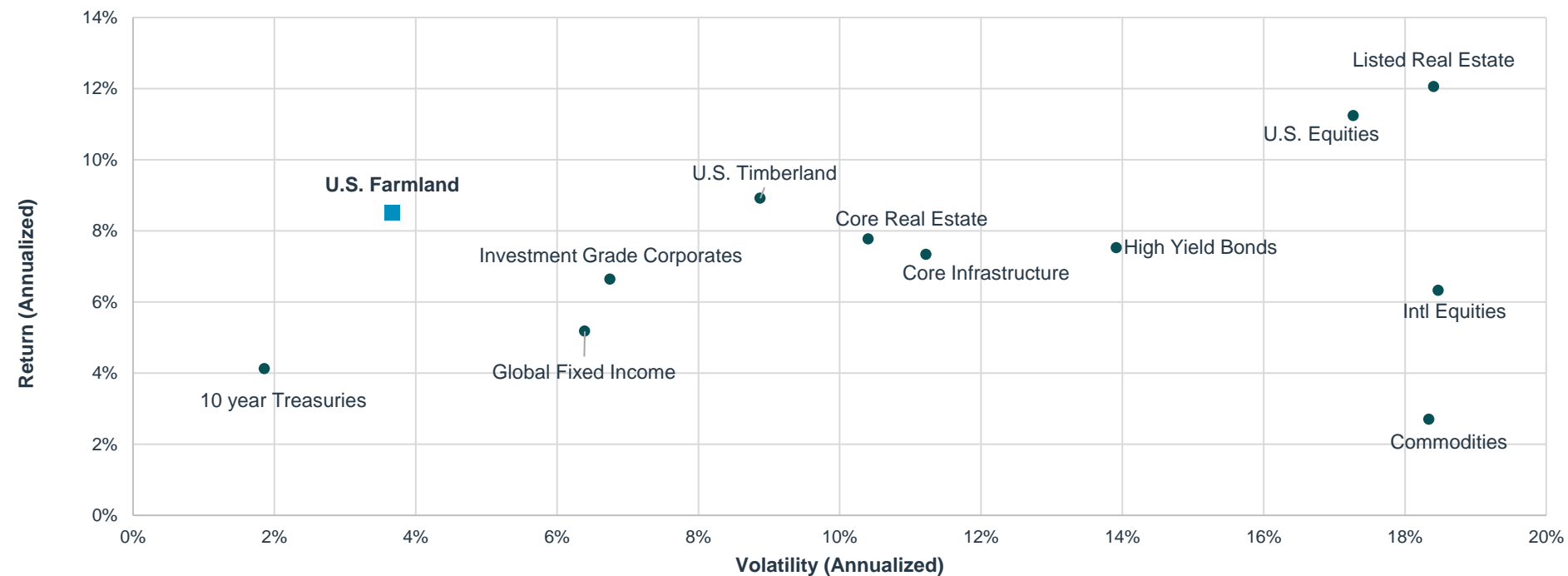
2 Macrobond, NCREIF, data to 31 Dec 2022.

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Farmland - diversification

High returns with fixed income level of volatility

Annual return vs. volatility (1990-2022)



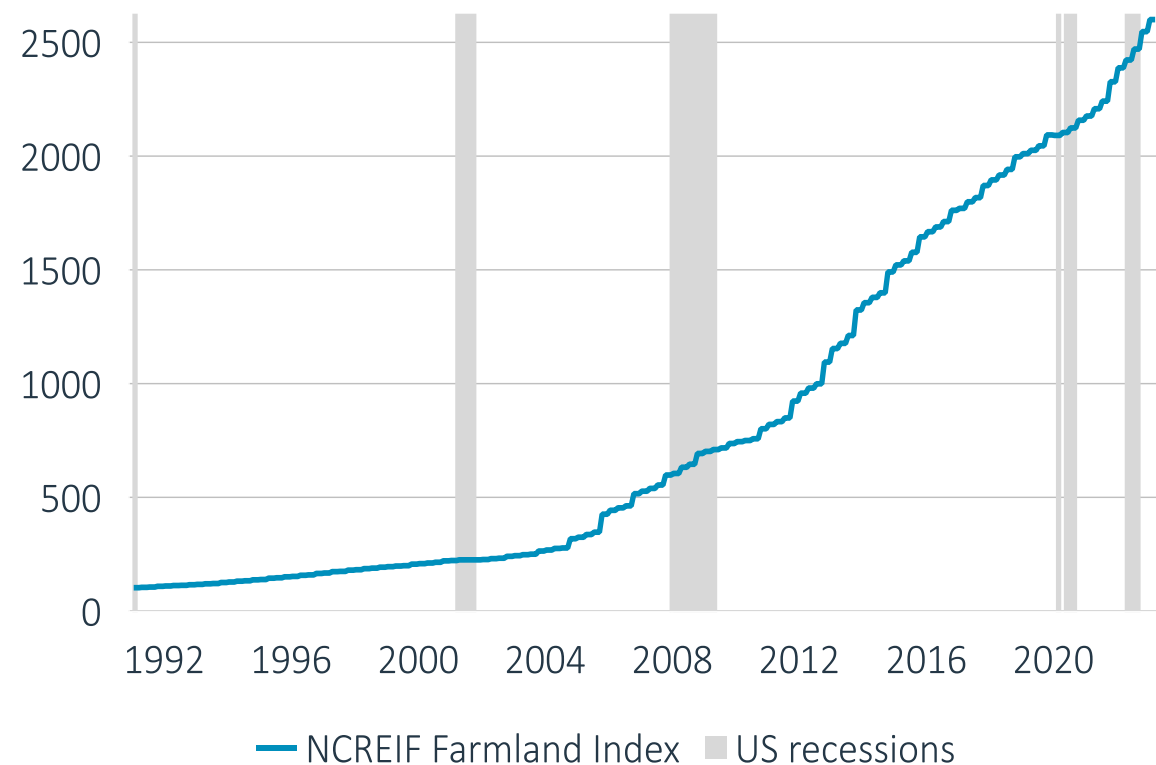
Sources: TIAA-CREF Center for Farmland Research, Standard & Poor's, Federal Reserve, MSCI, Commodity Research Bureau, Consumer Price Index. **U.S. Farmland:** NCREIF Farmland; **Listed Real Estate:** FTSE NAREIT All Equity REITs; **Core Real Estate:** NCREIF NFI-ODCE; **U.S. Timberland:** NCREIF Timber; **Investment Grade Corporates:** ICE BofA US Corporate Index; **10 Year Treasuries:** ICE BofA U.S. Treasury 7-10 Year; **High Yield Bonds:** Barclays U.S. Corporate High Yield 2% Issuer Capped Index. Values from start of data 31 Dec 1992.; U.S. Equities: S&P 500; International Equities: MSCI EAFE; Global Fixed Income: BBG Global Agg.; Commodities: BBG Commodity. Values from start of data 31 Dec 1992. **Core Infrastructure:** Cambridge Global Infrastructure Index. Values from start of data 31 Dec 1998.

Performance data shown represents past performance and does not predict or guarantee future results.

Farmland - durable returns

Cyclical resilience through recessions

Farmland returns rose in the last three U.S. recessions¹



¹ Macrobond, NCREIF, data to 31 Dec 2022.

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Portfolio construction



Diversification considerations

Geography

- OECD vs EM
- Hemispheres
- Intra-country

Operations

- Lease
- Custom
- Direct

Water profile

- Dryland
- Irrigated
- Ground & Surface

Crop type

- Row
- Permanent
- Optionality

Potential geographies

Diversification by country and hemisphere



Portfolio construction

Country/region filter

Market factors



Governance factors

Commodity filter

Demand factors



Supply factors

Investment universe

Potential crop types

Row

- Corn Belt
- Delta
- Mountain
- PNW
- Southeast
- Non US

Horticulture

- Citrus
- Almonds
- Pistachios
- Cherry
- Olives
- Blueberries

Viticulture

- Napa & Sonoma
- Central CA
- Oregon
- Chile, AU, NZ
- Other countries
- Varietals

2023 farmland outlook



Row / corn, soybeans

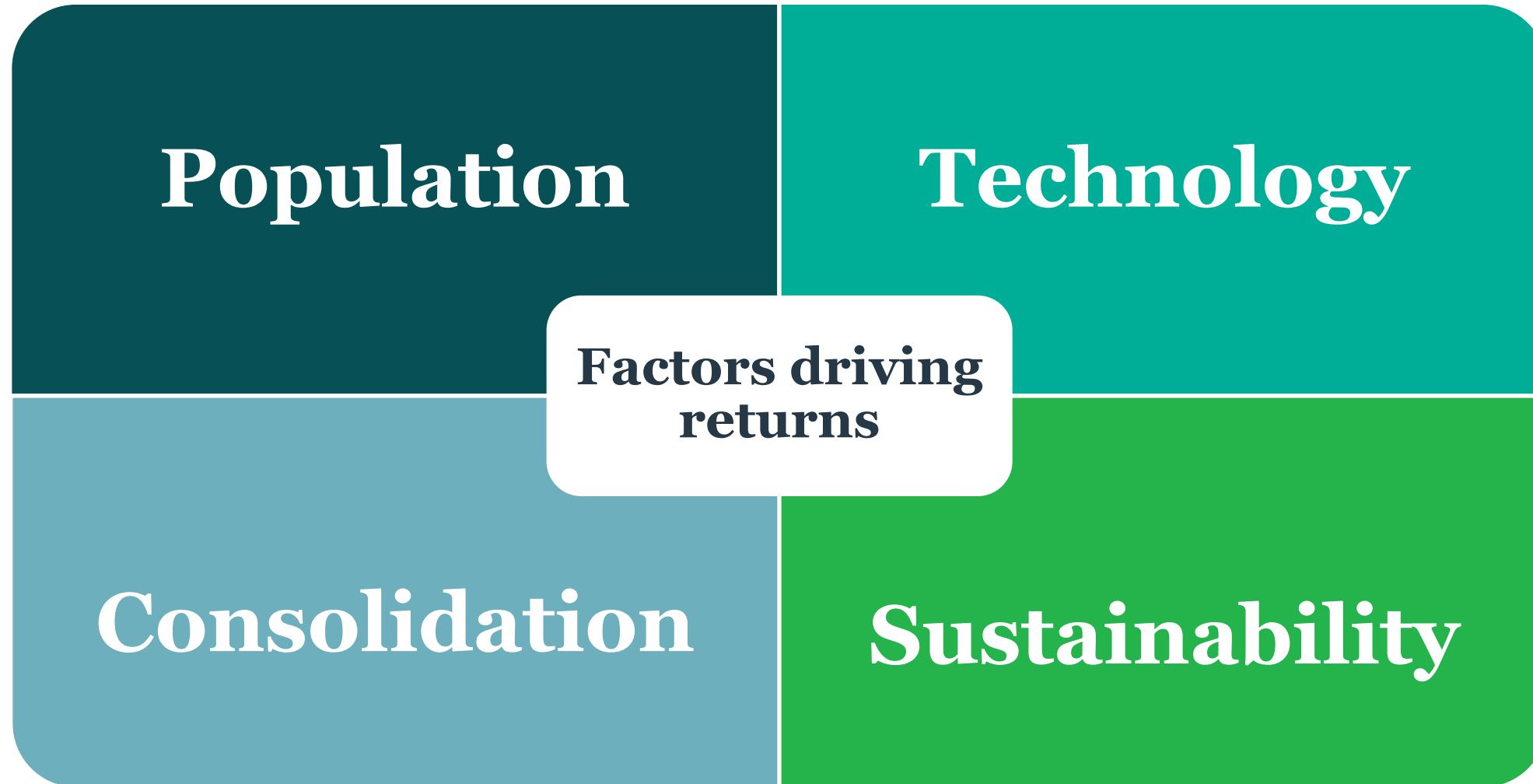


Viticulture / wine grapes



Horticulture / nuts, citrus

Long term farmland outlook



Buy and sell considerations

Buy criteria

- Income
- Property attributes
- Capex needs
- Water risk

Sell criteria

- Valuation
- Performance
- Capex needs
- Water risk

Exit strategy

- Tenants
- Other local farmers
- Investors



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