Alternatives as an asset class

Why Alternatives?

High stock-bond correlation suggests portfolio allocations beyond public markets.

While the classic 60/40 stock-bond portfolio has historically delivered positive returns in most calendar years, with gains in stocks offsetting loses in bonds and vice versa, challenging years like 2022 remind investors that a well-diversified portfolio should not consist of only public stocks and bonds. Against the backdrop of lingering inflation risks and stock-bond correlation still that may be in a regime shift, investors should look beyond traditional markets for diversification.

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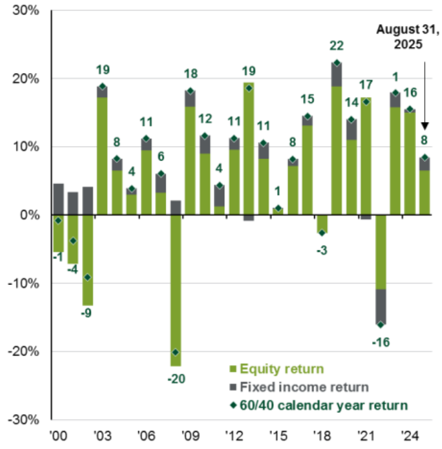
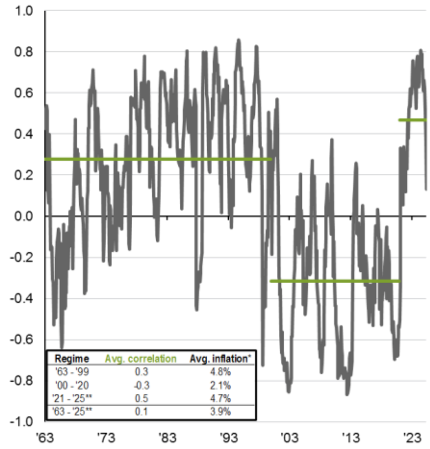
60/40 portfolio annual return decomposition

%, total return



S&P 500 / U.S. 10-year Treasury correlation

Rolling 12-month correlation based on monthly total returns



Source: Bloomberg, FactSet, Haver Analytics, LSEG, Standard & Poor's, J.P. Morgan Asset Management.
(Left) The 60/40 portfolio is 60% invested in the S&P 500 Total Return Index and 40% invested in the Bloomberg U.S. Aggregate Total Return Index. (Right) *Simple average of the year-over-year percent change in headline CPI during each period. **2025 figures are through 8/31/2025. Past performance is not a reliable indicator of current and future results. Data are based on availability as of August 31, 2025.

Which Alternatives?

Alternatives offer diversification, stable income and growth.

Alternatives offer a means to increase diversification within a portfolio and diversify a wider range of shocks (i.e. both weak growth and high inflation), as well as offer additional income streams and enhanced alpha return. Alternatives can be used to complement or replace the desired portfolio characteristics that can't be found in public markets.

The characteristics of various alternatives can be used to substitute, or complement, those of traditional public assets, based on what best fits the ultimate investment objective of the portfolio.

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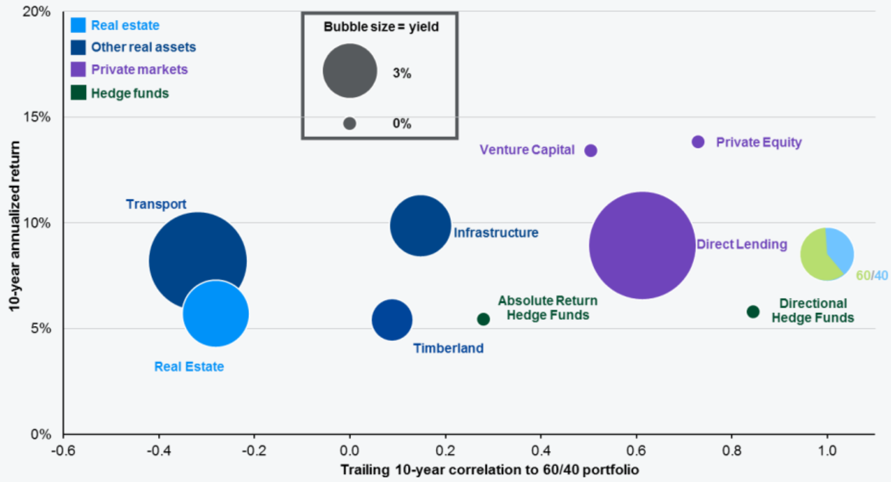
Correlations, returns and yields

10-year correlations and 10-year annualized total returns, 2Q15 – 1Q25



Source: Burgiss, Cliffwater, FactSet, MSCI, NCREIF, PivotalPath, J.P. Morgan Asset Management. All categories are global, except for timberland and direct lending, which are U.S. Correlations are based on quarterly returns over the time period indicated. A 60/40 portfolio is comprised of 60% stocks and 40% bonds. Stocks are represented by the S&P 500 Total Return Index. Bonds are represented by the Bloomberg U.S. Aggregate Total Return Index. 10-year annualized returns are calculated based on the time period indicated. "Absolute Return Hedge Funds" represent asset-weighted returns from the PivotalPath Global Macro and Relative Value indices. "Directional Hedge Funds" represent asset-weighted returns from the PivotalPath Credit, Equity Diversified and Event Driven indices. Direct Lending uses yields from the Cliffwater Direct Lending Index. All other indices and data used for alternative asset class returns and yields are as described on pages 12 and 16 of the Guide to Alternatives. Yields are based on latest available data as described on page 12 of the Guide to Alternatives. Transportation returns are shown on an unlevered basis and returns can be enhanced by adding leverage. Past performance is not a reliable indicator of current and future results. Data are based on availability as of August 31, 2025.

Whose Alternatives?

Manager selection is crucial as potential returns can vary significantly.

This slide illustrates that the range of returns for private investment managers is much broader than for public investment managers, highlighting the importance of selecting an effective manager to unlock the return-enhancing potential of alternatives.

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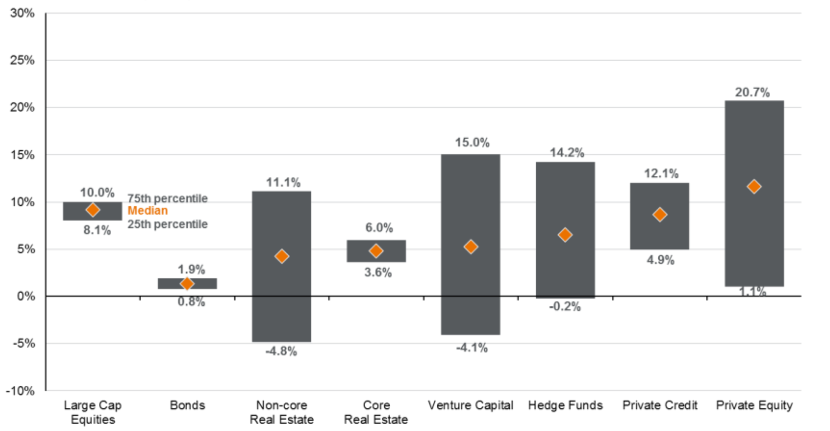
Public and private manager dispersion

Based on returns from 2Q15 – 2Q25*



Source: Burgiss, Morningstar, MSCI, PivotalPath, J.P. Morgan Asset Management. All categories are global. Large Cap Equities and Bonds are based on the Morningstar Global Large Stock Blend and Global Bond (not hedged) categories, respectively. Core Real Estate is based on the MSCI Global Property Fund Index. Private Credit, Non-core Real Estate, Private Equity and Venture Capital are based on indices from the MSCI Private Capital Universe. Hedge Funds are based on the PivotalPath index. Manager dispersion is based on annual returns over the 10-year period indicated for: Large Cap Equities, Bonds and Hedge Funds. *Manager dispersion is based on annual returns over the 10-year period ending 1Q25 for Core Real Estate. Manager dispersion is based on the 10-year internal rate of return (IRR) ending 1Q25 for: Private Credit, Non-core Real Estate, Private Equity and Venture Capital. Past performance is not a reliable indicator of current and future results. Data are based on availability as of August 31, 2025.

Private equity

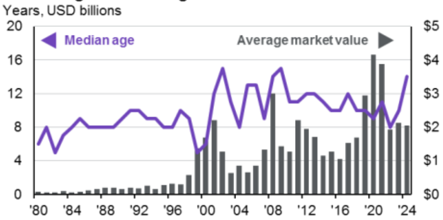
Investors risk missing opportunities if they don't look beyond public markets.

Companies are choosing to stay private, and can stay private longer, due to the abundance of private capital.

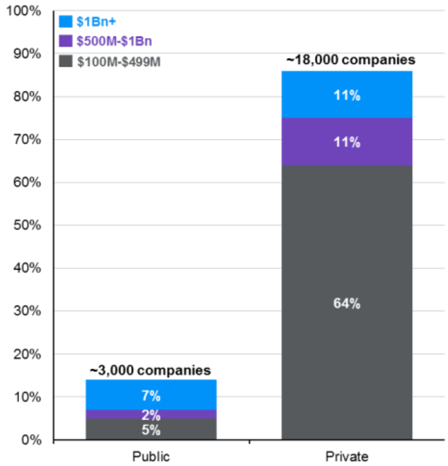
In 1999, the median age of a company being taken public was 4 years, by 2020 that had increased to 12 years. This means that many companies may experience their fastest growth phases while still private. Overall, listed companies represented a small set of all companies. More than 85% of companies with revenue of over $100 million in the U.S. are privately held.

Number of listed U.S. companies* and market cap.
Count, S&P 500 market capitalization in USD trillions

Median age and average market value at IPO
Years, USD billions



U.S. companies split public vs. private
Companies with revenue greater than $100M, share public vs. private



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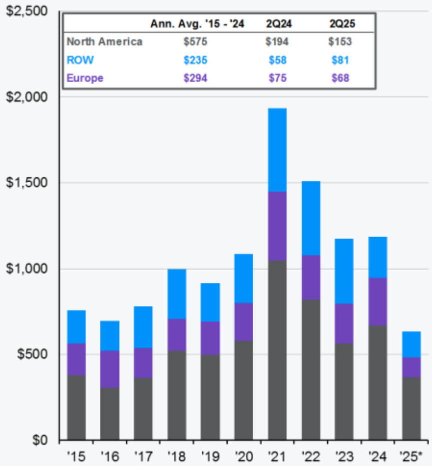
Sources: Bain and Company, FactSet, Jay Ritter – University of Florida, S&P Capital IQ, World Federation of Exchanges, J.P. Morgan Asset Management.
(Top left) *Number of listed U.S. companies is represented by the sum of number of companies listed on the NYSE and the NASDAQ. (Bottom left) Average market value is calculated by dividing the total market value at first closing price by the total number of IPOs for each period. The sample is IPOs with an offer price of at least $5, excluding ADRs, unit offers, closed-end funds, REITs, natural resource limited partnerships, small best efforts offers, banks and S&Ls and stocks not listed on CRSP (CRSP includes Amex, NYSE and NASDAQ stocks). (Right) Percentages may not sum to 100 due to rounding. Data are based on availability as of August 31, 2025.

Changing exit dynamics amidst higher interest rates.

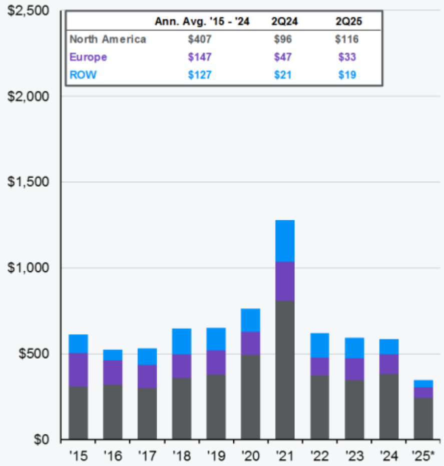
Elevated global interest rates have slowed deal-making since 2022. While private equity investment remains robust, exit activity is still weak.

Headwinds to exit activity are fading as rates come down and markets move past the peak in policy uncertainty. The recovery in IPO activity will be gradual. Investors are seeking new approaches amidst this bottleneck, such as turning to the secondary market.

Global private equity investments by value
USD billions, 2015 – 2025*



Global private equity exits by value
USD billions, 2015 – 2025*



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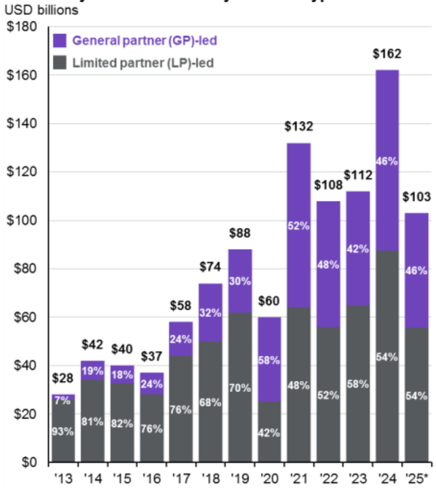
Source: Preqin, J.P. Morgan Asset Management.
*2025 data are as of 2Q25. Data are based on availability as of August 31, 2025.

The private secondary market is growing.

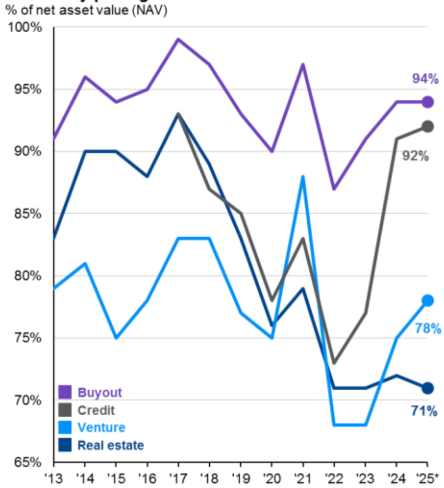
Secondary transactions can create much needed liquidity for both General Partners and Limited Partners in private equity, and is another avenue to exit a private company or part of a private equity fund.

The secondary private equity market marked its strongest year ever in 2024. The limited exit activity in public markets has driven investors to the secondary market. The sometimes forced nature of sales in the secondary market means that investors can buy assets a discounted prices.

Secondary market volume by investor type
USD billions



Secondary pricing**
% of net asset value (NAV)



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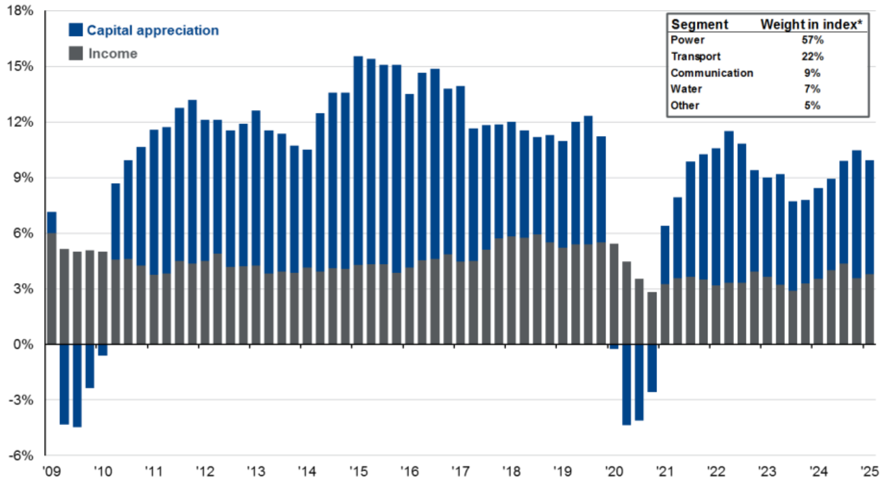
Source: Greenhill, Jefferies, J.P. Morgan Asset Management.
*2025 data are as of 2Q25. "Global Secondary Market Review," Jefferies, July 2025. Secondary transactions involve selling an existing stake of a target company or fund to raise liquidity, exit a position, modify exposures or lock in gains. (Right) **Secondary pricing of LP portfolios. Data are based on availability as of August 31, 2025.

Infrastructure

Infrastructure provides stable income and diversification.

Infrastructure investments offer stable and predictable income streams, as they provide essential services that remain in constant demand regardless of economic conditions. As shown in the chart, even during 2020, the income generated was robust enough to offset price declines. Thus, global infrastructure offers both stable income and diversification throughout the economic cycle.

Global core infrastructure returns
1Q09-1Q25, rolling 4-quarter returns from income and capital appreciation



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Source: MSCI, J.P. Morgan Asset Management.
Infrastructure returns represented by the MSCI Global Private Quarterly Infrastructure Asset Index. Data show rolling 4-quarter returns from income and capital appreciation.
*Weights are based on enterprise value. Past performance is not a reliable indicator of current and future results. Data are based on availability as of August 31, 2025.

The future demand for infrastructure is expected to be tremendous. This is both to support economic growth and the ongoing energy transition.

Globally, several trillion dollars in infrastructure investment is needed annually to establish or upgrade the foundations of many economies. This asset class is truly global, with significant demand in both developed and developing markets.

Beyond maintaining current infrastructure, the transition towards net zero will create additional capital demand. While governments may face constraints and require more time to deploy capital, favorable regulatory changes and subsidies are likely to support private solutions moving forward.

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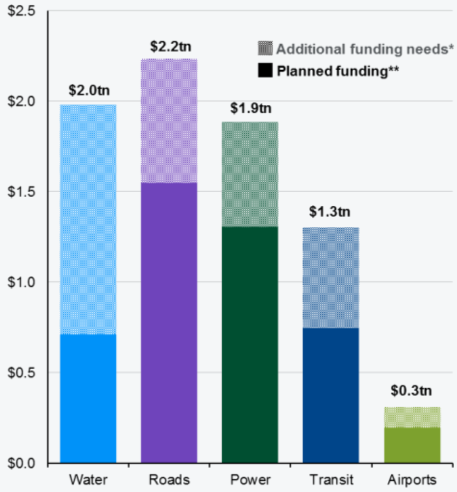
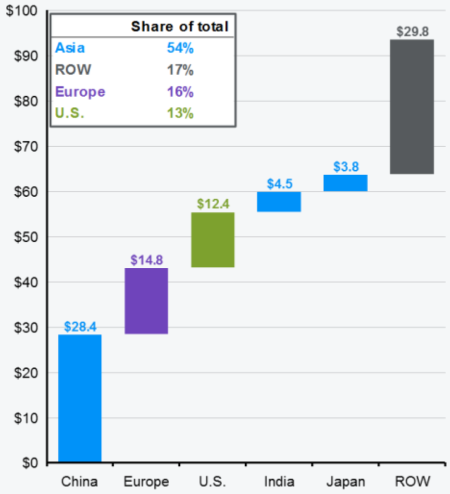
U.S. infrastructure funding & funding gaps
USD trillions, 2024-2033, as of 2024



Infrastructure investment needs by region
USD trillions, 2016-2040, constant 2016



Source: American Society of Civil Engineers (ASCE), Global Infrastructure Hub by G20, J.P. Morgan Asset Management. (Left) Categories defined by the ASCE in the March 2025 "A Comprehensive Assessment of America's Infrastructure: 2025 Report Card for America's Infrastructure" report. *Additional funding is the amount of funding needed to get each category to a "B" rating, or a state of "Good" repair, as defined by the ASCE. **Planned public funding is the amount of investment from 2024-2033 that is currently in place by U.S. law. (Right) ROW = Rest of World. Data are based on availability as of August 31, 2025.

Infrastructure investments can serve as effective inflation hedges.

Many infrastructure assets have long-term contracts with built-in inflation adjustments, ensuring revenues keep pace with rising costs. For example, the left chart shows how "allowed returns" for utilities, defined by regulators, tend to increase with inflation, enabling companies to pass higher costs to customers.

Given their essential nature, customers are less willing to go without during periods of economic stress. Even in recessions, household spending on utilities doesn't change and why the asset is not sensitive to the economic cycle.

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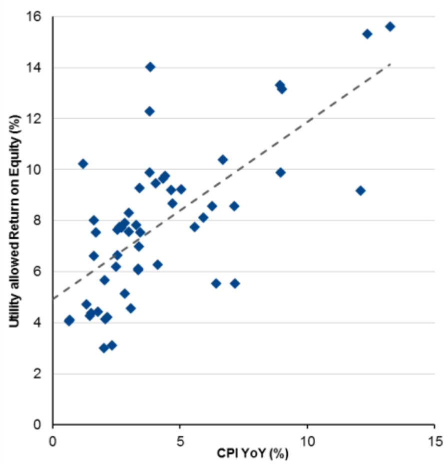
Gas and electric utilities: Allowed returns vs. inflation
Average allowed return on equity* 1970-2024



Household utility spending
Household utility spending % of GDP

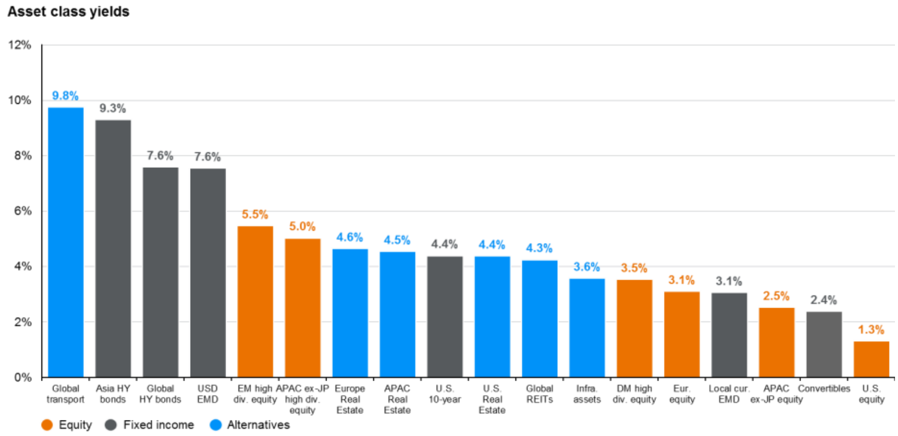
Source: AEU, Bloomberg, Bureau of Economic Analysis, SNL, J.P. Morgan Asset Management. (Left) Data represent average allowed return on equities (RoEs) for electricity and natural gas utilities and annual inflation from December 1970 through December of the indicated period. *Return on equity is lagged by 2 years. Past performance is not a reliable indicator of current and future results. Data are based on availability as of August 31, 2025.

Transport

Infrastructure provides stable income and diversification.

Transport assets generate higher yields for investors due to high demand for many transport assets (like maritime) and tight supply, surpassing most fixed income products.

At the same time, they carry lower credit risk compared to high-yield bonds, as transport counterparties are often of investment-grade quality.



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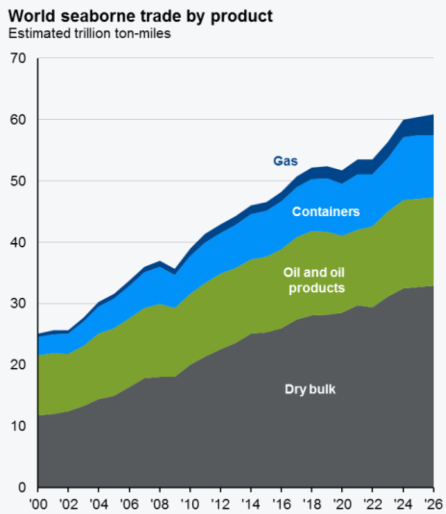
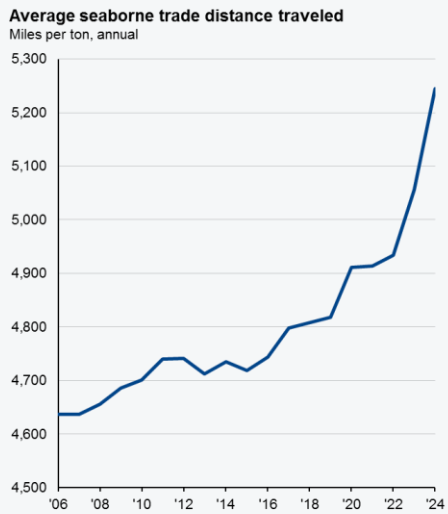
Source: Alerian, Bank of America, Bloomberg, Clarkson, Drewry Maritime Consultants, FactSet, Federal Reserve, FTSE, MSCI, Standard & Poor's, J.P. Morgan Asset Management. Global transport: Levered yields for transport assets are calculated as the difference between charter rates (rental income), operating expenses, debt amortization and interest expenses, as a percentage of equity value. Yields for each of the sub-vessel types above are calculated and respective weightings are applied to each of the sub-sectors to arrive at the current levered yields for Global Transportation; asset classes are based on MSCI Global Property Fund Index – North America (U.S. real estate), market weighted-average of MSCI Global Property Fund Indices – UK & Continental Europe (Europe real estate), MSCI Global Property Fund Index – Asia Pacific (APAC real estate), FTSE NAREIT Global REITs (Global REITs), MSCI Global Infrastructure Asset Index (Infra. assets), Bloomberg U.S Convertibles Composite (Convertibles), Bloomberg Global High Yield Index (Global HY bonds), J.P. Morgan Government Bond Index EM Global (GBI-EM) (Local currency EMD), J.P. Morgan Emerging Market Bond Index Global (EMBIG) (USD EMD), J.P. Morgan Asia Credit Index Non-investment Grade (Asia HY bonds), MSCI Asia Pacific ex-Japan equities (APAC ex-JP equity), MSCI Asia Pacific ex-Japan High Dividend Yield Index (APAC ex-JP high div. equity), Emerging Markets High Dividend Yield Index (EM high div. equity), MSCI World High Dividend Yield Index (DM high div. equity), MSCI Europe (Eur. equity), MSCI USA (U.S. equity). Yields for infra. assets, global transport, U.S. real estate, Europe real estate and APAC real estate are as of 31/12/24. Past performance is not a reliable indicator of current and future results. Guide to the Markets – Asia. Data reflect most recently available as of June 30, 2025.

Transportation played and will continue to play a vital role in the global economy.

Global trade has grown rapidly over the past decades, with transportation assets the backbone of the global supply chain.

The volume of global trade by sea, which still represents the main mode of transport for goods, has continually grown since the year 2000. We have also seen the average distance traveled by ships increase due to a number of factors, including ships taking longer routes to avoid conflict zones, and an increase in the size of vessels making trans-continental voyages.





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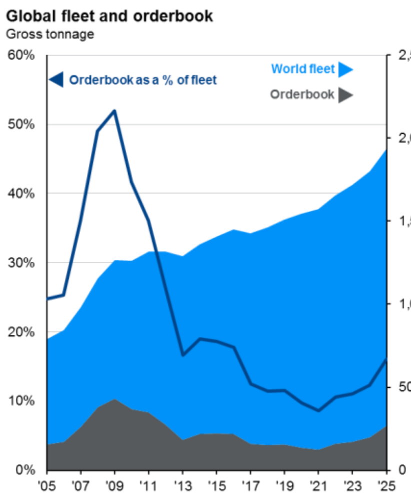
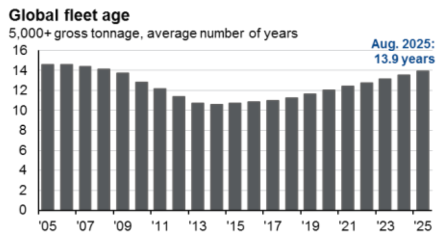
Source: Clarksons, J.P. Morgan Asset Management. (Left) World seaborne trade by product as of July 2025. Dry bulk refers to unpackaged commodity cargo. (Right) Average seaborne trade distance miles are an estimate derived by dividing ton-miles carried by vessels by the total volume of shipments in each period. Data are based on availability as of August 31, 2025.

Shipping demand is growing but supply remains tight.

The global orderbook as a percentage of fleet remains at subdued level compared to historical ranges, suggesting limited risk of oversupply which occurred over 2008-09.

Ships sitting idle at port (idle rates), although spiked during the pandemic, have since reduced to near 10-year lows as global economy recovered. An aging global fleet also suggests demand for new ships to continue to likely increase to pile up in the future.





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Source: Clarksons Research, MSI, Sea/net, J.P. Morgan Asset Management.
(Left) An orderbook contains all the vessels that have been delivered as well as the current order or expected ship orders. The orderbook to fleet ratio is a useful indicator of future supply growth. (Bottom right) Gross tonnage is the volume of a ship's enclosed spaces in cubic meters. Data are based on availability as of August 31, 2025.