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FLORIDA PUBLIC PENSION TRUSTEES ASSOCIATION
SINCE 1984

Winter Trustee School

Understanding Non-Traditional Assets

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Traditional Assets

- Ready liquidity
- Frequently traded at high volume on organized exchanges
- Public equities, fixed income, cash

Non-Traditional Assets

- Broadly classified as alternative investments
- Does not fall into one of the traditional asset classes
- Often less liquid, private (although some vehicles trade on public exchanges)
- Private equity, hedge funds, **opportunistic investments**

Defining Non-Traditional, Opportunistic Investments

- Investments that are expected to have low correlation to traditional public or private market returns
- Returns tend to be driven by idiosyncratic factors rather than changes in the business cycle
- Opportunistic assets can generally be divided into three broad segments: Real Assets, Private Credit and Alternative Private Markets

Opportunistic Asset Types		
Real Assets	**Private Credit**	**Alternative Private Markets**
Farmland	Music and Healthcare Royalties	Infrastructure and AI
Timberland	Hard Asset Leasing	Blockchain and Cryptocurrency
Aquaculture	Litigation Finance	Gaming
Water Infrastructure and Rights	Catastrophe Bonds	Intellectual Property
Sustainable Food	Life Settlements	Collectibles
Conservation Easements	Specialty Lending	Sports Franchises

Source: ACG Research
Note: Table above is for illustrative purposes only. Asset type list is not meant to be all inclusive, and certain asset types may cross over more than one category.

Defining Opportunistic Investments

- Non-opportunistic assets often have relatively high correlations, except for U.S. bonds and core real estate
- Due to their unique qualities, opportunistic assets can help further diversify a portfolio beyond traditional alternative investments
- Certain opportunistic assets not shown below, such as music royalties and intellectual property, are difficult to model but are often still driven by factors uncorrelated to the traditional economic cycle

Correlation of Opportunistic Investments
(Nov 2014 - Nov 2024)

	U.S. Large Cap Equity	U.S. Bonds	Commodities	Core Real Estate	Private Equity	Private Debt
Non-Opportunistic Assets*						
U.S. Large Cap Equity	1.00					
U.S. Bonds	0.32	1.00				
Commodities	0.42	-0.28	1.00			
Core Real Estate	-0.07	-0.12	0.08	1.00		
Private Equity	0.76	0.15	0.57	0.14	1.00	
Private Debt	0.59	-0.17	0.66	0.10	0.74	1.00
Opportunistic Assets*						
Bitcoin	0.38	0.13	0.15	0.13	0.40	0.31
Catastrophe Bonds	0.35	0.36	0.08	-0.16	0.16	0.40
Farmland	0.38	0.41	-0.04	-0.24	0.24	-0.02
Timberland	0.10	0.18	0.08	0.07	0.27	0.02

Source: ACG Research
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Blockchain Defined

Traditional System is Centralized

- One party controls the information
- Lower security and greater risk of impropriety

Blockchain System is a Decentralized, Distributed System

- Each user has real-time access to the same information
- Changes can only be made with group consensus

Blockchain Defined

- A blockchain is a decentralized database that securely stores information and distributes it across a shared network of computers
- Blockchains allow multiple parties to confidentially store and exchange information without the need for a trusted intermediary
- This exchange of information can come in different forms, including financial transactions, supply chain tracking, and record keeping
- When used appropriately, blockchains can offer greater trust, security and efficiency versus traditional, centralized databases

Currently, a primary use of blockchain technology is to facilitate cryptocurrency transactions

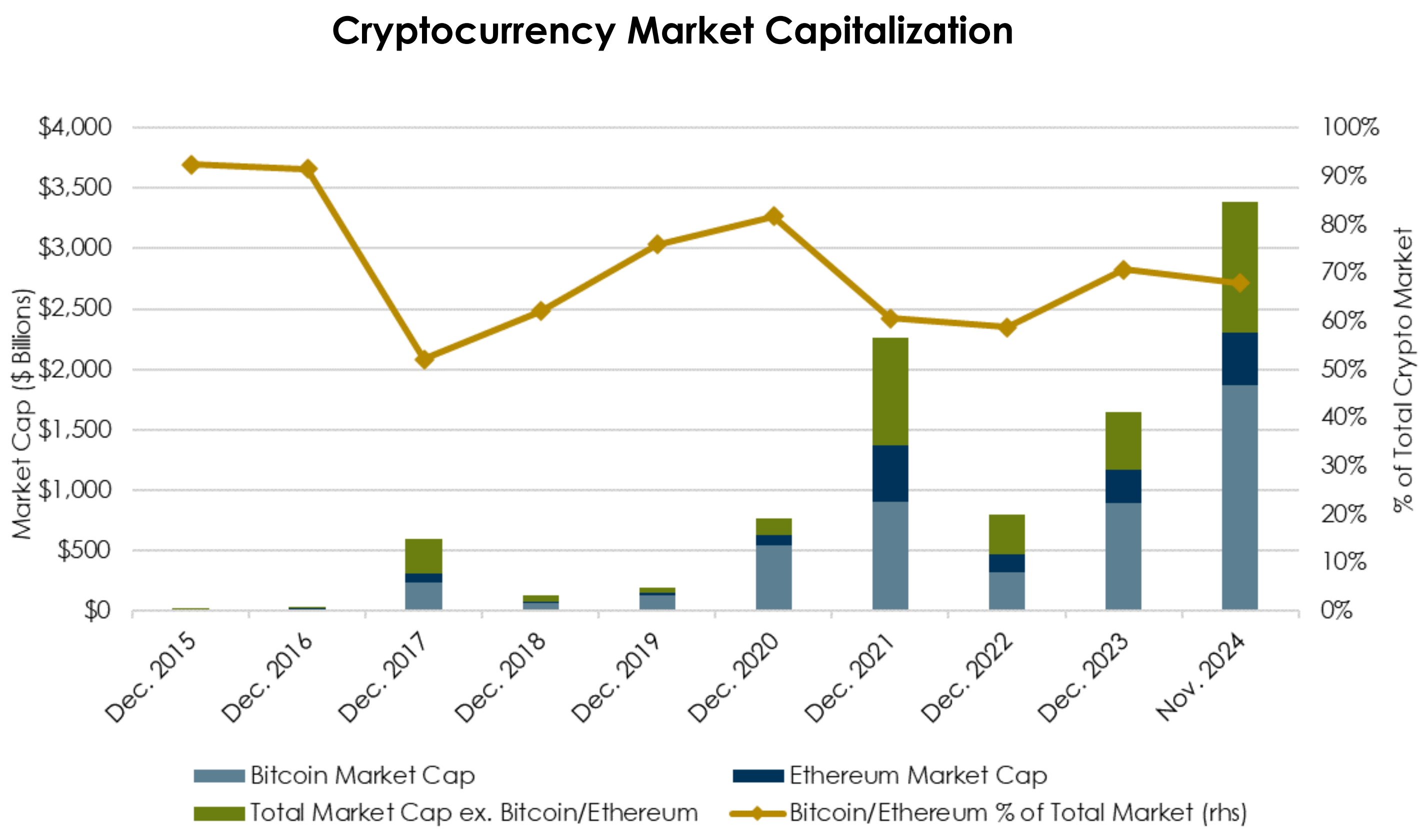
Blockchain - Cryptocurrency

"A cryptocurrency is any kind of ***peer-to-peer*** *digital money powered by the* ***Blockchain technology****. Since Bitcoin's appearance in 2009, hundreds of new cryptocurrencies have been created… The Blockchain itself is based on the* ***principles of cryptography****, hence the name "cryptocurrencies"."*

Source: Cointelegraph

- This technology means that crypto can provide an avenue for more consumers to access the global financial system, particularly in developing countries
- This possibility has helped drive strong investor interest in crypto, along with its high potential return and low correlation to traditional assets
- However, there are risks that investors should evaluate before considering an allocation to crypto, such as:
  - Volatility
  - Regulation (lack of/threat of/regional regulations)
  - Cyberthreats

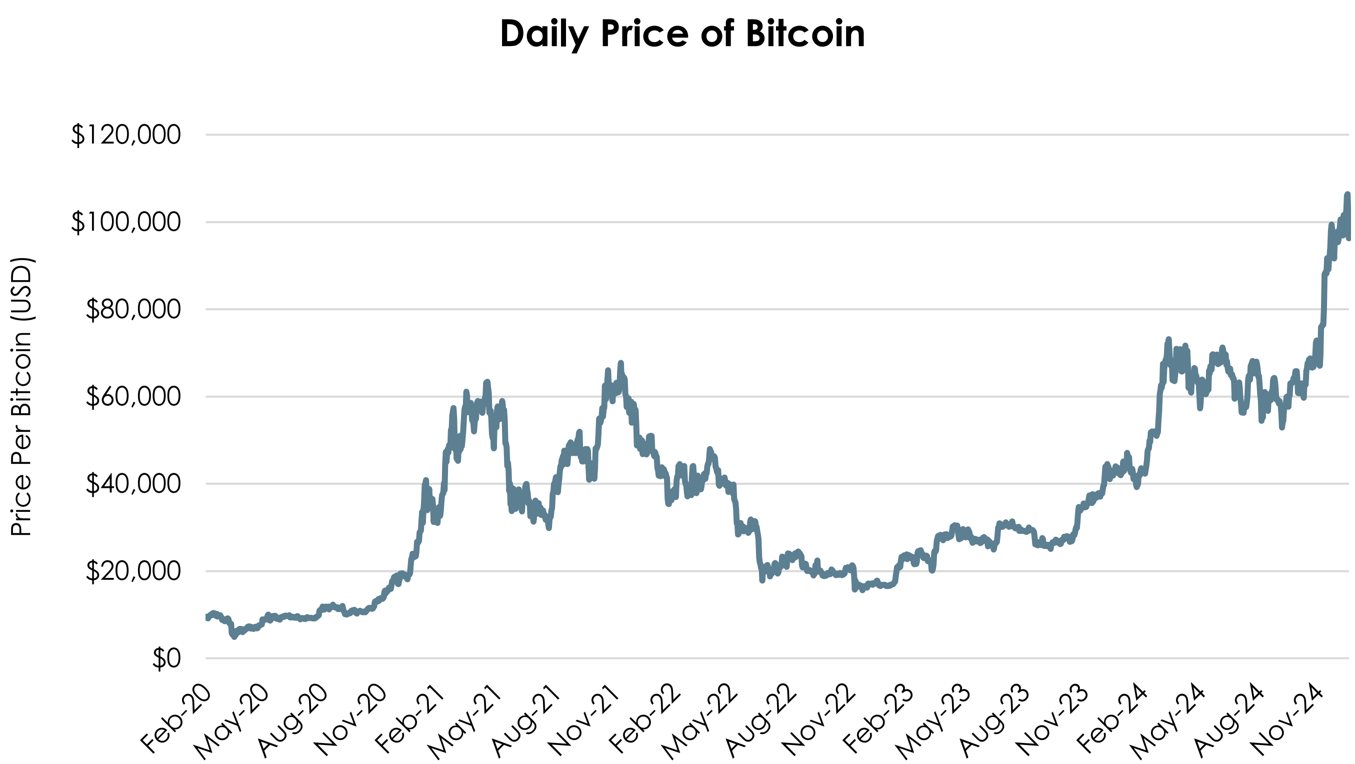
Cryptocurrency Growth in Popularity



Source: CoinMarketCap, ACG Research

Bitcoin Price

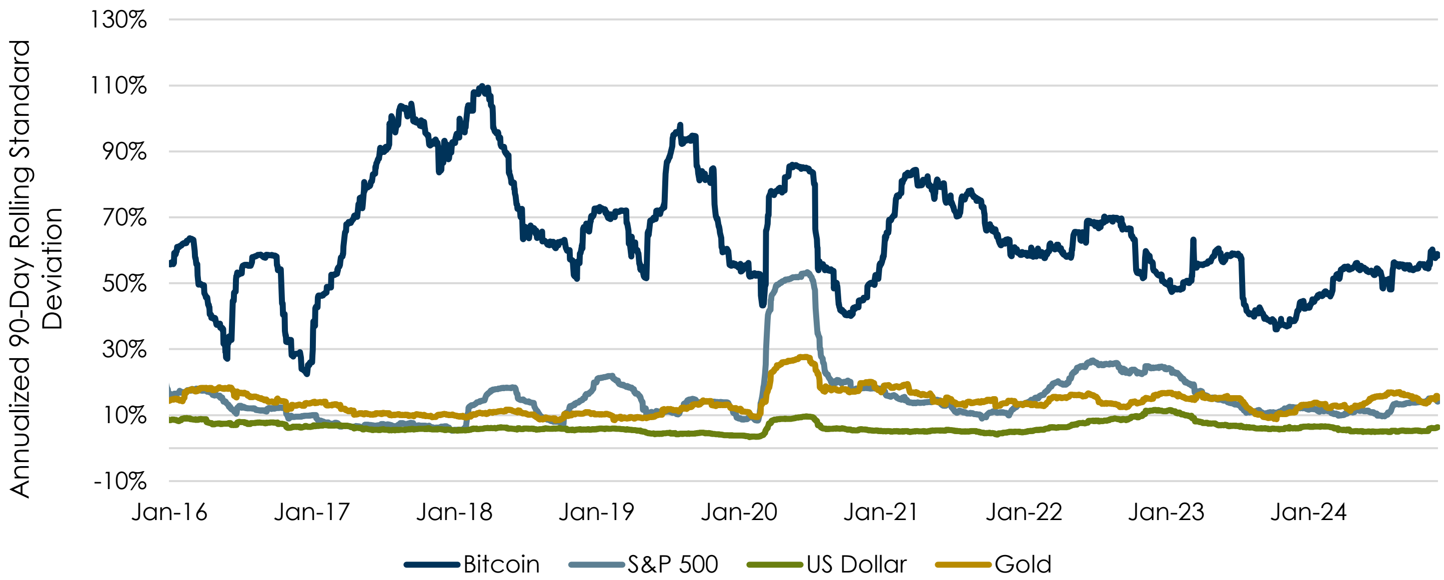
- Broader market adoption and support for Bitcoin have helped drive substantial price appreciation for most of 2020 and parts of 2021
- However, Bitcoin continues to exhibit high volatility, with multiple drawdowns in 2021 and 2022 of greater than 20%:



Source: Bloomberg, ACG Research

Bitcoin – A Volatile Asset

- **Bitcoin continues to exhibit high realized volatility, particularly versus a traditional store of value such as gold**
- This can result in outsized losses during certain periods—in 2018, Bitcoin's price fell by 74% versus a 2% decline for gold and a 4% decline for the S&P 500
- **Bitcoin may still be a viable store of value for consumers in developing countries with high levels of inflation**, but its volatility likely remains too high for it to play this role for many investors today



Source: Bloomberg, ACG Research

Investing in Cryptocurrency

Representative Cryptocurrency Investment Strategies			
Type	**Advantages**	**Disadvantages**	**Examples**
Currency-Only	▪ "Pure" exposure to cryptocurrency ▪ Ability to bet on specific currencies	▪ Single-currency adoption risk ▪ Returns can be highly volatile	▪ Direct ▪ Liquid Funds ▪ Spot ETFs ▪ Stablecoins
Non-Currency (Public)	▪ Plays the ecosystem, not the currency ▪ Mix of dedicated crypto and diversified FinTech companies	▪ Potentially less upside than currencies ▪ High correlation to growth stocks ▪ Relatively limited number of crypto-focused public companies	▪ Direct ▪ Liquid Funds
Non-Currency (Private)	▪ Early access to next-generation companies ▪ Broader access to blockchain use cases such as Decentralized Finance	▪ Fees and liquidity issues ▪ Underlying technologies can be difficult to value	▪ Venture Capital
Diversified	▪ Benefits from ecosystem growth by investing in custodians, exchanges, etc. ▪ Maintains optionality on currencies	▪ Fees and liquidity issues ▪ No control over underlying currency exposure	▪ Venture Capital

Investing in Cryptocurrency

Representative Cryptocurrency Investment Vehicles			
Type	**Advantages**	**Disadvantages**	**Examples**
Direct Ownership	▪ High degree of customization and control ▪ Institutions can now partner with a qualified custodian to hold assets	▪ Complexity around trading, custody and taxes ▪ Concentration risk	▪ Bitcoin ▪ Ethereum ▪ CME Futures
Liquid Funds	▪ Partner with professional managers ▪ Access without the complexity of direct ownership	▪ Fees can be high and some only have monthly or quarterly liquidity ▪ Often new firms formed in the last several years	▪ Single-Asset Funds ▪ Diversified Funds ▪ Spot ETFs
Hedge Funds	▪ Active management with the ability to take both long and short positions ▪ Access to less liquid strategies such as Decentralized Finance	▪ Fees and liquidity ▪ Opaque strategies in an already complex space	▪ Multiple firms to consider
Venture Capital	▪ Offers access to crypto without betting on a particular currency or technology ▪ Access to infrastructure opportunities like exchanges and custodians	▪ Illiquidity and duration ▪ Manager selection is critical	▪ Diverse list of firms to consider

Infrastructure Defined

- Infrastructure refers to the basic physical systems needed for the operation of a society or enterprise
- Infrastructure assets can be categorized across three primary groups: **Utilities/Power, Transportation and Communications**
- However, there are many **different types of infrastructure assets** within each of these groups, **all with varying degrees of risk and return**
- There are also strategies that focus on social infrastructure (schools, hospitals, etc.), but these assets tend to have a high degree of government reliance and an allocation can often be achieved through niche private real estate strategies

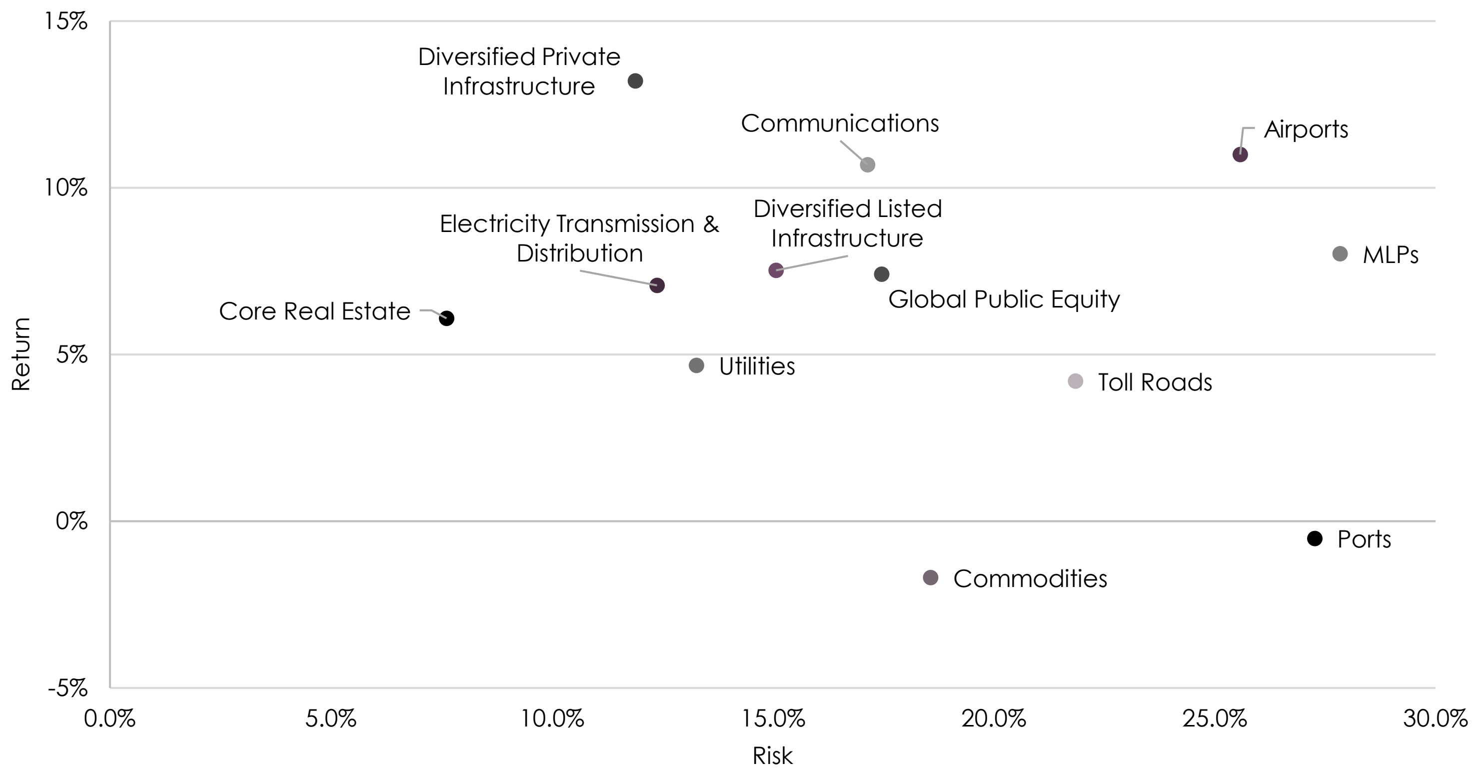
Infrastructure

Infrastructure Categories		
Utilities and Power	**Transportation**	**Communications**
Electricity	Toll roads and bridges	Cell towers
Water	Airports	Fiber networks
Gas	Rail networks	Data centers
Renewable energy	Ports	Wireless spectrum

Infrastructure – Risk and Return

Historical Risk and Return

12/31/05 – 9/30/24



Source: Bloomberg, NCREIF, PitchBook, ACG Research

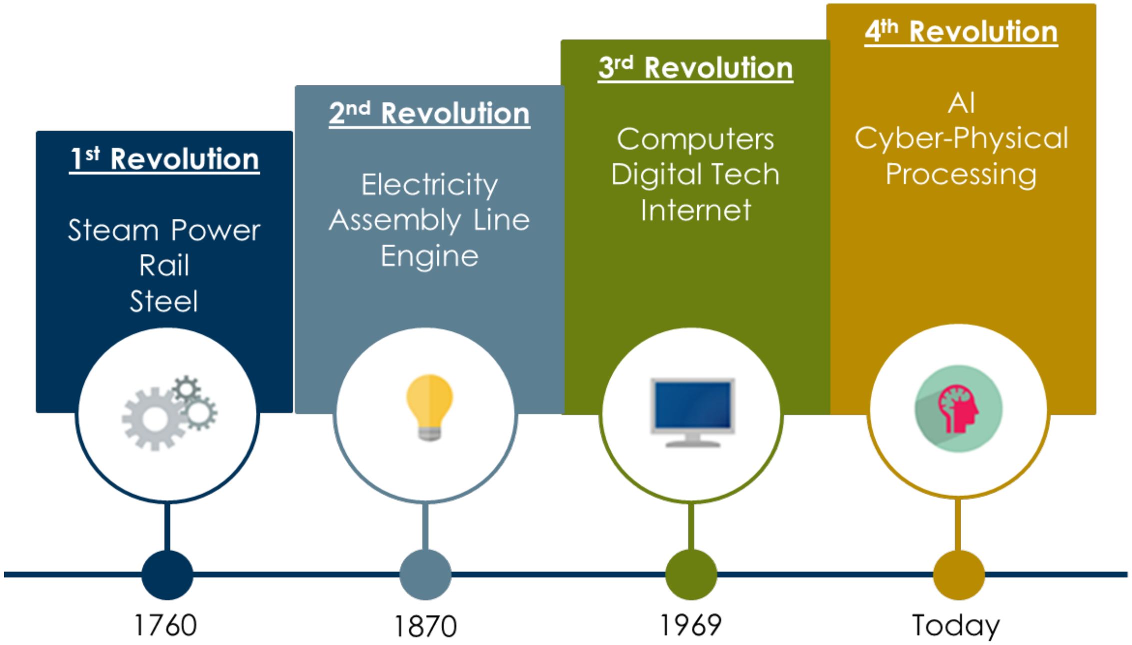
Infrastructure Investing

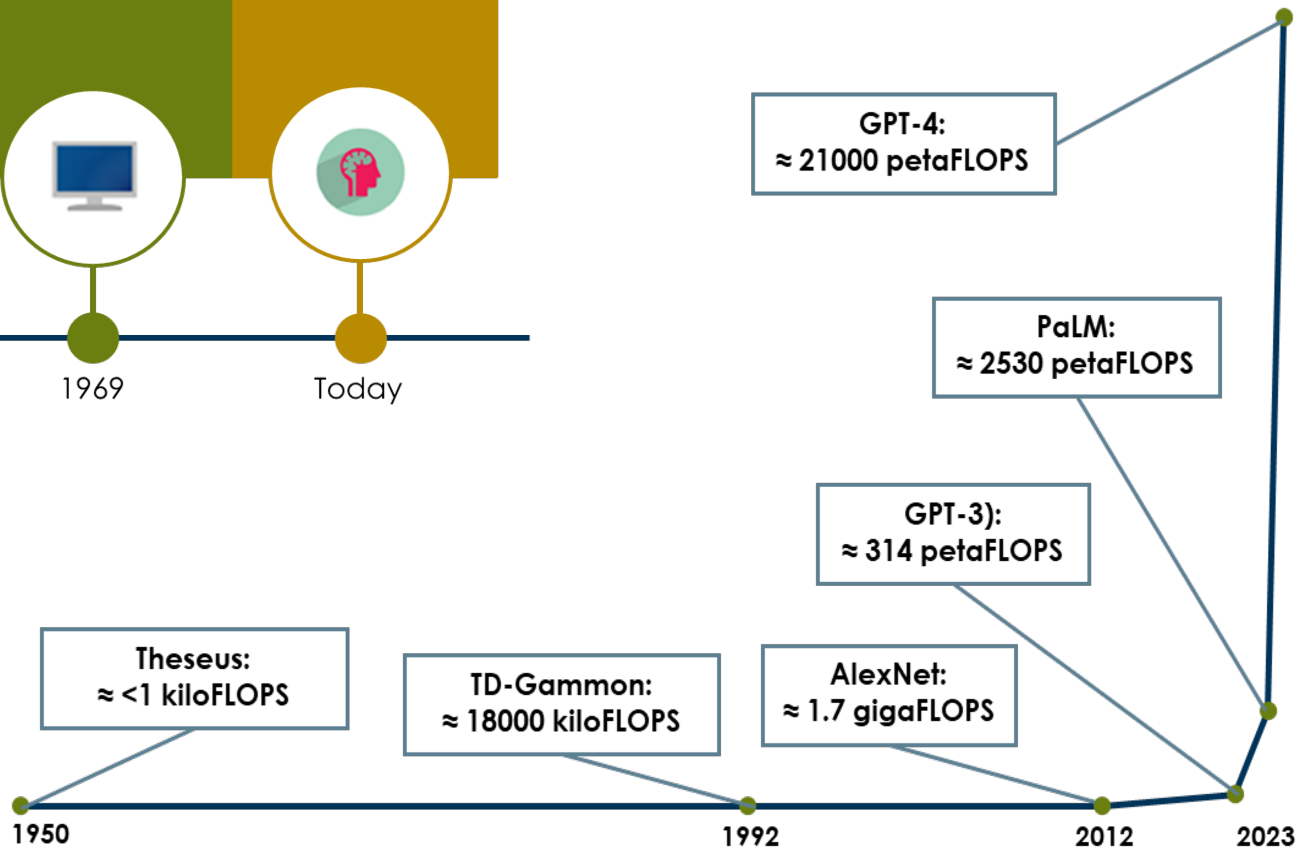
- In a diversified real assets portfolio, core real estate offers a steady foundation that can be complemented by **infrastructure strategies**
- **Listed infrastructure** has performed favorably versus global public equity and public infrastructure options like utilities
- **Private infrastructure** can enhance returns and reduce volatility versus listed options, but strategies are illiquid and have high minimums
- **Technology-driven** assets like communications can potentially deliver meaningful outperformance, though risk can also be higher
- **MLPs** offer an attractive current yield (~8%), but experience meaningful volatility

Infrastructure Investing

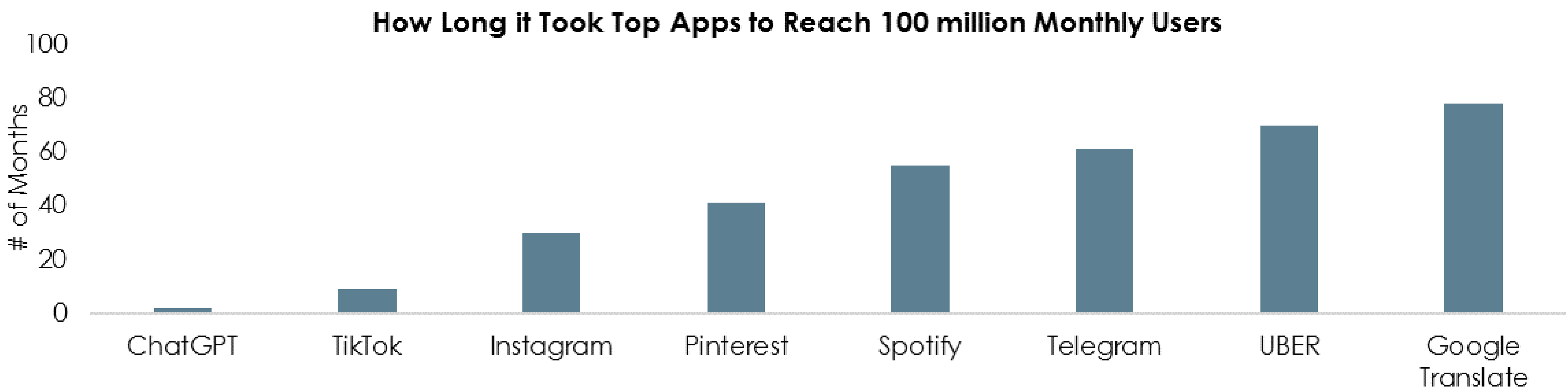
- **Generalists** invest in a broad range of infrastructure assets and often target core/value-added returns driven by steady income
- **Sector specialists** pursue specific asset types like digital infrastructure or renewable energy and often emphasize total return
- **Private equity** strategies tend to allow for greater specialization and offer broader access to non-traditional or less liquid asset types
- **Public equity** strategies often emphasize utilities and pipelines over assets like airports and rail networks that are less liquid

Artificial Intelligence – The Fourth Industrial Revolution





Artificial Intelligence – Excitement Moving Markets



Artificial Intelligence – Excitement Moving Markets