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AlphaCurrents Crypto

Stablecoins: The Disrupted, the Disruptors and the Fortunate Beneficiaries

Stablecoins are the latest idea to jump from cryptocurrency discussion groups to mainstream conversation. As such, learning about them is a key part of Morgan Stanley Wealth Management's call to "get educated" on cryptocurrency. Stablecoins have made headlines recently for four reasons. First, long-awaited crypto legislation has been passed by Congress and signed into law. Second, total stablecoin market capitalization has grown to over \$250 billion. Third, the first stablecoin company initial public offering (IPO) was successfully completed. And fourth, stablecoins could boost demand at US Treasury auctions amid large federal deficits.

In this report, we define stablecoins and highlight why investors are discussing them so much recently. We consider which industries could be among "the disrupted," which could become "disruptors" and which might emerge as "fortunate beneficiaries" as stablecoins gain traction. We conclude that if the stablecoin market continues to grow, it could affect banking deposit growth, lending, currency exchange rates and interest rates in the years to come.

We make no recommendation whether to buy or sell any cryptocurrency. However, understanding the implications of stablecoins may help investors analyze how they could affect other investments.

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For additional information about the risks of cryptocurrencies, please see the Important Information in the Disclosure section of this report.

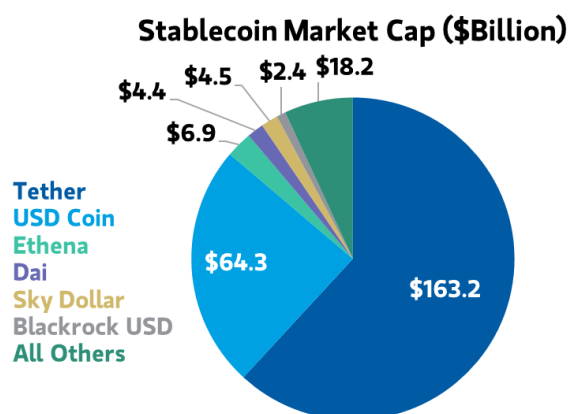
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What Are Stablecoins?

Stablecoins are types of cryptocurrencies that aim to maintain stable value versus a benchmark. They use blockchain technology that was pioneered by bitcoin and made more flexible with Ethereum and other smart contract-focused cryptocurrency networks. Most stablecoins aim to replicate the value of the US dollar and are similar to money market funds in that they hold low-risk collateral, such as US dollars, US Treasury bills or bank deposits, to back the stablecoins issued.

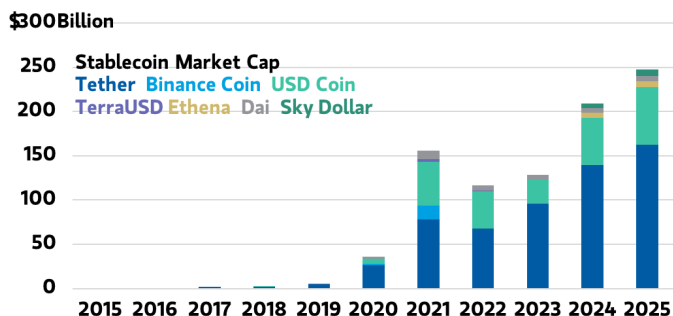
The idea was first explored in 2014 with the development of a stablecoin called bitUSD. Backed by a volatile cryptocurrency rather than a fiat currency, it was ultimately unable to retain its peg to the US dollar. Since then, the total market cap of stablecoins has grown to more than \$250 billion. Tether, currently the largest stablecoin, has a \$163.2 billion market cap, amounting to 65% of total stablecoin capitalization (see Exhibit 1). Despite early questions about whether Tether was fully backed (1:1) by US dollars, it found a product-market fit as a way to transfer money between crypto exchanges without using the traditional banking system, which had historically created roadblocks for bank account holders seeking to interact with crypto industry organizations. The second-largest stablecoin is USD Coin, operated by Circle Internet Group (CRCL), with a \$64.3 billion market cap, equal to 25% of total stablecoin capitalization (see Exhibit 2).

Exhibit 1: Tether Has the Largest Market Cap of Any Stablecoin



Source: DefiLlama, Morgan Stanley Wealth Management Global Investment Office as of July 24, 2025

Exhibit 2: Stablecoins Total Market Cap is Larger than \$250 Billion



Source: CoinMarketCap, Morgan Stanley Wealth Management Global Investment Office as of July 24, 2025

Why Are People Talking About Stablecoins?

In our view, stablecoins have been in the news recently for four reasons. First, Congress passed the Guiding and Establishing National Innovation for US Stablecoins Act (GENIUS Act), which was signed into law by President Trump on July 18, creating a regulatory framework for stablecoins and generating notable media attention (more on this below). Second, after launching in 2014, the stablecoin industry has reached a critical mass of just over \$250 billion, roughly 1% of US M2 money supply. The number of use cases has been broadening, with many stablecoin platforms experiencing rapid growth. Third, the second-largest stablecoin-issuing company, Circle, had its IPO. Stablecoin issuers like Circle hold reserve assets such as bank deposits or US Treasury bills and issue cryptocurrency tokens on blockchains, such as those of Ethereum and Solana, that can be redeemed for dollars. Once issued, the stablecoins can be exchanged, transferred or held by anyone with a cryptocurrency wallet. Circle's IPO was upsized and oversubscribed; in the weeks since it took place, the stock rose more than 700%, to \$262 per share, before declining to \$202, as of July 23. Fourth, amid questions about how to pay for US deficit spending, stablecoin issuers are expected to emerge as large buyers of US Treasury bills. Last year, the largest stablecoin issuer, Tether, bought \$33 billion in US Treasuries, making it the seventh-largest global buyer. US Treasury Secretary Scott Bessent has suggested stablecoin issuers could buy trillions of dollars of US Treasury securities over the next few years.

The GENIUS Act could support greater stablecoin adoption in response to legislative and regulatory guidance. Importantly, it creates standards for stablecoin issuers, including but not limited to the establishment of US Treasury and dollar reserve requirements, as well as capital, liquidity and anti-money laundering obligations. It also creates a dual

regulatory oversight structure aimed at providing balance between federal and state bodies to prevent regulatory arbitrage and provide consumer protections. For example, issuers with more than \$10 billion in reserves meet the threshold for federal oversight, while those with less than \$10 billion in reserves may operate as state-regulated entities subject to baseline federal standards. The law also states that stablecoin issuers may not pay yield or interest to holders of stablecoins and that issuers are subject to anti-money laundering laws and regulations. Additionally, the GENIUS Act clarifies that stablecoins are neither securities nor commodities; as such, they are not within Securities and Exchange Commission (SEC) and Commodity Futures Trading Commission (CFTC) jurisdictions.

We expect continued policy action in the coming months and are paying particular attention to the Digital Asset Market Clarity Act of 2025, or the “CLARITY Act,” which addresses cryptocurrency market structure. The bill passed the House of Representatives with bipartisan support on July 17, 2025 and now sits with the Senate where text will continue to be developed and negotiated. The CLARITY Act could make further changes to stablecoin regulations if it passes. We also expect various industry stakeholders and regulatory bodies to weigh in during the process as they seek to shape the outcome. However, final consideration of the CLARITY Act is likely to be subject to delay, as Senate passage, which requires a 60-vote threshold, hinges on bipartisan support.

Implications of Stablecoins: The Disrupted, the Disruptors and the Fortunate Beneficiaries

We believe stablecoins are likely to become an increasingly important part of the financial infrastructure. Frequently, when a new technology appears, the first order of business is to identify other products or industries that could become disrupted. While new technologies often take time to gain meaningful market share, they often quickly impact the terminal value assigned to companies by affecting their projected long-term growth rates and valuation multiples. The second priority is often to find the disruptors—those positioned to directly benefit from the technology. Finally, there will also be some collateral damage and fortunate beneficiaries of most new technologies. Some businesses and organizations will be worse off through no fault of their own, while others will experience a lucky windfall.

Disruptive to payment networks and the broader credit card industry. Stablecoins could disrupt existing payment networks, which have historically had resilient business models. Existing payment networks work by creating new money through fractional reserve lending, capturing processing fees on every transaction and charging interest on

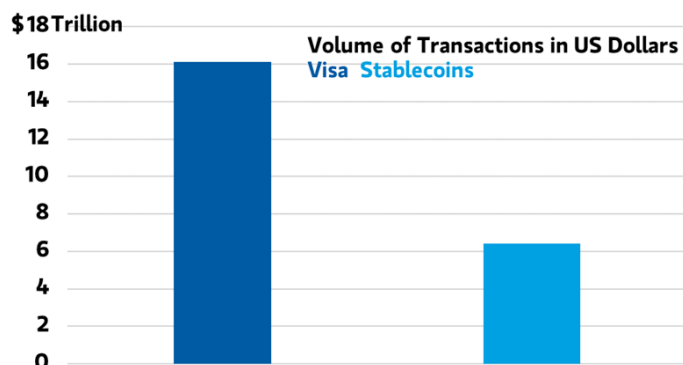
the roughly 3% of balances left unpaid after 30 days. Credit card firms also plow a significant portion of the revenue generated into marketing initiatives to promote more spending and borrowing in the form of incentives like 0% finance offers, airline miles and other “points” schemes. Two parts of the credit card industry—payment networks and credit card issuers—could be impacted.

This credit card model has been difficult to disrupt, and industry analysts have correctly dismissed prior challengers. Debit card networks, for instance, attempted to compete with lower processing fees. Merely saving on processing fees while not creating new loans, however, did not provide a big enough marketing budget to promote usage. Likewise, though gift cards could be sold at a discount, they had limited liquidity beyond the issuer.

That said, we understand why stablecoins have reintroduced the debate around how payment networks and credit card issuers could be impacted. Stablecoins solve the processing-fee issue and generate a substantial marketing budget on par with that of the credit card ecosystem. Whether stablecoins ultimately disrupt payment networks and the broader credit card industry or not, the debate is likely to persist.

Large stablecoins are liquid on a global basis, with minimal technological integration costs; thus, they are a substantial upgrade over gift cards. In addition, in our view, stablecoins also generate enough revenue, net of transaction fees, to fund a robust marketing effort. Stablecoin reserves generate interest at close to the risk-free rate, recently around 4.1%, with minimal transaction fees, of approximately 1.5 cents per transaction—resulting in processing-fee savings of roughly 1% to 2%. Marketing could take the form of rewards for holding stablecoins, as already implemented by some payment processors and cryptocurrency exchanges. Alternatively, it could take the form of cash back from using stablecoins. We expect different combinations to proliferate until the most effective formulas for driving increased float and usage emerge. While it may take time to impact volume growth on payment networks, we believe it’s possible that stablecoins could capture a growing percentage of payments over time (see Exhibit 3). For payment networks and credit card industry firms, this would mean slower growth in payment volume and credit card receivables. To be clear, we expect stablecoins to be a slow-moving disruptor; volumes and receivables could continue to grow for many years even as their rates of growth rates may be dampened.

Exhibit 3: Stablecoin Transactions Represent Nearly One-Third of Visa Transactions



Source: Visa, Morgan Stanley Wealth Management Global Investment Office as of March 31, 2025

Some tech companies might become disruptors. As potentially disruptive as stablecoins may be to incumbent payment networks, they could create opportunities for many other companies, namely those poised to emerge as disruptors. We believe the companies with the greatest upside from stablecoins are the tech platforms that sit between multidirectional payment flows and that have the most customers. We suspect that leading-market-share companies among merchant acquirers (financial institutions that connect merchants to payment networks), e-commerce platforms and billing companies could be early adopters, as could gig economy firms that connect two or more user networks. Examples of potential multisided user networks include drivers and passengers, and restaurants, drivers and diners/customers.

There are many ways such organizations could introduce stablecoins and a number of ways stablecoins could help them improve their operations. These include saving on processing fees; offering employees, vendors and partners something like a checking or savings account; speeding up payments; using cash balances to facilitate transactions in exchange for fees; and partnering with a stablecoin issuer that could encourage suppliers to hold rather than redeem the stablecoins they receive from the platform. The reserves backing stablecoins that are not immediately redeemed generate net interest that could be shared with tech platforms and/or customers and vendors. These capabilities present some interesting opportunities, and we are likely to see this type of experimentation ahead. While some experiments could fail, we believe that at least one of them, or something similar, could succeed.

Merchant acquirers or billing firms could let customers pay in stablecoins. Rather than directly converting payments to cash, merchant acquirers could allow merchants to hold stablecoins in a wallet, effectively offering something similar to a money market fund with 24/7 liquidity. Some merchants

could, in turn, use their stablecoin balances to pay vendors and employees. A payment processor could strike a promotional deal with a stablecoin issuer to reward customers who pay in stablecoins, saving processing fees. Billing firms could potentially do something similar by sending invoices that facilitate payments in stablecoins in return for a discount to account for the processing fee. When paid, vendors could be encouraged to leave proceeds on the platform, earning rewards until they need to use the rewards. Firms sending and receiving invoices from the same platform might find it useful to accrue and maintain a stablecoin balance on the platform.

Gig economy firms could offer services similar to checking, savings or airline mile accounts. Companies that sit in the middle of multiple transactions may be able to encourage both sides of networks to use stablecoins. A firm connecting riders and drivers, or drivers, consumers and restaurants could save on processing fees for each leg of the payment. Subscription revenue could be held in stablecoin-denominated accounts that earn a reward similar to interest for subscribers. Using the platform could accrue loyalty rewards held in stablecoins. Vendors could also be encouraged to leave proceeds on the platform, earning rewards until they need to use the rewards. In the same way people leave a few hundred dollars of value in airline miles in their loyalty accounts, customers and vendors could leave hundreds of dollars of stablecoins on the platform, accruing rewards until needed.

E-commerce companies that handle cross-border commerce could speed up the payment process. Cross-border flows often take much longer and have higher fees than other types of flows. Sometimes a payment must move through multiple banks before it arrives at its destination. Furthermore, occasionally there are errors along the way, making the payment difficult to track or audit. Companies dealing with cross-border flows may be able to build faster, cheaper and more transparent systems based on stablecoins.

Cash-rich companies could convert excess cash balances to stablecoins and then use the stablecoins to facilitate payments between customers and vendors. If incentives are structured correctly, a firm might be able to earn interest on payments in transit or on payments received by a vendor and not yet redeemed for cash while also avoiding the processing fees associated with transactions

Many firms could issue their own stablecoins. Recently passed stablecoin legislation may raise barriers to entry through the rulemaking process that could prevent some firms from launching stablecoins. Still, many firms might find ways to work with dedicated third-party issuers. Technologically, stablecoins could fit into a host of different businesses with multiple payment flows between vendors, advertisers, employees and customers. The technology

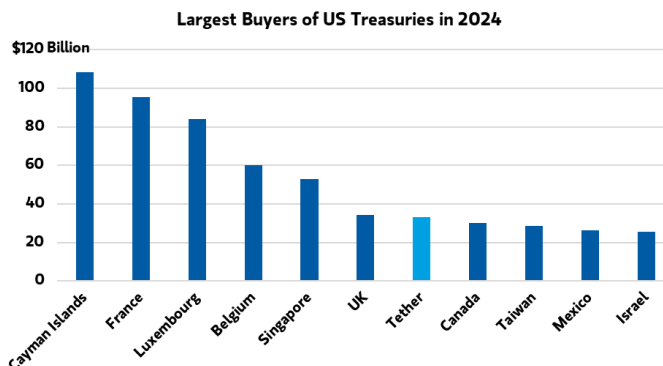
theoretically could allow many new types of firms to earn net interest on their outstanding stablecoins. In some respects, stablecoins may emerge as a more liquid version of the gift cards that many companies already issue.

A wide range of potential fortunate beneficiaries. A rollout of stablecoins might disrupt payment networks while creating new opportunities for many companies. It would also likely benefit some “fortunate bystanders.” Facilitators, for example, help operate and maintain stablecoin systems. The US Treasury could benefit from lower interest rates as a result of stablecoin-issuer purchases of T-bills for their reserves, while US consumers could benefit from a strengthening US dollar. Lastly, growing stablecoin balances could lead to generally higher prices for cryptocurrencies, which are often purchased with stablecoins. We highlight five potential fortunate beneficiaries below.

1. Processors and treasury managers. Demand may rise for more services of stablecoin processors and stablecoin treasury managers. Some firms may need tech partners to help them integrate blockchain networks through payment processing, creation and redemption. Stablecoin issuers may ultimately need treasury management firms to help them manage treasury reserves of deposits, US Treasuries and other financial instruments.

2. US debt issuers. Debt issuers may see downward pressure on interest rates, as stablecoin issuers become major buyers of US Treasuries. Tether was the seventh-largest buyer of US Treasuries in 2024. With more regulatory clarity, stablecoin advocates believe that overall stablecoin market cap could grow rapidly from both new stablecoin issuance and increased adoption of existing stablecoins. Treasury Secretary Bessent has suggested that stablecoin issuers could become buyers of trillions of dollars of US debt. In 2024, the largest buyers of US debt were the Cayman Islands, as a proxy for hedge funds, France, Luxembourg and Belgium. In 2024, Tether purchased \$33 billion of US Treasuries. The market cap of tether’s stablecoin outstanding has increased by roughly \$20 billion in the first half of 2025. If this pace continues, and if its new coins are backed predominately by US T-bills, Tether might end up being an even bigger buyer of T-Bills in 2025 than in 2024 (see Exhibit 4).

Exhibit 4: Stablecoin Issuers Could Be Among the Largest Owners of US Treasuries



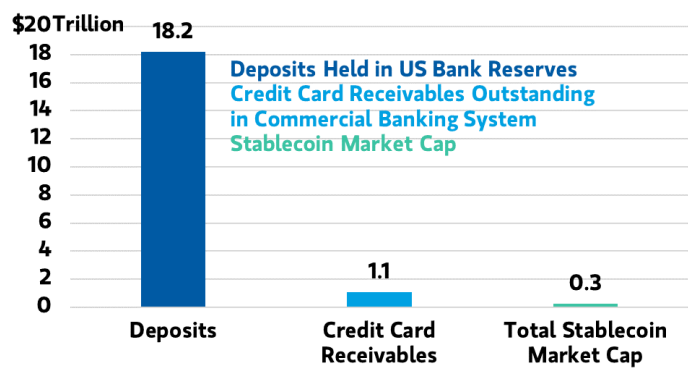
Source: Bloomberg, Morgan Stanley Wealth Management Global Investment Office as of Dec. 31, 2024

3. US-based entities. US-based entities could benefit from US dollar appreciation if stablecoins draw money away from foreign currencies. The largest stablecoin is primarily used for international payments, and as previously outlined, speeding up the payment process for cross-border transactions is one of the five ways we think stablecoins could impact the payment industry. Even dollar-denominated stablecoins paying zero interest or rewards might emerge as popular store-of-value savings vehicles in countries with currencies that tend to lose ground versus the dollar or in countries where customers fear the domestic banking system might collapse, seize assets or offer an unfavorable dollar exchange rate.

4. Borrowers. Those financing automobile, housing and consumer durables purchases might benefit if lenders shift their focus from unsecured lending to these types of loans. Within the banking industry, there is fear that successful stablecoins could lead to a reduction in deposits in the domestic system. Stablecoin legislation allows stablecoin reserves to be held in the form of short-dated T-bills, deposits or other debt instruments. Even if most reserves were in T-bills rather than deposits, it would more likely be a concern for foreign banks than for domestic banks, as outlined above. The process of converting deposits backing a stablecoin to some other type of collateral involves exchanging deposits for a T-bill or other collateral. The seller of the asset would then control those cash deposits. If the US Treasury were the counterparty, the government would eventually deposit the proceeds of its T-bill sales into a bank as either a transfer payment or payment for government services. In this case, no deposits are destroyed, they simply move from one bank to another. One bearish view might be that banks may create fewer new deposits, i.e., they might lend less. While this risk shouldn’t be ignored, we think a shift in the composition of lending is more likely than a sharp reduction in overall volume. Currently, banks create deposits via lending to the government, financing durable goods like houses or cars,

lending to businesses or engaging in unsecured lending, such as with credit cards. Should stablecoin growth slow the rate of growth in credit card receivables—as stablecoins replace credit cards as a way to facilitate payment growth—we believe banks will likely lend more to governments or for housing, durables and autos, thereby maintaining recent deposit growth levels as loans are deposited into bank accounts (see Exhibit 5).

Exhibit 5: Total Market Cap of Stablecoins Is Only a Fraction of Bank Deposits



Source: US Federal Reserve, Morgan Stanley Wealth Management Global Investment Office as of June 18, 2025

5. Cryptocurrencies. Stablecoins could lead to higher prices for cryptocurrencies. Some investors view stablecoins as a leading indicator for cryptocurrency markets. Historically, stablecoins were primarily used for trading in and out of

cryptocurrencies. A stablecoin balance is more likely to be traded for a cryptocurrency than for a fiat currency deposit. Some investors view stablecoin balances in a similar way that they view the size of the Federal Reserve's balance sheet—as a measure of potential buying power in the economy. Investors have looked at metrics such as stablecoins' percentage of the total cryptocurrency market cap and the change in stablecoin balances to draw conclusions about the direction of the broader crypto market. While these relationships are beyond the scope of this report, it's possible that higher stablecoin balances could lead to higher prices of other cryptocurrencies, particularly cryptocurrencies related to protocols that help to trade, borrow or lend stablecoins.

New legislation, potential macroeconomic impact and a successful IPO could keep stablecoins in the news, and we believe stablecoins could be an important disruptive technology for some business models while presenting an opportunity for others. If the stablecoin market continues to grow, it could affect banking deposit growth, lending, currency exchange rates and interest rates in the years to come. We expect the evolving legislative and regulatory landscape to be responsive to the technology's growing use cases and industry adoption. Morgan Stanley Wealth Management's US Policy team will be monitoring these developments closely. The emergence of stablecoins is another reminder of why investors should continue to get educated on cryptocurrency.

Disclosure Section

Important Disclosures

For index, indicator and survey definitions referenced in this report please visit the following: <https://www.morganstanley.com/wealth-investmentsolutions/wmir-definitions>

Definitions

M2 is a measure of the money supply that includes all elements of M1 as well as "near money." M1 includes cash and checking deposits, while near money refers to savings deposits, money market securities, mutual funds and other time deposits.

Volatility This is a statistical measure of the dispersion of returns for a given security or market index. Volatility can either be measured by using the standard deviation or variance between returns from that same security or market index. Commonly, the higher the volatility, the riskier the security.

Risk Considerations

Virtual Currency Products (Cryptocurrencies)

Buying, selling, and transacting in Bitcoin, Ethereum or other digital assets ("Digital Assets"), and related funds and products, is highly speculative and may result in a loss of the entire investment. Risks and considerations include but are not limited to:

- Digital Assets have only been in existence for a short period of time and historical trading prices for Digital Assets have been highly volatile. The price of Digital Assets could decline rapidly, and investors could lose their entire investment.
- Certain Digital Asset funds and products, allow investors to invest on a more frequent basis than investors may withdraw from the fund or product, and interests in such funds or products are generally not freely transferrable. This means that, particularly given the volatility of Digital Assets, an investor will have to bear any losses with respect to its investment for an extended period of time and will not be able to react to changes in the price of the Digital Asset once invested (for example, by seeking to withdraw) as quickly as when making the decision to invest. Such Digital Asset funds and products, are intended only for persons who are able to bear the economic risk of investment and who do not need liquidity with respect to their investments.
- Given the volatility in the price of Digital Assets, the net asset value of a fund or product that invests in such assets at the time an investor's subscription for interests in the fund or product is accepted may be significantly below or above the net asset value of the product or fund at the time the investor submitted subscription materials.
- Certain Digital Assets are not intended to function as currencies but are intended to have other use cases. These other Digital Assets may be subject to some or all of the risks and considerations set forth herein, as well as additional risks applicable to such Digital Assets. Buyers, sellers and users of such Digital Assets should thoroughly familiarize themselves with such risks and considerations before transacting in such Digital Assets.
- The value of Digital Assets may be negatively impacted by future legal and regulatory developments, including but not limited to increased regulation of such Digital Assets. Any such developments may make such Digital Assets less valuable, impose additional burdens and expenses on a fund or product investing in such assets or impact the ability of such a fund or product to continue to operate, which may materially decrease the value of an investment therein.
- Due to the new and evolving nature of digital currencies and the absence of comprehensive guidance, many significant aspects of the tax treatment of Digital Assets are uncertain. Prospective investors should consult their own tax advisors concerning the tax consequences to them of the purchase, ownership and disposition of Digital Assets, directly or indirectly through a fund or product, under U.S. federal income tax law, as well as the tax law of any relevant state, local or other jurisdiction.
- Over the past several years, certain Digital Asset exchanges have experienced failures or interruptions in service due to fraud, security breaches, operational problems or business failure. Such events in the future could impact any fund's or product's ability to transact in Digital Assets if the fund or product relies on an impacted exchange and may also materially decrease the price of Digital Assets, thereby impacting the value of your investment, regardless of whether the fund or product relies on such an impacted exchange.
- Although any Digital Asset product and its service providers have in place significant safeguards against loss, theft, destruction and inaccessibility, there is nonetheless a risk that some or all of a product's Digital Asset could be permanently lost, stolen, destroyed or inaccessible by virtue of, among other things, the loss or theft of the "private keys" necessary to access a product's Digital Asset.
- Investors in funds or products investing or transacting in Digital Assets may not benefit to the same extent (or at all) from "airdrops" with respect to, or "forks" in, a Digital Asset's blockchain, compared to investors who hold Digital Assets directly instead of through a fund or product. Additionally, a "fork" in the Digital Asset blockchain could materially decrease the price of such Digital Asset.
- Digital Assets are not legal tender, and are not backed by any government, corporation or other identified body, other than with respect to certain digital currencies that certain governments are or may be developing now or in the future. No law requires companies or individuals to accept digital currency as a form of payment (except, potentially, with respect to digital currencies developed by certain governments where such acceptance may be mandated). Instead, other than as described in the preceding sentences, Digital Asset products' use is limited to businesses and individuals that are willing to accept them. If no one were to accept digital currencies, virtual currency products would very likely become worthless.
- Platforms that buy and sell Digital Assets can be hacked, and some have failed. In addition, like the platforms themselves, digital wallets can be hacked, and are subject to theft and fraud. As a result, like other investors have, you can lose some or all of your holdings of Digital Assets.
- Unlike US banks and credit unions that provide certain guarantees of safety to depositors, there are no such safeguards provided to Digital Assets held in digital wallets by their providers or by regulators.
- Due to the anonymity Digital Assets offer, they have known use in illegal activity, including drug dealing, money laundering, human trafficking, sanction evasion and other forms of illegal commerce. Abuses could impact legitimate consumers and speculators; for instance, law enforcement agencies could shut down or restrict the use of platforms and exchanges, limiting or shutting off entirely the ability to use or trade Digital Asset products.
- Digital Assets may not have an established track record of credibility and trust. Further, any performance data relating to Digital Asset products may not be verifiable as pricing models are not uniform.

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- Investors should be aware of the potentially increased risks of transacting in Digital Assets relating to the risks and considerations, including fraud, theft, and lack of legitimacy, and other aspects and qualities of Digital Assets, before transacting in such assets.
- The exchange rate of virtual currency products versus the USD historically has been very volatile and the exchange rate could drastically decline. For example, the exchange rate of certain Digital Assets versus the USD has in the past dropped more than 50% in a single day. Other Digital Assets may be affected by such volatility as well.
- Digital Asset exchanges have limited operating and performance histories and are not regulated with the same controls or customer protections available to more traditional exchanges transacting equity, debt, and other assets and securities. There is no assurance that a person/exchange who currently accepts a Digital Asset as payment will continue to do so in the future.
- The regulatory framework of Digital Assets is evolving, and in some cases is uncertain, and Digital Assets themselves may not be governed and protected by applicable securities regulators and securities laws, including, but not limited to, Securities Investor Protection Corporation coverage, or other regulatory regimes.
- Morgan Stanley Smith Barney LLC or its affiliates (collectively, “Morgan Stanley”) may currently, or in the future, offer or invest in Digital Asset products, services or platforms. The proprietary interests of Morgan Stanley may conflict with your interests.
- The foregoing list of considerations and risks are not and do not purport to be a complete enumeration or explanation of the risks involved in an investment in any product or fund investing or trading in Digital Assets.

Asset Class and Additional Risk Considerations

Investing in foreign markets entails greater risks than those normally associated with domestic markets, such as political, currency, economic and market risks. **Investing in currency** involves additional special risks such as credit, interest rate fluctuations, derivative investment risk, and domestic and foreign inflation rates, which can be volatile and may be less liquid than other securities and more sensitive to the effect of varied economic conditions. In addition, international investing entails greater risk, as well as greater potential rewards compared to U.S. investing. These risks include political and economic uncertainties of foreign countries as well as the risk of currency fluctuations. These risks are magnified in countries with **emerging markets**, since these countries may have relatively unstable governments and less established markets and economies.

Equity securities may fluctuate in response to news on companies, industries, market conditions and general economic environment.

Investing in commodities entails significant risks. Commodity prices may be affected by a variety of factors at any time, including but not limited to, (i) changes in supply and demand relationships, (ii) governmental programs and policies, (iii) national and international political and economic events, war and terrorist events, (iv) changes in interest and exchange rates, (v) trading activities in commodities and related contracts, (vi) pestilence, technological change and weather, and (vii) the price volatility of a commodity. In addition, the commodities markets are subject to temporary distortions or other disruptions due to various factors, including lack of liquidity, participation of speculators and government intervention.

Treasury Inflation Protection Securities’ (TIPS) coupon payments and underlying principal are automatically increased to compensate for inflation by tracking the consumer price index (CPI). While the real rate of return is guaranteed, TIPS tend to offer a low return. Because the return of TIPS is linked to inflation, TIPS may significantly underperform versus conventional U.S. Treasuries in times of low inflation.

An investment in a **money market fund (MMF)** is not insured or guaranteed by the Federal Deposit Insurance Corporation or any other government agency. Although the Fund seeks to preserve the value of your investment at \$1.00 per share, it is possible to lose money by investing in the fund. The price of other MMFs will fluctuate and when you sell shares they may be worth more or less than originally paid. MMFs may impose a fee upon sale or temporarily suspend sales if liquidity falls below required minimums. During suspensions, shares would not be available for purchases, withdrawals, check writing or ATM debits.

Participating in a new issue/syndicate is subject to availability. **Initial public offerings (IPOs)** are highly speculative and may not be appropriate for all investors because they lack a stock-trading history and usually involve smaller and newer companies that tend to have limited operating histories, less experienced management teams, and fewer products or customers. Also, the offering price of an IPO reflects a negotiated estimate as to the value of the company, which may bear little relationship to the trading price of the securities, and it is not uncommon for the closing price of the shares shortly after the IPO to be well above or below the offering price.

Hedge funds may involve a high degree of risk, often engage in leveraging and other speculative investment practices that may increase the risk of investment loss, can be highly illiquid, are not required to provide periodic pricing or valuation information to investors, may involve complex tax structures and delays in distributing important tax information, are not subject to the same regulatory requirements as mutual funds, often charge high fees which may offset any trading profits, and in many cases the underlying investments are not transparent and are known only to the investment manager.

Alternative investments may be either traditional alternative investment vehicles, such as hedge funds, fund of hedge funds, private equity, private real estate and managed futures or, non-traditional products such as mutual funds and exchange-traded funds that also seek alternative-like exposure but have significant differences from traditional alternative investments. The risks of traditional alternative investments may include: can be highly illiquid, speculative and not appropriate for all investors, loss of all or a substantial portion of the investment due to leveraging, short-selling, or other speculative practices, volatility of returns, restrictions on transferring interests in a fund, potential lack of diversification and resulting higher risk due to concentration of trading authority when a single advisor is utilized, absence of information regarding valuations and pricing, complex tax structures and delays in tax reporting, less regulation and higher fees than open-end mutual funds, and risks associated with the operations, personnel and processes of the manager. Non-traditional alternative strategy products may employ various investment strategies and techniques for both hedging and more speculative purposes such as short-selling, leverage, derivatives and options, which can increase volatility and the risk of investment loss. These investments are subject to the risks normally associated with debt instruments and also carry substantial additional risks. Investors could lose all or a substantial amount of their investment. These investments typically have higher fees or expenses than traditional investments.

Environmental, Social and Governance (“ESG”) investments in a portfolio may experience performance that is lower or higher than a portfolio not employing such practices. Portfolios with ESG restrictions and strategies as well as ESG investments may not be able to take advantage of the same opportunities or market trends as portfolios where ESG criteria is not applied. There are inconsistent ESG definitions and criteria

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