How to Value Payment Tokens

Cointelegraph Research

Key Takeaways

- **Alchemy Pay is a hybrid crypto-fiat payment infrastructure powered by its Ethereum-based utility token, ACH.** It unites fiat and crypto economies by offering crypto and fiat acceptance compatible in numerous payment industries.
- **The relevant application and economic size of payment tokens, which are referred to as target addressable markets (TAM),** are necessary components in token valuation with the equation of exchange model.
- The equation of exchange model suits specific types of cryptocurrency such as payment tokens because it relies on the theory that **the value of each cryptocurrency should be directly correlated with the dollar volume of the economy it supports.**
- **The value of each crypto asset is inversely related to its supply** — i. e., the number of coins that are in circulation and its velocity, which is the number of times each coin is traded per year.
- **The adoption rate is based on an assumption regarding future use of the currency for each use case.** To estimate adoption, we fit a curve to the historical growth in active wallet addresses.
- Data from a survey shows that **46 million customers, including 17 million non-crypto owners, plan to use cryptocurrencies to make purchases in the future.**
- **The payment gateway market was valued at $20 billion in 2020 and is expected to grow at a 15% CAGR between 2021 and 2027.** Yet cryptocurrency payments lag far behind leading players such as PayPal, Stripe and Shopify Pay.
- **Addressing the precarious taxonomy of digital assets is perhaps the biggest impediment to establishing a legal framework** that encompasses payment tokens, stablecoins and all types of crypto assets.

Contents

Authors

Demelza Hays, Ph.D.

Demelza Hays is the director of research at Cointelegraph, and formerly was a Forbes 30 Under 30, U.S. Department of State Fulbright Scholar, and fund manager of two regulated crypto funds.

Igor Kravchenko

Igor Kravchenko is a research analyst at Cointelegraph. He is currently pursuing a master's degree in quantitative finance at the Vienna University of Economics and Finance.

Ron Mendoza

Ron has worked in business development for several investment firms in Dubai and Abu Dhabi for more than six years. He has also covered cryptocurrency, blockchain, and fintech topics for several publications since 2019.

Nikita Malkin

3+ years of working experience in crypto sphere and finance. Higher School of Economics graduate with diploma work related to digital asset market. Co-author of Security Token Report and research analyst at Cointelegraph Research.

Vladimir Shapovalov

A Chemical Engineering graduate from the University of Cambridge with previous experiences in London brokerage services firm and British brain cancer treatment startup.

Helen Rosenberg

Helen Rosenberg is a research analyst at Cointelegraph, holds a bachelors' degree in economics and finance and has co-authored three reports at Cointelegraph Research.

1 Introduction

One of the challenges in valuing cryptocurrencies is that standard valuation approaches used for traditional financial assets are inapplicable. For instance, the basis for valuing a stock is through the success or profitability of its underlying business. For cryptocurrencies, with the exception of stablecoins, there is no such asset to back them, thus requiring a more suitable valuation metric. Goldman Sachs identified that a cryptocurrency's value is determined by the volume of transactions or expected transactions that its network processes.[1] The network also refers to the number of active users, which coincides with how social media companies such as Facebook can be valued.[2]

This is fundamental to the concept of valuation in this report. However, instead of taking the complete Metcalfe's Law route, which has a particular focus on network growth, the report utilizes the equation of exchange model.[3] This model suits specific types of cryptocurrency such as payment tokens because it relies on the theory that the value of each cryptocurrency should be directly correlated with the dollar volume of the economy it supports.

As it stands, blockchain technology has broadened the scope to where the application of managing trustworthy information provides more utility, such as in the areas of financial services, supply chain management, healthcare and law. Ostensibly, more blockchain use cases spur the demand for certain cryptocurrencies that serve those specific areas. In the case of payment tokens, it can be useful as a medium of exchange for a whole range of categories, including digital commerce, foreign exchange transactions, remittances and other use cases. Such relevant applications and their economic size are referred to as target addressable markets (TAM) and are necessary components in token valuation with the equation of exchange model.

Another key component is velocity, which is how many times a cryptocurrency has changed hands per year. Velocity is a key lever in understanding a token's long-term, non-speculative value.[4] In token economies, where tokens are the primary medium of exchange, velocity tends to be high because there are usually no incentives for users to hold on to their token, thereby putting downward price pressures. On the other hand, when an asset's velocity is low, it means users perceive more value in holding it long term.

Mill's traditional equation of exchange, MV = PQ, was first applied to Bitcoin (BTC) by Chris Burniske in his original 2016 report for Coinbase.[5] It describes the balance between money in the economy and demand for that money for purchasing goods and services. In applying the model, the percentage of the TAM will be used to estimate the crypto asset's implied future price. In this report, three payment-type tokens are analyzed, namely Alchemy Pay (ACH), XRP and Dash. The model is then applied with the assumptions concerning each of the three coins' target addressable markets.

[1] See "CRYPTO: A NEW ASSET CLASS?", Allison Nathan, Gabriel Lipton Galbraith, Jenny Grimberg, *Goldman Sachs*, May 21, 2021

[2] See "Cryptocurrencies can be valued based on network size just like social media companies employ metrics like monthly active users", Shalini Nagarajan, *Market Insider*, July 21, 2021

[3] See "Metcalfe's Law as a Model for Bitcoin's Value", Timothy F. Peterson, *Cane Island Alternative Advisors*, 2018

[4] See "Token Velocity: What It Is and Why You Should Care", Adil Haris, *Hackernoon*, September 12, 2018

[5] See "Ringing the Bell For a New Asset Class", Chris Burniske, Adam White, *Ark Invest*, January 16, 2017

Alchemy Pay

Alchemy Pay is a hybrid crypto-fiat payment infrastructure powered by its Ethereum-based utility token, ACH. It unites fiat and crypto economies by offering crypto and fiat acceptance compatible in numerous payment industries — offline, online, in-store, e-commerce, entertainment, bulk transactions, supply chain finance, and remittance — without the need for an infrastructure upgrade.[6] Alchemy Pay has a flourishing ecosystem that continues to onboard users, merchants, businesses, partners of transaction service networks, and developer communities. For instance, its partnership with Ethereum scaling platform Polygon enables flexible fiat payment on-ramps on the Polygon network.[7]

Its other integrations also encompass decentralized finance (DeFi) protocols, such as MetaMask, Uniswap, 1inch, Aave and Compound. On the merchant's end, Alchemy Pay's network includes Hong Kong's Pricerite, Singapore's Ce La Vi, Canadian footwear brand Aldo and others. Alchemy Pay is also the official payments partner of Shopify, providing more than 1 million merchants the capability of accepting crypto and fiat payments. With such extensive partnerships and integrations, Alchemy Pay's payments gateways can support more than 300 payment channels in over 70 countries and more than 20 major cryptocurrencies, including BTC, Bitcoin Cash (BCH), Binance Coin (BNB), Binance USD (BUSD), Huobi Token (HT), Huobi USD (HUSD) and Gemini Dollar (GUSD). **(Figure 1)**

At the heart of Alchemy Pay's ecosystem is the ACH token, which is the driving force behind the further adoption of its technology. It is also used for transaction fee payments, as collateral for using payments gateways, as a way to incentivize crypto transactions for ACH rebates, and more. Holders of ACH can also participate in governance activities. As of the time of this writing, ACH has a circulating supply of 3.8 billion tokens, which, at its current market price of $0.06383, equates to a market capitalization of $244 million.[8]

Dash

Dash is an open-source blockchain and a cryptocurrency focused on offering fast, cheap and secure decentralized global payments. It is a fork of Bitcoin that has introduced many industry-shaping innovations, including masternodes, Long-Living Masternode Quorums, ChainLocks and InstantSend, which target scalability, speed, reliability, cost-effectiveness and the user experience.

Like Alchemy Pay, Dash also has a vast merchant network. Dash's payment app, DashDirect, added 155,000 vendors and more than 125 online retailers, including Best Buy and GameStop, when it was launched last year. Dash offers a privacy feature called PrivateSend that makes transactions with these merchants untraceable while keeping users' identity undisclosed. Dash's total payment volume has increased by 85% since Q3 2021 from $12 billion in Q2 and 1,784% since last year. However, daily active addresses have dropped 37.5% year over year.[9]

Dash currently has a circulating supply of 10.5 million tokens, with a hard limit at 18.9 billion. Its price has a market capitalization worth $1.4 billion at the time of writing.[10]

[6] See "Alchemy Pay's Deep Ecosystem", *Alchemy Pay*, November 24, 2021

[7] See "Polygon deploys fiat on-ramps via Alchemy Pay, enabling direct fiat payments for DeFi", *Cointelegraph*, November 12, 2021

[8] See more information on Alchemy Coin here

[9] Learn more about Dash quarterly call here

[10] More information on Dash here

Figure 1 /

Alchemy Pay Ecosystem

as of Q1 2022

Alchemy Pay

Payment channel

PayPal, VISA, MasterCard, Singtel, VNPAY, AirPay, Rabbit, Telkomsel, ALTO, VIA, RPAY, PayTM, Zalo Pay, Gojek, Pay Now, Free Charge, AXS, Sam Kiosk, MOMO, truemoney, Octopus, BNI, Indosat ooredoo, VinID, Promt Pay

Merchant network

Pricerite, Shopify, Midwest, Instpower, Areader, QFPAY, ALDO, Celavi, Dana, Dan Dan, Alfamart, Lawson, Alfamidi

Exchange

Coinbase, ZebPay, Hotbit, DragonEx, Probit Global, Crypto.com, Gemini, Gate.io, AEX, AOFEX, ZB, MEXC Global, BitWell, HitBTC, Coinone, Poloniex, Huobi, Chargelly, Binance

Wallet

Binance Pay, Huobi Wallet, Coinbase Wallet, ImToken, Token Pocket, Trust Wallet, Exodus, Bixin, MetaMask, HyperPay, Coinpayments, Eclair, BlockChain Wallet, Cobo, Ledger, Argent, Math Wallet, EtherCore Wallet, KCash, Ballet, FILWallet

Public chain

HECO, Ethereum

Bank

EMAAR, NOOR BANK, CIMB BANK, LH BANK, BDO, BEA, BAC A BANK, Kasikorn Ban, Kiatnakin Bank, Krung Thai Bank, Goverment Savings Bank, Bank of Ayudhya, Vietcom bank, Bangkok Bank, Maybank, TMB, Vietin Bank, SCB, BIDC, NAM A BANK, VIB, TPBank, Sacombank, EXIMBANK, Pvcom Bank, AGRIBANK, Shinhan Bank, HDBank, NCB, OCB, BIDV, MSB

Settlement

Binance, Bitfinex, OKEx, Huobi

Cryptocurrency

BTC, BNB, ALGO, DAI, BUSD, USDT, ACH, BCH, Vite, AVAX, MATIC, GUSD, EGLD, Litecoin, NEM

DeFi infrastructure

AAVE, DAOMaker, bZx, RiceSwap, Chainlink, Fortube, Elrond Network, TrueChain, Compound, MakerDAO, Polygon, Conflux, Near, BSC, TRON, NEM

DEX

Pancake, Sushiswap, DODO, 1inch, ONTOI, Curve, Balancer, Uniswap

XRP (Ripple)

Ripple was established back in 2012 as a blockchain-based digital money transfer network. XRP, the native cryptocurrency of Ripple, facilitates quick conversion between various currencies on the Ripple network and features a simpler mining mechanism than that of Bitcoin. Combined with a unique distributed consensus mechanism in which everyone using the blockchain can agree on the latest state, Ripple can process transactions in an energy-efficient manner and at low costs.[11] Moreover, transactions take from three to five seconds for the XRP Ledger to complete — a significant improvement over Bitcoin's 10-minute block time.[12]

One of the main solutions developed by Ripple is called RippleNet, which is a network built for fast and transparent transactions among financial institutions. Currently, more than 100 customers use RippleNet, including Bank of America and American Express.[13] While being successful on the institutional transaction market, the company has been facing legal challenges since December 2020, when the United States Securities and Exchange Commission claimed XRP to be a security and filed a lawsuit against Ripple for an unregistered securities sale that garnered over $1.3 billion.[14]

2 Target Addressable Market for Payment Coins

Each distributed ledger network offers a specific range of abilities to its cryptocurrency users. **The fundamental value of a coin can be defined as the aggregate summation of each individual user's valuation of the network**.

Several papers have used the equation of exchange model to estimate Bitcoin's price in five years, 10 years and even on longer time frames. For example, Satis estimates Bitcoin's price to be $96,000 by 2023; and Vision 7 believes it will have topped out at $65,000 by 2028. The main reason each report has different prices is that estimating future demand for Bitcoin and other coins is based on assumptions. The equation of exchange model is an absolute approach to valuing crypto assets. This means that the model gives a target price that crypto assets should be priced at based on assumptions regarding changes in supply and demand.

The equation of exchange model relies on the theory that the value of each cryptocurrency should be directly correlated with the dollar volume of the economy it supports. A crypto asset economy that has $1,000 in trading volume each year and has 10 coins in circulation will have a fair coin value of $100 if each coin is traded once during that year. The value of each crypto asset is inversely

[11] Learn more about Consensus protocol here

[12] See "What is Ripple? A beginner's guide for understanding Ripple", *Cointelegraph*

[13] Learn more about Ripple here

[14] See "SEC unveils suit against Ripple, calling XRP a '$1.3B unregistered securities offering'", Turner Wright, *Cointelegraph*, December 22, 2020

related to its supply — i. e., the number of coins that are in circulation and its velocity, which is. the number of times each coin is traded per year. The growth in the gross domestic product of each coin or the crypto asset economy will be determined by product-market fit. **The likelihood of future market adoption is what drives speculative activity today**.

The absolute valuation approach is inspired by Mill's equation of exchange, which was later formulated by Fisher.[15] In this model, the percentage of the TAM can be used to estimate a crypto asset's implied future price. The traditional equation MV = PQ describes the balance between money in the economy and demand for that money to purchase goods and services. To estimate the size of the economy supported by crypto assets, the following steps are taken:

- The economic size of all relevant use cases for a crypto asset is summed. This is referred to as the target addressable market (TAM). **This involves three assumptions**:
  - Which use cases are applicable for cryptocurrencies?
  - What is the total market capitalization in U.S. dollars **(PQ)** of each use case? **P** in the equation stands for the average price of goods in the economy and **Q** — for the quantity of goods in the economy?
  - What will be the growth of the total market capitalization in U.S. dollars of each use case over the next decade?
- An estimate of the percentage of each TAM that is penetrated by crypto assets over a 10-year period is calculated. **This involves two assumptions**:
  - How well will cryptocurrencies penetrate each use case?
  - What is the growth rate of penetration for cryptocurrencies over the next decade? **This involves an assumption**:
    - To estimate the growth rate of penetration for cryptocurrencies over the next decade, an assumed adoption rate of cryptocurrencies can follow an S-curve, a linear curve, an exponential curve, a mean-reversion curve or a log curve. **This paper assumes an S-curve for all cryptocurrencies**.
- Each annual addressable market is divided by each coin's velocity to determine the coin's market capitalization. **This involves three assumptions**:
  - What is the supply **(M)** of each cryptocurrency over the next decade?
    - Some cryptocurrencies follow supply schedules, such as Bitcoin that follows a Poisson distribution.
    - Other coins have supplies that depend on a voting mechanism, such as EOS.
    - Therefore, the former will have a lower forecast error than the latter. In this analysis, the supply of each cryptocurrency is assumed to be the average size of the crypto asset base through the year, which is necessary due to the inflationary nature of most crypto asset protocols, including Bitcoin.
    - What is the velocity **(V)** of each cryptocurrency?
  - What is the growth in velocity for each cryptocurrency over time?
- To determine the price per coin, the TAM multiplied by the penetration rate is divided by its circulating supply.
- Once the price per coin is forecasted for each year over the next decade, the discount rate must be applied in order to calculate the net present value of the price of each coin for each year. **This involves the following assumption**:
  - The discount rate should reflect each coin's risk and the nominal inflation rate. **This report assumes a standard discount rate of 30 % for each coin**.

[15] See "Principles of Political Economy", John W. Parker, John Stuart Mill, 1848

Assumptions in-depth

Monetary supply

The "M" in MV = PQ is measured by the supply in circulation of a crypto asset. **M is the monetary base necessary to support an economy**. This report assumes a stable supply of each crypto asset for each year and forecasts the supply over the next decade based on each crypto asset's programmed supply schedule in its protocol.

Velocity

"V" is the velocity of each unit of money in the monetary base. If Alice passes 1 BTC to Bob once a year, that's an annual velocity of 1. If Bob passes on that same BTC to Eve, that's an annual velocity of 2. **This report assumes a stable velocity of each coin over the next decade**. The velocity figure is calculated based on the 2021 on-chain velocity of each coin.

Target addressable market model

"P" is the average price of goods in the economy. With regards to currency, utility and stable coins, the price is the cost of the good or service being provisioned.

"Q" is the quantity of goods in the economy.

The total global demand for crypto assets, **(PQ)**, is calculated by determining the size of each TAM for each coin for each year and what percentage of the TAM will be penetrated by the coin each year.

To project the TAM of future years, a reasonable assumption about the growth of this market going forward is required. **This paper assumes a compound annual growth rate for each TAM**.

Table 1/ Target addressable markets for crypto assets in billions of USD

Target Addressable Market	Current Capitalization	Implied 2023 End of Year Capitalization	Implied 2027 End of Year Capitalization	CAGR data
In-game Transactions	54,000	68,000	82,000	5.1%
Digital Commerce[16]	68,900	98,000	196,000	19.4%
Remittance[17]	589,000	620,000	687,000	2.6%

Digital commerce

According to the "Digital Payment Market Size & Share Report" published by Grand View Research, the global digital payment market stayed at $58.30 billion in 2020 and is expected to grow at a compound annual growth rate (CAGR) of 19.4% from 2021 to 2028.

In its Crypto Commerce Report, research firm Chainalysis estimates that **cryptocurrency commerce transactions account for $6 million daily**.[18] This means that cryptocurrency payments account for just a fraction of online transactions. However, according to the same report by Chainalysis, the amount of digital money sent to 16 merchant service providers, such as BitPay, rose 65 % between January and July 2019. This is because cryptocurrency transactions are comparatively faster, taking a few seconds optimally or about an hour when networks are congested.

Famous merchants such as Microsoft, CheapAir (flights), Travala (hotel bookings)[19] and the Dallas Mavericks basketball team accept cryptocurrency payments in order to reach out to niche markets of cryptocurrency holders. Local governments are also accepting cryptocurrency payments, such as the Ticino and Zug Cantons in Switzerland and Seminole County, Florida in the U.S. to name a few.

[16] See "Digital Payment Market Size, Share & Trends Analysis Report By Solution, By Mode Of Payment (Point Of Sales, Digital Wallets, Net Banking), By Deployment, By Enterprise Size, By End-use, And Segment Forecasts, 2021–2028", *Grand View Research*, February, 2021

[17] See "Remittance Flows Register Robust 7.3 Percent Growth in 2021", Rebecca Ong, *The World Bank*, November 17, 2021

[18] See "From Online Gambling to Pot, Crypto Commerce Takes Off This Year",Olga Kharif, *Bloomberg*, November 6, 2019

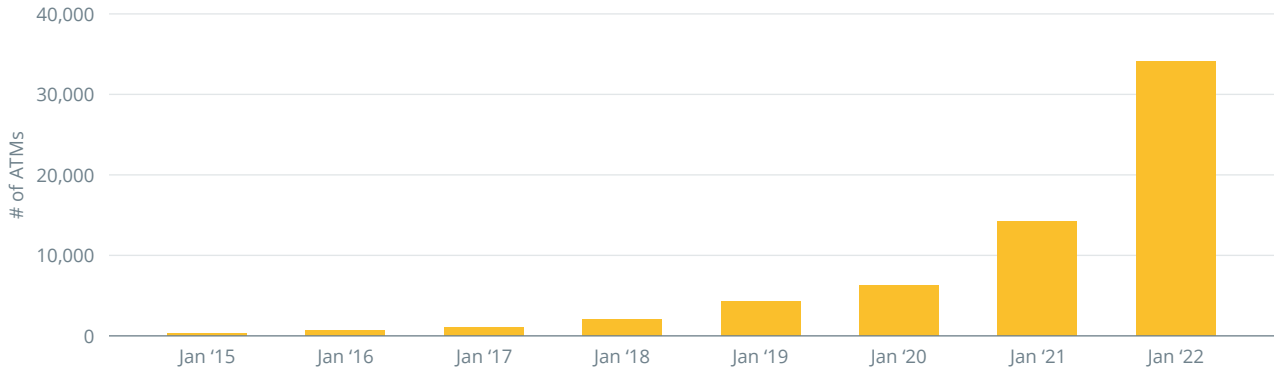
[19] See "Travala.com Monthly Report: October 2019", *Travala.com*, November 1, 2019

Remittance

The World Bank expected migrants to send upward of $589 billion to their home countries in 2021.[20] However, the use of traditional banking services means high transaction fees and slow processing. The Philippines, which is one of the world's top remittance markets, already has solutions, such as Coins.ph, that use crypto and blockchain technology, which allows individuals to send money home with lower fees.

Many remittances are being conducted via Bitcoin ATMs that have remittance features enabled. One such feature allows a user to put British pounds into an ATM in London and to receive a code. They can send that code to a relative or friend in New York. Their friend can go to a Bitcoin ATM in New York, enter the code, and then receive U.S. dollars. This feature is available in over 100 countries and 35 different fiat currencies.

Figure 2 / The Number of Bitcoin ATMs Installed Across the Globe



Source: *Coinatmradar.com*

Gaming

Gaming is one of the industries that exhibited unprecedented growth despite the economic damages brought on by the COVID-19 pandemic. Fortune Business Insights estimated that the global gaming market was $203.12 billion in 2020 and is expected to reach half a trillion by 2028.[21] Ancillary to the growth of the gaming industry is in-game purchases, and this submarket demonstrated a similar upward trajectory, with approximately $54 billion spent on additional in-game content in 2020.[22] The market value of such transactions is also estimated to go beyond $74.4 billion by 2025.

Cryptocurrency penetration in this space has been apparent since 2014, particularly in the online gambling world where most players prefer Bitcoin as the medium of exchange.[23] Back in 2016, popular social gaming platform Steam also began accepting Bitcoin as payment but only to rescind this decision amid the bull market of 2017 due to high fees and volatility.[24] Video game retailers like G2A.com limited, which claims to serve more than 4 million customers per year with transactions surpassing 10 million annually worldwide, still have Bitcoin as a mode of payment through a partnership with Bitpay.[25] Other ones include GAMIVO, MMOGA, IndieGala, and GamesOnly.at.[26]

[20] See "Remittance Flows Register Robust 7.3 Percent Growth in 2021", Rebecca Ong, *The World Bank*, November 17, 2021

[21] See "The global gaming market is projected to grow from $229.16 billion in 2021 to $545.98 billion in 2028 at a CAGR of 13.20% in forecast period, 2021–2028", *Fortune Business Insights*, 2020

[22] See "Consumer spending on in-game purchases worldwide from 2020 to 2025", J. Clement, *Statista*, September 7, 2021

[23] See "Poker network now gives '95% of payouts' in Bitcoin — around $160M monthly", Turner Wright, *Cointelegraph*, November 20, 2020

[24] See "You can now buy games on Steam using Bitcoin", James Vincent, *The Verge*, April 28, 2016

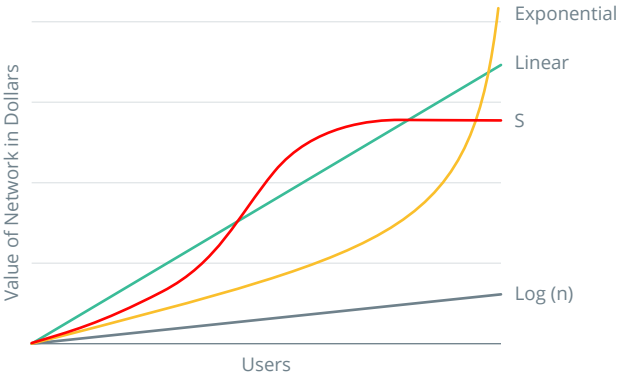
[25] See "Gaming Giant G2A Now Accepts bitcoin Through Partnership with BitPay", G2A, *PR Newswire*, October 12, 2015

[26] See "Buy video games with Bitcoin (and altcoins) for PC and consoles", *Coingate*, January 29, 2019

Adoption Rate

Once the M, V, P, and Q are estimated, the penetration rate of each TAM by each cryptocurrency is calculated. This is called the adoption rate, and this is based on an assumption regarding future use of the currency for each use case. To estimate adoption, we fit a curve to the historical growth in active wallet addresses.

Most studies adopt an S-curve beginning on when the network is launched. There are several different possible curves for cryptocurrency adoption, such as S-curve and linear. Other curve options include exponential and log. All of the following curve assumptions can be seen on the following graph.



Source: *Cointelegraph Research*

Use of ACH as a medium of exchange appears to be following a linear curve or an S-curve and currently has approximately 12,000 active users per day.

Scenarios

To improve the robustness of the adoption rate analysis, several scenarios can be calculated for the adoption rate of each cryptocurrency for their respective TAMs. This report assumes three different scenarios:

- Bearish
  - Cryptocurrency will only take over 1% of the entire target addressable market.
  - The cryptocurrency will take two years to achieve 10% of the 1% adoption.
  - The number of years that the cryptocurrency will take to achieve 90% of the 1% adoption will be seven.
- Modest
  - Cryptocurrency will only take over 10% of the entire target addressable market.
  - The cryptocurrency will take two years to achieve 10% of the 1% adoption.
  - The number of years that the cryptocurrency will take to achieve 90% of the 1% adoption will be five.
- Bullish
  - Cryptocurrency will only take over 20% of the entire target addressable market.
  - The cryptocurrency will take two years to achieve 20% of the 1% adoption.
  - The number of years that the cryptocurrency will take to achieve 90% of the 1% adoption will be five.

Discount Rate

A dollar today is worth more than a dollar a year from now. Stock valuation models, such as the discounted cash flow model, can use discounts rates of 10 – 50% per year based on the risk of the industry and the company. Take the future current value and discount it back to the present. Taking the value of $7.45 and discounting it back 10 years at a rate of 40% yields a rational market value of $0.26. The calculation is $7.45/(1.40^{10}). An alternative approach is to discount each period utility value and use the weighted average by applying larger weights to periods that are closer. The Satis Report argues that discounting isn't required for the TAM analysis[27]; however, most reports incorporate a discount rate. Chris Burniske uses rates between 30% and 40%.[28] The 2015 Wedbush Securities report uses a discount rate of 40%.[29] In this report, we apply 30%.

[27] See "Cryptoasset Market Coverage Initiation: Valuation August 30, 2018", Sherwin Dowlat and Michael Hodapp, SatisGroup, 2018

[28] Burniske and White, 2017

[29] See "Bitcoin Investment Trust (GBTC)", Gil Luria and Aaron Turner, Wedbush Securities, July 9, 2015

Valuation Results

Looking into all the variables and addressable markets, we have come up with a utility price estimate for the ACH token. It is worth noting that the estimate is done on a non-discounted basis and with moderate market penetration assumptions.

Non discounted utility price predictions				
	Jan 2022	2024	2027	2030
ACH	$0.2	$0.92	$5.67	$9.58

As seen by the chart above, we believe that ACH is still at the very start of its adoption curve. The utility price of $0.1 at the beginning of 2022 suggests that ACH has penetrated less than 0.2 % of its total addressable markets. If this penetration manages to reach 10 %, its non-discounted utility price should reach nearly $10.

3 Future Outlook for Cryptocurrency Payments

The specified target addressable market categories indicate just how vast the relevant use cases payment tokens can penetrate. For example, the payment gateway market was valued at $20 billion in 2020 and is expected to grow at a 15% CAGR between 2021 and 2027.[30] Yet cryptocurrency payments lag far behind leading players such as PayPal, Stripe and Shopify Pay. However, 2021's strong momentum may carry over into 2022. **(Figure 3)**

Back in September 2021, El Salvador fully embraced Bitcoin as a legal tender alongside the U.S. dollar, marking a quantum leap for the entire crypto space. Another seminal move is when PayPal allowed U.S. customers to pay merchants in cryptocurrencies.[31] PayPal integrated a new crypto checkout feature that supports Bitcoin, Ether (ETH), Litecoin (LTC) and Bitcoin Cash. Visa's crypto-linked cards provided additional momentum when it announced transactions topped $1 billion in the first half of 2021.[32]

The above examples show how cryptocurrencies can shape the future of payments and coincide with how users generally want to utilize them. Data shows that 46 million customers, including 17 million non-crypto owners, plan to use cryptocurrencies to make purchases in the future.[33] Still, despite the past year's breakthroughs, there are several challenges that payment tokens face in achieving greater adoption, one of which is volatility.

Ostensibly, users would prefer to transact with a cryptocurrency whose value doesn't exhibit rapid fluctuations. Such wild price swings deter some users from putting their faith in cryptocurrencies as a medium of exchange or unit of account, not to mention the tax obligations it can engender, particularly with inadvertent gains.

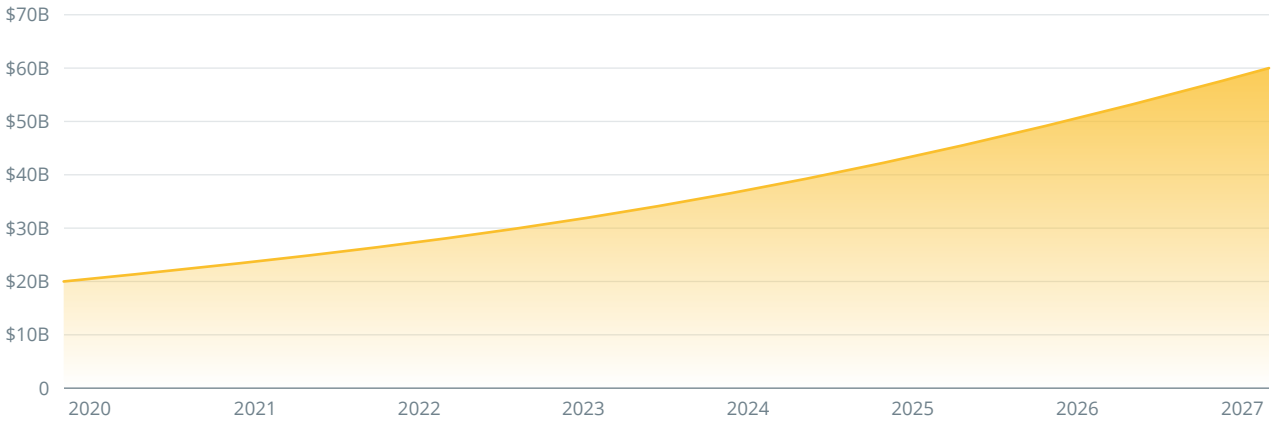
[30] See "Payment Gateway Market Size By Type (Hosted, Non-Hosted, Local Bank Integrated), By Organization Size (SME, Large Enterprises), By Application (Travel and Hospitality, Retail & E-commerce, Media & Entertainment, Healthcare, Energy & Utilities, IT & Telecom, BFSI), COVID-19 Impact Analysis, Regional Outlook, Growth Potential, Competitive Market Share & Forecast, 2021–2027", *Global Market Insights*, 2020

[31] See "PayPal to start letting US customers pay in Bitcoin at global merchants", Greg Thomson, *Cointelegraph*, March 30, 2021

[32] See "Visa reports over $1 billion in crypto spending in H1 2021", Helen Partz, *Cointelegraph*, July 7, 2021

[33] See "Cryptocurrency Payments Report", *PYMNTS and bitpay*, May, 2021

Figure 3 / Payment gateway market size projection 2020–2027



Source: *Global Market Insights*

Payment tokens vs. stablecoins

That is why the practical use case of stablecoins was thrust into the limelight. Stablecoins have been the favored asset for transactions within the scope of cryptocurrency trading because its fixed value relative to the fiat currency provides a "parking space" for volatility.[34] It is also because of this stable value that it is deemed to have the potential of reaching widespread means of payment, according to the President's Working Group on Financial Markets.[35] The market size of stablecoins grew to $168 billion from $120 billion in 2020, worlds apart from the value of the top payment tokens.

However, it is likely that the apparent utility between payment tokens and stablecoins in the payments scene is not a question of which one gets the larger piece of the pie, but more on how the two can coexist, especially if the utility of stablecoins remains concentrated within the realm of DeFi and trading.

Regulation

Progress on the regulatory front could lead to further adoption of payment tokens. Addressing the precarious taxonomy of digital assets is perhaps the biggest impediment to establishing a legal framework that encompasses payment tokens, stablecoins and all types of crypto assets for that matter. As stated earlier, the gains generated through a payment token's price fluctuations exhibit the characteristics of an investment asset, making it difficult for regulators to simply classify payment tokens as electronic money.

[34] See "The expanding functions and uses of stablecoins", Mitsutoshi Adachi, Alexandra Born, Isabella Gschossmann and Anton van der Kraaij, *European Central Bank*, November, 2021

[35] See "Report on Stablecoins", *President's Working Group on Financial Markets, the Federal Deposit Insurance Corporation, the Office of the Comptroller of the Currency*, November, 2021

Disclaimer

Cointelegraph Research is not an investment company, investment advisor,or broker/dealer. This publication is for information purposes only and represents neither investment advice nor an investment analysis or an invitation to buy or sell financial instruments. Specifically, the document does not serve as a substitute for individual investment or other advice. Readers should be aware that trading tokens or coins and all other financial instruments involves risk. Past performance is no guarantee of future results, and I/we make no representation that any reader of this report or any other person will or is likely to achieve similar results. The statements contained in this publication are based on the knowledge as of the time of preparation and are subject to change at any time without further notice. The authors have exercised the greatest possible care in the selection of the information sources employed; however, they do not accept any responsibility (and neither does Cointelegraph Consulting or for the correctness, completeness, or timeliness of the information, respectively the information sources made available as well as any liabilities or damages, irrespective of their nature, that may result therefrom (including consequential or indirect damages, loss of prospective profits or the accuracy of prepared In no event shall Cointelegraph Consultingbe liable to you or anyone else for any decision made oraction taken in reliance on the information in this report or for any special, direct,indirect, consequential, or incidental damages or any damages whatsoever, whetherin an action of contract, negligence or other tort, arising out of or in connection withthis report or the information contained in this report. Cointelegraph Consultingreserves the right to make additions, deletions, ormodifications to the contents of this report at any time without prior notice. The valueof cryptocurrencies can fall as well as rise. There is an additional risk of making a loss when you buy shares in certain smaller cryptocurrencies. There is a big difference between the buying price and the selling price of some cryptocurrencies and if you have to sell quickly you may get back much less than you paid. Cryptocurrencies may go down as well as up and you may not get back the original amount invested. It may be difficult to sell or realize an investment. You should not buy cryptocurrencies with money you cannot afford to lose.