



# Life & Health Underwriting Insights

## The rollercoaster of cryptocurrency. How will this growing (and volatile) asset class impact financial underwriting?

2021 might have been the most important, and tumultuous, year ever for cryptocurrency. We saw Bitcoin reach multiple new all-time high prices, as well as quick and significant market corrections. We witnessed more mainstream adoption and buy-in from institutional investors, which brought a heightened focus on regulation. With more than 100 million estimated cryptocurrency users globally (many who just started investing this year), L&H insurers need to critically think about how this growing asset class might impact financial underwriting, particularly for high-net-worth individuals.<sup>1</sup>

### What is cryptocurrency and what offerings are most popular?

Cryptocurrency is defined as a digital currency in which transactions are verified and records maintained by a decentralised system using cryptography, rather than by a centralised authority. Cryptocurrencies utilise blockchain technology – a distributed ledger enforced for a disparate network of computers.

While more than 16 000 different cryptocurrencies are traded publicly, some of the most popular are Bitcoin and Ether (part of Ethereum platform).



Bitcoin has no physical form – it technically exists online as a complete digital asset. If you do see it, it is in the form of lines of code in an alphanumeric string.

### Cryptocurrency in numbers

- 1. Highly volatile and unpredictable.**  
In May 2021, Bitcoin fell by 30% in a day and 50% that month. A high-profile investor can swing the market with a single comment or action.
- 2. Not just for young, digital natives.**  
While this is the overwhelming user base, half of Bitcoin's IRA user base is 55 and older.<sup>2</sup>
- 3. Bought and sold frequency.**  
According to one US survey, 24% of respondents say they trade daily.<sup>3</sup>

**Table 1**  
Cryptocurrency overview

Type	Description	Primary Use	Backed by central authority?	Example
<b>Payment cryptocurrencies</b>	Digital currency operated by a distributed network of computers running a shared blockchain software	Alternative to cash; payments for a specific use	No	Bitcoin, Litecoin, Ethereum
<b>Asset-backed cryptocurrencies</b>	Unit of data blockchain stored with reproducible digital file such as photos or digital art. Every token program is unique and irreplicable.	Vehicle to 'tokenize' real-world tangible assets and allow them to be bought, sold and traded more efficiently, while reducing probability of fraud.	No	Non-fungible tokens (NFTs), which are unique and cannot be replicated e.g., digital artwork
<b>Central Bank Digital Currencies (CBDC's)* (in development)</b>	Digital version of currency	Replace banknotes and coins; enable cashless payments	Yes, issued by central authority or bank	Digital yuan (e-CNY) is currently in development in China

\*Differs from cryptocurrency and does not use blockchain

The fast growth of cryptocurrency has been accompanied by a booming ecosystem to support these products and services. For example, infrastructure providers such as Ethereum (the leader in this space), Polkadot and Chainlink were created to provide the rails on which crypto and blockchain businesses can be built. Alongside these offerings sit crypto trading platforms, such as Coinbase and Binance, which allow corporate and retail investors to trade a range of digital assets.

**Figure 1**  
Cryptocurrency ecosystem



Source: Oxbow Partners

## Who invests in cryptocurrency and how much should you invest?

Most cryptocurrency investors fall into two categories – either ‘crypto savvy’ or ‘crypto curious’. According to Gemini’s 2021 State of Crypto Report, most owners of digital currency are relatively young and affluent (average household income of USD 110,000). In the US, 74% of crypto holders are male, 77% of all owners are under the age of 45 and 68% first purchased crypto in the last 2 years.<sup>4</sup> Some government officials are even getting involved. The newly elected Mayor of New York City plans to deposit his first paycheck into Coinbase and convert it into Bitcoin and Ethereum.

El Salvador also became the first country to adopt Bitcoin as legal tender last year (although, the International Monetary Fund has urged the country to remove Bitcoin as legal tender). Some organisations and political candidates are even using NFTs to raise money for campaigns and social causes.

While the US may dominate headlines, Cryptocurrency investing is of global interest. According to one blockchain data firm, global adoption is up 881% in the last year, with Vietnam, India and Pakistan in the lead as a result of peer-to-peer exchange volumes in emerging markets.<sup>5</sup> As widespread interest in crypto grows, experts expect demographics will slowly diversify. However, not all countries are fans; China and Russia have negative views on the market. If other countries join this sentiment, it may undermine future growth and acceptance.

There are different perspectives how much of one’s assets should be invested. A Yale research paper wrote that an “optimal portfolio to include 6% cryptocurrency”.<sup>6</sup> As huge rises in value can create greater potential return on investment as opposed to other assets a more popular opinion is that 1% of assets should be invested simply for diversification purposes.

## Is cryptocurrency here to stay?

Depends who you ask. Many are still undecided on whether cryptocurrency is secure over the long run. It’s only been around for a decade and is still considered by many to be an experiment. The technology is still developing, with its fair share of challenges to overcome. Even if the currencies ceased to exist, the technology (blockchain) is likely to remain.

A 2018 Yale University report found the probability of cryptocurrency crashing to zero value is approximately 0.4%. For comparison, the probability of the Euro crashing to zero is approximately 0.009%.<sup>6</sup> On the other hand, several mainstream banks are taking it seriously. Bank of America launched an inaugural research report on digital assets, which states that “crypto-based digital assets could form an entirely new asset class”.<sup>7</sup>

## Cause for concern? How does cryptocurrency fit in with insurers’ increasing focus on sustainability?

Cryptocurrency is not a physical asset. New coins are mined through powerful computers. This process is extremely energy intensive. In fact, cryptocurrency is considered to consume more energy than some small countries. However, newer solutions are being developed to allow scalability, maintain security while creating a smaller carbon footprint. In 2009, you could mine Bitcoin in your living room and it would take a few seconds worth of household electricity. Today, to mine one Bitcoin, you need a room full of specialised machines, costing thousands of dollars each, and it would require 9 years’ worth of household electricity – or about USD 12 500.<sup>8</sup> In the past 5 years alone, energy consumption has increased tenfold.

Due to the widespread use of fossil fuel, the sustainability of cryptocurrency is increasingly being called into question. Currently, we do not foresee environmental impacts affecting insurers positions on cryptocurrency – especially when it comes to financial underwriting of life or health policies based upon such assets, held by applicants.

Insurers should take a wait and see approach and continue to better understand and quantify the negative (and positive) impacts of cryptocurrency on climate change.

## Booming – but volatile

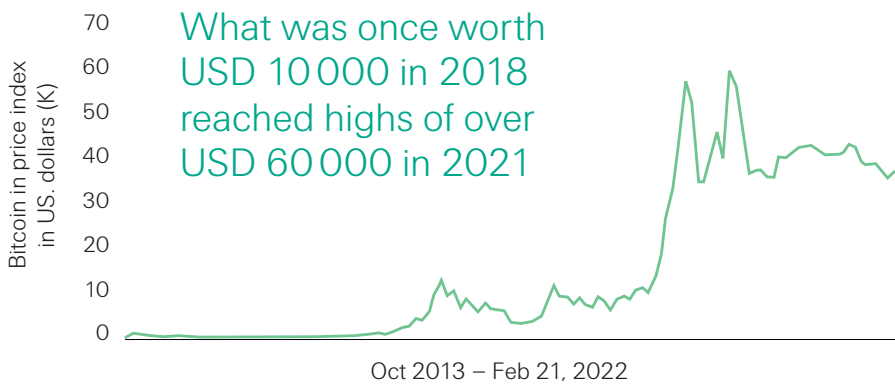
Several cryptocurrencies have been booming as of late, with Bitcoin as a particular standout. What was once worth USD 10 000 in 2018 reached highs of over USD 60 000 in 2021 – a six fold increase. But like most cryptocurrencies, Bitcoin is highly volatile and unpredictable. In May 2021, Bitcoin fell by 30% in a single day and 50% that month. More recent collapses in December and January have erased more than USD 1 trillion in wealth. A high-profile investor can swing the market with a single comment or action, especially given the fact that approximately 1 000 individuals own 40% of cryptocurrency. Equally, as many cryptocurrencies rely on a few platforms, there is increased concentration risk.

Volatility and unpredictability bring increased risk. With an asset that can change value by 30% in 24 hours, insurers should exercise caution when basing high sum assured financial assessments for life insurance cover based upon calculations using a percentage of applicant asset value solely.



In the US, 74% of crypto holders are male, 77% of all owners are under the age of 45 and 68% first purchased crypto in the last 2 years.

Figure 2: Bitcoin price per day from October 2013 to February 25, 2022



What L&H insurers need to know

Where an applicant has significant cryptocurrency as assets, the policy is likely to be a high-net worth (HNW) insurance application. These applications need to comply with industry standard anti-money laundering procedures and undergo appropriate due diligence.

While HNW applications will likely see the most significant cryptocurrency assets, underwriters may start to come across cryptocurrency investments for more mass market lives as it continues to spread.

Keep these principles in mind when you assess cryptocurrency as a financial asset class



Cryptocurrency is not being widely used for the purpose of a currency to buy and sell goods. Instead, the value of the currency is **purely derived from speculations**, placing it into the “speculative asset class” and making it difficult to place an exact intrinsic value.



There are no uniform international laws that regulate cryptocurrencies; they are **not supported by any central authority or bank**. Different countries have different regulatory frameworks and some countries like China and Russia even have restrictions in place. Underwriters need to be aware of local laws and regulations when financial underwriting these assets and be mindful of how frequently the landscape is changing.



For independent validation of cryptocurrency assets, a statement from the account or wallet can be generated which shows the account holder name, amount of holdings and the date. If the statement does not show **identifying information**, then insurers should request an uploaded message cryptographically signed using the account’s private key from their wallet. If a statement is not available, extra care is required. A holding wallet statement would be an alternative.



Some consider that a significant investment failure risk (given the volatility of cryptocurrency), could increase moral hazard risk. Though the percent of cryptocurrency activity associated with **illegal activity is extremely low** (estimated at 0.15% by some accounts), it is still a risk to be aware of.



Any declared income from cryptocurrency must be documented and verifiable through **income tax statements**.

## Swiss Re's suggested underwriting guidance

In order to more accurately assess and value assets as part of financial underwriting, Swiss Re suggests, similar to many cyber insurance products, using a discount factor for significant cryptocurrency holdings for asset value derived life cover:

- If cryptocurrency assets are **≤10% of total assets**, there is no need to discount.
- If **> 10% and < 25% of total assets** held in cryptocurrency, we suggest insurers apply a discount factor. Generally, we recommend discounting the cryptocurrency asset value by approximately 40% as a factor of current market value to determine long-term financial viability. This allows us to gain greater experience in assessing

these assets with potential change when these may be more established.

- E.g. USD 1 000 000 asset would become USD 600 000. Underwriters will also need to consider overall lifestyle risk factors and market specifics.

- We recommend considering a **maximum of 25% of total assets** held in cryptocurrency for financial underwriting assessment purposes. Assets held in excess of this may be disregarded. While this scenario presents added concern for insurers, it is unlikely.
- Accept **100% of estate duty (or inheritance tax) liability** (with independent valuations)
- **Generally, we would not distinguish** between different cryptocurrency types as doing so is still a little speculative to future value, at this moment.

## Adapt now to benefit later

Regardless of your personal stance on cryptocurrencies, they already play a role in the global economy. Although significant cryptocurrency portfolios are not commonplace in HNW applications, it is vital for insurers to proactively consider this emerging risk and the potential mitigation at their disposal.

But – given their uncertainty in the long-term, insurers should be prepared to adapt their approach overtime as the cryptocurrency market continues to evolve. At Swiss Re, we will be reviewing our suggested underwriting guidance regularly to ensure protective value and relevancy.

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