HSLU Lucerne University of Applied Sciences and Arts

Crypto Assets Study 2025

An Overview of the Swiss and Liechtenstein Crypto Assets Ecosystem

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1. Introduction

The fifth edition of the "Crypto Assets Study" provides an overview of the current state and developments in the investment ecosystem for crypto assets in Switzerland and the Principality of Liechtenstein. As in previous years, the objective is to provide a data-driven overview for both industry stakeholders and external audiences, such as investors, service providers, and regulators.

A general overview of global market developments can be drawn from the total market capitalisation of publicly traded crypto assets, illustrated in Figure 1.1.

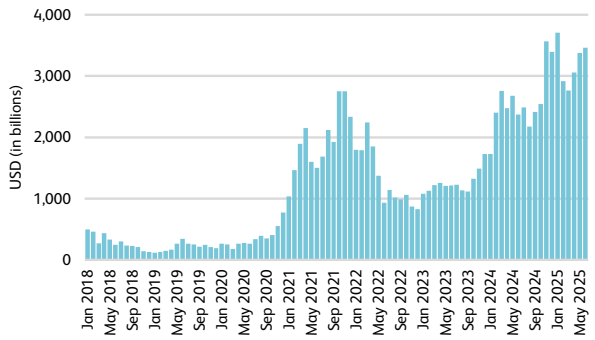

Figure 1.1: Total market capitalisation of crypto assets, by end of period (source: CoinGecko (online-a))

After a steady recovery phase that began in late 2023, the market reached a new end-of-month all-time high of approximately USD 3.7 trillion in January 2025, surpassing the previous peak observed during the 2021 growth cycle. As of the end of June 2025, total market capitalisation stood at USD 3.5 trillion, slightly below the January high (CoinGecko, online-a). Since early 2023, Bitcoin's share of the total market capitalisation has steadily increased, rising from around 38 percent in January 2023 to 62 percent in June 2025 (CoinGecko, online-a). This trend highlights Bitcoin's enduring prominence within the broader crypto asset investment ecosystem.

Part of the increase in total market value coincided with capital inflows into spot Bitcoin exchange-traded funds (ETFs). Introduced in the United States in early 2024, these products attracted significant investor interest, with assets under management reaching USD 136 billion for Bitcoin by end of June 2025 (CoinMarketCap, online-a), and USD 11 billion for Ether (CoinMarketCap, online-b). These figures correspond to approximately six percent and four percent of each asset's total market capitalisation, respectively, highlighting the significant role that regulated investment vehicles are beginning to play in the crypto asset investment ecosystem.

Developments in the area of crypto asset investments have also been observed in Switzerland and Liechtenstein in recent months. In addition to the overall expansion of crypto-related services and products offered by local financial institutions, this includes, for example, the licensing of BX Digital by the Swiss Financial Market Supervisory Authority (FINMA) as a first Distributed Ledger Technology (DLT) trading facility (FINMA, 2025). In terms of infrastructure, regulated trading venues and tokenisation platforms continued to expand their activities. For example, the SIX Digital Exchange (SDX) reached a cumulative volume of over CHF 1.6 billion in digital bond issuances by mid-2025 (SDX, 2025a). Additional tokenisation initiatives involving Swiss banks and financial infrastructure providers were launched or continued in 2025, particularly in the area of deposit tokens and asset-backed tokens. In Liechtenstein, the European Economic Area (EEA) MiCA Implementation Act entered into force on 1 February 2025, serving to pre-implement the EU Markets in Crypto-Assets Regulation (MiCAR) ahead of its formal incorporation into the EEA Agreement. This step underlines Liechtenstein's proactive alignment with the EU regulatory framework for crypto assets (Financial Market Authority Liechtenstein, online).

These developments appear to have increased the acceptance and adoption of crypto assets not only at the corporate level, but have also led to an increasing adoption of crypto assets among private individuals. According to a November 2024 study by the Lucerne University of Applied Sciences and Arts, approximately eleven percent of the Swiss population are invested in crypto assets through instruments such as cryptocurrencies, stablecoins, ETFs, exchange-traded notes (ETNs), non-fungible tokens (NFTs), and tokenised real-world assets. Notably, the study found that curiosity, return expectations, and diversification are the primary motivations for entering the crypto asset market, highlighting the growing potential for related financial services and product providers (Dietrich, Rey, & Amrein, 2024).

1.1. Definition of Crypto Assets

The definition of the subject matter remains consistent with previous editions of the "Crypto Assets Study" and serves to delineate the scope of the analysis:

Crypto assets are digital representations, like claims, values, or rights, issued on a distributed ledger, such as a blockchain protocol, in the form of tokens.

This definition includes all tokenised information recorded on a distributed ledger, irrespective of the degree of decentralisation or whether the system is public or private. This inclusive approach accommodates a wide range of designs and use cases. As detailed in the crypto asset taxonomy introduced by Ankenbrand, Bieri, Ferrazzini, et al. (2024), crypto assets can exhibit substantial diversity across multiple dimensions. For example, at the token level, they may serve different functions such as utility, governance, investment, or ownership, and can be native or non-native. At the protocol level, tokens are implemented on infrastructures with varying technical architectures, consensus mechanisms, and permissioning models. At the tokenomics level, design parameters such as decentralisation and supply mechanisms differ widely. These attributes are illustrative rather than exhaustive, and highlight the large diversity of crypto assets that all fall under the outlined definition.

1.2. Methodological Approach

The methodological approach of this study remains consistent with the previous edition. Market activities are primarily analysed using structured desk research and publicly available data sources. This allows for a comprehensive and comparable assessment of crypto asset-related investment products and services offered in Switzerland and Liechtenstein.

1.2.1 Identification of Relevant Market Participants

A multi-step screening process was conducted to identify companies offering crypto asset-related investment products and/or services. First, Swiss and Liechtenstein entities were selected based on public registers and databases, including those provided by FINMA and the Liechtenstein Financial Market Authority (FMA-LI). The sample included banks, securities firms, FinTech companies, asset managers, IT service providers, and other relevant actors.

In a second step, each company was examined using general web search results and large language model support to determine its relevance to the crypto asset investment ecosystem. For positively identified entities, corporate websites were reviewed to extract general information about their activities, offerings, and target clients.

1.2.2 Classification Framework

The structure of the investment ecosystem introduced in Chapter 2 served as the classification basis. Each company was mapped to one or more segments of the value chain, distinguishing between off-chain, on-chain centralised, and on-chain decentralised investment products and services. The resulting dataset was subjected to plausibility checks to improve accuracy and consistency.

1.2.3 Data Sources

The analysis is based exclusively on publicly available or commercially licensed data. Key quantitative indicators and product-level data were obtained from the following sources:

1. Bloomberg
2. BX Swiss
3. CoinGecko
4. Google BigQuery
5. Morningstar Direct
6. Semrush
7. SIX

1.2.4 Scope and Limitations

The findings are based solely on desk research and do not reflect confidential or unpublished business activity. It is important to note that the majority of the data providers referenced focus on publicly traded crypto assets. Consequently, investment activities involving private or permissioned DLT systems are not captured in this study. Furthermore, due to the partially scarce public information available and the use of large language models, the evaluation and classification of the in-scope companies follows the most probable categorisation in some cases. The results should therefore be interpreted as an informed approximation of observable developments in the crypto asset investment ecosystem of Switzerland and the Principality of Liechtenstein.

2. Structure of the Investment Ecosystem for Crypto Assets

The structure of the crypto asset investment ecosystem broadly mirrors that of traditional financial markets, but with important distinctions. As shown by the vertical columns in Figure 2.1, the investment value chain includes the issuance of crypto assets and of financial instruments based on them, the participation of investors (both in the primary and secondary markets), the provision of investment services, the operation of trading venues, and post-trading activities. A key differentiating factor to the investment value chain of traditional assets is the degree to which blockchain-based systems are integrated into these processes. This technological dimension is illustrated by the horizontal layers in Figure 2.1, which distinguish between:

- **Off-chain:** Traditional financial infrastructure without direct integration of DLT, covering indirect investments in crypto assets (e.g., exchange-traded products or structured products). Investors do not directly interact with blockchain-based systems.
- **Centralised on-chain:** Services and products built on DLT that offer direct exposure to crypto assets, but are operated by identifiable intermediaries or regulated institutions that retain control over key processes.
- **Decentralised on-chain:** Fully decentralised infrastructures that provide direct exposure to crypto assets, where activities are executed through smart contracts and user-controlled wallets, without reliance on centralised entities.

The following sections provide an overview of the actors and functions along the investment value chain as presented in Figure 2.1. Note that the figure focuses on the core processes of investment. In addition to these, supporting infrastructure such as compliance services (e.g., Know Your Customer and Anti-Money Laundering) and market data providers are essential enablers of investor access and market integrity.

Issuance

Issuers initiate the creation of new crypto assets or indirect financial products based on them. For indirect products, the issuer is typically a regulated financial institution.

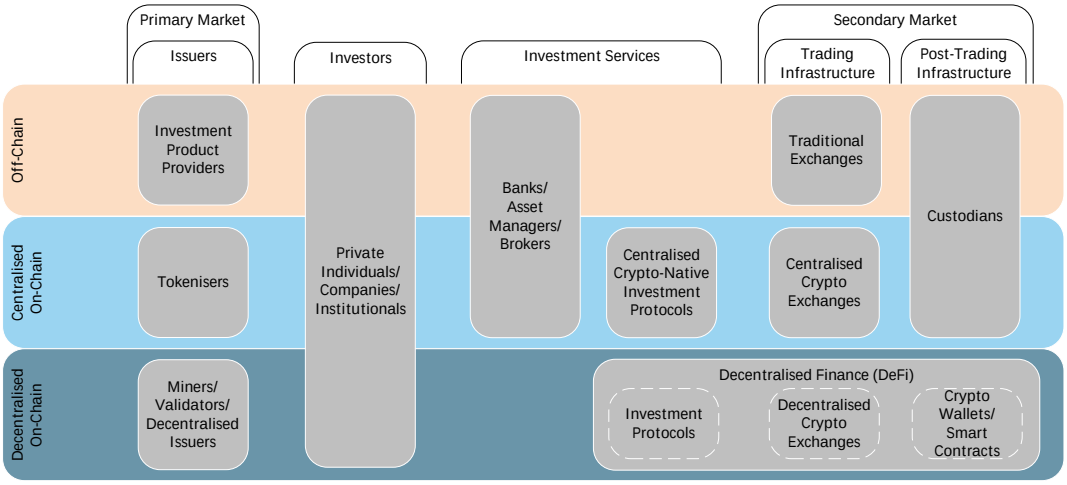

Figure 2.1: Structure of the investment ecosystem for crypto assets

These instruments allow clients to gain exposure to crypto assets without requiring on-chain interaction, such as operating wallets or managing private keys, as these investment products can be booked directly into traditional securities accounts.

Direct issuance of crypto assets occurs through the tokenisation of digital or real-world assets on a DLT network. Centralised issuers (e.g., regulated tokenisation platforms or stablecoin providers) generate these tokens while retaining operational control.

In decentralised settings, issuance is embedded in protocol mechanisms. Here, two general categories of issuers exist:

- **Miners and validators:** These actors receive newly created tokens as protocol rewards for producing and verifying blocks, thereby contributing to network consensus and security. This process can be understood as a form of issuance embedded in the protocol itself, where the generation of new tokens is tied to the operation and maintenance of the underlying blockchain infrastructure (Shrimali & Patel, 2022).

- **Decentralised issuers:** These include individuals, decentralised autonomous organisations (DAOs), or other entities deploying smart contracts to create and distribute tokens via open, decentralised infrastructures. They operate without the need for platform-level permission or central coordination and represent a share of token issuance in decentralised finance and community-driven projects (U.S. Department of the Treasury, 2023).

Investors

Investors form the demand side of the ecosystem and are the final recipients of investment services and products. This study considers a range of investor types, including retail clients and institutional investors. As in earlier editions, business volume metrics are presented based on observable activity at the service provider level. However, due to the pseudonymous nature of most DLT-based systems and the limitations of available off-chain market data, it is difficult to attribute activity to specific investor categories. As a result, the analyses in Chapter 4 do not distinguish between investor types. A more detailed assessment of institutional investor exposure to crypto asset markets is provided in Chapter 6.

Investment Services

Investment services include the structuring, offering, and management of crypto asset exposures. These services may relate to off-chain investment products or direct crypto asset holdings. Providers such as banks, asset managers, and brokers typically operate across the off-chain and/or centralised on-chain domains, depending on their product offering. They support clients in accessing crypto asset markets either directly or indirectly.

Within the centralised on-chain segment, crypto-native investment platforms have emerged that combine on-chain infrastructure with centralised service models (S&P Global Ratings, 2023). These include, for example, CeFi lenders, staking-as-a-service providers, and portfolio platforms, which offer users simplified access to on-chain yield or crypto asset exposure, while retaining centralised control over execution and custody (Ethereum Foundation, 2025).

In decentralised finance (DeFi), smart contract protocols replicate investment functions such as asset management, lending, and staking. These decentralised services allow users to manage their crypto asset positions without the involvement of intermediaries (Gogel, 2021).

Trading Infrastructure

Trading platforms facilitate the buying and selling of crypto assets and related financial instruments. Indirect investment products are typically traded on conventional exchanges and require no DLT interaction at the user level. Direct crypto asset trading takes place on either centralised or decentralised platforms. Centralised crypto exchanges (CEXs) operate order books and provide custodial services, resembling traditional trading venues. Decentralised exchanges (DEXs), in contrast, are built on smart contracts and execute trades via automated market maker protocols. They operate without intermediaries and rely on DLT-native mechanisms.

Note that cross-chain bridges and interoperability protocols also play an important role in enabling trading and asset transfers between blockchain ecosystems. However, these services are not directly and exclusively related to investments and are therefore not discussed in more detail in this study.

Post-trading Infrastructure

Custody and settlement conclude the investment value chain for crypto asset exposure. For off-chain investment products, post-trade functions are typically handled by custodians, such as banks or specialised financial institutions, which integrate these assets into traditional securities account structures. In the centralised on-chain segment, custodians also play a key role. These may include regulated crypto asset custodians or centralised exchanges that safeguard client assets by managing private keys and maintaining omnibus or segregated wallets under their control. In the decentralised on-chain setting, post-trade activities are carried out through crypto wallets and smart contracts. Users retain full control over their assets by managing private keys themselves or by interacting with protocol-based smart contracts that autonomously settle and hold assets.[1]

[1] For a comprehensive discussion of digital wallets, see Ankenbrand, Bieri, Gattlen, et al. (2024).

3. Overview of Providers of Crypto Asset-related Products and Services

This chapter presents the results of an updated evaluation of the Swiss and Liechtenstein crypto asset investment ecosystem[1], based on public web data and an AI-supported screening process using OpenAI's GPT-4o model (OpenAI, 2025). The goal is to provide an overview of companies with tangible business activities in the crypto asset investment space as of the end of June 2025.

The identification and evaluation of relevant companies for this study followed a three-step process:

1. **Compilation of the initial sample:** Newly available company lists were consulted, including entities licensed by the FINMA and the FMA-LI, as well as DLT-related companies listed in FinTech directories. This resulted in a total sample of 1,053 companies.

2. **Verification of activity status:** All companies were reviewed using entries in the commercial registers of Switzerland and the Principality of Liechtenstein to assess whether they are active. As a result, 879 companies (83 % of the total) were confirmed to be active and relevant for further analysis[2]. For these, a website check was conducted to ensure that they are operational and that relevant information could be retrieved through public sources.

3. **Assessment of crypto asset investment relevance:** All companies were evaluated using a combination of public web data and OpenAI's GPT-4o model to determine their involvement in the crypto asset investment ecosystem. Based on this analysis and subsequent manual plausibility checks and adjustments, a core sample of 407 companies (39 % of the total) with tangible business activities and projects in the crypto asset investment domain was identified.

[1] Note that in certain statements and analyses that follow, the Principality of Liechtenstein is referenced alongside Swiss cantons, or the two countries are considered collectively. This is done to increase the significance, although it is clear that Switzerland and the Principality of Liechtenstein are distinct markets.

[2] In contrast to last year, companies with legal entities in both Switzerland and the Principality of Liechtenstein were assigned only to the country in which their headquarters are located.

For this core sample, the following paragraphs provide an analysis of regional distribution, targeted customer segments, and product and service offerings. The classification of companies follows the ecosystem structure introduced in Chapter 2.

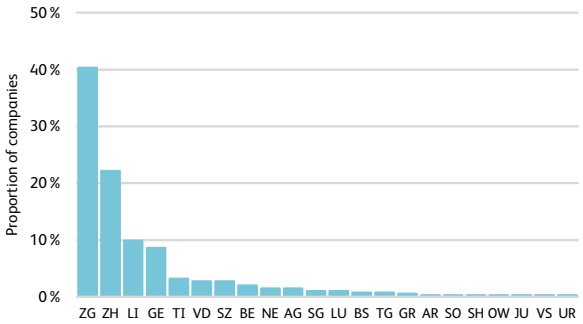

Figure 3.1: Headquarters of examined companies (n=407)

Figure 3.1 illustrates the regional distribution of the companies in the Swiss and Liechtenstein crypto asset investment ecosystem. It reveals that the cantons of Zug (ZG) and Zurich (ZH) are the most strongly represented, with 40 and 22 percent of all companies, respectively. The Principality of Liechtenstein (LI) and Geneva (GE) follow with ten and nine percent, respectively. Smaller clusters of companies involved in crypto asset-related investment products and services are located in Ticino (TI), Vaud (VD), and Schwyz (SZ) with three percent each, and Bern (BE) with two percent. This distribution highlights a strong concentration of crypto asset investment companies in the cantons of Zurich and Zug.

Figure 3.2 presents the customer segments targeted by companies in the Swiss and Liechtenstein crypto asset investment ecosystem. Among the 407 companies analysed, 37 percent operate exclusively in the business-to-business (B2B) segment, serving banks, corporates, family offices, and other institutional clients. Another 53 percent address both B2B and business-to-consumer (B2C) segments, while ten percent focus solely on B2C, targeting retail or private clients.

	B2B	B2B & B2C	B2C	*Total*
Liechtenstein	15 (4%)	20 (5%)	5 (1%)	***40 (10%)***
Switzerland	135 (33%)	195 (48%)	37 (9%)	***367 (90%)***
Total	***150 (37%)***	***215 (53%)***	***42 (10%)***	***407 (100%)***

Figure 3.2: Customer segments of examined companies (n=407)

Within the B2B segment, companies serve a diverse range of client types. 78 percent serve corporates, and 81 percent address other institutional clients. The latter group excludes family offices and banks but includes pension funds, insurance companies, foundations, and other organisations with substantial capital and professional investment capabilities. Additionally, 39 percent of companies serve banks, while 27 percent focus on family offices.

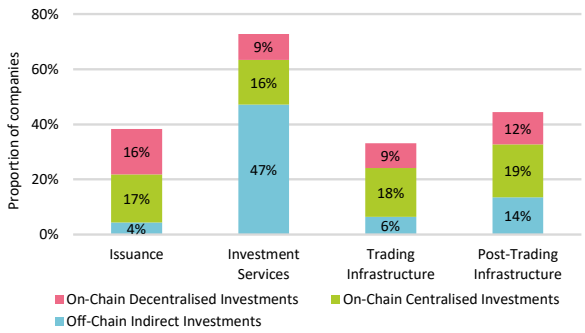

Figure 3.3: Service offerings of examined companies (n=407, multiple classifications possible)

Figure 3.3 provides an overview of the product and service offerings of companies in the Swiss and Liechtenstein crypto asset investment ecosystem, categorised into the service types *Issuance*, *Investment services*, *Trading infrastructure*, and *Post-trading infrastructure*. The percentages represent the proportion of companies offering products or services within each category, further broken down by whether the services are delivered off-chain, via on-chain centralised systems, or via on-chain decentralised systems.

Issuance services are most commonly found in the context of on-chain centralised investments, where they are offered by 17 percent of companies. In the decentralised space, 16 percent of companies provide issuance-related services, such as token launches on decentralised platforms. *Issuance* plays a smaller role in the off-chain indirect segment, where only four percent of companies are active in this area, issuing, for example, structured products on crypto assets.

Investment services are most prominently offered for off-chain indirect products, with 47 percent of companies offering such services. In comparison, 16 percent of companies provide investment services for direct investments via centralised channels, while nine percent are active in offering decentralised investment solutions.

Trading infrastructure services, such as conversions between fiat and crypto assets or between different crypto assets, are provided across all categories with varying degrees of prevalence. They are most common in the on-chain centralised segment, where 18 percent of companies enable clients to trade crypto assets. In the off-chain indirect category, exchange services are offered by six percent of companies. Nine percent of companies are active in the decentralised exchange space.

Post-trading infrastructure services, i.e., custody, are most commonly offered in the context of on-chain centralised investments, provided by 19 percent of companies. In the off-chain indirect category, 14 percent of companies offer such services, typically focusing on the safekeeping of indirect products on crypto assets. Self-custody solutions, which allow clients to manage their own keys and assets independently, are available from twelve percent of companies operating in the on-chain decentralised space.

In summary, it becomes clear that the companies associated with the crypto asset investment ecosystem are concentrated in the cantons of Zurich and Zug. Combined B2B and B2C business models and pure B2B business models dominate, whereas pure B2C business models are less common. The range of services is broad, with investment offerings being the most prevalent, particularly in the field of off-chain indirect investments.

4. Overview of Market Activities

This chapter presents a data-driven analysis of investment activities within the Swiss and Liechtenstein crypto asset investment ecosystem. It distinguishes between two primary forms of investment: indirect (Section 4.1) and direct (Section 4.2). This view enables a comprehensive understanding of the evolving and potentially different dynamics and preferences in crypto asset investment behaviours, and is complemented by an analysis of recent developments in the tokenisation area (Section 4.3).

4.1. Indirect Investments

Indirect investments refer to financial products that provide exposure to crypto assets without requiring direct ownership or interaction with DLTs. These instruments include exchange-traded products (ETPs), open-end funds, and structured products, which are typically integrated into traditional financial infrastructures and can be held in conventional custody accounts. They are particularly relevant for investors seeking crypto asset exposure within a regulated and familiar investment environment. Indirect exposure can also be obtained through derivatives trading via specialised crypto exchanges. In both cases, the investor's position represents a contractual claim rather than direct ownership of the underlying asset, and settlement occurs within the respective platform's infrastructure. The following subsections examine these two key segments of the indirect investment landscape, i.e., traditional exchanges (Section 4.1.1) and derivatives crypto exchanges (Section 4.1.2).

4.1.1 Traditional Exchanges

ETPs and open-end funds traded on traditional exchanges have been identified in previous editions as key vehicles for indirect crypto asset investments. They offer investors regulated and operationally simple access to crypto asset markets through traditional financial infrastructures. A common measure of activity in this segment is the number of distinct International Securities Identification Numbers (ISINs) associated with such products. Figure 4.1 illustrates the evolution of crypto asset-related ETPs and open-end funds that are available for sale, domiciled, and/or traded in Switzerland and Liechtenstein over time.[1]

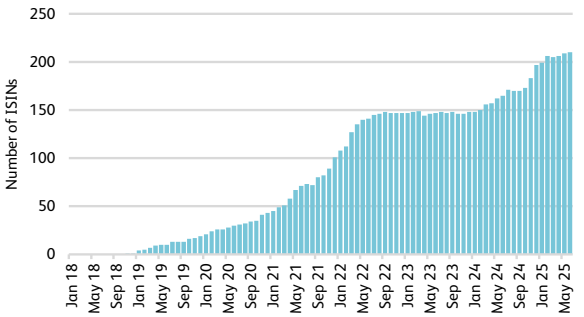

Figure 4.1: Monthly number of individual ISINs of crypto asset-related ETPs and open-end funds (source: Morningstar Direct)

The data shows a steady increase in the number of products over time, starting from the first ISIN in late 2018 and reaching 210 by mid-2025. The growth was relatively steady from 2019 through 2022, reaching 147 ISINs by the end of 2022. Throughout 2023, the total remained stable with minor fluctuations. From early 2024 onwards, the number of products began to rise again, surpassing 200 by early 2025.

In parallel, a moderate number of product liquidations occurred, particularly from 2021 onward. In that year, three products were closed, followed by five in 2022. The number increased significantly to 13 in 2023, marking the highest annual figure to date. In 2024, liquidations declined slightly to twelve, and only three were recorded in the first half of 2025. This annual pattern indicates a modest, but noticeable level of product turnover. Despite these closures, the net annual increase in products has remained positive, reflecting the continued expansion and resilience of the market.

[1] Note that some funds do not invest exclusively in crypto assets, but also hold positions in crypto-related companies. For actively managed funds, temporary cash holdings may also be included. Additionally, funds of funds were excluded from the analysis to avoid double counting of assets under management.

While the number of ISINs provides insight into the breadth of available products, the volume of assets under management (AuM) reflects the actual capital allocated to these investment vehicles. Figure 4.2 shows the total assets held in crypto asset-related ETPs and open-end funds over time, highlighting key fluctuations in investor demand and market valuation. This perspective complements the previous figure by illustrating not just the supply of products, but also the scale of their adoption within the Swiss and Liechtenstein markets.

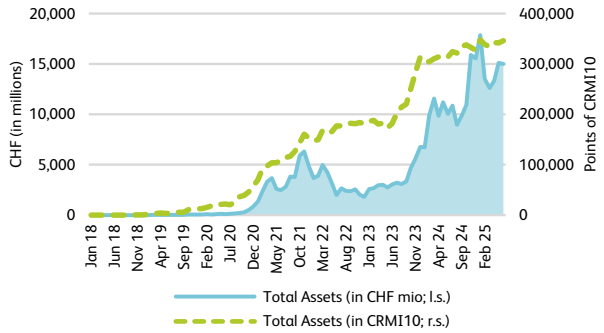

Figure 4.2: Monthly total assets of crypto asset-related ETPs and open-end funds (sources: Morningstar Direct, Bloomberg)

The figure presents AuM data from 2018 to June 2025, shown in Swiss francs (CHF millions, left-hand scale) and in CRMI10[2]-denominated terms (right-hand scale). Over this period, total assets increased substantially to over CHF 17.9 billion by January 2025. Notable growth phases occurred throughout 2021, followed by relatively stable asset levels during most of 2022 and 2023, with some fluctuations. From late 2023 onward, AuM began rising again, continuing through 2024 and reaching new highs in early 2025. A decline follows in the first half of 2025, with a slight recovery toward mid-year and total assets reaching approximately CHF 15 billion by June 2025. These developments indicate that while the number of available products has grown steadily, the capital invested in them is subject to market dynamics and investor sentiment.

[2] The SIX Crypto Market Index 10 (CRMI10) measures the performance of the largest and most liquid crypto assets. See SIX (online-b) for more details.

Compared to the CHF-denominated AuM, the CRMI10-denominated view reveals a smoother and more consistent upward trend in net capital flows over the observation period. By correcting for the price effect of crypto assets, this adjusted measure isolates underlying investment activity and shows less fluctuation. It also peaks in early 2025 and then remains at roughly the same level for the rest of the observation period. The comparison suggests that while market prices significantly influence CHF valuations, underlying investment volumes have grown more steadily, indicating persistent investor interest independent of short-term price movements.

While Figure 4.2 emphasises the overall scale of investment in crypto asset-related ETPs and open-end funds, a more detailed view reveals how these assets are distributed across different underlying crypto assets. Figure Figure 4.3 shows the proportional allocation of total assets in crypto asset-related ETPs and open-end funds by underlying crypto asset from October 2018 to June 2025. The data is broken down into four categories: Bitcoin, Ether, multi-asset products, and other crypto assets.

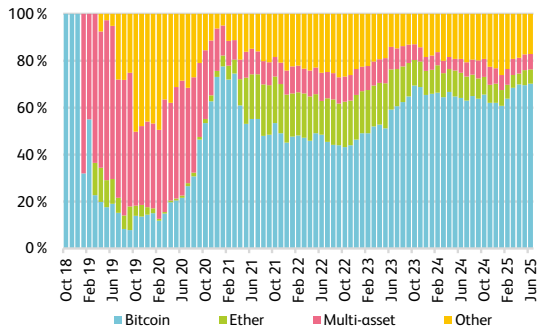

Figure 4.3: Monthly proportional total assets of crypto asset-related ETPs and open-end funds by underlying (sources: Morningstar Direct, Bloomberg)

Bitcoin has dominated the allocation throughout most of the observation period. After an early phase of product diversification in 2019 and 2020 with only small total AuM, Bitcoin's share increased sharply, peaking above 75 percent in early 2021. This dominance moderated during 2021 and 2022 as Ether and other assets gained ground, but Bitcoin remained the leading underlying of ETPs and open-end funds in terms of AuM. From late 2022

onward, Bitcoin's share rose again and stabilised around 70 percent by mid-2025. Since mid-2021, Ether's share has shown a declining trend, while the share of multi-asset products also decreased slightly. In contrast, the "Other" category remained relatively stable over the same period, mostly accounting for around 15 to 25 percent of total assets. The figure illustrates a consolidation around Bitcoin and "Other" crypto assets alongside a gradual reduction in the relative weight of Ether and multi-asset exposures.

To better understand the relevance of the Swiss and Liechtenstein markets for these investment vehicles, it is valuable to examine not only asset volumes but also product availability, domicile, and tradeability across jurisdictions. Figure 4.4 provides a breakdown of the 210 crypto asset-related ETPs and open-end funds and their AuM according to whether they are available to investors, domiciled[3], and/or traded in Switzerland or Liechtenstein. This classification helps assess the strategic positioning of these markets within the broader investment landscape. The following can be observed by June 2025:

- 18 ETPs and open-end funds are available but not domiciled or listed in Switzerland and/or Liechtenstein, with a total AuM of CHF 4,984 million.
- 121 ETPs and funds are available and domiciled but not listed in Switzerland and/or Liechtenstein, with a total AuM of CHF 1,405 million.
- 22 ETPs and funds are available and listed but not domiciled in Switzerland and/or Liechtenstein, with a total AuM of CHF 5,110 million.
- 49 ETPs and funds are domiciled, listed, and available in Switzerland and/or Liechtenstein, with a total AuM of CHF 3,503 million.
- No ETPs or funds were identified that are domiciled but neither listed nor available, listed but neither domiciled nor available, or listed and domiciled but not available to investors in Switzerland and/or Liechtenstein.

Compared to the previous year, the total number of individual ISINs of ETPs and open-end funds increased from 164 to 210 (+28 %), while total AuM rose from CHF 8.6 billion to CHF 15.0 billion (+74 %). Products available in the region but neither domiciled nor listed there recorded the

[3] Domicile refers to the jurisdiction in which an ETP or open-end fund is registered, as opposed to where it is managed.

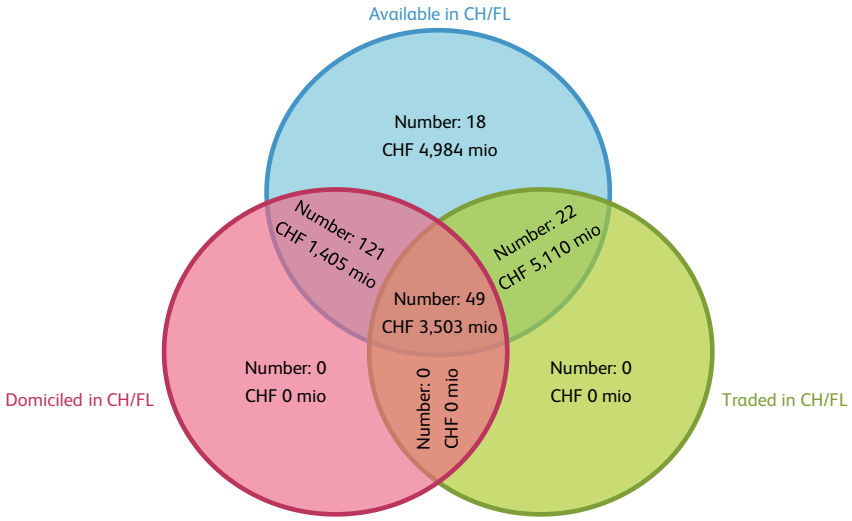

Figure 4.4: ETPs and open-end funds available, domiciled, and/or traded in Switzerland or Liechtenstein in June 2025 (source: Morningstar Direct, Bloomberg)

largest absolute AuM growth, more than tripling from CHF 1.34 billion to CHF 4.98 billion (+273 %), despite the product count rising only slightly from 17 to 18 (+6 %). The second largest absolute growth was observed in products that are available and listed but not domiciled in Switzerland and/or Liechtenstein, where AuM rose from CHF 3.36 billion to CHF 5.11 billion (+52 %), alongside a comparably small rise in product count from 20 to 22 (+10 %). Products that are available and domiciled but not listed also expanded significantly, with the number of ISINs growing from 76 to 121 (+59 %) and AuM from CHF 698 million to CHF 1.41 billion (+101 %). By contrast, the number of products that are domiciled, listed, and available in Switzerland and/or Liechtenstein declined slightly from 51 to 49 (-4 %), although their AuM still rose by CHF 288 million (+9 %), indicating ongoing investor interest in core regional products.

These figures highlight the significant role Switzerland and Liechtenstein play both as structuring hubs and as distribution markets for crypto asset-related investment products. Notably, in June 2025, a substantial portion of total AuM was concentrated in products that are listed on Swiss exchanges.[4] For this reason, it is valuable to examine the breadth and composition of exchange-listed crypto investment products in these markets. Figure 4.5 shows the monthly number of such products on BX Swiss and the SIX Swiss Exchange, differentiated by product type (left-hand graph) and underlying crypto asset (right-hand graph). This provides further insight into how the Swiss exchange landscape has evolved in terms of product variety and exposure.

Over the observed period, the total number of listed crypto asset-related products generally increased, reaching 516 in June 2025. The left-hand graph shows that tracker certificates and ETPs[5] experienced substantial growth primarily between 2021 and 2022. More recently, the increase in total products has been driven largely by the expansion of mini futures, which saw a marked rise from mid-2023 onward. In June 2025, there were a total of 198 ETPs, 163 mini futures, and 155 tracker certificates traded on BX Swiss and the SIX Swiss Exchange.

In terms of underlying assets, the right-hand graph of Figure 4.5 shows that the "Other" category, which includes products on individual crypto assets other than Bitcoin, Ether, and Cardano, has consistently accounted for the largest share of listed products and has grown further in

[4] Note that Liechtenstein does not maintain a traditional stock exchange.

[5] The discrepancy between the number of ETPs in Figure 4.4 and Figure 4.5 results from differing counting methodologies. Specifically, Figure 4.4 reports the number of distinct ISINs, while SIX records products at the financial instrument level. As a result, a single ISIN in Figure 4.4 may correspond to multiple entries in Figure 4.5 when the same product is listed in different currencies.

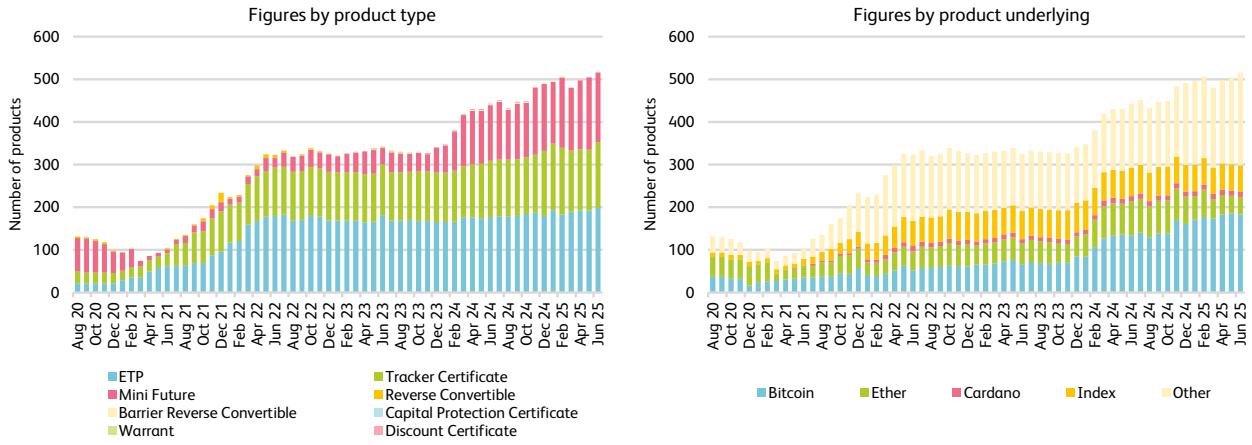

Figure 4.5: Monthly number of crypto asset-related financial products traded in Switzerland by product type (left-hand graph) and underlying asset (right-hand graph) (sources: BX Swiss, SIX)

recent months, reaching 218 listings by June 2025. Products linked to Bitcoin have also expanded significantly since early 2024, rising from 84 in January 2024 to 183 in June 2025, reflecting continued investor demand for Bitcoin exposure. In contrast, the number of Ethereum-based products has declined in the past months, decreasing from 80 in June and July 2024 to 41 in June 2025. Index-based products have remained relatively stable since early 2022, fluctuating between 62 and 69 listings, while Cardano continues to represent a small and largely unchanged segment, with twelve listings in June 2025.

Beyond the number and variety of listed products, trading activity provides an important indicator of market engagement. Figure 4.6 shows the monthly market turnover of crypto asset-related products on Swiss exchanges, split by ETPs and structured products. The left-hand graph displays absolute turnover in CHF million, while the right-hand graph shows the relative share of each product type over time.

From late 2020 to mid-2021, market turnover increased sharply, peaking in February 2021 at roughly CHF 1.22 billion, driven by nearly equal volumes in ETPs (CHF 601 million) and structured products (CHF 616 million), as shown in the left-hand graph. After October 2021, overall turnover declined but remained volatile, with occasional spikes in activity, for example, in November 2024, when total turnover reached CHF 921 million. In 2025, turnover showed a downward trend. Starting at CHF 504 million in January, it declined steadily to CHF 171 million by June 2025. In absolute terms, this reduction was mainly driven by falling ETP volumes, which dropped from CHF 437 million in January to CHF 155 million in June. Structured products also decreased, from CHF 66 million to CHF 16 million over the same period.

ETPs have consistently accounted for the majority of trading volume since late 2020, both in absolute and proportional terms, as shown in the right-hand graph of Figure 4.6. Their dominance is particularly visible in recent months. In June 2025, ETPs represented around 91 percent of total turnover, compared to nine percent in structured products. The share of structured products in total turnover has generally declined, notwithstanding occasional short-term recoveries.

In addition to overall turnover trends, Figure 4.7 presents the distribution of trading volume for crypto-related indirect products on the SIX Swiss Exchange[6] across different underlying crypto assets.[7]

Over the full period, Bitcoin-linked products consistently accounted for a significant share of trading activity,

[6] Note that corresponding data is not available for BX Swiss.

[7] Note that for 15 products, no underlying could be identified. These products were typically active in earlier years and are no longer traded. They are subsumed as "Unknown" in Figure 4.7.

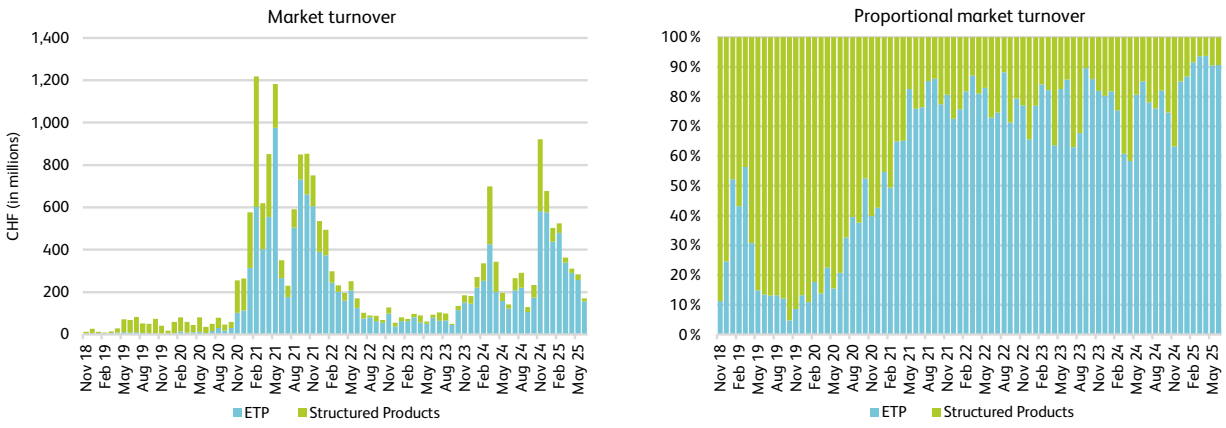

Figure 4.6: Monthly market turnover by product type (sources: Bloomberg, BX Swiss, SIX)

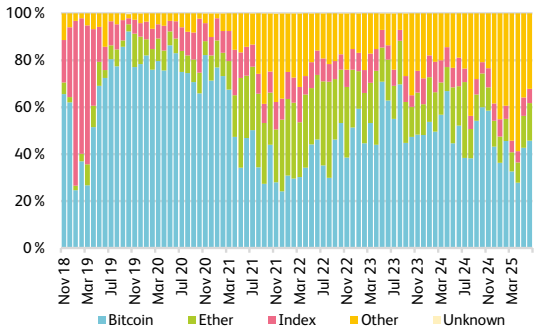

Figure 4.7: Monthly proportions of market turnover by underlying (sources: SIX)

though their relative dominance varied over time. Bitcoin's share was highest in earlier years, declined somewhat during 2021 and 2022, and accounted for 46 percent of turnover in June 2025. Ethereum-related products recorded their strongest trading volumes in 2021 and 2022. Since then, their share has gradually declined, falling to approximately 16 percent by mid-2025. Index-based products have maintained a relatively stable but small share throughout the observed period, contributing between five percent and eight percent of total volume since July 2024. The "Other" category, comprising products linked to various alternative crypto assets, has shown a notable increase in share since 2021, reflecting greater product diversification and investor interest in alternative crypto assets. Despite some fluctuations, these products represented around 32 percent of trading volume in June 2025.

To complement the turnover analysis, it is also insightful to consider the number of trades executed on the SIX Swiss Exchange. While turnover reflects the total volume traded, the number of transactions provides an indication of market breadth and activity at the investor level. Figure 4.8 presents the monthly count of market trades involving crypto asset-related products (left-hand graph), shedding light on how trading participation has evolved over time, and the average half-yearly trade size by product type (right-hand graph).

The left-hand graph reveals that ETPs have accounted for the vast majority of transactions, particularly since late 2020. Trading activity in this product type began to accelerate sharply in November 2020, rising from fewer than 5,000 trades per month to a peak of over 42,000 trades in May 2021. Although volumes declined in the second half of 2021, ETP trading remained significantly elevated compared to pre-2020 levels. Activity increased again in late 2023 and early 2024, with a temporary resurgence in November 2024 trades, followed by a gradual decline to 8,874 trades in June 2025.

By contrast, the number of trades in structured products has remained consistently low throughout the period. Monthly volumes rarely exceeded 5,000 trades, with brief upticks in early 2021 and again in late 2024, but overall showing limited growth. In 2025, the number of structured product trades fluctuated between 800 and 2,600 per month, highlighting their relatively minor role in day-to-day trading activity. This pattern suggests that while ETPs dominate in terms of both turnover and transaction count, structured products remain a niche instrument with low trade frequency, possibly reflecting use by a smaller or more institutional investor base.

The right-hand graph of Figure 4.8 reveals that average trade sizes in CHF, measured semi-annually and broken down by product type, have fluctuated considerably over the past years. For ETPs, average trade sizes generally ranged between CHF 11,000 and CHF 24,000 over the observation period. After a dip in 2022, reaching a low of CHF 11,040 in the second half, the average gradually increased again, reaching CHF 19,989 in the first half of 2025. This trend suggests a moderate increase in capital per ETP transaction in more recent periods. In contrast, structured products have consistently exhibited higher average trade sizes than ETPs. Between 2019 and 2021, average trades ranged between CHF 25,000 and CHF 42,000, rising further to a peak of CHF 43,840 in the second half of 2024. However, this dropped markedly to CHF 20,736 in the first half of 2025, nearly converging with ETP levels. Overall, while structured products have traditionally been characterised by larger individual trades, the recent narrowing of the gap between the two product types suggests a potential shift in usage patterns or participant profiles in the Swiss crypto asset-related product market.

Finally, analysing the currencies in which crypto asset-related products are traded offers additional perspective on investor preferences and market structure. Figure 4.9

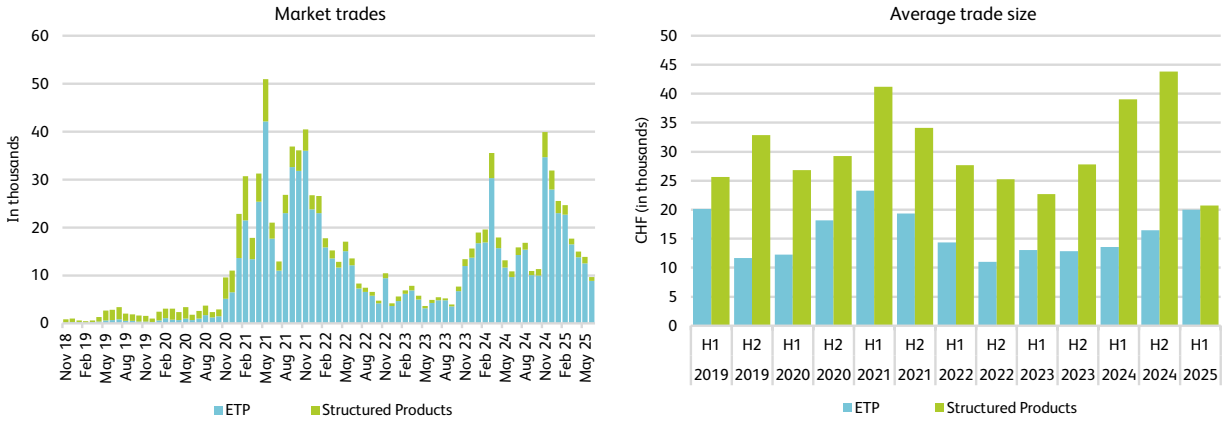

Figure 4.8: Monthly number of market trades (left-hand graph) and half-yearly average trade size (right-hand graph) (sources: SIX)

shows the proportional distribution of trading turnover by currency over time, highlighting the dominance of certain currencies in the Swiss exchange landscape for crypto asset investments.

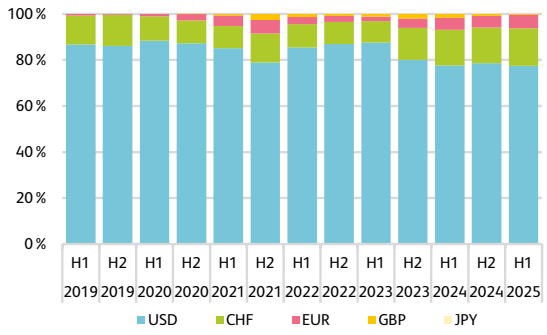

Figure 4.9: Half-yearly proportions of turnover by currency (sources: SIX)

Figure 4.9 shows that USD-denominated products have consistently dominated trading turnover in the Swiss crypto asset-related product market. From 2019 to the first half of 2025, USD has accounted for the majority of trading volume each year, representing 77 to 89 percent of total turnover. In the first half of 2025, USD-denominated products made up approximately 77 percent of total volume, underscoring the continued central role of USD in the Swiss crypto asset investment ecosystem. CHF-denominated products have grown in significance in more recent years. While they accounted for only around 13 percent of turnover in 2019, their share increased to over 16 percent in the first half of 2025. This rise suggests a steady demand for franc-denominated instruments. Products denominated in euro, British pound, and Japanese yen account for comparatively smaller shares of trading turnover. In the first half of 2025, they represented 5.9 percent, 0.35 percent, and 0.02 percent of turnover, respectively.

4.1.2 Derivatives Crypto Exchanges

Another form of indirect exposure to crypto assets involves trading derivatives on specialised crypto exchanges. Unlike tokenised assets on DLTs, these derivatives are proprietary financial instruments offered by individual exchanges. As they cannot be withdrawn to personal wallets, they do not confer on-chain ownership of the underlying asset and are therefore considered indirect investments. Derivatives crypto exchanges offer a range of products beyond spot trading, including futures contracts, allowing investors to speculate or hedge on the future price of crypto assets.

The monthly derivatives trading volume on derivatives crypto exchanges originating from Switzerland are analysed for the period from January 2020 to end of June 2025. To collect the data, the following steps are applied:

1. Obtain monthly global trading volumes for all crypto exchanges from CoinGecko (online-b) API.

2. Identify the top 20 exchanges by total trading volume for each month, considering only those with a trust score greater than five out of ten to ensure reliability and liquidity.

3. Obtain the monthly proportions of total website traffic from Switzerland for the identified exchanges from Semrush (online). Note that VPN use and cross-border access may distort the measured share of Swiss traffic.

4. Estimate the monthly trading volume from Switzerland by multiplying the exchange's global trading volume by the Swiss traffic share.

5. Aggregate the monthly Swiss trading volumes for each in-scope exchange over the sample period to determine the total monthly trading volume of Swiss users.

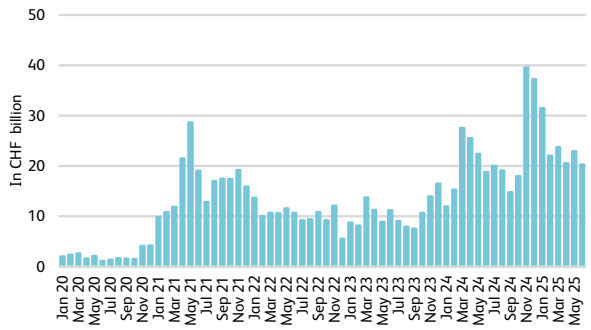

Figure 4.10: Monthly derivatives trading volume on derivatives crypto exchanges from Switzerland (source: CoinGecko (online-b), Semrush (online))

Figure 4.10 shows the trading volumes on derivatives crypto exchanges originating from Switzerland, showing relatively low activity throughout 2020. Trading activity peaked notably in May 2021 at CHF 28.6 billion, after which volumes began a downward trajectory that persisted into early 2022. Between 2022 and the end of the third quarter of 2023, market volumes remained relatively stable, exhibiting limited fluctuation. A shift occurred in the fourth quarter of 2023, marking the onset of a recovery that continued with a clear upward trend from January through March 2024. In the past twelve months, trading volumes on derivatives crypto exchanges from Switzerland saw a significant surge, followed by a correction. In June 2025, Swiss investors traded approximately CHF 20 billion on derivatives crypto exchanges.

Between July 2024 and June 2025, BitMart, XT.COM, and Binance were the most popular crypto derivatives exchanges among Swiss investors, based on the total derivative trading volumes originating from Switzerland.

4.2. Direct Investments

Building on the previous analysis of market metrics for indirect crypto investments via traditional exchanges and derivatives crypto exchanges, this section turns to direct investments in crypto assets. Direct investment refers to purchasing and holding crypto assets in a manner that enables direct ownership on a blockchain, typically through an exchange that allows withdrawals to a personal wallet. For direct investments, this study distinguishes between two types of exchanges, i.e., centralised (Section 4.2.1) and decentralised (Section 4.2.2) exchanges. In particular, trading activity related to direct investment is estimated, with a focus on Switzerland, and Section 4.2.3 presents a comparison of trading volumes for centralised, decentralised, and derivatives crypto exchanges. The data analysed covers the period from January 2020 to end of June 2025, and data collection follows the same approach as outlined in Section 4.1.2.

4.2.1 Centralised Crypto Exchanges

Centralised crypto exchanges (CEXs) are digital platforms that enable the trading and, optionally, the custody of crypto assets. Functioning as intermediaries, these exchanges connect buyers and sellers, thereby facilitating the execution of spot market transactions. Modelled largely on traditional financial exchanges, CEXs typically employ order book systems and algorithmic matching engines. Many such platforms also offer custodial services, which relieve users of the responsibility of managing private wallets and interacting directly with blockchain infrastructure. While this convenience reduces the technical barriers for users, it introduces counterparty risk, as control over private keys is transferred to the exchange. Furthermore, several CEXs support fiat on- and off-ramp functionalities, allowing for the seamless conversion between fiat currencies and crypto assets.

Figure 4.11 shows monthly trading volumes on CEXs originating from Switzerland. Volumes rose sharply in early 2021, peaking in May at over CHF 17.8 billion, an all-time high. However, after mid-2021, there was a steady decline in volume until September 2023. A notable resurgence in volume was observed in late-2023 to mid-2024.

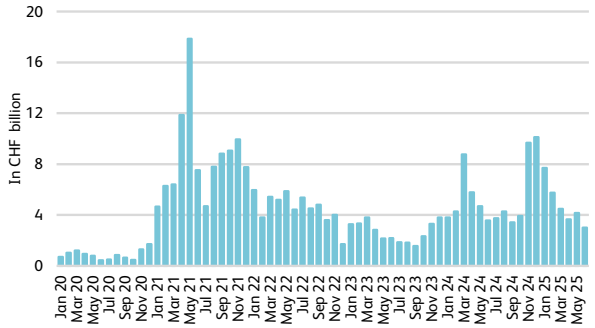

Figure 4.11: Monthly spot trading volume on centralised crypto exchanges from Switzerland (source: CoinGecko (online-b), Semrush (online))

Between May 2024 and June 2025, trading volumes exhibited substantial monthly fluctuations. The period began with relatively stable volumes between CHF 3.4 billion and CHF 4.7 billion, followed by a significant surge (around 150 %) starting in November 2024. The volume peaked in December 2024 at over CHF 10 billion, indicating intensified trading activity. However, this peak was followed by a steady decline, with volumes falling to approximately CHF 3 billion by May 2025, suggesting a return to more moderate trading behaviour or reduced investor engagement.

Based on aggregated trading volume data between July 2024 and June 2025, the top three CEXs by Swiss trading volumes were Binance, Crypto.com, and Pionex.

In comparison to the Swiss CEX volumes reported in last year's edition of the "Crypto Assets Study", some slight differences in the aggregated monthly volumes are apparent. This is mainly due to the removal of some exchanges from the Coingecko API that were available for the previous study.

4.2.2 Decentralised Crypto Exchanges

Decentralised crypto exchanges (DEXs) are digital platforms that enable peer-to-peer trading of crypto assets without the involvement of centralised intermediaries. In contrast to CEXs, DEXs are built directly on blockchain protocols and rely on smart contracts to facilitate direct transactions between users. As a result, users of DEXs retain full control over their assets and are individually responsible for the management of their private keys through self-custodial wallets.

Figure 4.12 shows the monthly trading volume on DEXs originating from Switzerland. Two peaks in trading volumes during 2021 can be observed, reaching around CHF 1.2 billion and coinciding with periods of heightened DeFi activity globally. Volumes then gradually decreased, reaching the minimum value in September 2023 with just CHF 0.04 billion.

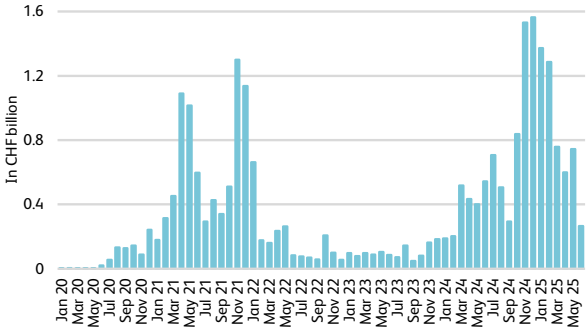

Figure 4.12: Monthly spot trading volume on decentralised crypto exchanges from Switzerland (source: CoinGecko (online-b), Semrush (online))

Since last year's edition of the "Crypto Assets Study", DEX trading volumes originating from Switzerland experienced a substantial surge followed by a partial correction. The period began with moderate volumes in June 2024 (CHF 0.54 billion), followed by a gradual increase through October 2024. A significant surge occurred in November and December 2024, where monthly trading volumes reached approximately CHF 1.5 billion, respectively, the highest recorded during the observed period. This represents an increase of approximately 83 percent from October to November. However, following the December peak, volumes began to gradually decline. By June 2025, the trad-

ing volume had fallen to approximately CHF 0.26 billion, suggesting a cooling-off phase after the intense trading activity of the previous months.

Between July 2024 and June 2025, the top three DEXs by Swiss trading volumes were Aerodrome Slipstream, Pancakeswap, and Raydium.

4.2.3 Exchange Type Comparison

Since the methodology for estimating Swiss trading volumes is identical across CEXs, DEXs, and derivatives crypto exchanges, their results are directly comparable. While this section focuses on direct investments, the analysis also includes derivatives crypto exchanges to provide a comprehensive view of trading activity across all major crypto exchange types.

In the first half of 2025, the trading volumes from Switzerland across the three exchange types showed varied trends, with shifts in the overall market dynamics compared to the previous year. While CEXs experienced a slight decline in Swiss trading volume when comparing the first half of 2024 to the first half of 2025, DEXs saw considerable growth. In contrast, derivatives exchanges continued to attract substantial volume, maintaining their prominence in the Swiss market. Table 4.1 presents a comparison of the global trading volumes, Swiss traffic shares, estimated Swiss trading volumes, and Swiss trading volume per capita for the first half of 2025.

Derivatives crypto exchanges reported the largest global trading volume in the first half of 2025, with CHF 99,200 billion. CEXs followed with CHF 14,503 billion, and DEXs recorded CHF 1,144 billion. The typically higher trading volumes on derivatives crypto exchanges, compared to CEXs and DEXs, can be attributed to factors such as the ability to leverage and short-sell, as well as the diverse payoff structures that derivatives offer. Additionally, the lower volumes on DEXs compared to CEXs are often due to lower liquidity, higher technological complexity, potential smart contract risks, and the involvement of blockchain in every transaction, which can result in higher transaction fees and longer settlement times.

When examining website traffic from Switzerland in the first half of 2025, DEXs held the largest share (0.44 %), followed by CEXs (0.20 %) and derivatives exchanges (0.14 %).

Swiss trading volumes are estimated by multiplying the global trading volume of each exchange with its web traffic share from Switzerland. In the first half of 2025, derivatives crypto exchanges accounted for CHF 141.0 billion, CEXs for CHF 28.7 billion, and DEXs for CHF 5.0 billion in Swiss trading volumes. These differences are also evident on a per capita basis, with the average Swiss investor trading CHF 15,548 on derivatives crypto exchanges, CHF 3,170 on CEXs, and CHF 554 on DEXs. It is important to note that, while these figures are based on the Swiss population, institutional investors from Switzerland likely play a role in the trading volumes as well.

4.3. Tokenisation

Switzerland has developed a comprehensive legal and regulatory framework for asset tokenisation, a process that enables the issuance of crypto assets on-chain and thereby facilitates direct investment. Since 2018, the Swiss Financial Market Supervisory Authority (FINMA) has classified "asset tokens" as securities, providing a legal basis for Security Token Offerings (STOs) (Stefanoski & Sahin, 2021). Rather than introducing standalone legislation, Swiss regulators integrated DLT into existing financial market laws (Maerki Baumann, online).

The Federal DLT Act, which came into full effect in August 2021, introduced ledger-based securities, i.e., uncer-

[8] Swiss population data was obtained from the Federal Statistical Office (2025) and refers to the end of the first quarter of 2025.

Table 4.1: Trading volume comparison across different crypto exchange types in the first half-year of 2025

	Centralised exchanges	Decentralised exchanges	Derivatives exchanges
Global volume	CHF 14,503 bn	CHF 1,144 bn	CHF 99,200 bn
Swiss traffic share	0.20 %	0.44 %	0.14 %
Swiss volume	CHF 28.7 bn	CHF 5.0 bn	CHF 141.0 bn
Swiss volume per capita[8]	CHF 3,170	CHF 554	CHF 15,548

tificated securities recorded directly on a blockchain, and a new regulatory licence for DLT-based trading facilities (PwC, online). Several Swiss start-ups and regulated entities have issued tokenised equity. As of the beginning of July 2025, TokenMarketCap (online) listed a total of 102 asset tokens issued in Switzerland. Of these, 31 are actively traded, representing an aggregate valuation of approximately CHF 590 million, while the remaining tokens are either not traded or available only on request. This indicates that although tokenisation activity is ongoing, secondary market liquidity remains limited, with fewer than one-third of asset tokens being traded.

While most early tokenisation efforts in Switzerland have focused on equity instruments, developments in the debt market have also gained momentum. The launch of the SIX Digital Exchange (SDX) in 2021 (SIX, 2021) marked a significant milestone in this area, enabling the issuance of native digital bonds within a fully regulated infrastructure. As of July 2025, SDX has listed eleven digital bonds with a total volume of over CHF 1.6 billion (SDX, 2025a). In 2025, Citi announced a strategic collaboration with SDX to serve as custodian and tokenisation agent for late-stage pre-IPO equities via SDX's regulated digital central securities depositary platform. The initiative, expected to launch in the third quarter of 2025, aims to enhance institutional access to private market assets and provide issuers with a compliant model for managing liquidity and cap tables, further signalling institutional interest in regulated tokenised financial instruments (SDX, 2025b).

In parallel to developments at SDX, Switzerland's digital asset infrastructure is expanding with the emergence of additional regulated venues. A notable example is the launch of BX Digital, which became the first financial market infrastructure in Switzerland to receive authorisation from FINMA to operate as a dedicated DLT trading facility (FINMA, 2025). Once operational, BX Digital will provide regulated trading and decentralised settlement of crypto assets on a public blockchain (i.e., Ethereum), without intermediaries such as central securities depositories. It is designed to support the trading of tokenised shares, bonds, and funds among institutional participants, enabling fast and secure delivery-versus-payment settlement via a direct link to the Swiss National Bank's payment system (BX Digital, online).

The expansion of tokenised securities and DLT-based trading facilities has highlighted the potential need for reliable, blockchain-native settlement assets denominated in Swiss francs. In this context, CHF-based stablecoins could form a critical component in enabling delivery-versus-payment on both public and permissioned blockchains, serving as the cash leg in tokenised transactions and supporting private as well as institutional use cases in Switzerland's evolving crypto asset ecosystem.

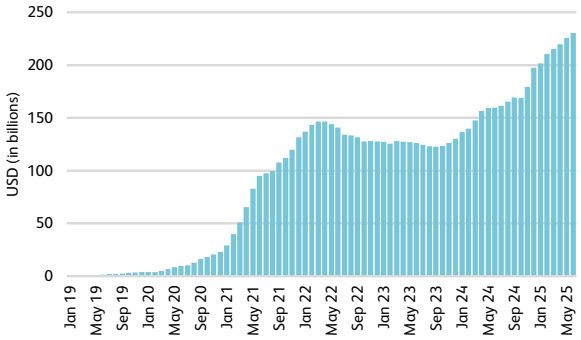

Figure 4.13: Monthly total USD value of stablecoins in circulation (source: Visa & Allium Labs (online-b))

Hence, while tokenisation infrastructure for equities and bonds continues to mature in Switzerland, the role of blockchain-native payment instruments is receiving increased attention. The global market capitalisation across all fiat-referenced stablecoins, as illustrated in Figure 4.13, has grown substantially in recent years, rising from under USD 1 billion in early 2019 to approximately USD 231 billion by mid-2025, with U.S. dollar-denominated tokens such as Tether (USDT) and USD Coin (USDC) accounting for the majority of volume and circulation (Visa & Allium Labs, online-a). In contrast, stablecoins linked to other currencies represent a relatively small share of the market and are used in more limited contexts. CHF-based stablecoins have historically seen limited traction as on-chain settlement mechanisms. This is exemplified by the termination of Bitcoin Suisse's CryptoFranc (XCHF), whose issuance and redemption were officially discontinued in August 2024 (Bitcoin Suisse, online). A more recent initiative is Frankencoin, a decentralised CHF-denominated stablecoin launched on Ethereum. Governed by a DAO and backed by overcollateralised assets, it allows users to mint tokens independently of traditional intermediaries. As of the beginning of July 2025, the total supply exceeded

10.5 million ZCHF, backed by collateral worth over 23.4 million ZCHF (Frankencoin, online).

Furthermore, the concept of tokenised deposits, blockchain representations of bank-held liabilities, is gaining interest as a potentially more regulated and bank-integrated alternative (Swiss Bankers Association, 2024). As highlighted in the report by the Swiss Bankers Association (2025), such instruments could offer the technological advantages of stablecoins while preserving the two-tier banking system and reducing risks of disintermediation. Unlike decentralised models, tokenised deposits would be issued by supervised institutions and fully backed by central bank reserves or sight deposits, providing a higher degree of legal certainty and integration into existing financial infrastructure. The Swiss Bankers Association stresses that a stablecoin ecosystem anchored in the Swiss franc and embedded within the domestic regulatory framework is essential to ensure monetary sovereignty and systemic stability (Swiss Bankers Association, 2025).

4.4. Summary

In conclusion, the market for crypto asset investments in Switzerland and Liechtenstein has experienced growth in recent years, both in the realm of indirect and direct investments. Indirect investments through products such as ETPs and open-end funds demonstrate continuous expansion, reflected in the increasing number of available products and a steady rise in AuM, even when adjusted for the price effects of underlying crypto assets. The area of direct investments is also experiencing growth, with notable trading volumes on CEXs and derivatives crypto exchanges. However, CEXs have seen a decline in volume compared to the previous year. Furthermore, the tokenisation of assets, supported by Switzerland's established regulatory infrastructure, is gaining importance and opening new opportunities for the issuance and trading of DLT-based securities. This infrastructure development is shaped not only by growing investor demand but also by the steady increase in regulatory clarity and the broader institutional acceptance.

5. Crypto Assets as an Investment

With the continued rise in market capitalisation of Bitcoin and other crypto assets, the question of their role within a traditional investment portfolio has gained increasing relevance. In this year's edition of the study, we introduce two additional methodological enhancements to deepen the analysis of Bitcoin's potential as an investment.

First, we include gold as an additional asset in our analysis. This extension reflects the frequent comparison between Bitcoin and gold, particularly with regard to their perceived role as "safe haven" assets. By explicitly incorporating gold, we aim to assess whether Bitcoin demonstrates similar characteristics in a portfolio context.

Second, we apply a simple linear regression model to estimate Bitcoin's beta in relation to traditional asset classes. Specifically, we distinguish between upside beta and downside beta, depending on whether the respective market proxy exhibits positive or negative returns. This approach enables us to assess whether Bitcoin's sensitivity to market movements differs under positive versus negative return conditions. The resulting beta coefficients, calculated with respect to equities, bonds, real estate, and gold, offer a more granular understanding of Bitcoin's asymmetric risk behaviour.

The following analysis is based on a simplified modelling framework and relies on general assumptions regarding the crypto asset market, the typical investment universe of traditional Swiss investors, their strategic asset allocation, and the selected observation period. The core assumptions are as follows:

1. The crypto asset market is proxied by Bitcoin (denominated in CHF), given its dominant share of total market capitalisation in recent years (CoinGecko, online-a), as shown in Figure 5.1. After declining to below 40 percent in early 2022, Bitcoin's dominance increased steadily, reaching 62 percent by the end of June 2025. This upward trend underscores Bitcoin's central role in the crypto asset ecosystem. Accordingly, using Bitcoin as a proxy for the broader crypto asset market offers a meaningful and robust representation of overall market dynamics throughout the analysis period. Price data for Bitcoin was obtained from finanzen.net (online).
2. The reference portfolio of a traditional investor is based on the strategic allocation of Swiss pension funds, as reported by the "Occupational Pension Supervisory Commission (OPSC)", and serves as the benchmark.[1]
3. The four asset classes included in the analysis, i.e., stocks, bonds, real estate, and gold, are proxied by the Swiss Performance Index® (SPI), the Swiss Bond Index® TR (SBI), the CH Real Estate® Shares TR (SXI), and the spot price of gold in CHF, respectively. Data for the traditional indices were sourced from SIX (online-a) and gold price data was retrieved from Bloomberg L.P. (2025).
4. The observation period spans from the beginning of 2018 to the end of June 2025. This starting point coincides with the broader availability of indirect crypto asset investment products, thereby facilitating access for traditional investors (see Chapter 4). Business days are used as the frequency, to match the trading calendars of conventional asset classes.

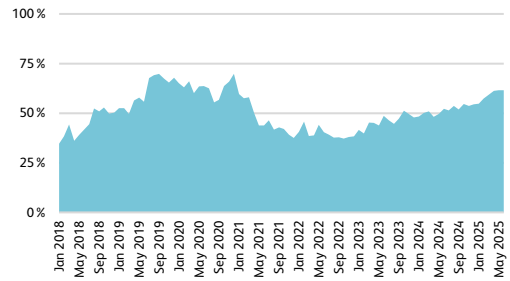

Figure 5.1: Bitcoin dominance (source: CoinGecko (online-a))

Building on these methodological foundations, the subsequent section investigates Bitcoin's return sensitivity with respect to traditional asset classes by estimating its beta coefficients. In particular, the analysis distinguishes between upside and downside betas to capture potential asymmetries in Bitcoin's behaviour under differing market conditions. This approach allows for a more differenti-

[1] In this analysis, traditional alternative investments are excluded from the investment universe.

ated understanding of Bitcoin's return dynamics and risk exposure across varying market states. The beta analysis thus serves as a critical precursor to the portfolio-level assessment that follows, providing empirical insights into the extent and direction of Bitcoin's co-movement with conventional assets.

Formally, the analysis is based on a series of simple linear regressions of the form

$$r_{\text{BTC},t} - r_{f,t} = \alpha + \beta \cdot (r_{m,t} - r_{f,t}) + \varepsilon_t,$$

where $r_{\text{BTC},t}$ denotes the return of Bitcoin at time t, $r_{m,t}$ the return of the respective market proxy (i.e., SPI, SBI, SXI, or gold), and $r_{f,t}$ the daily risk-free rate[2]. To examine potential asymmetries in market sensitivity, separate regressions are conducted for periods in which $(r_{m,t} - r_{f,t}) > 0$ (upside beta) and $(r_{m,t} - r_{f,t}) < 0$ (downside beta). This decomposition allows us to assess whether Bitcoin exhibits different sensitivities during periods of positive versus negative market excess returns. All regressions are estimated using heteroskedasticity-consistent standard errors (Long & Ervin, 2000) to ensure robust inference.

[2] Throughout this chapter, the daily risk-free rate is proxied by the yield of the 10-year Swiss government bond. The corresponding data is obtained from the Swiss National Bank (online).

The results of the regression analysis are summarised in Figure 5.2, which displays the estimated beta coefficients[3] of Bitcoin with respect to each traditional asset class under up-market, down-market, and overall conditions. The analysis reveals a statistically significant relationship between Bitcoin and the stock market (SPI) across all three regimes. Specifically, Bitcoin exhibits an overall beta of 0.82 ($p = 0.0003$) with respect to the SPI, indicating a positive and economically meaningful sensitivity to equity market movements. Notably, the beta is higher during down markets (1.29, $p = 0.025$) than in up markets (0.78, $p = 0.0046$), suggesting asymmetric risk exposure and greater co-movement during periods of negative equity returns. These magnitudes imply that a one percent decline in the SPI is associated with an average 1.29 percent decline in Bitcoin's excess return, underscoring Bitcoin's vulnerability to broader equity market stress. Conversely, during up markets, a one percent increase in the SPI corresponds to an average increase of 0.78 percent in Bitcoin's excess return, indicating that Bitcoin tends to benefit from rising equity prices, albeit to a lesser extent than it reacts during downturns.

In contrast, the estimated betas with respect to bonds (SBI) are not statistically significant in any regime, indi-

[3] Asterisks indicate statistical significance: *** $p < 0.01$, ** $p < 0.05$, * $p < 0.10$.

Figure 5.2: Estimated beta coefficients of Bitcoin with respect to traditional asset classes under up-market, down-market, and overall conditions

cating that Bitcoin does not exhibit a meaningful linear relationship with bond market excess returns over the sample period. This is the case even though some coefficients are relatively large, because the underlying relationship is noisy, leading to large standard errors that make it difficult to distinguish these estimates from zero in a statistical sense. For real estate (SXI), only the overall beta is statistically significant (0.49, $p = 0.030$), while both upside and downside betas remain insignificant, implying moderate co-movement on average, but no strong directional dependence.

The analysis further reveals a strong and statistically significant relationship between Bitcoin and gold in up markets (0.81, $p = 0.0013$) and over the full sample (0.55, $p = 0.0004$), whereas the beta during down markets is smaller and statistically insignificant (0.40, $p = 0.325$). This asymmetry suggests that Bitcoin and gold tend to comove primarily during periods of rising gold prices, potentially reflecting similar investor behaviour during risk-on phases. The magnitude of these betas further indicates that Bitcoin responds to gold price movements with a sensitivity comparable to its response to equities in up-market environments.

Overall, these findings highlight that Bitcoin's return dynamics are most closely tied to stocks and gold, with varying sensitivities depending on market conditions. These findings indicate that Bitcoin's return dynamics are systematically linked to broader financial markets, albeit in an asymmetric fashion. As such, a subsequent portfolio-level investigation is warranted to evaluate whether Bitcoin can enhance risk-adjusted performance when integrated into a traditional asset allocation framework.

To explore this potential, four distinct portfolio allocations that reflect different approaches to diversification within a traditional investment framework are constructed and compared. As shown in Table 5.1, the first portfolio serves as a baseline and includes only the conventional asset classes bonds, stocks, and real estate, weighted based on the strategic allocation of Swiss pension funds. The second and third portfolios introduce a small allocation (3 %) to either Bitcoin or gold, respectively, allowing for a direct comparison of their diversification potential, as alternative assets often regarded as stores of value. The fourth portfolio combines both Bitcoin and gold, each at a three percent allocation, resulting in a dual-alternative structure. In all adjusted portfolios, the weights of the traditional asset classes are proportionally reduced to accommodate the new components. This setup enables a comprehensive evaluation of how Bitcoin, gold, and their combination influence overall portfolio performance, volatility, and risk-adjusted return metrics.

To evaluate the in-sample performance of the four portfolios, their cumulative returns and maximum drawdowns are analysed. Daily portfolio returns are calculated with annual rebalancing, and the analysis covers the period from January 2018 to June 2025. The visualisation in Figure 5.3 summarises the performance of each portfolio, showing how the inclusion of Bitcoin and/or gold affects both return dynamics and downside risk over time.

The results show that the inclusion of Bitcoin leads to a higher cumulative return compared to both the gold-inclusive and baseline portfolios. Specifically, the Bitcoin-inclusive portfolio achieves a cumulative return of 48.8 percent, outperforming the gold-inclusive portfolio (32.2 %) and the portfolio without either alternative asset (30.3 %). The portfolio that includes both Bitcoin and gold generates the highest cumulative return at 51.0 percent, suggesting a potential complementary effect of the two assets when combined.

In terms of downside risk, the Bitcoin-inclusive portfolio experiences the deepest maximum drawdown at -19.8 percent, followed closely by the portfolio with both Bitcoin and gold at -19.3 percent. These are slightly more severe than the drawdowns of the baseline portfolio (-18.2 %)

Table 5.1: Asset allocations considered

Portfolios	Bonds	Stocks	Real Estate	Gold	Bitcoin
Portfolio excluding BTC & Gold	40 %	35 %	25 %	0 %	0 %
Portfolio including BTC	39 %	34 %	24 %	0 %	3 %
Portfolio including Gold	39 %	34 %	24 %	3 %	0 %
Portfolio including BTC & Gold	38 %	33 %	23 %	3 %	3 %

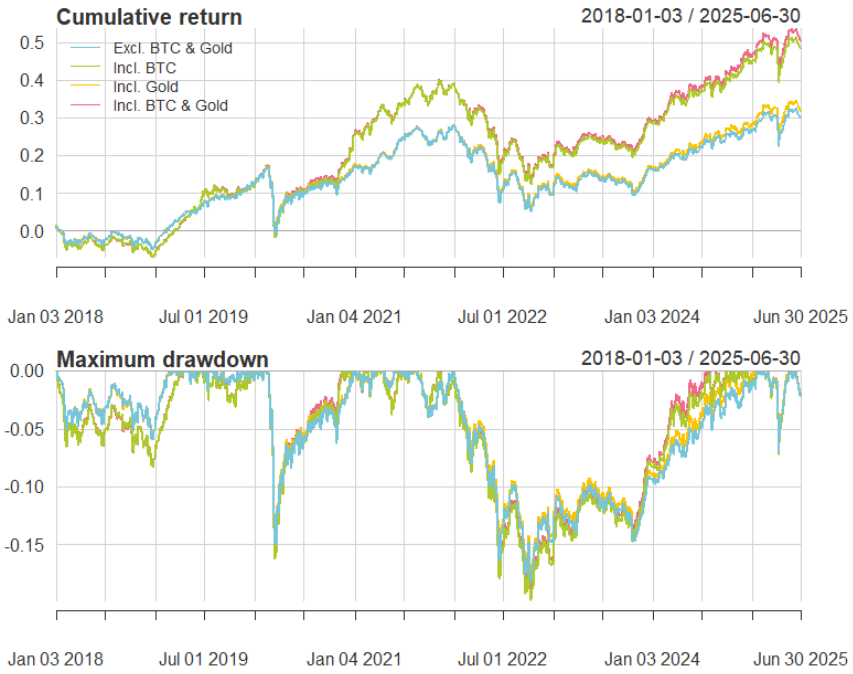

Figure 5.3: Portfolio performances of the four asset allocations

and the gold-inclusive portfolio (-17.6 %), highlighting the increased short-term volatility introduced by Bitcoin.

By the end of June 2025, however, all four portfolios exhibit relatively modest drawdowns of approximately -1.9 percent, indicating that they had largely recovered from earlier market stress episodes. Notably, the drawdown of the combined Bitcoin and gold portfolio at that point is comparable to that of the other portfolios, suggesting that the inclusion of gold helped mitigate some of the interim volatility introduced by Bitcoin. As a result, this portfolio ended the period in a similarly resilient state, despite its higher return profile.

A more detailed view of portfolio performance over time is provided in Table 5.2, which reports annualised returns, volatility, and Sharpe ratios across the full sample period, each calendar year, and the first half of 2025. Over the full period, the portfolio including both Bitcoin and gold achieves the highest annualised return (5.7 %) and the highest Sharpe ratio (0.77), while keeping volatility slightly below that of the Bitcoin-only portfolio (7.3 % vs. 7.4 %). The Bitcoin-inclusive portfolio delivers a similar return (5.5 %) but comes with the highest volatility and a slightly lower Sharpe ratio (0.72). In contrast, the gold-inclusive and baseline portfolios offer more modest returns of 3.8 percent and 3.6 percent, respectively, along with slightly lower volatility (6.6 % and 6.7 %, respectively) and lower risk-adjusted performance in general.

While the higher volatility introduced by Bitcoin affects year-to-year Sharpe ratios, the inclusion of gold appears to mitigate some of this risk, leading to improved stability in the dual-asset portfolio. In the most recent period, i.e., first half of 2025, all four portfolios display broadly similar returns and Sharpe ratios, indicating a degree of convergence in performance. However, notable differences persist across earlier years, especially in return levels and risk-adjusted outcomes. This highlights that Bitcoin's impact on portfolio performance has been time-dependent, but not necessarily detrimental to short-term stability in the most recent phase. It remains to be seen whether the convergence in portfolio performance observed in the first

Table 5.2: Comparison of the annualised performance of the four asset allocations

Portfolio	Metric	2018	2019	2020	2021	2022	2023	2024	H1 2025	Total
Portfolio excl. BTC & Gold	*Return*	-4.4 %	18.1 %	4.4 %	9.2 %	-14.3 %	6.4 %	8.8 %	6.2 %	**3.6%**
	Std. dev.	5.4 %	4.4 %	10.3 %	5.1 %	8.6 %	5.3 %	5.1 %	7.5 %	**6.7%**
	Sharpe ratio	-0.81	4.16	0.46	1.86	-1.71	1.05	1.65	0.79	**0.52**
Portfolio incl. BTC	*Return*	-6.4 %	20.2 %	12.2 %	11.0 %	-15.8 %	10.1 %	12.6 %	6.1 %	**5.5%**
	Std. dev.	5.7 %	5.8 %	11.6 %	6.3 %	8.9 %	5.6 %	5.8 %	7.3 %	**7.4%**
	Sharpe ratio	-1.13	3.56	1.09	1.78	-1.83	1.68	2.09	0.80	**0.72**
Portfolio incl. Gold	*Return*	-4.2 %	18.1 %	4.7 %	8.9 %	-13.8 %	6.2 %	9.6 %	6.8 %	**3.8%**
	Std. dev.	5.3 %	4.3 %	10.1 %	5.0 %	8.3 %	5.2 %	5.0 %	7.3 %	**6.6%**
	Sharpe ratio	-0.81	4.26	0.50	1.83	-1.72	1.06	1.83	0.89	**0.56**
Portfolio incl. BTC & Gold	*Return*	-6.3 %	20.1 %	12.4 %	10.7 %	-15.3 %	10.0 %	13.4 %	6.6 %	**5.7%**
	Std. dev.	5.6 %	5.7 %	11.4 %	6.2 %	8.6 %	5.4 %	5.8 %	7.1 %	**7.3%**
	Sharpe ratio	-1.14	3.59	1.13	1.76	-1.83	1.70	2.24	0.90	**0.77**

half of 2025 will persist, particularly as Bitcoin continues to gain broader acceptance among both retail and institutional investors.

To complement the empirical comparison, the in-sample tangency portfolio based on the Modern Portfolio Theory (MPT) approach by Markowitz (1952) is computed. This portfolio represents the optimal asset mix that would have maximised the Sharpe ratio over the observation period, providing a useful benchmark for evaluating the efficiency of the constructed portfolios. Based on the in-sample returns and risk characteristics, the tangency portfolio that maximises the Sharpe ratio allocates 49.9 percent to gold, 26.2 percent to real estate, 16.1 percent to stocks, and 7.9 percent to Bitcoin. This distribution reflects the strong historical performance and diversification benefits of gold, while also supporting a modest allocation to Bitcoin. Although Bitcoin receives a relatively small weight, its inclusion nonetheless indicates a positive contribution to portfolio efficiency.

Notably, this theoretical allocation aligns best with the empirical performance of the portfolio that includes both Bitcoin and gold, which achieved the highest Sharpe ratio (0.77) and annualised return (5.7 %) among the four evaluated strategies. This consistency between the MPT-based optimal portfolio and the observed outperformance of the combined BTC and gold allocation further underscores the potential benefits, in the past, of integrating both assets into a diversified investment strategy.

In summary, this chapter has examined Bitcoin's risk and return characteristics through both a regression-based sensitivity analysis and a comparative portfolio assessment. The results demonstrate that Bitcoin exhibits asymmetric co-movement with traditional asset classes, most notably stocks and gold, and that its inclusion in a diversified portfolio can enhance long-term performance, albeit with increased volatility. Notably, the portfolio combining both Bitcoin and gold achieved the highest Sharpe ratio and return among the evaluated strategies, suggesting that these assets can complement each other in improving portfolio efficiency. As the market matures and crypto assets become more accessible, particularly for institutional investors, their role in professional portfolio construction is likely to evolve, potentially as part of multi-asset allocations that harness the combined strengths of both Bitcoin and traditional alternatives like gold. It is important to note, however, that past performance is not indicative of future results, and the relationships observed in this analysis may change as market conditions, regulation, and investor behaviour evolve.

6. Institutional Investors in Crypto Asset Markets

While the adoption of crypto assets like Bitcoin among retail investors is increasingly well documented, with over ten percent of the Swiss population reporting experience with such assets (Dietrich et al., 2024), the role of institutional investors remains comparatively less researched. Public discourse and academic studies have largely focused on individual users, leaving institutional engagement in crypto asset markets underexamined.

This chapter analyses the potentially evolving participation of institutional actors in crypto asset markets. Several methodological approaches are applied to assess institutional exposure to blockchain-based assets. These are grouped into three main categories, i.e., a literature review (Section 6.2), an on-chain analysis (Section 6.3), and an off-chain analysis (Section 6.4). The chapter begins by defining the term "institutional investors", and outlining their key characteristics (Section 6.1).

6.1. Definition and Characteristics of Institutional Investors

Institutional investors are companies or organisations that invest significant amounts of money in various financial instruments. They differ from private investors in that they usually have considerably larger amounts of capital at their disposal and make professional investment decisions. They typically invest in a variety of asset classes, including equities, bonds, real estate, commodities, and alternative investments, such as private equity or hedge funds.

Typical types of institutional investors are:

- **Pension funds:** These manage pension assets for employees and focus on long-term investments with stable returns.
- **Insurance companies:** They invest large sums of money from premium payments, often in fixed-interest securities.
- **Banks:** They offer their clients investment services such as brokerage, advisory, and custody. They also offer other services such as loans.
- **Family offices:** They manage the wealth, investments, and financial affairs of high-net-worth families, aiming to preserve and grow assets across generations.
- **Investment funds:** They pool money from investors and invest it specifically in various markets.
- **Foundations and universities:** These organisations manage capital that is used for research or charitable purposes.
- **Central banks:** They influence monetary policy and stabilise financial markets through their investments.
- **Non-financial corporates:** These are large companies with professional treasury departments that manage substantial assets and liquidity.

Institutional investors have a significant influence on financial markets due to the size and scope of their investments. Indicators of their exposure and influence can be summarised as follows:

- Large volumes (transactions and balances)
- Professional investment decisions
- Long-term investment behaviour

Accordingly, institutional investors are expected to leave subtle but profound traces on blockchain networks and crypto asset markets. Measuring their exposure and influence is, however, a challenging task due to the pseudonymity of public DLT protocols. The following methodological approaches for estimating their market exposure and thus influence are proposed:

- **Literature review:** Studies and regular surveys, such as those conducted by crypto banks or specialised research firms, provide valuable data. By directly asking institutional investors about their risk and allocation strategy, trends in investment behaviour and shifts in market demand can be measured.

- **On-chain analyses:** Institutional activity may be inferred by examining blockchain data for wallets plausibly associated with institutional actors. Relevant metrics include balances held in crypto assets, transaction volumes, activity frequency, and timing of market entry or exit. Temporal and behavioural patterns in such data can provide indicators of the presence and level of engagement of institutional investors in specific market phases or assets.

- **Off-chain analyses:** Data from crypto exchanges, such as trading volume patterns and bid-ask spreads, offer indirect but quantifiable signals of institutional activity. Indicators such as higher trading volumes during weekdays and narrowing bid-ask spreads over time suggest institutional engagement, as these actors typically operate during business hours and contribute to deeper, more liquid markets.

Measuring the influence of institutional investors on crypto assets requires a multidimensional approach that combines technical, economic, and empirical data. These methods may help analysts to assess not only the immediate but also the longer-term impact of institutional capital flows on market stability, price discovery, and liquidity. Regulatory developments also play a critical role. New frameworks, such as the MiCAR regulation in Europe, along with institutional self-reporting, can offer further insight into how major players are adapting their strategies and shaping the market infrastructure. To gain a comprehensive understanding of institutional engagement, it is essential to regularly analyse on-chain activity, off-chain market data, and formal disclosures, capturing the evolving interplay between traditional finance and crypto asset markets. The following sections aim to provide an initial overview of these dynamics, serving as a foundation for more in-depth future analysis.

6.2. Literature Review

This section reviews existing studies and surveys conducted by crypto banks, consulting firms, and research institutions to gain insight into institutional engagement with crypto assets. These sources provide valuable information on the evolving role of institutional actors in crypto asset markets.

One of the early research reports called *Taking the pulse of digital assets in financial services across EMEA* (Deloitte, 2021) surveyed 25 leading organisations including established banks, wealth management firms, consultancies, and crypto start-ups. The study highlights growing institutional interest in cryptocurrencies, stablecoins, and tokenised securities, driven primarily by diversification goals and the potential for blockchain-enabled innovation. However, significant barriers remain, such as regulatory uncertainty, security concerns, and asset volatility. Trends indicate increased but cautious adoption, with many institutions opting for pilot projects and awaiting clearer regulatory frameworks like the EU's MiCAR. Overall, despite high awareness and interest, the market sentiment is characterised by a "fast follower" or "wait and see" approach rather than aggressive engagement in the crypto asset space.

The global survey *Gaining Ground: how institutional investors plan to approach digital assets in 2024* (EY–Parthenon, 2024) gathered insights from 277 institutional investors across North America, Europe, Asia-Pacific, and Latin America. Respondents included COOs, CEOs, portfolio managers, and other decision-makers from asset managers, pension funds, hedge funds, family offices, and registered investment advisors. The study revealed strong institutional interest in regulated crypto asset vehicles, with 35 percent having already invested in Bitcoin ETPs and 33 percent planned to do so. Furthermore, 50 percent of participants expressed investment interest in tokenised assets such as real estate, treasuries, and alternatives. Motivators included long-term conviction in blockchain (94 %), portfolio diversification (79 %), and asymmetric return potential (57 %), while key barriers were regulatory uncertainty and lack of trusted partners. Notably, 42 percent increased their crypto asset allocations in 2023, and 55 percent expect to do so in the next two to three years, with growing interest in both tokenisation and regulated fund issuance.

The study *Future Finance Report 2024* (Sygnum Bank AG, 2024) surveyed over 400 institutional and professional investors across 27 countries in the third quarter of 2024, providing a global perspective on crypto asset strategies and sentiment. Respondents represent a broad range of institutions including banks, hedge funds, family offices, and crypto-native firms, with approximately one-third being Sygnum Bank clients. Asset preferences showed strong adoption of core blockchain tokens like Bit-

coin and Ether (91 %), moderate use of stablecoins (50 %), and some interest in DApp tokens and NFTs, while tokenised assets remained less common due to liquidity issues. Key motivators for adoption included diversification, long-term returns, and alignment with the broader crypto trend, whereas volatility (43 %) and security/custody risks (39 %) were cited as leading barriers. Notably, 57 percent of respondents planned to increase allocations by late 2024, and 65 percent expressed a bullish outlook for 2025, reflecting growing institutional confidence and demand for instruments such as spot ETFs and tokenised real-world assets.

The Institutional Investor Digital Assets Survey (Coinbase Institutional & EY-Parthenon, 2025) provides insights into global institutional sentiment toward crypto assets. The study surveyed 352 institutional investors, including hedge funds, pension funds, endowments, and family offices, across North America, Europe, and Asia. Results indicate that Bitcoin and Ether remain dominant holdings, while interest is growing in stablecoins and tokenised assets due to their potential for yield and transactional efficiency. Institutions are primarily motivated by diversification and improved risk-adjusted returns, though regulatory uncertainty and security remain key barriers. Notably, 83 percent of respondents plan to increase crypto asset allocations in 2025, with growing interest in altcoins and DeFi, suggesting a maturing and broadening market engagement. Participation in DeFi is projected to triple over the next two years, from 24 percent to 75 percent.

The overall conclusion from the reviewed surveys and reports is that institutional interest in crypto assets is growing, particularly in regulated investment vehicles and tokenised assets. While diversification and potential returns drive this interest, regulatory uncertainty and security concerns persist as barriers. Despite these challenges, there is a positive outlook, with many institutions planning to increase allocations and explore new opportunities in the crypto asset space. While these studies offer valuable insights into institutional sentiment and strategic intent, they rely primarily on self-reported data. To gain a more complete and objective picture, empirical analysis of blockchain activity and market data offers a valuable complementary perspective. The following sections therefore examine on-chain and off-chain indicators to identify potential patterns of institutional engagement and to trace their evolution over time.

6.3. On-chain Analysis

By examining on-chain behaviours such as transactions, account balances, and asset-holding duration, it may be possible to identify signals that distinguish institutional activity from retail participation. These methods leverage publicly available blockchain data and are supported by a growing suite of analytics tools enabling both real-time monitoring and historical comparisons. The analysis in this section is structured around these three dimensions.

6.3.1 Transaction Analysis

In this study, transaction analysis focuses on on-chain data from the Bitcoin and Ethereum networks. The approach monitors transfers exceeding a predefined threshold of USD 100,000 and examines their distribution across weekdays. This threshold is chosen by following industry standards (e.g., Whale Alert and Chainalysis) and supported by academic literature (e.g., Zetzsche, Buckley, and Arner (2021) and Chen, Chuen, and Aste (2022)).

The following patterns may indicate institutional activity:

- Exceptionally large transactions exceeding typical retail thresholds.
- Large transactions concentrated on working days.

Due to the unstructured nature of blockchain protocols and the considerable technical requirements involved, analysing blockchain data remains a complex task. Block explorers offer user-friendly web interfaces to inspect transactions, blocks, and addresses on a blockchain (e.g., Etherscan for Ethereum and Blockchain.com for Bitcoin). In parallel, on-chain data providers aggregate, clean, and enrich raw blockchain data into structured formats suitable for analysis (e.g., Google BigQuery, Nansen, or Glassnode). Research platforms focus on advanced querying and visualisation capabilities, often supporting custom analytics via SQL or APIs (e.g., Dune Analytics and Flipside Crypto). Crypto asset market data providers supply real-time and historical price, volume, and order book data across exchanges (e.g. CoinGecko and CoinMarketCap).

In the subsequent analysis, an on-chain data provider, Google BigQuery, and a crypto asset market data provider CoinGecko, are utilised. The following steps to collect large transactions from the blockchain are applied:

1. For each in-scope crypto asset (i.e., Bitcoin and Ether), calculate the minimum threshold for subsequent transaction filtering:

$$\text{threshold} = \frac{\text{USD } 100{,}000}{\text{all-time high price}}$$

2. Query the blockchain dataset to extract transactions above the threshold:

Example of a generic SQL query

```
SELECT block_number, block_timestamp,
from_address, to_address, value
FROM
‘bigquery-public-
data.crypto_blockchain.transactions‘
WHERE
value > threshold
```

3. Store the extracted transactions in a new BigQuery table.

4. Retrieve historical prices for Bitcoin and Ether from CoinGecko (online-b) and upload them to BigQuery.

5. Match each transaction's `block_timestamp` with the corresponding end-of-day price on that day.

6. Calculate the USD value of each transaction. Flag it as a large transaction if it exceeds USD 100,000.

7. Restrict results to the date range from June 1, 2020, to June 1, 2025.

The collected data enables further analysis of large transaction[1] patterns, including their frequency across different days of the week and other characteristics relevant to identifying potential institutional activity.

Figure 6.1 shows the average number of large transactions per day for both Bitcoin and Ethereum protocols.

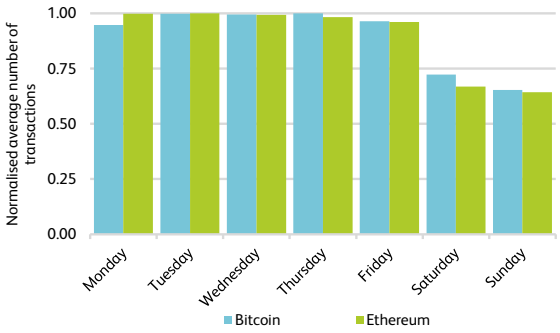

Figure 6.1: Average number of Bitcoin and Ethereum large transactions by day of week

The values are normalised to account for differences in scale between the two protocols. The first notable observation is that the majority of large transactions occur on weekdays, with approximately 20 to 25 percent fewer transactions on Saturdays and Sundays, a pattern consistent with traditional financial markets where institutional participants are primarily active during the workweek[2]. A second observation is that Ethereum shows a relatively steady level of activity throughout the workweek, whereas Bitcoin exhibits a more pronounced peak from Tuesday to Thursday, suggesting mid-week trading intensity potentially driven by institutional strategies and their respective portfolio management processes.

Figure 6.2 offers a slightly different perspective, showing the average number of unique Bitcoin and Ethereum accounts (i.e., addresses), taking part in large transactions, per weekday. The results again show fewer active accounts over weekends, a pattern consistent with traditional financial markets where institutional actors are primarily active during the workweek. This weekday-dominant distribution, combined with a pronounced weekend decline, further indicates institutional involvement in crypto asset markets. The analogous pattern in both Bitcoin and Ethereum strengthens the view that these markets increasingly follow institutional behaviour norms.

[1] This approach is static rather than dynamic, as a single threshold value is defined for Bitcoin and Ether based on each crypto asset's respective all-time high price. Consequently, the calculated threshold for Bitcoin is, for example, less than one BTC, given an all-time high of approximately USD 120,000. This implies that in the earlier stages of the observation period, when the market price was significantly lower, relatively small transactions denominated in USD were classified as "large".

[2] Monday to Friday in most Western markets (see, e.g., Investopedia (2025)).

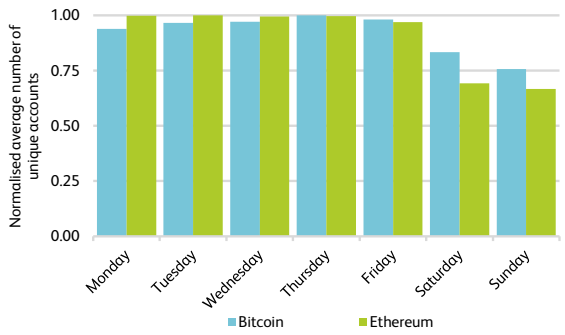

Figure 6.2: Average number of unique Bitcoin and Ethereum accounts in large transactions by day of week

Another approach to identifying institutional activity is to calculate the daily share of large transactions relative to the total number of transactions. Figure 6.3 shows that in early 2021, large transactions in Bitcoin accounted for nearly ten percent of all transactions, reflecting a period of potentially increased institutional interest in Bitcoin. Conversely, the subsequent decline suggests either a reduction in institutional activity or an increase in retail transactions. The recent stabilisation at lower levels may indicate a maturing market characterised by a more diverse range of participants.

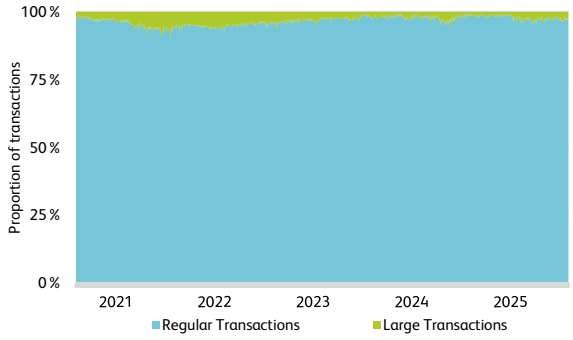

Figure 6.3: Bitcoin large transactions as a percentage of regular transactions

Although not shown here for brevity, the same calculation for Ethereum reveals an even lower proportion of large transactions, averaging around one percent over the observation period. This notably low share of large transfers on both the Bitcoin and Ethereum protocols toward the end of the observation period may be partly explained by the execution strategies used for sizeable trades, such as Smart Order Routing (SOR). In traditional finance, these systems are used to optimise execution by directing orders across fragmented markets to capture the best available prices (Foucault & Menkveld, 2008). In blockchain-based markets, particularly in DeFi, similar routing logic is used to split and route large trades across multiple liquidity pools (Danos, Khalloufi, & Prat, 2021), thereby breaking them into multiple smaller transactions that are not recorded as a single large transaction on the blockchain and, consequently, are not captured as such in our analysis. However, blockchain environments introduce challenges such as transaction fees, latency, and risks from transaction ordering manipulation, which require more sophisticated routing approaches (Daian et al., 2019; Angeris, Evans, Chitra, & Boyd, 2022). Whether SOR systems are responsible for the low proportion of large transactions remains unclear and is the subject of further research.

6.3.2 Account Balances Analysis

While transaction analysis provides insights into the timing and distribution of large transfers, account balance analysis offers a complementary perspective by focusing on the size and persistence of holdings.

The following patterns may indicate institutional activity:

- Large balances held by individual accounts over extended periods may signal institutional presence.
- Increasing total balance held by large accounts may indicate institutional accumulation, reflecting growing interest and confidence.

In the subsequent analysis only the Ethereum blockchain is considered using Google BigQuery to estimate the balances of large holders. Bitcoin is not analysed due to several structural and practical limitations. First, unlike Ethereum's account-based model, Bitcoin uses a UTXO-based system that does not maintain persistent account balances, requiring balances to be reconstructed from individual transaction outputs and making the derivation of holdings more complex. Second, Bitcoin users frequently

rotate addresses for privacy reasons, which complicates the identification and tracking of large holders over time. Third, comprehensive and scalable data access for Bitcoin is more limited in public platforms like Google BigQuery, whereas Ethereum offers more structured and readily accessible datasets.

The process for collecting Ethereum balance data involves the following steps:

1. Construct a double-entry ledger of Ethereum addresses by aggregating inflows and outflows from transactions and gas fees. Outgoing transactions incur gas costs, which are deducted from the sender's balance in addition to the transferred amount.

2. Include only successful transactions, as indicated by a transaction status.

3. Compute daily net balance changes per address and calculate cumulative balances using window functions.

4. Retain addresses holding at least 20 Ether on a given day, as this threshold approximates accounts with a minimum of USD 100,000 in holdings based on Ethereum's historical all-time-high price, thereby focusing the analysis on large holders potentially indicative of institutional activity.

5. Convert daily Ether balances to USD using historical prices from CoinGecko (online-b).

6. Retain addresses with balances of at least USD 100,000 on any given day.

7. Restrict the analysis to the period from June 1, 2020, to June 1, 2025.

Figure 6.4 illustrates the cumulative Ether balances (blue) and USD-denominated balances (green) of large Ethereum holders over time (magenta). The blue line indicates a gradual and consistent accumulation of Ether over the years, suggesting that large holders, potentially institutional entities, were accumulating Ether irrespective of market volatility. The green line exhibits more volatility, reflecting Ethereum's price fluctuations. The number of large holders seems to undergo an increase prior to or during significant price rallies, particularly in early 2021 and early 2024. This observation could indicate the entry of new large players like institutional entities during growth phases. However, the most noteworthy observation is that even during substantial USD value declines, such as during 2022 and 2023, Ether balances of large Ether holders do not experience a sharp decline. This resilience implies a limited presence of short-term liquidation behaviour typically associated with retail investors, suggesting instead a holding strategy consistent with institutional market participants.

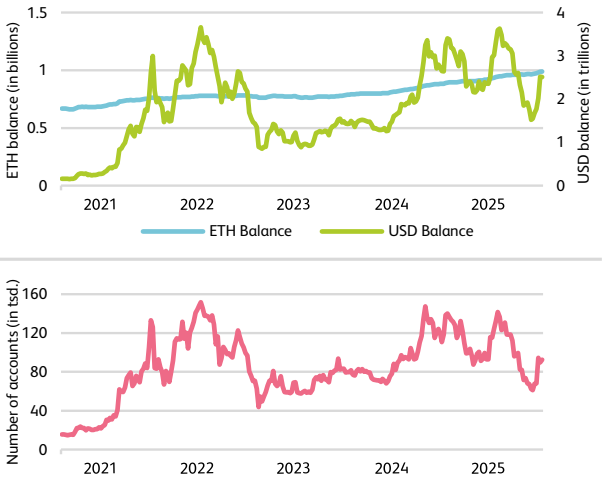

Figure 6.4: Weekly aggregated Ethereum large balances in Ether (blue) and USD (green), and count of large accounts (magenta)

In addition, Figure 6.5 shows the relative yearly Ethereum balance changes for addresses holding at least USD 100,000, segmented by weekday and weekend activity over the observed period.

Across all observed years, approximately 75 percent of balance movements occur on weekdays, indicating a persistent structural pattern. This suggests that Ethereum balance shifts of large holders are predominantly driven by weekday activity, aligning with the operating hours and behavioural norms of traditional financial markets. Such a pattern may again reflect a significant institutional presence.

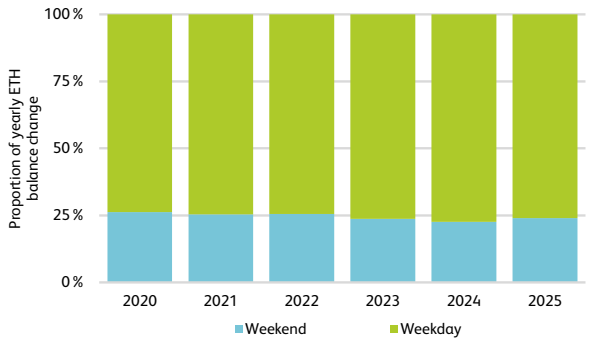

Figure 6.5: Yearly Ether balance change by weekday and weekend

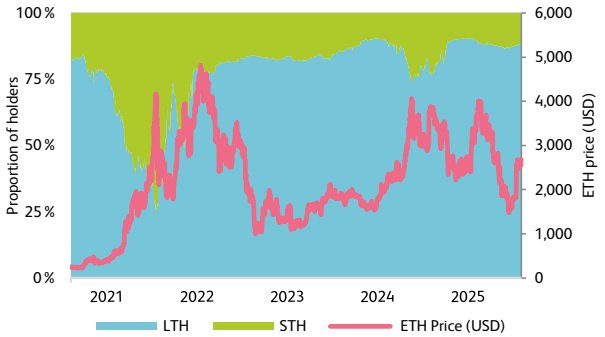

Figure 6.6: Long-term versus short-term Ether holder change over the years

6.3.3 Holding Period Analysis

While account balance analysis reveals the size and persistence of holdings, it does not capture how long those assets have been retained by their owners. To gain a fuller picture of investor behaviour, the next step examines holding periods, distinguishing between long-term holders (LTH) and short-term holders (STH). This dimension provides insight into investor conviction and trading horizons, which are often correlated with the strategic objectives of institutional versus retail participants.

The following patterns may indicate institutional activity:

- An increase in LTH-held supply may suggest accumulation behaviour, often associated with institutional strategies.
- A rise in STH supply may indicate tokens are being moved in anticipation of near-term trading.

The percentage of LTH versus STH of Ether is shown in Figure 6.6 and is based on the data generated in Section 6.3.2, with the figure also displaying the corresponding Ether price development over time. The distinction between LTH and STH follows the common convention of classifying addresses holding assets for more than 155 days as long-term holders and those holding for less as short-term holders.

The figure shows that as Ether's price rose, long-term holdings gave way to short-term speculation in the middle of 2021. This high turnover, typical of bull markets and significant crypto asset rallies, is reflected in the decline in the LTH percentage. Higher confidence in Ether's long-term value is indicated by an increase and subsequent stabilisation in the percentage of long-term holders, particularly after 2022, despite significant price changes. While the figure alone cannot conclusively attribute these trends to institutional activity, the observed persistence in long-term holding patterns is consistent with the growing presence of institutional investors in Ether's holder base.

6.4. Off-chain Analysis

In addition to on-chain metrics, market data from centralised exchanges can provide further insight into trading behaviour and the potential role of institutional participants. This section examines two off-chain indicators, i.e., temporal trading patterns and market liquidity, to assess institutional involvement over time.

A first indicator, shown in Figure 6.7, reveals a clear and consistent pattern in global spot trading volumes of Bitcoin across the days of the week.

From January 2018 to June 2025, average weekday volumes ranged from 1.41 to 1.45 million BTC. In contrast, weekend trading volumes were notably lower, averaging 1.14 million BTC on Saturday and 1.17 million BTC on Sunday. This disparity between weekday and weekend trading activity supports the hypothesis that institutional investors, who typically trade during business hours on

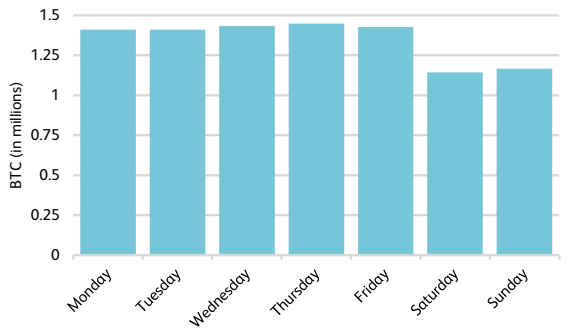

Figure 6.7: Mean global spot trading volume of Bitcoin by day of the week (source: CoinMarketCap (online-c))

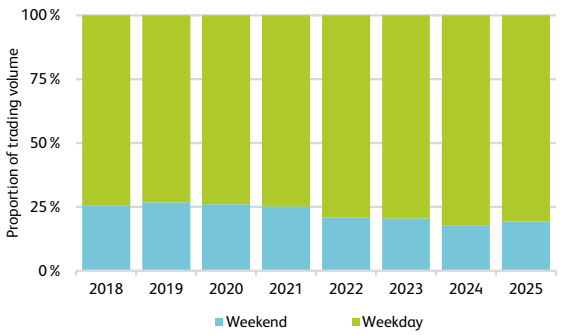

Figure 6.8: Yearly proportions of global spot trading volume of Bitcoin by weekday and weekend (source: CoinMarketCap (online-c))

weekdays, contribute significantly to overall market volume. The approximately 20 percent lower average volume on weekends may indicate reduced institutional engagement and a shift toward retail-driven activity during those periods. The consistency of this pattern over a multi-year timeframe reinforces the relevance of day-of-week effects in crypto asset market microstructure and suggests that, despite the continuous nature of crypto asset trading, institutional influence remains concentrated within traditional market hours.

Figure 6.8 further explores the temporal evolution of trading activity distribution between weekdays and weekends. The data reveals a declining trend in the relative share of weekend trading volume over the observed period from 2018 through June 2025. While weekends accounted for around 25 to 27 percent of total trading volume in the years 2018 to 2020, this share gradually decreased, falling to 21 percent in 2022 and 2023, and reaching a low of 18 percent in 2024. For the first half of 2025, the weekend share remained subdued at 19 percent. This shift suggests an increasing concentration of market activity during weekdays, strengthening the interpretation that institutional participation has grown over time. As institutional actors generally operate within traditional business hours, a growing weekday dominance likely reflects their rising influence in the crypto asset markets. Conversely, the declining weekend share could indicate that retail-driven trading, which is more evenly distributed throughout the week, has become relatively less dominant.

In addition to changes in trading volume patterns, a second indicator of institutional involvement is market liquidity. This is assessed by tracking the evolution of the mean bid-ask spread for Bitcoin across four major centralised exchanges, i.e., Bitfinex, Bitstamp, Coinbase, and Gemini, over the period from 2018 to mid-2025.[3] The bid-ask spread is expressed as a percentage and calculated as

$$\frac{ask_{\text{min}} - bid_{\text{max}}}{ask_{\text{min}}} \times 100,$$

where ask_{min} is the lowest ask price and bid_{max} the highest bid price at a given point in time. The calculation is based on hourly data, and the graph displays the corresponding yearly averages.

The findings are illustrated in Figure 6.9. Across most platforms, a clear downward trend in spreads is evident, indicating a significant increase in market liquidity and trading efficiency. Bitstamp and Gemini, which initially exhibited relatively wide bid-ask spreads, experienced a notable and steady narrowing over the observed period. Coinbase consistently maintained tighter spreads than the other exchanges, reflecting its comparatively higher liquidity and market efficiency throughout. Bitfinex, starting from already low spread levels, remained stable in the earlier years and demonstrated a modest tightening more recently. These developments suggest a gradually maturing and increasingly efficient trading environment, potentially influenced by growing institutional participation, enhanced liquidity provision, and the broader integration of crypto asset markets with traditional financial systems.

[3] These are the exchanges for which consistent data is available from January 2018 to the end of June 2025, as provided by Bitcoinity (online).

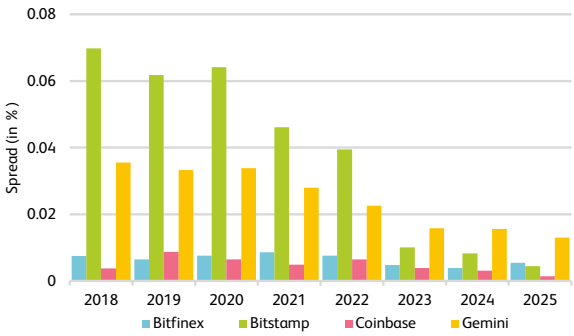

Figure 6.9: Yearly mean bid-ask spreads for Bitcoin on Bitfinex, Bitstamp, Coinbase, and Gemini (source: Bitcoinity (online))

6.5. Summary

Assessing the influence of institutional investors in crypto asset markets is challenging due to the pseudonymity of blockchain protocols and because market data generally does not distinguish between investor types. Still, assuming that institutional actors manage larger volumes, operate mainly on weekdays, and hold assets for extended periods, certain indicative patterns emerge from on-chain and off-chain data.

On-chain analyses for Bitcoin and Ether reveal a higher prevalence of large transactions during weekdays. For Ethereum specifically, large-balance accounts show stable asset holdings even during market downturns and maintain a substantial share of long-term holdings, patterns consistent with institutional-style investment behaviour. However, the anonymity of blockchain addresses prevents definitive attribution without verified identity data.

Off-chain data from centralised exchanges further point to possible growth in institutional participation. Global Bitcoin spot volumes are increasingly concentrated on weekdays, and mean bid–ask spreads have narrowed over time across four major exchanges. These features align with professional market norms, and the observed spread compression likely reflects increased liquidity provision, potentially from institutional market makers, as well as the general maturation of crypto asset trading infrastructure.

7. Conclusion and Outlook

This chapter presents key statements and hypotheses based on the findings of the "Crypto Assets Study 2025". It summarises trends in the Swiss and Liechtenstein crypto asset market and provides insights into underlying market dynamics and potential future developments.

On the way from a niche to an established asset class. The global crypto asset market has experienced a recovery in the past months, reaching a total market capitalisation of USD 3.5 trillion in mid-2025. In Switzerland and the Principality of Liechtenstein, indirect investment products have followed a similar trajectory, with assets under management (AuM) reaching approximately CHF 15 billion by the end of June 2025, an increase of more than CHF 6 billion compared to June 2024. In addition to rising prices, adoption has also continued to increase.

The Swiss and Liechtenstein crypto asset investment ecosystem is evolving. Over the past twelve months, the number of companies active in crypto asset investments in Switzerland and Liechtenstein has increased from 359 to 407. Most are located in the cantons of Zug and Zurich. Business models serving both institutional and private clients, as well as those focused exclusively on institutional clients, dominate the market, while companies targeting only private clients are less common. The range of services spans all main segments of the crypto asset investment value chain, with investment services being the most common, particularly in the area of off-chain indirect investments.

More products, but trading volumes show no clear tendency. The number of indirect investment products on Swiss traditional exchanges, including exchange-traded products and structured products, has continued to rise. While nominal AuM in these products fluctuated over the observation period, price-adjusted AuM showed a comparatively steady increase, indicating a net inflow of new capital. In June 2025, around two thirds of the AuM was based on Bitcoin products, although trading volumes have tended to increase proportionally more for indirect products linked to other crypto assets. Overall, trading volumes showed fluctuations but no clear tendency, and did not record significant growth compared to June 2024, one year earlier. This pattern is visible not only in indirect investments, including trading on derivatives crypto exchanges, but also in direct investments on centralised and decentralised crypto exchanges, with derivatives markets accounting for the largest share of overall trading activity.

Bitcoin is not the new gold. The analysis of return dynamics shows that Bitcoin is most closely linked to both stocks and gold. Based on a historical assessment of risk-adjusted performance for various asset class combinations, a portfolio including Bitcoin and gold achieved the best performance in the past, indicating that the two assets complemented each other in improving portfolio efficiency. However, a general limitation is that many prevalent portfolio allocation approaches are dependent on the historical performance of the individual asset classes. This underlines the value of exploring alternative portfolio optimisation approaches, particularly when dealing with volatile crypto assets.

Institutional investors are increasingly entering the crypto asset market. Measuring the influence and significance of institutional investors in the crypto asset market is challenging because neither trading data from exchanges nor blockchain records directly identify the type of market participant. Their presence must therefore be inferred from characteristic behaviour, such as larger trade sizes, longer holding periods, and trading patterns concentrated on traditional business days. Multiple indicators point to growing institutional interest. Centralised exchange data for Bitcoin and Ether show higher trading volumes on weekdays compared to weekends and a gradual narrowing of bid-ask spreads. On-chain data confirm this weekday-dominant pattern, with large Bitcoin and Ether transactions more common on weekdays. In Ethereum, large-balance accounts hold assets increasingly steadily, even across different market phases, and retain a substantial share of long-term positions.

Blockchain meets Kassenobligation. Swiss franc stablecoins have not shared in the strong growth of their USD-denominated counterparts. However, tokenised deposits and other balance sheet-based instruments are emerging as a promising use case. Switzerland is addressing this topic proactively and benefits from a well developed, regulated secondary market for tokenised assets.

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