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Crypto Assets on the Balance Sheets of U.S. Public Companies: Financing Sources, Corporate Motives, and the Evolution of Treasury Strategies

Abstract: This article examines the crypto assets reported on the balance sheets of U.S.-listed public companies from August 2020 through June 2026 and the sources used to finance their acquisition. The study addresses three questions: how firms finance crypto-asset purchases, which motives they disclose for holding these assets, and how corporate crypto-asset treasury strategies have evolved. Its purpose is to connect the asset side of the balance sheet with the liability and equity structure used to fund acquisitions. The exploratory study draws on filings with the U.S. Securities and Exchange Commission (SEC), including Current Reports on Form 8-K, Annual Reports on Form 10-K, Quarterly Reports on Form 10-Q, and securities prospectuses. The purposive sample comprises 18 major holders in four economically distinct classes; the financing analysis is limited to eleven firms that acquired crypto assets.

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The study combines descriptive statistics, content analysis of disclosed motives, and comparative case studies. Three findings emerge. First, equity issuance was used by nine of the eleven acquiring firms, whereas debt was never the sole financing source. For the six dedicated crypto-asset treasury companies for which value-based estimates were available, common equity, including in-kind contributions, accounted for 77.0% of funds raised, preferred stock for 10.5%, and debt for 12.5%. Second, firms' behaviour during the market downturn was associated with their liability structure. Asset sales accompanied by debt reduction occurred when firms faced non-discretionary payment obligations and limited access to new issuance, whereas firms financed predominantly with equity held their positions or continued to purchase assets when access to issuance remained open. Third, later disclosures referred to an asset-accumulation business motive more often than to a precautionary motive. The practice evolved through five phases, and the 2025–2026 market downturn did not reverse its institutionalisation. The findings indicate an association between financing structure and firm behaviour, not a causal relationship. The principal limitations are the small and concentrated sample, the qualitative nature of the inference, and the attribution of financing sources at the firm-year rather than transaction level.

Keywords: crypto assets, capital structure, corporate treasury, pecking-order theory

JEL: G12, G32, M41

1. Introduction

Since August 2020, when MicroStrategy (now Strategy) became the first U.S. public company to designate bitcoin as its primary treasury reserve asset, corporate holdings of crypto assets have expanded substantially. The article addresses three research questions. RQ1 asks how companies finance crypto-asset purchases and how the choice of financing source is associated with their subsequent behaviour. RQ2 asks which motives companies disclose for holding crypto assets and whether those motives correspond to the classical reasons for maintaining corporate reserves. RQ3 asks how corporate crypto-asset treasury strategies have evolved and how firms' disclosures have framed these assets over time.

The first two questions are linked to theoretically derived propositions assessed qualitatively rather than as statistical hypotheses; the third question is descriptive. Research proposition P1 has two components. First, firms are expected to finance crypto-asset purchases primarily through equity issuance rather than retained earnings or debt. Such a pattern would reverse the classical pecking order of financing sources. Second, during a market downturn, non-discretionary payment obligations, including maturing debt and fixed preferred dividends, combined with limited access to new issuance are expected to increase pressure to sell

assets. Financing with common equity should reduce this pressure. The proposition does not predict whether a firm will suspend or continue its purchases. Research proposition P2 concerns disclosed motives. It expects those motives to differ from the classical transactions and precautionary motives for holding reserves and anticipates that an asset-accumulation business motive – making growth in the asset position a central business objective – will appear more often in later disclosures than in earlier ones. Because the earlier and later disclosures generally come from different firms, P2 concerns the pattern of disclosures. A within-firm change can be traced only for MicroStrategy/Strategy. The propositions are derived from capital structure theory and the literature on corporate reserve-holding motives (Section 2).

The article contributes by matching financing instruments to crypto-asset acquisitions using original SEC filings for a purposive sample of major corporate holders. The matching is performed at the firm-year level and, for dedicated crypto-asset treasury companies, also in value terms. Whereas existing studies typically examine the consequences of holding crypto assets or model financing mechanics analytically (Papadogiannis, 2025), this study reconstructs observed financing structures from cash flow statements and current reports. Section 2 develops the theoretical framework, Section 3 describes the sample, Section 4 explains the method, Section 5 presents the results, and Sections 6 and 7 provide the discussion and conclusions.

2. Theoretical Background

2.1. The financing structure of crypto-asset purchases

RQ1 concerns how crypto-asset purchases are financed, and its framework is capital structure theory. Classical approaches link the choice of financing sources to the costs of financial distress (Kraus, Litzenberger, 1973), agency costs (Jensen, Meckling, 1976) and information asymmetry (Myers, 1984). The classical pecking order (Myers, Majluf, 1984) predicts that firms cover their needs first with internal funds, then with debt, and treat equity issuance as a last resort because of the costs of information asymmetry. Proposition P1 assumes that the practice of companies accumulating crypto assets departs from this hierarchy: equity instruments (ATM offerings, preferred stock, PIPE transactions, in-kind contributions) would be the first and dominant source, supplemented by debt, while internal funds would play a marginal role. Section 5.1 assesses this expectation. Preferred stock is an intermediate case: formally it is part of equity, but its fixed dividend brings it closer to debt in terms of the burden it imposes. Debt and preferred instruments therefore create non-discretionary payment obligations against a volatile asset base. The theory of liquidation values (Shleifer, Vishny, 1992) implies that a company burdened with such an obligation, whose access to capital narrows in a downturn, may be forced to service it by selling assets below their acquisition cost.

The financing structure may thus differentiate companies not only by the pace of accumulation but also by the pressure to sell assets in a downturn, which forms the second part of proposition P1.

2.2. Classical motives for holding reserves

In this article, the concept of a reserve is used in its economic sense, as a deliberately held, liquid store of value that is not committed to operating activities and serves to safeguard the company or to allocate surplus funds. It is not a balance-sheet category. Crypto assets are neither cash nor cash equivalents, and since 2025 those meeting the criteria of ASU 2023–08 have been measured at fair value (Financial Accounting Standards Board, 2023). The standard does not cover all crypto assets, only assets that meet all of its criteria: they are intangible assets, do not provide rights to underlying assets, are created and held on a distributed ledger, are secured cryptographically, are fungible, and were not issued by the reporting entity or its related parties. The distinction between the economic and the balance-sheet concept matters because some of the entities analysed hold crypto assets that are not reserves in the economic sense. The starting point is the classical theory of corporate reserve holdings. Keynes (1936) distinguished the transactions motive (servicing current payments) and the precautionary motive (a buffer against unforeseen needs). Empirical studies indicate that the level of reserves increases with cash flow uncertainty and with the cost of external finance (Opler et al., 1999), and the long-term growth of the cash holdings of U.S. companies is explained mainly by the precautionary motive (Bates, Kahle, Stulz, 2009). The agency view adds a third motive: large, discretionary holdings may serve the interests of managers rather than shareholders (Jensen, 1986). The triad of transactions, precautionary and agency motives, provides the frame of reference against which decisions to include crypto assets in corporate holdings are assessed.

2.3. Crypto assets in the light of the classical motives

Confronting the properties of crypto assets with the classical motives gives an unambiguous result. The transactions motive is almost absent: companies do not settle liabilities in crypto assets, with the partial exception of entities whose business involves trading these assets (exchanges, payment processors). The precautionary motive works in the opposite direction to what the theory assumes: an asset whose volatility is many times that of deposits and Treasury securities, and which is positively correlated with market conditions, increases rather than reduces the risk of a liquidity shortfall. In terms of the precautionary motive, crypto assets are thus an anti-reserve. The inflation-hedge variant (protecting purchasing power against inflation) has weak empirical support: in the inflationary episode of 2022 and in the 2025–2026 crash, crypto-asset prices fell together with the prices of other risky assets instead of behaving like a hedge. The agency motive remains a competing hypothesis that cannot be ruled out, because holding large, liquid resources unrelated to operating

activities is a typical setting for the agency costs of free cash flow (Jensen, 1986). If none of the classical motives explains the observed practice, explanations should be sought in alternative motives. These organise the typology used in the study and underpin proposition P2.

2.4. Alternative motives: investment, signalling and business

The investment motive treats crypto assets as an investment of surplus funds with expected appreciation, i.e. a portfolio decision that is reversible and subordinated to the needs of the core business. The signalling motive locates the value of the purchase not in the asset itself but in the message, i.e. in positioning the company in relation to customers, investors and a particular vision of the monetary system. The theory of clientele effects predicts that such a signal attracts a specialised group of investors; Phillips and Pohl (2023) analyse the case of MicroStrategy in this context.

The asset-accumulation business motive is qualitatively different: accumulation of the asset per share becomes the purpose of the business, and the company becomes a vehicle intermediating between the capital market and the market for the asset. The logic of its financing, which departs from the classical pecking order, is discussed in Section 2.1. The coding of declarations in filings (Section 5.6) uses a set of five categories: the two classical motives that a company can declare (transactions and precautionary) and three alternative ones (investment, signalling and business). The agency motive, which by its nature is not disclosed in declarations, is not coded.

2.5. Development and institutionalisation of the practice

The descriptive question RQ3 requires a theory that organises the diffusion and consolidation of an organisational practice. Diffusion of innovations theory (Rogers, 2003) predicts adoption along an S-curve, from innovators through early adopters to the majority, with a key role for a visible champion whose success lowers the risk perceived by followers. Neo-institutional theory (DiMaggio, Powell, 1983) identifies three mechanisms through which organisations become similar: mimetic isomorphism (imitation under uncertainty, e.g., the open copying of the MicroStrategy model by Semler Scientific), normative isomorphism (the ASU 2023–08 accounting standard, audited disclosures, inclusion in indices) and coercive isomorphism (the disclosure format imposed by the SEC). Within this framework, institutionalisation can be described by the number and sectoral diversity of entities, their presence in indices and the existence of dedicated instruments and standards. The price crash also serves as a test of durability: once institutionalised, a practice does not disappear with a price shock but undergoes differentiation and selection. This reasoning organises the descriptive analysis of development in Section 5.7.

2.6. Prior empirical research

The empirical literature on the practice is young but growing fast. Thomson (2021) documents positive abnormal returns around announcements of bitcoin purchases in 2020–2021. Krause (2025a; 2025b) indicates that treasury companies provide substantial exposure to bitcoin and that their volatility is structurally amplified. Aufiero et al. (2025) analyse the co-movement of the share prices of 39 bitcoin-holding companies and the direction of information flow between the crypto-asset market and the stock market. Liu, Verma, and Verma (2026) examine the relationship between corporate bitcoin holdings and firms' risk and return profiles, and Kazemikhasragh (2025) the cross-sectional sectoral and regulatory variation in such holdings. Closest to the financing problem is the work of Papadogiannis (2025), who formalises the effect of equity, debt and convertible instruments on the quantity of crypto assets per share and derives the conditions under which financing increases or decreases this quantity. Recent studies also examine the survival of the model during a bear market (Wen, 2025) and the relationship between the market valuation of treasury companies and the value of their holdings (Meister, 2025).

The contribution of this article to that literature is empirical rather than theoretical. Existing studies analyse the effects of holding crypto assets (factor exposure, volatility, the conditions for growth in the asset per share) on the basis of market data or formal models. This article, by contrast, matches financing instruments with crypto-asset acquisitions on the basis of SEC source documents and confronts them with the motives declared by management. It complements rather than replaces the findings of Papadogiannis (2025), whose model describes the mechanics of financing analytically.

3. Companies holding crypto assets on their balance sheets

Table 1 lists the 18 entities covered by the study: 17 companies listed on U.S. exchanges (NYSE, NYSE American or Nasdaq) at the end of the study period, and Semler Scientific, analysed for the period in which it pursued its strategy as an independent public company, i.e. from May 2024 until its acquisition by Strive on 16 January 2026. Holdings are taken from periodic reports as of a single date, 31 March 2026, i.e. the end of the last quarter covered by reports filed before the cut-off date of the study. The exceptions are BitMine, whose fiscal year ends on 31 August (holdings as of 28 February 2026), and Semler Scientific (holdings disclosed on 13 January 2026, before its acquisition by Strive). The sample is extremely concentrated. Of the 933,540 BTC reported as of 31 March 2026 by the sample companies that disclose the number of units, Strategy held 762,099 BTC, or 81.6%. In value terms its dominance is also pronounced: the fair value of Strategy's holdings (USD 51.6 billion) exceeded the combined value of the holdings reported by the other companies in the sample.

Table 1. Entities analysed and their crypto-asset holdings (as of 31 March 2026 unless stated otherwise)

Company	Ticker	Holdings (units; fair value)	Main financing sources	Class
Strategy Inc.	MSTR	BTC: 762,099; USD 51.6 bn	Share issuance (ATM), preferred stock (STRK, STRF, STRC, STRD), convertible notes	Dedicated treasury company (since Aug 2020)
Twenty One Capital	XXI	BTC: 43,514; USD 2.95 bn	In-kind contribution (Tether, Bitfinex, SoftBank), PIPE, secured convertible notes (USD 486.5 m)	Dedicated treasury company (since Dec 2025)
MARA Holdings	MARA	BTC: 35,303, incl. 9,995 receivable; USD 2.41 bn	Mining, ATM offerings, convertible notes	Miner (acquiring)
Hut 8	HUT	BTC: 16,331 (consolidated, incl. ABTC); USD 1.11 bn	Mining, loans	Miner
Coinbase Global	COIN	BTC: 16,492; USD 1.12 bn (plus 150,193 ETH)	Operating cash flows	Exchange
Riot Platforms	RIOT	BTC: 15,679, incl. 5,802 encumbered; USD 1.07 bn	Mining, ATM offerings, convertible notes	Miner
Strive, Inc.	ASST	BTC: 13,628; USD 0.93 bn	PIPE (2025), ATM offerings, preferred stock (SATA); acquisition of Semler Scientific for shares (Jan 2026)	Dedicated treasury company (since Sep 2025)
CleanSpark	CLSK	BTC: 11,920; USD 0.81 bn	Mining (sale of part of production)	Miner
Trump Media & Technology	DJT	BTC: 9,542; USD 0.65 bn (plus CRO)	PIPE (shares), convertible notes (2025); CRO acquired partly in exchange for shares	Corporate holder (treasury alongside operations)
Block, Inc.	XYZ	BTC: 9,032; USD 0.62 bn	Internally generated funds; reinvestment of 10% of gross profit from bitcoin	Corporate holder (diversification)
Tesla, Inc.	TSLA	Digital assets: USD 0.79 bn (number of units not disclosed)	Internally generated funds	Corporate holder (diversification)
American Bitcoin	ABTC	BTC: 7,021 (included in Hut 8 holdings); USD 0.48 bn	Mining, share issuance	Miner
Bullish	BLSH	Digital assets: USD 2.30 bn (number of BTC units not disclosed)	Exchange balance sheet, IPO (2025)	Exchange

Company	Ticker	Holdings (units; fair value)	Main financing sources	Class
Galaxy Digital	GLXY	Crypto assets in trading activities (number of BTC units not disclosed)	Trading balance sheet, securities issuance	Broker
BitMine Immersion	BMNR	ETH: 4,473,459 (28 Feb 2026); USD 8.79 bn (plus 195 BTC)	ATM offerings, PIPE	Dedicated treasury company, ETH (since Jun 2025)
SharpLink	SBET	ETH: approx. 870,821 incl. liquid staking tokens; USD 1.24 bn at fair value and USD 0.49 bn at cost	PIPE, ATM offerings, in-kind contribution	Dedicated treasury company, ETH (since Jun 2025)
Forward Industries	FWDI	SOL: 5,278,000 (excl. fwdSOL tokens); USD 0.44 bn	PIPE (cash and digital assets)	Dedicated treasury company, SOL (since Sep 2025)
Semler Scientific	SMLR	BTC: 5,048 (disclosed 13 Jan 2026; acquired by Strive 16 Jan 2026)	Internally generated funds, ATM offerings, convertible notes	Corporate holder (treasury alongside operations), until Jan 2026

Source: Forms 10-Q and 10-K (holdings and fair values) and current reports on Forms 8-K and 6-K (SEC EDGAR); document numbers are given in the list of source documents. Industry trackers (Bitcointreasuries.net, CoinGecko, DefiLlama, The Block, HODL15Capital; accessed June 2026) were used only to identify entities. Hut 8 holdings are consolidated and include the holdings of American Bitcoin (Hut 8 stake: 55.3%); American Bitcoin's holdings are not counted again in the total number of BTC units. Tesla, Bullish and Galaxy do not disclose the number of BTC units. The total number of BTC units as of 31 March 2026 excludes holdings as of other dates (BitMine: 195 BTC as of 28 February 2026; Semler Scientific). For miners other than MARA and for exchanges, the financing column describes the financing of the company's operations, not of crypto-asset purchases.

The sample is economically heterogeneous and requires a distinction between four classes of entities. The first consists of dedicated crypto-asset treasury companies, i.e. entities whose principal function is accumulating an asset financed by securities issuance: Strategy, Twenty One, Strive, BitMine, SharpLink and Forward Industries. They have no significant operating activities, and their function is to intermediate between the capital market and the crypto-asset market. The second class comprises corporate holders: companies diversifying surplus funds (Tesla, Block) and companies running a treasury alongside their core business (Semler Scientific, Trump Media). For them, acquiring crypto assets is a decision on the allocation of surpluses. The third class consists of miners (MARA, Riot, CleanSpark, Hut 8, American Bitcoin), whose holdings arise mainly from their own production, and the fourth of exchanges and brokers (Coinbase, Bullish, Galaxy Digital), whose assets are linked to trading activities and need not constitute a reserve in the sense adopted in Section 2.2.

The distinction between classes has a direct analytical consequence, because crypto assets reach the balance sheet in three ways, which are consistently kept apart in the analysis. The first is a purchase financed with funds raised through the issuance of securities or the incurrence of debt (financing of purchases). The second is a purchase from funds generated by operating activities, or the retention of assets produced or traded in the course of those activities, such as mining by miners or the trading balance sheet of exchanges (financing of operations). The third is an in-kind contribution, i.e. the contribution of crypto assets in exchange for shares, e.g., in a merger with a SPAC or in a PIPE transaction settled in digital assets. A financing channel, as understood in this article, is any source of funds from which a company acquired crypto assets, including operating funds, while an in-kind contribution is treated as a separate equity channel. The retention of assets from operations (mining, trading balance sheet) is not a purchase and is not subject to the channel analysis. The class boundaries are, however, fluid: in addition to mining, MARA purchased bitcoin with funds from share and convertible note issuance in several years (2021, 2024 and 2025), so despite its classification as a miner it was included in the financing analysis as an acquiring entity. The analysis of financing sources (Section 5.1) therefore covers eleven acquiring firms: six dedicated crypto-asset treasury companies, four corporate holders and MARA. Purchases also occurred among the other miners and exchanges (Section 5.1), but these classes were distinguished by their core business, and their purchases were not included in the channel analysis. The behaviour of the other miners is discussed separately (Section 5.4) as control cases.

Bitcoin Standard Treasury Company (BSTR) remained outside the sample. Its merger with Cantor Equity Partners I had not been completed by the cut-off date, and the announced contribution of 30,021 BTC was to take place only after the transaction closed. As of 30 June 2026, these bitcoins were therefore not on the balance sheet of a public company; the merger agreement was terminated in August 2026, after the study period.

4. Method

The sample was selected purposively. The starting point was independent industry trackers (Bitcointreasuries.net, CoinGecko, DefiLlama, The Block, HODL15Capital; accessed in June 2026), from which the largest holders among companies listed on U.S. exchanges (NYSE, NYSE American, Nasdaq) and filing reports with the SEC were selected, so as to cover all four classes of entities and the three main crypto assets (BTC, ETH, SOL). The size criterion (holdings above USD 100 million in fair value or 5% of total assets) defines the population from which the sample was drawn, but the sample does not include all entities above this threshold, so the article makes no claims about coverage of the whole population. Excluded were ETFs and trust vehicles, companies listed outside the United States (e.g., Metaplanet) and transactions announced but not completed by the cut-off date (BSTR). Companies that reduced or exited their positions in the market downturn (Genius Group, Empery Digital) are discussed separately as

a comparison group (Section 5.3). The study period runs from August 2020 to June 2026 and includes documents filed up to 30 June 2026. The primary source is SEC EDGAR filings: current reports on Form 8-K and, for foreign issuers, Form 6-K (announcements of purchases, sales and issuance), periodic reports on Forms 10-K and 10-Q (holdings, cash flows, indebtedness), 424B prospectuses (terms of financing) and correspondence with the SEC. Every figure used in the analysis comes from a source document (the filing-first principle). Table 2 lists the categories, their definitions and sources.

Table 2. Definitions and data sources

Category	Operational definition	Source
Crypto-asset holdings	Number of units of a given crypto asset at the balance sheet date (31 March 2026 or the last day of the quarter before the cut-off date)	10-Q, 10-K
Fair value of holdings	Fair value reported in the periodic report as of the same date	10-Q, 10-K
Purchases and sales	Units acquired or disposed of in the period, with the average transaction price	8-K, 10-Q, 10-K
Sources of financing of purchases (firm-year)	Channel or channels financing acquisitions in the fiscal year, established by the three-criteria rule	8-K, 424B, cash flow statement
Structure of financing by value	Proceeds from issuance of common stock (including in-kind contributions), preferred stock and debt from strategy adoption to the last reporting period before the cut-off date	Cash flow statement and disclosures of non-cash transactions (10-K, 10-Q)
Declared motives	Motive code assigned to a dated justification of the strategy (five categories from Section 2.4)	10-K (MD&A), 10-Q, 8-K, correspondence with the SEC

Source: own elaboration.

The quantities defined in this way come exclusively from documents filed with the SEC, which ensures consistent measurement across the sample. Document (accession) numbers and the items used in the calculations are given in the list of source documents and in the supplementary data file, which makes it possible to check every numerical value. The article does not, however, include a full reconstruction of all purchase announcements at the level of individual transactions.

Management motives are not directly observable, so the study examines declared motives. Justifications of the strategy in Forms 10-K (including the MD&A sections), 10-Q and 8-K and in correspondence with the SEC were analysed, and the declarations were coded using the five categories from Section 2.4 (transactions, precautionary, investment, signalling, business); a single declaration may receive more than one code. A possible divergence between declared and actual motives is mitigated by confronting the declarations with observed behaviour (holding or selling positions).

The attribution of financing sources to purchases (RQ1) requires a separate comment. Due to the fact that money is fungible, it cannot be proven that a specific issue financed a specific purchase; attribution is a reasoned approximation, not proof. The unit of attribution is the firm-year, i.e. the fiscal year in which the company acquired crypto assets; in the year of strategy adoption or of the company's acquisition it is the corresponding part of the year, and in 2026 the period up to the last reporting date before the cut-off date (usually the first quarter). For each firm-year, three criteria were assessed: (1) a declaration of the use of proceeds for crypto-asset purchases in a document filed with the SEC (current report, prospectus, periodic report); (2) issuance of the given instrument no earlier than 90 days before the acquisition and, for internally generated funds, the absence of issuance in this window; (3) consistency with the cash flow statement, i.e. proceeds from the given instrument, or operating cash flows sufficient to cover the outlays, reported in the same period. A channel was attributed when at least two criteria were met. The channels distinguished are convertible and other debt, at-the-market (ATM) share offerings (sales of shares in tranches at the current market price), preferred stock, PIPE transactions (private placements with institutional investors), in-kind contributions (including in mergers with SPACs) and operating funds. The results of applying the rule are presented in Table A1 in the Appendix: of the 26 firm-years with acquisitions, 17 met three criteria and nine met two, and there were no unattributed cases. The absence of unattributed cases follows from the chosen unit: at the firm-year level, issuance and acquisitions can be linked by at least two criteria, whereas at the level of individual transactions, sometimes announced weekly, attribution would be less clear-cut. Borderline cases are discussed in the Appendix, after Table A1.

On the basis of the firm-year attributions, each acquiring firm was assigned a configuration of financing sources for the whole period (Table 4). This summary shows the frequency of sources, not their value shares. The value-based approach (Table 5) avoids the attribution problem: it does not link issuance to purchases but presents the structure of funds raised on the basis of cash flow statement items, and its scale is compared in the text with outlays on crypto-asset purchases in the same period. It covers the six dedicated crypto-asset treasury companies, whose financing is used almost exclusively to accumulate the asset (the exception is Forward's loan of March 2026, used to repurchase shares; Section 5.5). All proceeds from share issuance and borrowing reported in financing activities were included, excluding employee plans, together with in-kind contributions of crypto assets reported among non-cash transactions. The period runs from strategy adoption to the last reporting period ended before the cut-off date, in most cases to 31 March 2026. The amounts correspond to cash flow statement items: mostly gross proceeds and, for some items (e.g., BitMine, part of the proceeds of Forward and Twenty One, and Strategy's loans), proceeds net of issuance costs or fees.

The scope of evidence differs between the research questions, and this is a deliberate choice that reflects the nature of the material. The financing question (RQ1) allows a quantitative approach, because the issuance instrument and its proceeds are disclosed in the documents and comparable across companies. The results are presented in unweighted terms (frequency of sources) and, for dedicated crypto-asset treasury companies, in value-weighted terms.

The motives question (RQ2) relies on content analysis of declarations, and the material consists of six dated justifications from five entities. With this number of observations, reporting percentage distributions would be spurious precision, so the coding results are presented descriptively, limited to counts and the direction of change. The development question (RQ3) is formulated as descriptive and is deliberately not assigned a research proposition. Its result is a periodisation of the practice rather than a measure, and it is therefore not subject to statistical verification.

The study is exploratory and relies on three methods: descriptive statistics of holdings and financing sources, analysis of declared motives, and comparative case studies conducted using process tracing. Process tracing is an established method of inference about mechanisms based on chronologically ordered sequences of events (George, Bennett, 2005; Beach, Pedersen, 2013) and is particularly suited to small but well-documented populations in which formal statistical estimation is infeasible or would produce spurious precision. The propositions are assessed qualitatively by confronting theoretical predictions with the documented behaviour of companies (dates and sources of purchases, sales and issuance, debt structure). The choice of a qualitative method is therefore deliberate. With a sample of 18 entities, its strong concentration and time series shortened by the change in accounting rules (uniform fair value measurement since 2025), econometric estimation would be premature; a possible direction for it is indicated in Section 6.

Applying process tracing requires specifying the predictions of the mechanism and the falsification criteria. For the second part of P1, the prediction is as follows: the absence of non-discretionary payment obligations reduces the pressure to sell assets in a downturn, whereas non-discretionary payment obligations (debt falling due, fixed dividends) combined with limited access to new issuance increase it. The prediction does not concern the continuation of purchases: an equity-financed company may continue them if it retains access to issuance (market valuation at or above the value of its holdings) or suspend them if it loses this access. The diagnostic evidence is not the sale as such but its documented timing relative to a debt event or payment obligation (repurchase, maturity, margin call, dividend payment) in current reports. A sale forced by an obligation falling due is distinguished from a voluntary decision to repurchase debt early, and the description of each case corresponds to the available evidence. A competing hypothesis is the price explanation, i.e. a sale as a reaction to expectations of further declines, independent of the liability structure; it can be assessed by comparing companies with similar price exposure but different liability structures. A second competing hypothesis is the investment motive: corporate holders that treat crypto assets as a reversible investment may sell them without debt pressure, as Tesla did in 2022. A criterion weakening P1 would be the sale of a significant part of its position by a dedicated crypto-asset treasury company financed exclusively with common equity, with no obligations falling due and with retained access to issuance, or the retention of its position by a company burdened with debt falling due and without access to capital. No such cases were observed in the study period, which means that the observations are consistent with the prediction, not that a causal relationship has been proven.

Finally, a note on the composition of the sample. Although Strategy held 81.6% of the BTC units reported by the sample companies as of 31 March 2026, the other entities are not merely background but provide the variation needed for inference. They display the full range of financing channels and of behaviour in the market downturn: from companies financed entirely with equity that held their positions or continued buying, to debt-burdened companies that sold assets. Without Tesla, the reversibility of a corporate position would not be visible; without Tesla and Block, there would be no cases of purchases financed exclusively from internally generated funds; and without the group of companies that reduced their positions, the operation of debt pressure would not be visible. Strategy is therefore the leading case, but inference rests on the variation across the whole sample.

5. Results

5.1. Channels for financing purchases

The starting point of the analysis is a catalogue of the channels through which companies financed their crypto-asset purchases. Table 3 lists these channels together with the mechanism of each and examples of companies that used them. The last row covers the retention of assets from operations, which is not a purchase but shows a different way in which holdings arise among miners and exchanges.

Table 3. Channels for financing crypto-asset purchases

Channel	Mechanism	Cases
Convertible and other debt	Zero- or low-coupon convertible notes in which the value of the conversion option replaces part of the interest; less often secured notes and loans	MSTR, MARA, XXI, DJT, SMLR
ATM share offerings	Sale of shares in tranches at the current market price; beneficial to existing shareholders when the share price exceeds the value of holdings per share	MSTR, BMNR, SBET, ASST, SMLR, MARA
Preferred stock	Perpetual preferred stock with a fixed or variable dividend	MSTR (STRK, STRF, STRC, STRD), ASST (SATA)
PIPE	Private placements of shares with institutional investors, usually when the business model changes	XXI, ASST, BMNR, SBET, FWDI, DJT
In-kind contribution	Contribution of crypto assets in exchange for shares, including in a merger with a SPAC or in a PIPE settled in digital assets	XXI, FWDI, SBET, ASST, DJT

Channel	Mechanism	Cases
Internally generated funds	Purchase from funds generated by the core business	TSLA, XYZ, SMLR, MSTR (2020)
Retention of assets from operations (no purchase)	Retention of mined coins or of assets from trading activities	MARA, RIOT, CLSK, HUT, ABTC, COIN, BLSH, GLXY

Source: own elaboration based on SEC filings.

The catalogue shows that the acquiring firms used a broad range of equity instruments and that debt appears mainly in the form of convertible notes. The catalogue of channels says nothing, however, about their quantitative importance, so the subsequent tables separate the frequency of sources (Table 4) from their share in the value of funds raised (Table 5).

To separate a regularity that applies to the whole group from a result reflecting the dominant position of a single entity, financing sources are first presented in unweighted terms, with each company counted as one observation. The summary covers the eleven acquiring firms: six dedicated crypto-asset treasury companies, four corporate holders and MARA, which, in addition to mining, financed purchases through share and convertible debt issuance. The other miners and the exchanges were omitted because their core business consists of mining crypto assets or trading them. Purchases did, however, also occur in these classes: in December 2024 Riot acquired approx. 5,117 BTC for approx. USD 510 million from the proceeds of convertible notes and cash on hand, in the first quarter of 2026 American Bitcoin spent USD 61.3 million on bitcoin purchases while raising net ATM proceeds of USD 110.5 million, and Coinbase acquires crypto assets for its investment portfolio (for USD 83.0 million in the first quarter of 2026). These purchases were not included in the channel analysis, which is a limitation of the study. The summary presents the configuration of sources established by the attribution rule (Table A1), not value shares.

Table 4. Configurations of financing sources for purchases, unweighted (company = one observation)

Configuration of financing sources	Number of companies	Share	Companies
Equity issuance only (ATM, PIPE, in-kind contribution, preferred stock)	4	36%	Strive, BitMine, SharpLink, Forward
Equity issuance combined with debt	5	45%	Strategy, Twenty One, MARA, Trump Media, Semler
Internally generated funds only	2	18%	Tesla, Block
Debt only, without equity issuance	0	0%	None
Total	11	100%	

Source: own elaboration based on SEC filings (Table A1). Shares are rounded to whole percentages; their sum differs from 100% due to rounding.

Equity issuance occurs in nine of the eleven acquiring firms (82%) and, excluding Strategy, in eight of ten (80%). Debt, convertible or other, is in no case the sole source: it appears only in combination with equity issuance (Strategy, Twenty One, MARA, Trump Media, Semler). Financing exclusively from internally generated funds is limited to two mature corporate holders with strong operating cash flows (Tesla, Block), for which the acquisition was an allocation of surpluses rather than an accumulation strategy. This result concerns frequency, however. It shows that equity issuance is a widespread source but does not establish whether it dominates in the value of financing; in five of the nine cases equity occurs together with debt, and the unweighted summary does not specify the proportions between them.

Value shares can be established for the dedicated crypto-asset treasury companies, whose financing is used almost exclusively to accumulate the asset (Table 5). From strategy adoption to the first quarter of 2026, these six companies raised a total of USD 89.4 billion. Common stock, including in-kind contributions of crypto assets, accounted for 77.0% of this amount, preferred stock for 10.5% and debt for 12.5%. The result is strongly dominated by Strategy, which raised USD 60.8 billion, of which 67.5% came from common stock, 15.0% from preferred stock and 17.5% from debt, mainly convertible. In the other five companies (USD 28.7 billion), common stock accounted for 97.3% and debt for 1.7%. The predominance of equity is thus not an artefact of Strategy's position, whereas Strategy accounts for most of the debt and preferred stock in the group as a whole. The structure differs considerably across companies: in Twenty One, the in-kind contribution (USD 3.25 billion) outweighs cash financing, within which convertible notes (USD 0.44 billion) exceeded proceeds from shares (USD 0.40 billion), and Strive raised almost a quarter of its funds from preferred stock. These proceeds match the scale of outlays: in the same period, Strategy spent USD 57.7 billion on crypto-asset purchases and BitMine spent USD 17.0 billion.

Table 5. Structure of funds raised by dedicated crypto-asset treasury companies, by value (USD bn)

Company	Period	Common stock (incl. in-kind contribution)	Preferred stock	Debt	Total	Structure: common / preferred / debt (%)
Strategy	2020–Q1 2026	41.01 (0.00)	9.11	10.66	60.78	67.5 / 15.0 / 17.5
Twenty One	2025–Q1 2026	3.65 (3.25)	0.00	0.44	4.09	89.3 / 0.0 / 10.7
Strive	Sep 2025–Q1 2026	0.96 (0.01)	0.29	0.00	1.25	76.8 / 23.2 / 0.0
BitMine	Sep 2024–Feb 2026	18.38 (0.00)	0.00	0.00	18.38	100.0 / 0.0 / 0.0
SharpLink	2025–Q1 2026	3.25 (0.12)	0.00	0.00	3.25	100.0 / 0.0 / 0.0
Forward	Oct 2024–Mar 2026	1.63 (0.69)	0.00	0.05	1.69	97.0 / 0.1 / 3.0
Total		68.89 (4.07)	9.40	11.15	89.44	77.0 / 10.5 / 12.5

Company	Period	Common stock (incl. in-kind contribution)	Preferred stock	Debt	Total	Structure: common / preferred / debt (%)
Total excl. Strategy		27.88 (4.07)	0.29	0.49	28.66	97.3 / 1.0 / 1.7

Source: own calculations based on cash flow statements and disclosures of non-cash transactions in Forms 10-K and 10-Q (the list of documents and items in the supplementary data file). Common stock includes public offerings, ATM offerings, PIPEs and warrants; debt includes convertible notes, secured notes and loans. Proceeds from employee plans are excluded. Some items are reported net of issuance costs or fees (e.g., BitMine, some items of Forward and Twenty One, and Strategy's loans). The amounts correspond to cash proceeds reported in cash flow statements, not to the nominal value of the instruments. PIPE proceeds are counted once, in line with their presentation in the cash flow statements. Shares issued by Strive in the acquisition of Semler Scientific (Jan 2026) are not included. Totals may differ from the sum of components due to rounding. The period for BitMine and Forward reflects their fiscal years (BitMine: from 1 Sep 2024, Strategy since Jun 2025; Forward: from 1 Oct 2024, Strategy since Sep 2025).

Restricting the value-based approach to dedicated crypto-asset treasury companies stems not from data availability but from the requirement of correct identification. In entities with significant operating activities, the financing structure of the company is not identical to the financing structure of the purchase. In the year in which it acquired crypto assets (2021), Tesla did not issue shares, and its operating cash flows amounted to USD 11.5 billion against an outlay of USD 1.5 billion. The aggregate financing structure for 2020–2021 would nevertheless point to equity, because USD 12.3 billion was raised from share issuance in 2020 for purposes unrelated to crypto assets. Similarly, Block acquired bitcoin in October 2020 and in February 2021 and in those years issued notes (convertible in 2020, non-convertible in May 2021) for the needs of its core business; the aggregate approach would attribute the purchases to these notes. Mechanical attribution would produce a seemingly precise but substantively wrong result, so the calculations were restricted to entities whose financing is used almost exclusively to accumulate the asset.

5.2. The accumulation phase: Strategy

Since August 2020, Strategy has acquired bitcoin in a series of purchases announced in current reports on Form 8-K (Table 6). The purchases were financed successively with internally generated funds and convertible notes (2020), convertible and secured notes and an ATM offering (2021), a term loan (2022) and, from 2023, mainly with common stock issued through ATM offerings and, from 2025, also with preferred stock; in 2025 alone, the company raised USD 25.3 billion. Debt therefore prevailed in 2020–2021, and equity issuance from 2023 onwards. This is consistent with P1 for the period as a whole but shows that the order of sources changed over time.

Table 6. Strategy: annual accumulation and evolution of financing

Year	Accumulation	Holdings at end of period	Market valuation relative to holdings (qualitative)	Main financing
2020	+70,469 BTC (USD 1.125 bn; avg. USD 15,964)	70,469 BTC (10-K)	neutral → premium	Internally generated funds (incl. liquidation of short-term investments); convertible notes due 2025 (USD 650 m, Dec)
2021	+53,922 BTC (USD 2.627 bn)	124,391 BTC (10-K)	high premium	0% convertible notes due 2027 (USD 1.05 bn), 6.125% secured notes due 2028 (USD 0.5 bn), ATM (USD 1.0 bn)
2022	+8,109 BTC net (8,813 bought, 704 sold)	132,500 BTC (10-K)	premium compression	Term loan (USD 204.7 m, Mar); ATM (USD 46.6 m); purchases of 8,813 BTC for USD 287.9 m (avg. USD 32,670); sale of 704 BTC (Dec, tax purposes)
2023	+56,650 BTC (USD 1.902 bn)	189,150 BTC (10-K)	premium recovery	ATM, USD 2.03 bn in total; purchases incl. 6,455 BTC (avg. USD 23,238), 12,333 BTC (avg. USD 28,136), 16,130 BTC (Nov), 14,620 BTC (Dec)
2024	+258,320 BTC (USD 22.07 bn)	447,470 BTC (31 Dec)	peak premium	ATM (USD 16.36 bn), convertible notes (USD 6.21 bn); '21/21' plan; inclusion in the Nasdaq-100
2025	+225,027 BTC (USD 22.47 bn)	672,497 BTC (28 Dec; 8-K)	premium → erosion	USD 25.3 bn raised: ATM (USD 16.27 bn), preferred stock STRK, STRF, STRC, STRD (USD 7.04 bn), convertible notes (USD 2.0 bn); avg. cost of holdings USD 74,997
2026 (Jan–May)	+171,209 BTC	843,706 BTC (31 May; 8-K); 762,099 BTC as of 31 Mar (10-Q)	at parity	Q1: ATM, common stock (USD 5.30 bn) and preferred stock (USD 2.07 bn); 41,002 BTC in January; 34,164 BTC for approx. USD 2.54 bn (avg. USD 74,395; 8-K of 20 Apr 2026); sale of 32 BTC (26–31 May) to pay preferred dividends; avg. cost of holdings USD 75,699, total cost USD 63.87 bn

Sources: Strategy's annual reports on Form 10-K for 2020–2025, Form 10-Q for Q1 2026 and current reports on Form 8-K of 27 Mar 2023, 28 Jun 2023, 30 Nov 2023, 27 Dec 2023, 29 Dec 2025, 5 Feb 2026, 20 Apr 2026 and 1 Jun 2026 (SEC EDGAR, CIK 0001050446; document numbers in the list of source documents). The valuation column is descriptive (the ratio of market capitalisation to the value of holdings) and is not a measurement.

Table 6 shows that Strategy's financing moved from individual issues towards an elaborate capital structure (ATM, preferred stock, convertible notes), and that the pace of accumulation increased as the available channels expanded. For the second part of P1, what matters is the company's behaviour in the market downturn. Strategy's holdings increased on a net basis, from 672,497 BTC at the end of 2025 to 843,706 BTC at the end of May 2026.

This does not mean, however, that there were no sales. On 26–31 May 2026, the company sold 32 BTC for USD 2.5 million and used the proceeds to pay dividends on preferred stock; this was its first sale since 2022. This observation is consistent with the prediction formulated in Section 4. The company retained access to share issuance, from which it raised USD 7.4 billion in the first quarter of 2026, and the sale was preceded by the obligation to pay a fixed dividend, i.e. a rigid obligation arising from preferred stock. The scale of this sale was marginal and not comparable with the case of MARA. The cases of Strategy and MARA thus mark the two ends of the spectrum along which the other companies in the sample are located.

5.3. The downturn phase: MARA and debt reduction

MARA provides material for the second part of P1. The sequence of events documented in EDGAR filings (Table 7) is as follows: a fall in the price of the asset with no issuance under the ATM programme since September 2025, the sale of 15,133 BTC on 4–25 March 2026, and then the repurchase of convertible notes maturing in 2030 and 2031 at a discount of approx. 9%. The repurchase took place before maturity and was therefore a voluntary decision to reduce debt, and the sale that preceded it was not forced by an obligation falling due. The sequence is consistent with the pressure mechanism described in P1 (non-discretionary payment obligations with the issuance channel closed) but does not prove compulsion.

Table 7. MARA Holdings: bitcoin sales and debt reduction in Q1 2026

Event (date)	Figures	Source document
Sale of BTC (4–25 Mar 2026)	15,133 BTC for approx. USD 1.1 bn	8-K of 26 Mar 2026
Repurchase of notes due 2030 and 2031 (30–31 Mar 2026)	Total principal of approx. USD 1.0 bn for approx. USD 912.8 m (discount of approx. 9%)	8-K of 26 Mar 2026
Total convertible debt	Decrease from USD 3.298 bn to USD 2.297 bn	8-K of 26 Mar 2026
Full Q1 2026	20,880 BTC sold (avg. price USD 70,137); 2,247 BTC mined; no purchases; no ATM issuance since Sep 2025	Shareholder letter for Q1 2026 (8-K of 11 May 2026)
Holdings as of 31 Mar 2026	35,303 BTC (approx. USD 2.4 bn), incl. 9,995 BTC receivable	10-Q for Q1 2026
Q1 2026 result	Net loss of USD 1.3 bn, incl. USD 1.0 bn from fair value remeasurement	Shareholder letter for Q1 2026

Sources: 8-K of 26 Mar 2026; shareholder letter for Q1 2026 (8-K of 11 May 2026); 10-Q for Q1 2026 (SEC EDGAR, CIK 0001507605).

Companies with a different liability structure behaved differently. Despite its bitcoin-secured convertible notes (USD 486.5 million, maturing in 2030), Twenty One held its position: in the first quarter of 2026, its holdings decreased by 1 BTC. This indicates that what matters is not debt as such but its scale relative to holdings and the company's access to new issuance.

Completing the picture and serving as a comparison group that limits survivorship bias, are the companies that reduced or exited their positions in the market downturn. Between 29 December 2025 and 6 February 2026, Genius Group sold 96 BTC and then the remaining 84 BTC, using the proceeds to repay a bitcoin-secured loan; in total, it repaid USD 8.5 million of debt. In the first quarter of 2026, Empery Digital sold 1,092 BTC (USD 74.7 million) and on 31 March 2026 fully repaid a bitcoin-secured loan in the form of a repurchase agreement, retaining 2,989 BTC. Both cases combine sales with debt service, which is consistent with the second part of P1. An earlier case of selling without debt pressure is Tesla, which in 2022 converted approx. 75% of its holdings into cash, citing the maximisation of liquidity under uncertainty. This behaviour is consistent with a reversible investment motive (Section 5.6) rather than with the debt mechanism, and it shows that the absence of non-discretionary payment obligations reduces selling pressure but does not rule out sales. Sources: Genius Group current reports (6-K of 6 Feb 2026 and 1 Apr 2026); Empery Digital Form 10-Q for Q1 2026; Tesla Form 10-Q for Q2 2022.

5.4. Miners: operational sales versus debt reduction

Mining companies form a group in which sales of crypto assets differ in nature from MARA's debt reduction, which refines the second part of P1. Riot Platforms, CleanSpark and Hut 8 regularly sell part of their current production to cover operating costs and capital expenditure, which is part of the mining business model rather than a response to debt pressure. During the market downturn, Riot declared that it sold bitcoin to fund the expansion of data centres (including for artificial intelligence), not to service its obligations. The distinction is important: not every sale in a downturn indicates debt pressure, because for miners current supply reflects the structure of their business. At the same time, none of these companies, despite their indebtedness, sold off its holdings on a scale comparable to that of MARA. This indicates that what matters is not indebtedness as such but its scale and the company's access to other sources of funds.

5.5. The group accumulating ether and solana

From 2025, the treasury model expanded beyond bitcoin: SharpLink built a position in ether, Forward Industries in solana, and BitMine Immersion Technologies became the largest corporate holder of ether (4,473,459 ETH as of 28 February 2026). The group supports the first part of P1: purchases were financed with equity issuance (ATM, PIPE,

in-kind contributions), and debt does not exceed 3% of funds raised in any of these companies (Table 5). BitMine is a case that refines the boundaries of the second part of P1. It continued to accumulate during the crash, raising USD 10.4 billion from share issuance between September 2025 and February 2026, which shows that equity financing need not lead to a suspension of purchases if the company retains access to issuance. In June 2026, BitMine issued 3.5 million perpetual preferred shares with a 9.5% dividend on a stated amount of USD 100 per share (offering price USD 80, gross proceeds USD 280 million), similar to Strategy's instruments. This channel may partly decouple the pace of accumulation from the valuation of common stock, but at the cost of rigid dividend obligations. The other companies in the group behaved differently. In the first quarter of 2026, SharpLink made no purchases or sales, and the increase in its holdings came from staking rewards. Forward suspended net purchases and in March 2026 took out a loan from Galaxy Digital secured by fwdSOL tokens (USD 40 million), which it used to repurchase shares at a price below net asset value. Both cases distinguish the loss of the market premium, which was accompanied by a halt in accumulation, from debt pressure, which in the sample was associated with asset sales.

5.6. Declared motives

The selection of companies for Table 8 was purposive and guided by the aim of comparing declarations from different periods. Three criteria were applied: the existence of an explicit, dated justification of the strategy in a document filed with the SEC, not only in a press release; membership in different classes of the typology from Section 3; and joint coverage of the entire study period. The summary covers five entities and six declarations: for MicroStrategy, which has operated as Strategy since 2025, the declarations of 2020–2021 and of 2025–2026 are included separately. The coding uses the five categories from Section 2.4, and a single declaration may receive more than one code.

Table 8. Declared motives for holding crypto assets: coding of declarations

Company	Period of declaration	Declared motive (paraphrase; code)	Source
MicroStrategy	2020–2021	Bitcoin as the primary treasury reserve asset under the Treasury Reserve Policy; protection of the value of reserves relative to cash [PRECAUTIONARY, INVESTMENT]	8-K of 14 Sep 2020; correspondence with the SEC (2021)
Tesla	2021–2022	Investment of USD 1.50 bn in bitcoin; long-term potential of digital assets as an investment and a 'liquid alternative to cash,' with the option of increasing or decreasing the position according to business needs [INVESTMENT, PRECAUTIONARY; reversible position]	10-K for 2020; 10-Q for Q1 2022 (Note 3); 10-K for 2022

Company	Period of declaration	Declared motive (paraphrase; code)	Source
Block (Square)	2020–2024	Purchase justified by the belief that cryptocurrencies are an instrument of 'economic empowerment,' consistent with the company's mission; holdings declared as a long-term investment and as support for bitcoin trading in Cash App; from 2024, a programme reinvesting 10% of monthly gross profit from bitcoin [SIGNALING, TRANSACTIONS (partly), INVESTMENT]	8-K of 5 Nov 2020 (Ex. 99.1); 10-K for 2020; 10-K for 2024
Semler Scientific	2024	Board of directors adopted bitcoin as the primary treasury reserve asset; rationale: a reliable store of value, a 'reasonable inflation hedge' and a safe haven, the best use of surplus cash; reference to institutionalisation (ETFs) [PRECAUTIONARY, INVESTMENT, SIGNALLING]	8-K of 28 May 2024 (Ex. 99.1)
Strategy	2025–2026	Bitcoin as a 'compelling long-term treasury reserve asset' owing to its scarcity, durability and global liquidity; at the same time, reporting of BTC Yield (9.4%) and BTC $ Gain (USD 4.97 bn) for 2026 year to date (as of the report date) as measures of business success [BUSINESS]	10-K for 2025; 8-K of 5 May 2026
MARA	2024–2026	HODL strategy (retention of mined bitcoin) combined with active management of holdings: BTC loans generating interest income [BUSINESS]	10-K for 2025; shareholder letter for Q1 2026

Source: own elaboration based on SEC EDGAR filings (document numbers in the list of source documents).

The summary makes it possible to trace four coding patterns. MicroStrategy's declarations of 2020–2021 are the clearest example of the precautionary motive: bitcoin is presented as the primary treasury reserve asset, and the justification remains the protection of the value of cash holdings. Tesla's declaration was coded primarily as the investment motive, because it refers to the investment of surplus funds and to flexibility in deploying them, which is consistent with the later sale of most of the position. Block combines the signalling motive with a partly transactional one: the purchase is justified by the company's mission, and the holdings support bitcoin trading in its payment app, which makes it the only case in the summary close to the transactions motive. A separate case is Semler Scientific, which illustrates the mimetic isomorphism described in Section 2.5: a small medical company adopts a model explicitly patterned on MicroStrategy, and its declaration refers to a board resolution changing its treasury policy. The declarations of Strategy of 2025–2026 and of MARA, by contrast, represent the asset-accumulation business motive: the measure of success becomes the growth of the asset per share and, in the case of MARA, the combination of retaining mined bitcoin with income from lending crypto assets.

In numerical terms, the summary includes six dated justifications from five entities: three of them begin in 2020–2021 and three in 2024–2026. The first group is dominated by the language of reserves, of protecting the value of cash and of investing surplus funds, the second by the language of growth in the asset per share and of income from the holdings. Given the number of observations, the summary is descriptive and does not provide a basis for inference about the distribution of motives in the sample as a whole.

The picture is consistent with P2 in two respects, but to different degrees. First, none of the declarations justifies purchases by transaction needs or by a liquidity buffer in the classical sense; Block is a partial exception. Three declarations did receive the precautionary code (MicroStrategy of 2020–2021, Tesla and Semler Scientific), but in each of them it refers to surplus cash rather than to a liquidity reserve for operating needs, and it occurs together with the investment code. In this respect, P2 is therefore only partly supported. Second, the asset-accumulation business motive appears more often in the later declarations of the selected entities: the declarations of 2020–2021 use the language of reserves (reserve asset, protection of purchasing power, diversification of cash), whereas the declarations of Strategy and MARA of 2024–2026 report the accumulation of the asset per share or income from holdings as a measure of success. Because the two periods involve mostly different firms making the disclosures, the summary does not make it possible to separate a change in the motives of the same firms from a change in the composition of the population. A within-entity change can be traced only for MicroStrategy/Strategy: from bitcoin as the primary reserve asset under a treasury policy (2020–2021) to the reporting of BTC Yield and BTC $ Gain as measures of business success (2025–2026). The conclusion therefore concerns a change in the pattern of declarations in the selected material, not an evolution of motives in the population as a whole. Declarations are confronted with behaviour in the analysis in Sections 5.2 and 5.3; this confrontation reveals the clearest divergence in the case of MARA, whose declared HODL strategy was accompanied by the sale of 20,880 BTC in the first quarter of 2026 (Table 7).

5.7. Evolution of the practice and evolution of perceptions

The source material makes it possible to distinguish five phases. Experiment (2020–2021): MicroStrategy, Tesla, Block. Retreat (2022): the bear market and Tesla's sale of approx. 75% of its position. Normalisation (2023–2024): the return of accumulation, the first adoption in the sample outside the technology sector (Semler Scientific) and Strategy's inclusion in the Nasdaq-100 index. Expansion (from early 2025): a wave of new entities, the extension to ether and solana, and record financing by Strategy (USD 25.3 billion in 2025 as a whole). Verification (from October 2025): the price crash, MARA's debt reduction, consolidation (the acquisition of Semler Scientific by Strive in January 2026) and uncompleted transactions (BSTR), with no withdrawals from the strategy among the dedicated crypto-asset treasury companies. This sequence corresponds to the predictions

of the theory in Section 2.5: expansion was accompanied by imitation around a visible champion, while accounting and index normalisation was normative in nature. The crash did not reverse institutionalisation but revealed differences between financing models.

The scale of the expansion phase is reflected in the composition of the sample itself: six of the eighteen entities analysed (Twenty One, Strive, BitMine, SharpLink, Forward Industries and Trump Media) adopted a crypto-asset accumulation strategy only in 2025, so one third of the sample adopted the strategy within a single year. In the same period, the practice extended beyond bitcoin to ether and solana, which means diffusion not only in the number of entities but also in the type of asset accumulated. The stress-testing phase, by contrast, brought differentiation rather than retreat. None of the dedicated crypto-asset treasury companies abandoned its strategy. Sales on a significant scale occurred at an entity burdened with convertible debt (MARA) and in the group of companies that reduced their positions, while the largest holder (Strategy) continued to accumulate, making only a marginal sale to pay dividends. Institutionalisation thus outlasted the boom, and the crash revealed internal differentiation of the models along the criterion that organises the whole study, namely the financing structure.

6. Discussion

The article addresses three research questions. On financing (RQ1): in unweighted terms, equity issuance occurs in nine of the eleven acquiring firms (Table 4) and, excluding Strategy, in eight of ten; debt, convertible or other, is in no case the sole source. In value terms, available for the six dedicated crypto-asset treasury companies, common stock including in-kind contributions accounted for 77.0% of the funds raised, preferred stock for 10.5% and debt for 12.5% (Table 5). These findings support P1 for dedicated crypto-asset treasury companies also in the sense of dominance in value terms, whereas for corporate holders and MARA they indicate only the occurrence of equity issuance (in three of the five companies), without establishing its share. On motives (RQ2): the coding of declarations (Table 8) shows that none of them justifies purchases on the grounds of a classical liquidity reserve and that the precautionary motive appears in three declarations, in each case solely with reference to surplus cash and together with the investment motive; the asset-accumulation business motive appears more often in the later declarations of the selected entities. For the core group of dedicated treasury companies, i.e. dedicated crypto-asset treasury companies, the category of a reserve therefore turns out to be of limited relevance, although a within-entity change was documented only for Strategy. On development (RQ3): the practice has passed through five distinguishable phases (Section 5.7), from experiment to verification, and the 2025–2026 crash did not reverse institutionalisation but revealed differences between financing models. In the cases examined, asset sales were associated with the rigidity of obligations and with access to capital rather than with the price level as such: MARA's debt reduction differs from the ongoing sales of production by miners

for operating purposes, which do not stem from debt pressure. Non-discretionary payment obligations and a limited ability to raise new capital may therefore increase the pressure to sell assets, but they do not force such sales.

These findings need to be related to prior research. The existing literature has mainly described the effects of holding crypto assets: Thomson (2021) documents abnormal returns around purchase announcements, Krause (2025a; 2025b) points to the structural amplification of the volatility of treasury companies, Aufiero et al. (2025) examine share-price co-movement and the direction of information flow, and Liu, Verma, amd Verma (2026) analyse the risk profile. These studies take crypto-asset holdings as given and examine their market consequences. The present study concerns an earlier stage: it shows where the funds for these holdings come from and suggests that the variation observed in those studies may originate in the financing structure. If the volatility of treasury companies is amplified, the present results suggest that the strength of this amplification may depend on the share of non-discretionary payment obligations in the financing of accumulation; this is illustrated by the cases of MARA and Strategy, which, with similar price exposure but different liability structures, behaved differently in the market downturn. Closest to the present study is the work of Papadogiannis (2025), which derives analytically the conditions under which financing increases or decreases the quantity of crypto assets per share. The results presented here provide an empirical counterpart to that work, showing which instruments were actually used and in what proportions. With respect to the pecking-order theory (Myers, Majluf, 1984), the results for dedicated crypto-asset treasury companies point to a reversal of the order: equity issuance is the dominant source here, not the last resort.

The findings have practical implications. For management and investors, it is important to distinguish models by their liability structure: leverage, which accelerates accumulation in an upswing, may increase selling pressure in a downturn. For regulators, disclosures that distinguish a reserve from a business model and the monitoring of non-discretionary payment obligations are important. The BSTR case also shows that industry trackers may attribute holdings to entities that do not yet hold them, which argues for basing analyses on periodic reports. In Poland, the practice is marginal, but with the implementation of the MiCA regulation some domestic companies may take similar steps, which makes the lessons from the U.S. market relevant to Polish readers as well.

The study has limitations concerning the sample and the inference. The sample is small (18 entities), and the value of holdings is highly concentrated in a single entity, although the analysis covers all four classes, from dedicated crypto-asset treasury companies through corporate holders to miners and exchanges, as well as entities accumulating ether and solana. The selection was purposive and included the largest entities rather than all those above the size threshold, so the results are not representative of the whole population. Selection based on holdings as of the date on which the trackers were accessed omits companies that abandoned the strategy earlier; survivorship bias was reduced by discussing the group of companies that reduced their positions separately (Section 5.3), but it was not eliminated. The inference is qualitative rather than conclusive: consistency of observations with the predicted mechanism does not prove a causal relationship, especially as financing structures were not assigned to companies

exogenously. Motives were examined only at the level of declarations, and the coding covered the five entities meeting the criteria set out in Section 5.6, not the whole sample. The analysis of financing channels covers the eleven acquiring firms and omits purchases made by the other miners and the exchanges (Section 5.1). Data for 2026 come from quarterly reports, which are not audited.

A separate group of limitations concerns measurement. Because money is fungible, the attribution of financing sources to purchases remains a reasoned approximation. It was carried out at the firm-year level (Table A1) rather than for individual transactions, which limits the number of ambiguous cases but also the granularity of the result. The value-based approach covers the six dedicated crypto-asset treasury companies; it was not applied to corporate holders and MARA, because for them the financing structure of the company is not identical to the financing structure of purchases. Some proceeds are reported in cash flow statements net of issuance costs, which slightly understates their share of the total. Nor was the sensitivity of the sample composition to the adopted criteria (the USD 100 million threshold, the threshold of 5% of total assets, the valuation date of holdings) formally examined; given the high volatility of crypto-asset prices, the composition of the sample may depend on when the data were accessed. Finally, the article documents financing channels but does not formally test whether issuance took place during periods of share overvaluation. A natural direction for further research is a formal analysis of this relationship in the spirit of market timing theory (Stein, 1996; Baker, Wurgler, 2002). It would require constructing, for each company and quarter, the ratio of enterprise value (market capitalisation plus net debt) to the fair value of holdings, i.e. a variant of the mNAV ratio, and examining, with rank correlation or a panel model, whether issuance intensified when the valuation was above parity.

7. Conclusions

The contribution of the article is the empirical reconstruction of the link between the asset side of the balance sheet (crypto-asset acquisitions) and the liability side (financing instruments) for a purposive sample of the largest holders, based on documents filed with the SEC. This complements studies analysing the effects of holding crypto assets and studies modelling financing formally. The second contribution is the use of the 2025–2026 crash as a real-world stress episode of the resilience of different financing structures, although this is not a natural experiment, because financing structures were not assigned to companies exogenously. The article also illustrates that process tracing on a purposive sample makes it possible to organise phenomena that are too new and too concentrated for econometric inference.

The study leads to three main findings. First, equity issuance is the most frequent source of financing for crypto-asset purchases by the companies analysed and, in dedicated crypto-asset treasury companies, also the dominant source in value terms (87.5% of the funds raised, including preferred stock); debt occurs only as a supplement to equity issuance. Second,

in the market downturn, asset sales combined with debt reduction occurred at a company with non-discretionary payment obligations and a limited access to new issuance (MARA) and in the group of companies that reduced their positions, whereas equity-financed companies held their positions or, while retaining access to issuance, continued to buy. This is an association consistent with the mechanism described in P1, not proof of a causal relationship: non-discretionary payment obligations combined with limited access to new capital may increase the pressure to sell assets, but they do not force such sales. Third, the asset-accumulation business motive appears more often than the precautionary motive in the later declarations of the selected entities, which makes the category of a reserve of limited relevance for the core group of dedicated treasury companies; a within-entity change was documented for Strategy. Linking these three dimensions in a single study based on source documents constitutes the article's contribution to the existing body of knowledge.

References

Aufiero S., Briola A., Salarin T., Caccioli F., Bartolucci S., Aste T. (2025), *Cryptocurrencies in the Balance Sheet: Insights from (Micro)Strategy – Bitcoin Interactions*, https://doi.org/10.48550/arXiv.2505.14655

Baker M., Wurgler J. (2002), *Market Timing and Capital Structure*, "Journal of Finance", vol. 57(1), pp. 1–32, https://doi.org/10.1111/1540-6261.00414

Bates T., Kahle K., Stulz R. (2009), *Why Do* U.S. *Firms Hold So Much More Cash than They Used To?*, "Journal of Finance", vol. 64(5), pp. 1985–2021, https://doi.org/10.1111/j.1540-6261.2009.01492.x

Beach D., Pedersen R.B. (2013), *Process-Tracing Methods: Foundations and Guidelines*, University of Michigan Press, Ann Arbor, https://doi.org/10.3998/mpub.10072208

DiMaggio P., Powell W. (1983), *The Iron Cage Revisited: Institutional Isomorphism and Collective Rationality in Organizational Fields*, "American Sociological Review", vol. 48(2), pp. 147–160, https://doi.org/10.2307/2095101

Financial Accounting Standards Board (2023), *Intangibles – Goodwill and Other – Crypto Assets (Subtopic 350–60). Accounting Standards Update No. 2023–08*, Norwalk, https://www.fasb.org/page/ShowPdf?path=ASU%202023-08.pdf&title=ACCOUNTING%20STANDARDS%20UPDATE%202023-08%E2%80%94Intangibles%E2%80%94Goodwill%20and%20Other%E2%80%94Crypto%20Assets%20(Subtopic%20350-60) (accessed: 27.10.2026).

George A.L., Bennett A. (2005), *Case Studies and Theory Development in the Social Sciences*, MIT Press, Cambridge.

Jensen M. (1986), *Agency Costs of Free Cash Flow, Corporate Finance, and Takeovers*, "American Economic Review", vol. 76(2), pp. 323–329.

Jensen M., Meckling W. (1976), *Theory of the firm: Managerial behavior, agency costs and ownership structure*, "Journal of Financial Economics", vol. 3(4), pp. 305–360, https://doi.org/10.1016/0304-405X(76)90026-X

Kazemikhasragh A. (2025), *Corporate Bitcoin Holdings: A Cross-Sectional Analysis of Sectoral Risk, Regulatory Influence, and Decentralized Governance*, "Journal of Risk and Financial Management", vol. 18(11), 642, https://doi.org/10.3390/jrfm18110642

Keynes J.M. (1936), *The General Theory of Employment, Interest and Money*, Macmillan, London.

Kraus A., Litzenberger R. (1973), *A State-Preference Model of Optimal Financial Leverage*, "Journal of Finance", vol. 28(4), pp. 911–922, https://doi.org/10.1111/j.1540-6261.1973.tb01415.x
Krause D. (2025a), *A Fool's Errand? The Case Against Holding Bitcoin in a Corporate Treasury*, "SSRN Working Paper", no. 5080327, https://doi.org/10.2139/ssrn.5080327
Krause D. (2025b), *Digital Asset Treasuries as Volatility Amplifiers: Empirical Evidence from Corporate Bitcoin Adoption*, "SSRN Working Paper", no. 5739049, https://doi.org/10.2139/ssrn.5739049
Liu C.Z., Verma P., Verma R. (2026), *The risk-return dynamics of corporate cryptocurrency adoption: evidence from bitcoin holdings*, "Decisions in Economics and Finance", https://doi.org/10.1007/s10203-026-00575-8
Meister B.K. (2025), *Through the Looking Glass: Bitcoin Treasury Companies*, https://doi.org/10.48550/arXiv.2507.14910
Myers S. (1984), *The Capital Structure Puzzle*, "Journal of Finance", vol. 39(3), pp. 574–592, https://doi.org/10.1111/j.1540-6261.1984.tb03646.x
Myers S., Majluf N. (1984), *Corporate financing and investment decisions when firms have information that investors do not have*, "Journal of Financial Economics", vol. 13(2), pp. 187–221, https://doi.org/10.1016/0304-405X(84)90023-0
Opler T., Pinkowitz L., Stulz R., Williamson R. (1999), *The Determinants and implications of corporate cash holdings*, "Journal of Financial Economics", vol. 52(1), pp. 3–46, https://doi.org/10.1016/S0304-405X(99)00003-3
Papadogiannis A. (2025), *Crypto Treasury Companies: Financing Dynamics, Accretion Conditions, and Systemic Risk*, "SSRN Working Paper", no. 5487486, https://doi.org/10.2139/ssrn.5487486
Phillips P.J., Pohl G. (2023), *MicroStrategy, Bitcoin, Corporate Finance, Shareholder Value*, "SSRN Working Paper", no. 4595603, https://doi.org/10.2139/ssrn.4595603
Rogers E.M. (2003), *Diffusion of Innovations*, Free Press, New York.
Shleifer A., Vishny R. (1992), *Liquidation Values and Debt Capacity: A Market Equilibrium Approach*, "Journal of Finance", vol. 47(4), pp. 1343–1366, https://doi.org/10.1111/j.1540-6261.1992.tb04661.x
Stein J. (1996), *Rational Capital Budgeting in an Irrational World*, "Journal of Business", vol. 69(4), pp. 429–455, https://doi.org/10.1086/209699
Thomson L. (2021), *Abnormal Returns of Corporations Adopting Bitcoin as a Treasury Asset: An Event Study*, "SSRN Working Paper", no. 5341421, https://doi.org/10.2139/ssrn.5341421
Wen H. (2025), *How Digital Asset Treasury Companies Can Survive Bear Markets: The Case of Strategy and Bitcoin*, https://doi.org/10.48550/arXiv.2511.01135

Source documents and data

American Bitcoin Corp., *CIK 0001755953:10-Q for Q1 2026 (0001193125–26–209008)*.
BitMine Immersion Technologies, Inc., *CIK 0001829311:10-K for the fiscal year ended 31 Aug 2025 (0001493152–25–024679)*; *10-Q for the period ended 28 Feb 2026 (0001493152–26–016560)*; *8-K of 30 Jun 2025 (0001683168–25–004802)*; *424B5 prospectus of 5 Jun 2026 (0001493152–26–027521)*; *8-K of 10 Jun 2026 (0001493152–26–028140)*.
Block, Inc. (formerly Square, Inc.), *CIK 0001512673*: 8-*K of 10 Nov 2020 (0001193125–20–289591)*; *8-K of 5 Nov 2020 (0001193125–20–286821)*; *10-K for 2020 (0001512673–21–000008)*; *10-K for 2021 (0001628280–22–003825)*; *8-K of 9 May 2024 (0001193125–24–135259)*; *10-K for 2024 (0001628280–25–007376)*; *8-K of 18 Aug 2025 (0001193125–25–182661)*; *10-K for 2025 (0001628280–26–012254)*; *10-Q for Q1 2026 (0001628280–26–032200)*.
BSTR Holdings, Inc. (*document filed after the study period), CIK 0002083583*: 8-*K of 20 Aug 2026, Ex.* 99.1 *(0001213900–26–092250)*.

Bullish, *CIK 0001872195: 6-K of 14 May 2026 (0001437749–26–016869)*.
CleanSpark, Inc., *CIK 0000827876:10-Q for the period ended 31 Mar 2026 (0001193125–26–217036)*.
Coinbase Global, Inc., *CIK 0001679788:10-Q for Q1 2026 (0001679788–26–000054)*.
Corporate holdings trackers used only to identify entities: Bitcointreasuries.net*, CoinGecko, DefiLlama, The Block, HODL15Capital (accessed June 2026)*.
Empery Digital Inc., *CIK 0001829794:10-Q for Q1 2026 (0001683168–26–003608)*.
Forward Industries, Inc., *CIK 0000038264:10-K for the fiscal year ended 30 Sep 2025 (0001683168–25–009068)*; *10-Q for the period ended 31 Mar 2026 (0001683168–26–003917)*; *8-K of 8 Sep 2025 (0001683168–25–006734)*; *8-K of 19 Mar 2026 (0001683168–26–001997)*.
Galaxy Digital Inc., *CIK 0001859392:10-Q for Q1 2026 (0001859392–26–000054)*.
Genius Group Ltd, *CIK 0001847806: 6-K of 6 Feb 2026 (0001493152–26–005456)*; *6-K of 1 Apr 2026 (0001493152–26–014525)*.
Hut 8 Corp., *CIK 0001964789:10-Q for Q1 2026 (0001104659–26–055891)*.
MARA Holdings, Inc., *CIK 0001507605:10-K for 2021 (0001493152–22–006446)*; *10-K for 2025 (0001507605–26–000007)*; *10-Q for Q1 2026 (0001507605–26–000016)*; *424B5 prospectus of 14 Jan 2021 (0001493152–21–001087)*; *8-K of 26 Jan 2021 (0001493152–21–001821)*; *8-K of 20 Nov 2024 (0001493152–24–047078)*; *8-K of 24 Jul 2025 (0000950142–25–001993)*; *8-K of 26 Mar 2026 (0000950142–26–000873)*; *8-K of 11 May 2026, shareholder letter for Q1 2026 (0001507605–26–000014)*.
Riot Platforms, Inc., *CIK 0001167419: 8-K of 13 Dec 2024 (0001558370–24–016217); 10-Q for Q1 2026 (0001104659–26–053120)*.
Semler Scientific, Inc., *CIK 0001554859:10-K for 2024 (0001554859–25–000011)*; *10-Q for Q3 2025 (0001554859–25–000061)*; *8-K of 28 May 2024 (0001554859–24–000020)*; *8-K of 26 Aug 2024 (0001104659–24–092635)*; *8-K of 24 Jan 2025 (0001104659–25–005782)*.
SharpLink, Inc., *CIK 0001981535:10-K for 2025 (0001493152–26–009214)*; *10-Q for Q1 2026 (0001493152–26–021981)*; *8-K of 30 May 2025 (0001641172–25–013081)*; *8-K of 11 May 2026 (0001493152–26–022140)*.
Strategy Inc. (formerly MicroStrategy), *CIK 0001050446:10-K for 2020 (0001564590–21–005783)*; *10-K for 2021 (0001564590–22–005287)*; *10-K for 2022 (0001564590–23–002012)*; *10-K for 2023 (0000950170–24–015847)*; *10-K for 2024 (0000950170–25–021814)*; *10-K for 2025 (0001050446–26–000020)*; *10-Q for Q1 2026 (0001050446–26–000031)*; *8-K of 11 Aug 2020 (0001193125–20–215604)*; *8-K of 14 Sep 2020 (0001193125–20–244732)*; *8-K of 11 Dec 2020 (0001193125–20–315971)*; *8-K of 14 Jun 2021 (0001193125–21–189600)*; *8-K of 29 Mar 2022 (0001193125–22–087494)*; *8-K of 27 Mar 2023 (0001193125–23–079839)*; *8-K of 28 Jun 2023 (0001193125–23–176793)*; *8-K of 30 Nov 2023 (0001193125–23–285756)*; *8-K of 27 Dec 2023 (0001193125–23–303488)*; *8-K of 25 Nov 2024 (0001193125–24–264733)*; *8-K of 24 Feb 2025 (0000950170–25–025233)*; *8-K of 29 Dec 2025 (0001193125–25–332296)*; *8-K of 12 Jan 2026 (0001193125–26–009811)*; *8-K of 5 Feb 2026 (0001050446–26–000012)*; *8-K of 20 Apr 2026 (0001193125–26–162756)*; *8-K of 5 May 2026 (0001050446–26–000024)*; *8-K of 1 Jun 2026 (0001193125–26–249768)*; *correspondence with the SEC (CORRESP) of 22 Oct 2021 (0001193125–21–305105)*; *correspondence with the SEC (CORRESP) of 16 Dec 2021 (0001193125–21–359249).*
Strive, Inc., *CIK 0001920406:10-K for 2025 (0001628280–26–019879)*; *10-Q for Q1 2026 (0001628280–26–034805)*; *8-K of 22 Sep 2025 (0000950103–25–011928)*; *8-K of 13 Jan 2026 (0001628280–26–001928).*

Tesla, Inc., *CIK 0001318605: 8-K of 10 Dec 2020 (0001564590–20–056725); 10-K for 2020 (0001564590–21–004599)*; *10-Q for Q1 2022 (0000950170–22–006034)*; *10-Q for Q2 2022 (0000950170–22–012936)*; *10-K for 2022 (0000950170–23–001409)*; *10-Q for Q1 2026 (0001628280–26–026673)*.

The supplementary data file contains the holdings in Table 1, the cash flow statement items used in Table 5, the criteria in Table A1 and the list of documents with accession numbers.

Trump Media & Technology Group Corp., *CIK 0001849635:10-K for 2025 (0001140361–26–007174)*; *10-Q for Q1 2026 (0001140361–26–020229)*; *8-K of 27 May 2025 (0001140361–25–020420)*; *8-K of 26 Aug 2025 (0001140361–25–032615)*.

Twenty One Capital, Inc., *CIK 0002070457:10-K for 2025 (0001213900–26–037460)*; *10-Q for Q1 2026 (0001213900–26–055938)*; *424B3 prospectus of 7 Apr 2026 (0001213900–26–040725).*

Appendix. Results of applying the attribution rule

Table A1 presents the results of applying the attribution rule described in Section 4 to the 26 firm-years in which the acquiring firms purchased crypto assets. In all cases, at least two criteria were met: three in 17 cases and two in nine; there were no unattributed cases.

Table A1. Attribution of financing sources for crypto-asset acquisitions by firm-year

Company	Period	Purchases (USD m)	Attributed channels	(1) Declaration	(2) Issuance within 90-day window	(3) Consistency with cash flows	Result
Strategy	2020	1,125.0	internally generated funds; convertible notes	yes (8-K of 11 Aug 2020; 8-K of 11 Dec 2020)	yes (note issue 11 Dec 2020, purchases in Dec 2020)	yes (notes 650.0 + internally generated funds)	3/3
Strategy	2021	2,626.5	convertible and secured notes; ATM	yes (8-K of 14 Jun 2021)	yes (issuance in 2021 before purchases)	yes (1,050.0 + 500.0 + 1,000.0)	3/3
Strategy	2022	287.9	term loan; ATM	yes (8-K of 29 Mar 2022)	yes (loan in Mar 2022)	yes (204.7 + 46.6)	3/3
Strategy	2023	1,902.3	ATM	no (8-K of 30 Nov 2023 discloses purchases and ATM proceeds without linking them)	yes (share sales in the same period)	yes (2,029.2)	2/3
Strategy	2024	22,072.8	ATM; convertible notes	yes (8-K of 25 Nov 2024)	yes (issuance in the same week as purchases)	yes (16,363.0 + 6,213.8)	3/3
Strategy	2025	22,467.1	ATM; preferred stock; convertible notes	yes (8-K of 24 Feb 2025)	yes (issuance before purchases)	yes (16,272.0 + 7,036.1 + 2,000.0)	3/3
Strategy	Q1 2026	7,251.1	ATM (common and preferred stock)	yes (8-K of 12 Jan 2026)	yes (share sales in the same week)	yes (5,298.6 + 2,070.0)	3/3
Twenty One	2025	713.2	PIPE; convertible notes	yes (424B3 of 7 Apr 2026)	yes (settlement at the merger, Dec 2025)	yes (311.8 + 438.0 + 82.3)	3/3

Company	Period	Purchases (USD m)	Attributed channels	(1) Declaration	(2) Issuance within 90-day window	(3) Consistency with cash flows	Result
Strive	Sep–Dec 2025	855.0	PIPE (shares, warrants); preferred stock	no (8-K of 22 Sep 2025 discloses the purchase of 5,816 BTC without identifying the source of funds)	yes (PIPE closing 12 Sep 2025)	yes (859.9 + 161.2)	2/3
Strive	Q1 2026	77.3	ATM (common and preferred stock)	no (no declaration in the documents reviewed)	yes (share sales in the quarter)	yes (95.0 + 129.8)	2/3
BitMine	Jun–Aug 2025	7,433.1	ATM; PIPE	yes (8-K of 30 Jun 2025)	yes (PIPE of 30 Jun 2025, ATM from Jul 2025)	yes (7,717.8 + 230.3)	3/3
BitMine	Sep 2025–Feb 2026	9,537.0	ATM; warrants	no (no declaration in the documents reviewed)	yes (share sales in the period)	yes (10,068.9 + 361.8)	2/3
Sharp-Link	2025	2,952.5	PIPE; ATM	yes (8-K of 30 May 2025)	yes (PIPE of 30 May 2025)	yes (983.1 + 2,147.1)	3/3
Forward	Sep 2025	900.8	PIPE	yes (8-K of 8 Sep 2025)	yes (PIPE closing 11 Sep 2025)	yes (900.1)	3/3
Semler	2024	189.7	internally generated funds; ATM	yes (8-K of 26 Aug 2024)	yes (ATM from 2024)	yes (119.6 + internally generated funds)	3/3
Semler	Jan–Sep 2025	289.2	convertible notes; ATM; loan	yes (8-K of 24 Jan 2025)	yes (note issue Jan 2025)	yes (100.0 + 215.0 + 20.0)	3/3
Trump Media	2025	1,436.0	PIPE (shares); convertible notes	yes (8-K of 27 May 2025)	yes (closing 30 May 2025, purchases in Jul 2025)	yes (1,395.3 + 960.0)	3/3
MARA	2021	150.0	ATM	no (8-K of 26 Jan 2021 refers to a press article without identifying the source of funds)	yes (ATM prospectus (424B5) of 14 Jan 2021)	yes (324.8 from shares; notes only in Nov 2021)	2/3

Company	Period	Purchases (USD m)	Attributed channels	(1) Declaration	(2) Issuance within 90-day window	(3) Consistency with cash flows	Result
MARA	2024	1,946.9	convertible notes; ATM	yes (8-K of 20 Nov 2024)	yes (issuance before purchases)	yes (2,178.7 + 1,851.6)	3/3
MARA	2025	473.7	convertible notes; ATM	yes (8-K of 24 Jul 2025)	yes (note issue Jul 2025)	yes (1,014.0 + 568.6)	3/3
Tesla	2021	1,500.0	internally generated funds	yes (10-K for 2020)	no (share offering completed 10 Dec 2020, within 90 days before the acquisition)	yes (no issuance in 2021; operating cash flows 11,497)	2/3
Block	2020	50.0	internally generated funds	yes (8-K of 5 Nov 2020)	yes (no issuance within 90 days before the acquisition)	yes (operating cash flows 173.1)	3/3
Block	2021	170.0	internally generated funds	yes (10-K for 2020)	no (convertible note issue 10 Nov 2020; the purchase date in February 2021 is not disclosed, so issuance within the window cannot be ruled out)	yes (operating cash flows 847.8)	2/3
Block	2024	53.9	internally generated funds	yes (10-K for 2024)	no (note issue May 2024)	yes (operating cash flows 1,707.4)	2/3
Block	2025	64.6	internally generated funds	yes (10-K for 2025)	no (note issue Aug 2025)	yes (operating cash flows 2,579.7)	2/3
Block	Q1 2026	12.6	internally generated funds	yes (10-Q for Q1 2026)	yes (no issuance since Aug 2025)	yes (operating cash flows 965.6)	3/3

Criteria: (1) a declaration of the use of proceeds for crypto-asset purchases in a document filed with the SEC; (2) issuance of the instrument within 90 days before the acquisition (for internally generated funds: no issuance in this window); (3) consistency with the cash flow statement for the same period; amounts in USD million. A channel was attributed when at least two criteria were met. In-kind contributions (Twenty One USD 3,253.2 million, Forward USD 685.4 million, SharpLink USD 122.9 million, Strive USD 8.0 million) follow directly from disclosures of non-cash transactions and do not require attribution; the same applies to the non-cash part of Trump Media's payment for CRO tokens (the company's shares, 8-K of 26 Aug 2025). The acquisition of Semler Scientific's bitcoin by Strive through the merger (Jan 2026) and Forward's exchanges of SOL for liquid staking tokens (Oct 2025–Mar 2026) were left outside the rule.
Source: own elaboration based on SEC filings (accession numbers in the supplementary data file).

An example of attribution based on three criteria is Strategy in 2024. The current report of 25 November 2024 states explicitly that the purchase of approx. 55,500 BTC for approx. USD 5.4 billion was financed with proceeds from the issuance of convertible notes and from share sales under the ATM programme; the issuance took place in the same week as the purchases, and the cash flow statement for 2024 shows USD 16.4 billion from shares and USD 6.2 billion from notes against USD 22.1 billion of outlays. Attribution based on two criteria is illustrated by Strategy in 2023: the report of 30 November 2023 discloses the purchase of 16,130 BTC for USD 593.3 million and net ATM proceeds of USD 590.9 million in the same period but does not link them explicitly. The borderline cases are the most instructive. In 2021, Tesla acquired bitcoin for USD 1.5 billion shortly after completing a share offering in December 2020, so a mechanical application of the timing criterion would point to share issuance. The declaration in the annual report and the absence of issuance in 2021, with operating cash flows of USD 11.5 billion, nevertheless point to internally generated funds. Similarly, at Block, note issues in 2020, 2021, 2024 and 2025 were close in time to purchases, but neither the documents nor the scale of operating cash flows indicates a link between them and the acquisitions.

Kryptoaktywa w bilansach spółek publicznych w USA. Źródła finansowania, motywy i rozwój zjawiska

Streszczenie: Artykuł analizuje kryptoaktywa utrzymywane w bilansach spółek publicznych notowanych w USA w okresie od sierpnia 2020 r. do czerwca 2026 r. oraz sposób finansowania ich zakupów. Postawiono trzy pytania: „Jak spółki finansują nabycie kryptoaktywów?", „Jakie motywy ich utrzymywania deklarują?" oraz „Jak rozwijało się to zjawisko?". Celem jest powiązanie strony aktywnej bilansu ze strukturą finansowania. Badanie ma charakter eksploracyjny i opiera się na dokumentach składanych do SEC (raporty 8-K, 10-K i 10-Q, prospekty emisyjne) dla celowo dobranej próby 18 podmiotów, obejmującej największych posiadaczy w czterech klasach o odmiennej logice ekonomicznej. Analizę finansowania ograniczono do 11 spółek nabywających kryptoaktywa. Zastosowano statystykę opisową, analizę deklarowanych motywów oraz porównawcze studia przypadków. Ustalenia są trojakie. Po pierwsze, emisje kapitału występują jako źródło finansowania w 9 z 11 spółek nabywających, a dług w żadnym przypadku nie jest źródłem wyłącznym. W ujęciu wartościowym, dostępnym dla sześciu spółek czysto skarbcowych, akcje zwykłe (łącznie z wkładami rzeczowymi) stanowiły 77% pozyskanych środków, akcje uprzywilejowane 10,5%, a dług 12,5%. Po drugie, zachowanie spółek w fazie spadkowej wiąże się ze strukturą zobowiązań: sprzedaż aktywów połączona z redukcją długu wystąpiła przy sztywnych zobowiązaniach i ograniczonym dostępie do emisji, a spółki finansowane kapitałem utrzymywały pozycje lub, zachowując dostęp do emisji, kontynuowały zakupy. Po trzecie, w późniejszych deklaracjach dobranych podmiotów częściej pojawia się motyw biznesowy niż ostrożnościowy, a samo zjawisko

przeszło pięć faz rozwoju, przy czym załamanie rynkowe z lat 2025–2026 nie cofnęło jego instytucjonalizacji. Wyniki wskazują na związek między strukturą finansowania a zachowaniem spółek, a nie na zależność przyczynową. Ograniczeniami badania są mała i skoncentrowana próba, jakościowy charakter wnioskowania oraz przypisywanie źródeł finansowania na poziomie spółko-roku, a nie pojedynczej transakcji.

Słowa kluczowe: kryptoaktywa, struktura kapitału, korporacyjne zasoby kryptoaktywów, teoria hierarchii źródeł finansowania