



BLOCKCHAIN AND DATA ORACLES TO DRIVE EFFICIENT CARBON MARKETS; CHAINLINK AMONG THE LEADING BENEFICIARIES

Key takeaway: *Increasing Climate Awareness among Stakeholders is driving the demand for greater carbon offsets, and limited availability of compliance markets has given way to Voluntary Carbon Markets. However, lack of transparency and standardization has dented the profiles of these markets. Blockchain-based carbon exchanges that use data oracles to facilitate measurement, reporting and verification of carbon credits provide a way forward. Players like Chainlink, KlimaDAO, and Thallo stand to benefit.*

Carbon credits have emerged as a key tool in the fight against climate change, offering a pragmatic mechanism for corporates, investors, and project developers to drive environmental action. Carbon credits create a bridge between economic activities and environmental impact, enabling a market-driven approach to reducing carbon emissions and promoting sustainable development, which is crucial for the long-term health of the planet. The strong interest in carbon trading is also reflected in the strong performance of the EU ETS, the oldest traded carbon permits. Carbon markets can be a win-win situation for all stakeholders involved:

- **Corporates:** For corporates, carbon credits provide a pathway to achieve carbon neutrality. By purchasing credits, companies can offset emissions they cannot yet eliminate, incentivizing the development of renewable energy, reforestation, and other projects that reduce greenhouse gases. This not only helps corporates meet regulatory requirements and sustainability goals but also enhances their reputation among consumers and investors increasingly concerned about environmental responsibility.
- **Investors** find value in carbon credits as they represent an emerging asset class with potential for appreciation as carbon pricing becomes more prevalent globally. Investing in carbon credits or related derivatives can yield financial returns while supporting climate-positive projects, aligning investment portfolios with environmental, social, and governance (ESG) criteria, which is a growing focus in the financial community.
- **Project developers**, particularly in developing countries, can leverage carbon credits as a financial incentive to pursue eco-friendly projects. The sale of credits provides a revenue stream that can make sustainable projects financially viable, fostering innovation in carbon reduction technologies and practices. This not only contributes to local sustainable development but also helps in the global effort to mitigate climate change.

Chart 1: 10-year Chart of EU Carbon Permits Prices, as of 7 November 2023 (EUR)

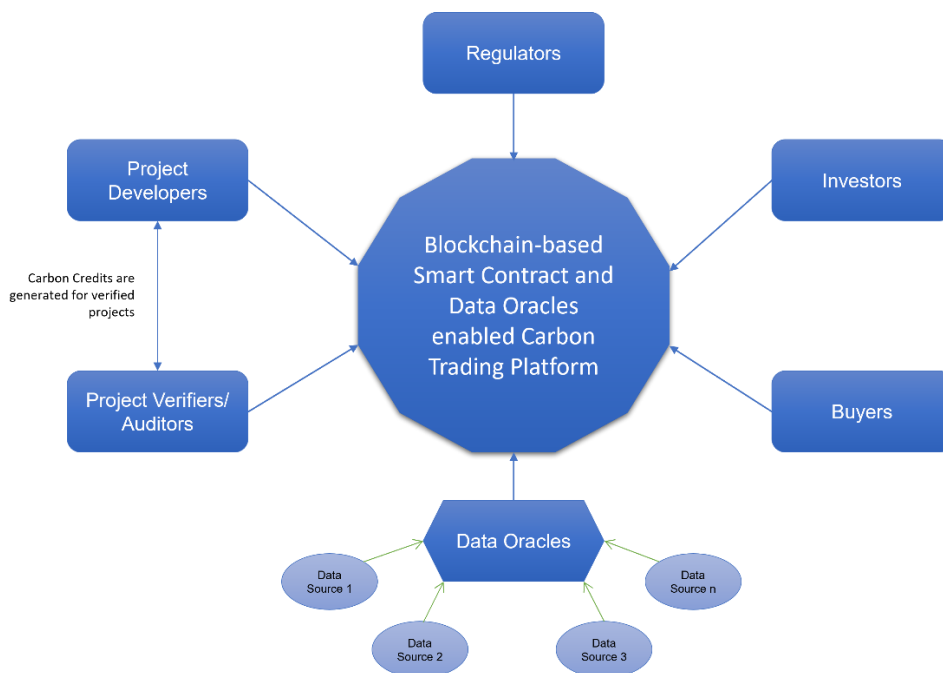


Source: Intro-act, Trading Economics

Voluntary Carbon Markets have the potential to significantly contribute to the reduction of global carbon emissions; however, they face several challenges. The rising demand for carbon offsets and lack of Compliance (Regulated Markets) such as European Union Emissions Trading System (EU ETS), and California Cap-and-Trade Program, has given rise to a number of Voluntary Carbon Markets (VCMs). VCMs, however, face significant challenges, including a lack of standardization that leads to inconsistent quality and verification of carbon credits. This inconsistency can result in market fragmentation, where credits are not universally recognized or valued. Moreover, the issue of double counting, where a single carbon offset is claimed by multiple entities, undermines the credibility of carbon reductions. Transparency is another concern, as it is often difficult for buyers to trace the impact of their investments. Additionally, the voluntary nature of VCMs can lead to lower participation rates, reducing the overall effectiveness in combating climate change.

Blockchain-based carbon exchanges that use smart contracts and data oracles can address several of the limitations of VCMs. A blockchain-based carbon trading platform or exchange that uses data oracles can significantly enhance the transparency and integrity of voluntary carbon markets. Blockchain's immutable ledger ensures that carbon credits are uniquely tagged and tracked, preventing double counting and fraud. Data oracles provide real-time, verified environmental data, ensuring that carbon offset projects deliver promised emission reductions. These data oracles make data from various sources such as satellite companies, IoT sensor providers, and environmental monitoring organizations available on the blockchain. Smart contracts automate transactions and enforce compliance with standards, simplifying the trading process. This combination fosters trust among participants, streamlines operations, and ensures that each credit represents a genuine contribution to combating climate change, addressing core challenges of verification, transparency, and accountability in voluntary carbon exchanges.

Chart 2: Illustration of Smart Contract- and- Data Oracles-enabled Carbon Trading Platforms



Source: Intro-act

Our research shows that on-chain decentralized data oracles such as Chainlink Labs are enabling several blockchain-based carbon exchanges to emerge. This trend is likely to continue as the demand for verified and transparent carbon credits continue to rise, fueled by increased pressure on corporates from stakeholders including investors, regulators, customers and even employees to become environmentally conscious. Below, we have profiled some potential winners from this trend.

- **Chainlink Labs** is the leader in decentralized oracle networks and distinguishes itself as a leader in providing critical data services for carbon markets. At its core, Chainlink facilitates secure and reliable integration of real-world data into blockchain platforms. Its robust infrastructure enables smart contracts to access off-chain environmental data, which is essential for the transparent and accurate verification of carbon emissions and offsets. By ensuring that on-chain carbon trading platforms can trust the data they rely on, Chainlink plays an instrumental role in enhancing the credibility and efficiency of carbon markets. The platform's ability to provide tamper-proof data from various sources makes it an invaluable asset for establishing trust in the voluntary carbon market's emission reductions. Chainlink's leadership in this space is paving the way for more dynamic and responsive carbon trading ecosystems, where data integrity is paramount for driving meaningful climate action. According to Dealroom, the company raised \$32.0 million in its initial coin offering in 2017.

Chart 3: The Chainlink Network Connects Various Participants of Carbon Markets



Source: Intro-act, Chainlink

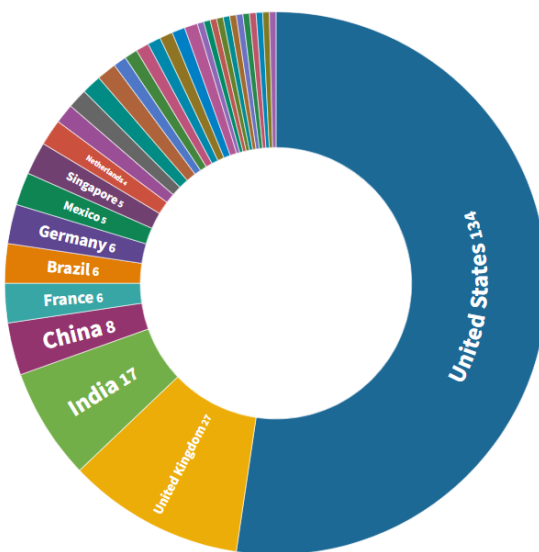
- **Klima DAO:** KlimaDAO is a decentralized autonomous organization (DAO) that aims to create a carbon-backed cryptocurrency that can drive climate action. KlimaDAO leverages Web3 technologies to enable transparent and efficient carbon trading on the blockchain. **KlimaDAO uses Chainlink's decentralized oracles to access verified carbon data from multiple sources and issue carbon credits as ERC-20 tokens.** KlimaDAO's native token, KLIMA, is backed by a basket of carbon assets that represent real-world emissions reductions. KlimaDAO's vision is to embed the cost of carbon into the economic system and reward those who participate in activism for the climate. The company claims that it holds 17.6 million+ tonnes of carbon and more than 100,000 members hold the \$KLMA token. According to Dealroom, the company raised \$17.0 million in its seed round in September 2021.
- **Thallo:** Thallo is an innovative blockchain-based platform revolutionizing the voluntary carbon market. It leverages the power of decentralized finance (DeFi) and data oracles to provide a transparent, efficient, and accessible carbon trading exchange. The platform ensures the integrity and traceability of carbon credits by using blockchain's immutable ledger, allowing for the accurate tracking of carbon offset projects from inception to retirement. By integrating data oracles, Thallo guarantees that the environmental impact data is real-time and verifiable, bolstering trust among buyers and sellers. According to its website, the platform has bridged 51,174 tonnes of carbon so far. According to Dealroom, Thallo raised \$2.5 million in its seed round in November 2022.

FINTECH NEWS

INDUSTRY TRENDS

With China playing catchup with the U.S., here are the top countries for fintech in 2023. In 2023, the United States leads the global financial technology (fintech) industry, housing the majority of the world's most valuable fintech companies, as per Statista data. With 65 top firms, the U.S. outpaces the U.K., which holds 15. Fintech unicorns, companies valued over \$1 billion, are predominantly American, with the U.K. following. This industry, which encompasses everything from digital banking to wealth management, has expanded significantly post-2008 financial crisis, with firms like Monzo and Starling in the U.K., and Alibaba's Alipay and Tencent's WeChat Pay in China, revolutionizing the sector. [Read More](#) (CNBC)

Chart 4: Countries with Most FinTech Unicorns



Source: Intro-act, CNBC, Statista

ChatGPT interprets 'Fed speak' to predict direction of interest rates. A study from Sheffield Hallam University reveals that large language models like ChatGPT can effectively predict central bank interest rate decisions. Researchers from Sheffield Business School at the university analyzed speeches of Bank of England Monetary Policy Committee members preceding interest rate votes. Using ChatGPT, they classified speeches as dovish, neutral, or hawkish based on tone and content. This classification was then used in an econometric model to forecast how committee members would vote in the next one or two policy meetings. [Read More](#) (Finextra)

Monzo and Starling among worst performers for APP fraud reimbursements. Monzo and Starling, two prominent challenger banks, have been rated poorly for reimbursing victims of authorized push payment (APP) fraud, as per the 2022 data released by the Payment Systems Regulator (PSR). TSB, on the other hand, stands out by refunding 91% of the total value of APP fraud losses reported to the bank in 2022. TSB also leads in terms of volume, fully refunding 94% of claims and partially returning four percent. In contrast, Monzo and Starling reimbursed only 22% and 37% of the value of APP scams reported. These challenger banks also ranked poorly in preventing APP fraud payments per million transactions. The latest UK Finance report shows that the banking sector returned over £152 million to APP fraud victims in the first half of the year. [Read More](#) (Finextra)

AXA future risks report 2023 highlights growing concerns over AI and cybersecurity. The 10th AXA Future Risks Report highlights a shift in risk perception, with AI and data concerns entering the top 10 risks for the first time among UK experts and the public. The report, drawing on a survey of over 18,000 individuals, shows increased awareness of technology's potential risks. Cybersecurity has risen to the third spot in the rankings, reflecting a global trend. Climate change remains the foremost risk for the third year running. In response, the UK government is launching AI safety initiatives, including a taskforce and safety institute. Energy risks and potential social unrest, fueled by the Ukraine conflict and cost of living issues, are also notable concerns. Public trust in authorities to handle these risks is low.. [Read More](#) (Insurtech Insights)

Chart 5: Experts' Top-10 Risk Rankings



Source: Intro-act, AXA

More than a quarter of Brits using BNPL - FCA. New research from the Financial Conduct Authority (FCA) reveals that 27% of UK adults, approximately 14 million people, have used Buy Now, Pay Later (BNPL) services in the six months leading up to January 2023, marking a significant increase from the 17% reported in May 2022. Furthermore, individuals who have used BNPL more than 10 times in the past year are more than twice as likely to have high-cost credit products, nearly twice as likely to increase their debt on credit products over the last year, and over four times as likely to have missed bill or credit commitment payments. [Read More](#) (Finextra)

76% of payments providers are frustrated with the lack of VRP progress. UK payment service providers (PSPs) are keen to leverage open banking, with 75% planning to adopt variable recurring payments (VRPs), expecting that open banking will account for 51% of payment flows within three years, as per Nuapay's survey. Annemarie Graham of Nuapay sees this as a significant trend, warning that PSPs not engaging with this shift risk falling behind. Despite the enthusiasm, PSPs are concerned about the absence of a standardized industry framework for VRPs, a sentiment shared by 76% of respondents, particularly after the implementation of PSD2 and the introduction of open banking over five years ago. Additionally, 63% believe there's a need for better education on VRP benefits for business customers. [Read More](#) (AltFi)

India starts second wholesale CBDC use case pilot. The Reserve Bank of India (RBI) has reportedly started using its central bank digital currency (CBDC) in the call money markets for interbank lending, following a previous wholesale CBDC pilot for government bond transactions. Nine banks, including the addition of Federal Bank, are participating in this latest pilot. Intraday transactions in interbank markets are an ideal use case for blockchain solutions, enabling instant atomic settlement and programmability through smart contracts to ensure timely fund returns. While retail trials for the digital rupee are ongoing, RBI is also collaborating with the UAE on cross-border payments. [Read More](#) (Ledger Insights)

mBridge cross border CBDC has 23 central banks, IMF as observers. The mBridge project, a cross-border central bank digital currency (CBDC) initiative, has published a document revealing that 23 central banks, along with the IMF and the World Bank, are monitoring the project. Founded by the central banks of Thailand, Hong Kong, China, and the UAE, mBridge is part of the Hong Kong BIS Innovation Hub and plans to launch a minimum viable project in mid-2023. Eleven of the 25 observers have engaged in the sandbox, simulating mBridge nodes and transactions. The project aims to improve cross-border payments, allowing direct international bank-to-bank transactions using wholesale CBDCs, reducing the need for correspondent banks. [Read More](#) (Ledger Insights)

Chart 6: mBridge Participants



Source: Intro-act, Ledger Insights

Blockchain trade finance network Contour to shutter. Digital trade finance platform Contour has announced its closure due to insufficient funding from its bank shareholders. Operations will cease on November 30, giving users a limited window to complete transactions and download essential data. Launched in 2020 by a consortium of banks, Contour aimed to digitize and streamline the documentary trade process, focusing on electronic letters of credit (LCs). Despite its potential, Contour struggled to attract enough users and generate sufficient revenue to cover its costs. It joins a growing list of digital trade finance platforms, including Marco Polo and we.trade, that have faced challenges in achieving scale and interoperability in the industry. [Read More](#) (Trade Finance Global)

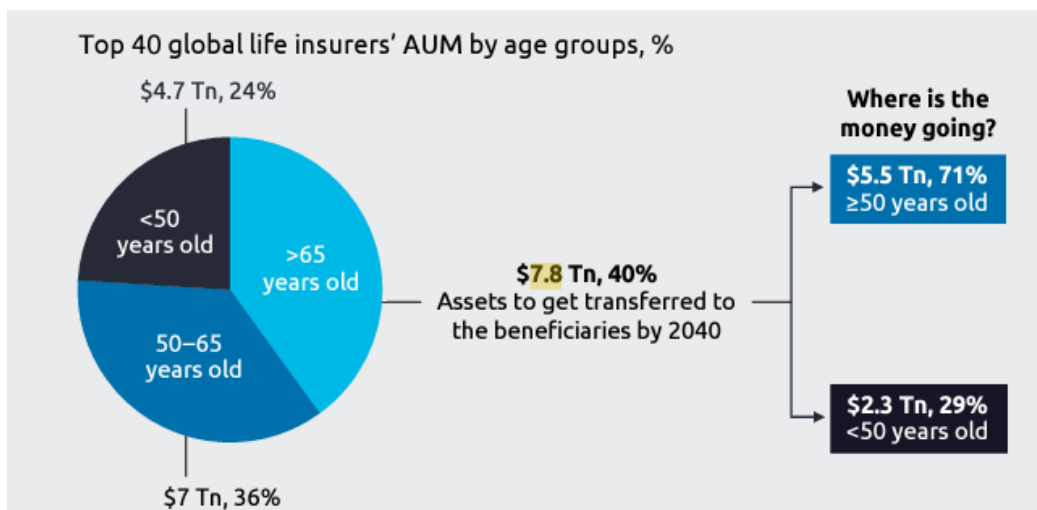
Syndicated loan platform founded by BofA, Citi, JP Morgan logs 1,500 loans. The digital syndicated loan platform Versana, founded by Bank of America, Citi, Credit Suisse, and J.P. Morgan, has successfully processed over 1,500 loans with a total value of \$900 billion. Versana utilizes Digital Asset's DAML smart contract language for workflows and is integrated with the Canton blockchain network for interoperability. Syndicated loans involve multiple lenders, making data administration complex, with updates often shared only monthly or quarterly. [Read More](#) (Ledger Insights)

BlackRock, Barclays join JP Morgan's Tokenized Collateral Network. JP Morgan's Onyx division has introduced the Tokenized Collateral Network (TCN), with BlackRock and Barclays participating on the Onyx Digital Assets platform. In the first transaction, BlackRock tokenized shares from a Money Market Fund (MMF) and used them as collateral for a derivatives contract with Barclays. Using blockchain and tokenization, this process enables instant settlement, addressing the challenge of delayed asset ownership transfers associated with collateral. This solution incentivizes institutions to retain their MMF shares for collateral purposes, especially during periods of margin pressure. JP Morgan also offers a blockchain repo solution that has processed \$300 billion in transactions. [Read More](#) (Ledger Insights)

Reserve Bank Australia: tokenization could save \$11 billion annually in Australia. The Reserve Bank of Australia (RBA) has presented research on how distributed ledger technology (DLT) and tokenization could impact Australia's capital markets. Their hypothetical estimates suggest that this could lead to up to A\$4 billion in annual transaction cost savings and another A\$13 billion in reduced capital costs. These savings come from tighter bid-ask spreads due to increased trading volumes, as well as instant settlement, reduced collateral requirements, and fewer settlement failures. Additionally, the cost of capital could fall by as much as 24 basis points. [Read More](#) (Ledger Insights)

Life insurance industry faces unprecedented \$7.8 trillion wealth transfer by 2040. The World Life Insurance Report 2023 from the Capgemini Research Institute indicates a critical period ahead for the life insurance sector, with an expected \$7.8 trillion wealth transfer by 2040. This shift involves individuals over 65, who currently hold 40% of the assets for the world's top 40 insurers. The report is based on a global survey of insurance customers over 50 and interviews with 200 senior insurance executives, covering a wide range of markets. It highlights that 60% of seniors do not seek financial advice, which is concerning given the increased financial needs for aging well, including healthcare costs. The industry faces challenges in product complexity and consumer trust. [Read More](#) (Insurtech Insights)

Chart 7: Life Insurers to Experience Significant Outflow of AUM by 2040

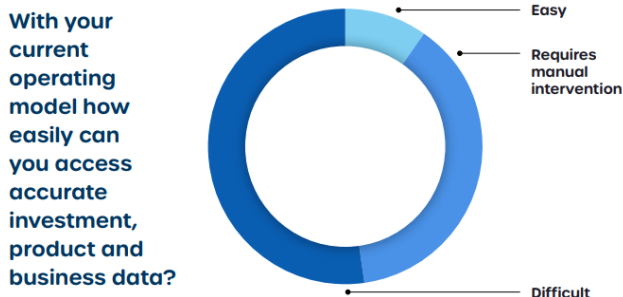


Source: Intro-act, CapGemini, Federal Reserve, University of Pennsylvania

One third of countries now have open banking programs. Konsentus, an open banking SaaS platform, reports that 68 countries, representing 35% of the world, are now engaging in open banking initiatives, either operational or under development. The majority (64%) of these programs are mandated by law, while a minority are market-driven or supported by strong regulatory backing without formal legislation. The study notes a trend towards a hybrid model, especially in Asia, indicating no universal approach suits all regions. Konsentus CEO Mike Woods highlights the rapid adoption of open banking as part of the global financial digitalization movement and anticipates further growth and more rigorous testing in the coming year. [Read More](#) (AltFi)

Clearwater report says 90% of Insurers struggle with outdated operating models. Clearwater Analytics, in collaboration with Sionic, has released a report indicating that 90% of European insurers are disadvantaged by outdated operating models, unable to meet future demands. The September 2023 survey, involving top insurance professionals, highlights the digital transformation challenges and opportunities in the industry. All respondents expect IT costs to rise in the next three years, while 98% recognize the need for a strong digital data strategy to stay competitive. The trend is shifting towards cloud-based solutions for investment management and accounting, reflecting the industry's move to more scalable and flexible technologies. [Read More](#) (Insurtech Insights)

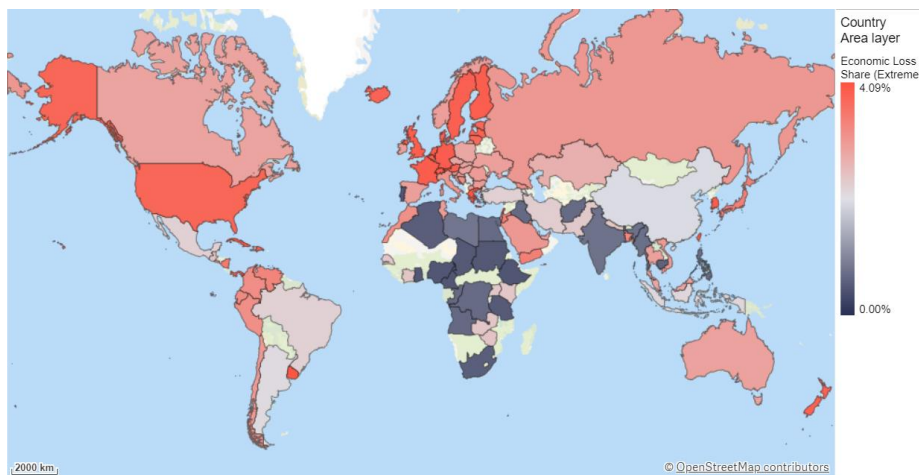
Chart 8: Current Operating Models are Not Easy to use



Source: Intro-act, Clearwater

Lloyd's sounds the alarm: Global economy faces \$3.5 trillion cyber attack risk over five years. Lloyd's, in partnership with the Cambridge Centre for Risk Studies, has presented an alarming evaluation of the global economy's susceptibility to a cyber attack, projecting potential losses of \$3.5 trillion over five years. The study simulated a cyber attack on a critical financial services payment system, examining the economic impact in 107 countries at varying levels of severity. The U.S., China, and Japan are expected to suffer the most, with estimated losses in the billions. The research highlights the increasing costs of cyber maintenance, prevention, and response, emphasizing the extensive reach of such attacks on supply chains and geopolitics. [Read More](#) (Insurtech Insights)

Chart 9: % of GDP that Could be Lost due to Cyber Attacks



Source: Intro-act, Lloyds

China's insurance market leaps 10 indexed places in a decade, says new study from swiss re on digital adoption. Swiss Re's report reveals China's significant advancement in digital adoption within the insurance sector, climbing ten spots in the global index. This reflects the rapid digital uptake by emerging markets, with South Korea leading and followed by Sweden, Finland, and the U.S. The "Economics of Digitalization in Insurance" study suggests that digitalization's full potential is yet untapped across the industry. Digitalization is enhancing firms' intangible assets but also exposes them to new risks like cyberattacks. It's driving a shift in the economy from physical goods to services and information, with a fivefold increase in the value of intangible assets in two decades, yet 80% of this remains uninsured. The rise of the sharing economy is changing risk profiles, necessitating new insurance solutions. [Read More](#) (Insurtech Insights)

Barclays among potential Metro Bank mortgage book buyers. Metro Bank's CEO, Daniel Frumkin, has hinted that Barclays could be a prospective purchaser for its £3bn mortgage portfolio. This speculation comes as Metro Bank recently finalized a £925m rescue package, following a refusal by regulators to relax capital requirements, which had led to a significant drop in its share price. The rescue deal consists of £325m in equity and £600m in debt refinancing, primarily backed by Jaime Gilinski Bacal's Spaldy Investments. The bank is also in talks to sell a substantial portion of its residential mortgages, with interest from various banks including NatWest, Lloyds, and Santander. [Read More](#) (AltFi)

REGULATORY UPDATES

Fintech chiefs raise AI regulatory fears in Parliament. The "Fintech is Dead. Long Live FinAI" summit, organized by the Parliament Street think tank, brought together leaders from the fintech and AI industries to discuss the ethical and regulatory challenges posed by AI in the UK. Over 70 experts, academics, and CEOs attended the debate, focusing on AI's impact on both the public and private sectors in anticipation of Prime Minister Rishi Sunak's global AI summit in November. The summit took place shortly after the head of the Securities and Exchange Commission, Gary Gensler, expressed concerns about unregulated AI growth potentially leading to a financial crisis. [Read More](#) (Finextra)

US Treasury proposes crypto mixer-crackdown to end anonymous transactions. The U.S. Treasury's Financial Crimes Enforcement Network (FinCEN) is targeting increased oversight on cryptocurrency mixers, which obscure the origins of digital currencies, to prevent their use by entities the U.S. classifies as terrorist organizations. This regulatory push is part of a broader effort to enhance transparency in the cryptocurrency sector, traditionally criticized for enabling anonymous transactions. Recent actions by U.S. authorities include sanctions against crypto mixers like Tornado Cash and Blender, accused of aiding North Korean hackers.. [Read More](#) (Finextra)

New York sues Digital Currency Group, Gemini and Genesis over alleged \$1.1bn crypto fraud. The New York attorney-general has filed a lawsuit against Digital Currency Group (DCG), Gemini, and Genesis, alleging that they defrauded over 230,000 investors of more than \$1.1 billion. The suit claims that these companies misled investors about the safety of their cryptocurrency investments as the value of assets like Bitcoin sharply declined last year. Notably, senior executives at DCG and Gemini have been in a public dispute over the consequences of the crypto market crash, revealing the extent of risky lending within the industry. [Read More](#) (Financial Times)

FCA issues 146 alerts in first 24 hours of new crypto marketing regime. The UK's Financial Conduct Authority (FCA) has issued 146 alerts regarding cryptoasset promotions on the first day of its new regulatory regime. The FCA now requires businesses promoting cryptoassets to be authorized or registered, with clear, fair, and non-misleading promotions labeled with risk warnings. Firms promoting cryptoassets must engage with the FCA in good faith to ensure compliance. The FCA's warnings aim to protect UK consumers from illegal crypto promotions, urging them to consult the Warning List before investing in cryptoassets. [Read More](#) (Financial Conduct Authority)

Singapore to test interoperable QR Code scheme. The Monetary Authority of Singapore (MAS) is initiating a proof of concept (POC) for SGQR+, an interoperable Singapore Quick Response Code Scheme. This POC, running from November 1 to 30, 2023, aims to enable Singaporean merchants to accept QR payments from various payment schemes through a single financial institution. Despite the successful introduction of SGQR in 2018, merchants wanting to accept multiple payment schemes must maintain relationships with various financial institutions. [Read More](#) (Finextra)

CFPB proposes rule to Jumpstart Competition and Accelerate Shift to open banking. The Consumer Financial Protection Bureau (CFPB) has introduced a groundbreaking proposal called the "Personal Financial Data Rights" rule, designed to empower consumers with control over their financial data and safeguard against misuse by companies. This rule would promote open banking, enabling consumers to share their financial data across checking and prepaid accounts, credit cards, and digital wallets while ensuring it is not exploited for commercial interests. Under the rule, financial institutions must provide data to consumers at no cost through secure digital interfaces, granting consumers the legal right to share this data with third parties. [Read More](#) (Consumer Financial Protection Bureau)

Fed to review debit card fee cap. The Federal Reserve Board is set to revisit the legal cap on debit card fees, which has remained unchanged since it was introduced in 2011. The cap, mandated by the 2010 Dodd-Frank Wall Street Reform and Consumer Protection Act, currently stands at 21 cents plus 0.05% of the transaction value, along with a one-cent fraud-prevention adjustment. The fee cap is applicable to banks and financial institutions with over \$10 billion in deposits. [Read More](#) (Payments Dive)

BIS publishes proposals for harmonisation of ISO20022 data standards. The Bank for International Settlements' Committee on Payments and Market Infrastructures (CPMI) has issued standardized ISO 20022 data requirements to address concerns about inconsistent application of this international messaging standard in various regions. These requirements, outlined in the report titled "Harmonised ISO 20022 data requirements for enhancing cross-border payments," define a uniform minimum set of messaging standards to streamline cross-border payment processing. [Read More](#) (Finextra)

Australia moves to give RBA oversight of Apple Pay. The Australian government is planning to introduce new legislation that would grant the central bank regulatory authority over digital wallet providers like Apple Pay and Google Pay. Currently, these services are not categorized as payment systems, leaving them outside of Australia's financial regulatory framework. The proposed rules aim to enable the Reserve Bank of Australia to oversee digital wallet payments in a manner similar to credit card networks and other transactions. It would also empower the treasurer to instruct regulators to assess whether any payment platforms pose risks to the country. [Read More](#) (The Economic Times)

Major U.S. banking regulator OCC warms to tokenization. The acting Comptroller of the Currency, Michael Hsu, has expressed support for tokenization while announcing a 2024 symposium on the topic. Hsu, who has been cautious about cryptocurrencies, differentiates between crypto and the tokenization of real-world assets and liabilities. He sees crypto as driven by speculative gains, plagued by scams, fraud, and compliance issues, while tokenization focuses on solving real-world settlement problems in a safe and compliant manner. Hsu's stance highlights a growing divide between these two realms. [Read More](#) (Ledger Insights)

Non-bank financial institutions must report data security breaches: FTC. The Federal Trade Commission (FTC) has updated its Safeguards Rule, mandating non-banking financial entities to report cybersecurity incidents affecting at least 500 consumers. This amendment affects mortgage brokers, vehicle dealers, and payday lenders, who must notify the FTC within 30 days of discovering a breach. The rule aims to ensure that sensitive customer data is protected and that there's transparency when breaches occur. Samuel Levine, of the FTC's Bureau of Consumer Protection, stated that this requirement would motivate companies to better protect consumer data. The rule, originating from the 1999 Gramm-Leach-Bliley Act, will be enforced 180 days after publication in the Federal Register. [Read More](#) (Legal Dive)

Earnings

Worldline shares halve on depressed outlook. Shares in Worldline, a payment service provider, tumbled by over half as the company issued a warning about its sales outlook and the termination of multiple merchant relationships due to surging cybercrime rates. In Q3 2023, Worldline reported €1,182 million in revenue, driven by a 4.8% organic growth, particularly in Merchant Services with a 7.6% increase. However, Financial Services saw a decline of -2.9% due to contract signing delays. The company cited macroeconomic challenges affecting key markets, especially in Germany, where consumer spending patterns have been disrupted. [Read More](#) (Finextra)

CAB Payments shares nosedive on gloomy update. CAB Payments, a British B2B cross-border payments company, saw its shares plummet by more than 50% after a significant downward revision of its revenue guidance. The company recently raised £335 million through a listing on the London Stock Exchange. The revision is attributed to market conditions affecting its key currency corridors and ongoing uncertainties surrounding the Naira, impacting both volumes and margins. CAB Payments now anticipates its 2023 group revenue to be at least 20% higher than the previous year, which is around 17% lower than previous guidance. To mitigate the impact on profitability, the company plans to implement cost reduction measures and efficiency improvements. [Read More](#) (Finextra)

Wise shares up as profit guidance hiked. Wise, a major player in money transfer services, has witnessed a surge in its shares following an upgraded income guidance for FY24. The company reported a remarkable 51% year-on-year growth in income and a 32% increase in active customer numbers, reaching 7.2 million. Wise has also benefited from rising interest rates, resulting in a 3.8% yield on £12.3 billion held on behalf of customers. Consequently, the company has revised its profit guidance to 33-38%, up from the previous range of 28-33%. [Read More](#) (Finextra)

Chubb reveals Q3 results with soaring net income and record operating income. Chubb Limited reported a stellar third-quarter performance for 2023, with significant increases in key financial areas. Net income and core operating income per share both soared to \$4.95, marking rises of 161.9% and 58.1%, respectively. The company's consolidated net premiums written reached \$13.1 billion, a 9.1% growth, with Global Property & Casualty (P&C) premiums up by 12.3%. Despite a decline in Agriculture premiums by 11.7%, P&C underwriting income grew by 83.8%, totaling \$1.31 billion. The company's net investment income also rose by 34.2%, contributing to a strong annualized return on equity of 15.5%. [Read More](#) (Insurtech Insights)

CAPITAL MARKETS

Klarna rival from Gulf: BNPL platform Tabby nets \$200M at \$1.5B valuation. Dubai-based payments and shopping app, Tabby, has secured \$200 million in equity financing in its Series D funding round. This comes after receiving \$150 million in debt financing last year and a \$58 million Series C funding round earlier this year. The round was led by Wellington Management, a leading independent investment management firm, with additional participation from growth equity investor Bluepool Capital and existing investors STV, Mubadala Investment Capital, PayPal Ventures, and Arbor Ventures. [Read More](#) (Tech Funding News)

Chart 10: Snapshot of a Customer Using the Tabby Platform



Source: Intro-act, Tabby, TechCrunch

Atom Bank raises £100m in equity funding from existing investors. Atom Bank, a digital bank based in Durham, has secured £100m in equity funding from its current investors, indicating a potential delay in its anticipated IPO. Initially, CEO Mark Mullen hinted at a public offering in 2024 or 2025, but the bank now vaguely states it remains a "long-term strategy" for the future. Despite not disclosing a new valuation, reports suggest the bank's worth has decreased from £435m to £362m since last year. [Read More](#) (AltFi)

Zilch scores deal with eBay and holds \$2bn valuation. Zilch, a 'buy now, pay later' service that also operates an ad-subsidised payments network, has maintained its valuation at £1.65 billion following a new equity investment from eBay Ventures, reported to be in the "low single digit million" range. This deal comes on the heels of a £20 million funding round earlier in the year from existing investors. Achieving 'double unicorn' status in 2021 after a swift and oversubscribed Series C funding round, Zilch has managed to retain its valuation in 2022 despite market trends of decreasing valuations. [Read More](#) (AltFi)

Youtrip raises \$50 million to expand multicurrency digital wallet. YouTrip, a digital payment solutions provider, has secured new funding that it plans to use to launch new products, invest in technology, and expand into new markets. The company envisions creating additional features and experiences for users while traveling and spending in foreign currencies. Their investment in technology aims to improve product usability and reliability. [Read More](#) (Pymnts)

Female-founded Brite Payments secures \$60M investment despite the fintech slump. Swedish fintech company Brite Payments has secured \$60 million in a funding round led by Dawn Capital, with participation from Headline and existing investor Incore Invest. Brite Payments specializes in instant account-to-account (A2A) payments solutions. The company has shown strong growth since its founding in 2019, doubling its revenue and transaction volume in 2022, achieving profitability, and expanding its presence to 25 European countries.. [Read More](#) (Tech Funding News)

London's iwoca closes £200M debt facility to bridge gap between SMEs and finances. London-based SME lender iwoca has secured a £200 million debt facility from Barclays and Värde Partners, increasing its total debt commitments to over £850 million. The funding comes as high street banks in the UK reduce access to capital for SMEs, resulting in growing demand for alternative lenders. iwoca, founded in 2011, has already provided over £2.5 billion in business loans to more than 120,000 companies in the UK and Germany. [Read More](#) (Tech Funding News)

London's Uncapped closes £200M debt financing to provide up to £10M for online businesses. Fintech firm Uncapped, based in London, has secured a £200 million debt facility from funds managed by Fortress Investment Group. Uncapped is known for revolutionizing funding for digital entrepreneurs and high-growth businesses, offering capital ranging from £10,000 to £10 million. They provide a quick and transparent financing model, granting decisions within 24 hours, with no personal guarantees or equity loss. [Read More](#) (Tech Funding News)

London insurtech Sprout.ai scores £5.4M to redefine claims processing with AI. London-based Sprout.ai, an AI-driven insurance claims automation firm, has secured £5.4 million in funding from a consortium led by Amadeus Capital Partners and Praetura Ventures. Other contributors include UK investors Capricorn Capital Partners, Portfolio Ventures Angel Fund, US investor Forefront Venture Partners, Canadian investor Verstra Ventures, and existing investors like Octopus Ventures and Techstars. These funds will drive Sprout.ai's market expansion, growth acceleration, and continued investment in AI and product innovation. [Read More](#) (Tech Funding News)

Generali allocates €250 million to fuel venture fund for Insurtech and Fintech Innovation. Generali has allocated €250 million to Generali Ventures, its venture capital fund, to invigorate innovation within the insurtech and fintech industries. The fund aims to scout and invest in promising startups, focusing on early to late stages, and is looking at opportunities in Europe and the U.S. Since its inception in 2022, Generali Ventures has partnered with Mundi Ventures for insurtech, Speedinvest for early-stage startups, and Dawn for B2B software investments. [Read More](#) (Insurtech Insights)

Agentsync raises us\$50 million in series B round. AgentSync has secured \$50 million in a Series B funding round, elevating its total capital to \$161 million. The investment, led by Craft Ventures and Valor Ventures, will bolster the development of AgentSync's platform, which has already seen a tripling in ARR and a doubling of its customer base since the last funding phase. Serving over 200 insurance entities, AgentSync's cloud-native solutions are designed to streamline the insurance distribution process, offering scalability and cost-efficiency. [Read More](#) (Insurtech Insights)

M&A

Thailand's Kasikornbank acquires crypto exchange. Kasikornbank (KBank), one of Thailand's largest banks, has acquired the local crypto exchange Satang and plans to rebrand it as Orbit Trade. Additionally, the bank has established Orbix branded subsidiaries for custody and investment. KBank's move into the crypto space follows its creation of a \$100 million fund to invest in AI, web3, and tech startups. Notably, another Thai bank, Siam Commercial Bank (SCB), attempted to acquire a majority stake in the largest Thai crypto exchange, Bitkub, but the deal fell through due to regulatory concerns. [Read More](#) (Ledger Insights)

DTCC buys blockchain outfit Securrency. The Depository Trust & Clearing Corporation (DTCC) is set to acquire blockchain-based fintech company Securrency, a move aimed at enhancing the adoption of digital assets. The deal, expected to close soon, will see Securrency operating as a fully-owned subsidiary under the name DTCC Digital Assets. DTCC's goal is to leverage Securrency's technology to fast-track the development of its enterprise digital asset platform, enabling institutional decentralized finance (DeFi). [Read More](#) (Finextra)

Zurich Secures 51% Stake in Kotak Mahindra General Insurance for US\$488 Million. Zurich Insurance Group has secured a majority stake in India's Kotak Mahindra General Insurance, partnering with the country's third-largest private bank to leverage local expertise and global experience. The deal, worth \$488 million, combines new capital and share purchases, pending regulatory nods. Kotak General Insurance, operational since 2015, has made significant strides in the Indian insurance market, offering services through various channels and benefiting from Kotak Mahindra's extensive customer network. [Read More](#) (Insurtech Insights)

FINTECH ADOPTION

HSBC tokenizes gold. HSBC, the London-based financial giant, has launched tokenized ownership of physical gold held in its London vault using distributed ledger technology (DLT). One token on HSBC's gold tokenization platform represents 0.001 troy ounce of gold. The platform allows tokenized gold to be traded between HSBC and institutional investors through the HSBC Evolve platform. John O'Neill, HSBC's head of digital assets strategy, markets and securities services, stated that they are seeing an appetite for tokenization solutions linked to real-world use cases like gold. [Read More](#) (Blockworks)

Chart 11: HSBC is the First Bank in the World to offer Tokenized Gold



Source: Intro-act, Fintech Finance News

Klarna taps AI for human shopping experience in major autumn launch. Klarna, the AI-powered global payments network, has introduced 13 new products as part of its Spotlight Fall launch. The flagship feature, "Shopping Lens," allows users to snap a picture of items and styles in their surroundings, instantly identifying where to buy them and find the best deal in the Klarna app. Klarna uses AI to translate the image into a search term, making anything in the user's environment shoppable. [Read More](#) (PR Newswire)

World Bank issues first digital bonds on Euroclear's platform. Euroclear has announced the issuance of the first bond using its distributed ledger technology (DLT) issuance platform, known as the Digital Financial Market Infrastructure (D-FMI). The €100 million digitally native note (DNN) was issued by the International Bank for Reconstruction and Development (IBRD), the World Bank's lending arm. The digital bond is listed on the Luxembourg Stock Exchange, with Citi serving as the issuing and paying agent, TD Securities as the dealer, and Euroclear Bank as the Central Securities Depository (CSD). Euroclear's D-FMI integrates with the conventional settlement platform to allow investors who don't yet support digital securities to participate and access trading venues and liquidity management. Euroclear is leveraging R3's Corda blockchain technology for its infrastructure. [Read More](#) (Ledger Insights)

Emirates NBD launches digital wealth platform for trading securities and ETFs. Emirates NBD, Dubai's largest bank, has introduced a digital wealth platform allowing customers to trade securities and ETFs on both local and global exchanges. The platform offers access to over 11,000 global and 150 regional equities, enabling trading on domestic bourses, including the Dubai Financial Market, Abu Dhabi Securities Exchange, and Nasdaq Dubai, as well as international markets like the New York Stock Exchange, Nasdaq, and London Stock Exchange. [Read More](#) (The National)

StanChart, Deutsche Bank execute stablecoin payments via UDPN blockchain. Standard Chartered's SC Ventures and Deutsche Bank have successfully completed the first proof of concept (PoC) for the Universal Digital Payments Network (UDPN). The UDPN, founded by Red Date Technology, aims to connect payments across various Central Bank Digital Currencies (CBDCs) and blockchain networks using messages, similar to the Swift system. However, UDPN operates through a permissioned blockchain, making it more secure and regulatory compliant. This initiative addresses the lack of interoperability among the growing number of CBDCs, stablecoins, and deposit tokens. [Read More](#) (Ledger Insights)

Marqeta inks deal with European BNPL firm Scalapay. Marqeta has entered into a five-year exclusive partnership with Scalapay, a Southern European buy now, pay later (BNPL) provider. As part of the agreement, Marqeta will issue virtual cards for both online and in-store transactions, leveraging its Just-in-Time Funding feature. Scalapay, which serves over five million users across Europe through 5,000 stores and 7,000 physical points of sale, can now offer customers a seamless payment experience by instantly generating and funding virtual cards upon loan approval. These virtual cards can be used for online and in-person payments via digital wallets and existing checkout or point-of-sale systems. [Read More](#) (Finextra)

Mastercard inks open banking deals with Worldpay and Zip. Mastercard is expanding its open banking initiatives through partnerships with Worldpay and Zip, further enhancing its open banking technology in the US. The collaboration with Worldpay, a unit of FIS, enables users to securely share and pay bills directly from their bank accounts, eliminating the need to manually enter routing and account numbers. This technology also streamlines onboarding processes for billers and merchants, reducing risks and costs associated with storing bank account information. [Read More](#) (Finextra)

Citi goes live on 2 smart contract platforms for stocks, syndicated loans. Citi Securities Services has gone live on the HKEX Synapse smart contract platform to facilitate securities settlement between Hong Kong and China. HKEX Synapse simplifies post-trade processes for Northbound Connect, allowing Hong Kong and international investors to settle stock trades on China's mainland Shanghai Stock Exchange more efficiently. Citi, one of the first live Synapse participants, has integrated its custody solution with the platform, being the world's fourth-largest global custodian with \$27.8 trillion in assets under custody. [Read More](#) (Ledger Insights)

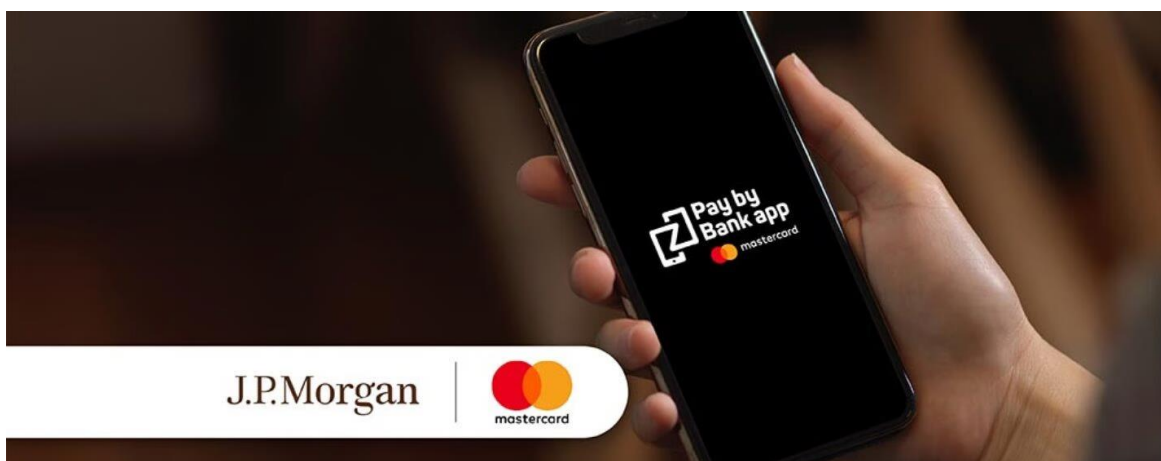
\$2 trillion asset manager Amundi eyes tokenizing money market funds. Amundi, one of Europe's top three asset managers with €1.96 trillion (\$2.1tn) AUM, is exploring the tokenization of money market funds in Europe. The Italian arm of Amundi aims to create the first tokenized fund under Italian law, which can be held digitally, making it fungible and usable for redemption, transfers, payments, or collateral. Gabriele Tavazzani, CEO of Amundi Italy, expressed the company's aspiration to be a trailblazer in this field and believes that Italy has the necessary technology, local expertise, and regulations to lead in the tokenization of funds. [Read More](#) (Ledger Insights)

COMPANY NEWS

Visa launches \$100 mn venture fund for generative AI startups. Visa has launched a \$100 million venture fund dedicated to generative artificial intelligence (AI) startups. The move follows the growing interest in AI technology, with major players like Microsoft and Google investing in the sector. Generative AI, which creates new content based on past data, has gained prominence, partly due to the popularity of technologies like ChatGPT. [Read More](#) (Reuters)

JP Morgan's Pay-by-Bank product goes live. JP Morgan and Mastercard have jointly launched the Pay-by-Bank solution, enabling billers to offer customers the option to pay bills directly from their bank accounts through traditional ACH banking rails. This product leverages Mastercard's open banking technology, enhancing JP Morgan's ACH capabilities. The partnership, initiated in November 2022, aims to provide customers with an improved, secure, and convenient payment experience. [Read More](#) (Finextra)

Chart 12: Pay-by-Bank App Powered by Mastercard



Source: Intro-act, Fintech America

Wells Fargo extends advice and planning, LifeSync access to all retail banking customers. Wells Fargo is expanding its LifeSync personalized wealth management platform to all consumer customers via its mobile banking app. Originally launched for its Wealth and Investment Management clients earlier this year, this expansion aligns with Wells Fargo's strategic delivery of digital-first, personalized financial advice and planning services. [Read More](#) (Retail Banker International)

Binance stops accepting new UK customers after regulatory crackdown. Binance, the world's largest cryptocurrency exchange, has halted new customer registrations in the UK following regulatory actions by the Financial Conduct Authority (FCA). The FCA's crackdown on digital asset companies advertising to British consumers led to the company implementing this policy. These regulatory changes are among the toughest globally, aiming to enhance consumer protection in the wake of digital asset price collapses and industry upheavals. [Read More](#) (Financial Times)

Ripple forges partnership with Uphold. Ripple, a leader in blockchain and crypto solutions for enterprises, has entered into a partnership with Uphold, a global Web3 financial platform. This collaboration aims to enhance Ripple's cross-border payments infrastructure by utilizing Uphold's crypto liquidity capabilities. Ripple is well-known for its blockchain and crypto solutions, which enable businesses to accelerate performance by eliminating the need for pre-funding accounts across the world. [Read More](#) (Finextra)

Musk wants X to replace the need for a bank – report. Elon Musk, CEO of X.com (formerly Twitter), has shared his vision to turn the platform into an all-encompassing financial app, similar to China's WeChat, where users can conduct a wide range of transactions without needing a traditional bank. Musk aims to offer a comprehensive financial solution, including peer-to-peer payments, money market funds, and more by the end of 2024. [Read More](#) (Ledger Insights)

B2B BNPL player Mondu registers with FCA and goes live in UK. Berlin-based B2B buy now, pay later (BNPL) startup Mondu has registered with the UK's Financial Conduct Authority (FCA) and is commencing operations with 16 British clients. Mondu, which recently expanded into the Netherlands and Austria, offers various services, including MonduOnline B2B BNPL for e-commerce checkout and MonduSell for multichannel sales, with flexible payment terms ranging from 30 to 90 days. They have also entered the French market, initially available for buyers only, alongside their UK launch. [Read More](#) (Finextra)

Orum launches first product built on FedNow. Payments API provider Orum has introduced a product called "Verify" on top of the new FedNow payment rail, enabling instant verification of bank accounts. This technology can confirm the validity of any US-based consumer or business bank account within 15 seconds before processing payments. Orum highlights that existing methods for verifying bank accounts are often outdated and inefficient, including slow microdeposits, batched historical data, and manual entry of login credentials. [Read More](#) (Finextra)

PayPal faces class-action lawsuit alleging anti-competitive practices. A class-action lawsuit has been filed against PayPal, alleging anti-competitive practices that result in higher prices for consumers during eCommerce transactions. The lawsuit, filed by Hagens Berman, claims that PayPal's anti-steering rules prevent merchants from offering discounts for lower-cost payment options, limiting competition and driving up consumer costs. [Read More](#) (Pymnts.com)

ABN Amro sells stake in payments joint venture to Fiserv. ABN Amro has divested its 49% stake in the digital payments business EMS to Fiserv. EMS, founded as a joint venture in 2005, offers payment processing solutions for merchants and their customers, with 40,000 clients across 25 markets and membership in 13 national payment schemes. Previously, EMS was associated with International Card Services, the largest credit card issuer in the Netherlands for consumer and business credit cards. [Read More](#) (Finextra)

JPMorgan: JPM Coin handles \$1 billion in daily transactions. J.P. Morgan reports that its digital token, JPM Coin, now facilitates \$1 billion in daily transactions. This blockchain-based cryptocurrency primarily handles transactions in U.S. dollars, but the bank plans to expand its usage further. Although the \$1 billion figure is substantial, it pales in comparison to the \$10 trillion in daily U.S. dollar transactions conducted by J.P. Morgan. The bank is also considering the development of a digital deposit token to expedite cross-border settlements. [Read More](#) (Pymnts.com)

Asia fintech MoneyHero slides on first day of trading after merger with Peter Thiel-backed SPAC. MoneyHero, an Asian fintech company, commenced trading in the U.S. through a merger with Thiel Capital and Pacific Century Group-backed SPAC Bridgetown Holdings. Despite a drop in share price on its Nasdaq debut, MoneyHero aims to leverage the U.S. capital market's appetite for Southeast Asian digital financial services. [Read More](#) (CNBC)

Cover genius partners with Fintech Klarna via the Insurtech's global platform Xcover. Cover Genius, an insurtech company, has partnered with Klarna, a prominent Buy Now, Pay Later (BNPL) fintech, to offer enhanced purchase protection to U.S. consumers. This protection, provided through Cover Genius' XCover platform, safeguards against breakdowns and accidental damage, with easy policy management and claim filing within the Klarna app. This collaboration reflects a broader trend in insurtech to streamline customer experiences in claims and payments. [Read More](#) (Insurtech Insights)

Allianz Partners and bolttech forge strategic alliance to meet rising demand for embedded Insurance Solutions.

Allianz Partners has formed a strategic partnership with bolttech, an insurtech company, to meet the growing demand for embedded insurance solutions in device and appliance protection in the Asia Pacific region and the United States. This collaboration aims to integrate insurance products into the customer journey for electronics and home appliances, enhancing the purchasing experience at the point of sale. [Read More](#) (Insurtech Insights)

LendingClub offsets cooldown in loan-buying demand through new product. LendingClub, facing subdued investor demand for its loans, has reduced its workforce and is focusing on a new product to maintain profitability. The company, which specializes in refinancing credit card debt, has experienced a revenue decline due to higher interest rates and the banking crisis earlier in the year. CEO Scott Sanborn does not anticipate a quick return of bank buyers, historically a significant portion of their market. To adjust, LendingClub has laid off 172 employees, adding to a previous reduction of 225, and has cut compensation and marketing expenses. [Read More](#) (National Mortgage News)

CoreLogic unveils integrated digital mortgage platform, transforming the borrower's journey. CoreLogic® has unveiled its Digital Mortgage Platform (DMP), a significant innovation that integrates Roostify's digital mortgage technology with CoreLogic's vast property data and workflow systems, aiming to revolutionize the mortgage industry by enhancing the efficiency of the loan process for lenders. This platform is a result of CoreLogic's earlier acquisition of Roostify and demonstrates its dedication to industry transformation. [Read More](#) (Corelogic)

Stripe chooses TrueLayer for first European open banking payment option. Stripe has integrated TrueLayer's open banking payment options for UK and European merchants, enhancing the checkout experience on its platform. This addition to Stripe's Payment Element allows for seamless open banking transactions, offering an alternative to traditional card payments. TrueLayer's CEO, Francesco Simoneschi, celebrates the integration as a milestone for open banking, which is now accessible to Stripe users in 21 markets, including the UK, France, Spain, and Germany, with transactions in GBP and EUR.. [Read More](#) (AltFi)

FINTECH ADOPTION HIGHLIGHTS

S. No.	Company	Segment	Theme	Link
1	CBA	Banking	AI in Finance	CBA using Gen AI to create 'synthetic customers' for testing of new products
2	EVO Banco	Banking	AI in Finance	EVO Banco taps AI and Google Maps to show customers transaction locations
3	Klarna	Payments	AI in Finance	Klarna taps AI for human shopping experience in major autumn launch
4	Emirates NBD	Wealth Management	Digital Wealth Management	Emirates NBD launches digital wealth platform for trading securities and ETFs
5	Aktia	Wealth Management	Digital Wealth Management	Finland's Aktia picks Temenos to modernise payments
6	HSBC	Blockchain	Asset Tokenization	HSBC trials tokenized deposits using Ant blockchain technology
7	Standard Chartered	Blockchain	CBDC	StanChart, Deutsche Bank execute stablecoin payments via UDPN blockchain
8	JPMorgan	Blockchain	Asset Tokenization	JPMorgan moves to commercialise blockchain with Tokenized Collateral Network
9	Reserve Bank of Australia	Blockchain	CBDC	Mastercard demonstrates interoperable CBDC for trusted Web3 commerce
10	Fiserv	Payments	Embedded Finance	Fiserv opens the door to embedded finance
11	WorldPay	Payments	Open Banking	Mastercard inks open banking deals with Worldpay and Zip
14	Marqeta	Payments	BNPL	Marqeta inks deal with European BNPL firm Scalapay
15	Citi	Lending	Smart Contracts	Citi goes live on 2 smart contract platforms for stocks, syndicated loans
16	HSBC	Blockchain	Asset Tokenization	HSBC tokenizes gold
17	UBS	Blockchain	Asset Tokenization	SBI Digital Markets collaborates with UBS for fund tokenization trial
18	Columbian Stock Exchange	Wealth Management	Blockchain	Colombian stock exchange adopts blockchain for crowdfunding platform
19	World Bank	Lending	Blockchain	World Bank issues first digital bonds on Euroclear's platform
20	Pirum	Lending	Blockchain	Pirum tests DLT for securities lending
21	Amundi	Wealth Management	Asset Tokenization	\$2 trillion asset manager Amundi eyes tokenizing money market funds

Source: Intro-act, Multiple Web Sources

FINTECH CHART OF THE MONTH

Chart 13: AltFi Fintech Index – Last 12 Month Performance (As of 3rd November 2023)



Source: Intro-act, AltFi

FINTECH CAPITAL MARKET ACTION (September 2023)

IPO Activity

Company	Stock Exchange	Offer Date	Gross Proceeds (\$m)
MoneyHero	NASDAQ	12-Oct-23	213.08

Source: Intro-act, FactSet

M&A Activity

Target	Target Industry	Target Country	Acquirer	Deal Size (\$m)	Announcement Date
Keebo Ltd.	Finance/Rental/Leasing Investment	United Kingdom	Wagestream Ltd.	-	10/3/2023
Coin Meester BV	Banks/Brokers	Netherlands	Payward, Inc.	-	10/4/2023
droneinsurance.com	Packaged Software	United States	Skywatch Insurance Services, Inc.	-	10/5/2023
PT Eastern Transglobal Remittance	Regional Banks	Indonesia	PT Brick Teknologi Indonesia	-	10/5/2023
Luko Insurance AG	Packaged Software	Germany	Getsafe GmbH	-	10/9/2023
UpyugoFi LLC	Investment Managers	United States	Freedom Financial Plus, Inc.	-	10/9/2023
True Gold Consortium Pty Ltd.	Packaged Software	Australia	SMX (Security Matters) Plc	-	10/10/2023
BitcoinAbuse.Com	Packaged Software	United States	TRM Labs, Inc.	-	10/11/2023
GreenSky, Inc.	Finance/Rental/Leasing	United States	TPG Sixth Street Partners LLC	-	10/11/2023
HeightZero LLC	Packaged Software	United States	BitGo, Inc.	-	10/17/2023
Digital Care Sp zoo	Commercial Services	Poland	Miscellaneous	-	10/18/2023
FirstCoin ATM LLC	Regional Banks	United States	bolttech	-	10/19/2023
Mexpago Transacciones S.A.P.I. De CV	Packaged Software Investment	Mexico	RockItCoin LLC	-	10/19/2023
Airwallex Pty Ltd.	Banks/Brokers	United States	The Depository Trust & Clearing Corp.	-	10/19/2023
Phoenix Crypto	Banks/Brokers	United States	RockItCoin LLC	-	10/19/2023
Securrency, Inc.	Packaged Software	United States	The Depository Trust & Clearing Corp.	-	10/19/2023
D2K Technologies India Pvt Ltd.	Packaged Software	India	ICRA Analytics Ltd.	1.85	10/20/2023
Milvik AB	Life/Health Insurance	Sweden	CapitalSG Pte Ltd.	-	10/23/2023
Cylantro SAS	Property/Casualty Insurance	France	Blockmate Ventures, Inc.	-	10/24/2023
BESS Power Innovation Corp.	Electrical Products	Canada	Laka Ltd.	0.44	10/25/2023

Source: Intro-act, FactSet

PE/ VC Funding Activity

Company	Funding Round	Fund raised (\$m)	Investors	Date
Root Wealth (Pty) Ltd	Series A	1.50	InVenfin Venture Capital	10/1/2023
Kafene, Inc.	Series B4	12.60	3rd Prime Capital LLC Kinea Private Equity Investimentos SA, Galapagos Capital Investimentos e Participações Ltda., Honey Island Capital	10/2/2023
Liqi Digital Assets SA	Series A	2.59	Honey Island Capital	10/2/2023
Wodo Teknoloji AS	Private Sh	1.00	VBT Yazilim AS	10/3/2023
Brite AB	Series A	60.12	Dawn Capital LLP, Headline - Asia, Incore Invest AB	10/4/2023
Vipatra Technologies Pvt Ltd.	Seed Round2	3.25	Sunil Satyapal Gulati, MBA, India Quotient Advisers LLP, Nikhil Kumar	10/4/2023
Mintouge Ltd.	Seed Round	2.50	Operating Group	10/4/2023
PT Investree Radhika Jaya	Series D	231.00	SBI Holdings, Inc., JTA International Holding	10/5/2023
Phaver	Seed Round5	7.00	Superhero Capital Oy, SBorg SA (Switzerland), Nomad Venture Partners LLC, Alphanonce, Dao5, Symbolic Capital, Polygon Labs UI (Cayman) Ltd., F.actor	10/5/2023
Fleamint Foundation DAO	Series A	10.00	LDA Capital	10/6/2023
HEAVY FINANCE	Private Sh	1.05	Mantas Mikuckas	10/9/2023
OrdinalsBot	Seed Round	1.00	Howard Lee Morgan, PhD, Pacific Alliance Ltd. LLC, Sébastien Borget, James Frederic Haft, MBA, Meyer Family, Ivan Brightly, Innovation World Ltd., Charles Micah Spruill, UTXO Management GP, Bitcoin Frontier Fund, Deep Ventures Ltd., Lightning Ventures, Kestrel 0x1, Dillon Healy, Metalink Capital, Louis Curran	10/9/2023
Canopy Technology	Series A3	15.20	Foundation Capital LLC, Infinity Ventures	10/10/2023
Untangled Finance	Seed Round	13.50	Fasanara Ventures	10/11/2023
Transactionlink	Seed Round2	5.31	White Star Capital Investments UK Ltd., Target Germanium GmbH	10/11/2023
Game of Silks	Seed Round2	5.00	Taylor-Made Farm, Inc., Funfair Ventures	10/11/2023
AlpacaDB, Inc.	Series D	15.00	The SBI Group	10/12/2023
Beldex International, Inc.	Series B	3.00	Block Alpha Technologies LP	10/12/2023
Bridge Insurance Services Srl	Series A	2.11	Societa' Reale Mutua di Assicurazioni, CDP Venture Capital Sgr SpA, Apside Srl	10/12/2023
Eazy Digital Co. Ltd.	Seed Round2	1.00	Wavemaker Partners LLC, OneDegree, Inc., M Capital Management Pte Ltd, Ascend Angels Pte Ltd., Orvel Ventures	10/12/2023
VirgoCX, Inc.	Series A2	3.66	Waterdrip Capital	10/13/2023

Ascend Money	Series C	150.00	Charoen Pokphand Group Co. Ltd., Ant Group LLC, Bow Wave Capital Management, LP	10/14/2023
Selimor Investments Ltd.	Series B	5.70	Delphi Ventures, Inc., Multicoins Capital Management LLC, Anatoly Yakovenko, Placeholder Management LLC, 6th Man Ventures LLC, Evestake LLC, Solana Ventures, Lucas Bruder, L1 Digital AG/Venture Capital/, Mumtaz Mert	10/16/2023
Morty Technologies, Inc.	Seed Round2	2.20	General Catalyst LLC, Animo Ventures LLC, Unpopular Ventures LLC, Protagonist Management LLC, Marketplace Capital LP	10/16/2023
Split Payments SL	Series A2	8.00	Earlybird Venture Capital GmbH & Co. KG, JME Venture Capital SGEIC SA, Raffaele Terrone Hack VC Management Company LLC, Neo Global Capital Pte Ltd., Bloccelearate VC Management LLC, Angellist Venture LLC	10/18/2023
Elixir Technologies Ltd.	Series A	7.50		10/18/2023
BillGo, Inc.	Series B4	5.00	BankTech Ventures LP	10/18/2023
Hercle Srl	Seed Round	1.79	Prana Ventures SpA, Kairos Partners Sgr Spa/Private Equity/	10/18/2023
Alwrite	Seed Round	1.20	Apurva Narendrakumar Parekh, Amit Sheth, Amith Sheth, PhD, Sumit Bohra, Sanjay Bhagat, Shah Shrenik, Thakker Viral	10/18/2023
Takadao Holdings Pte Ltd.	Seed Round	1.60	BIM SAS, Core Vision	10/19/2023
Veruna, Inc.	Series B	10.00	Keystone Insurers Group, Inc., Employers Mutual Casualty Co., Guidewire Software, Inc., American Institute for Chartered Property Casualty Underwriters, CoVerica, Inc., Berkley Ventures LLC	10/20/2023
Creditly Corp.	Series A4	10.00	Khosla Ventures LLC, Tippet Venture Partners	10/20/2023
Keyfactor, Inc.	Private Sh	500.00	Insight Venture Management LLC, TPG Sixth Street Partners LLC	10/23/2023
AGRA Fintech	Series A	18.00	Re-pie Portföy Yönetimi AS	10/23/2023
Alt Ltd. (United Kingdom)	Seed Round	2.69	Enterprise Ireland, Omid Ashtari, Forward Investment Partners LLP, Syndicate Room Ltd., Alex Macdonald, MiddleGame Ventures SA, Algorand LLC, 365.fintech as, Unbundled VC	10/23/2023
Cube Exchange Australia Pty Ltd.	Seed Round	9.00	Foundation Capital LLC, Susquehanna Private Equity Investments LLC, XE Capital Advisers LLC, Third Kind Venture Capital, Asymmetric Technologies LLC, LLLP GmbH, WW Ventures Ltd., Big Brain Holdings, Everstake Capital LLC	10/24/2023
Laka Ltd.	Series B	8.00	Creandum Advisor AB, Ponooc BV, Elkstone Capital Partners Ltd., AutoTech Management LLC, OpenDeal, Inc., Eric Min, 1818 Venture Capital Ltd., Porsche Ventures, ABN AMRO Ventures Management BV, Shift4Good SAS	10/24/2023
Preczn, Inc.	Series A	6.80	SaaS Ventures LLC, Paypal Ventures, Owl Capital LLC, Gilgamesh Ventures LLC, Blank Ventures, Kearny Jackson LLC	10/24/2023
Etoshi Technologies SL	Series A	6.00	GED Capital Development SGEIC SA, JME Venture Capital SGEIC SA	10/24/2023
InfinityStakeChain	Series A	12.00	Binance Labs, Bixin Ventures, Delphi Parent LLC, Polygon Ventures	10/25/2023

Triple A Technologies Pte Ltd.	Series A	10.00	Peak XV Partners, Shorooq Partners Ltd	10/25/2023
You Technologies Group Ltd.	Series B	50.00	Lightspeed Management Co LLC	10/26/2023
Anboto Labs Pte Ltd.	Series A	3.00	Kronos Ventures, Xbto Ventures, Mechanism Capital, Matrixport Technologies Ltd., Cherry Crypto	10/26/2023
Embedded Finance Ltd.	Series C3	21.16	MonetaVenture Capital, D Squared Capital Ltd.	10/27/2023
Light Labs Pte Ltd.	Series A	1.20	Muneeb Ali, SBX Capital, Bitcoin Frontier Fund, Oak Grove Ventures	10/27/2023
Inclusivity Solutions	Series B	1.50	Goodwell Investments BV	10/30/2023
REDEX Pte Ltd.	Series A2	10.00	Aramco Ventures	10/31/2023

Source: Intro-act, FactSet

FINTECH INSTITUTIONAL INVESTOR LEAGUE

Chart 14: Fintech Institutional Owners League (Current)

Rank	Institution Name	Invested in Fintechs (\$)	Q/Q Change (\$)	# Fintech Positions	% of Instit Ownership
1	The Vanguard Group, Inc.	132,187,262,724	(105,658,167,613)	218	9.4%
2	BlackRock Fund Advisors	77,929,970,238	(60,932,275,351)	218	5.5%
3	SSgA Funds Management, Inc.	47,710,689,481	(52,445,812,779)	228	3.4%
4	Geode Capital Management LLC	26,897,411,854	(23,064,114,506)	223	1.9%
5	Fidelity Management & Research Co. LLC	25,761,400,927	(24,500,441,904)	187	1.8%
6	Massachusetts Financial Services Co.	25,000,896,817	(13,284,851,985)	61	1.8%
7	Capital Research & Mgt Co. (World Investors)	22,998,032,729	(11,097,830,758)	53	1.6%
8	T. Rowe Price (Inv Mgt)	20,312,535,992	(38,726,742,996)	146	1.4%
9	Capital Research & Management Co. (International Investors)	17,129,837,086	(12,879,479,919)	41	1.2%
10	TD Asset Management, Inc.	15,365,358,896	(10,625,181,213)	96	1.1%
11	JPMorgan Investment Management, Inc.	14,220,659,225	(11,240,655,672)	179	1.0%
12	BlackRock Advisors (UK) Ltd.	13,839,460,554	(8,251,252,678)	181	1.0%
13	T. Rowe Price Investment Management, Inc.	13,059,709,464	(1,117,921,244)	34	0.9%
14	BlackRock Inv Mgt (UK) Ltd.	13,033,071,367	(12,535,218,973)	165	0.9%
15	Wellington Management Co. LLP	12,582,535,569	(24,857,063,977)	102	0.9%
16	Berkshire Hathaway (Inv Mgt)	12,186,014,058	(24,616,173,103)	6	0.9%
17	Northern Trust Investments	11,599,469,304	(12,372,715,569)	212	0.8%
18	Legal & General Inv Mgt Ltd.	9,205,833,192	(5,473,319,857)	184	0.7%
19	Charles Schwab Inv Mgt, Inc.	9,204,496,905	(7,432,444,505)	207	0.7%
20	Capital Research & Management Co. (Global Investors)	9,138,016,236	(8,724,178,695)	42	0.6%
21	Dimensional Fund Advisors LP	8,858,078,811	(4,666,956,448)	183	0.6%
22	Baillie Gifford & Co.	8,826,318,420	(6,998,015,173)	68	0.6%
23	Artisan Partners LP	8,657,199,084	(1,438,494,366)	45	0.6%
24	AllianceBernstein LP	8,592,495,038	(10,260,220,168)	168	0.6%
25	Dodge & Cox	7,741,573,474	(11,196,941,632)	8	0.5%
	Others	841,275,045,727	(691,174,710,152)	66,300	59.5%
	TOTAL	1,413,313,373,172	1,195,571,181,236)	69,555	100%

Source: Intro-act, 13F Filings

Chart 15: Top 25 Fintech Buyers (Q/Q)

Rank	Institution Name	Invested in Fintechs (\$)	Q/Q Change (\$)	# Fintech Positions	% of Instit Ownership
1	Lindsell Train Ltd.	4,071,784,289	1,316,435,161	9	0.3%
2	Societe Generale Gestion SA	1,163,808,840	613,643,281	12	0.1%
3	PineStone Asset Mgt Inc.	667,195,438	550,098,090	5	0.0%
4	Caledonia (Private) Inv Pty Ltd.	1,666,489,485	420,070,863	2	0.1%
5	West Yorkshire Pension Fund	619,447,830	335,766,856	26	0.0%
6	Canoe Financial LP	311,752,904	311,752,904	6	0.0%
7	AF Advisors, Inc.	256,372,933	256,372,933	1	0.0%
8	MFS International (UK) Ltd.	4,169,245,670	209,349,993	33	0.3%
9	Alphinity Inv Mgt Pty Ltd.	191,288,609	178,012,252	1	0.0%
10	Senator Investment Group LP	301,686,495	168,465,395	6	0.0%
11	Platinum Investment Mgt Ltd.	299,496,248	160,863,037	5	0.0%
12	Senvest Management LLC	150,558,237	150,558,237	2	0.0%
13	Pentwater Capital Management LP	267,191,920	142,615,570	6	0.0%
14	Independent Franchise Partners	2,585,852,522	140,937,232	5	0.2%
15	Empower Advisory Group LLC	138,039,606	138,039,606	14	0.0%
16	Mackenzie Financial Corp.	4,542,095,547	126,158,890	90	0.3%
17	Greenhaven Associates, Inc.	473,767,259	124,631,630	2	0.0%
18	Aegon Asset Mgt UK PLC	992,349,314	115,764,610	20	0.1%
19	New York Life Inv Mgt LLC	116,668,249	113,521,173	21	0.0%
20	Evenlode Investment Mgt Ltd.	978,960,282	113,513,630	13	0.1%
21	Mirae Asset Investment Managers (India) Pvt Ltd.	1,116,815,099	103,733,247	4	0.1%
22	MFS International Singapore Pte.	1,387,322,910	103,142,140	12	0.1%
23	Cavanal Hill Inv Mgt, Inc.	99,766,347	99,648,766	12	0.0%
24	Driehaus Capital Mgt LLC	267,935,458	94,370,125	17	0.0%
25	ArrowMark Colorado Holdings LLC	663,310,252	92,503,900	16	0.0%

Source: Intro-act, 13F Filings

Chart 16: Top 25 Fintech Sellers (Q/Q)

Rank	Institution Name	Invested in Fintechs (\$)	Q/Q Change (\$)	# Fintech Positions	% of Instit Ownership
1	The Vanguard Group, Inc.	132,187,262,724	(105,658,167,613)	218	9.3%
2	BlackRock Fund Advisors	77,929,970,238	(60,932,275,351)	218	5.5%
3	SSgA Funds Management, Inc.	47,710,689,481	(52,445,812,779)	228	3.4%
4	T. Rowe Price (Inv Management)	20,312,535,992	(38,726,742,996)	146	1.4%
5	Norges Bank Investment Mgt	252,237,827	(38,329,422,090)	7	0.0%
6	Wellington Management Co. LLP	12,582,535,569	(24,857,063,977)	102	0.9%
7	Berkshire Hathaway (Inv Mgt)	12,186,014,058	(24,616,173,103)	6	0.9%
8	Fidelity Management & Research	25,761,400,927	(24,500,441,904)	187	1.8%
9	Geode Capital Management LLC	26,897,411,854	(23,064,114,506)	223	1.9%
10	Massachusetts Financial Services	25,000,896,817	(13,284,851,985)	61	1.8%
11	Capital Research & Management Co. (International Investors)	17,129,837,086	(12,879,479,919)	41	1.2%
12	BlackRock Inv Mgt (UK) Ltd.	13,033,071,367	(12,535,218,973)	165	0.9%
13	Northern Trust Investments,	11,599,469,304	(12,372,715,569)	212	0.8%
14	JPMorgan Inv Mgt, Inc.	14,220,659,225	(11,240,655,672)	179	1.0%
15	Dodge & Cox	7,741,573,474	(11,196,941,632)	8	0.5%
16	Capital Research & Management Co. (World Investors)	22,998,032,729	(11,097,830,758)	53	1.6%
17	TD Asset Management, Inc.	15,365,358,896	(10,625,181,213)	96	1.1%
18	AllianceBernstein LP	8,592,495,038	(10,260,220,168)	168	0.6%
19	Managed Account Advisors LLC	5,688,812,589	(9,047,058,023)	85	0.4%
20	Capital Research & Management Co. (Global Investors)	9,138,016,236	(8,724,178,695)	42	0.6%
21	BlackRock Advisors (UK) Ltd.	13,839,460,554	(8,251,252,678)	181	1.0%
22	Morgan Stanley Smith Barney LLC	2,866,202,643	(7,788,438,542)	163	0.2%
23	Fisher Asset Management LLC	2,667,764,459	(7,539,288,960)	39	0.2%
24	Charles Schwab Inv Mgt, Inc.	9,204,496,905	(7,432,444,505)	207	0.7%
25	Baillie Gifford & Co.	8,826,318,420	(6,998,015,173)	68	0.6%

Source: Intro-act, 13F Filings

ETF SPOTLIGHT

ARK Fintech Innovation ETF (ARKF)

Closing Price (\$)	CUSIP	Expense Ratio	Inception
18.18	00214Q708	0.75	04/02/2019
AUM (\$ million)	Shares Outstanding (#)	Fund Flows (1M, \$)	Fund Flows (YTD, \$)
767.4	41,650,000	(23,946,550.00)	(75,479,100.00)

Fund Description

ARKF is an actively managed fund of stocks related to financial technology innovation. The Fund is an actively managed exchange-traded fund (ETF) that will invest under normal circumstances primarily (at least 80% of its assets) in domestic and foreign equity securities of companies that are engaged in the Funds investment theme of financial technology (Fintech) innovation. A company is deemed to be engaged in the theme of Fintech innovation if (i) it derives a significant portion of its revenue or market value from the theme of Fintech innovation, or (ii) it has stated its primary business to be in products and services focused on the theme of Fintech innovation. The Adviser defines Fintech innovation as the introduction of a technologically enabled new product or service that potentially changes the way the financial sector works. In selecting companies that the Adviser believes are engaged in the theme of Fintech innovation (Fintech Innovation Companies), the Adviser seeks to identify, using its own internal research and analysis, companies capitalizing on disruptive innovation.

ETF Returns Annualized (As of 9/30/2023)

1 Year	3 Year	5 Year	Since Inception
25.75%	-21.06%	-	-0.33%

ETF Returns Cumulative (As of 9/30/2023)

1 Month	3 Month	YTD	Since Inception
-8.11%	-7.26%	35.48%	-1.54%

Top 10 Holdings (updated as of 10/31/23)

CUSIP	Company	% of Fund	Market Value
19260Q107	COINBASE GLOBAL	11.0%	\$84,260,371.19
82509L107	SHOPIFY	8.1%	\$62,337,080.19
852234103	BLOCK	6.9%	\$52,819,517.44
26142V105	DRAFTKINGS	6.8%	\$51,811,419.59
90364P105	UIPATH	6.2%	\$47,932,961.28
90138F102	TWILIO	5.3%	\$40,365,997.65
770700102	ROBINHOOD MARKETS	4.7%	\$36,232,096.52
M5216V106	GLOBAL E ONLINE	4.6%	\$35,446,730.42
461202103	INTUIT	4.1%	\$31,188,990.03
58733R102	MERCADOLIBRE	3.9%	\$29,837,829.52

Source: Intro-act, FactSet

For more information on ARKF visit: <https://ark-funds.com/funds/arkf/>

Global X FinTech ETF (FINX)

Closing Price (\$)	CUSIP	Expense Ratio	Inception
18.84	37954Y814	0.68	12/09/2016

AUM (\$ million)	Shares Outstanding (#)	Fund Flows (1M, \$)	Fund Flows (YTD, \$)
301.4	1,60,541,900	(8,401,717.17)	(104,047,068.85)

Fund Description

FINX tracks a market-cap-weighted index of companies in developed markets that derive significant revenues from providing financial technology products and services. The Fund invests at least 80% of its total assets in the securities of the Underlying Index. The Fund's 80% investment policy is non-fundamental and requires 60 days prior written notice to shareholders before it can be changed. The Fund may lend securities representing up to one-third of the value of the Funds total assets (including the value of the collateral received). The Underlying Index is designed to provide exposure to exchange-listed companies in developed markets that provide financial technology products and services, including companies involved in mobile payments, peer-to-peer (P2P) and marketplace lending, financial analytics software and alternative currencies (collectively, FinTech Companies), as defined by Indxx, LLC, the provider of the Underlying Index (Index Provider).

ETF Returns Annualized (As of 9/30/2023)

1 Year	3 Year	5 Year	Since Inception
-0.80%	-17.50%	-5.77%	5.08%

ETF Returns Cumulative (As of 9/30/2023)

YTD	1 Month	3 Months	Since Inception
5.36%	-7.44%	-8.79%	41.79%

Top 10 Holdings (updated as of 10/31/23)

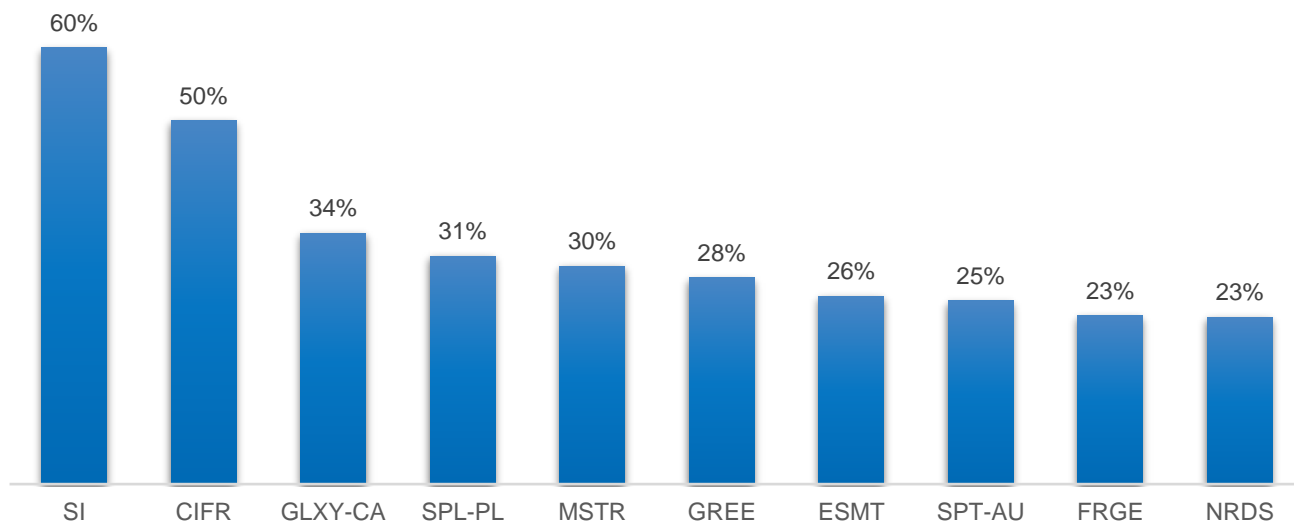
CUSIP	Company	% of Fund	Market Value
461202103	INTUIT	8.6%	\$26,039,986.61
337738108	FISERV	6.9%	\$20,924,155.80
31620M106	FIDELITY NATIONAL INFO SERVICES	5.5%	\$16,435,865.60
19260Q107	COINBASE GLOBAL	5.4%	\$16,421,878.31
37940X102	GLOBAL PAYMENTS	5.2%	\$15,736,164.84
70450Y103	PAYPAL HOLDINGS	4.9%	\$14,856,537.78
78467J100	SS&C TECHNOLOGIES HOLDINGS	4.4%	\$13,287,055.23
426281101	JACK HENRY & ASSOCIATES	4.0%	\$12,084,556.05
Q98665104	XERO	4.0%	\$12,066,436.45
852234103	BLOCK	3.7%	\$11,184,619.52

Source: Intro-act, FactSet

For more information on FINX visit: <https://www.globalxetfs.com/funds/finx/>

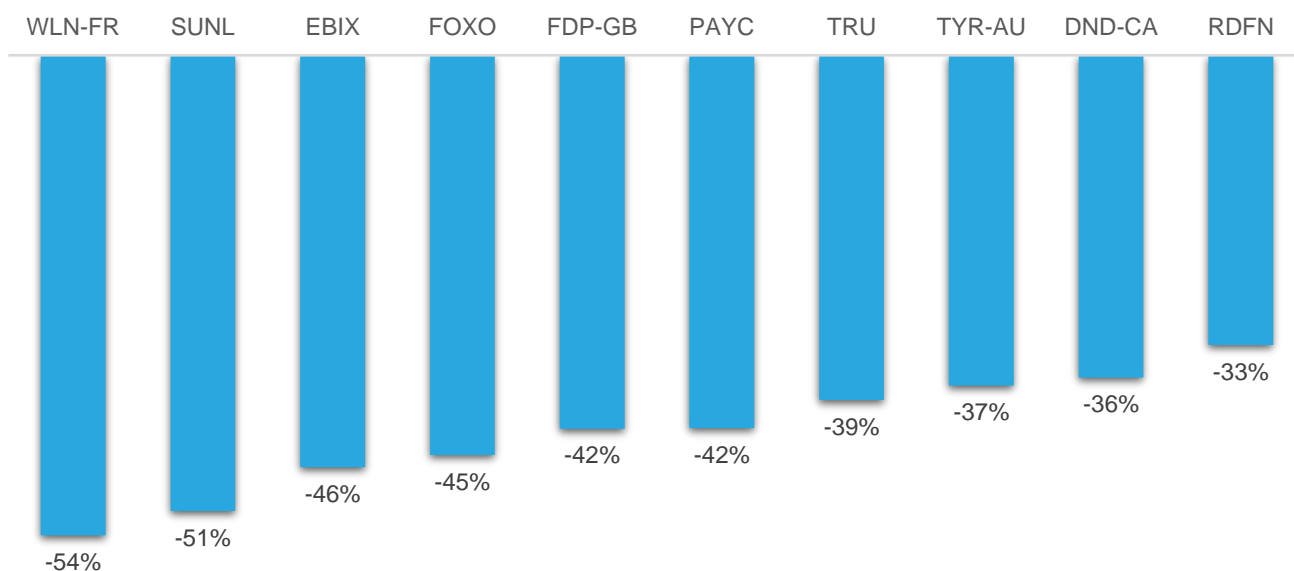
GAINERS AND LOSERS – FINTECH STOCKS

Chart 17: Top 10 M/M Fintech Gainers (Oct 2023)



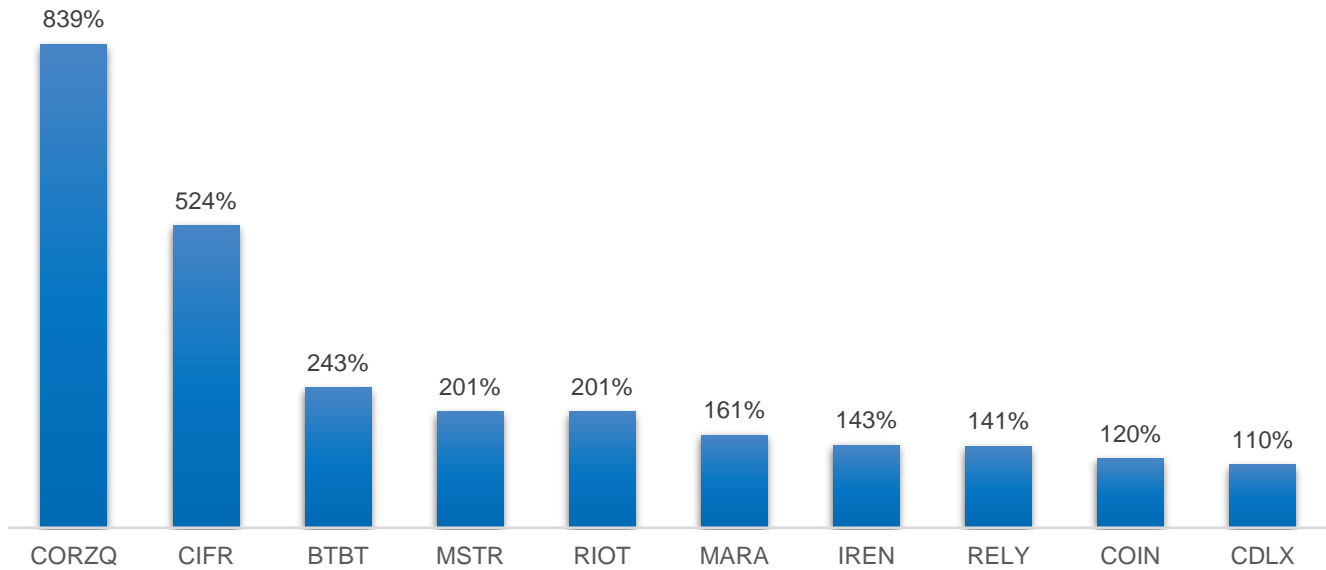
Source: Intro-act, FactSet

Chart 18: Top 10 M/M Fintech Losers (Oct 2023)



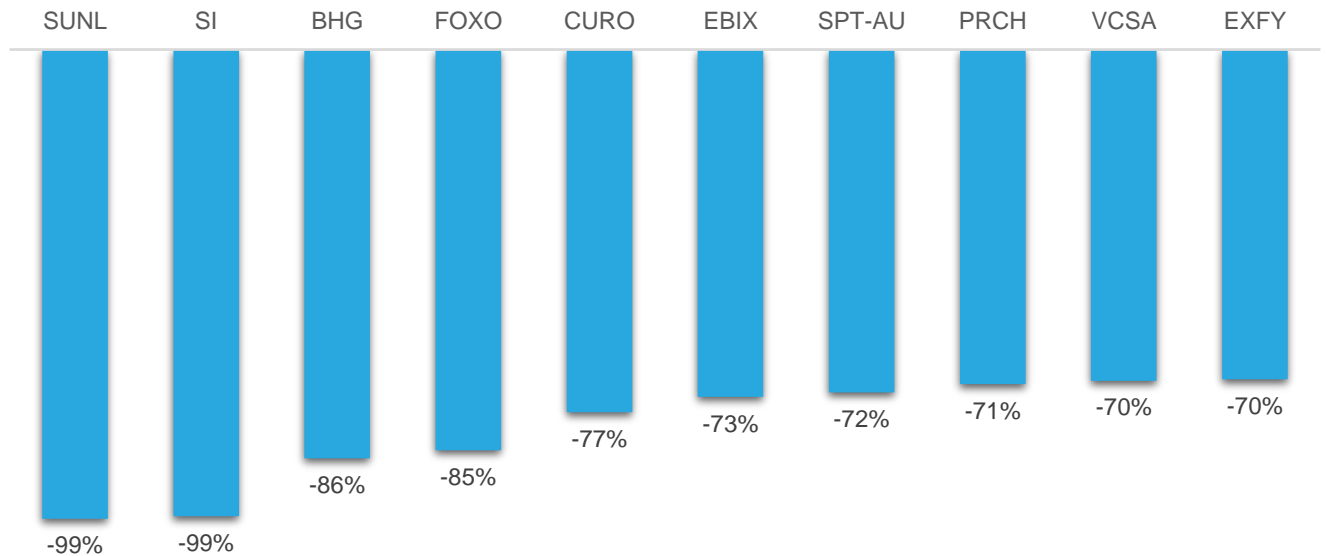
Source: Intro-act, FactSet

Chart 19: Top 10 YTD FinTech Gainers



Source: Intro-act, FactSet, YTD data through end of October 2023

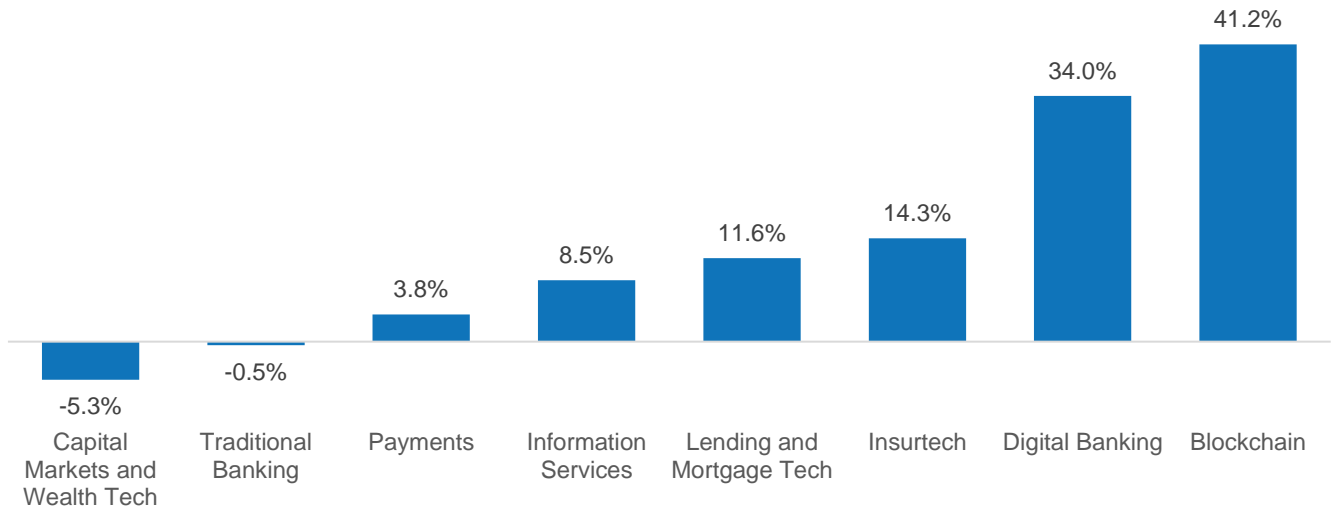
Chart 20: Top 10 YTD FinTech Losers



Source: Intro-act, FactSet, YTD data through end of October 2023

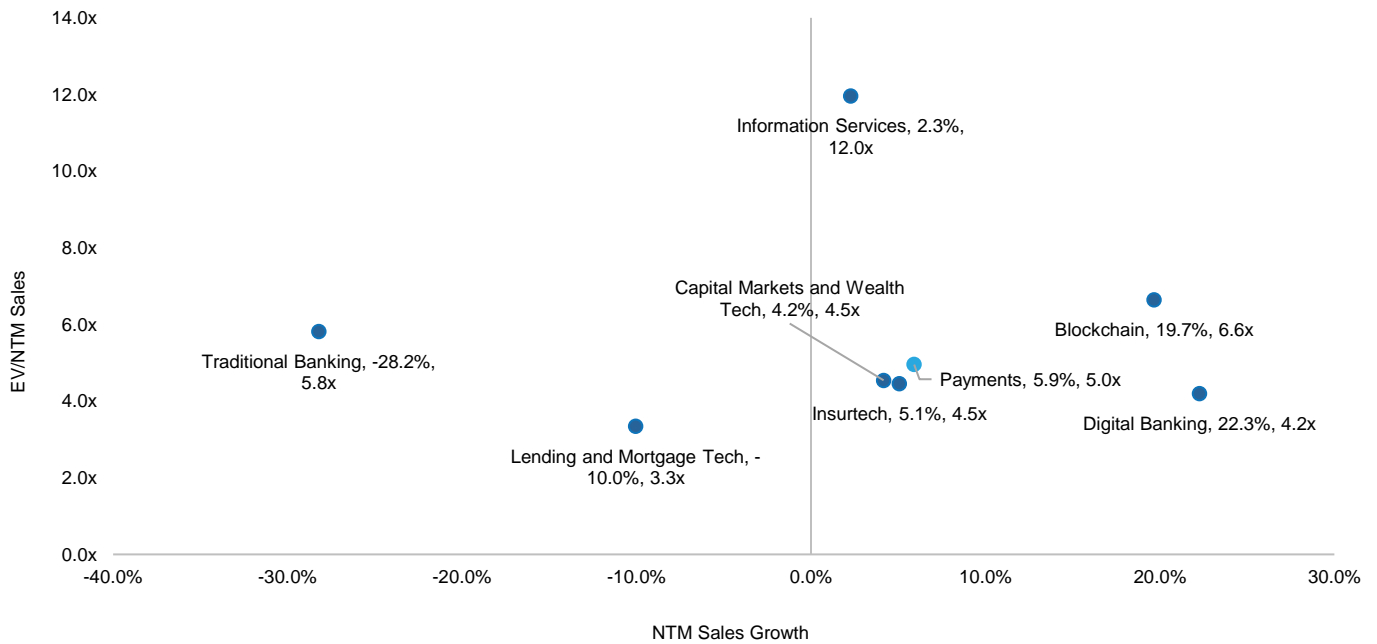
SEGMENT RETURN AND VALUATION

Chart 21: YTD Stock Price Returns by Segment



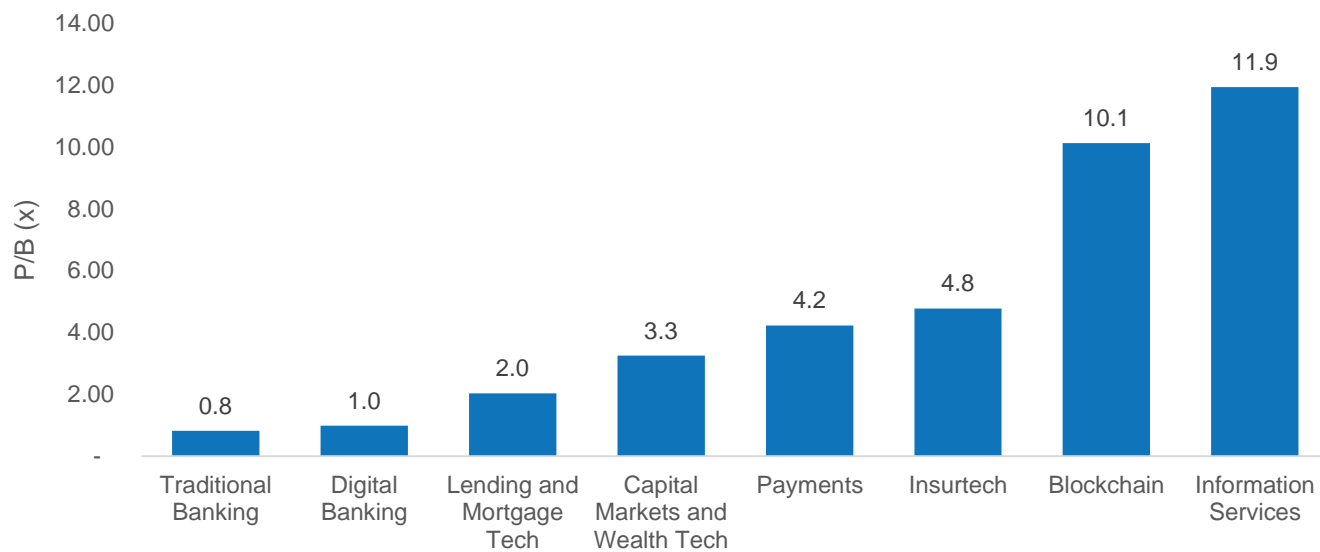
Source: Intro-act, FactSet. YTD Data Through end of Oct 2023.

Chart 22: Fintech Industry Growth and Valuation by Segment



Source: Intro-act, FactSet. Data Through end of Oct 2023.

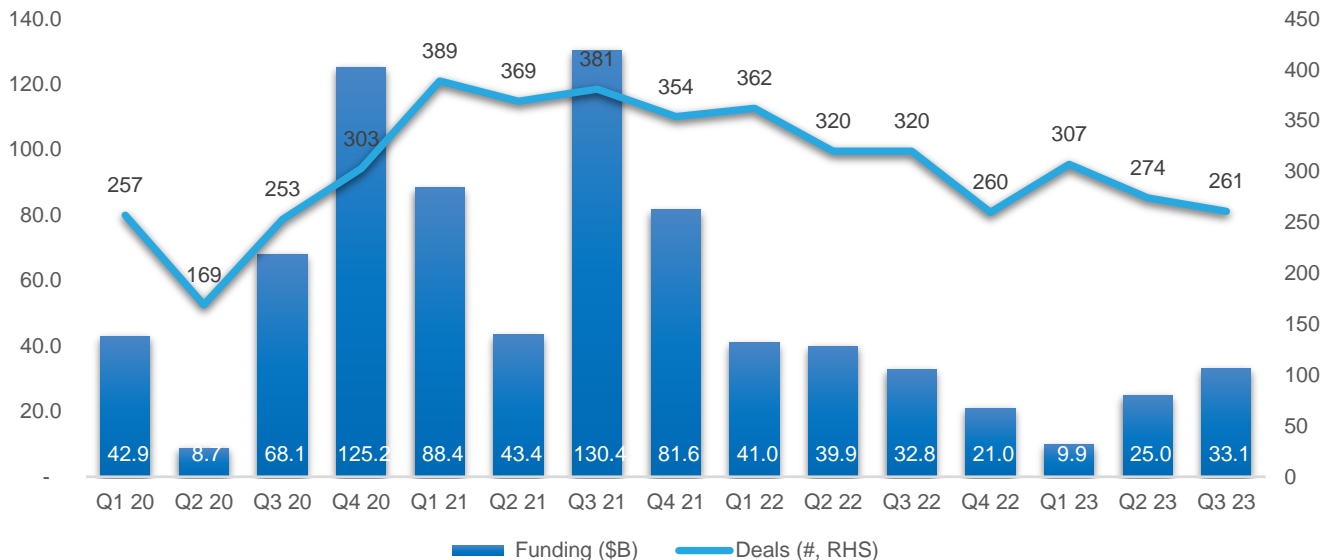
Chart 23: Price-to-Book Multiple by Segment



Source: Intro-act, FactSet. Data Through end of Oct 2023.

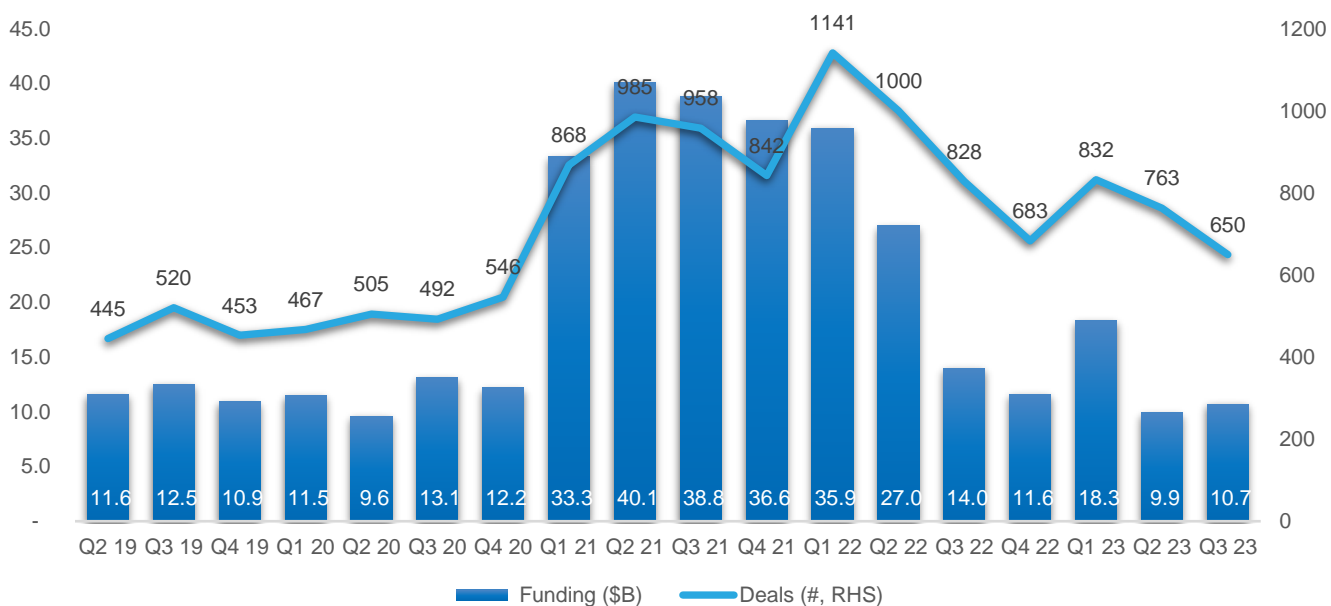
FINTECH CAPITAL MARKET TRENDS

Chart 24: Quarterly FinTech M&A Financing



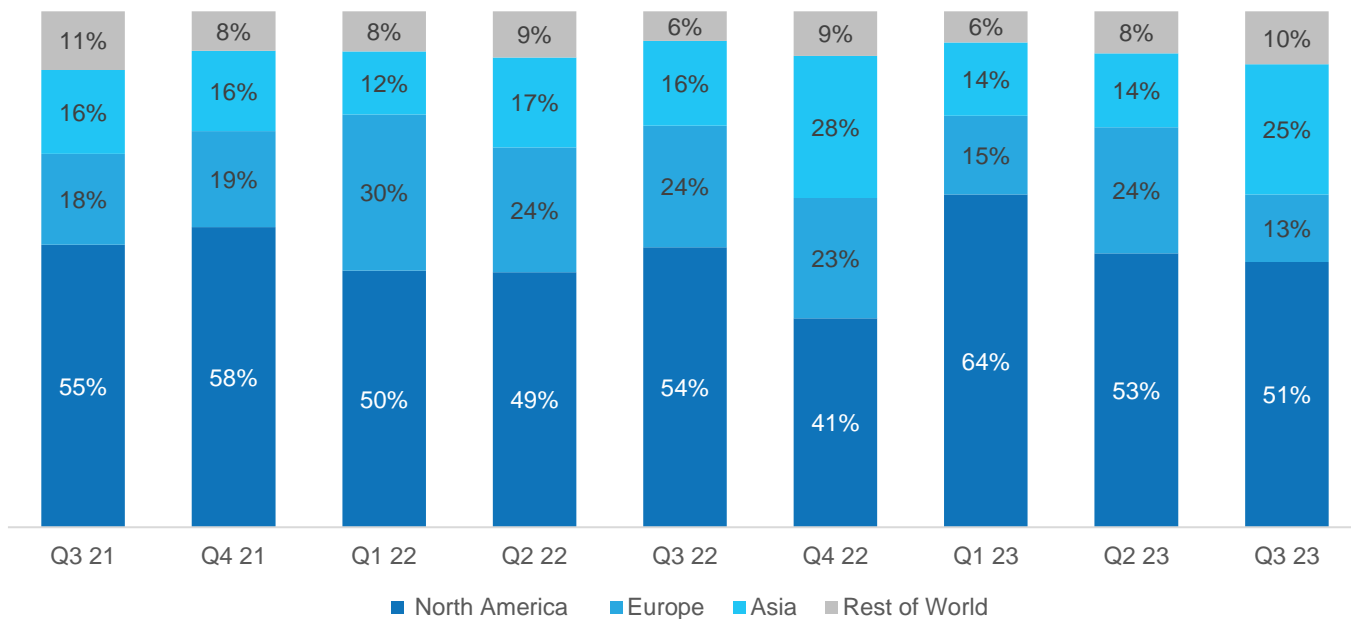
Source: Intro-act, FT Partners

Chart 25: Quarterly Fintech Funding



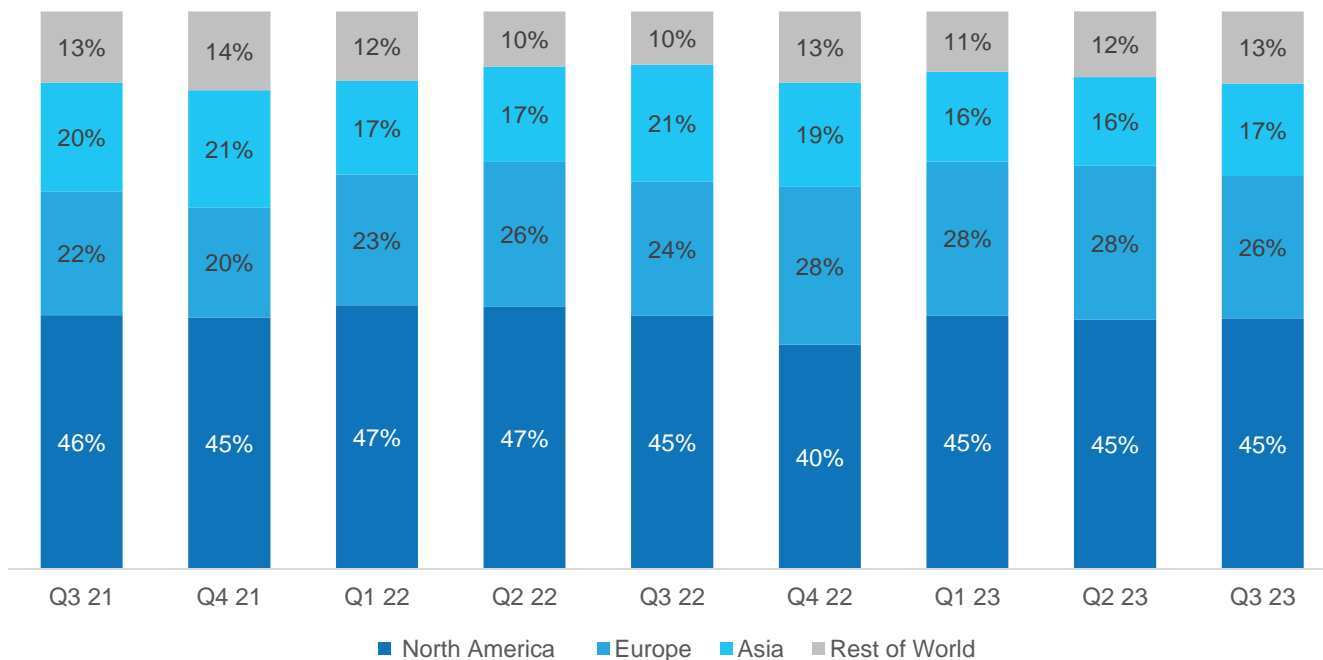
Source: Intro-act, FT Partners

Chart 26: Geographic Distribution of Fintech Private Financing by Value



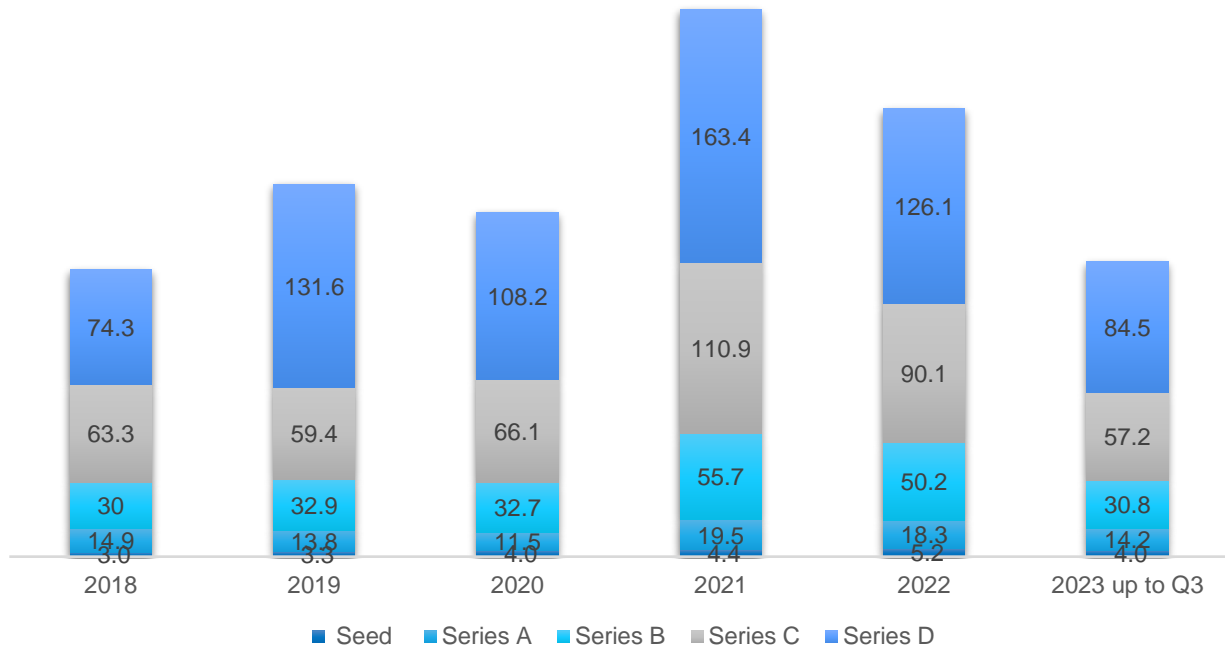
Source: Intro-act, FT Partners

Chart 27: Geographic Distribution of Fintech Private Financing by Deal Volume



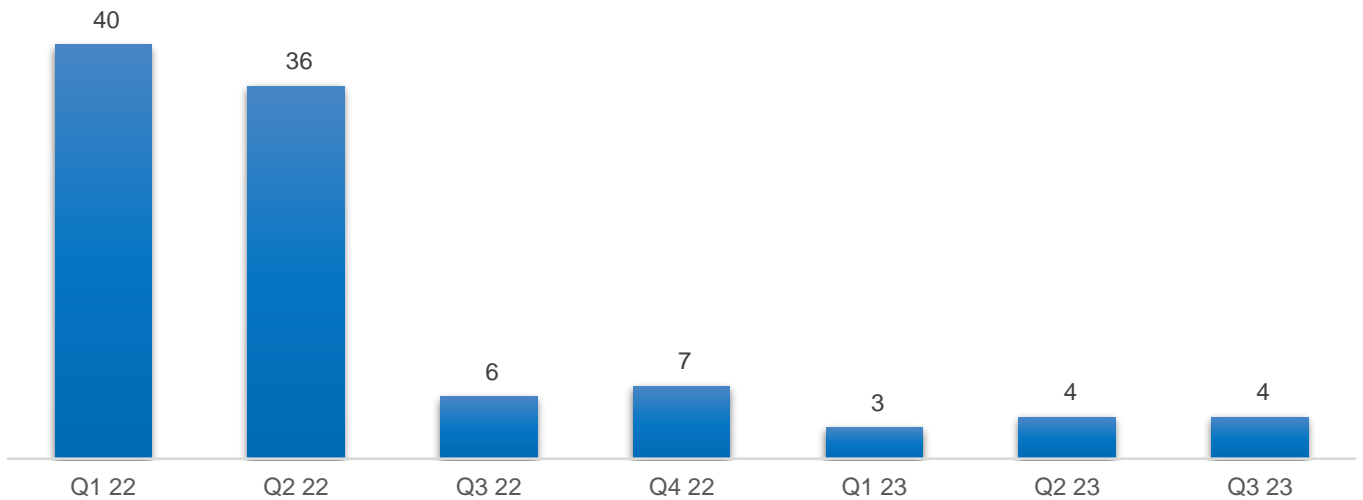
Source: Intro-act, FT Partners

Chart 28: Average Funding Round Size (\$ million)



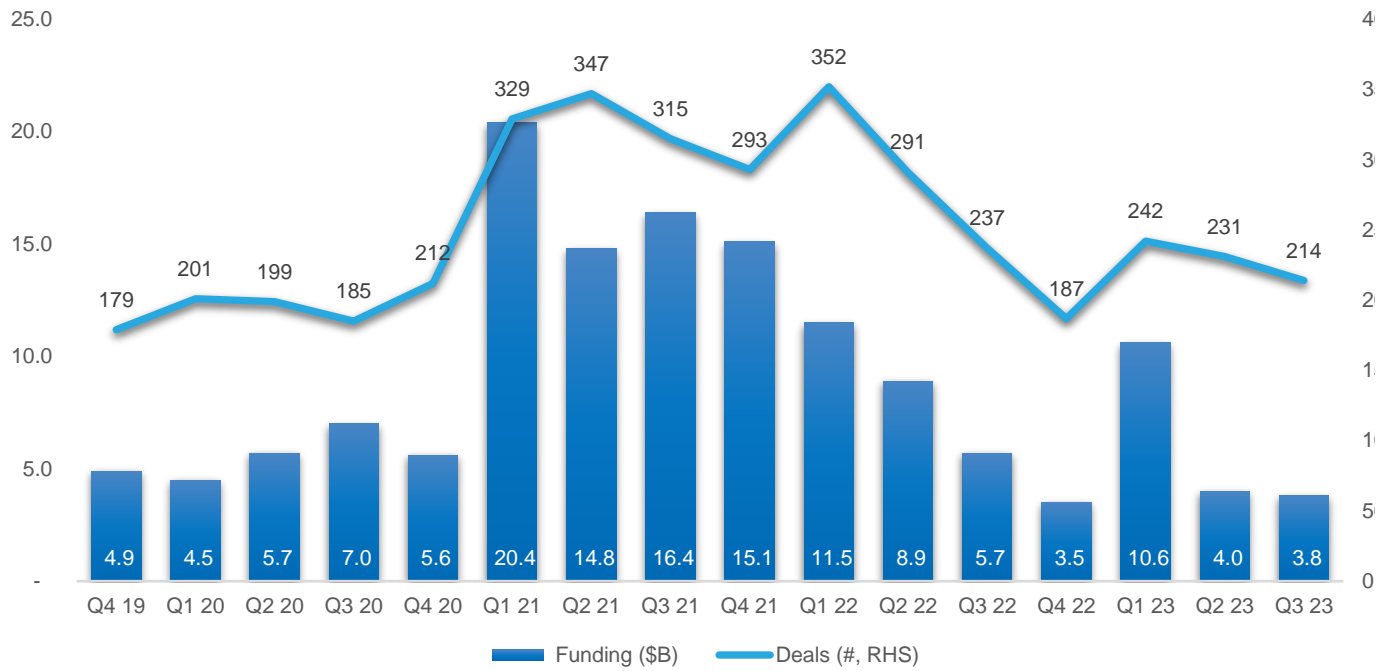
Source: Intro-act, FT Partners

Chart 29: New FinTech Unicorns Announced (Last Seven Quarters)



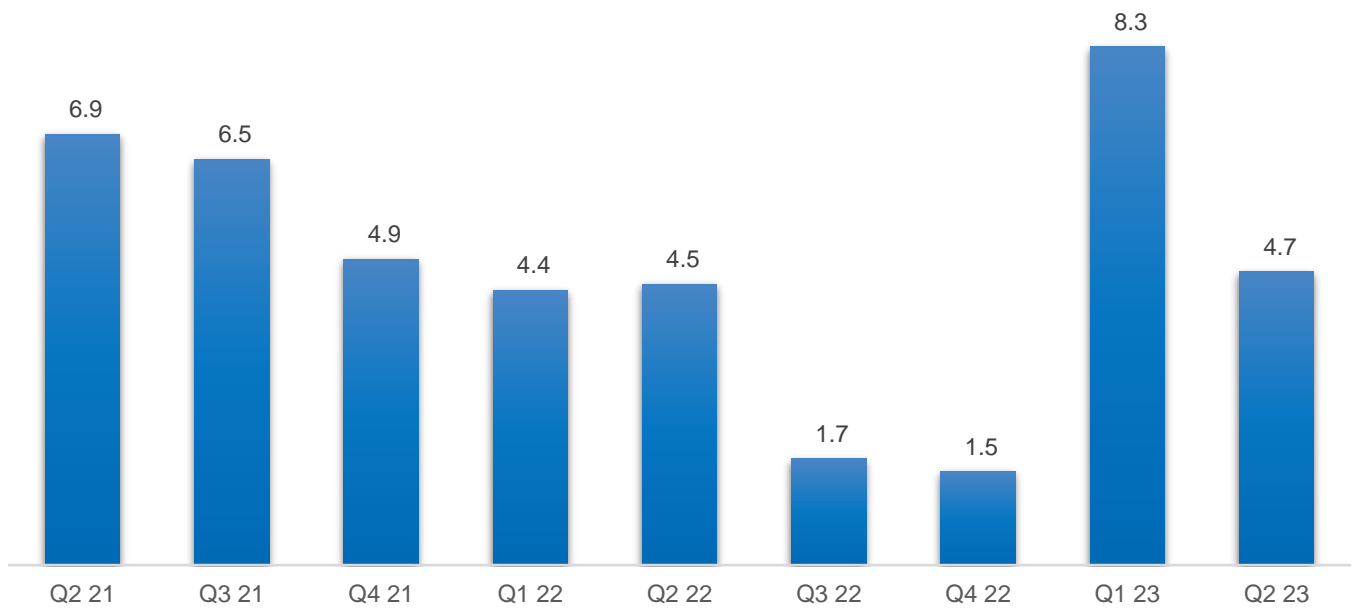
Source: Intro-act, FT Partners

Chart 30: Private FinTech Financing Activity in United States



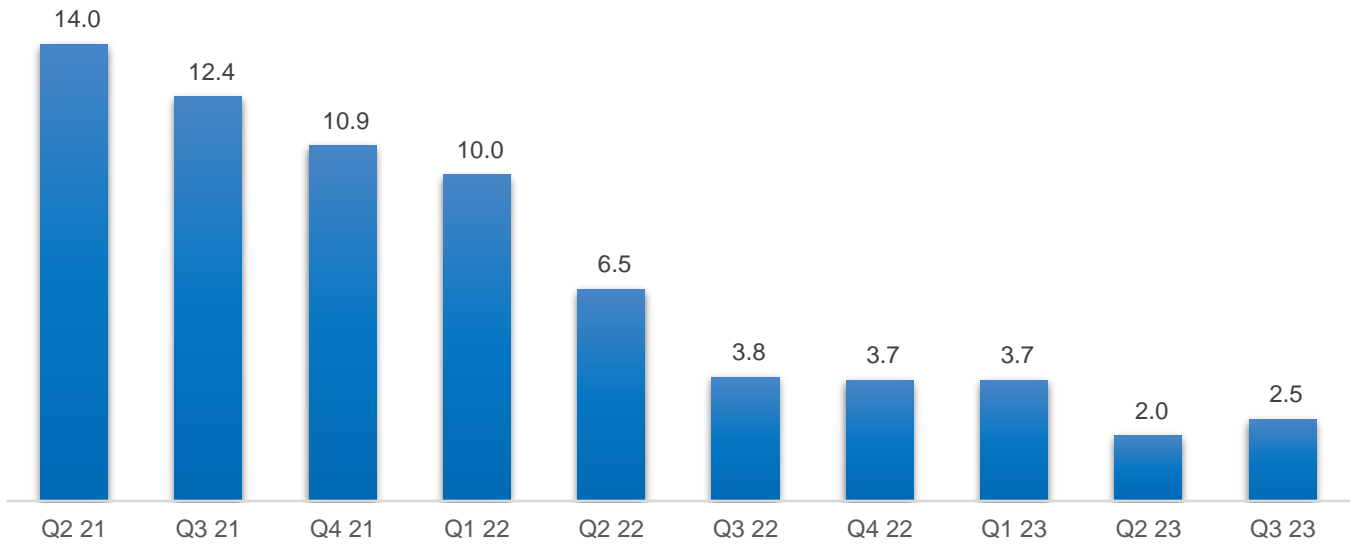
Source: Intro-act, FT Partners

Chart 31: Quarterly Private FinTech Financing Trend – Payments (\$ billion)



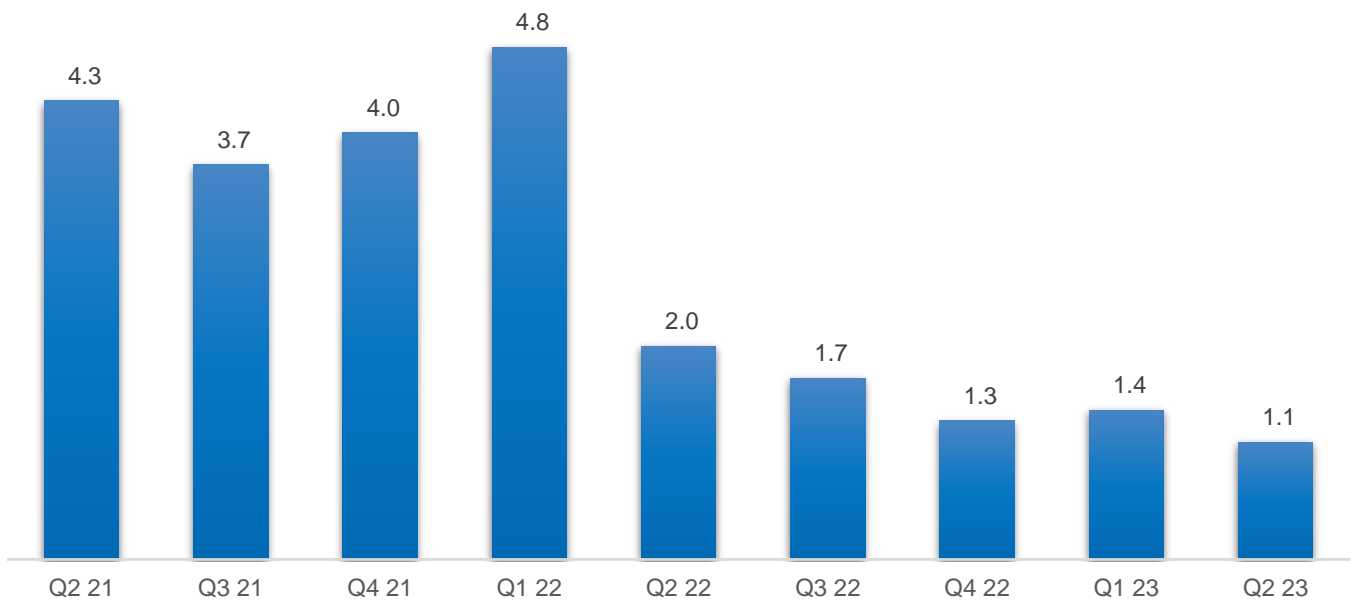
Source: Intro-act, FT Partners

Chart 32: Quarterly Private FinTech Financing Trend – Banking/ Lending Tech (\$ billion)



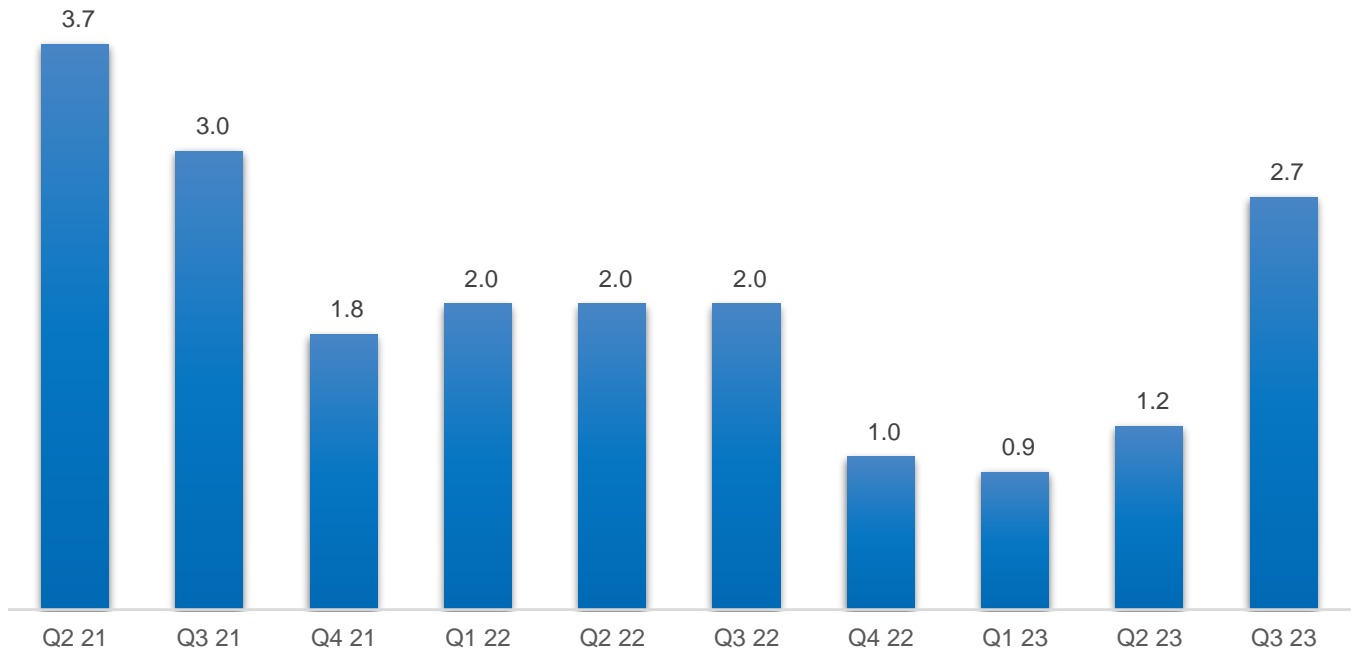
Source: Intro-act, FT Partners

Chart 33: Quarterly Private FinTech Financing Trend – Wealth and Capital Markets Tech (\$ billion)



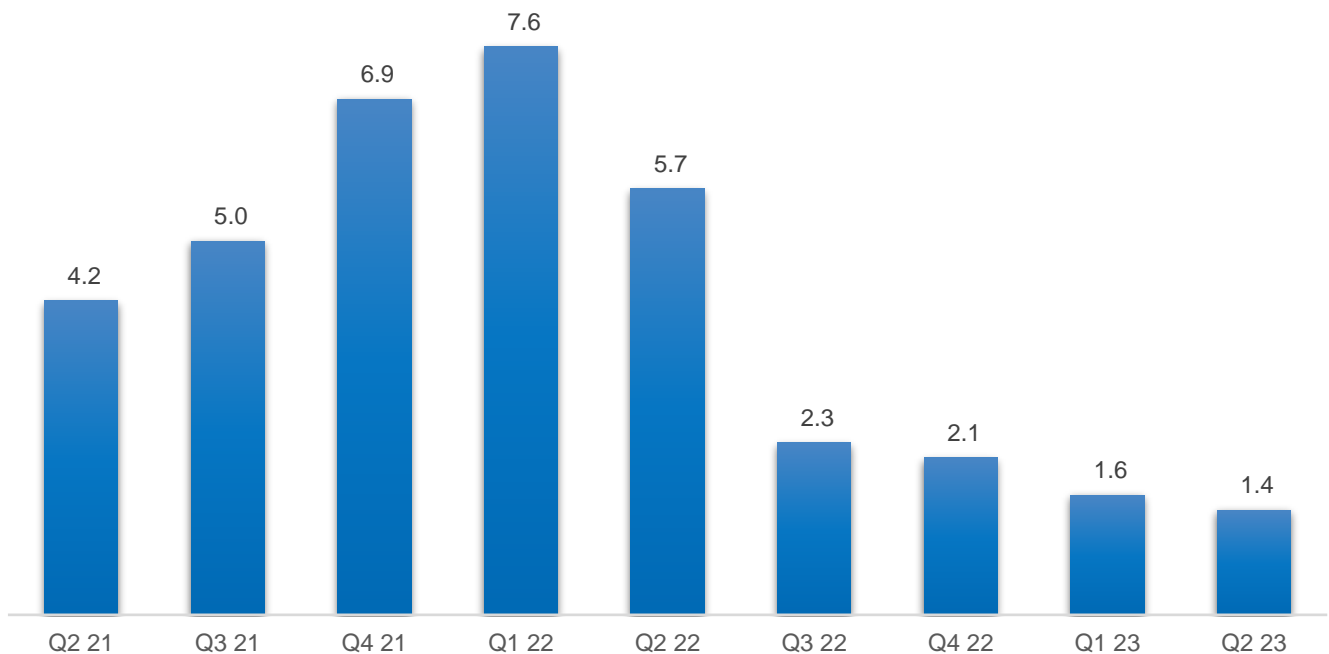
Source: Intro-act, FT Partners

Chart 34: Quarterly Private FinTech Financing Trend – InsurTech (\$ billion)



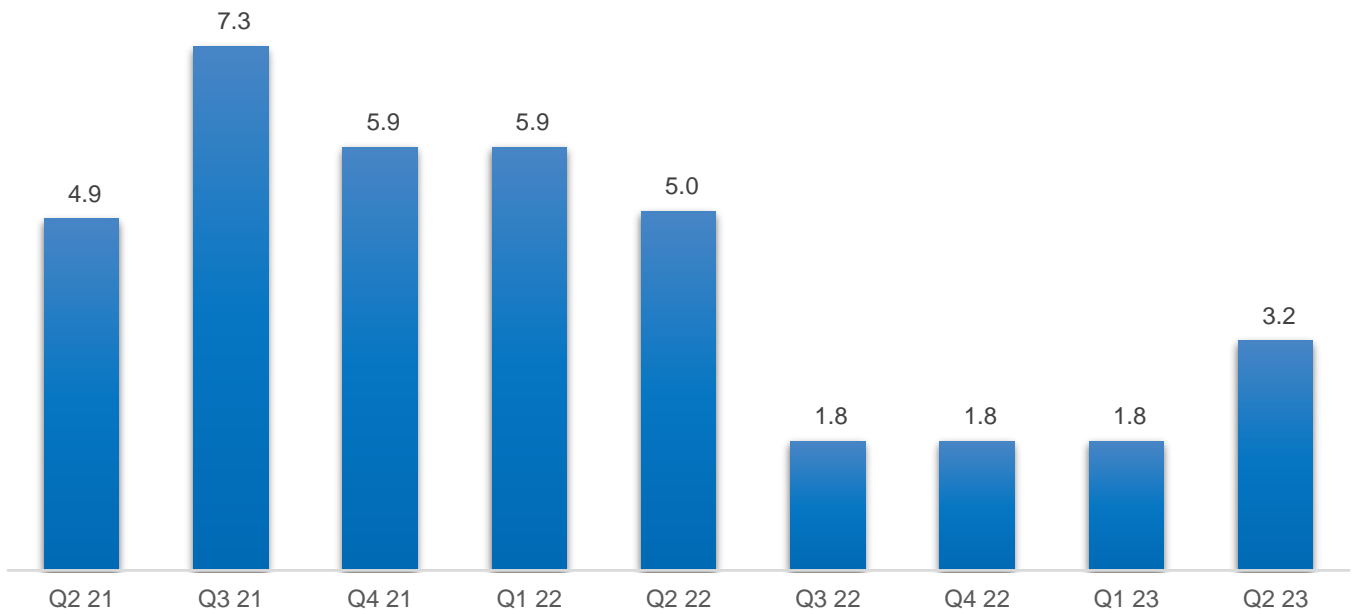
Source: Intro-act, FT Partners

Chart 35: Quarterly Private FinTech Financing Trend – Crypto and Blockchain (\$ billion)



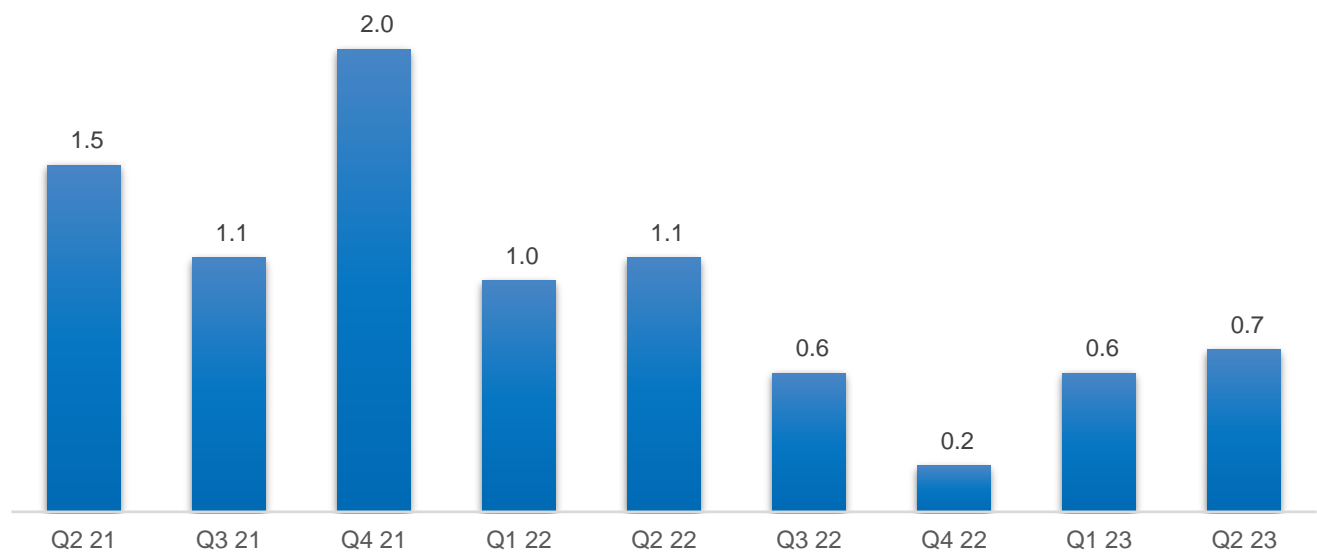
Source: Intro-act, FT Partners

Chart 36: Quarterly Private FinTech Financing Trend – Financial Management Solutions (\$ billion)



Source: Intro-act, FT Partners

Chart 37: Quarterly Private FinTech Financing Trend – Healthcare FinTech (\$ billion)



Source: Intro-act, FT Partners

Chart 38: Select Sector and Sub-Sector Financing Activity Highlights Q3 2023

Alternative Lending		
Company	Amount (\$ in mm)	Description
PAYJOY	\$150	Smartphone Loans for Consumers in Emerging Markets
VERITAS FINANCE	145	Indian Alternative Lender
splitit	60	Card-Based Buy-Now, Pay-Later Installments
Metro	67	Vehicle & Equipment Financing
AUXILO	57	Education Loans in India
nagro	49	Agricultural Credit in Brazil

Banking Tech		
Company	Amount (\$ in mm)	Description
Perfios	\$229	Financial Data Analysis Software for FIs
MariBank	173	Singapore Challenger Bank
bung	111	Amsterdam-based Challenger Bank
GxS	101	Singapore Challenger Bank
CURVE	72	Digital Wallet & Super-App
NOMAD	61	Global Banking Accounts for Brazilians

PropTech / Real Estate Tech		
Company	Amount (\$ in mm)	Description
loft	\$100	Brazilian Home Buying & Selling Platform
Perenna	52	UK Mortgage Lender
MYND	30	Property Management & Real Estate Investing Platform
STEADILY	29	Landlord Insurance
bowery	16	Appraisal Platform
Realm+	10	Home Renovation Management Platform

Payments		
Company	Amount (\$ in mm)	Description
Airwallex Singapore	\$165	Global Payments & Financial Operations Software
toss payments	75	Digital Payments Solutions for Korean Merchants & Customers
LAWPI	33	International Accounts & Money Transfer for African Immigrants
CROISSANT	24	Buyback Value at Checkout
IVY	20	Instant Bank Payments for Businesses
GoTab	20	Restaurant Commerce Platform / POS

GRC / Fraud / Identity		
Company	Amount (\$ in mm)	Description
onetrust	\$150	Trust Intelligence Cloud Solutions
MindBridge	60	AI-powered Financial Risk Discovery Platform
THETARAY	57	AI-powered Transaction Monitoring for AML
certa	35	Third-Party Procurement & Compliance Platform
CERTIFID	20	Wire Fraud Prevention
frustmi	17	Fraud Prevention & Payments Protection Platform

Financial Management Solutions		
Company	Amount (\$ in mm)	Description
ramp	\$300	Expense Management Platform
bob	150	HR & Employee Management Platform
CLASSWALLET	95	Digital Wallet for Purchase & Reimbursement Management
KOREA CREDIT DATA	76	SMB Financial Management Platform
Tradeshift	70	Source-to-Pay Software & B2B Marketplace
collective	50	Financial Management Platform for Self-Employed Entrepreneurs

Crypto & Blockchain		
Company	Amount (\$ in mm)	Description
MICROCONNECT	\$458	Investments in Micro & Small Chinese Businesses
HAGEX	400	Crypto Asset Trading for Islamic Investors
BitGo	100	Liquidity, Custody & Security of Digital Assets
Ingsai	80	AI Crypto Trading Bots
Flashbots	60	Research & Development Platform for MEV Extraction
Halo	40	Computing for Zero-Knowledge Ecosystem

Wealth & Capital Markets Tech		
Company	Amount (\$ in mm)	Description
Teamshares	\$245	Employee Ownership Platforms for SMBs
AlphaSense	150	AI-powered Market Intelligence & Search Platform
OneChronos	40	US Equities Alternative Trading System
Endowus	35	Digital Wealth Management
Farther	31	Tech-Driven Wealth Management Platform
MerQube	22	Index-linked Investing

US Consumer FinTech Brands		
Company	Amount (\$ in mm)	Description
Jerry	\$110	Car Insurance & Services Platform
Openly	100	Home Insurance MGA
kin.	33	Direct-to-Consumer Homeowners Insurer
Farther	31	Tech-Driven Wealth Management Platform
Petal	20	Cards for Credit Building
ECHOOO	15	Self-Custodial AA Smart Contract Wallet

ESG FinTech		
Company	Amount (\$ in mm)	Description
Sylvera	\$57	Carbon Credits Ratings, Data & Analytics
PERSEFONI	50	Climate Management & Carbon Accounting Platform
planA	27	Carbon Accounting Platform
ISOMETRIC	25	Carbon Removal Standard & Registry Platform
PEXAPARK	21	Wind & Solar Power Purchase Agreements
pulsora	20	Enterprise Sustainability Management Platform

InsurTech		
Company	Amount (\$ in mm)	Description
PRISMIC	\$1,000	Life & Annuity Reinsurance
Singlife	625	Diversified Insurance & Investment Marketplace
Jerry	110	Car Insurance & Services Platform
AUGMENT	100	Global Risk Capital & Reinsurance Broker
resilience	100	Cyber Insurance & Risk Services
Openly	100	Home Insurance MGA

Healthcare FinTech		
Company	Amount (\$ in mm)	Description
Collectly	\$29	Patient Billing Platform
Verifiable	27	Medical Credential Verification Platform
Take Command	25	Employee Benefits Platform
SEMPRE HEALTH	20	Behavior-based Dynamic Pricing for Prescriptions
briya	12	Healthcare Data Exchange Platform
muralhealth	8	Clinical Trials Reimbursement & Participant Mgmt Platform

Source: Intro-act, FT Partners

Chart 39: Most Active VC Investors in 2023 (as of end of Q3 23)

Investor Name	# of New FinTech Investments in 2023 YTD	Selected New FinTech Investments in 2023 YTD
Fin	27	
HASKEY Capital	20	
SHIMA CAPITAL	18	
NGC Ventures	17	
Robot Ventures	16	
BIG BRAIN HOLDINGS	15	
SEQUOIA	15	
andreesen. horowitz	14	
GFC	13	
Lightspeed	13	

Source: Intro-act, FT Partners

Chart 40: Most Active Strategic and Corporate VC Investors in 2023 (as of end of Q3 23)

Investor Name	# of New FinTech Investments in 2023 YTD	Selected New FinTech Investments in 2023 YTD
coinbase Ventures	25	
CIRCLE VENTURES	22	
citi VENTURES	16	
animoca BRANDS	14	
Jump Capital	14	
CMT DIGITAL	13	
KUCCOIN	12	
GMO VENTURE PARTNERS	11	
MS&AD MS&AD VENTURES	10	
VISA	8	

Source: Intro-act, FT Partners

Chart 41: Most Active Countries by number of Financing in 2023 (as of end of Q3 23)

Country	# of Financings	# of Financings % of Total	Dollar Volume (\$ in mm)	Dollar Volume % of Total	Largest Rounds Raised in Q1 – Q3 2023
USA	916	41%	\$20,245	52%	
UK	213	9%	\$3,441	9%	
India	120	5%	\$2,223	6%	
Singapore	102	5%	\$2,362	6%	
Germany	72	3%	\$758	2%	
France	63	3%	\$706	2%	
Canada	54	2%	\$891	2%	
Brazil	51	2%	\$533	1%	
Switzerland	50	2%	\$316	1%	
Netherlands	33	1%	\$276	1%	
Israel	31	1%	\$387	1%	
Spain	28	1%	\$211	1%	

Source: Intro-act, FT Partners

Chart 42: Select Well-Funded Private FinTech Companies

Last Funding Date	Company	Total Financing Amount (\$ in mm)	Last Funding Date	Company	Total Financing Amount (\$ in mm)	Last Funding Date	Company	Total Financing Amount (\$ in mm)
03/16/23		\$10,145	01/27/22		\$1,039	09/28/23		\$740
08/13/21		2,243	08/22/23		1,028	04/07/21		734
10/08/21		1,962	07/13/21		1,000	03/15/22		715
10/13/21		1,600	09/09/21		992	05/04/21		714
12/14/21		1,355	08/01/23		984	01/05/22		685
10/05/23		1,276	11/12/21		910	05/12/22		675
03/07/23		1,197	12/07/22		904	12/23/21		655
08/13/21		1,174	05/18/22		900	11/09/21		652
10/21/21		1,157	03/31/21		881	09/21/22		620
04/12/22		1,111	01/14/22		873	10/12/21		603
06/30/21		1,099	07/01/21		850	06/21/23		602
07/24/23		1,070	07/08/22		770	06/03/21		581
03/23/21		1,046	05/13/22		746	04/07/22		579

Source: Intro-act, FT Partners

FINTECH SPAC ACTION

Chart 43: Fintech SPACs (Searching)

S. No	SPAC Name	Ticker	Trust Value (\$ Mn)	IPO Date	Completion Date
1	Thunder Bridge Capital Partners III	TBCP	414	2/4/21	8/10/23
2	FinServ Acquisition Corp. II	FSRX	300	2/17/21	8/22/23
3	Fusion Acquisition Corp. II	FSNB	500	2/25/21	3/2/23
4	InterPrivate III Financial Partners Inc.	IPVF	259	3/5/21	3/9/24
5	Portage Fintech Acquisition Corp.	PFTA	259	7/20/21	7/20/23
6	Williams Rowland Acquisition Corp.	WRAC	230	7/26/21	7/29/23
7	World Quantum Growth Acquisition	WQGA	204	8/11/21	8/11/23
8	Concord Acquisition Corp II	CNDA	280	8/31/21	8/31/23
9	WinVest Acquisition Corp.	WINV	115	9/14/21	6/17/23
10	Concord Acquisition Corp III	CNDB	345	11/3/21	11/3/23
11	Canna-Global Acquisition Corp	CNGL	230	11/29/21	12/2/23
12	Globalink Investment Inc.	GLLI	115	12/6/21	9/9/23
13	AIB Acquisition Corp	AIB	86	1/18/22	10/21/23
14	SHUAA Partners Acquisition Corp I	SHUA	109	3/2/22	12/2/23
15	Metal Sky Acquisition Corp	MSSA	115	10/5/23	2/5/24
16	Quetta Acquisition Corporation	QETA	69	10/5/23	7/5/25

Source: Intro-act, Boardroom Alpha

Chart 44: Fintech SPACs (Business Combination Agreement Announced)

S. No	SPAC Name	Ticker	Target Company	EV (\$ Mn)	Expected Closing
1	ADIT Edtech Acquisition Corp.	ADEX	Griid	3,300	1Q22
2	StoneBridge Acquisition Corp.	APAC	DigiAsia Bios	500	2Q23
3	Arisz Acquisition Corp.	ARIZ	BitFuFu	1,500	-
4	Blockchain Coinvestors Acquisition Corp. I	BCSA	Qenta Inc.	622	-
5	Broad Capital Acquisition Corp	BRAC	Openmarkets Group	90	2Q23
6	Brilliant Acquisition Corporation	BRLI	Nukkleus, Inc.	140	-
7	Capitalworks Emerging Markets Acquisition Corp	CMCA	Lexasure Financial Group	-	-
8	Churchill Capital Corp VII.	CVII	CorpAcq	1580	1Q24
9	Fintech Ecosystem Development Corp.	FEXD	Rana and Afinoz	198	-
10	Global Blockchain Acquisition Corp.	GBBK	Cardea Corporate	175	2Q24
11	HHG Capital Corporation	HHGC	Perfect Hexagon	-	3Q23
12	InFinT Acquisition Corporation	IFIN	Seamless Group	400	1Q23
13	Kingswood Acquisition Corp	KWAC	Wentworth	208	-
14	LIV Capital Acquisition Corp. II	LIVB	Covalto	547	1Q23
15	Everest Consolidator Acquisition Corp	MNTN	-	-	-
16	Goal Acquisitions Corp.	PUCK	Digital Virgo	513	1Q23
17	Quantum FinTech Acquisition Corp	QFTA	AtlasClear	-	2/3Q23

18	Thunder Bridge Capital Partners IV	THCP	Coincheck	1,250	-
19	Worldwide Webb Acquisition Corp.	WWAC	Aeries Technology	196	-

Source: Intro-act, Boardroom Alpha

Chart 45: Fintech SPACs (Closed Deals Since January 2022)

S. No	SPAC Name	Ticker (Old)	DE-SPAC	Ticker	Closing Date
1	VPC Impact Acquisition Holdings III, Inc.	VPCC	Dave Inc.	DAVE	5-Jan-22
2	Motive Capital Corp	MOTV	Forge Global, Inc.	FRGE	22-Mar-22
3	TradeUP Global Corporation	TUGC	SAI Tech	SAI	29-Apr-22
4	EJF Acquisition Corp	EJFA	Pagaya	PGY	22-Jun-22
5	Delwinds Insurance Acquisition Corporation	DWIN	FOXO Technologies Inc.	FOXO	16-Sep-22
6	Northern Lights Acquisition Corp.	NLIT	Safe Harbor Financial	SHFS	29-Sep-22
7	AGBA Acquisition Limited	AGBA	TAG Holdings Limited	AGBA	14-Nov-22
8	Cartesian Growth Corporation	GLBL	The Tiedemann and Alvarium Groups	ALTI	3-Jan-23
9	Blue Safari Group Acquisition Corp	BSGA	Bitdeer	BTDR	13-Apr-23
10	Avalon Acquisition Inc.	AVAC	The Beneficient Company Group, L.P.	BENF	7-Jun-23
11	East Resources Acquisition Company	ERES	Abacus Life	ABL	3-Jul-23
12	Prime Impact Acquisition I	PIAI	Cheche Technology	CCG	18-Sep-23
13	Vahanna Tech Edge Acquisition I Corp.	VHNA	Roadzen, Inc.	RDZN	20-Sep-23
14	Bridgetown Holdings Ltd	BTWN	MoneyHero	MNY	12-Oct-23

Source: Intro-act, Boardroom Alpha

SELECT DIGITAL ASSET TRADING PERFORMANCE

Chart 46: Top-10 Cryptocurrencies by Market Cap

#	Name	Price	1h %	24h %	7d %	Market Cap ⓘ	Volume(24h) ⓘ	Circulating Supply ⓘ	Last 7 Days
1	Bitcoin BTC	\$34,405.77	▼ 0.08%	▲ 0.57%	▲ 0.71%	\$671,938,352,504	\$15,601,333,958 453,144 BTC	19,529,818 BTC	
2	Ethereum ETH	\$1,805.12	▼ 0.24%	▲ 0.35%	▲ 0.70%	\$217,099,926,711	\$6,820,428,334 3,774,686 ETH	120,269,303 ETH	
3	Tether USDt USDT	\$1.00	▲ 0.01%	▼ 0.00%	▲ 0.04%	\$84,846,068,357	\$29,257,677,647 29,244,863,217 USDT	84,806,706,137 USDT	
4	BNB BNB	\$225.08	▼ 0.11%	▼ 0.75%	▼ 1.29%	\$34,145,779,658	\$310,900,219 1,380,554 BNB	151,703,612 BNB	
5	XRP XRP	\$0.5875	▼ 0.69%	▲ 2.66%	▲ 5.77%	\$31,469,329,599	\$2,181,374,974 3,704,489,488 XRP	53,560,508,378 XRP	
6	USDC USDC	\$1.00	▲ 0.02%	▲ 0.01%	▲ 0.02%	\$24,751,012,970	\$3,535,496,838 3,535,459,123 USDC	24,746,638,528 USDC	
7	Solana SOL	\$38.18	▼ 0.36%	▲ 6.27%	▲ 20.82%	\$16,015,100,511	\$1,487,977,307 38,778,106 SOL	419,441,542 SOL	
8	Cardano ADA	\$0.2877	▼ 0.45%	▼ 4.05%	▲ 1.82%	\$10,140,562,400	\$315,024,364 1,094,228,401 ADA	35,248,686,970 ADA	
9	Dogecoin DOGE	\$0.06715	▼ 0.38%	▼ 2.75%	▲ 1.40%	\$9,512,092,927	\$483,178,835 7,178,940,148 DOGE	141,646,266,384 DOGE	
10	TRON TRX	\$0.0972	▼ 0.21%	▲ 1.02%	▲ 4.72%	\$8,630,236,213	\$265,651,949 2,732,240,070 TRX	88,792,219,232 TRX	

Source: Intro-act, Coin MarketCap. Data as of 10/31/2023.

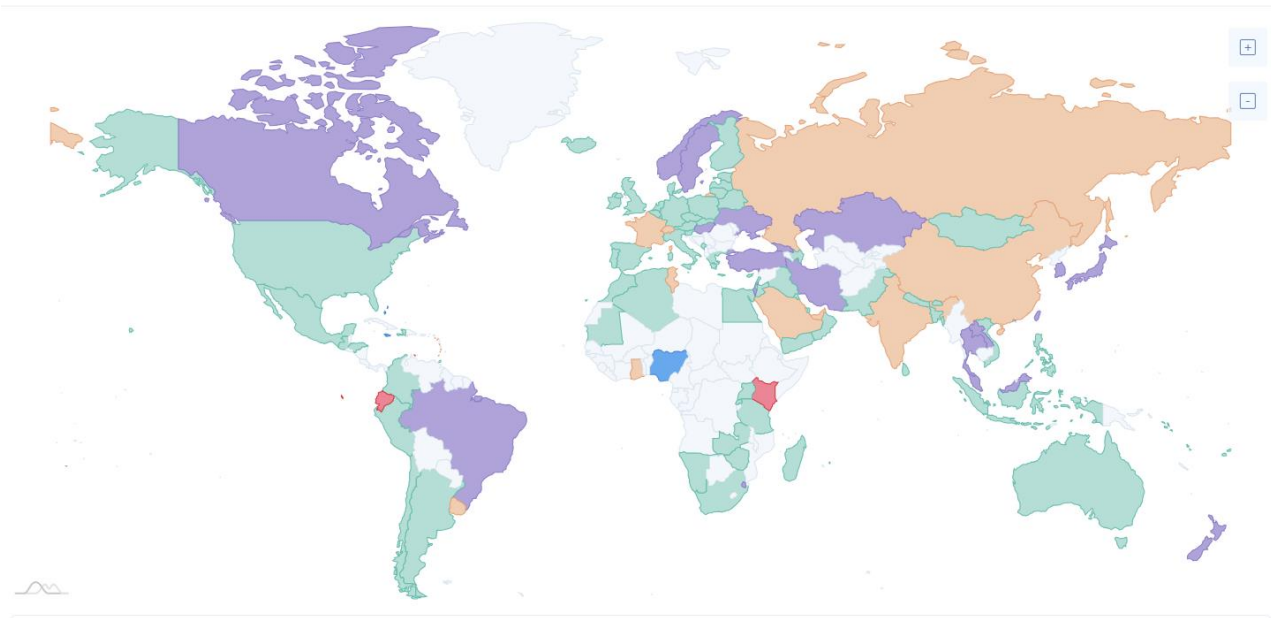
GLOBAL CBDC TRACKER

Chart 47: Global CBDC Tracker – Status as of October 31 2023

Today's Central Bank Digital Currencies Status

Database update: October 2023 • News update: Oct, 31 23

Cancelled Research Proof of concept Pilot Launched Show all



Source: Intro-act, CBDCTracker.org. Data as of 31 October 2023.

Top-10 U.S.-based Fintech Start-ups in 2023

Chart 48: FinTech Magazine's Top 10 FinTech Start-ups from U.S. in 2023 Based on Funds Raised

Rank	Company	Funding
1	Secfi	\$707.0 million
2	Steady Technologies	\$509.5 million
3	SellersFunding	\$274.6 million
4	Passport	\$213.5 million
5	Edly	\$182.1 million
6	Arc Technologies	\$181.0 million
7	Opto Investments	\$145.0 million
8	Rain	\$128.6 million
9	Sunday	\$124.0 million
10	CoinList	\$119.2 million

Source: Intro-act, FinTech Magazine

FINTECH EVENTS CALENDAR

S. No.	Event	Place	Dates
1	FinTech LIVE London 2023	London, UK	8-Nov to 9-Nov-23
2	Quantminds International 2023 London	London, UK	13-Nov to 16-Nov-23
3	The 15th NextGen Payments and RegTech Forum	Texas, US	14-Nov to 15-Nov-23
4	Fintech Talents Festival	London, UK	15-Nov to 16-Nov-23
5	BattleFin Discovery Day Singapore 2023	Singapore	13-Nov to 14-Nov-23
6	Real Time Payments and Fraud Management Summit (America)	New York, US	14-Nov to 14-Nov-23
7	7th MENA RegTech Conference	Dubai, UAE	15-Nov to 15-Nov-2023
8	Singapore Fintech Festival	Singapore	15-Nov to 17-Nov-23
9	MoneyLive Payments Europe	Amsterdam, The Netherlands	21-Nov to 22-Nov-23
10	Fintech World Forum	London, UK	22-Nov to 23-Nov-23
11	Credit & Collections Technology Think Tank	Manchester, UK	23-Nov to 23-Nov-23
12	Alternative Investing Summit	California, USA	3-Dec to 5-Dec-2023
13	Next Block Expo	Berlin, Germany	4-Dec to 5-Dec- 2023
14	Impact Investing World Forum 2023	London	5-Dec to 6-Dec-23
15	FTT Embedded Finance & Super Apps North America	California, USA	6-Dec to 7-Dec-23
16	Fintech Connect	London, UK	6-Dec to 7-Dec-23
17	World Finance Banking Symposium	Vilnius, Lithuania	14-Dec to 15-Dec-23
18	6th International Conference on Blockchain Technology and Applications (ICBTA 2023)	Xi'an, China	15-Dec to 17-Dec-23
19	CES 2024	Las Vegas, USA	9-Jan to 12-Jan-2024
20	Web3 Revolution Cyprus Blockchain Expo 2024	Limassol, Cyprus	12-Jan to 13-Jan-2024
21	The Fintech Risk & Compliance Forum	Chicago, USA	17-Jan to 18-Jan-2024
22	Fintech Retreat	California, USA	5-Feb to 6-Feb-2024
23	FinovateEurope	London, UK	27-Feb to 28-Feb-2024
24	FiNext	Dubai, UAE	28-Feb to 29-Feb-2024

Source: Intro-act, Multiple Web Sources

FINTECH COMP TABLE

			Share Price	Mkt Cap (Mns)	Ent Val (Mns)	Price Performance			Sales			EBITDA			Book Value	
						% to High	% to Low	% YTD	LTM	NTM	EV/Sales	LTM	NTM	EV/EBITDA	Book/Share	P/Book
Peer Set																
Blockchain			2,400	41,224	45,395			41%	5,711	6,833	6.6 x	(188)	1,949	23	237.03	10.1 x
1	Coinbase	COIN	77.81	14,780	16,453	47%	-59%	120%	2,700	2,745	6.0 x	238	543	30.3 x	24.29	3.2 x
2	Texas Pacific Land	TPL	1,842.74	14,146	13,535	49%	-31%	-21%	618	722	18.7 x	-	680	19.9 x	115.58	15.9 x
3	MicroStrategy	MSTR	426.67	5,172	8,204	11%	-69%	201%	508	511	16.1 x	-	98	83.9 x	58.16	7.3 x
4	Riot Platforms	RIOT	10.21	2,029	1,621	102%	-68%	201%	256	370	4.4 x	12	108	15.0 x	6.81	1.5 x
5	Marathon Digital	MARA	8.92	1,887	2,275	123%	-65%	161%	174	472	4.8 x	(337)	119	19.1 x	3.41	2.6 x
6	Cipher Mining	CIFR	3.50	877	894	52%	-89%	524%	56	148	6.0 x	-	82	11.0 x	1.37	2.6 x
7	Galaxy Digital	GLXY-CA	4.96	531	531	9%	-51%	74%	251	193	2.8 x	-	-	-	4.12	1.2 x
8	Cleanspark	CLSK	4.14	632	614	84%	-58%	103%	142	313	2.0 x	20	111	5.6 x	4.58	0.9 x
9	Iris Energy	IREN	3.04	208	135	165%	-66%	150%	81	154	0.9 x	2	51	2.6 x	4.72	0.6 x
10	Core Scientific	CORZQ	0.70	270	222	72%	-94%	839%	643	758	0.3 x	29	146	1.5 x	(1.04)	-0.7 x
11	TeraWulf	WULF	1.10	255	375	267%	-51%	65%	40	99	3.8 x	(34)	52	7.2 x	0.58	1.9 x
12	Bit Digital	BTBT	2.06	175	133	133%	-74%	243%	35	66	2.0 x	-	2	87.9 x	0.97	2.1 x
13	Bakkt Holdings	BKKT	0.94	86	181	205%	0%	-21%	55	82	2.2 x	(115)	(79)	-	0.92	1.0 x

14	BitMine Immersion Technologies	BMNR	0.55	27		481%	-100%	-21%	-	-	-	-	-	-	-	-
15	Moxian (BVI)	MOXC	0.89	32	29	102%	-52%	97%	-	-	-	-	-	-	-	-
16	Stronghold Digital Mining	SDIG	4.12	30	91	203%	-13%	6%	84	98	0.9 x	(2)	13	6.8 x	13.78	0.3 x
17	Future FinTech Group	FTFT	0.75	11	(24)	293%	-5%	-60%	-	-	-	-	-	-	4.26	0.2 x
18	Xtra Energy	XTPT	0.19	38		11%	-68%	36%	-	-	-	-	-	-	-	-
19	SAI.TECH Global	SAI	1.03	15	14	618%	-17%	-49%	-	-	-	-	-	-	1.67	0.6 x
20	Greenidge Generation	GREE	5.25	23	113	165%	-70%	82%	69	102	1.1 x	-	24	4.7 x	(7.15)	-0.7 x

			Share Price	Mkt Cap (Mns)	Ent Val (Mns)	Price Performance			Sales			EBITDA			Book Value	
						% to High	% to Low	% YTD	LTM	NTM	EV/Sales	LTM	NTM	EV/EBITDA	Book/Share	P/Book
			4,602	1,589,269	1,865,003			4%	355,535	376,562	5.0 x	89,623	98,865	18.9 x	1,088.26	4.2 x
Payments																
21	Visa Inc	V	238.58	383,347	486,890	5%	-19%	15%	32,653	35,891	13.6 x	22,935	25,589	19.0 x	18.30	13.0 x
22	Mastercard	MA	377.82	351,538	362,327	11%	-18%	9%	24,367	27,261	13.3 x	14,829	16,958	21.4 x	6.72	56.2 x
23	American Express	AXP	146.45	106,725	110,877	24%	-5%	-1%	58,892	65,124	1.7 x	-	-	-	37.48	3.9 x
24	Intuit	INTU	489.17	137,095	140,121	14%	-28%	26%	14,368	16,027	8.7 x	5,857	6,652	21.1 x	61.58	7.9 x
25	PayPal	PYPL	51.66	56,725	58,033	79%	-3%	-27%	29,128	31,522	1.8 x	7,404	7,930	7.3 x	17.84	2.9 x
26	Fiserv	FISV	114.93	68,979	91,864	14%	-19%	14%	17,761	19,066	4.8 x	7,974	8,559	10.7 x	49.12	2.3 x
27	Shopify	SHOP	48.79	58,719	58,940	46%	-38%	41%	6,303	7,523	7.8 x	214	856	68.9 x	5.82	8.4 x
28	Adyen	ADYEN-NL	683.57	21,204	14,435	174%	-7%	-50%	-	-	-	-	-	-	93.19	7.3 x
29	Paychex	PAYX	108.86	39,324	38,449	19%	-4%	-6%	5,087	5,412	7.1 x	2,251	2,443	15.7 x	9.93	11.0 x
30	Workday	WDAY	211.46	43,772	52,002	20%	-39%	26%	6,716	7,805	6.7 x	1,751	2,144	24.3 x	23.95	8.8 x
31	Capital One	COF	100.27	38,247	84,693	23%	-16%	8%	36,321	37,893	2.2 x	-	-	-	140.86	0.7 x
32	Fidelity (FIS)	FIS	49.28	29,197	46,740	71%	-5%	-27%	14,574	14,838	3.2 x	6,090	6,297	7.4 x	34.23	1.4 x
33	Global Payments	GPN	109.02	28,388	44,357	19%	-15%	10%	8,507	9,134	4.9 x	4,227	4,610	9.6 x	86.19	1.3 x
34	Discover Financial Services	DFS	82.59	20,652	31,942	48%	-4%	-16%	15,407	16,477	1.9 x	-	-	-	52.71	1.6 x
35	Paycom Software	PAYC	150.69	9,112	8,604	148%	-3%	-51%	1,630	1,827	4.7 x	707	756	11.4 x	24.63	6.1 x
36	FLEETCOR Technologies	FLT	228.60	16,907	20,945	22%	-25%	24%	3,626	3,911	5.4 x	1,885	2,069	10.1 x	44.13	5.2 x

37	Edenred	EDEN-FR	52.53	13,111	12,445	30%	-4%	-3%	2,533	-	-	-	-	-	(2.81)	-18.7 x
38	Synchrony Financial	SYF	27.97	11,574	11,896	46%	-5%	-15%	13,061	14,213	0.8 x	-	-	-	31.50	0.9 x
39	Worldline	WLN-FR	13.00	3,680	7,279	281%	-27%	-67%	4,997	-	-	-	-	-	35.14	0.4 x
40	Jack Henry & Associates	JKHY	140.35	10,218	10,531	44%	-3%	-20%	2,078	2,217	4.8 x	657	686	15.3 x	22.07	6.4 x
41	Paylocity Holding	PCTY	164.14	9,221	9,002	44%	-6%	-16%	1,175	1,409	6.4 x	375	466	19.3 x	15.07	10.9 x
42	Nexi	NEXI-IT	6.00	7,877	15,886	73%	-12%	-24%	3,545	-	-	1,801	-	-	9.82	0.6 x
43	Sage Group	SGE-GB	11.90	12,221	13,023	10%	-34%	33%	-	-	-	-	-	-	1.55	7.7 x
44	WEX	WEX	169.11	7,227	6,093	21%	-12%	3%	2,503	2,686	2.3 x	1,070	1,191	5.1 x	39.73	4.3 x
45	Wise	WISE-GB	8.12	8,324	7,821	23%	-27%	20%	1,129	-	-	-	-	-	0.68	11.9 x
46	GMO Payment Gateway	3769-JP	41.38	3,168	2,530	131%	-7%	-50%	438	482	5.2 x	-	-	-	7.66	5.4 x
47	Toast	TOST	16.21	6,660	7,163	67%	-4%	-2%	3,318	4,385	1.6 x	(39)	86	83.0 x	2.02	8.0 x
48	Euronet Worldwide	EEFT	76.07	3,778	3,757	60%	-3%	-19%	3,596	3,878	1.0 x	598	637	5.9 x	27.84	2.7 x
49	PayTM	543396-in	10.97	6,957	6,242	10%	-51%	71%	1,049	-	-	21	-	-	2.47	4.4 x
50	Paycor HCM	PYCR	18.98	3,361	3,288	63%	-4%	-22%	553	647	5.1 x	164	197	16.7 x	7.21	2.6 x
51	Western Union	WU	11.40	4,154	5,299	30%	-12%	-17%	4,397	4,215	1.3 x	1,020	1,034	5.1 x	1.67	6.8 x
52	BlackLine	BL	48.07	2,931	3,242	62%	-2%	-29%	558	626	5.2 x	98	118	27.5 x	2.89	16.6 x
53	Shift4 Payments	FOUR	45.45	2,566	3,814	68%	-20%	-19%	824	1,100	3.5 x	379	510	7.5 x	6.12	7.4 x
54	NCR Corporation	NCR	15.58	2,195	7,425	99%	-7%	-33%	7,858	8,133	0.9 x	1,451	1,605	4.6 x	11.08	1.4 x
55	EngageSmart	ESMT	22.64	3,806	3,483	0%	-34%	29%	346	419	8.3 x	64	77	45.1 x	4.93	4.6 x

Monthly Newsletter – The Fintech Industry

56	Flywire	FLYW	27.08	3,217	2,941	32%	-37%	11%	330	425	6.9 x	26	47	63.1 x	4.39	6.2 x
57	Remitty Global	RELY	27.59	4,999	4,819	1%	-68%	141%	871	1,134	4.3 x	44	59	81.7 x	2.85	9.7 x
58	Nuvei	NVEI-CA	13.87	874	3,099	216%	-4%	-45%	981	1,286	2.4 x	373	462	6.7 x	13.71	1.0 x
59	StoneCo	STNE	10.16	2,857	2,798	46%	-20%	8%	2,117	2,443	1.1 x	1,104	1,372	2.0 x	9.07	1.1 x
60	Cielo	CIEL3-BR	0.71	1,939	5,379	65%	-10%	-28%	2,257	2,384	2.3 x	946	988	5.4 x	0.86	0.8 x
61	Dlocal	DLO	17.02	2,759	4,526	45%	-47%	9%	529	771	5.9 x	178	259	17.5 x	1.35	12.6 x
62	Lightspeed Commerce	LSPD	12.44	1,893	1,136	62%	-2%	-13%	812	1,029	1.1 x	(20)	33	34.6 x	16.27	0.8 x
63	EVERTEC	EVTC	32.38	2,093	2,296	30%	-7%	0%	662	689	3.3 x	289	288	8.0 x	8.24	3.9 x
64	Payoneer Global	PAYO	5.75	2,065	1,502	40%	-30%	5%	741	884	1.7 x	118	172	8.7 x	1.74	3.3 x
65	Marqeta	MQ	5.14	2,446	1,346	60%	-33%	-16%	844	429	3.1 x	(25)	(32)	-	2.57	2.0 x
66	EverCommerce	EVCM	9.49	1,791	2,263	42%	-38%	28%	651	729	3.1 x	136	153	14.8 x	4.56	2.1 x
67	PagSeguro Digital	PAGS	7.14	1,455	3,937	110%	-3%	-18%	3,043	3,261	1.2 x	608	710	5.5 x	8.06	0.9 x
68	Phreesia	PHR	13.79	761	649	190%	-13%	-57%	319	399	1.6 x	(61)	(41)	-	4.57	3.0 x
69	Network International	NETW-GB	4.70	2,506	2,664	8%	-39%	31%	-	-	-	-	-	-	1.15	4.1 x
70	AvidXchange	AVDX	8.58	1,734	1,446	49%	-18%	-14%	347	401	3.6 x	(2)	20	71.4 x	3.19	2.7 x
71	Everi Holdings	EVRI	10.75	946	1,723	85%	-2%	-25%	819	850	2.0 x	379	392	4.4 x	2.76	3.9 x
72	Global Blue Group	GB	5.37	1,020	1,686	41%	-35%	16%	-	468	3.6 x	-	179	9.4 x	0.07	82.6 x
73	Paysafe	PSFE	9.45	579	2,978	157%	-2%	-32%	1,540	1,662	1.8 x	424	485	6.1 x	14.35	0.7 x
74	Alpha Group	Alph-gb	18.19	788	616	63%	0%	-18%	-	-	-	-	-	-	4.60	4.0 x

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75	GB Group	GBG-GB	2.91	735	866	64%	-15%	-23%	-	-	-	-	-	-	3.34	0.9 x
76	Green Dot	GDOT	11.21	587	(88)	91%	-3%	-29%	1,447	1,444	-0.1 x	202	192	-0.5 x	16.07	0.7 x
77	Olo	OLO	5.31	575	483	80%	-5%	-15%	205	236	2.0 x	17	23	20.6 x	4.13	1.3 x
78	Deluxe Corporation	DLX	16.19	706	2,247	33%	-16%	-5%	2,219	2,154	1.0 x	422	401	5.6 x	14.06	1.2 x
79	BigCommerce	BIGC	8.87	666	718	77%	-23%	1%	292	327	2.2 x	(31)	(1)	-	0.36	24.7 x
80	Nayax	NYAX-IL	20.48	682	626	26%	-21%	8%	207	268	2.3 x	(6)	14	45.3 x	2.77	7.4 x
81	Fawry	FWRY-EG	0.17	550	452	38%	-16%	-21%	-	-	-	-	-	-	0.03	6.5 x
82	i3 Verticals	IIIV	19.09	444	935	62%	-6%	-22%	359	395	2.4 x	95	108	8.6 x	9.59	2.0 x
83	Repay Holdings	RPAY	6.03	571	935	73%	-28%	-25%	291	296	3.2 x	129	129	7.2 x	9.73	0.6 x
84	Riskified	RSKD	3.69	383	167	82%	-6%	-20%	284	320	0.5 x	(19)	(9)	-	2.81	1.3 x
85	Expensify	EXFY	2.68	183	168	417%	-9%	-70%	165	159	1.1 x	31	22	7.7 x	1.21	2.2 x
86	Tyro Payments	TYR-AU	0.55	287	271	126%	-2%	-43%	-	-	-	-	-	-	0.22	2.5 x
87	Cantaloupe	CTLP	6.35	462	456	30%	-56%	46%	244	277	1.6 x	18	31	14.9 x	2.27	2.8 x
88	PayPoint	PAY-GB	6.57	478	403	13%	-29%	7%	-	-	-	-	-	-	1.87	3.5 x
89	NewtekOne	NEWT	14.33	354	1,270	45%	-25%	-12%	163	237	5.4 x	-	-	-	8.19	1.8 x
90	Priority Technology	PRTH	3.49	267	1,075	76%	-25%	-34%	711	828	1.3 x	154	174	6.2 x	(1.64)	-2.1 x
91	Zip Co Ltd.	ZIP-AU	0.19	170	2,012	242%	-15%	-45%	619	-	-	-	-	-	0.09	2.1 x
92	OFX Group	OFX-AU	0.97	240	(16)	97%	-4%	-40%	-	-	-	-	-	-	0.37	2.6 x
93	PaySign	PAYS	1.80	95	12	122%	-7%	-30%	42	49	0.3 x	6	7	1.7 x	0.32	5.7 x

94	Paymentus Holdings	PAY	14.57	294	1,648	18%	-54%	82%	558	652	2.5 x	41	49	33.5 x	3.31	4.4 x
95	Valid Solucoes	VLID3-BR	3.23	264	360	22%	-53%	88%	-	-	-	-	-	-	3.20	1.0 x
96	CompoSecure	CMPO	6.05	115	1,078	31%	-30%	23%	391	436	2.5 x	136	155	7.0 x	(46.46)	-0.1 x
97	EML Payments	EML-AU	0.72	268	(1,218)	13%	-64%	68%	-	-	-	-	-	-	0.30	2.4 x
98	Sezzle	SZL-AU	8.99	51	43	147%	-1%	-12%	122	-	-	-	-	-	2.75	3.3 x
99	Diebold Nixdorf	DBD	18.34	689	2,176	38%	-10%	-	-	3,822	0.6 x	-	385	5.6 x	(26.68)	-0.7 x
100	Splitit Payments	SPT-AU	0.03	17	60	485%	-34%	-72%	-	-	-	-	-	-	0.03	1.0 x
101	Bill.com	BILL	88.26	9,454	8,619	58%	-23%	-19%	1,058	1,297	6.6 x	130	168	51.3 x	38.35	2.3 x

			Share Price	Mkt Cap (Mns)	Ent Val (Mns)	Price Performance			Sales			EBITDA			Book Value	
						Share Price	Mkt Cap (Mns)	Ent Val (Mns)	% to High	% to Low	% YTD	LTM	NTM	EV/Sales	LTM	NTM
Lending and Mortgage Tech			774	93,057	140,713			12%	46,791	42,091	3.3 x	1,142	4,995	28.2 x	381.19	2.0 x
102	Compass Group	CPG-GB	25.41	43,495	47,398	11%	-20%	10%	-	-	-	-	-	-	3.86	6.6 x
103	Zillow Group	Z	36.46	6,195	7,060	57%	-23%	13%	1,906	2,032	3.5 x	395	442	16.0 x	19.28	1.9 x
104	First American Financial	FAF	52.06	5,372	5,454	24%	-8%	-1%	6,259	6,401	0.9 x	630	966	5.6 x	43.83	1.2 x
105	Temenos	TEMN-CH	72.26	5,431	5,942	26%	-26%	38%	980	1,050	5.7 x	429	491	12.1 x	7.96	9.1 x
106	ACI Worldwide	ACIW	20.24	2,198	3,180	44%	-3%	-12%	1,428	1,520	2.1 x	380	421	7.6 x	10.80	1.9 x
107	nCino	NCNO	27.72	3,130	3,099	22%	-29%	5%	445	512	6.1 x	34	81	38.4 x	9.13	3.0 x
108	AppFolio	APPF	184.15	3,986	6,306	13%	-46%	81%	573	728	8.7 x	56	134	47.2 x	7.34	25.1 x
109	Affirm Holdings	AFRM	17.61	4,252	9,439	46%	-51%	82%	1,588	1,959	4.8 x	(45)	88	107.0 x	8.54	2.1 x
110	Altus Group	AIF-CA	34.21	1,554	1,815	33%	-14%	-14%	564	602	3.0 x	103	121	15.0 x	9.65	3.5 x
111	PEXA Group	PXA-AU	7.16	1,269	1,449	45%	-11%	-12%	-	-	-	-	-	-	4.44	1.6 x
112	Enova International	ENVA	41.49	1,239	3,513	41%	-15%	8%	2,020	2,365	1.5 x	488	538	6.5 x	41.69	1.0 x
113	Q2 Holdings	QTWO	29.80	1,742	2,007	23%	-37%	11%	609	672	3.0 x	62	97	20.6 x	7.55	3.9 x
114	MeridianLink	MLNK	15.88	1,269	1,586	43%	-21%	16%	300	322	4.9 x	105	117	13.6 x	6.95	2.3 x
115	Upstart Holdings	UPST	24.59	2,063	2,580	195%	-51%	86%	543	653	3.9 x	(51)	51	50.6 x	7.61	3.2 x
116	Stewart Information Services	STC	44.78	1,225	1,634	15%	-20%	5%	2,323	2,377	0.7 x	164	218	7.5 x	49.42	0.9 x
117	Rocket Companies	RKT	7.52	965	19,041	59%	-19%	7%	3,678	4,253	4.5 x	(296)	661	28.8 x	4.65	1.6 x

118	Opendoor Technologies	OPEN	1.89	1,246	1,423	186%	-51%	63%	11,314	5,220	0.3 x	(1,071)	(186)	-	1.65	1.1 x
119	Redfin Corporation	RDFN	4.75	541	1,496	272%	-35%	12%	1,681	1,045	1.4 x	(188)	11	138.8 x	0.08	57.0 x
120	Open Lending Corporation	LPRO	5.92	715	634	103%	-10%	-12%	154	149	4.2 x	80	76	8.3 x	1.82	3.3 x
121	Dye & Durham	DND-CA	6.27	345	1,293	175%	-14%	-48%	333	345	3.7 x	183	202	6.4 x	5.41	1.2 x
122	LendingClub	LC	5.25	576	(680)	124%	-10%	-40%	942	776	-0.9 x	109	94	-7.3 x	11.02	0.5 x
123	Pagaya Technologies	PGY	1.29	690	1,199	119%	-56%	4%	736	868	1.4 x	5	66	18.2 x	0.74	1.7 x
124	Alfa Financial Software	ALFA-GB	1.80	532	505	43%	-20%	-9%	-	-	-	-	-	-	0.18	10.2 x
125	Mortgage Advice Bureau	MAB1-GB	6.93	396	411	69%	-28%	9%	-	-	-	-	-	-	1.44	4.8 x
126	Mitek Systems	MITK	10.72	489	499	30%	-20%	11%	173	170	2.9 x	56	46	10.8 x	4.56	2.3 x
127	Atlanticus Holdings	ATLC	28.82	416	1,990	52%	-25%	10%	1,098	1,262	1.6 x	-	-	-	25.18	1.1 x
128	LendingTree	TREE	15.00	195	739	219%	-33%	-30%	740	672	1.1 x	80	82	9.0 x	7.89	1.9 x
129	Real Matters	REAL-CA	3.46	252	214	54%	-19%	12%	46	50	4.3 x	(4)	5	41.2 x	1.46	2.4 x
130	Funding Circle	FCH-GB	0.41	149	(124)	109%	-5%	-36%	-	-	-	-	-	-	0.95	0.4 x
131	Vacasa	VCSA	7.56	93	(202)	971%	-9%	-70%	1,192	1,070	-0.2 x	1	4	-51.4 x	32.98	0.2 x
132	Blend Labs	BLND	1.24	292	314	107%	-57%	-14%	178	169	1.9 x	(125)	(52)	-	0.17	7.4 x
133	Payfare	PAY-CA	3.22	154	(10)	72%	-9%	2%	121	158	-0.1 x	9	22	-0.4 x	0.89	3.6 x
134	LendInvest	LINV-GB	0.37	52	1,431	220%	-7%	-62%	-	-	-	-	-	-	0.67	0.5 x
135	loanDepot	LDI	1.21	95	4,183	150%	-6%	-27%	924	1,150	3.6 x	(167)	93	45.2 x	2.22	0.5 x
136	Doma Holdings	DOMA	4.00	54	146	490%	-4%	-65%	367	-	-	(82)	-	-	0.80	5.0 x

137	Offerpad Solutions	OPAD	8.31	226	106	133%	-32%	20%	1,751	1,671	0.1 x	(179)	(18)	-	4.89	1.7 x
138	Porch Group	PRCH	0.55	54	158	624%	-10%	-71%	326	341	0.5 x	(91)	9	17.8 x	(0.37)	-1.5 x
139	CURO Group Holdings	CURO	0.83	34	2,642	571%	-30%	-77%	804	732	3.6 x	-	-	-	(6.52)	-0.1 x
140	Katapult Holdings	KPLT	10.24	41	87	230%	-11%	-57%	207	242	0.4 x	(7)	1	88.3 x	(0.07)	-147.1 x
141	OppFi	OPFI	2.26	34	702	21%	-25%	10%	487	553	1.3 x	79	116	6.0 x	0.07	33.5 x
142	Sunlight Financial Holdings	SUNL	0.22	1	53	18627%	-13%	-99%	-	-	-	-	-	-	40.39	0.0 x

			Share Price	Mkt Cap (Mns)	Ent Val (Mns)	Price Performance			Sales			EBITDA			Book Value	
						% to High	% to Low	% YTD	LTM	NTM	EV/Sales	LTM	NTM	EV/EBITDA	Book/Share	P/Book
Capital Markets and Wealth Tech			2,654	593,179	494,089			-5%	104,415	108,761	4.5 x	37,287	38,848	12.7 x	815.50	3.3 x
143	Charles Schwab	SCHW	52.82	93,503	106,678	64%	-15%	-37%	19,875	19,843	5.4 x	10,504	10,037	10.6 x	15.80	3.3 x
144	CME Group	CME	210.92	75,878	77,362	5%	-21%	25%	5,347	5,696	13.6 x	3,655	3,909	19.8 x	78.37	2.7 x
145	Intercontinental Exchange	ICE	108.25	61,833	71,223	10%	-15%	6%	7,555	9,023	7.9 x	4,955	5,852	12.2 x	42.54	2.5 x
146	Hong Kong Exchanges & Clearing	388-HK	35.00	44,372	14,860	40%	-24%	-19%	2,665	2,652	5.6 x	1,957	-	-	4.94	7.1 x
147	London Stock Exchange	LSEG-GB	101.38	52,777	63,320	11%	-17%	18%	8,968	10,157	6.2 x	-	-	-	59.07	1.7 x
148	Deutsche Boerse	DB1-DE	166.33	31,604	(45,920)	23%	-6%	0%	5,211	5,910	-7.8 x	3,038	3,450	-13.3 x	48.05	3.5 x
149	Nasdaq	NDAQ	48.71	23,932	28,991	42%	-4%	-21%	3,685	4,039	7.2 x	1,985	2,197	13.2 x	12.69	3.8 x
150	Broadridge Financial	BR	170.53	20,142	23,542	11%	-23%	27%	6,209	6,603	3.6 x	1,473	1,596	14.8 x	18.97	9.0 x
151	LPL Financial	LPLA	218.48	16,522	17,597	24%	-18%	1%	9,742	10,465	1.7 x	-	2,114	8.3 x	27.65	7.9 x
152	MarketAxess	MKTX	217.24	8,235	7,832	84%	-8%	-22%	733	814	9.6 x	388	425	18.4 x	31.61	6.9 x
153	Cboe Global Markets	CBOE	165.68	17,482	18,737	1%	-31%	32%	1,838	1,966	9.5 x	1,171	1,208	15.5 x	34.73	4.8 x
154	SS&C Technologies	SSNC	49.19	12,203	18,680	31%	-5%	-6%	5,433	5,636	3.3 x	2,034	2,232	8.4 x	24.92	2.0 x
155	B3 SA	BOLSY	6.91	13,409	12,561	38%	-14%	-6%	1,780	1,932	6.5 x	1,320	-	-	2.24	3.1 x
156	Tradeweb Markets	TW	90.48	10,380	18,224	0%	-41%	39%	1,261	1,443	12.6 x	656	764	23.9 x	24.88	3.6 x
157	Computershare	CPU-AU	15.94	9,626	11,015	20%	-16%	-10%	-	-	-	-	-	-	3.37	4.7 x
158	Interactive Brokers	IBKR	78.56	8,404	(50,846)	22%	-13%	9%	4,177	4,650	-10.9 x	-	-	-	30.27	2.6 x
159	Japan Exchange Group	8697-JP	20.29	10,727	9,620	1%	-37%	43%	1,016	-	-	-	-	-	4.09	5.0 x
160	Euronext	ENX-FR	70.39	7,539	9,636	20%	-13%	-4%	1,526	1,612	6.0 x	883	956	10.1 x	37.89	1.9 x

161	SEI Investments	SEIC	54.16	7,127	6,264	19%	-4%	-7%	1,892	1,913	3.3 x	546	551	11.4 x	15.84	3.4 x
162	Singapore Exchange	S68-SG	6.91	7,404	7,130	6%	-15%	4%	-	-	-	-	-	-	1.16	5.9 x
163	Robinhood Markets	HOOD	9.08	7,120	5,236	46%	-17%	12%	1,668	2,067	2.5 x	224	427	12.3 x	7.90	1.1 x
164	TMX Group	X-CA	21.03	5,861	6,390	10%	-11%	5%	862	904	7.1 x	471	501	12.7 x	10.67	2.0 x
165	XP Inc	XP	20.33	8,851	21,949	36%	-49%	33%	2,664	3,196	6.9 x	848	1,173	18.7 x	7.24	2.8 x
166	Allfunds Group	ALLFG-NL	5.22	3,288	780	92%	-6%	-25%	-	-	-	-	-	-	3.92	1.3 x
167	IG Group	IGG-GB	7.74	3,018	2,143	34%	-6%	-18%	-	-	-	-	-	-	6.00	1.3 x
168	Envestnet	ENV	37.00	2,018	2,982	87%	-4%	-40%	1,211	1,311	2.3 x	221	283	10.5 x	13.25	2.8 x
169	SimCorp	SIM-DK	103.13	4,177	4,051	6%	-45%	54%	642	-	-	-	-	-	9.98	10.3 x
170	Swissquote Group	SQN-CH	191.90	2,942	(3,012)	23%	-42%	36%	-	-	-	-	-	-	58.22	3.3 x
171	AssetMark Financial	AMK	23.79	1,767	1,689	39%	-15%	3%	510	567	3.0 x	225	256	6.6 x	15.97	1.5 x
172	StoneX Group	SNEX	95.52	1,986	6,528	11%	-22%	0%	2,720	1,668	3.9 x	-	-	-	64.09	1.5 x
173	Plus500	PLUS-GB	17.23	1,379	543	39%	-11%	-21%	-	-	-	-	-	-	8.01	2.2 x
174	Virtu Financial	VIRT	18.29	1,720	2,844	28%	-11%	-10%	1,213	1,293	2.2 x	504	589	4.8 x	13.56	1.3 x
175	TP ICAP	TCAP-GB	1.97	1,541	1,008	22%	-9%	-5%	-	-	-	-	-	-	3.25	0.6 x
176	AJ Bell	AJB-GB	3.18	1,310	1,201	55%	-8%	-26%	-	-	-	-	-	-	0.43	7.3 x
177	BGC Partners	BGCP	6.13	2,372	3,204	1%	-41%	63%	1,945	2,123	1.5 x	-	-	-	1.88	3.3 x
178	Matsui Securities	8628-JP	5.01	1,298	2,027	23%	-3%	-15%	253	-	-	-	-	-	1.95	2.6 x
179	Flow Traders	FLOW-NL	18.35	854	3,601	61%	-8%	-15%	372	370	9.7 x	118	113	32.0 x	14.31	1.3 x
180	JTC	JTC-GB	8.12	1,345	1,387	26%	-8%	-7%	-	-	-	-	-	-	3.54	2.3 x
181	IRESS	IRE-AU	3.22	601	886	134%	-3%	-49%	-	-	-	-	-	-	0.91	3.5 x

182	Monex Group	8698-JP	4.44	1,145	(4,908)	10%	-34%	41%	611	-	-	-	-	-	2.65	1.7 x
183	Clearwater Analytics	CWAN	17.93	1,578	3,507	16%	-27%	-5%	352	420	8.3 x	100	121	29.0 x	1.61	11.1 x
184	Enfusion	ENFN	7.87	663	656	86%	-6%	-17%	163	193	3.4 x	26	37	17.9 x	0.59	13.4 x
185	OTC Markets	OTCM	52.77	594	577	23%	-6%	-7%	106	110	5.2 x	-	45	12.9 x	3.15	16.7 x
186	CMC Markets	CMCX-GB	1.14	318	113	181%	-4%	-58%	-	-	-	-	-	-	1.63	0.7 x
187	FD Technologies	FDP-GB	10.38	292	324	176%	-13%	-37%	-	-	-	-	-	-	8.14	1.3 x
188	Tel Aviv Stock Exchange	TASE-IL	4.53	419	390	57%	-10%	-24%	-	99	3.9 x	-	39	9.9 x	1.62	2.8 x
189	Warsaw Stock Exchange	GPW-PL	9.28	389	301	11%	-28%	15%	95	-	-	36	-	-	5.39	1.7 x
190	Forge Global Holdings	FRGE	2.50	436	292	23%	-56%	45%	65	87	3.4 x	(52)	(27)	-	1.66	1.5 x
191	PensionBee Group	PBEE-GB	0.73	163	145	90%	-24%	12%	-	-	-	-	-	-	0.08	8.6 x
192	Linedata Services	LIN-FR	54.58	271	370	24%	-19%	11%	-	-	-	-	-	-	21.15	2.6 x
193	Gresham Technologies	GHT-GB	1.67	140	136	35%	-5%	-22%	-	-	-	-	-	-	0.74	2.3 x
194	Bravura Solutions	BVS-AU	0.44	197	165	55%	-56%	-8%	-	-	-	-	-	-	0.18	2.5 x
195	Mogo	MOGO-CA	1.13	28	76	161%	-14%	-32%	49	-	-	0	-	-	2.75	0.4 x

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						% to High	% to Low	% YTD	LTM	NTM	EV/Sales	LTM	NTM	EV/EBITDA	Book/Share	P/Book
			2,312	373,722	417,326			14%	89,056	93,561	4.5 x	22,301	25,704	16.2 x	483.80	4.8 x
Insurtech																
196	Marsh & McLennan	MMC	190.05	93,708	94,754	5%	-20%	15%	22,204	23,897	4.0 x	6,233	6,848	13.8 x	23.14	8.2 x
197	Aon	AON	311.75	62,417	73,796	11%	-12%	4%	13,131	13,988	5.3 x	4,197	4,616	16.0 x	(2.92)	-106.8 x
198	Roper Technologies	ROP	487.15	51,984	57,188	4%	-20%	13%	5,995	6,538	8.7 x	2,457	2,687	21.3 x	156.93	3.1 x
199	Arthur J. Gallagher	AJG	237.31	51,235	57,304	0%	-26%	26%	9,529	11,145	5.1 x	2,830	3,472	16.5 x	48.46	4.9 x
200	Verisk Analytics	VRSK	222.25	32,232	34,916	12%	-27%	26%	2,635	2,820	12.4 x	1,405	1,541	22.7 x	2.65	83.8 x
201	Willis Towers Watson	WTW	235.42	24,310	29,047	10%	-17%	-4%	9,291	9,779	3.0 x	2,356	2,511	11.6 x	91.08	2.6 x
202	Brown & Brown	BRO	69.30	19,723	22,898	8%	-24%	22%	4,132	4,514	5.1 x	1,409	1,525	15.0 x	18.29	3.8 x
203	Guidewire Software	GWRE	89.31	7,273	6,920	7%	-42%	43%	905	983	7.0 x	21	86	80.9 x	14.73	6.1 x
204	CCC Intelligent Solutions	CCCS	10.74	6,789	7,270	25%	-23%	23%	819	888	8.2 x	319	354	20.6 x	3.20	3.4 x
205	HealthEquity	HQY	68.10	5,831	6,477	16%	-28%	10%	938	1,050	6.2 x	322	373	17.3 x	22.77	3.0 x
206	Alight	ALIT	7.34	3,649	6,784	39%	-14%	-12%	3,392	3,646	1.9 x	711	811	8.4 x	8.19	0.9 x
207	PB Fintech	543390-IN	8.43	3,793	3,047	17%	-48%	59%	330	-	-	(45)	-	-	1.47	5.7 x
208	CorVel	CRVL	194.95	3,336	3,282	17%	-30%	34%	-	-	-	-	-	-	12.09	16.1 x
209	Sapiens International	SPNS	26.28	1,450	1,359	17%	-38%	42%	491	533	2.5 x	97	103	13.3 x	7.59	3.5 x
210	Oscar Health	OSCR	4.98	930	(916)	99%	-59%	102%	5,205	6,340	-0.1 x	(263)	20	-46.1 x	4.28	1.2 x
211	Goosehead Insurance	GSHD	65.09	1,556	1,642	22%	-52%	90%	256	317	5.2 x	67	85	19.3 x	1.91	34.2 x

212	Lemonade	LMND	11.00	767	604	128%	-7%	-20%	403	461	1.3 x	(195)	(159)	-	11.07	1.0 x
213	MultiPlan	MPLN	1.64	1,065	5,611	77%	-63%	43%	966	-	-	643	632	8.9 x	2.72	0.6 x
214	Ebix	EBIX	5.31	164	751	519%	-4%	-73%	874	505	1.5 x	151	148	5.1 x	20.60	0.3 x
215	Crawford & Company	CRD.A	9.15	267	747	22%	-44%	65%	1,251	1,366	0.5 x	116	-	-	3.10	3.0 x
216	Hippo Holdings	HIPO	7.21	171	(49)	183%	-8%	-47%	154	278	-0.2 x	(242)	(125)	-	18.87	0.4 x
217	EverQuote	EVER	8.32	231	251	127%	-36%	-44%	369	230	1.1 x	5	(11)	-	3.16	2.6 x
218	SelectQuote	SLQT	1.38	231	880	113%	-62%	105%	1,003	1,124	0.8 x	85	93	9.5 x	2.08	0.7 x
219	eHealth	EHTH	8.52	239	434	24%	-69%	76%	390	436	1.0 x	(11)	6	66.8 x	21.47	0.4 x
220	Clover Corporation	CLV-AU	0.55	92	94	85%	-8%	-34%	-	-	-	-	-	-	0.25	2.2 x
221	GoHealth	GOCO	14.02	133	906	63%	-60%	34%	528	849	1.1 x	(80)	132	6.9 x	26.54	0.5 x
222	Bright Health	BHG	7.09	57	1,418	1186%	-21%	-86%	3,238	1,210	1.2 x	(220)	17	82.0 x	(54.65)	-0.1 x
223	Root	ROOT	8.85	84	(99)	67%	-63%	97%	626	666	-0.1 x	(66)	(61)	-	14.89	0.6 x
224	FOXO Technologies	FOXO	0.06	4	7	2735%	-5%	-85%	-	-	-	-	-	-	(0.15)	-0.4 x

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						Share Price			% to High	% to Low	% YTD	LTM	NTM	EV/Sales	LTM	NTM
Digital Banking			102	52,694	56,491			34%	11,004	13,455	4.2 x	405	741	76.2 x	103.57	1.0 x
225	Nu Holdings	NU	8.30	29,904	31,914	1%	-59%	101%	6,219	8,186	3.9 x	-	-	-	1.19	7.0 x
226	KakaoBank	323410-KR	13.82	6,590	4,656	74%	-14%	-28%	804	935	5.0 x	-	-	-	9.13	1.5 x
227	SoFi Technologies	SOFI	7.58	7,202	10,393	54%	-44%	64%	1,923	2,452	4.2 x	321	579	17.9 x	5.28	1.4 x
228	Nordnet	SAVE-SE	14.03	3,508	3,511	31%	-17%	-3%	409	434	8.1 x	-	-	-	2.03	6.9 x
229	PT Bank Jago	ARTO-ID	0.10	1,347	1,250	319%	0%	-60%	114	-	-	-	-	-	0.04	2.5 x
230	Moneysupermarket.com	MONY-GB	3.20	1,716	1,777	15%	-39%	38%	-	-	-	-	-	-	0.46	6.9 x
231	Alkami Technology	ALKT	17.60	1,658	1,581	8%	-39%	21%	249	311	5.1 x	(9)	14	109.4 x	3.37	5.2 x
232	NerdWallet	NRDS	10.93	486	765	99%	-42%	12%	608	596	1.3 x	99	104	7.4 x	4.73	2.3 x
233	MoneyLion	ML	19.05	194	304	97%	-61%	2%	374	480	0.6 x	(3)	36	8.4 x	25.03	0.8 x
234	Dave	DAVE	5.10	53	64	176%	-12%	-45%	243	-	-	-	-	-	7.05	0.7 x
235	Silvergate Capital Corp	SI	0.24	8	258	24795%	-92%	-99%	-	-	-	-	-	-	42.05	0.0 x
236	BM Technologies	BMTX	2.40	28	17	258%	-41%	-54%	62	60	0.3 x	(3)	7	2.4 x	3.21	0.7 x

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						% to High	% to Low	% YTD	LTM	NTM	EV/Sales	LTM	NTM	EV/EBITDA	Book/Share	P/Book
Traditional Banking			443	778,928	1,643,397			0%	393,662	282,601	5.8 x	0	0	#DIV/0!	536.22	0.8 x
237	HSBC Holdings	HSBC	36.26	141,220	192,033	17%	-29%	16%	68,598	63,943	3.0 x	-	-	-	47.81	0.8 x
238	Citigroup	C	39.60	76,258	633,312	34%	-4%	-12%	79,028	78,916	8.0 x	-	-	-	99.28	0.4 x
239	ICICI Bank	532174-IN	10.98	76,913	85,079	12%	-11%	2%	11,144	-	-	-	-	-	3.98	2.8 x
240	DBS Group	D05-SG	24.10	62,359	107,616	14%	-7%	-4%	14,101	14,688	7.3 x	-	-	-	15.95	1.5 x
241	National Australia Bank	NAB-AU	17.92	56,061	160,912	27%	-6%	-12%	-	-	-	-	-	-	12.42	1.4 x
242	ING Groep	INGA-NL	12.65	45,792	104,690	17%	-23%	4%	23,856	23,873	4.4 x	-	-	-	14.87	0.9 x
243	Oversea-Chinese Banking Corporation	O39-SG	9.28	41,901	39,315	8%	-10%	3%	9,570	10,070	3.9 x	-	-	-	8.27	1.1 x
244	Banco Bilbao Vizcaya Argentaria	BBVA	7.99	47,664	113,489	4%	-37%	33%	30,988	-	-	-	-	-	8.84	0.9 x
245	Nordea Bank	NRDBY	10.43	37,018	221,735	23%	-9%	-2%	-	-	-	-	-	-	8.84	1.2 x
246	NatWest Group	NWG-GB	2.14	18,842	(81,054)	80%	-4%	-34%	18,511	-	-	-	-	-	4.31	0.5 x
247	KBC Group	KBC-BE	54.69	22,815	33,626	43%	-11%	-15%	10,933	11,542	2.9 x	-	-	-	54.10	1.0 x
248	Barclays	BARC-GB	1.57	23,638	(229,475)	50%	-1%	-18%	31,682	-	-	-	-	-	4.50	0.3 x
249	DNB Bank	DNB-NO	17.74	27,372	90,436	17%	-7%	-10%	7,570	7,372	12.3 x	-	-	-	13.64	1.3 x
250	Standard Chartered	STAN-GB	7.42	19,814	61,204	31%	-21%	-1%	17,091	18,811	3.3 x	-	-	-	15.49	0.5 x
251	Deutsche Bank	DBK-DE	11.02	22,492	(9,772)	22%	-22%	-1%	31,079	31,321	-0.3 x	-	-	-	32.70	0.3 x
252	ABN AMRO Bank	ABN-NL	13.39	5,854	58,266	37%	-28%	-51%	8,948	9,162	6.4 x	-	-	-	25.72	0.5 x

253	Erste Group Bank	EBS-AT	35.49	15,254	64,130	13%	-31%	17%	10,939	-	-	-	-	-	48.79	0.7 x
254	Commerzbank	CBK-DE	10.86	13,474	(22,309)	18%	-30%	15%	10,194	11,560	-1.9 x	-	-	-	23.74	0.5 x
255	Santander Bank Polska	SPL-PL	108.31	11,068	13,124	3%	-53%	83%	3,630	-	-	-	-	-	77.52	1.4 x
256	National Bank of Greece	ETE-GR	5.65	5,170	2,671	27%	-38%	41%	2,390	-	-	-	-	-	8.13	0.7 x
257	Union Bank of the Philippines	UBP-PH	1.05	2,468	4,497	73%	-2%	-30%	1,169	1,342	3.3 x	-	-	-	1.30	0.8 x
258	Federal Bank Ltd	500469-IN	1.69	4,092	4,793	9%	-14%	1%	1,286	-	-	-	-	-	1.37	1.2 x
259	Bank of Cyprus	BOCH-GB	3.12	1,390	(4,922)	14%	-57%	72%	957	-	-	-	-	-	4.63	0.7 x

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						% to High	% to Low	% YTD	LTM	NTM	EV/Sales	LTM	NTM	EV/ EBITDA	Book/ Share	P/ Book
Information Services			3,263	466,727	520,303			9%	42,520	43,486	12.0 x	16,621	18,620	27.9 x	273.25	11.9 x
260	S&P Global	SPGI	351.40	111,815	126,017	22%	-13%	5%	12,282	13,022	9.7 x	5,593	6,270	20.1 x	111.46	3.2 x
261	Thomson Reuters	TRI-CA	122.07	55,578	57,420	14%	-18%	7%	6,744	7,083	8.1 x	2,604	2,725	21.1 x	23.94	5.1 x
262	RELX	REL-GB	34.70	65,540	73,833	3%	-27%	26%	-	-	-	-	-	-	2.10	16.5 x
263	Moody's	MCO	312.88	57,257	62,611	16%	-19%	12%	5,726	6,363	9.8 x	2,448	2,932	21.4 x	17.44	17.9 x
264	MSCI	MSCI	471.85	37,319	41,043	21%	-6%	1%	2,415	2,733	15.0 x	1,447	1,612	25.5 x	(13.26)	-35.6 x
265	Wolters Kluwer	WKL-NL	124.03	30,823	32,428	10%	-23%	23%	-	-	-	-	-	-	8.63	14.4 x
266	Experian	EXPN-GB	30.18	27,724	31,462	32%	-5%	-10%	-	-	-	-	-	-	4.23	7.1 x
267	Equifax	EFX	167.70	20,663	26,444	43%	-6%	-14%	5,137	5,584	4.7 x	1,614	1,893	14.0 x	34.85	4.8 x
268	Fair Isaac	FICO	870.99	21,650	23,459	8%	-51%	46%	1,473	1,629	14.4 x	747	860	27.3 x	(28.28)	-30.8 x
269	FactSet Research Systems	FDS	436.57	16,585	17,967	9%	-13%	9%	2,086	2,224	8.1 x	778	863	20.8 x	42.60	10.2 x
270	TransUnion	TRU	44.00	8,523	13,684	88%	-4%	-22%	3,779	3,887	3.5 x	1,339	1,363	10.0 x	20.34	2.2 x
271	Morningstar	MORN	257.23	10,972	11,944	1%	-37%	19%	1,975	-	-	-	-	-	28.97	8.9 x
272	LiveRamp	RAMP	27.50	1,821	1,364	20%	-44%	17%	608	635	2.1 x	82	105	12.9 x	13.88	2.0 x
273	Cardlytics	CDLX	12.12	457	627	61%	-79%	110%	296	326	1.9 x	(29)	(3)	-	6.37	1.9 x

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