Follow the Money: Back to the Basics

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Abstract

According to KPMG, there was over US$210 billion invested in global FinTech with over 5684 deals in 2021 (KPMG Pulse, 2022), which doubled 2020's numbers of US$105 billion invested in 2861 deals (KPMG Pulse, 2021). This tells us two things. First, despite COVID-19 and its many variants troubling the globe, FinTech has made its way back, strong, and square. Second, with record deals and a record amount of money invested in FinTech, it is clearer than ever that FinTech is the future for both Financial and Technology businesses in the financial services industry. For financial and technology companies to survive and thrive, they have to respond swiftly and robustly to the inevitable trend of transformation to FinTech. By studying FinTech investment deals in the past two years, we have discovered that the development trend has gone through three main phases—from payments, to embedded finance, and to Public–Private Artificial Intelligence. Along with this trend, both business practices and related investments have shown a stronger tendency of matching and focusing with clearly defined positioning that is better aligned with resources. The areas of major focus include payments, insurtech, regtech, wealthtech, blockchain and cryptocurrency, and cybersecurity. As more and more FinTech businesses have realized the value in the aforementioned areas and are promoting opening and cooperating practices, risk control has also become more important a task, not just for FinTech businesses, but for regulators as well. This is another trend in which we are witnessing growing levels of cooperation and collaboration between the public and private sectors. In summary, all recent efforts we have seen in the FinTech sector are pointing in one direction: credibility, which happens to be the basis of finance. In this chapter, we will attempt to reveal the "secret equation"

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which governs this money invested, as well as the targets which have attracted such large sums. Analyzing this will help us better understand how the FinTech sector has evolved and what to expect for the future.

Keywords

FinTech · Trend · Investment · Risk management · Credibility

1 Overview: FinTech Investment Under the Global Pandemic

In some way, all of us are affected by the financial services industry. Hence, it is important to pay close attention to the changes in this field, just as an increasing number of businesses do. At the end of the day, money is at the core of this industry, and that money, as you may have already guessed, is your money! "Follow the money!", a catchphrase normally used to suggest the best way in fighting corruption, is also a perfect description of investment deals in the FinTech industry.

Let us take a short trip back in time to 2020. Despite the largest FinTech unicorn Ant Financials' dual-IPO being canceled prior to listing, there was still strong interest in FinTech investment, resulting in a total investment of US$105 billion over 2861 deals (KPMG Pulse, 2021). It is a sheer drop from the US$168 billion invested in 2019, largely thanks to the global pandemic. Nevertheless, a strong comeback in the second half of 2020, more than doubling investment in the first half of the year, tells us that the investment fever in FinTech has not subsided, not even a little. When looking at venture capital (VC) investment, FinTech attracted US $42.3 billion in 2020, the second-highest level in history. It is a major contributing factor to KPMG labeling the year 2020 as a "Game Changer" in FinTech (KPMG Pulse, 2021).

Here are the top 10 global FinTech deals in 2020, as compiled by KPMG:

1. TD Ameritrade—$22B, Omaha, US—Wealth/investment management—*M&A.*
2. Credit Karma—$7.1B, San Francisco, US—Lending—*M&A.*
3. Vertafore—$5.35B, Denver, US—Institutional/B2B—*M&A.*
4. Honey Science—$4B, Los Angeles, US—Payments/transactions—*M&A.*
5. Gojek—$3B, Jakarta, Indonesia—Payments/transactions—*Series F.*
6. IberiaBank—$2.54B, Lafayette, US—Banking—*M&A.*
7. Avaloq—$2.3B, Zurich, Switzerland—Institutional/B2B—*M&A.*
8. Paya—$1.3B, Dunwoody, US—Payments/transactions—*Reverse merger.*
9. Open Lending—$1.3B, Austin, US—Lending—*Reverse merger.*
10. Galileo—$1.2B, Salt Lake City, US—Payments/transactions—*M&A.*

Through this list, we can see that the majority are M&A deals (7/10) and payments are the hot attractions. For the 3 non-M&A deals (2 Reverse Mergers and 1 Series F financing), the focus on payments holds true. Some key trends in 2020 are:

- Digitalization is the top priority, for all.
- Customer behaviors have changed dramatically to e-commerce platforms, e-wallets, and so on.
- Increasing ambition from both tech and financial institutions (FI's) to join forces and add value for their consumers.

Let us zip our time machine ahead from 2020 to 2021. Investment in the payment space continues to boom, but the prom king and queen are crypto and blockchain, with investments of over US$30 billion eclipsing US$5.4 billion in 2020.

Through the record high of US$210 billion invested in global FinTech with 5684 deals in 2021 (KPMG Pulse, 2022), we observe a new high of US$115 billion from VC investment, more than doubling the historical high point of US$53.2 billion in 2018. Alongside the VC firms are global private equity (PE) firms aggressively investing in the FinTech sector—with a record 144 deals totaling over US$12 billion.

As the investment in FinTech heats up in 2021, we see a growing interest in data connectivity and analytics, embedded finance (BNPL "Buy-Now-Pay-Later," Embedded insurance), BaaS (Banking-as-a-Service), as well as AI (Artificial Intelligence) and ML (Machine Learning). Continuing the 2020 trend, the segmental structure of FinTech investment remains focused on the same areas namely payments, insurtech, regtech, wealthtech, blockchain and cryptocurrency, and cybersecurity. However, the interest and development in three key areas are specific to 2021:

- A growing number of banks and tech firms are cooperating and promoting open banking services.
- Increasing regulatory scrutiny of embedded finance with more sandbox practices worldwide.
- Growing focus on ESG (Environmental, Social, and Governance) (Brock, 2022) capabilities offered by FinTech in the wake of COP26 (Conference of the Parties—the global climate summit in Glasgow, UK) (UN, 2021).

Here is the list of the top 10 FinTech deals for 2021 (KPMG Pulse, 2022):

1. Refinitiv—$14.8B, London, UK—Institutional/B2B—*M&A.*
2. Nets—$9.2B, Ballerup, Denmark—Payments—*M&A.*
3. Adenza—$3.75B, San Francisco, US—Institutional/B2B—*Buyout.*
4. Robinhood—$3.4B, Menlo Park, US—Wealth/investment management—*Series G.*
5. Verafin—$2.75B, St. John's, Canada—Institutional/B2B—*M&A.*
6. Paidy—$2.7B, Tokyo, Japan—Lending—*M&A.*
7. Itiviti Group—$2.6B, Stockholm, Sweden—Institutional/B2B—*M&A.*
8. SoFi—$2.4B, San Francisco, US—Lending—*Reverse merger.*
9. Divvy—$2.3B, Draper, US—Payments/transactions—*M&A.*
10. Tink—$2.2B, Stockholm, Sweden—Banking—*M&A.*

Like 2020, the majority of the top 2021 deals were concentrated in M&A (7/10). The focus shifted from payments toward platforms with data analytics capability. Interestingly, exchanges and trade platforms were very active in FinTech deals in 2021. The #1 deal on the list was the acquisition of data and analytics giant Refinitiv by the London Stock Exchange Group (LSEG), while #4 was a Robinhood Series G financing deal, known by many as a zero-commission trading platform. The #5 deal involves Verafin, a St. John's online security and anti-fraud company, being acquired by Nasdaq. The #10 deal is Tink being acquired by VISA, a strategic move to enhance VISA's open banking platform.

Given the impact of the global pandemic throughout 2020 and 2021, established FinTech companies and start-ups alike are facing unprecedented challenges while also being amidst unprecedented opportunities. As shown by the record number of deals and investment amounts over the past two years—from payments to embedded finance to AI/ML, with focused subsectors more clearly defined and positioned in insurtech, regtech, wealthtech, blockchain and cryptocurrency, and cybersecurity, Fintech is a fast-evolving sector that is currently the single biggest factor in reshaping the real meaning and practice of the broader financial services industry.

2 Related Works

Since the inception of FinTech in the twenty-first century, when it was initially applied to the technology employed at the back-end systems of established financial institutions, it has emerged into a more consumer-oriented service spanning a wide breadth of sectors, even industries. Many works have been done in the past to study and address different aspects, and their impacts on businesses. For instance, Aldridge and Krawciw (2017) have studied that when technology collided with investing, the boom created stratospheric amounts of data that allows us to plumb untapped depths and discover solutions that were unimaginable 20 years ago, and their work has helped readers to learn why flash crashes happen, and how to mitigate damage in advance, as well as examine the FinTech disruption to established business models and practices.

Al Nawayseh's research (2020) empirically examines the factors affecting Jordanian citizens' intention to use FinTech applications. In Bao & Huang's (2021) study, they find that FinTech companies are more likely to expand credit access to new and financially constrained borrowers after the start of the pandemic. However, this increased credit provision may not be sustainable; the delinquency rate of FinTech loans triples after the outbreak, but there is no significant change in the delinquency of bank loans. Borrowers holding both loan types prioritize the payment of bank loans.

These results shed light on the benefits provided by shadow banking in a crisis and hint at the potential fragility of such institutions when delinquency rates spike. Boot et al. (2021) pointed out that the rise of new communication channels in FinTech can lead to the vertical and horizontal disintegration of the traditional bank business model. Cummings and Andrus (2022) studied Fintech's direct

indexing investment and found out that investors are buying with direct indexing to reduce unwanted exposures, harvest tax loss, and have the potential for ESG portfolios that are more finely tuned to their personal values. Lee et al. (2022) studied initial coin offerings (ICOs) and concluded that a market-based certification process that relies on a diverse group of individuals is at play in financing blockchain start-ups.

Goo and Heo (2020) found that the adoption of regulatory sandboxes had very positive influences on the growth of the fintech venture investment. The results implied that regulatory sandboxes may play a vital role in increasing the influx of venture capital into the fintech venture ecosystem by removing regulatory uncertainty.

3 Trending: From Payments, Embedded Finance, to Public–Private Artificial Intelligence

As we can see from the two top 10 lists for 2020 and 2021, the payments subsector has always been at the center of FinTech investment deals. Over the past four years, total global investment activity in payments was US$50 billion, US$111 billion, US $29 billion, and US$52 billion for 2018, 2019, 2020, and 2021, respectively (KPMG/PitchBook, 2021). This heavy investment in payments has been largely driven by:

- The continued acceleration of digitalization (smartphone and 5G network).
- The expansion of digital/contactless payments (COVID-19).
- FinTech itself pushing for more alternative payments models like "BNPL" (Buy-Now-Pay-Later), "POSL" (Point-of-service Lending), "IIS" (Integrated Insurance Services), "I&T"(Investment and Trading), and "FaaS" (Fintech-as-a-Service). These five alternative payment models are the most common uses of embedded finance nowadays.

Outside of the investment deals in FinTech reported publicly, the traditional banking industry has also played a critical role in driving FinTech development through internal investment. According to a joint study by Ant Group and ICBC (2021), JP Morgan Chase invested US$12 billion in FinTech in 2020 (half on IT infrastructure and half on digitalization). In comparison, Citi Group also invested heavily in FinTech in 2020, spreading US$7 billion into 6 innovative areas: data analytics, data currencitization, mobile payment, security authentication, New IT tech, and Next-generation FinTech. It has planned another US$11 billion for 2022. HSBC is set to invest US$3.5 billion more, on top of the US$6 billion already invested in FinTech back in 2019, to grow its FinTech service team, enhance its digital service capacity, and develop new products. Other financial institutions that have been following suit in FinTech investment include Bank of America US$10 billion, Wells Fargo US$9 billion, BNP US$7 billion, Deutsche Bank US$4.5 billion, Barclay US$3.5 billion, and Credit Suisse US$2.9 billion. It was estimated

that, in 2020, Chinese banks invested over RMB200 billion (or US$40 billion) in FinTech.

In general, investments in FinTech, be it through M&A deals or internal, are spent on the development of technologies in these categories:

1) Blockchain Technologies—enable low credit cost cooperation/collaboration models that are functional in a non-trust environment.
2) Distributed Ledger Technologies (DLT)—including Smart Contract, ZKP (Zero-Knowledge-Proof), and Distributed Data Storage/Exchange technologies that have made the applications like Digital Wallets, Digital Assets, DeFi (Decentralized Finance), and NFT (Non-Fungible Token) possible. It is estimated that in 2021 total digital assets in DeFi have reached a record level of over US $2.1 trillion, and the revenue of digital assets exchanges has also reached US$15 billion globally.
3) Cloud Finance Technologies—fastest-growing segment in cloud computing.
4) Big-data Analytics Technologies—for applications in both operations and risk control.
5) Open banking Technologies—In the UK, the 9 largest banks have formed OBIE (Open Banking Implementation Entity) with API (Application Programming Interface) standards since 2016 and it has grown to cover 74 financial institutions and 134 Third-party Service Providers in 2020. Similarly in the USA, Jack Henry and Finicity have joined forces to provide open banking services to community financial institutions since 2021, and also in the UK, BNPL platform, Zilch has teamed up with credit scoring start-up Credit Kudos (recently bought by Apple) to optimize Credit Kudos' open banking platform to promote Zilch's responsible lending to its customers.
6) AI/ML Technologies—Artificial Intelligence and Machine Learning Technologies to integrate all FinTech technologies, to foster optimization of efficient automation in the financial decision-making process, and drastically improve security, credit risk assessment, customer satisfaction, and fraud detection.

Alongside investments pouring into the evolving FinTech technologies also comes increased concerns over risks and compliance issues associated with FinTech, especially in the area of AI/ML. Finance regulators around the globe have since taken measurements toward the solutions that address those very concerns.

In November 2019, MAS (Monetary Authority of Singapore) has launched the Veritas platform, which "aims to enable financial institutions to evaluate their AIDA-driven solutions against the principles of fairness, ethics, accountability and transparency (FEAT) that MAS co-created with the financial industry in late 2018 to strengthen internal governance around the application of AI and the management and use of data" (MAS website). MAS goes on to state that "The Veritas is part of Singapore National AI Strategy. It was highlighted by Mr Heng Swee Keat, Deputy Prime Minister of Singapore, in his speech at the Singapore FinTech Festival and Singapore Week of Innovation and Technology (SFF x SWITCH) 2019 and 2020."

In February 2020, Australian Competition and Consumer Commission (ACCC) passed Consumer Data Right Rules (CDRR) to regulate data sharing and AI practice in the banking industry, and launched both RAAP (Consumer Data Right Register and Accreditation Application Platform) and CDRPP (Consumer Data Right Participant Portal) for the banks and FinTech to use in compliance with CDRR.

In October 2020, The Bank of England and the Financial Conduct Authority launched the Artificial Intelligence Public–Private Forum (AIPPF) and published its Final Report in February 2022. Here is the "Conclusion and Next Steps" of the report:

"Conclusion and next steps

160. The AIPPF discussions on the nature and uses of AI have been broad and deep, mirroring wider debates taking place across the financial services sector and beyond. The AIPPF meetings, workshops, and ad hoc discussions have highlighted the benefits as well as the many complex challenges in adopting and using AI. The Forum also brought together diverse views on potential ways of addressing those challenges.

161. While this report has focused largely on the role of Data, Model risk, and Governance in the adoption and use of AI in financial services, these sit within domestic and international regulatory and legislative frameworks. Clarity of regulatory expectations on the adoption and use of AI is a key component of fostering innovation. Regulators should provide greater clarity on existing regulation and policy. Such clarification and any new guidance should not be overly prescriptive and should provide illustrative case studies. Alongside that, regulators should identify the most important and/or high-risk AI use cases in financial services with the aim of developing mitigation strategies and/or policy initiatives.

162. In terms of next steps, it is clear that AI will continue to develop rapidly. Regulators and industry practitioners should continue to monitor and support the safe adoption of AI in financial services. Public-private engagement is invaluable and should continue with a wide range of stakeholders, including representation from civil society through regular or ad hoc forums. It would also be useful to have more structured and regular engagement on best practice or industry guidelines with a formal consultation process allowing for feedback.

163. An industry consortium could serve as a next step toward developing industry solutions to specific challenges and to creating industry-wide standards. Establishing an organisation to certify AI practitioners may also be useful and complementary to algorithm certification/auditing."

(Final Report 2022, AIPPF, Bank of England/Financial Conduct Authority).

4 Matching and Focusing: Positioning with Resources (Payments, InsurTech, RegTech, WealthTech, Blockchain and Cryptocurrency, CyberSecurity)

A closer look into the segmental FinTech investment deals in 2020/2021 confirms that the second and the third principles for business "matching principle" and "focusing principle" (He, 2017) are followed closely. Both established FI's and fintech companies are positioning themselves in alignment with their respective strength of resources (operational-wise and technology-wise) and staying focused on the areas that can further enhance their competitive advantages.

In payments, other than those mega deals on the top 10 list, like the US$9.2 billion acquisition of Denmark-based Nets by Nexi, and the US$2.7 billion acquisition of Japan-based Paidy by Paypal, we have also witnessed large VC funding poured into challenging banks: US$1.1 billion for Chime, US$800 million for Revolut, and US$510 million for Varo (KPMG Pulse, 2022). In 2021, Goldman Sachs announced its acquisition of GreenSky for US$2.2 billion, Square announced its acquisition of Australia-based AfterPay for US$29 billion, JP Morgan took a majority stake in Volkswagen's payments platform, and Walgreens and InComm Payments launched "ScarletTM"—all these and other activities of increased investment in payments are indicating a growing emphasis on embedded finance.

In the Insurtech subsector, we have seen very active VC funding: US$308 million raised for China-based MediTrust Health, US$255 million for India-based Acko, US $247 million for Hong Kong Singapore-based Bolttech, US$205 million for US-based At-Bay, and US$118 million for France-based Leocare.

In RegTech subsector, as Fabiano Gobbo at KPMG pointed out, "The regtech market saw quite a dichotomy in terms of funding during 2021—with M&A driving a significant amount of investment in the first half of the year—led by the $2.7 billion acquisition of Verafin—and late stage VC investments driving investment in the second half—led by the $500 million raise by Carta. While the US continued to attract the vast majority of investments in regtech, Europe is well-positioned to see growth heading into 2022." In this area, regulators are also playing a critical role to support the evolution of regtech solutions. For instance, the Monetary Authority of Singapore (MAS) has launched a series of initiatives aimed at strengthening the AI abilities of Singapore's financial services sector, including NovA! a technical platform to help financial institutions assess the environmental risks of companies and Veritas, an AI governance program meant to help financial institutions utilize AI and data analytics. Another example is the Hong Kong Monetary Authority, which also launched an AML-focused Regtech Lab to encourage the development and adoption of regtech.

In WealthTech, both the number of deals and the amount of investment have reached record highs in 2021: totaling US$1.6 billion over 66 deals (KPMG Pulse, 2022). VC investment has played a significant role: Canada-based Wealthsimple has raised US$600 million, US-based CleanCapital US$325 million, and Germany-based Moonfare and Liquid have raised US$125 million and US$104 million, respectively. Also worth noting are JP Morgan's acquisition of UK-based Nutmeg

for US$989 million, and Aberdeen announced its acquisition of Interactive Investor for US$2 billion.

In crypto and blockchain, global investment has increased fivefold to US$30 billion in 2021, almost doubling the amounts in 2018, 2019, and 2020—three years combined! In 2021, China banned cryptocurrency transactions, bitcoin mining, and the facilitation of cryptocurrency trading. India followed suit by introducing a bill that bans the use of cryptocurrencies as a method of payment, in addition to related activities.

Despite this, we have seen a significant expansion of interest in crypto and blockchain from countries like the USA, Canada, and Europe. To cope with the ever-growing interest in crypto and blockchain and increased pressure for oversight, regulators are working closely with the industry to support healthy development in this field: On March 09, 2020, US Congress passed the Crypto-Currency Act of 2020 (03/09/2020) Rep. Gosar. Paul A. [R-AZ-4] H. R. 6154–116th Congress (2020–2021). The legislation states that "The bill generally defines these assets as using a decentralized digital distributed ledger (e.g., blockchain) for transactions. The bill establishes the Commodity Futures Trading Commission as the primary regulator of cryptocommodities. The bill also establishes the Financial Crimes Enforcement Network and the Office of the Comptroller of the Currency as the primary regulators of cryptocurrencies. Finally, the bill establishes the Securities and Exchange Commission as the primary regulator of cryptosecurities and synthetic stablecoins." Later on August 17, 2021, US Congress passed the Blockchain Regulatory Certainty Act (08/17/2021) Rep. Emmer, Tom [R-MN-6] H.R.5045—117th Congress (2021–2022). According to Forbes, US Congress has introduced 50 Digital Asset Bills impacting Regulation, Blockchain, and CBDC Policy (Jason Brett Forbes 05/19/2022) since. Based on research completed at the Value Technology Foundation (VTF), the 50 bills identified are broken into six different categories. The categories include crypto taxation, central bank digital currency (CBDC), crypto clarity on the regulatory treatment of digital assets and digital asset securities, supporting blockchain technology, and issues of sanctions, ransomware, and implications involving either China or Russia's use of blockchain or cryptocurrency, and access and limitations on use of crypto by US elected officials. Also in 2020, the EU passed its own version of "Digital Finance Strategy/Framework/Package" and "Digital Finance Agenda," and launched "Digital Finance Platform" in April 2022.

Lastly, regarding cybersecurity—over the last two years, interest in managed detection and response (MDR) and endpoint detection and response (EDR) using AI, automation, and robotics solutions has grown significantly. Between 2020 and 2021, investment in cybersecurity more than doubled, with the $2.7 billion acquisition of Verafin accounting for over half of this total. We have seen a combination of M&A and VC investment in this subsector, including $310 million raised by US-based Fireblocks, the $250 million merger between Switzerland-based zero knowledge rollup blockchain company Hermez and India-based crypto company Polygon, and the acquisition of Israel-based cybersecurity firm GK8 by Celsius Network. As companies have accelerated their activities in the cloud and the speed of their digital transformation efforts, they have increasingly recognized the importance of secure

DevOps. They have also increased their investments in related areas, including cyber resilience, breach remediation, vulnerability testing, and ensuring basic security hygiene to ensure rapid change does not leave risk exposure.

5 Opening and Cooperating: Message from ACPR/NYDFS, Marquee, and Aladdin

Another interesting area in FinTech is the trend of opening and cooperation, which coincidentally echoes the fourth business principle (He, 2017), as evidenced in both public and private sectors.

In June 2020, the Autorité de Contrôle Prudentiel et de Résolution (ACPR) in France and the New York State Department of Financial Services (NYSDFS) in the USA announced they have signed a Memorandum of Understanding (MOU) to ease the operation of Fintech companies across the two jurisdictions. The new partnership aims at facilitating the increase of cross-border business and investment opportunities in the two markets. On April 8, 2020, the Monetary Authority of Singapore ("MAS") launched the "Fintech Service Providers ("FSP") Compliance Readiness Framework" to further promote openness and cooperation.

In the private sector, Goldman Sachs (2020) has opened up its SecDB database through Marquee. Marquee is the digital storefront for institutional client services, delivering Goldman Sachs' market insights, analytical tools, execution services, and developer and data services directly to clients via an integrated digital platform. Another financial giant, BlackRock (2020), also opened up its risk management platform, using Aladdin Studio and Aladdin Developer to help financial services providers better serve their customers.

(From BlackRock's website: Aladdin Studio is a data and developer platform delivered as part of BlackRock's end-to-end Aladdin® investment platform. Aladdin Studio enables investment professionals to build on top of core data and workflows in Aladdin® to create innovative solutions to meet bespoke needs across the investment process. Powered by Snowflake, Aladdin Data Cloud enables you to bring all your investment-related data together on a single, cloud-enabled platform, making it easy to generate differentiated analytics and insights.)

The examples above are just a few needles in a giant haystack, but enough to demonstrate the vital importance of staying open and cooperative in business, even in the most fiercely competitive FinTech sector.

6 Risk Controlling: Regulatory Sandbox (GFIN/DEPA) and Standards (ITU, ISO)

When it comes to finance, risk is the word that nobody can avoid. While innovations in technologies and creativities in business models have skyrocketed in FinTech in the past few years, so have the associated risks. In this aspect, regulators around the globe are taking initiatives to help both sides (the FinTech/FI businesses and the

Table 3.1 Inside the Digital Economic Partnership Agreement (DEPA)

Digital security	Digital trade	Digital inclusion	Data issues	Emerging tech
Cybersecurity cooperation	Paperless trading	Digital SME	Data	Fintech
Online consumer protection	Elimination of customs for digital products		Open government data	AI
	Non-discrimination of digital products		Prohibition of data localization	Data + regulatory sandboxed
	E-invoicing			

Note: On February 16, 2021, Canada started exploratory discussions with the DEPA parties for possible accession to the agreement. ~ Source: APF Canada
https://www.asiapacific.ca/publication/depa-worlds-first-digital-only-trade-agreement

regulators) explore the possibilities and viable options, so as to reach the ultimate goal of the optimized balance between "risk control" and "innovation." As a result, we are seeing more and more cross-board international cooperation taking place in regulatory sandbox.

In June 2020, Chile, New Zealand, and Singapore struck up the Digital Economic Partnership Agreement (DEPA), a ground-breaking, digitally focused trade agreement. Since then, many economies have expressed interest in joining this novel pact. On October 5, 2021, South Korea signed documents to formally request to join the Agreement. South Korea's request presents an opportunity to explore the world's first digital-only trade agreement and its potential impact on Canada. In December 2020, Canada notified the DEPA parties of its interest in joining the Agreement. In February of this year, Canada officially began exploratory discussions with those parties. One month later, Canada began public consultations with individuals and stakeholders on the current DEPA text and how DEPA could potentially be updated. The consultations closed in May, but Canada's exploratory discussions with DEPA members are ongoing. Table 3.1 provides some highlights about DEPA.

Another example of international regulatory sandbox cooperation over FinTech is GFIN. As of May 11, 2020, there were more than 20 regulators from countries including the UK, Canada, the USA, and Australia have opened applications for a global fintech "sandbox" following a trial last year. The regulators have come together, alongside related organizations, such as the Global Financial Innovation Network (GFIN). The group, which now has more than 60 member organizations, launched in January 2019 with the aim of boosting international cooperation around innovation.

Sandboxes allow fintechs and other innovators to test new products and services in a controlled environment under regulatory supervision, and are becoming more and more popular among countries that are aiming to strike a good balance between "risk control" and "innovation" in FinTech.

On top of the variant international and domestic regulatory sandboxes, international organizations are also working diligently in the development of standards that provide guidance and support for FinTech. In May 2020, ITU (International Telecommunication Union) published ITU-T X.1149 "security framework of an open platform for FinTech services," and in its Summary section, ITU states that "Recommendation ITU-T X.1149 describes an open platform architecture for financial technology (FinTech) services. It also specifies threats and vulnerabilities of open platform, open application programming interface (API) usage procedure for FinTech services, and detailed security requirements to open platform of FinTech services from both financial company and FinTech company sides. The appendix to this Recommendation includes some use cases of the proposed open platform."

On a broader basis, ISO (International Standards Organization) introduced ISO 20022 standard back in 2004, predominantly used for data exchange between financial institutions (ISO, n.d.). The genesis of the ISO 20022 messaging standard is to provide a common messaging protocol that will have a defined central dictionary and rules. All financial institutions across the globe need to migrate from current message standards (e.g., SWIFT MT Financial Messages) to the ISO 20022 standard by November 2022. According to experts in this field, some of the key benefits of the transition to ISO 20022 include:

Enhancing consistency and interoperability
Globally, financial institutions in different parts of the world currently use various messaging protocols, from proprietary standards to SWIFT MT messages. ISO 20022 has been designed to address issues related to consistency and interoperability (ISO, 2022).

Enabling richer data and enhanced efficiency
ISO 20022 messages are much richer in data, and the ability to accommodate more details helps in the creation of differentiated digital solutions and in the efficiency improvement of the existing payment processing systems.

Facilitating new-age solutions through real-time payments—Adoption of the ISO 20022 standards in certain parts of the world has accelerated through straight-through processing (STP) and with the implementation of real-time payments networks.

Allowing better data quality and analytics
The ISO 20022 standard ensures better data quality. It improves data analytics capabilities which require less manual intervention, and it also helps in the accurate compliance process.

Optimizing costs
ISO 20022-backed payment mechanisms have the potential to bring costs down drastically. Due to compatible message structures, payments between two countries could be almost instant and significantly inexpensive.

7 Forward-Thinking: Back to the Basics: From Collateral to Credibility (ESG)

Not all of us can keep up with the speed at which FinTech is evolving. While we are just getting familiarized with new concepts such as Blockchain, DLT, Bitcoin, and Timestamp, newer concepts are rapidly coming our way—Open banking, Smart Contract, API, DeFi, ZKP, NFT, Dapps, DAOs, to name just a few.

Although it feels like FinTech is capturing the attention of the whole world (at least the business world or the world of finance more precisely) overnight, it is surprising to note that FinTech is nothing new at all.

According to Fintech & Martech Blogger Vivek Agrawal (2020), Fintech history dates back to the nineteenth century, even preceding that. In 1860, a device called a pentelegraph was developed to verify signatures by banks. Historians accept 1866 as the year of the first valid fintech footprint because it was then that transatlantic cables were set up, leading to an era of creating network infrastructure and linkages around the world. Only after 150+ years of ongoing development has FinTech evolved into what we know it as today.

Despite all the fancy words and complicated technological definitions within FinTech, one thing remains unchanged, even over hundreds of years: FinTech is still, like money at its core, directly associated with (and heavily influenced by) credit, or credibility more precisely.

For hundreds of years, finance has been tied to credibility—governments issue money that is dependent on the governments' credibility, and banks issue bank notes which are tied to the banks' credibility. Without credibility, neither money nor banknotes will be issued, let alone traded or transferred. In a narrower definition, financing is simply lending money. We tend to be collectively bogged down with the idea that financing = collateral and forget that originally, financing did not necessarily have collateral as a metric for credibility. This collateral-based financing makes one wonder: what happened to our credibility?

Credibility, by any standard, is not just the cornerstone of finance, but also the backbone of the modern economy. Understanding credibility can help us look through all the layers of fancy covers and see the real picture: finance is all about the balance between risk/return and credibility. The development in FinTech, today or in the future, is to reveal that credibility in all of us, to all of us.

A growing number of people and organizations around the globe today have come to the realization that it is vital to have an ESG mindset—to be aware of the Environmental, Social, and Governance (ESG) consequences, for companies, organizations, governments, and individuals. In 2020, McKinsey has estimated that global sustainable investment reached US$30 trillion and has summarized 5 value creation ways ESG proposition can bring to business: top-line growth, cost reduction, regulatory and legal interventions, productivity uplift, and investment and asset optimization. In short, ESG proposition = Restoration of Credibility = Value, and that is the new equation for FinTech.

I wrap up the chapter by quoting from Anton Ruddenklau, Global Fintech Leader at KPMG:

> Since COP26, there has been seeing a lot of attention going to fintechs with ESG capabilities—including jurisdictions setting up incubators specifically focused on ESG solutions. While it's not a space that has been properly invested in to date, it has been gaining a lot of attention from governments and quite possibly has the biggest growth trajectory out of all fintech sub-sectors looking out over the next five years.

At the end of the day, what matters most is credibility, and that is the basis of FinTech.