Highline Beta

# Innovation in Payments

**Crisis Manifesto:**
How Payments
Will Evolve post-COVID

Highline Beta

In our **Crisis Manifesto** series, we're taking a look at a number of different industries to understand the short-term realities and long-term implications and possibilities of COVID-19. This is our **Innovation Opportunities in Payments** report.

## About Highline Beta

Corporate innovation is changing faster than ever. And opportunities abound for big companies to build a portfolio of ventures internally and externally, beyond their core.

Highline Beta is a corporate innovation and venture development firm. We're entrepreneurs, investors, designers and product experts, and we work with the Fortune 1000 to drive growth innovation. We helped **RBC** launch **RBC Ventures**, a group within the bank dedicated to going beyond banking. We've invested in the payments space, including **BanQu**, which provides digital identity and mobile payment capabilities to those at the bottom of the supply chain and **Drop**, which provides a free loyalty app to consumers, making it easy to earn points and rewards.

We believe in digging deep and taking action, providing clients with the right mix of innovation services and outcomes to create measurable growth opportunities. We believe in startup-corporate collaboration as the ultimate unfair advantage. Our fund invests in startups that have meaningful relationships and pilots with our corporate clients. When this works, everyone wins. For more, please visit highlinebeta.com

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# Introduction

Historically, innovation in payments came from iteration. Today, new companies emerge and find different ways to build on top of, or add to, the existing infrastructure, aiming to solve the new opportunities presented by technological and political/regulatory breakthroughs. For that reason, it makes sense to take a closer look at the past of payments: macroeconomics and monetary policies, payment standards for legal tender money, and infrastructure that developed over time to support micro- and large-scale payments.

## What is money?

For the purposes of this report we propose the following working definition of money: **Money is a record of value that cannot be duplicated or forged**. In modern societies, given the importance of transactions and commerce, money tends to move around in the form of payments. When you pay, you transact. Therefore, trends and opportunities in money is a useful proxy to trends and opportunities in payments.

## Basic monetary system requirements: Legal Tender + Strict control over money supply

**Legal Tender.** Countries have the power to legislate a unit of its money as "legal tender", which is why, globally, there are many currencies, i.e. the legislated legal tenders within national borders, used as a legal record of value and accepted by the local courts as a valid payment of debt. Legal tender is a basic requirement for any national monetary policy.

**Strict control over money supply.** Central banks play this crucial role, and most money in circulation today exists in a form of records in a central bank. Payment is simply a transfer: one balance goes down and one balance goes up by the same amount. **Payment creates an entry in the banking system's books**, unless the transaction is done with banknotes or coins. Given this level of abstraction, the trend has been to digitise all forms of payments. Payments are entries in banks' databases, and central banks rely on the banking system to settle and manage transactions. This system depends on the banks' capacity to responsibly control, protect, manage and settle these records, as well as offer services to the multitude of customer segments that they serve, built on top of these fundamentals. This level of responsibility in well-developed economies comes with strict regulatory and compliance obligations and policies.

**Money is a record of value that cannot be duplicated or forged**

# Impact on cash and checks

> **COVID-19 is just making the future happen faster."**
>
> **Scott Galloway**
> *Professor of marketing at the New York University Stern School of Business*

The impact of COVID-19 on payments has created unprecedented new opportunities for innovation at every level of the payment stack, supercharging the shift from cash and checks to digital payments.

## SMBs turn to digital

The small business segment has traditionally been an underserved market, and there's a huge opportunity to play in this market now to help businesses save on payments processing and get paid faster, move money faster, pay suppliers/vendors and get better insights into cash flow and inventory management.

SMBs, restaurants, and retailers have been hit particularly hard by the pandemic. The sector, in particular in North America and Europe, has traditionally been more reliant on cash and paper records, and the pressure to digitize has created an unprecedented opportunity to bring offline cash payments and the use of checks into the online/digital realm, globally. Just in the UK, while cash payments fell by 15% to 9.3 billion in 2019, it was still the second most frequently used method of payment before COVID-19, representing 23% of all payments. And, although on the decline globally, 16 billion checks were written in 2018 for a total value of $26.2 trillion.

Financial institutions serving the SMB sector, as well as startups have been busy addressing this pressing need, rolling out new products and partnerships, aimed at this market segment:

**Xero** Partners With **Transferwise** To Help SMBs With Cash Flow and sets up direct feeds for startup-friendly banks Mercury and Relay Financial in the US.

**Shopify** announced **Shopify Balance**, giving its merchants an account to manage cash flow, pay bills and track expenses, as well as a Shopify Balance Card, which is both a virtual and physical card that small businesses can use to access their funds, and earn rewards for business expenses. Shopify also announced a **Shop Pay Installments**, its buy now, pay later option to incentivise customer spending.

**Facebook** and **Instagram** roll out **Shops** turning business profiles into storefronts. As part of this announcement, Facebook said it's partnering with **Shopify**, **BigCommerce**, **Woo**, **Channel Advisor**, **CedCommerce**, **Cafe24**, **Tienda Nube** and **Feedonomics**. Merchants will be able to use these third-party platforms to manage their Facebook Shops, as well as the ads tied to those Shops. For example, Shopify said, "Facebook Shops allows Shopify merchants to get control over customization and merchandising for their storefronts inside Facebook and Instagram, while managing their products, inventory, orders, and fulfillment directly from within Shopify."

These announcements and most likely many more similar initiatives to come, absorb more of that 'offline' activity into digital and commerce omni-channels, reaching and solving problems for new, previously underserved segments of users.

# Startup Spotlight


Dipp, a business created within **RBC Ventures** serves as proof that traditional banks can approach innovation and actively build value for the SMB market segment in new, interesting ways, leveraging its strengths, such as pre-existing ecosystem relationships, which makes new user onboarding seamless, both on the merchant and consumer side, while adding value in the form of cashback (for consumers) and loyalty and engagement platform with a real-time performance dashboard (for merchants).

**Here are some of the big shifts we are seeing: small businesses and restaurants in particular are having to figure out how to navigate these changing times. Some are moving from offline to online, adding curbside/takeout as additional options shifting from cash to electronic payments not only for convenience but also for perceived health risk mitigation. At Dipp, we're looking at how we assist businesses open today and as they return to the new normal. How can we enable businesses to engage and reward customers with minimal effort required on their end. It's important to adapt to the new situation, understand your users and be cognisant of different pains and challenges business owners and merchants are facing. There will be new challenges to think about, and how those impact the consumer journey. We work closely with our partners and users to adapt in a thoughtful way to solve for and address all the new challenges.**

**Anthony Chan,**
*Co-founder, Dipp*

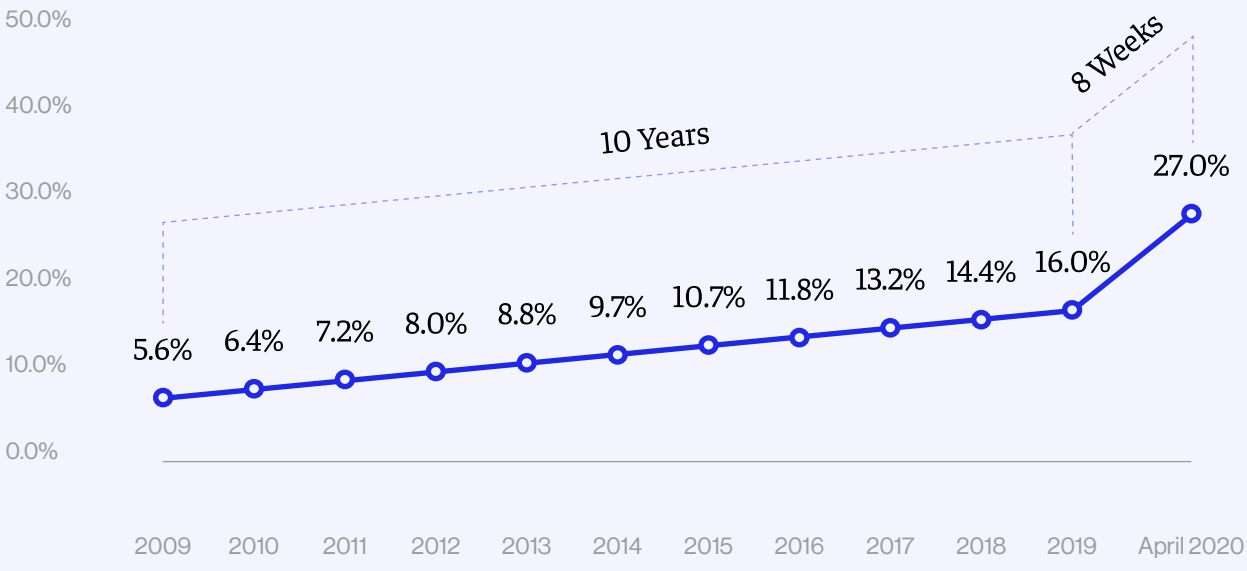
## Consumers abandon cash in favour of contactless payments

On the consumer side, unprecedented behavioural changes are now taking place, especially since the World Health Organization (WHO) cautioned people to wash their hands after using banknotes - and if possible to use contactless payments instead..

Before COVID, according to EY, cash still played a key role, especially for smaller payments: "Americans still pay with cash about one-third of the time and use checks about as often as they do digital payments. The great acceleration of digital payments has been happening slowly then suddenly: "10 years vs. 8 weeks" chart has shown that e-commerce penetration climbed to 27% from 16% in just eight weeks of quarantine. Morgan Stanley has issued a note projecting the full year 2020 e-commerce spending to be up 25% from last year. According to the new Payments Canada report, 75 per cent of Canadians spending less than pre-pandemic; 62 per cent using less cash; 42 per cent avoid shopping at places that don't accept contactless payments.

The opportunity also breaks through cultural barriers: When India withdrew certain bank notes , the population found that 86% of its cash was no longer legal tender. Several years later, and despite a strong government push to end cash and a plethora of new digital payment providers, 72% of consumer transactions in India are still settled with cash. This is all about to change due to the global nature of the pandemic.

### U.S. E-Commerce Penetration (% of Retail Sales)




Source: Bank of America, U.S. Department of Commerce, Shaw Spring Research

# Understanding payment networks


In modern economies with well-established banking systems and monetary policies, the most common implementation of payments has interesting parallels to the early developments in the history of the web. Just like establishing links between networked sites led to the internet, so the establishment of payment networks such as Mastercard and Visa has propelled commerce forward at light speed. They're an important application the financial industry has built on top of 'legal tender' dollars, as represented and managed by the banking system and central banks. As COVID-19 hit, prepaid cards are now growing, and merchants will need to figure out ways to accept credit cards. There are pressures to lower interchange fees and credit card fees to increase acceptance, at least temporarily to make it easier for merchants to onboard. There are several "jobs to be done" that payment networks have focused on solving, and FinTechs are increasingly jumping in toaccelerate the progress.

1. **Speed of transactions.** Historically, bank account money has been extremely slow. Entries and records needed to be reconciled when money moves between banks, in full compliance with the multitude of KYC, AML and other regulations. The industry knew it needed instant payments, and has created its own abstractions of money: credit card dollar and debit card dollar. There's a separate database for credit card transactions. Access to credit increases the amount of dollars in

circulation, since with credit card dollars, people can spend more than they have. With debit cards, networks such as Interac check the available legal tender balance to allow the transaction, and take it out of consumers' legal tender accounts without billing, meaning consumers can't spend more than they have at any time. This type of convenience carries less risk.

2. **Instant access to money**. Merchants and consumers benefit by getting access to credit card dollars instantly; something legal tender dollars do not support (other than via ATMs). In this system, merchants get instant payments and over the next several days, transparently to buyers/users of credit cards, credit card dollars are converted into legal tender dollars. Credit card networks send legal tender dollars from their pool of legal tender dollars to the merchants. And then, the consumer gets a bill which requires payment with legal tender dollars. Without banks, this wouldn't work.
3. **Improved security**. Visa, Mastercard and other credit card payment networks have transformed into global computer networks for instant communication, maintaining a secured database of credit card money. There are fees associated with the use of credit cards, since these instant transactions enabled by the payment networks are high risk, meaning consumers can refuse to pay their credit card bills and dispute charges. There are conditions for the convenience of credit card use: fees, minimum purchase, interest, and a set of ID verifications. However, as credit cards have evolved so have the security threats. With more payments moving online, increased investment in security of networks, data management and transfer, and ID management will be necessary.

Some additional aspects the payment networks are trying to achieve include: payment finality and irrevocability, real-time money movement transparency, data-rich transactions, and innovation by opening the access to third-parties such as FinTech companies.

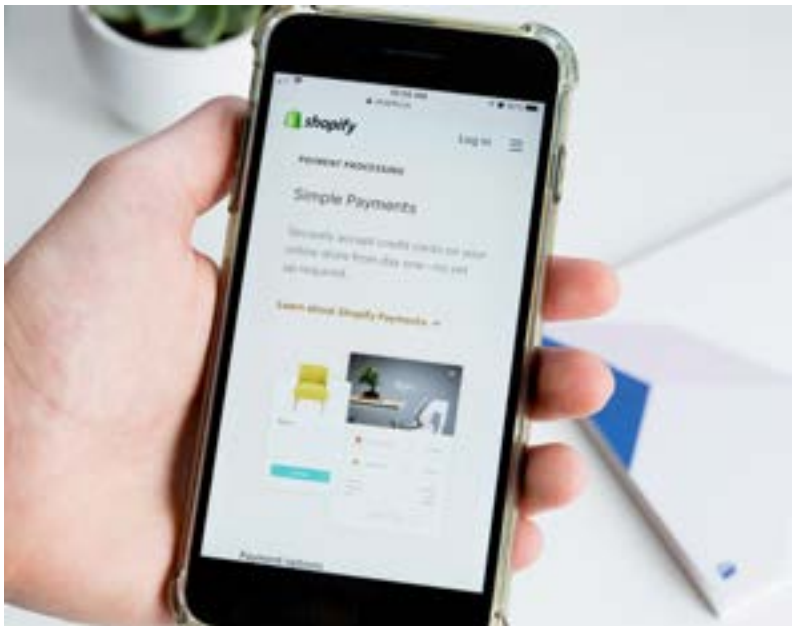
**COVID has shone the spotlight on the need to authenticate who we are, virtually. Whether that's logging in to apply for government subsidies or to transact in our fully digital reality. We're acknowledging the need to embrace a digital ID. We call it a shift of necessity. COVID-19 has accelerated some of the work organizations like Interac have been doing – focusing on digital transactions. And, as Professor Scott Galloway said of COVID-19 "the future is happening faster." We're seeing people who would've taken a lot longer, embrace change out of necessity."**


**Debbie Gamble,**
*Chief Officer, Innovation Labs and New Ventures at Interac*

# World Wide Web and introduction of browsers gives rise to e-commerce

## Paypal, Amazon, Square, Stripe and the rise of payment processors

Some key factors contributed to the rise of eCommerce: consumers' confidence in purchasing online due to increase in secure payments systems; credit cards' fraud coverage; and convenience in improved supply-chain (Amazon Prime. Global e-commerce company PayPal, established in 1998, currently operates in 202 markets and manages payment processing for online vendors, auction sites, and other commercial users, allowing its customers to send, receive and hold funds in 24 currencies worldwide. PayPal manages more than 244 million accounts.




**AmazonPay**, launched in 2007 is an online payments processing service that is owned by Amazon, and an important harbinger for other similar developments by technology companies, which would happen later in 2010+. AmazonPay uses the consumer base of Amazon, and focuses on giving users the option to pay with their Amazon accounts on external merchant websites. Thanks to the proliferation of AWS infrastructure that Amazon has built over the years, Amazon is particularly well positioned to enter the modern war of payments on a strong API footing.

> Amazon is particularly well positioned to enter the modern war of payments on a strong API footing

## Loyalty and rewards

Credit cards have traditionally and successfully been closely tied with loyalty and rewards systems, and with the rise of e-commerce and digitization of payments, loyalty and rewards create much-needed incentives for consumers and innovation opportunities for businesses. Some of the most known examples, such as **Starbucks Rewards**, **Sephora's Beauty Insider** and **Amazon Prime** have been showing the way. The market size of the global loyalty industry is estimated to be about $200B, according to CB Insights' Industry Analyst Consensus

market-sizing tool, reflecting the growing importance of customer relevance to companies. There is an opportunity for Fintechs in the loyalty and rewards space to collaborate more closely with Paypal, Square, Stripe and other modern payment processors. PayPal has signalled this trend by acquiring shopping rewards platform **Honey** for approximately $4 billion in cash.

## The rise of mobile: PoS, APIs, Apps, social networks as payment networks and other innovation opportunities

As e-commerce continues to evolve, new companies will continue to emerge, providing a much-needed digital layer on top of the banking infrastructure, now pushed into further acceleration because of COVID-19.

## Innovation at Point-of-Sale (PoS) and digital wallets

Due to COVID-19, innovation at PoS is critical. Payment terminals (also known as Point of Sale) are the immediate user experiences for consumers when they make payments. For years, many small merchants have resisted accepting electronic payments, because of high processing costs, but cost-effective options, such as mobile card readers offered by **Square**, **Intuit**, **PayPal**, and others, and the pressure to lower processing fees and reach new market segments and reward customers for their purchases are all converging.

- **Apple Watch** is the best-known example of 'wearable-wallet' innovation that operates as a debit/credit payment. Paying with Apple Watch is technically the same as paying with credit/debit card, when it comes to transferring credentials.
- **Google** Assistant Voice Match feature will soon be able to make payments for goods and services using only your voice for in-app purchases via Google Play and restaurant orders. This is a "pay by voice" type of innovation, where biometrics are used for identity verification. Alexa currently uses a PIN to protect purchases made using voice. Both Google and Alexa payments would fit under the category of card non-present transactions or voice-initiated ecommerce payments.
- **Uber** introduced a "Pay with Venmo" option as part of an ongoing partnership with PayPal, similar to how e-transfers work in its functionality.
- While card-readers PoS remain dominant, retailers like **Starbucks** which accept mobile wallets at the point of sale will show the way by offering their customers more streamlined and frictionless checkout experiences.
- **Affirm** is a PoS lender that originates several billions of dollars in loans a year. According to its founder Max Levchin (who also co-founded PayPal), Affirm has been designed for the major trend: that we're going to buy more things online and via electronic checkout. COVID has supercharged that trend, and now that there are a lot of merchants focused on cash flow, who also want to increase sales and incentivise customer spending, Affirm

Affirm has been designed for the major trend: that we're going to buy more things online and via electronic checkout

can lower that barrier and bring more brands and retailers onboard — their business model is highly compelling, because it's not built on fees per transaction. Affirm's user base has been tripling every year, with the company counting 5.3 million customers as of May 2020.

- **Square** allowed small businesses to accept debit and credit cards on mobile devices. Today, Square's gross payment volume amounts to $106.24 billion U.S. dollars, up from $84.65 billion in 2018. Square has recently introduced Online Checkout, a new payment tool designed for small businesses looking to rapidly transition to e-commerce (and its take on PayPal.) "With billions of people around the world forced to adhere to lockdown and social distancing measures driven by the COVID-19 crisis, this has led to a sizable uptick in people buying things online. With Square Online Checkout, the payments processor is looking to capitalize on this shift by offering companies an easier way to accept online card payments — this works on any website, social media profile, instant messaging app, or even SMS." In March, Square said it had also received approval from the FDIC to conduct deposit insurance. It aims to launch Square Financial Services, offering small business loans, in 2021.

- **Shopify** is betting on omnichannel, serving as a bridge between stores' physical and digital shops. Shopify says merchants who connect their online and in-store sales expect a revenue increase of 30% annually. The all-new Shopify PoS differentiates as a simplified omnichannel management solution, integrating offline and online sales, orders, products and payments get integrated into a unified customer experience.

- **Lightspeed** reported a YOY revenue increase of 70% as demand has soared amid the pandemic.The company powers small and medium-sized businesses with its cloud-based, omnichannel commerce platforms in over 100 countries around the world.

In addition to the examples above, we may start seeing higher rates of QR payments adoption, as businesses look for more contactless and seamless ways to engage with users in physical stores and online.

Shopify says merchants who connect their online and in-store sales expect a revenue increase of 30% annually

**The biggest change if you look at the past few months of the pandemic is that cash is less relevant. Particularly in emerging markets where there is a high density of people, mobile money will become more and more important. People in our supply chains – like farmers and recyclers – are moving toward mobile money payment mechanisms and this will now speed up. People can receive local cash on their mobile phones, via local telecom/mobile money networks – all safely and securely from a distance. While access to cash in marginalized populations is important, just as important is the personal security/safety mobile money provides by not having to carry physical cash.**

**This is increasingly important when trying to ensure social distancing through COVID-19. No one wants to stand in line to receive cash for their crops. Payments are completely changing and the fact that the Islamic Development Bank was able to deploy their capital across 25+ member countries without any of us leaving our homes is a testament to what's becoming the "new normal".**

**For every company, the biggest learning lesson is to make sure you can deliver value that matters to your customers and vendors, in a very nimble way. Companies also need to think: How do you survive in conditions that are going to be extremely unpredictable? Only the paranoid will thrive.**

BQ CLEARLY LINKED

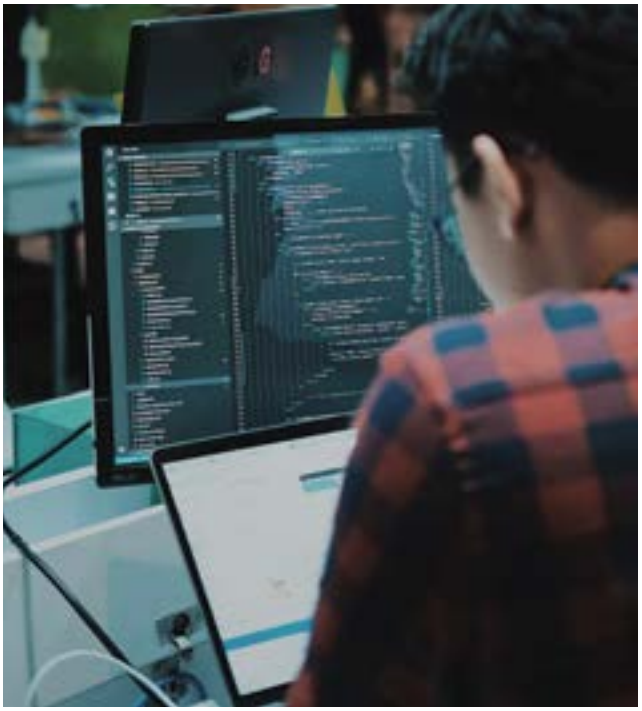
**Ashish Gadnis,**
*CEO at BanQu Inc.*

## Innovation at the API level

Banks and payment networks can open hooks into their databases, which would drive the next wave of innovation. Even read-only access APIs can be powerful: huge numbers of applications will arise, because money is information and innovative companies can play with information, offering a variety of ways to look at that information. Innovation at the API level is closely tied to Open Banking (see more on this in the last chapter).

- **Stripe**, founded in 2010, handles online payment processing for internet businesses through its suite of payment APIs, powering commerce for online businesses of all sizes.

- In January, Visa acquired **Plaid** and its range of APIs that let developers access banking information and securely connect financial accounts to apps consumers use to manage their financial lives, for $5.3 billion. With the recently launched **Plaid Exchange**, the company wants to help financial institutions directly so they can build and maintain an API that other developers can use.



## Innovation at UX

Open banking legislation in the UK has been instrumental in the rise of API-enabled Fintechs: from budgeting and other consumer-facing apps to the rise of digital banks. Government and Financial Institutions are now preparing for open banking to come in 2022, in the US and elsewhere. For now, FinTechs are focused on building a customer base, while waiting for the open banking mandate, as well as licensing.

- The new crop of challenger banks, reborn as apps backed by modern mobile-friendly architecture and easy-to-use UX, such as **Revolut**, **Monzo**, **Starling**, **N26** and similar companies like **Robinhood**, a pioneer of commission-free investing, are particularly attractive to underserved segments of the population, such as freelancers, small businesses, sole traders and others. These companies all benefit from lower operational costs due to the lack of physical infrastructure like branches, and due to the modern technology stacks they run on, they can test and release new products very quickly, offering a wide variety of services. For a deep-dive into **Revolut**, which competes with traditional banks on perks, user interface, and product suite, go here.

- These vertically focused challenger banks offer a strong suite of remittance services, exchanges, trading, insurance products as well as budgeting products and insights, to make it easier for their customers to manage cash flow and achieve financial goals. There's room for a specialised, vertically focused 'digital

bank' targeting niche groups of customers. This includes **GreenDot's GoBank** for gig workers; **Silicon Valley Bank** for startups; companies like **Propel** (budgeting and banking services for people on food stamps) and in the US, **Chime**, with its no-fee bank accounts and **Stash** – both said they are seeing record signups. Chime said they continue to see "some of the highest number of new account openings." During COVID-19 crisis, **Varo** provided early access to stimulus and unemployment relief funds, as it already does with users' direct deposit paychecks, and even partnered with job platforms Steady and Wonolo to help connect its customers to new work opportunities. All these neobanks can acquire customers much more cheaply than traditional banks, and cross-sell on additional features.

- Budgeting apps is a good example of innovation at the level of Apps and UX. Due to COVID-19, people are tracking their spending more closely. **YNAB**, **Mint**, **PocketGuard**, **Honeyfi**, and **Mvelopes** are all popular budgeting apps.

- Bank of Canada has been working with payment networks to lower those fees to increase acceptance. Fintechs that are solving specific problems for consumers while also incentivising spending are thriving. Startups in neobanking solutions, such as **KOHO**, **Stack**, and **MOGO** offer cost-effective solutions for younger Canadians and new graduates, who will look for solutions that give them points, cash back, low interest, and no banking fees. **PayTM** will reward customers for paying bills, and maintaining regular payment habits. **Drop** app will scan credit card receipts and offer consumers ways to gain points and spend them, driving sales for the merchants and rewarding consumers for their purchases.

- **Sensibill** has recently entered into a partnership with **JPMorgan Chase**, which is now offering Sensibill's receipt capture and management solution through the Chase Mobile Banking app to help its customers manage home office expenses, submit proof of purchase for insurance claims, track their spending at a granular level, and more.

**We're a technology company focused on finance. If Revolut succeeds, big banks will succeed as well. The competition will drive innovation. Often, phone apps aren't attuned to the specific needs of customers. We can compete on the UX and properly localize our products. For example, we want to make it incredibly easy to open an account. It shouldn't be something you couldn't do on the spot: if you're sitting in the park and decide to open an account, you shouldn't have to go home and look for documents and provide extra information.**

**As a consumer, and especially during COVID-19, I've noticed in the finance space that the lack of automation in some of the more established companies is becoming more prominent. They're not set up for scale, for remote work, for sudden spikes in customer management volume. FinTechs have solved this through chatbots and automated self-serve functionality, and that's helping us all today. Incumbents have discovered that a reliance on brick-and-mortar service is now a liability. If I lost my bank card, I'd have to wait two weeks or go to a physical branch. At Revolut, we can get a new card to customers within 1-2 business days. We built our product to be seamless for the customers and this has stood the test of time."**

Revolut

**Saud Aziz,**
*Strategy and Operations,*
*Revolut Canada*

## Innovation in remittances

Four years of digital growth has been compressed into two months in the money transfer space, impacted by COVID-19 in two ways: there are more new customers, however, people have less money to send, putting pressure on margins. If the ultimate trend is to make payments more seamless, especially for underserved markets, and reduce interchange fees, there's a potential for innovation here through stable coins, alternative currencies, or value-add services that could be built on top of existing payment rails.

- **Western Union** reported a 13% increase in its own digital revenue in Q1 of 2020.

- **MoneyGram** and **TransferWise** have all reported tremendous growth, driven by COVID-19. **WorldRemit** reported 150% year-on-year growth in new customer activations for March and April. However, MoneyGram's walk-in remittances declined by 19% in April, in line with the World Bank's forecast that global remittance transactions would drop 20% in 2020.

- **Remitly** customer growth was up 100% from February to March, and it saw a 40% growth in transaction volume. In February it expanded beyond remittances and launched a new banking service for immigrants.

## Innovation at P2P: Social networks as payment networks

- **WeChat Pay** and **AliPay**. Ninety-two percent of people in China's top cities said that they use WeChat Pay or AliPay as their primary payment method, according to a 2017 study by Penguin Intelligence. And the amount spent per month through these services keeps going up. In terms of market share, Alipay has 54% compared to 40% for WeChat Pay, according to iResearch Consulting Group. But the battle for who will dominate the mobile payments industry is only just starting to heat up. To put this in context: People spent over $115 billion in mini apps on WeChat in 2019 alone.


- **Fortnite/Twitch**. As gaming forms its own economies, seamless payment experiences are becoming more critical. Payments in gaming is one of the most interesting frontiers for natively digital payment systems to get tested at scale. With the advent of **Twitch** and **Fortnight**, and to a large extent **eSports**, gaming has been transformed from a solitary endeavor into vibrant virtual communities and social networks. For example, Twitch

99% of people in China's top cities said that they use WeChat Pay or AliPay as their primary payment method

streamers get "Bits" as tips from viewers, exchangeable for 'legal tender' real money. VentureBeat offers a sobering comparison: an Olympic Gold Medalist earns just $25,000 for their win, while the top prize for Activision Blizzard's Hearthstone championship, one of many eSports tournaments happening throughout the year is $250,000. Both types of athletes earn sponsorships and build increasingly global influence. Blizzard, one of the largest gaming companies in the world, currently accepts Blizzard Balance, Credit and Debit Cards, as well as PayPal payment methods.

- **Facebook's Libra** digital currency project. The Libra mission is "to build a simple global payment system and financial infrastructure that empowers billions of people." Due to regulatory pressures, the Libra project will now support existing currencies like the U.S. dollar in addition to the proposed Libra currency. **Novi**, its digital wallet is still slated to launch later this fall.

- **Facebook** also launched **WhatsApp Pay**, its P2P payment service it has been testing in India since 2018, expanding it to Brazil

- **Reddit** has launched test versions of **Ethereum-based Community Points** in **Fortnite** and cryptocurrency subreddits. It's interesting to note that crypto adoption is four times higher in the Fornite community than in Reddit's own cryptocurrency community.

# Protocol standardization, complete and verticalized payment ecosystems


## Complete payments ecosystems

While Facebook, Apple, Amazon and Google all enable e-commerce and payments across their ecosystems, Apple has been notably thorough. The release of **Apple Card**, **Apple Pay** and **Apple Cash** solidified the position of Apple and other mobile devices and technology companies (think GooglePay and SamsungPay) in the increasingly crowded payments space. Apple's new credit card came backed by Mastercard and Goldman Sachs, and included cryptographic protections, offering new levels of privacy and security. "The unique security and privacy architecture created for Apple Card means Apple does not know where a customer shopped, what they bought or how much they paid. Apple is partnering with Goldman Sachs as its issuing bank. Goldman Sachs will never share or sell data to third parties for marketing and advertising. Apple is also partnering with Mastercard to provide the support of a global payments network." Apple has always taken an ecosystem-centric walled garden approach to its products, and today, continues to lead the way with its Apple Watch payment integrations, making instant contactless payments a breeze for consumers — a trend that will no doubt grow due to COVID-19 sanitary and health concerns.

Another notable company taking a comprehensive 360 approach to payments is **Shopify**, with its recent unveiling of a series of payment and banking products designed to help merchants navigate the surge in e-commerce during the COVID-19 pandemic. The company has built a thriving ecosystem around its core offerings focused on enabling e-commerce for independent merchants.

## Vertically-focused payment systems

For Fintechs, specialized, vertically-focused payment ecosystems present opportunities for innovation, addressing the end-to-end needs

of their specific customer categories. Their winning formula is to **deliver a quality, fast, safe transaction while also delivering specific value**. Some examples:

- **Get Digs** is a payment system for renters.
- For landlords, there are many digital payment solutions to pick from: **Cozy** free rent collection platform, **Avail**, which offers portfolio management system and tenant payment options, **SparkRental** which aims to reduce defaults and evictions with guaranteed rent payment, and many more.
- **Butter**, a free app that's focusing on subscriptions. It is able to flatten the subscription cost by rewarding their customers with 1% cashback on certain eligible subscriptions and helps consumers track all their subscriptions, recurring expenses, and rewards.
- **Clubessential** is a SaaS provider focused on providing the golf course and country club industry with digital tools to drive member loyalty and operational efficiencies, including modern payments processing. Contactless payment capability the company offers minimizes friction, while increasing the safety of guests and staff.
- **Flywire** has vertical-specific insight and technology that allows organizations in education, healthcare, travel and technology industries to optimize the payment experience for their customers while eliminating operational challenges—from invoicing to payment reconciliation.
- **Dr. Bill** is a premium billing solution that simplifies and streamlines the billing and payment process for Canada's medical community.

> **In the healthcare space, COVID-19 has mostly changed how physicians are working — there's a big move to virtual care. Everything that isn't urgent is moving online: teleconference, telemedicine. People are doing all of this at home now. Clinics that are normally run in person have gone virtual as well. Physicians have to bill differently for this work and it's new to them. We have a plan and roadmap — it's helping physicians. We're looking at possibilities of integrating and partnering telemedicine providers on telezoom or custom built software, and so we could build a billing module. We're processing $400M dollars in claims a year. And it's growing significantly. There's about $26B in payments a year happening in the healthcare space, just in Canada, including fee-for-service medical billing and payments to physicians. Partly due to COVID, we're growing faster. Everyone's practice is changing and physicians want to run their practice better. We were founded in 2014 and have been recently acquired by RBC. It's a good time to be partnered with RBC on helping physicians get paid faster."**

DR.BILL

**Steve Lionais,**
*Co-Founder and CEO at Dr. Bill*

## Payment standards present opportunities for innovation

With the new standardisation of payment systems, the world will become more unified for sending payments, making the process much faster. The financial industry is now preparing to implement **ISO 20022**, an ISO standard for electronic data interchange between financial institutions; and there will be more standardisation in payments going forward, enabling merchants and consumers to get better, richer insights into their transactions. **Microsoft** is making strides with its **Digital ID framework**. Verification/authentication will remain key for digital payments to continue evolving, and for new banking and lending services to emerge.

For example, insurers moving away from checks because of COVID will be looking at faster sets of pre-authorized debits and digital ID solutions like **VerifiedMe**, combined with payments solutions that allow for verification and sharing of bank account information. They will also adopt the ISO20022 standard, enabling payments and data structures to travel in one payment message to automatically reconcile accounts receivable and payable. Since this standard will carry the data along with the payments, insurers will have less need for manual reconciliation. Notable mention also goes to **real-time b2b payments**, another key global trend.

For more innovation trends in insurance, please read Crisis Manifesto: How Insurance Will Change post-COVID

# What's next? Native digital money


**Cryptocurrencies** as they exist today can be seen as a **computer simulation of cash and banknotes**. A third-party like a bank is not needed to complete a payment. This is similar to paying with cash (i.e. paper money), which also does not require a permission or a third-party to make a payment. Cryptocurrencies take inspiration from existing processes. For example, 'batching' method to process crypto-transactions, which aims to address the **scalability issue inherent to Bitcoin**, was inspired by how banks transact legal tender money (for more on this, read about Lightning Network. To understand the magnitude of the scalability problem, simply compare Bitcoin's minuscule average range of 3.3 to 7 transactions per second to Visa's average of 24,000, and its peak capacity of around 50,000 transactions per second. Why is scalability an issue worth mentioning? People will always want spending-friendly money, and Bitcoin (as well as other cryptocurrencies as they exist today) does not support stable prices.

Cryptocurrencies today aren't yet spending-friendly, but they're trader-friendly. While people might not be buying coffee with Bitcoin at every local coffee shop, what can't be spent can be traded. The "killer-app" for cryptocurrencies today is in trading: exchanges and trading solutions built natively for this new 'analogue' asset class are important innovations in this space and have implications for payments, especially when it comes to remittances, taxes, and cybersecurity, as well as lending and

digital identity. The next wave of cryptocurrencies built as stable-coins, such as **Libra** project led by Facebook, will have to tackle the scalability problem and will benefit tremendously from the early developments in this space, such as digital wallets — a potentially disruptive new trend that is worth planning for and watching closely. Cryptocurrencies today have developed an ecosystem around programmable, native digital money, and this will be considered an important innovation in the history of payments.

While **Bitcoin** and **Ethereum** have demonstrated that native digital money can work and that ecosystems, services, smart contracts and apps can be built on top of that digitally native, programmable layer, the issues with scalability and volatility have not been resolved. The future of payments is tied to macroeconomics and monetary policies, and one of the biggest potential disruptions could be the introduction of national crypto-currencies gaining wide acceptance.
Ultimately, the future of legal tender money is political. The U.S. is currently borrowing huge sums because of COVID-19. Many countries around the world have held huge amounts of reserves in the form of U.S. treasuries, but some countries have been getting rid of this debt, including Russia and China (which is the biggest holder and is actively reducing their holdings of U.S. treasuries.) The potential problem with U.S. dollars as legal tender of choice for the global economy is that the Federal Reserve has been printing trillions of this money lately to stimulate the economy, and kept very low interest rates. Because of COVID-19, the U.S. money supply went from an outpour of money to a flood of money, and so there's a concern of too many U.S. dollars around. However, it's worth noting that many other countries have also printed money and stimulated domestic economies. On balance, are things really going to change? It is not yet clear.

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However, if Europe or China introduced a crypto version of its national currency, built natively for the internet, people will pay through apps like WeChat and the convenience of it might trump privacy concerns. This test is already underway, and represents a significant milestone for the world's biggest central banks, potentially setting the path toward launching electronic payment systems. If a consortium offering a stable version of a crypto currency, such as **Libra**, gains wide acceptance, this will also change the payments game and will represent new risks to the banking sector, especially if people start using wallets for deposits and loans.

There may be a new economy arising from that: services around native digital money designed for modern technology, like lending, insurance and more. For startups, the value will come from preparing the infrastructure for dealing with digital money as the consumer demand will catch up with technological advances — or to help incumbents integrate crypto-rails into their core offerings, for example in data markets, loyalty and cybersecurity.

## Open Banking

We are now clearly living in a fully digital economy. In the short to medium-term, there will be a renewed emphasis on developing open banking infrastructure. Open banking and data is already helping governments around the world better respond to the pandemic and offer help to those who need it, faster, with help from many FinTech companies that have stepped up. Open Banking unlocks new ways to build products and services — and in post-COVID world, could help customers and businesses recover and build deeper understanding of their finances.

As banks begin to expand their operational, data and API capabilities to prepare the infrastructure for open banking, they will need strong ecosystem partners.

Financial Institutions will need to plug into the tech ecosystem, in order to better leverage their assets, data and systems and offer new products and services to their customers. Notable examples include banks working more closely with Yodlee, Finicity, Quovo (acquired by Plaid), and others. While there are still challenges to overcome when it comes to expaanding API capabilities, from protocol standardization to data security, consumer demand for better services and improved access to their own data to make more informed decisions is driving the industry to adapt. COVID-19 is set to accelerate that demand.

**We're seeing a rapid digitization of everything including money. There's already a discussion happening around this transformation and especially from the central banks. We think cryptocurrency is the future of money, whether it's central bank or privately issued, or more decentralised versions like BTC or Dai. In response to Libra, countries have already begun looking at digitizing their money. Now, because of COVID-19 this has become even more pressing. They don't want people to use physical cash in order to encourage physical distancing. In some countries in Africa with no digital payment method, governments are concerned about how commerce is going to be done. We're seeing an increase in fraud — that's been increasing for a while now, but it's more prevalent amidst the pandemic. With blockchain, you can't fake transactions. That's why we're looking to onboard new businesses into issuing gift cards on our platform. We don't need to explain what gift cards are and how they work to consumers. Nobody needs to know about blockchain mechanics, it needs to be stable and most liquid, and you need to be able to spend it on real things."**

BIDALI

**Eric Kryski,**
*Co-founder, Bidali*

# How to think about innovation in payments

Big banks and FIs need to behave more like startups and move beyond banking – and even beyond payments. They need to build ventures in-house, partner with startups and focus on pilots and commercialization. They need to invest. They need to acquire companies and get really good at integrating them in. And they need to support startup creation on the outside as well. Getting the balance right between all of these options isn't easy, but at Highline Beta we absolutely believe it's possible. We've seen it in action. On the other side of COVID-19, companies that move fast and out-collaborate the competition will be well positioned to thrive.

Our approach to validating new opportunities moves through an agile and rigorous process, guided by decades of entrepreneurial and investor experience.

## Reach out to us if you're interested in:

- Identifying new growth and startup collaboration to help build your business resilience
- Developing a strategic portfolio of ventures
- Actioning your innovation strategy and building a tight integration into startups and technology companies in banking, financial services and beyond.

## Contact:

Marcus Daniels — marcus@highlinebeta.com
Benjamin Yoskovitz — ben@highlinebeta.com

highlinebeta.com


**TORONTO**

372 Bay Street,
Suite 200
Toronto, ON
M5J 2P1

**NEW YORK**

135 Madison Avenue
New York, NY
10016

**VANCOUVER**

555 Burrard Street
Vancouver, BC
V7X 1M8

**MONTREAL**

3 Place Ville Marie,
Suite 400
Montreal, QC
H3B 2E3

**CHICAGO**

30 S. Wacker Drive,
22nd Floor
Chicago Illinois
0606

**LOS ANGELES**

145 S. Fairfax Avenue
Suites 200 & 300
Los Angeles CA
0036