52 MONDAYS

BY KAREN WEBSTER

PYMNTS

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THE YEAR IN PAYMENTS: 2023 WAS ABOUT (MUCH) MORE THAN AI

Bank runs, artificial intelligence, consumer credit and the surge in buy now, pay later as interest rates remained lofty. The themes dominating the Monday Conversation this year were varied, to say the least, painting a rich mosaic of innovation, challenges and opportunities as omnichannel and instant payments grabbed the spotlight and wallet share.

The traditional look back at the end of the year that was begs the question: What have we learned?

Specifically, for 2023, the question might also be: Was it all about AI?

Hardly, although you'd be forgiven for thinking that artificial intelligence was the sole byproduct of millions of companies, billions of hours and untold sums of money devoted to innovation in the payments space.

Through 23 conversations kicking off the weeks, my Mondays-as-musing-days followed a series of topics evolving in near real time, where the speed of digital trumped the speed of, well, everything else. Tests of resilience seemed to be the order of the day. The banking system was tested as bank runs were conducted online. Consumer spending was tested in the face of interest rates standing at 22-year highs.

At the beginning of the year, in January, I weighed in on the eight trends that would shape the payments and commerce landscapes. The striving to create super apps and the continued evolution of the refill economy were certainly top of mind for platforms and providers seeking recurring revenues. As for paying for it all, the dominance of the PayPals of the world was predicted — and has proven — to be enough to be headwinds to the banks' much-ballyhooed efforts to get their own digital wallets into the mix.

As for the firmly entrenched players, in an age where eCommerce-only (the age of COVID-19) has given way to the age of omnichannel, the perennial jousting between Amazon and Walmart has been a flashpoint where consumers have been trading down, making tradeoffs across merchants, looking for the certainty of experience with a retailer across brick-and-mortar and digital settings. The monthly numbers from the government trumpeting slowing inflation may have hinted that things were not as bad as they felt, but then again, it's the pressure on the pocketbook that's perceived that really matters.

For a while, it seemed that Silicon Valley Bank, Signature Bank and uncertainty over deposit insurance limits would erode consumers' full faith in the U.S. government. But that was March, and as they say, this too passed. Everyone's attention turned to AI. ChatGPT was the subject of all chats, and it still is, depending on who's involved in the conversation.

Instant Payments Were an Instant Conversation Starter

Instant payments? Although they've been on the scene since the RTP® Network became a reality six years ago, the FedNow® Service's launch in July generated a fair share of buzz.

“Like any good competitive rivalry stimulated by a new entrant, the watercooler talk now is about how long it will take for either or both networks to reach the point where they support a large volume of transactions and use cases to drive those transactions and ignite real-time account-to-account payments in the U.S.,” I wrote in anticipation of the launch.

As 2023 neared its completion, the central bank reported that 300 financial institutions have signed on — hardly critical mass. But it’s a start.

Inflation touched 9% in mid-2022, and interest rates kept getting ratcheted higher. Small wonder, then, that chief financial officers and executives have been looking inward at the ways and means by which — as September and our joint efforts with Visa and the measure of growth corporates showed — 40% of growth corporate CFOs said they had used working capital loans and bank lines of credit as their go-to financing options but were looking for alternative sources in 2024.

And it was not just businesses examining new options. In October, I wrote in the column, “Buy Now, Pay Later Is Having Its Kleenex Moment,” that although roughly 80% of U.S. consumers have at least one credit card, with $1 trillion in credit card outstandings and more than $3.6 trillion of available credit lines to tap, there has been a conscious pivot to alternative credit.

As I wrote back then, “the payments industry has come to use the ‘Buy Now, Pay Later’ moniker as shorthand to mean any online point-of-sale credit product that divides everyday retail purchases into smaller, equal payments over a set term to pay in full for a purchase.” PYMNTS data showed that 60% of all U.S. consumers used an online point-of-sale payment option that split a retail purchase into equal installments over a set term. The typical persona is a millennial or Generation Xer earning over $100,000 living paycheck to paycheck while comfortably paying their bills.

And that might be the perfect segue into what comes next. In 2024, we’ll see whether the consumer runs out of gas or picks up steam, connected in a myriad of ways to devices and payments use cases. It’s a sure bet that payments will be faster than ever, and next year’s innovations will unspool at a dizzying pace.

Karen L. Webster

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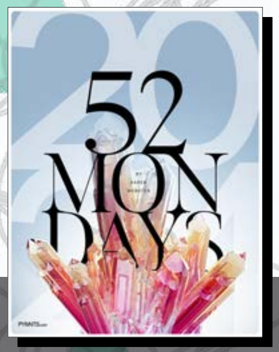

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January 9, 2023

THE EIGHT TRENDS THAT WILL SHAPE PAYMENTS, RETAIL, AND THE DIGITAL ECONOMY IN 2023

The holiday ornaments have been put away, the resolutions have been made, the new year well wishes have been given. That means it's time for predictions about the year to come.

This year, I'm going to share eight trends that provide business leaders and innovators across payments with a strategic framework for success. These trends are based on PYMNTS data and frameworks, along with my reflections on the hundreds of conversations I had with executives in 2022 about their pain points, priorities and goals for the future. Knowing these trends and this strategic framework, you will be armed to make your own predictions — and I'll also throw some of my own below.

01

REAL-WORLD PROBLEMS FORCE PAYMENTS INNOVATION BACK TO BASICS.

Roughly 348 web3 startups got $7.5 billion in funding in 2022, an increase of $4.5 billion from 2021 to further the pipedream of a decentralized web for small number of use cases that will require decades, if ever, to reach scale.

Then there was the more than $120 billion invested in metaverse projects last year to explore how humans can live their best lives plugged into a virtual world. This, despite investors punishing Meta, the staunchest of metaverse believers — a combination of issues shaved 65 percent off its market cap.

Billions more VC dollars were invested into crypto and blockchain projects, even as the crypto winter got so frigid that it froze, cracked and collapsed under its own weight. And the highest-profile private blockchain projects — once touted as the next big thing in logistics, trading, food provenance — shut down.

Meanwhile, a whole $15 million was invested in 2022 in a startup dedicated to helping elderly people get in-home care, despite the fact that all 70 million Baby Boomers will be 65 or older by 2030 — and analysts say that 70% of those over the age of 65 will require in-home care at some point in their lives. Talk about a massive total addressable market. A paltry $2.5 billion was invested, overall, in this category in 2021 — only a third of that was doled out to startups in this sector last year.

Senior care is just one example of the many important problems that real people face and for which digital solutions and embedded finance can create better outcomes at scale. For tens of millions of people. Right now.

Many of these problems, like elder care, don't seem "big enough" to spend time on simply because they are infrequent – something a consumer doesn't do every day, or even every five or seven years like buying a house or a car. However, they are among the areas where there is incredible friction for nearly every single person at least one point in their lives, often with parents, spouses or elder siblings.

02

THE REFILL ECONOMY EXPANDS TO BECOME TRADITIONAL RETAIL'S BIGGEST THREAT.

Prescription refills are a part of everyday life, a convenient way for people to never run out of the medication they need to make or keep them well. More than 6.5 billion prescriptions were refilled in 2021.

Innovators using APIs and payments technology can now turn any consumer product in the medicine cabinet, kitchen pantry, refrigerator, mud room, garage, shed or basement into an auto-refill — including the items of clothing and accessories that consumers frequently refresh. Think white T-shirts, running shoes, underwear, socks and more.

And they will.

Brands will incent consumers to use this new way to buy and pay by offering discounts based on frequency of refill, as they do now, in exchange for the predictability of those sales over a long period of time. The data related to consumption patterns and usage will help brands expand into adjacent areas, bundle related products and manage their supply chains and delivery costs more effectively.

As this innovation happens, the refill economy will cause traditional retail to suffer death by a thousand cuts, particularly the department and grocery stores that are already under attack. A soon-to-be-released PYMNTS study of grocery store purchases finds that nearly a quarter of U.S. consumers buy at least one of the household products they once purchased at the grocery store somewhere else. More interesting is that this reflects post-pandemic behavior — nearly all consumers said they used to buy those household staples as part of their weekly grocery shopping.

Look no further than Amazon Subscribe & Save for proof, which, as PYMNTS research shows, now comprises nearly a third of all retail subscriptions. We also find that at least some of the overall retail subscription purge has been to the advantage of Amazon, which counts almost ten percent of the U.S. population as Subscribe & Save subscribers. Prime Members are their target audience for turning consumables into refills.

03

THE INDUSTRIAL SECTOR WILL DOMINATE INNOVATION IN THE DIGITAL ECONOMY.

Conversations about digital transformation have largely covered two topics: digitizing the interactions that consumers have with retailers and service providers, and businesses automating their payables and receivables processes in the aftermath of the pandemic and the shift to a distributed workforce.

In 2023, we will see an acceleration in the shift to actually doing business online by companies operating in traditional sectors — the parts of the industrial economy that produce and distribute physical goods like manufacturing, farming, wholesale trade and construction, as well as the parts of the industrial economy that deliver services at scale, like healthcare and logistics/transportation providers. Many of these businesses have unfamiliar names, but collectively power roughly 35% of GDP in the U.S. and 47% of GDP globally.

Unlike the heavy lift that most consumer networks have in building networks from a cold start, traditional businesses have robust buyer and supplier relationships in place. But unlike consumer networks, the buying process is complex, paper-based and often exception-driven. Moving business online is more than just making a digital payment.

The pandemic started to chip away at those traditional buying practices as buyers were forced to find new sources of supply beyond their usual "go-tos."

In 2023, the promise of a more predictable time to cash will force the industrial economy to get serious about doing business online as access to credit remains tight and becomes more expensive.

Innovations in payments, technology, AI and credit will make it possible for industrial marketplaces to embed payments and working capital solutions into their workflows. Data networks will explore the role of payments in creating commerce marketplaces. Innovators will use access to credit and working capital as the cornerstones to building these networks. New providers of credit and capital will emerge to underwrite and support the delivery of that at scale.

The challenge is building and operating networks that can support the edge cases, the exceptions that are more typically the rule in business-to-business interactions across complex supply chains. Proving that networks can make the exceptions into the rule is essential for creating the offline trust needed for meaningful digital change.

04

COMMERCE PLATFORMS BECOME SUPER APPS AS CONSUMERS SEEK WAYS TO SIMPLIFY EVERYDAY TRANSACTIONS — AND PLATFORMS HELP THEM DO THAT.

The appeal of the Super App is obvious: the chance to be the all-in-one, one-for-all, digital ecosystem where consumers start and end their day. Getting consumers habituated is the trick — and the secret to the success of Super App innovators WeChat and Alipay.

In 2023, they will no longer be the playbook for Super App success — even as PYMNTS research finds that consumers everywhere in the world are shifting more of their daily activities online.

The quarterly PYMNTS study of 15,000 consumers across 11 countries shows that 84% of those consumers did about four of the 37 activities we track every day online by the end of 2022. That's up 17 percent from the start of that year. Consumers in the U.S. average nearly five digital activities every day — 21% more than consumers in other countries. Unsurprisingly, many of those daily activities are related to messaging friends and family — the starting point for the success of the Chinese Super Apps — and consuming digital content.

But nearly three quarters of consumers also transact more online every week, whether it is checking their bank statements, paying bills, sending money to other people or shopping for retail products and food. A remote and hybrid workforce in developed economies only increases the appeal of digital as an efficient alternative to physical world shopping and banking frictions.

There are a small number of players with the critical mass of consumers and businesses to play the role of this digital front door, to become the app that is "super" because it is a single place to manage most or many of the everyday interactions related to how consumers shop, pay and manage their money. This type of app will get its superpowers by using data about banking and payments behaviors to align credit and payments options with purchases and give consumers a great deal while preserving their financial and savings goals.

In 2023 we will see new business models created as network effects inside of these everyday apps fuel new embedded payments opportunities. Traditional and tech players will make acquisitions to expand their scope and monetize new flows. These players will look more like commerce platforms than Big Tech mobile wallets. They will be trusted intermediaries already in the payments and banking flow who see opportunities to bring commerce inside of the ecosystems consumers already use and trust.

We will also see these platforms expand their reach into the non-transactional activities that represent most of the daily digital engagement today. Rather than starting with those activities and building a super app around it, these everyday apps will embed commerce inside of the high engagement activities that already capture the consumer's attention.

05

AI BECOMES THE SERVICE ECONOMY'S KILLER APP.

Open AI made headlines last week when its valuation was reported to be twice what it was at the start of year. Microsoft is said to want to buy it — or at least use it to beef up Bing. Open AI's ChatGPT "brain," and the underlying technology, has the potential to change search by synthesizing billions of data points into curated snippets in a matter of milliseconds.

A few weeks before that, 2022 workforce studies reported 5.5 million more open retail positions in the U.S. than workers to fill them — something we probably didn't need a study to tell us, judging by recent experiences when shopping instore.

The greying of the workforce, combined with pandemic-related burnout, will result in 124,000 fewer doctors than necessary to meet the country's healthcare needs over the next ten years. Over just the next two, by 2025, there will be 195,000 fewer nurses, 446,000 fewer nursing assistants, and 98,000 fewer medical technicians, at the same time the demand for healthcare services will escalate.

Across all industries, the lack of skilled workers is cited as an impediment to business growth, something that becomes especially acute as innovations in technology require a different workforce.

That makes AI's greatest potential creating the knowledge base needed to equip the workforce — any worker in any industry — with the tools to deliver a consistent, high-quality level of service. And quickly, and at scale.

Simply put, it takes about 40 years from birth through training to create an experienced doctor, and there's a limited number of people born with the ability and the interest to become one. It will take far less time to impart training via a bot with much of those skills and knowledge. Once that happens, it will be scalable.

That means that getting the best doctor will no longer depend on whether a patient in need lives within five miles of the best doctors in the world. Doctors, nurses and the healthcare ecosystem will be able to tap into data sources that inform better, more consistent and more timely diagnoses, treatments, and decisions. Practically every medical professional will be able to leverage this technology, saving the healthcare system money and providing a better outcome for the patient and a more satisfying experience for the doctor.

Similarly, getting the best service at a retailer won't require access to an expert or a salesperson who's known you for twenty years. Retail sales associates will have tools to build and deliver a highly personalized level of service, whether their encounter with a customer is their first or fiftieth. Stores will have the benefit of keeping that customer because sales delivery will be less about the salesperson and more about the data that provides a consistent service experience regardless of who is on the other end of that transaction.

Of course, AI and machine learning is already taking on the more manual and mundane tasks across many payments, banking, and financial activities. It is used to combat fraud, underwrite credit, and manage payables and receivables and cash flow, all with better and more precise outcomes. Those outcomes will get smarter, and those use cases will expand.

06

THE BURDEN OF PROOF SHIFTS TO CRYPTO AND FINTECHS TO PROVE THEIR BUSINESSES DON'T HARM CONSUMERS AND IMPOSE SYSTEMIC RISK.

Legislators and regulators have approached regulation of crypto and FinTech tentatively, often believing claims that they shouldn't do anything to jeopardize the innovations that are supposed to transform the world. They didn't want to challenge visions expressed in language they couldn't comprehend and were afraid to ask questions to further their understanding.

That was 2022. Following the collapse of FTX, the lawsuits against the fraudsters and celebrity spokespeople, and the collapse of the hype machine for crypto, the burden of proof is now on crypto — and probably FinTechs more generally — to prove they are legit.

That's going to shape the regulatory debate, which is likely to result in a heavier hand on the crypto sector than on traditional banking, payments and finance.

Crypto players should be prepared to buckle up for more of the same scrutiny, including private stablecoin issuers whose primary purpose is to enable the efficient trading of crypto.

FinTechs will be under the microscope too, as the CFPB and OCC take a good hard look at the requirements for what it means to be a bank and provide banking-like services. And the CFPB will use rulemaking to affect more immediate and aggressive changes to innovations in credit and banking services.

All the alphabet soup of regulators will have their eyes wide open for backdoors and attempts to gain access to regulated payments and financial services privileges, particularly after the kerfuffle last year over rules related to accessing Fed Master Accounts.

07

PAYMENTS GET SMARTER AND FASTER WITHOUT BLOCKCHAINS AND CRYPTO.

We have been hearing about the promise of smart contracts since the start of Ethereum in 2014. What's not to love about the idea of sending a payment with instructions for its release only when specific conditions are met? The problem is that after nearly ten years, it's still just that — a promise, and an expensive one at that, when considering the processing or "gas" fees that are, ironically, often higher than traditional payments' processing fees.

In 2023, we will see payments and financial networks get smarter without crypto and blockchains, including private ones. Traditional networks will get faster as innovators make it possible to embed instant into any payments workflow at scale and businesses create new use cases for instant payouts. Interoperable RTP networks will target key corridors and banks to create critical mass using fiat currencies. Business-to-business networks will use software and data to make money "programmable" based on conditions and rules established by the networks. Closed-loop, permission-based "on us" networks will clear and settle transactions for the banks and the businesses that are a part of it.

Traditional card networks, acquirers and payments platforms will embed more capabilities into the payments flow to make them smarter and more efficient.

Time is the biggest threat to getting any innovation off the ground and igniting it at scale. In payments, it can be fatal. After 14 years, now immersed in financial collapse and contagion on top of deep-seated technical problems that prevent them from igniting, blockchains may have run out of time.

08

CEOs MUST FIND NEW WAYS TO IDENTIFY PAYMENTS INNOVATION THAT CAN DRIVE VALUE.

The last three years have seen the hype machine in overdrive, and often at the expense of the innovators and investments that quietly solve business problems for real people and businesses. Market signals stopped working — if Sequoia bet on FTX, why shouldn't you?

In 2022, innovators flush with cash kept the hype machine revved up, and flush corporate bank accounts funded projects that would have never seen the light of day absent investors' fear of missing out on the next big thing. This diverted time and resources away from projects with more potential to move the needle in a timeframe that was more relevant for the business.

In 2023, the corporate mantra has done a complete reversal. This year it's profits over growth, whether you're Amazon or the sit-down restaurant down the street.

When it comes to the ROI of any investment, "Prove it" will become the two most important and two most powerful words of 2023.

They could also become the corporate Achilles Heel.

Take the metaverse. The word has been coopted by those pushing a vision of humans living life in a virtual world, rather than the application of virtual technology to improve how humans interact in the physical world.

The risk going into 2023 is that all new ideas are dismissed as hype, that battening down the hatches will come at the expense of missing something meaningful as CEOs and CFOs hesitate to pull the trigger.

We saw a decade of massive innovation in the aftermath of the 2008 financial crisis as innovators used apps and smartphones to reimagine how people and businesses would interact.

We have the same opportunity in 2023 — and the platforms, tech and payments innovations business leaders and innovators can build on are even more evolved. Data and frameworks will be important guardrails.

Ten years from now I predict we will look back at the incredible payments innovations that happened in 2023 and say, "Wow." Many of them may not register high on the hype meter, but they will significantly shape an ever-more connected and accessible digital economy.

January 30, 2023

BANKS WANT TO PROVE THEY CAN INNOVATE DIGITAL WALLETS, BUT CAN THEY?

One of the worst-kept secrets in payments was finally confirmed last week. That's when Early Warning Services (EWS) announced its plans to launch a digital bank wallet in the second half of 2023 to challenge PayPal and named a former Mastercard exec as the CEO to lead the initiative. EWS is the digital payments platform owned by Bank of America, Capital One, J.P. Morgan, PNC, Truist, U.S. Bank and Wells Fargo. EWS operates the Zelle P2P network.

details are scant, but the story broken by the Wall Street Journal said that those seven banks want to replace the current digital wallet "middlemen" with one of their own. The article quotes unnamed EWS spokespeople who say that the yet-to-be-named Bank Wallet (which is how I will refer to it) will offer the banks' collective 150 million credit and debit card holders a new way to pay online.

There are a lot of smart people at each of these banks who've looked at the space and are presumably convinced there's an opportunity for them to create a new way to pay. Anything's possible — but if the past is prologue, I'm dubious.

Over the years, most of the key innovations in payments haven't come from the banks, but from innovators who see a new opportunity to enable new ways to shop and pay using the card products issued by the banks. They figure out a smart way to ignite something new in the complex ecosystem called payments.

Examples include Square and the white dongle. Stripe and Braintree and mobile payments. Uber and using invisible payments to blend the physical and digital worlds. Starbucks with mobile payments and rewards. Amazon and One-Click Checkout. PayPal and digital wallets. Venmo and P2P payments. Splitit with Installments. Affirm, Afterpay, Klarna and Sezzle with BNPL.

So, what's more relevant than the EWS announcement itself is an examination of what's actually required of the banks who want to innovate like PayPal did a quarter century ago and innovators have done more recently, to launch and ignite a new payments network that can compete with it — beyond the usual PR patter.

Starting with the basics of what it means to get a network off the ground.

THE BANK DIGITAL WALLET HAS A COLD START PROBLEM

Platform dynamics 101: To ignite, a platform must get all stakeholders on board pretty quickly. That's hard. And it's why there are only a handful of global payments networks operating at scale today. The challenge for the Bank Wallet is that they are starting from scratch — with no sides on board.

Despite the PR talking points, it's inaccurate to think that the seven banks, individually or collectively, are starting with any side of this new two-sided payments network on board.

Those seven banks may collectively have 150 million customers using their debit and credit cards at a variety of merchants on and offline — but so what, big deal. Those customers must be persuaded to create an account — or activate one, depending upon how it is introduced — and then use Bank Wallet most of the time they shop online instead of the online payments options they use today at checkout. There's even more to overcome because consumers are already using those bank cards with other wallets today, so that those cards aren't themselves a competitive advantage.

Just ask Apple how thinking that they had all consumers with an iPhone on board with Apple Pay has turned out. Today, fifty percent of U.S. consumers have an iPhone. It is literally impossible to upgrade the iOS operating system without installing the Apple Pay Wallet and then being badgered to put in a card. Apple Pay, therefore, has consumers with the potential to use Apple Pay in store and online — with the wallet on the first page of their home screen — but not enough of them have the appetite or the incentive to pop it open and use it.

Then, of course, there is the chicken and egg of getting merchants on board so that consumers can use Bank Wallet at the places they like to shop. Will it be accepted at Amazon, which accounts for around half of eCommerce sales, and where even the PayPal digital wallet isn't accepted? Will consumers be able to use it at Walmart?

Those two big online merchants aside, all merchants — or at least enough of them to account for the places consumers like to shop — will have to be convinced that people will use it and that it is worth their time to integrate and support it. That could be tricky, especially as retailers face their own resource challenges and tradeoffs when presented with new POS initiatives.

Especially when there's no guarantee that doing so will drive incremental sales and customers.

BANK AND CARD NETWORK CHECKOUT BUTTONS DON'T HAVE A GREAT TRACK RECORD

It wasn't that long ago that merchant checkout pages looked like cars racing around the NASCAR track with multiple buy buttons competing for the checkout click. Starting in about 2014, those buttons included Visa Checkout, Mastercard's Masterpass, Chase Pay, Samsung Pay, Google Pay, PayPal, followed by Amazon Pay, ShopPay, Facebook Pay, and more recently Secure Remote Checkout. Many merchants were given incentives to add those buy buttons to their pages, but over time removed those that few consumers used. Card network and bank buy buttons were among the first to fade away.

Today we see a more curated collection of checkout options that consumers like and use, including PayPal, BNPL brands, cards on file and credentials stored in their browser — all of which makes shopping online familiar, quick, secure and convenient. Is there room for a challenger?

Of course.

Consumers like and want to try new ways to shop and pay online, especially Millennials and Gen Z — if those new ways offer value, eliminate friction and create a better experience. For example, the latest PYMNTS data shows an appreciable increase — from 1% to 3% of all online retail purchases — in the use of Buy Now, Pay Later products in the last 12 months in the U.S. because BNPL offers consumers a new payments value proposition that many consumers really like.

That said, cards remain the go-to for consumers in the store and online — because they work, and consumers trust and know how to use them.

So the bar is high for any new entrant, including Bank Wallet. The new way to pay must be value-added, deliver a reimagined seamless, embedded checkout experience, and be accepted at all the places they like to shop. A payments experience that isn't simply as good as what consumers use today, but exponentially better.

Not another me-too button that is the same old same old, only from their bank.

Share Of Consumers Who Have Made Payments Related To Select Financial Products In The Last 90 Days, Over Time

Source: PYMNTS
New Reality Check: The Paycheck-To-Paycheck Report, January 2023
N = 3,989: Whole sample, fielded Dec. 8, 2022 – Dec. 23, 2022

BANK WALLET HAS TO BE CUSTOMER-FOCUSED, NOT COMPETITOR-OBSESSED

One of my favorite articles is one I wrote in 2013 called the MCX Fairy Tale. That was when the big merchants banded together to launch the merchant wallet operated by MCX. A few name changes (remember ISIS?) and who knows how many millions of dollars later, MCX crashed and burned.

And why? The value proposition started with what was good for the merchants — sticking it to Mastercard and Visa — and not with creating value for the consumer.

iiI must admit that when I first read the news of EWS and the Bank Wallet, it felt a little like the bank version of MCX and déjà vu all over again. Blame it on the reporting, perhaps, but the announcement focused not at all on the cool things Bank Wallet will do for consumers. It seemed much more about reclaiming the customer relationship from the "middleman" the seven banks now perceive as the enemy, rather than the enablers of billions of dollars of volume using their cards as registered credentials when they pay online.

The announcement also struck me as the latest attempt to elevate Early Warning's profile as a payments technology player. Especially given its six-year struggle to drive ubiquity and share with its P2P network Zelle — and its more recent regulatory and lawmaker backlash.

Zelle has failed to crack the hold on P2P that PayPal, Venmo, Square Cash and more recently Apple Cash has. PYMNTS data shows that PayPal (including Venmo) is used four times more frequently to send money to friends or other people than Zelle. Unlike Zelle, those providers make it easy to send money to just about anyone.

Sources report that today only 20% of all banks support Zelle, with many smaller banks resisting over the high cost of integrating and supporting it. The lack of ubiquity creates uncertainty for users who don't know whether they will be able to send money to someone or receive it from someone when they try to use Zelle. That's friction. And unless both senders and receivers are connected to a bank with Zelle, the experience is clunky, confusing and time-consuming.

Further complicating the P2P landscape for Zelle, regional banks and credit unions are trying to make a go of their own P2P network called Chuck, while at the same time money mobility networks like Ingo are using disbursement rails to enable P2P outside of a closed-loop network.

All that means that Zelle is likely feeling the pressure to monetize its network and drive a return on its investment to the banks that own it.

BANK WALLET MUST RECOGNIZE THE VALUE OF TIME AS A CURRENCY IN IGNITING IT

The announcement of Early Warning's Bank Wallet initiative drew a very explicit distinction between EWS as the operator of the Zelle network and EWS as the operator of the new digital wallet initiative using credit and debit cards that would be separate and distinct from it.

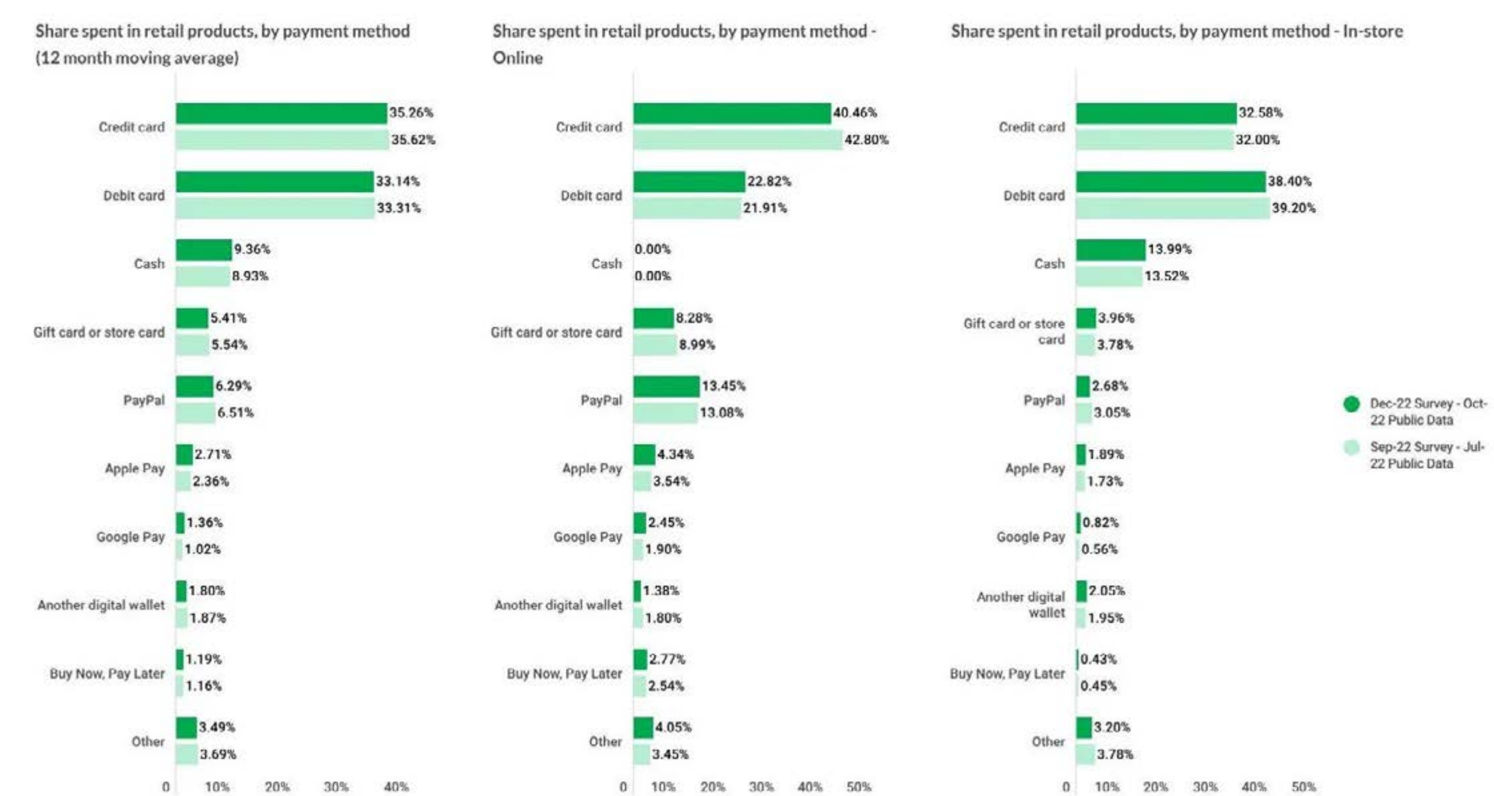
My guess is that the idea of launching a bank digital wallet in its early whiteboard days didn't have as much to do with cards as it did with moving consumers away from cards and the card networks, and towards bank rails and account-to-account payments, including payments to merchants.

But the toxicity of the Zelle brand in consumer and policymaker circles over push payments fraud may have forced a change in direction.

My hypothesis is that the discussion of cards was a late stutter step, a course correction to establish a digital wallet proposition for the banks to move consumers to a new digital payments platform using cards first, then transition to a pay-by-bank platform. I believe that would only exponentially complicate the ignition of this new payments network.

Assuming that enough consumers establish a bank digital wallet — and enough merchants accept it to make using it a better deal for them than the existing alternatives — moving consumers to a pay-by-bank option is another big lift. Even if there is an alias between the consumer and the merchant. Even if the pay-by-

Share Spent In Retail Products, By Payment Method



Source: PYMNTS. Aggregates are constructed using Consumer Spending Data from BEA
Based on an aggregated sample of 4 surveys fielded quarterly. Jan 2022 to December 2022

bank option is a substitute for the purchases they make with debit cards today.

Consumers don't understand how payments work, and they don't trust merchants to keep their information, including their payments credentials, private and secure.

But consumers do understand how payments — including fraud, chargebacks, refunds and disputes — work when they use their cards. That's why they use them. Getting consumers comfortable with a new way to pay, when funds are taken directly from their checking account, will only scale if consumers are given the same conveniences and protections as they have today with cards.

Then — assuming all that works — getting consumers on board, getting merchants on board, incenting both to use and adopt and then growing at scale will take time. Years.

After eight-going-on-nine years, Apple Pay use in store accounts for less than 3% of retail sales and 4.5% of online sales.

Meanwhile, it's taken PayPal a quarter of a century to get to 13.5% of online retail sales. For both Apple Pay and PayPal, cards in the store and online remain the entrenched favorite way to pay — even though according to PYMNTS' latest data, PayPal is the accepted and used digital wallet option by a ratio of 3 to 1 when compared to other mobile wallets.

And both PayPal and Apple Pay are looking over their digital shoulders at the ways in which embedded payments and finance are disrupting the digital experience, too. And massive online players look at payments as an enabler to their own commerce ambitions, including existing commerce players who seek to expand their reach outside of traditional retail. The competitor for Bank Wallet to beat isn't just PayPal and Apple Pay, but the schemes both known and unknown that are taking payments into new connected endpoints as more of the consumer's everyday activities move digital.

WHAT'S NEXT FOR BANK WALLET AND DIGITAL PAYMENTS

The silver lining to the pandemic, if there is one, is the ingenuity of business leaders and entrepreneurs who used the forced shift to digital to unlock new payments innovations. A new cohort of digital-first consumers has emerged and taken those digital preferences into the physical world. A PYMNTS study of more than 13,000 consumers and 3100 merchants in six countries, conducted in collaboration with Visa's CyberSource, finds that digital features influence how and where consumers shop. Payments choice is the key driver of those experiences across all six countries for the third consecutive year.

I believe that 2023 will mark the beginning of a new way of innovating payments because business leaders and entrepreneurs will be forced to think more carefully about how they bring new ideas to market. Everyone is feeling the pressure to produce results, at scale, with profits. No one, including the banks, has money to burn on new projects that can't get off the ground in a timeframe that is relevant for their business — and the pace at which the digital economy is growing. That's particularly true for these seven banks, all of which have other digital payments initiatives and ambitions competing for time and money.

Can the Bank Wallet be a major player in the drive to innovate the digital economy in the U.S.? That depends on whether they have a healthy respect for what it takes to create and operate a payments network at scale.

In the meantime, I will be anxious to find out what they decide to call this new network. I can almost guarantee you it won't be called Zelle.

February 6, 2023

CONSUMER SHOPPING DATA SHOWS TROUBLING SIGNS FOR GROCERY STORES' FUTURE

Will Grocery Stores Go the Way of the Department Stores?

If grocery store executives want to see what their industry could look like over the next decade, they might want to look at how department stores have fared over the past two.

Like the department store brands did in the mid-2010's, I am sure that grocery store execs look at Census Bureau numbers that show online grocery store sales as little more than bupkis and feel smug. Why wouldn't they? Data, including ours, show that 93% of U.S. consumers walked into the grocery store at least once in the last 30 days to get food for themselves and their family.

Unfortunately, just like department store CEOs once did, these grocery store execs will soon feel the pain of death by a thousand cuts as consumers buy groceries just as they purchase any other retail product — gradually moving those purchases online and to specialty physical retailers with a more curated and relevant selection of the items they once bought at the grocery stores.

Many consumers have already begun the shift. Food inflation may be keeping grocery store sales high, but when adjusted for inflation, aggregate grocery store sales have declined slightly over the last two years.

There are increasing signs of the thousand cuts taking blood.

PYMNTS data shows that three years ago, nearly every single consumer who bought at least one common household product each week — the items that occupy the center aisles of those stores such as paper towels, cleaning supplies and canned goods — did so at the grocery store.

Today, 22% fewer consumers across all grocery product categories report that they still make any of those purchases in the store.

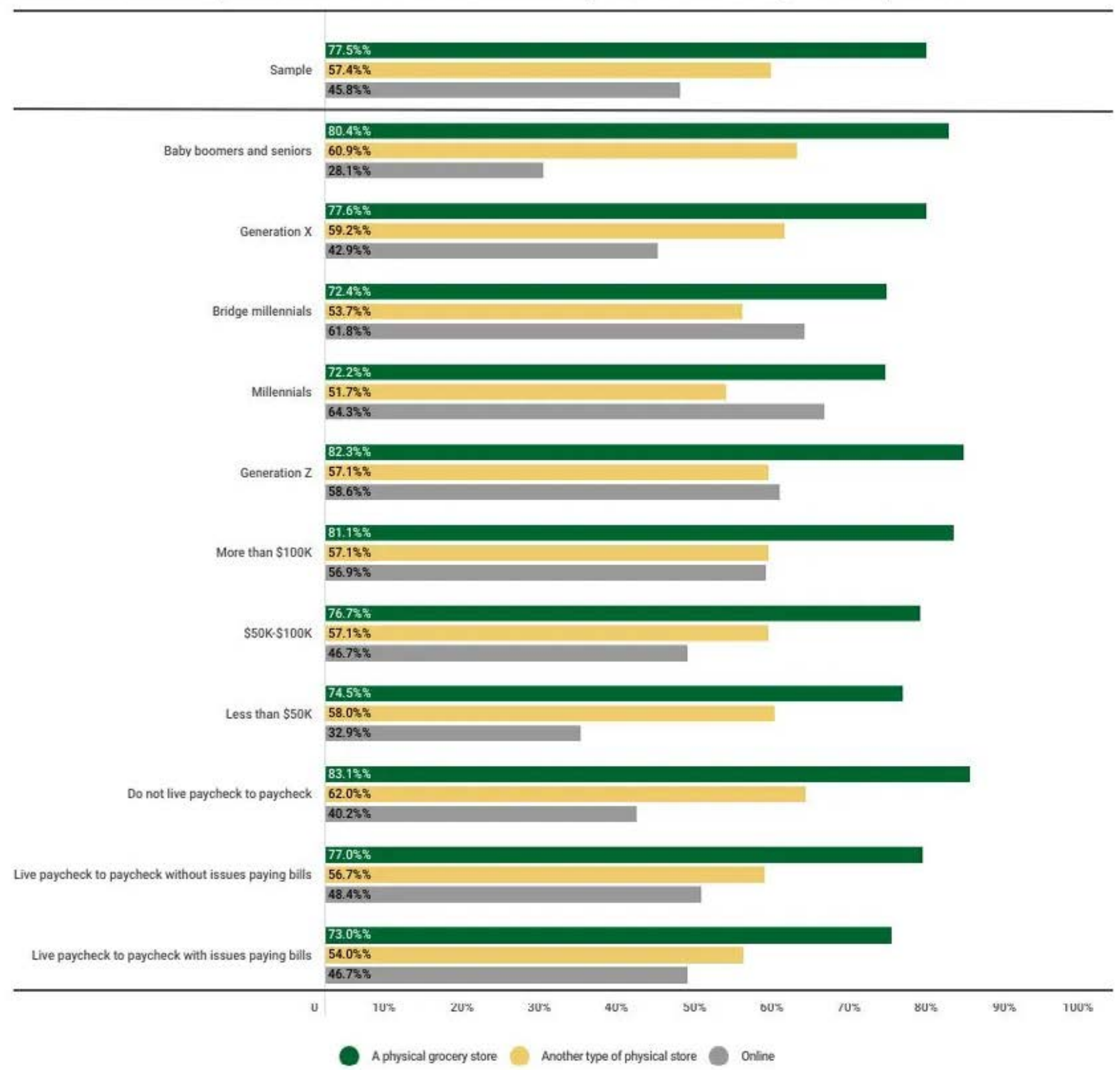
As we start 2023, fewer than half of all consumers report buying 50 percent or more of those center aisle grocery store purchases at the brick-and-mortar grocery store. More than a third of consumers (37%) now say they purchase none of these grocery products from a brick-and-mortar grocery store — up from 2.2% in 2020.

It's a stunning shift in just three years.

Figure 1B

Share of consumers who purchased at least one common household product in selected ways

Share of consumers who purchased at least one common household product in selected ways after the pandemic



Source: PYMNTS
Changes in Grocery Shopping Habits and Perceptions, February 2023
N= 2426: Complete respondents, fielded Dec. 22, 2022 – Dec. 25, 2022

Digital is where a growing number of grocery shoppers are turning. Apps, websites and delivery aggregators make it easier to shift the consumer mindset away from the ten-minute drive to the grocery store and toward whatever platform quickly lets them find what they want and need to buy. The share of consumers who now buy at least one household product online increased 23% over the last three years.

Consumer concerns about running out of essential household items also accelerated the growth of the refill economy. PYMNTS data show a growing share of that digital shift results from an increase in subscription services across nearly all classic grocery store product categories. That includes Amazon Subscribe & Save. Purchases of both canned goods and cleaning supplies by subscription increased at least 35% over the last three years; purchases of baby products by subscription grew 77% over that same time.

High earners, millennials and Gen Z are the early adopters of online grocery store shopping. That's probably not much of a surprise. What is more unexpected — and should have grocery store CEOs worried — is the consistent shift away from grocery stores to digital channels by every demographic group for every single grocery product category.

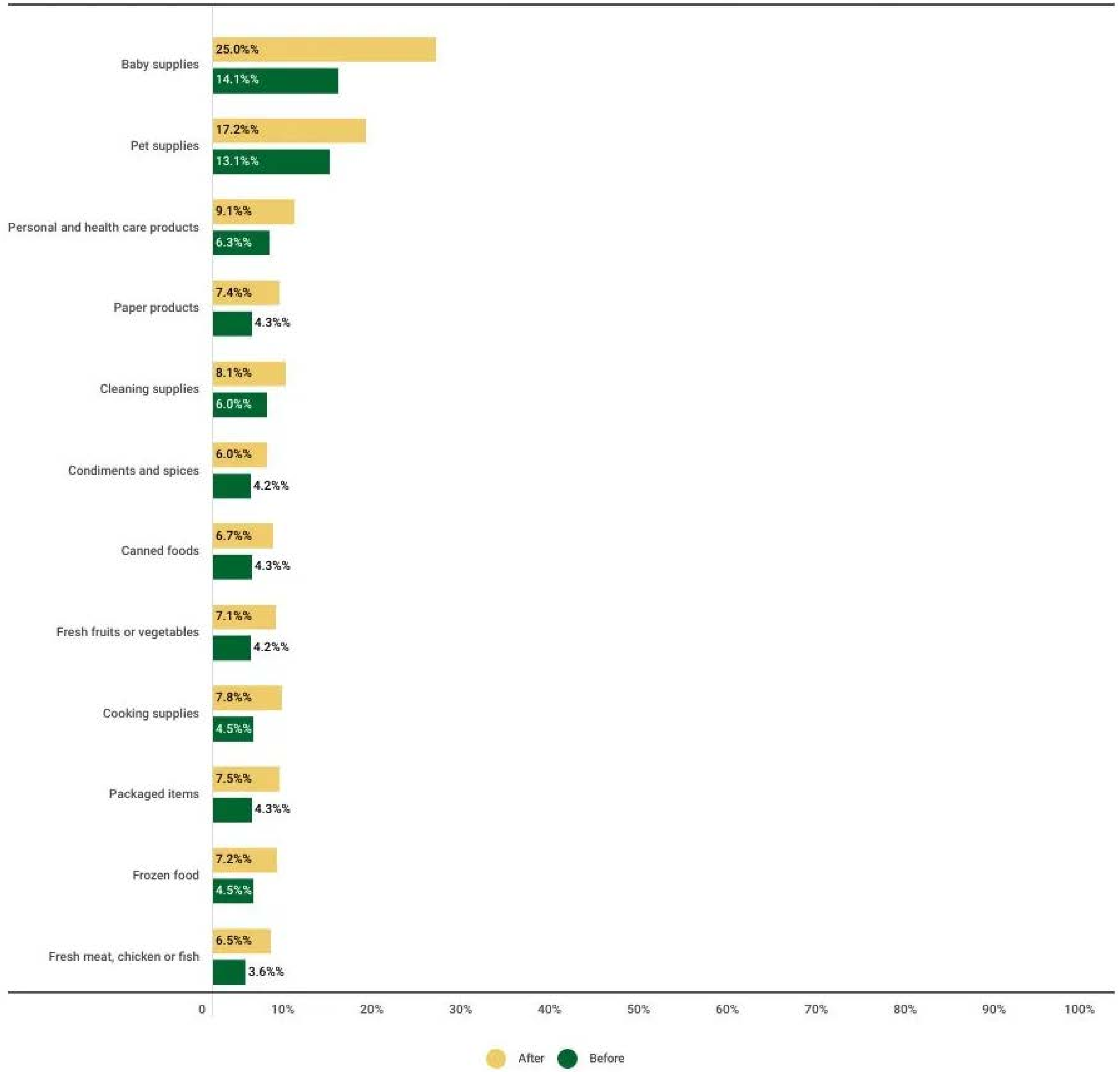
Everyone from the struggling paycheck-to-paycheck consumers to the middle income households to the Baby Boomers are shifting their grocery purchases online.

For most U.S. consumers in 2023, buying groceries doesn't necessarily mean buying them at the grocery store anymore.

Figure 2A

Channel usage for purchasing common household products, before and after the pandemic.

Share of consumers who purchased common household product online, via a subscription service, by type of product



Source: PYMNTS
Changes in Grocery Shopping Habits and Perceptions, February 2023
N (Before) = 2082: Respondents who have been purchasing common household products for at least three years
N (After) = 2426: Complete respondents, fielded Dec. 22, 2022 – Dec. 25, 2022

WHAT'S A GROCERY, ANYWAY?

The pandemic forced an across-the-board reset of how consumers define "groceries" and decide where to buy them. Supply chain shortages and fears about going into a store forced consumers to find alternative sources for the products they needed to stock their pantries, kitchen cabinets and refrigerators and feed their families.

In 2020, PYMNTS data showed that nearly 80% of consumers categorized canned goods, cooking supplies, condiments and spices as grocery products; today 60% do. Twenty-four percent fewer consumers now regard health and beauty products as grocery items to pop into their cart as they cruise the grocery store aisles.

That mindset shift has had a discernable impact on where consumers now go shopping for the items that once filled their grocery store carts.

In 2020, nearly all consumers bought at least some of their canned goods, condiments, spices and cooking supplies at the grocery store. In 2023, a third fewer consumers say they make any of those purchases there. Three years ago, nearly all consumers bought at least some of their cleaning supplies at the grocery store. Three years later, the number of consumers who say they do has fallen sharply, by 44%.

Just as department stores saw over the last three decades, the shift away from "groceries" bought at the grocery store to an eCommerce purchase for nearly every grocery product category was accelerated by the ease, convenience and certainty of buying important household products online. PYMNTS data shows that convenience is why nearly two thirds (62%) of consumers buy fewer things at the grocery store and more online; 54% cite higher prices and fewer deals at the stores they used to shop.

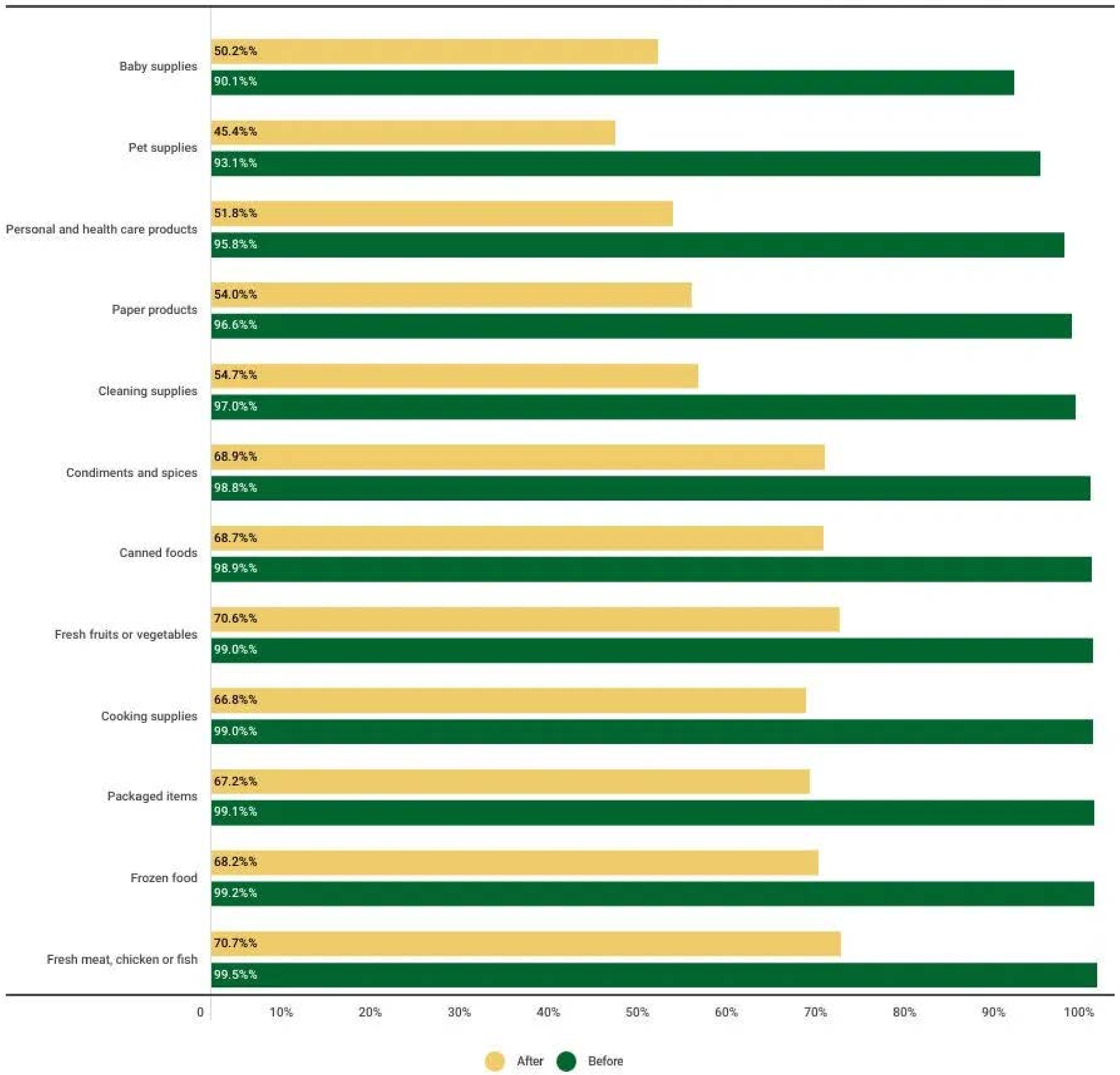
Just like the decline of department store sales, the shift away from grocery to other channels and providers has happened sharply in important product categories as consumers searched and then found cheaper, more convenient and more predictable places to shop.

In 2020, shoppers who bought pet supplies and baby products from grocery stores were starting to

Figure 2E

Channel usage for purchasing common household products, before and after the pandemic.

Share of consumers who purchased common household product in a physical grocery store, by type of product



Source: PYMNTS
Changes in Grocery Shopping Habits and Perceptions, February 2023
N (Before) = 2082: Respondents who have been purchasing common household products for at least three years
N (After) = 2426: Complete respondents, fielded Dec. 22, 2022 – Dec. 25, 2022

shift to other sources for some of those purchases. Three years later, the share of consumers who buy pet supplies and baby products plummeted. Today, roughly half of consumers who buy pet and baby supplies now report buying absolutely none of those items at the grocery store.

THE GROCERY STORE MARKETPLACE DYNAMIC

Unlike department stores in the mid-2010s, most grocery stores today have an online presence — that channel puts them less at risk of losing sales to the digital natives and marketplaces that hobbled department stores over the last two decades.

Or does it?

Instacart is the largest grocery store marketplace in North America. The company powers eCommerce for more than 1000 grocery brands and 75,000 stores across North America and has given grocery stores the digital leg up to stay competitive in a retail environment that is moving more digital.

Instacart has also created a more competitive grocery market at the same time it has given grocers a way to be digital in a digital-first world. With Instacart, consumers are no longer constrained by how long it takes to drive to and from the store. As they like to remind consumers at the end of each online shopping trip, shopping with Instacart saves consumers 2 to 3 hours with each order.

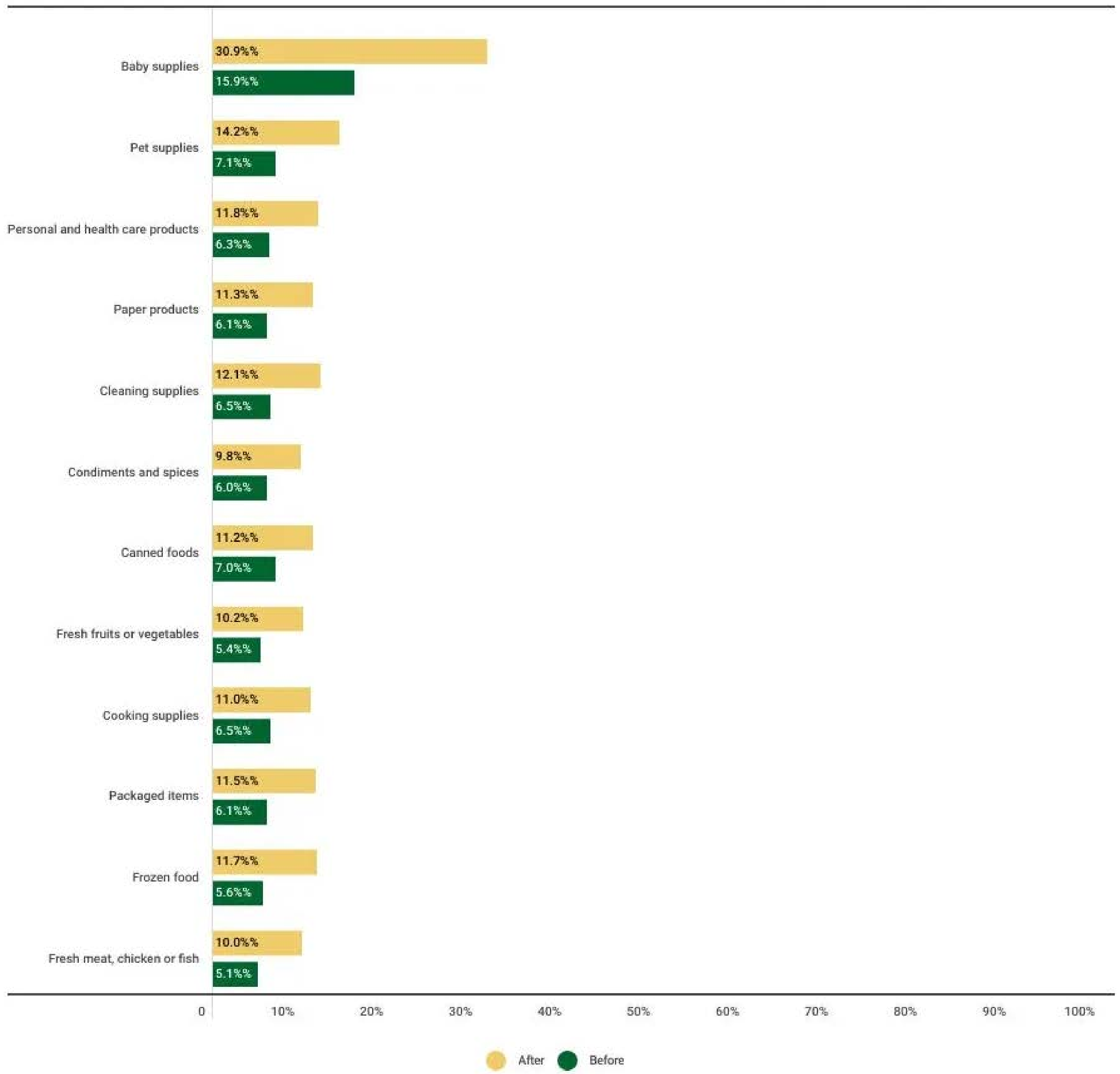
That has changed consumer behavior and grocery store dynamics. Shoppers can swap a more local location for the grocery store with better prices and a bigger selection that was out of driving range for delivery. They can divide their grocery shopping "trips" without having to actually spend the day driving to and from multiple stores to get exactly what they need to buy for the prices they are willing to pay.

The other marketplace dynamic that grocers must contend with is the growing relevance of Amazon Subscribe & Save and the importance that brands place on that channel. More than 182 million consumers

Figure 2C

Channel usage for purchasing common household products, before and after the pandemic.

Share of consumers who purchased common household product online, via a same-day delivery service, by type of product



Source: PYMNTS
Changes in Grocery Shopping Habits and Perceptions, February 2023
N (Before) = 2082: Respondents who have been purchasing common household products for at least three years
N (After) = 2426: Complete respondents, fielded Dec. 22, 2022 – Dec. 25, 2022

have an Amazon Prime membership and used it to drive $478.5 billion in eCommerce sales in 2022. Amazon Prime Members are prompted to turn almost every purchase into a Subscribe & Save opportunity, something that 7.2 percent of U.S. consumers have done to purchase the household items that once filled grocery store shopping baskets. Subscribe & Save, along with other subscription offerings, gives brands a more competitive opportunity to make a sale, then lock a consumer into a recurring purchase over a long period of time.

THE GROCERY STORE FOOT TRAFFIC PROBLEM

If you've shopped at a department store lately, chances are you've probably had the whole store to yourself. Foot traffic is down significantly, including over the important holiday shopping season. Analysts reported that over the five days between Thanksgiving and Cyber Monday, foot traffic was well below 2021 and 2019 levels at both department stores and malls.

Consumers have found better and more efficient ways of shopping that don't include department stores. Consumers shop online, they shop at smaller stores in their local cities and towns, they shop at discount retailers and at specialty retailers with a curated mix of products more consistent with their needs. This all happens without consumers really spending any more of their time shopping. Technology, including buying online, has given consumers the ability to divide shopping into the things they need — the utility purchases — and the things they might like to buy — the social/discretionary purchases — and given them a greater certainty in purchasing both.

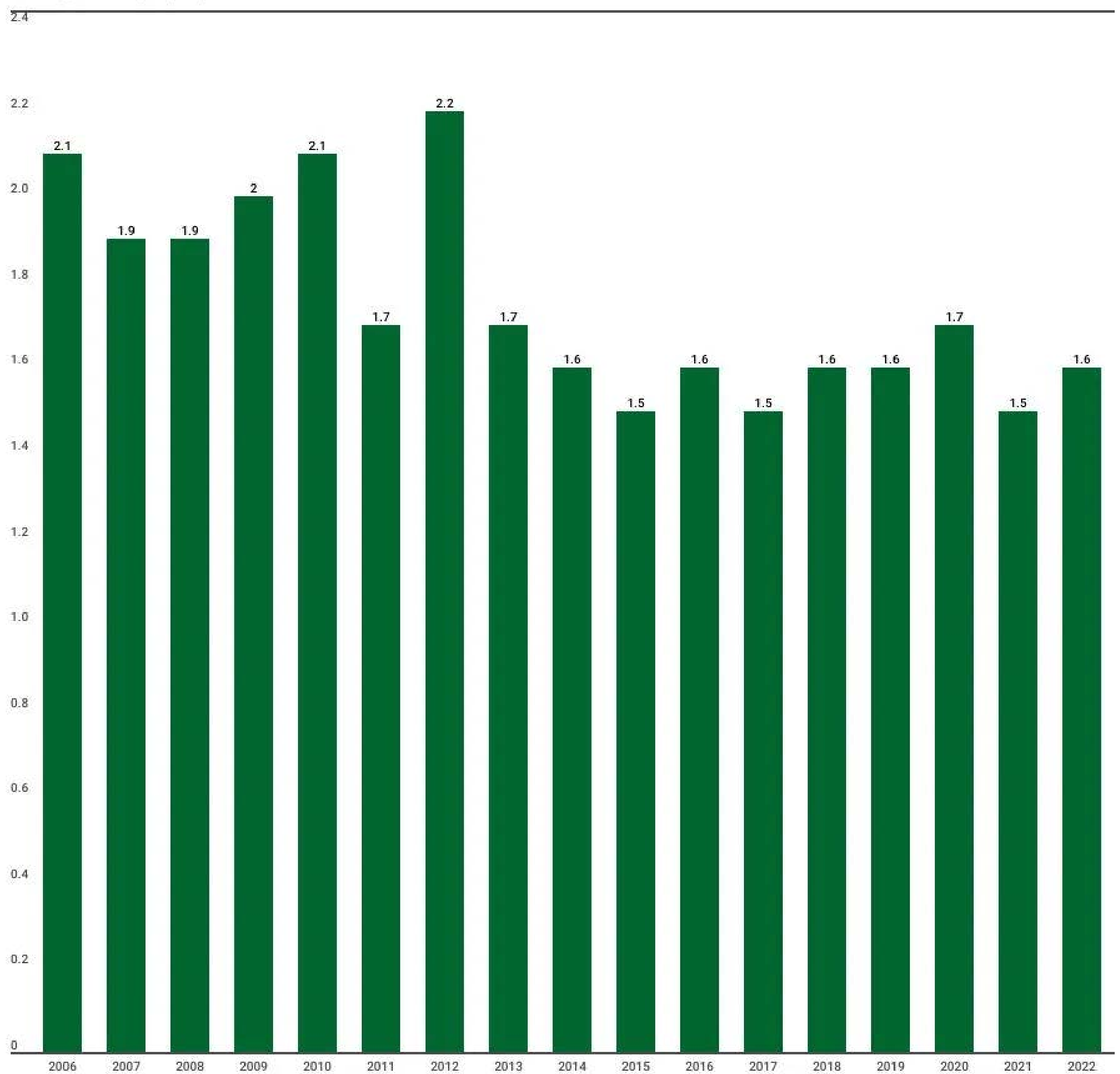
Over time that has meant fewer feet in department stores, which has resulted in fewer brands willing to spend the money and effort to have their merchandise there. The network effects in reverse have made department stores a less attractive place to shop and a less valuable venue for brands to display their merchandise.

Grocery stores may be staring down a similar dynamic.

Figure 3

Consumers' weekly grocery shopping trips in the United States from 2006 to 2022

(Average weekly trips per household



Source: Statista

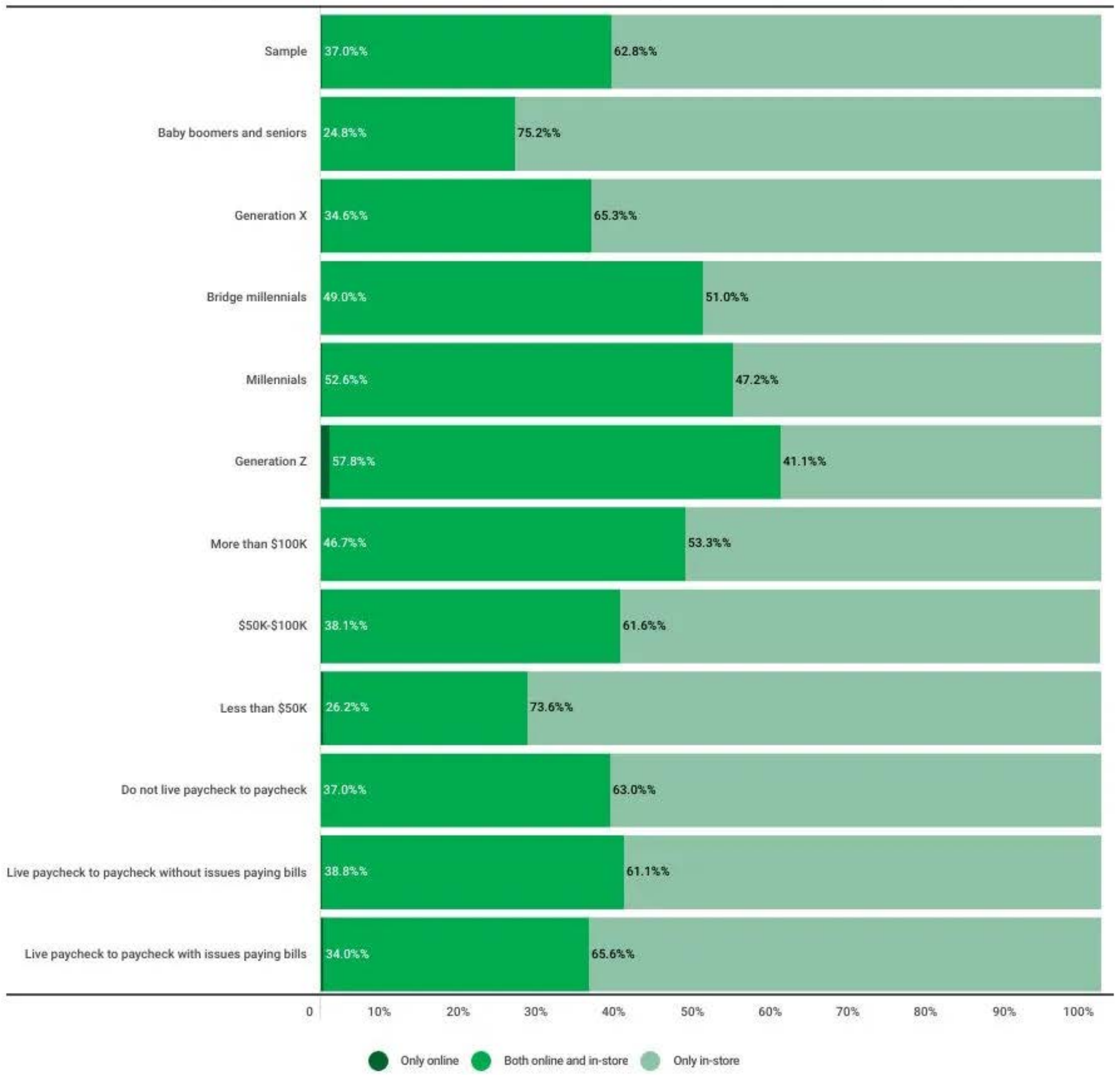
In 2006, consumers took about 2.1 trips to the grocery store every week. By the end of 2022, the number of trips declined by 24% as consumers shifted shopping channels online and to other retailers, including discount stores and warehouse clubs. At the same time, the mix and number of items that consumers bought at those grocery stores shifted too. PYMNTS data shows that food inflation prompted roughly 70% of U.S. consumers, including 64% of high-income consumers, to trade down to lower-cost items and/or adjust the number and types of items in their grocery basket to stay within their household budget.

The typical grocery store has 30,000 to 40,000 SKUs. Keeping store shelves stocked is important if grocery stores want to keep consumers shopping and buying there. Doing that while fewer feet visit less often and buy fewer items could create the same department store downward spiral as consumers find other places to shop. At some point it won't make sense for stores to stock certain categories of SKUs such as pet food, or for brands to devote resources to managing the shelf space. That will create even more of a downward spiral.

Figure 4A

Ways of purchasing common household products

Share of consumers who purchased common household product in select ways before the pandemic, by demographics

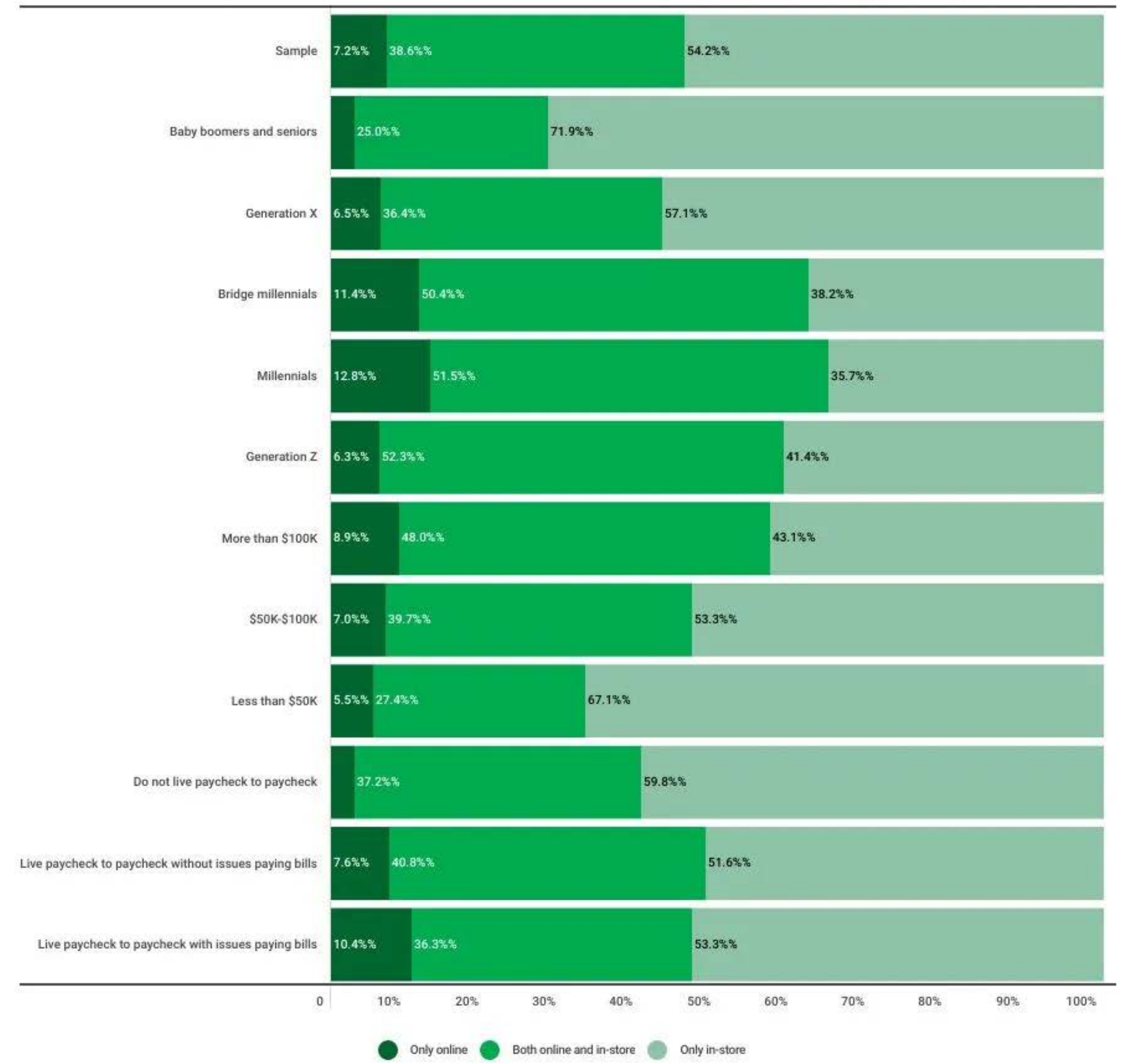


Source: PYMNTS
Changes in Grocery Shopping Habits and Perceptions, February 2023
N = 2082: Respondents who have been purchasing common household products for at least three years, fielded Dec. 22, 2022 – Dec. 25, 2022

Figure 4B

Ways of purchasing common household products

Share of consumers who purchased common household product in select ways after the pandemic, by demographics



Source: PYMNTS
Changes in Grocery Shopping Habits and Perceptions, February 2023
N = 2426: Complete respondents, fielded Dec. 22, 2022 – Dec. 25, 2022

THE FUTURE OF GROCERY STORES

The grocery store innovation, like its department store counterparts, was giving consumers a single place to buy what they wanted. As important, these vast physical showrooms gave consumers the chance to physically inspect — to touch and feel — the items they wanted to buy before making the purchase as they browsed the stores. A century or more ago, items were kept behind a counter and consumers had to ask a sales associate for help. Department stores and grocery stores removed that friction and made shopping easier and more convenient.

In 2023 and in the years to come, the single place for consumers to buy — or at least start their search for what to buy — is their laptop, mobile phone or voice-activated connected device. This is how consumers will find deals, see if what they want to buy is in stock, and set and forget the purchases of the things they buy all of the time and don't want to run out of.

The future of grocery shopping isn't all digital, just as it isn't in any other part of retail. But neither is it an entirely physical store experience either. Consumers, all consumers, see the physical grocery store experience as a smaller slice of how they shop for groceries.

Technology and embedded payments will give consumers the personalized and specialized shopping experiences they want with an easy way to make the purchases. Consumers will be able to shop online at their favorite store or find their new go-to — or find specialty shops online and then buy from them in their physical stores.

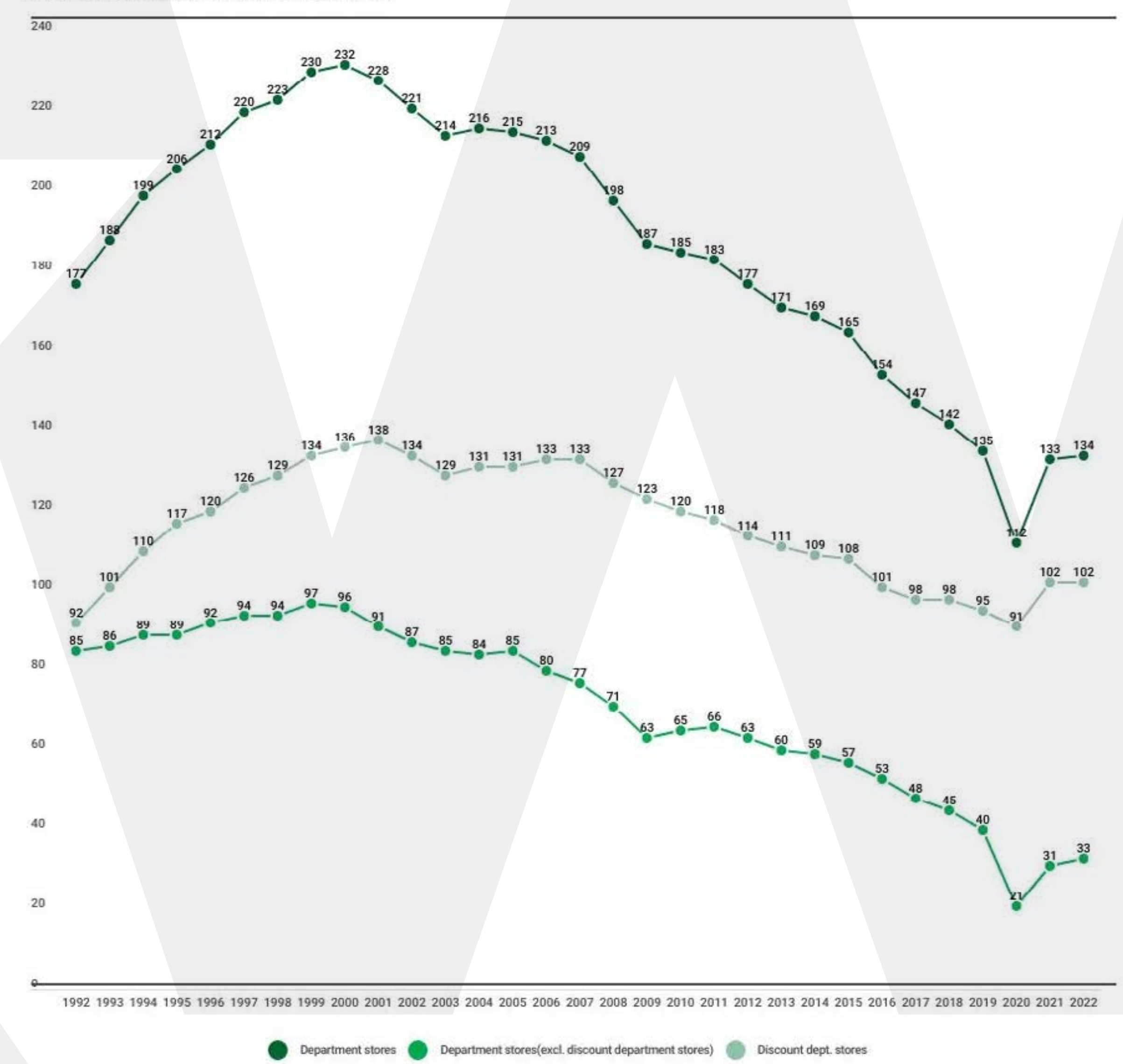
This is a trendline that department store executives largely ignored as smartphones and apps introduced consumers to new places to discover — and digital payments and wallets gave consumers new ways to buy the things they once bought in their stores. The mobile devices and web browsers became the consumer's department stores. The decline began in the early 2000s with the rise of the web and accelerated in the 2010s with the proliferation of smartphones and apps. Department stores have never recovered — and they likely never will.

The grocery store future doesn't have to end the same way. Grocery stores can avoid this fate by paying better attention to the data about consumers and their shopping trends in 2023 instead of repeating the mistakes of departments stores that looked at consumers, data and retail trends in 2010 and thought they were invincible.

Figure 5B

General Merchandise Sales

General Merchandise Sales in Billion dollars



Source: Monthly Retail Trade Survey, Annual Retail Trade Survey, Service Annual Survey

February 27, 2023

WHY THE AMAZON -WALMART RETAIL BATTLE WON'T BE FOUGHT IN THE GROCERY AISLE

Groceries, and how and where consumers buy them, is almost as topical as generative AI these days. Food inflation remains stubbornly high, and nearly all U.S. households have adjusted the number and types of items that now end up in their grocery baskets. The latest PYMNTS research now finds that 62% of consumers say the high cost of food has caused them to reduce spending in other discretionary categories, including 60% of those earning more than $100,000 a year and 63% of the middle-class consumers earning between $50,000 and $100,000 annually.

That's why groceries are a hot topic at the two of the largest retailers on the planet: Amazon and Walmart. Grocery was mentioned 17 times during Amazon's Q4 2022 earnings call, 11 times during Walmart's.

But Walmart's general merchandise strategy was discussed almost as frequently; CEO Doug McMillon and CFO John David Rainey referenced Walmart's general merchandise initiatives 10 times on their Q4 call. These mentions were all in the context of the need for a more invigorated retail merchandising strategy to offset "continued softness" in dry grocery and consumables.

For good reason.

With groceries now accounting for 56.9% of overall sales — up slightly from 55.9% in 2019 — Walmart is starting to look like a giant grocery store that also sells retail products instead of a mass merchant that also sells groceries.

Especially since Amazon and others have steadily taken away share in the retail categories that were once strategic drivers of sales and margin for Walmart.

According to their own and Census-reported data, we find that Walmart's grocery share has remained relatively flat since Q1 of 2019. The world's largest physical retailer may be seeing slightly higher grocery sales because of food inflation, but it is also making fewer sales overall in nearly every other retail product category.

Based on how the data is trending, Amazon will soon eclipse Walmart in health and beauty, a category that Walmart's CFO called out on the Q4

Source: PYMNTS estimations based on Amazon and Walmart's earning reports and the U.S. Census Bureau.

call as both high-margin and a high priority.

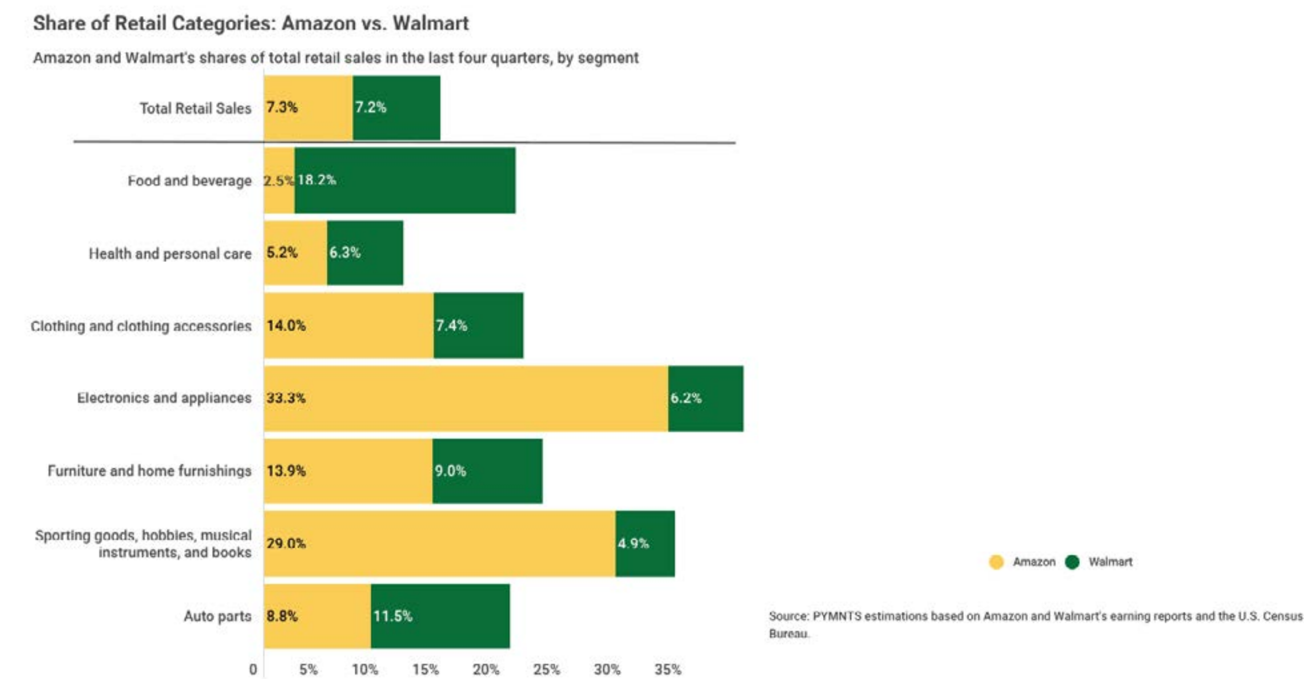
Health and beauty accounts for nearly 11% of Walmart's annual sales, its second-largest retail sales contributor.

Amazon has almost doubled its share of health and beauty sales since 2019, from 2.5% in 2019 to 5.1% in 2022. Walmart, on the other hand, has remained flat at around 6%.

Apparel, at 8%, is one category in which Amazon's share is now twice that of Walmart, a sales gap that has grown from 0.8% in 2019 to 6.4%. That's despite Walmart's efforts to beef up its apparel business with the purchases of Bonobos, ModCloth and 2020 partnership with ThredUp.

And why?

Because Walmart has a checkout conversion problem.



WALMART'S CHECKOUT CONVERSION CHALLENGE

No, not the same checkout conversion problem that plagues almost every online seller in the world that struggles to convert more than the mid-to upper-single digits of shoppers who visit their storefronts.

Walmart doesn't seem to be able to convert enough of the 100 or 120 million U.S. people who walk into a Walmart store each week into shoppers who walk out with much more than food in their baskets.

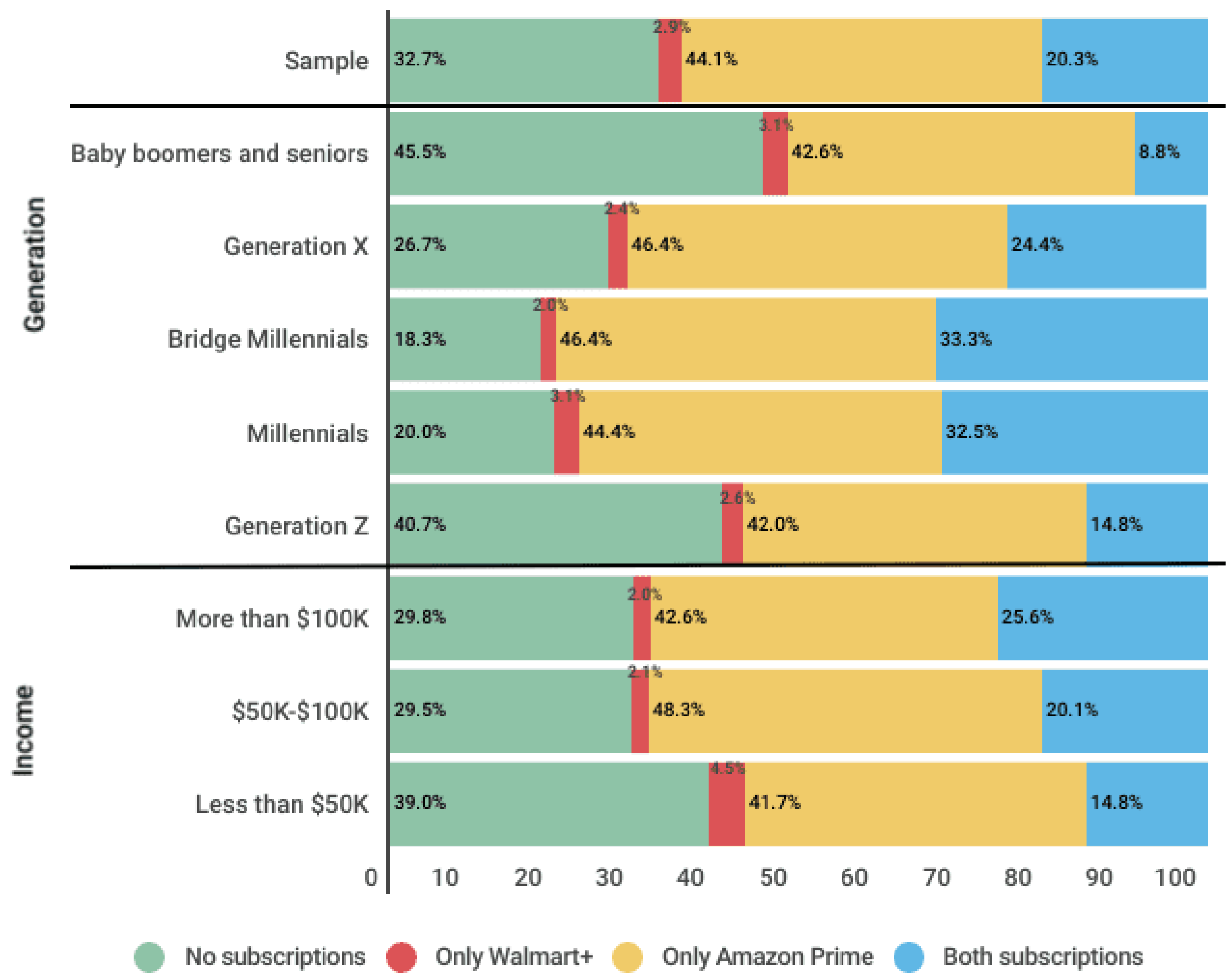
It's a battle royale — and a battlefield — that Walmart has to win, despite its efforts to drive more online volume and establish a more robust network of third-party sellers. Walmart's 2016 $3.3 billion purchase of Jet.com was shuttered four years later after failing to drive appreciable online sales for Walmart. The company has failed to make any meaningful online traction before or since.

That makes the 100 million or so pairs of feet inside of Walmart stores each week the low-hanging fruit, the qualified buyers, the burgeoning retail sales opportunity they must convert to more general retail buyers.

Especially when Walmart's main rival is the online player that has made online checkout conversion an art form — and has spent the last 28 years reshaping the standard for any acceptable online experience, retail or otherwise.

Types of Subscribers

Share of consumers with different types of subscriptions, by demographics



Source: PYMNTS Prime Day Survey, July 2022
No subscriptions N = 1,026 Only Walmart+ N = 97 Only Amazon Prime N = 1,482
Both subscriptions N = 640

THE AMAZON PRIME AND WALMART+ MEMBER OVERLAP

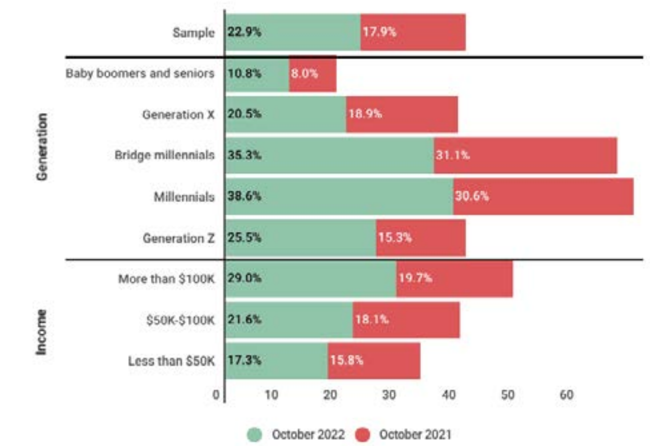
It will be a challenge, especially since 87% of Walmart+ members — the cohort of loyal customers Walmart wants to grow — also belong to Amazon Prime. PYMNTS data finds the percentage of consumers who only have a Walmart+ subscription to be in the low single digits.

More than 70% of adult consumers living in the U.S. are Amazon Prime subscribers, some 186 million consumers. They tend to be bridge millennials (82%) and high-income earners (82%). Free shipping is not merely a membership perk — it makes it easy and possible for consumers to order any retail or grocery product, on demand, multiple times a week, or even a day, without a second thought.

Amazon's efforts to reduce Prime fees for lower-income consumers and to accept EBT payments online also expanded its reach to the millions for whom an Amazon Prime membership fee would be out of reach — and created a new outlet for making grocery and other qualifying purchases.

Walmart+ Subscribers

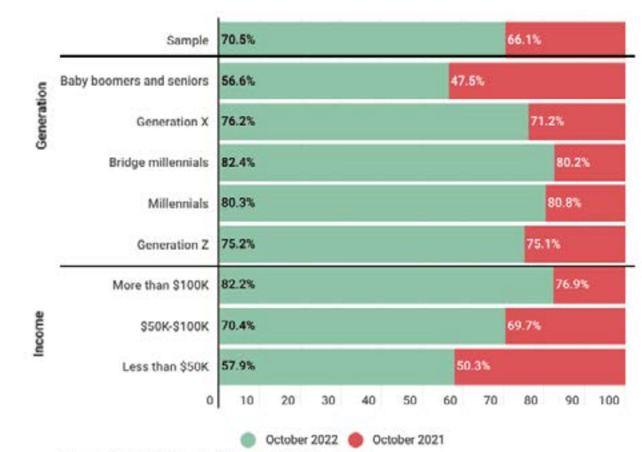
Share of consumers who have Walmart+, by demographics



Source: PYMNTS Prime Day Survey, July 2022
Amazon N=3,245, Walmart N= 2,891: Respondents who purchase at Amazon or Walmart

Amazon Prime Subscribers

Share of consumers who have Amazon Prime, by demographics



Source: PYMNTS Prime Day Survey, July 2022
Amazon N=3,245, Walmart N= 2,891: Respondents who purchase at Amazon or Walmart

Roughly 20% of U.S. adults, some 59 million adult consumers, have a Walmart+ membership. As Walmart's CEO referenced on their Q4 earnings call, Walmart has made great strides in capturing more share of the high earners making $100,000 or more, as well as the important millennials and bridge millennials.

Those Walmart+ members may be pulling into the Walmart parking lot to buy or pick up groceries, but more of them appear to hop back on their laptops and smartphones to buy lots of other retail products at Amazon or other online and physical alternatives.

AMAZON SHOPPERS COME FOR THE FREE SHIPPING, STAY FOR THE DEALS

Inflation-fatigued shoppers now say they're chasing deals more than they ever did, with nearly one in four U.S. consumers now characterizing themselves as deal chasers. One hundred million more U.S. consumers now chase grocery than retail deals.

Surprisingly, this same data finds that more than three times as many grocery shoppers reported they chose Amazon for the deals offered on grocery products as those who said they chose Walmart, despite Amazon's much smaller grocery footprint and share.

Is that because consumers factor free shipping into the mental math that shapes their perception of "a deal?"

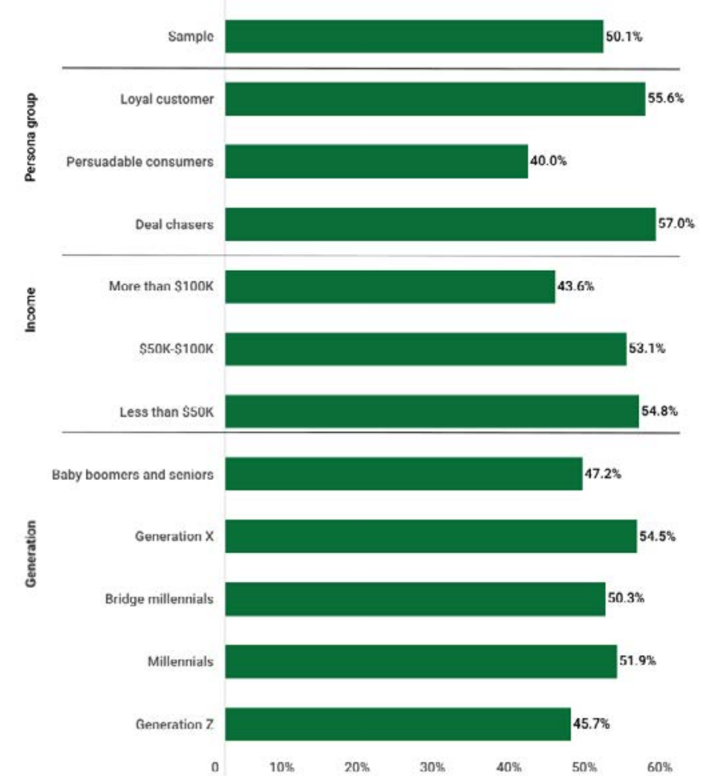
Maybe.

One of the biggest barriers to checkout conversion is free shipping, something that increasingly drives inflation-pressured consumer preferences for which merchants get their business.

PYMNTS data shows that 83% of Amazon Prime members signed up for this membership to get free shipping, and 61% of these cited free shipping as the most important reason for their membership — a perk they use to purchase a growing assortment of retail and grocery products. Amazon's expansion of the Buy with Prime program will offer Prime Members free shipping at more retailers that sell off the Amazon marketplace,

Inflation's Effects on Price Seeking

Share of consumers for whom inflation has made finding better deals for grocery products an essential factor when making a purchase



Source: PYMNTS – Consumer Inflation Survey #8
N= 1,668: Respondents who purchased grocery products in the last 30 days and noticed price increases
February 3 to February 8, 2023.

A study of 3,124 merchants and more than 13,000 consumers across 6 countries in December of 2022 found that free shipping is second only to payments choice as the most valued digital feature and driver of merchant preference.

It seems that a price-sensitive consumer is also now a time-sensitive consumer, as more of them return to part-time or full-time travel to work as well as shuttling kids to after-school and weekend activities. It's likely that ordering online and free shipping has now become an "essential service."

HOW WALMART AND AMAZON PLAY THE LOGISTICS LONG GAME

That's not to say that consumers don't value delivery immediacy — they do. In the U.S., the pickup economy is growing, with more than 41% of consumers saying that they picked up a grocery or retail purchase in 2022, an increase of 34% from 2021.

It's a consumer itch that physical retailers — all of them — are investing in heavily to be able to scratch, to both lower their costs and outsource delivery to a willing consumer. Walmart reports a 20% increase in delivery and curbside pickup capacity in 2022, with plans to increase it by 35% in 2023. Walmart can leverage its network of more than 5,000 retail locations, all within a 15-minute drive of 90% of U.S. consumers, and data on how many widgets are sold by what store each day or each month to expand both capabilities.

Amazon is leveraging its logistics network, which CEO Andy Jassy said now rivals UPS in size and scale, with its 28 years of online shopping history at the individual shopper level, to optimize its same-day delivery capabilities for its Prime Members. Amazon says 1.5 million Prime members every month are trying Same Day Delivery for the first time, a free service for Prime Members, subject to purchase minimums.

The service is being piloted in major cities, with fulfilment centers stocked with the 100,000 SKUs that are most frequently ordered.

The interesting shopper cohort to watch as Amazon's Same Day Delivery scales won't be the Amazon Prime shopper whose behavior is largely predictable — they'll likely adopt and use, and why wouldn't they?

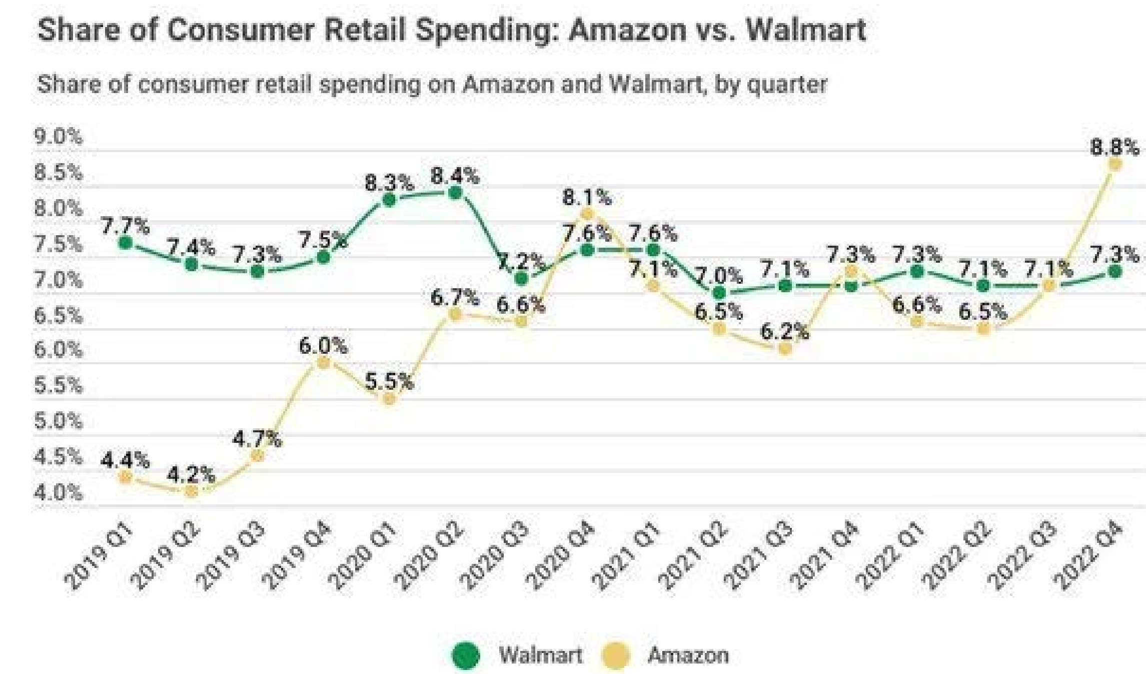
But the Walmart+ shopper who is also a Prime Member. This shopper may order Same Day Delivery for the things they'd ordinarily order online for pickup from Walmart or another provider — school supplies, birthday gifts, last minute travel essentials, garden supplies — and leave with groceries to meet minimum spending thresholds.

WALMART'S GROCERY SALES CLEAN UP IN AISLE TEN

Walmart is America's largest grocery store — a distinction that Walmart has had for the last 22 years. It was 2001 when Walmart officially became the country's largest food retailer.

But consumers don't think about groceries in the same way they did when grocery shopping was always done in the physical store and shoppers filled their grocery baskets with everything from lettuce and lentils to laundry detergent and loaves of bread.

The unbundling of the grocery shopping experience is easier now than ever as consumers order center-aisle products online, including 7.2% of U.S. consumers who do that using Amazon Subscribe & Save. Consumers can shop multiple grocery stores using Instacart that were once too inconvenient to visit



Source: PYMNTS estimations based on Amazon and Walmart's earning reports and the U.S. Census Bureau.

Source: PYMNTS estimations based on Amazon and Walmart's earning reports and the U.S. Census Bureau.

to snag deals, subscribe to the essentials they want from specialty providers and spend their time visiting grocery stores or specialty food markets for the fresh meats, produce and bakery items they want to see, smell and touch before buying them.

More than 40% of grocery items are now purchased online, according to PYMNTS' latest data, even though 60% of consumers still walk into the grocery store on a weekly basis.

It's why Walmart recognizes that capturing more retail sales over the next 22 years is significantly more important than remaining the country's largest grocery store.

There are lots of physical and online wagons circling the food retail space. New formats will emerge, including what Amazon has hinted about its plans to reflect the consumer's desire to buy different "grocery" products from different purveyors.

Dry goods will increasingly become commodities, bought online and delivered same day, next day or at an agreed upon replenishment schedule. Going to the grocery store will likely become a different experience over time, where shopping a store with fresh fruits, veggies, meats, cheeses and baked goods will be an experience to see, sample and then buy those perishables without spending an hour with the kids in tow, wheeling a cart around a vast store with 35,000 SKUs and a checkout system that increasingly makes the consumer do it themselves.

It's why the battle for Amazon and Walmart's retail share over the next two, never mind the next 22 years, won't only be fought in the grocery aisles, but in just about every other product category. Retail, pharmacy, and now healthcare with Amazon's One Medical purchase.

As of Q4 2022, Amazon now accounts for 8.8% of consumer retail spend, to Walmart's 7.3% and 4% of overall consumer spend to Walmart's 3.1%. This performance shows the vulnerabilities in Walmart's physical and grocery store model and highlights its failure over the last two decades to make any meaningful impact online — and to convert higher income, younger shoppers to loyal customers who aren't only chasing cheaper food prices.

It will be interesting to see what Q4 2023 may bring.

March 6, 2023

WHY 50% OF US CONSUMERS DON'T CHASE MERCHANT DEALS

Nearly half of U.S. consumers say they shifted to brands and stores that offered steeper discounts than their usual retail and grocery haunts in the last year. Half of consumers also say that finding a better deal is now the most important criterion for deciding where to shop for retail and grocery products. But knowing how the other half of those consumers shop — and why they don't chase deals — may be the difference between retailers who make a sale and those who make sales and drive profitable growth in 2023 and beyond.

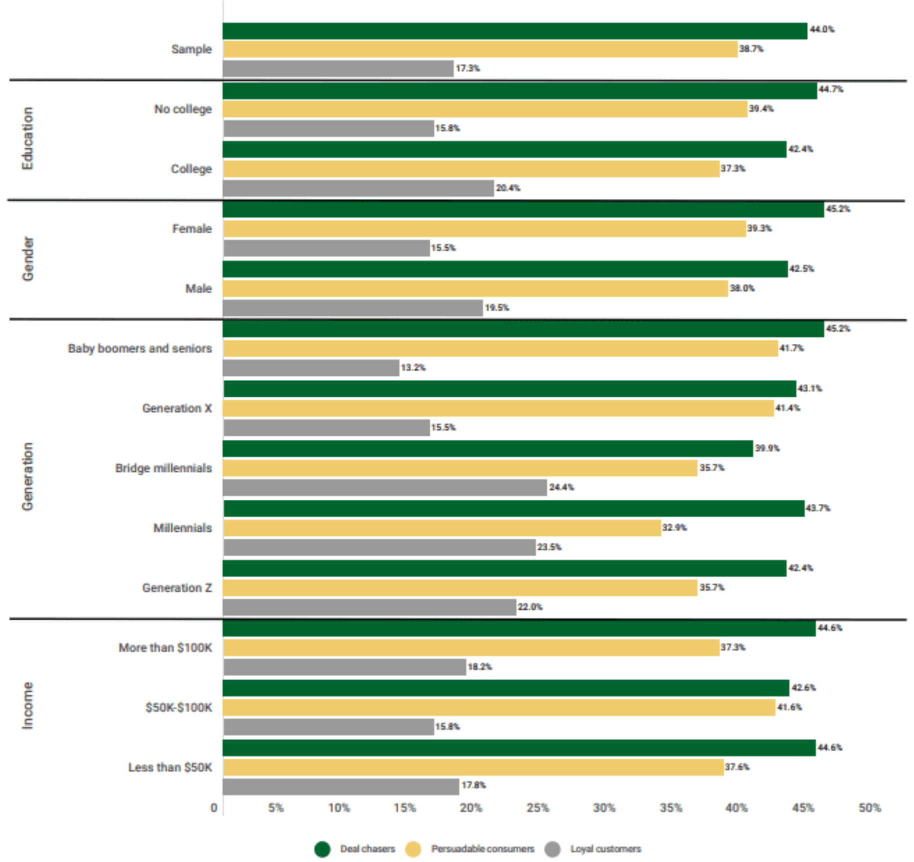
DEAL CHASING AND MARGIN ERODING

According to recent PYMNTS data, based on a representative sample of 2,116 consumers surveyed in February 2023, 44% of adult Americans say finding better deals has become a much more, if not the most, important factor when choosing where to buy retail or grocery items. The share of consumers who now say they are deal-chasers has increased steadily over the last six months.

With food inflation up by more than 20 percent over the last two years, deal-chasing consumers are on the hunt for better prices on food and willing to shop around, literally, to get them. Coupled with the increasing cost of credit card debt, everyday expenses and mortgage, rent and car payments, deal-chasers are also more willing to trade loyalty for the best deal on non-grocery retail purchases, too.

Relative importance between affinity with a merchant vs better deals when deciding where to shop, by grocery shoppers

Share of shoppers, by persona group



Source: PYMNTS
The False Appeal of Deal-Chasing Consumers, March 2023
N = 1,876: Respondents who purchased grocery products in the last 30 days, fielded Feb. 3, 2023 – Feb. 8, 2023

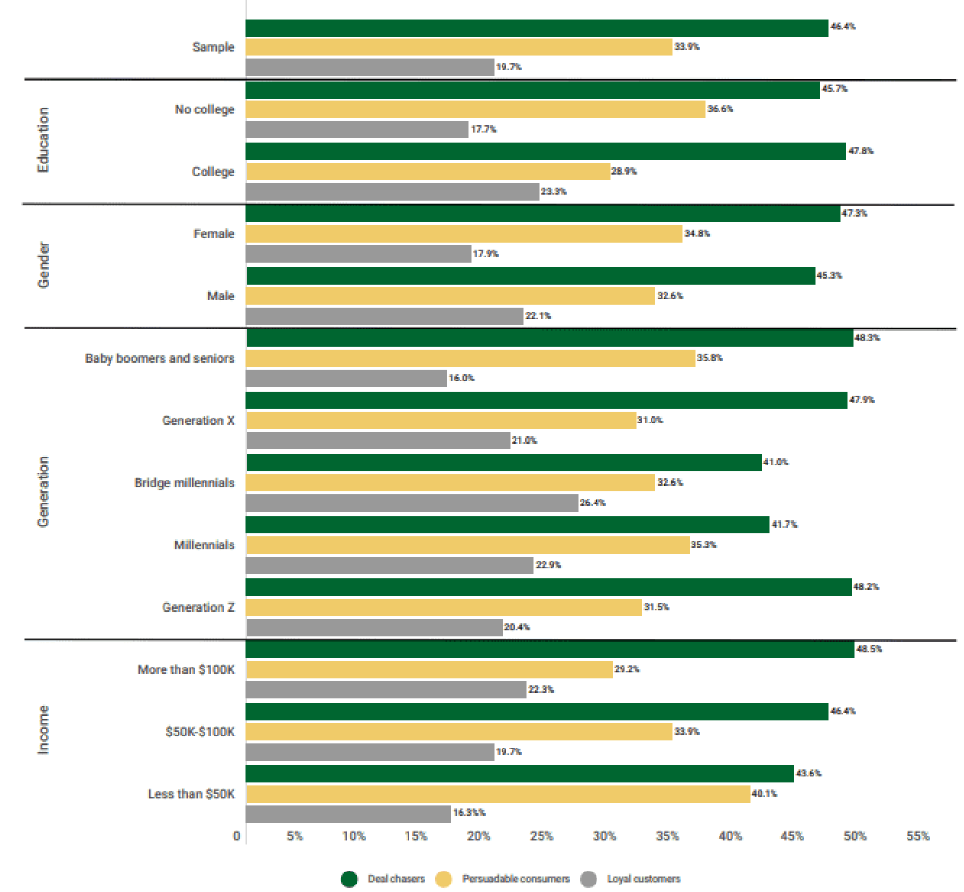
There are as many baby boomer deal-chasers as millennials, and as many deal-chasers who make more than $100,000 a year as those who make $50,000 or less. These are the same consumers who think it will take until August 2024 for the Fed to get to its 2 percent inflation target rate. Which means another 18 more months for deal-chasers to keep honing those skills and retailers to keep chasing them in the hope of getting them to stick around.

The problem is that they may not.

Sixty percent of deal-chasers say that the decision to make their most recent purchase was because they found the best deal there, suggesting that it takes little more than a better deal to get them to abandon their loyalty to a product or a store. For deal-chasers who want a new black dress for a night out in the town, the retailer with the cheapest black dress wins. The black shoes to go with that dress? That sale may not necessarily

Relative importance between affinity with a merchant vs better deals when deciding where to shop, by retail shoppers

Share of shoppers, by persona group



Source: PYMNTS
The False Appeal of Deal-Chasing Consumers, March 2023
N = 1,232: Respondents who purchased retail products in the last 30 days, fielded Feb. 3, 2023 – Feb. 8, 2023

go to the merchant that sold a deal-chasing consumer the cheapest black dress.

As a shopping persona, deal-chasers are much more pessimistic about their own financial future and macro-economic conditions than others. This could explain why their loyalty is to their own bottom line, and brand loyalty now takes a back seat. Deal-chasers are more willing to to spend the time — and risk the uncertainty of shopping with an unfamiliar merchant or trying an unfamiliar brand — to keep chasing those deals.

But then there's the 50% of consumers who aren't chasing deals.

CERTAINTY MATTERS MORE THAN A DEAL FOR THE OTHER HALF

Half of Americans (166 million consumers projected to the full adult population) don't trade brand loyalty for deals — but not because they don't want good value for money or have tens of thousands of dollars sloshing around their bank accounts waiting to be spent. Ease and convenience — and the certainty of their shopping experience with those brands — matter more.

Roughly 17% of U.S. consumers describe themselves as loyal to a merchant, where loyalty is defined as making most of their purchases with a small set of merchants they shop routinely. Need that black dress for a night on the town? Loyal shoppers are more likely to start first with their go-to retailers and buy there. They know the brand and the experience to be both familiar and reliable. Naturally, retailers know that too — and spend a lot of their data and dollars engaging those shoppers so that when the need arises, they get the first shot at that spend.

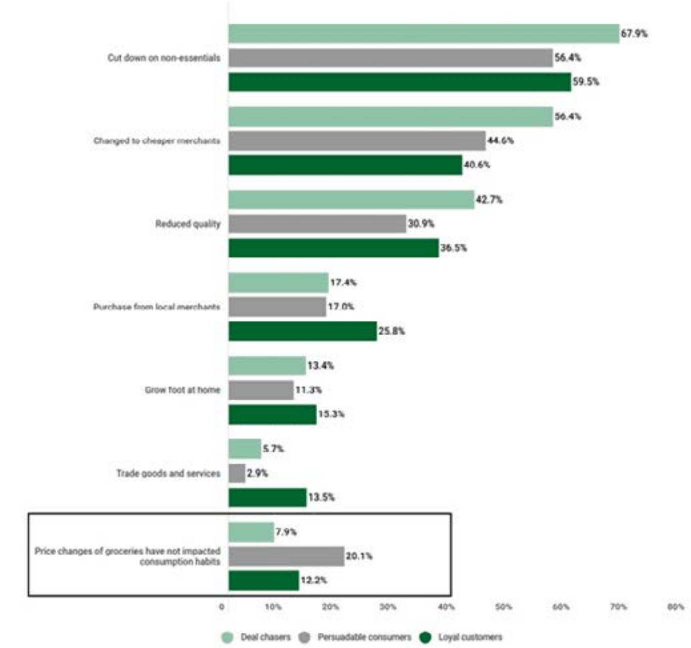
A disproportionate number of loyal shoppers are millennials and high-earners. Although small in numbers, relatively speaking, these loyalists are a powerful retail cohort because of the spending power they wield and their affinity with their favorite stores.

But so are one-third of consumers who fall somewhere in between. We call these consumers the "persuadables" because they actively straddle being loyal to a brand and getting a good deal.

Persuadables are largely middle-class consumers — those making between $50,000 and $100,000 a year. They shop as much online as they do in the physical store. More persuadables are women than men, and slightly fewer of them have a college degree.

Like loyal consumers, the circle of retailers they shop is small. But what makes these consumers persuadable is their loyalty to the products they like to buy, where they buy them and how buying them fits into their overall spend. Persuadables also say their employment prospects are more secure. Fewer persuadables than deal-chasers say that they or a family member have lost their jobs, and fewer believe that their jobs are at risk, than either loyal shoppers or deal chasers.

Share of grocery shoppers taking select actions to offset the effects of inflation, by persona group



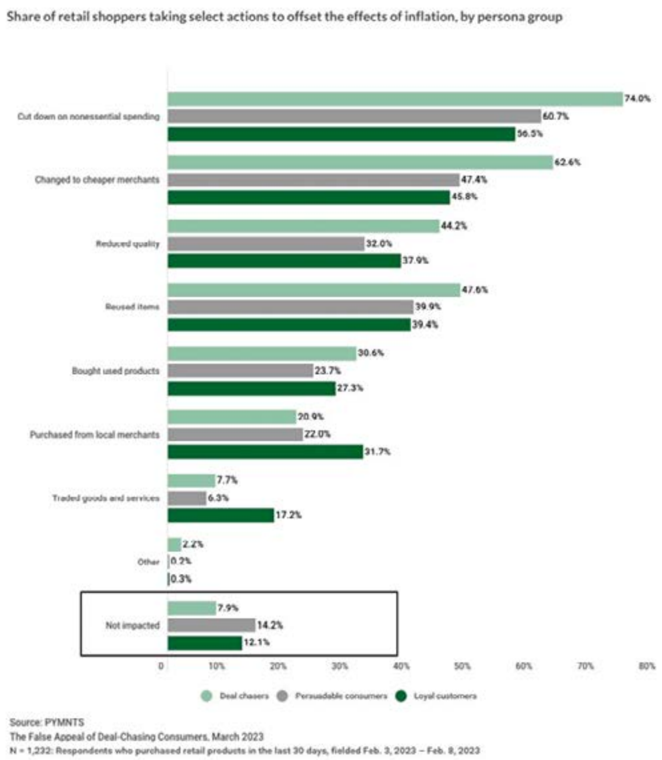
Source: PYMNTS
The False Appeal of Deal-Chasing Consumers, March 2023
N = 1,876: Respondents who purchased grocery products in the last 30 days, fielded Feb. 3, 2023 – Feb. 8, 2023

That makes persuadables more confident and financially stable shoppers, even if they are not as affluent as their loyal counterparts. As a shopping persona, they are less inclined to trade down, shop at cheaper merchants or sacrifice the quality of the items they purchase. For many brands, they are the ideal target audience.

Instead, persuadables are more apt to cut back on other non-essential purchases to keep their pantries and closets stocked with the products that offer predictability and certainty.

For that reason, nearly three times as many persuadables as deal-chasers say their purchases have not been impacted by higher grocery prices, and one and half times that of loyal shoppers.

The same behavior holds true for retail purchases. Persuadables are twice as likely as deal-chasers to say they have been unimpacted by price



increases, and even slightly more than loyal customers.

What's most interesting, and potentially powerful for retailers, about this group is how much more likely they are to act like loyal shoppers.

That black dress? Persuadables probably have a particular brand they like and a store they usually shop to buy it. Whether they buy it at all likely depends on whether it fits into their overall spending that month.

Like loyalists, persuadables also don't report they actively shop around for deals. If a retailer they don't usually shop with happens to come along with a good deal on a favorite brand or a better way to pay for that purchase, they can be persuaded — provided that buying and paying for that purchase is made easy and convenient.

That's what makes this group both persuadable and an attractive and potentially profitable customer segment for retailers who want consumers who value a good deal and the predictability of a great shopping and payments experience just as much.

CHOICES, DECISIONS, AND THE VALUE OF CERTAINTY

Scientists report that the average consumer makes about 35,000 decisions a day. That data set is from research published in 2013, and likely conducted years before. Over the last decade, the choices consumers have about everything — from the food they eat to the shows they watch on Netflix to the decisions they make as part of their day-to-day at work and at home — probably haven't expanded the number of decisions they make. But the increasing number of choices has complicated how consumers make them, and the perceived risk that they'll make the wrong one.

Many decisions that consumers make are based on habit — the cue, habit, routine feedback loop Charles Duhigg popularized in his book, The Power of Habit. Those habits create reliability, predictability and certainty of the outcome and make it easier and more efficient for consumers to navigate their day-to-day routine.

Other decisions are based on the consumer's own risk-and-reward assessment of doing something other than what they usually do. Will doing something different save them time, or create more friction because the outcome or the process is uncertain?

The combination of historically high inflation and the now three-year digital shift has redefined consumer loyalty and how consumers choose the merchants they shop.

This is evident when examining the third-annual six-country study of 3,000 merchants and 13,000 consumers that PYMNTS recently published in collaboration with CyberSource. This study finds that the digital features that merchants offer — and how easy they make it for consumers to find and use them — is what attracts consumers and keeps them shopping.

Happily, for all of us who live and breathe payments, consumers across every country we studied say that it is payments choice that matters most, now for three years straight. Making it easy for consumers to pay how they want — using traditional and alternative ways to pay, including BNPL and digital wallets — is what drives merchant preference and consumer spend at those merchants. In the U.S., digital wallets, BNPL and contactless payments in stores are now considered table stakes. New ways to pay offer consumers more options and less friction when managing payment for their purchases and give retailers options to convert deal-chasers and keep persuadables and loyalists from straying.

Free shipping and free returns are table stakes, too. The decision to eliminate one or both is why U.S.

merchants, overall, saw a decline in shopper satisfaction and conversion in 2022.

So, too, is making it easy for consumers to find and access digital features. The ability to see inventory availability is highly important to converting shoppers both online and instore — and critical to enabling a more robust buy online, pick up in store offering. For the U.S. shopper who has enthusiastically embraced the pickup economy, not having accurate information can kill that sale.

Offers and deals are important to all consumers, even loyal consumers and persuadables who say they want good value for money. But many merchants make finding and them getting them a hassle with email signups or promo codes that are buried, hard to find or emailed or sent via SMS. That friction creates a bad experience for a loyal or persuadable consumer who could be tempted to come for the deal and stay for other purchases if the experience were a good one. Deals and offers that are embedded into the payments flow can eliminate the friction from chasing the deal, or abandoning the sale because getting the deal just takes too many steps and too much time.

THE IMPACT OF DIGITAL ON RETAIL'S RISK AND REWARD FRAMEWORK

What's been interesting to observe over the three years we've done this study — and PYMNTS' own studies during that time — is how wide the awareness gap has become between what merchants say they offer and what consumers say drives preference. To consumers, making it too hard to find the digital features they want to use is the same as not having those features available at all. Our analysis shows that a less friction-filled experience drives preference and satisfaction, and preference and satisfaction is what drives spend.

Innovators see these frictions and create new ways for consumers to achieve a better and more certain outcome. As more innovators create or enable better solutions with less friction, with more certainty and less risk for consumers, retailers will feel more pressure to change their own status quo or risk being left behind.

It's why retailers are now examining their own shopping experiences and business models with a sharpened focus on where friction remains a threat to their business and where it can be an opportunity to attract those who want a more predictable shopping and payments outcome. Especially as more inflation-pressured, digitally-savvy consumers show up at their virtual and physical doorsteps in 2023.

Nearly all consumers who shop say they want value for money. Half of consumers define value as the best deal — the other half say it's the best experience. It may be that payments become the viable bridge between both.

Retailers can turn deal-chasers into regular shoppers, at a margin, provided they have a business model that supports it and the continuous flow of deals to keep them hooked.

March 13, 2023

THE SILICON VALLEY BANK STORY NO ONE HAS TOLD

It's almost an eerie coincidence.

Nearly three years to the day that the World Health Organization declared the novel Coronavirus a global pandemic, Silicon Valley Bank collapsed. The mass exodus of deposits that fled the bank in the 48-hour period between the time that SVB filed its 8K and the time the FDIC shut it down gave Americans a real-time view of what happens when there is a run on a bank.

Except this time, the bank run was led by the CEOs and founders of startups who are using technology, data, the cloud and payments to change the world — worried that their deposits would vanish.

Ironically, the venture capitalists behind many of these startups stoked the bank run that brought SVB to its knees. Between 2020 and 2022, Silicon Valley Bank's deposit base nearly tripled, growing from $60 billion in 2020 to roughly $175 billion in 2022. Flush with cash, VCs poured capital into startups with big ideas who found SVB much more eager to do business with them than traditional, risk-averse banks. In many cases, banking at SVB was part of the terms and conditions for getting loans. SVB claimed it banked 50% of U.S. startups, and no one doubts that it was the main bank for tech startups.

To protect their investments, VCs sent mass emails to their portfolio companies on Wednesday and Thursday of last week to pull their deposits. Some very quick-on-the draw startups managed to do that successfully. For most, the weekend was one filled with uncertainty about if, when and how much of their deposits would be recovered.

An auction by the FDIC of SVB assets on Sunday failed to produce a buyer. Shortly thereafter regulators said they would release all funds to SVB depositors today (March 13). SVB's balance sheet will be used to make depositors whole in an effort to keep the contagion contained and restore confidence in the financial system, regulators said.

However, that contagion has already spread to another bank. NYDFS Superintendent Adrienne Harris said that her agency took over Signature Bank yesterday (March 12) in an effort to protect depositors. The $110.6

billion bank which banked crypto companies was declared insolvent. That situation continues to develop.

Today, Silicon Valley Bank is no more. Many stories have been written about the shoddy risk management of SVB's CEO and executive team, their glaring blind spot to the obvious shift in startup market dynamics, the regulatory shortcomings that gave SVB the wiggle room to operate more aggressively, and the obvious client concentration risk that drove the depositors' rush to liquidate and that ultimately caused the FDIC to declare it insolvent.

Here's a story that hasn't been told.

WHEN COVID MOVED IN, INNOVATORS STEPPED UP

Where were you when the world shut down in March of 2020?

Everyone remembers that day. No one was prepared to navigate the palpable fear of being exposed to a deadly virus that was spreading uncontrollably and the abrupt, overnight shutdown of the physical economy. I remember walking home from the PYMNTS office in downtown Boston during the early afternoon of March 27th past shuttered storefronts — I was literally the only person on the street in a part of town that was always vibrant, bustling and filled with office workers and tourists. It seemed surreal, like being in a movie about the apocalypse — except without the lights, camera, action and Hollywood producer.

Almost overnight, the world was forced to shift dramatically to digital — and all the inertia on the part of consumers and businesses to adopt digital ways to access and pay for products and services simply disappeared.

Innovators that had spent the better part of the last decade paving the path to a more digital and mobile economy became the world's lifeline. Mobile phones, easy-to-use apps, websites and digital payments made that digital shift less onerous and more age-independent. Many seniors went online for the first time and were able to get food and medicine delivered to their doorsteps — a tribute to the efficiency of the technology and the seamless user interfaces and experiences those innovators had created. Businesses reprioritized investments in digitizing

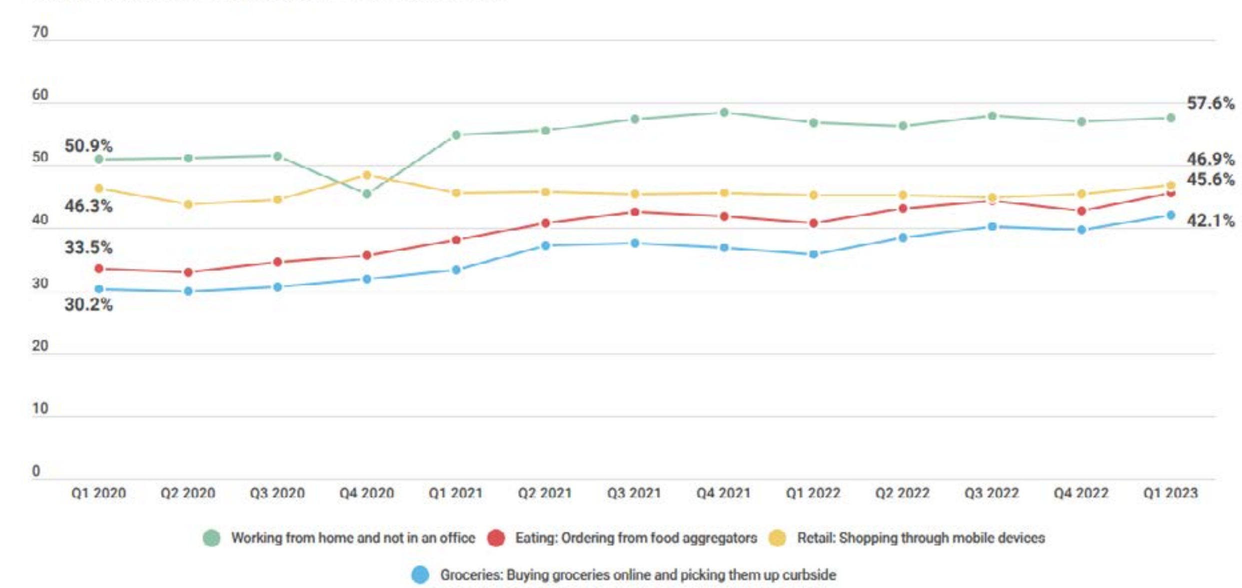
the office of the CFO to pay their people and their vendors, collect payments and monitor cash flow.

We all shudder to think how things might have turned without the efforts of those innovators — and the investments made in them by VCs and strategic partners years before the Black Swan called COVID swam into our global waters.

Naturally, those whose businesses and business models were natively digital saw their business shoot up and to the right. Those whose weren't partnered with startups to fast-track their own digital shift. Still others reprioritized their own internal digital transformations. Government stimulus for consumers and businesses drove consumer spending and kept the lights on at many small businesses. Digital payments took off, and the payments ecosystem flourished. New businesses emerged to capitalize on the newfound consumer and business appetite to become digital. The collective focus was on using tech, the established payments and financial services ecosystem and connected devices to eliminate the risks and uncertainty of doing business in the physical world.

Three years later, the physical economy has reopened for business — but digital is now embedded in the DNA of consumers and businesses.

Share of consumers who shop/eat/work in digital ways



Source: PYMNTS
Connected economy series, February 2023
Sample size varies with each month; N = 2,869: Whole sample for February 2023, fielded Feb. 1, 2023 - Feb. 6, 2023

Consumers may have returned to stores, but PYMNTS data suggests that just as many continue to shop online as they did during the pandemic. Despite Census Data reporting to the contrary and pundits poo-pooing the pandemic digital shift as a blip, PYMNTS analysis shows that the pandemic did, in fact, accelerate the online shift when it comes to retail shopping and spending, making it a durable part of the consumer's day-to-day.

The physical world is now an extension of our shift to digital, not just another channel — whether we are working from home, ordering groceries, banking or watching a movie. High earners and younger consumers are the most digitally transformed, but digital's reach and impact are relatively consistent across the population in the U.S. — and becoming that way in every other part of the world. Embedding payments and credit into these digital experiences offers choice and eliminates friction for consumers and merchants. For others, it creates an important and inclusive onramp to the digital economy.

Businesses continue to digitize their payables and receivables processes, moving away from paper processes and payments. Whether it is disbursing instant digital payouts to consumers or businesses, making vendor payments at scale more efficient for payors and payees, moving the industrial economy business online or creating new business payments networks to make payments between buyers and suppliers more efficient with greater choice, the conversations about ditching the paper check are not about "if," but "how" and "how fast."

Thanks to innovators — who until late Sunday night were pondering their own futures in the wake of SVB's collapse — there is no going back to party like it was in 2019. The world is not digital-only, but it is very clearly digital-first, here in the U.S. and almost everywhere in the world.

But.

HUBRIS INSIDE THE ECHO CHAMBER GOT LOUDER AND INNOVATORS LOST THEIR WAY

Well before SVB shuttered, startups — and FinTechs in particular — were navigating a different existential crisis.

The pandemic-fueled digital shift turned the startup funding crank to unprecedented levels. Investors, fearful of missing out on the "next big thing," threw caution to the wind and produced term sheets in a matter of days just to get the deal. Sequoia Capital and its investment in FTX is the poster child for that behavior, but that VC had plenty of company.

As a result, startups raked in funding with great-looking decks and lofty valuations. More startups followed, and then more after that. Customer acquisition was the name of the game, and VCs gave startups the checkbook to play that game. What's wrong with spending $500 to acquire a customer that might churn three months later? Nothing, if instead of the viability of the business and business model, the KPI (key performance indicator) is the number of accounts.

Or changing the world.

As in literally changing the world: To live in the metaverse, pay using cryptocurrency, mint NFTs and use them as cornerstones of a new digital economy, transacting over decentralized, permissionless networks that were smart because developers said they were.

Who wouldn't be tempted to invest in the face of compelling data? A 2022 McKinsey report said that by 2030 — a little less than 7 years away — the metaverse could be valued at $5 trillion with big consumer use cases in banking, retail and eCommerce. In 2022, $120 billion was plowed into metaverse companies, up from $57 billion in 2021 and $29 billion in 2020.

In January 2022, NFT Marketplace Open Sea raised $300 million on a $13.3 billion valuation. Chainalysis now reports that the size of the NFT market at the end of 2022 was $44 million. Pundits say that those who got in the NFT game early did well. How insightful.

Crypto is the poster child for the investor craziness and funding bubble. An odd bundle of technology, a business model, and ideology, cryptocurrency enthusiasts have been claiming it is going to change the world for thirteen years and counting, with frequent twists and turns on just how it is going to do that. Crypto startups attracted $30 billion of VC capital each year in 2021 and 2022. Then crypto trading fueled by speculation plummeted, exposing FTX and other crypto fraudsters and revealing the instability of stablecoins. Most recently, Circle's USD coin broke peg on Saturday when it was disclosed that more than $3 billion of capital is tied up at SVB. A crisis in confidence produced a run on USD, and its future remains cloudy as company executives publicly calm currency holders and its prospects for recovering its money at SVB grow more certain. Before the FDIC news, Circle had recovered from its low of $0.88 and was trading under a dollar at $0.9717. This morning, it was trading at $0.9895.

These dynamics created a startup ecosystem that became highly interdependent on the success of each other to stay in business. Startups became service providers to other startups whose VC-powered bank accounts drove sales to complementary businesses who counted these startups as their customers. The herd mentality ruled — what one VC did was good enough for the other. VCs invested in similar businesses to grow the pie and then consolidate share later. And as we know, half of those startups banked at SVB.

The herd mentality became infectious outside of the startup ecosystem, leading other businesses to divert time and money away from initiatives that solve real-world problems and toward things that possibly never would. If VCs were investing billions into these things, why shouldn't they?

So the beat went on. Capital was plentiful and, for a while, cheap. In 2020 and 2021, VCs that wanted to take the time to do more diligence found themselves on the wrong side of a deal, so they didn't. Businesses that couldn't show scale at speed and at all costs found themselves on the wrong side of getting funded.

Everyone knew, of course, that the decade-long streak of free and easy money and low inflation was destined to end, and that the valuations of businesses with no easy path to profit couldn't be real. And that the consumer was unnaturally strong because of the lasting effects of the stimulus money and low unemployment. And that businesses without a "there" there wouldn't survive.

Seasoned and serial entrepreneurs who had seen this movie in 2008 or the early 2000s recognized the warning signs flashing early in 2022 and started their own pivot to profitability. Many others didn't until they were forced to.

Until March 10th 2023, alive and well in their own Silicon Valley echo chamber, SVB believed that there would forever be more money, more funded startups to replenish those who may have washed out or burned cash to take themselves out, just like always. IPOs and big paydays were right around the corner. How could they not be?

Had the FDIC not prevailed, SVB's collapse would have hastened the failure of some of the startups that bank there, those who likely wouldn't have made it anyway. For a while, they will live to see another day.

The larger tragedy would have been the hit to the innovators with great businesses and solid business models with real prospects for profitable growth and scale. The ones working the phones last weekend trying to figure out whether they could survive without the capital they needed to run their businesses and the infrastructure they used at the bank to power their businesses and support their clients. Happily, they will live to see another day, too.

THE LESSONS TO BE LEARNED

Looking back over the last several decades, there is one thing we know for sure. Entrepreneurs have come up with powerful ideas that have enabled them to build businesses that make the everyday lives of people and businesses so much better while building fortunes for themselves and their investors. That's the American dream — and what makes our economy and our country the envy of the world and inspires innovators to dream those dreams.

We also know that the digital transformation is in its early years of sweeping through the traditional economy. PYMNTS research of 15,000 consumers in 11 countries every quarter over the last year shows the breathtaking adoption of digital — even though, as a global economy, we are not even a third of the way to having digital become a part of every one of the 37 routine activities we track.

Sudden twists and turns take us to a new level. That appears to be the case with AI which, as others have said, has reached an inflection point. As infatuated as we are now with ChatGPT, the potential for AI to improve outcomes in business, in healthcare, in the industrial economy, in credit and lending — in every facet of our economy — is breathtaking in its potential.

More so than I can remember, today tech investing seems to be driven by hype and buzzwords, with too little thought into whether startups have a plausible solution to a real problem that people and businesses have and that can lead to enough demand to sustain a profitable business.

It's time to go back to serious analytical work, to frameworks for assessing the probability and profitability of innovation, at scale, in a timeframe that is relevant for people and businesses. I've written about the value of such frameworks many times, and developed many of my own. Our FIT framework and ignition frameworks have helped guide our view of innovation over the last two decades. It's why we said in 2014 that Apple Pay's innovative digital wallet would be slow to adopt and ignite, why merchant-driven payments schemes are dead on arrival, and why Early Warning's digital wallet probably is too.

There will be backlash in the aftermath of the SVB and Signature Bank failures, hearings on Capitol Hill and everywhere else in the world. There will be recommendations to tighten the regulations that allowed SVB to operate without adequate risk management controls. President Biden has already said that "those responsible" for the SVB collapse will be held accountable.

A harder issue, though, is how to address the herd mentality — and the echo chamber — which accentuates risk and makes it unpopular to take the opposite view.

An unfortunate outcome of the collapse of two banks whose demise was the result of their own bad decisions would be to have the herd mentality shift to putting the brakes on funding good startups with great ideas more generally. It would be a shame for investors to think that the bloom is off the digital rose just because their big bets on bad moonshots, perhaps deservedly, never got off the launchpad.

Instead, I hope we set aside the metaverse for innovation that solves real problems in the real world. Innovation that doesn't seek to literally change the world in which we live, but to make living in the one we have better, healthier, smarter, more diverse and equitable.

April 24, 2023

HOW CONSUMERS WANT TO LIVE IN A CONVERSATIONAL VOICE ECONOMY

Consumers live their lives in a digital-first, connected world — habits formed after three years of a forced shift to digital. And they like it that way.

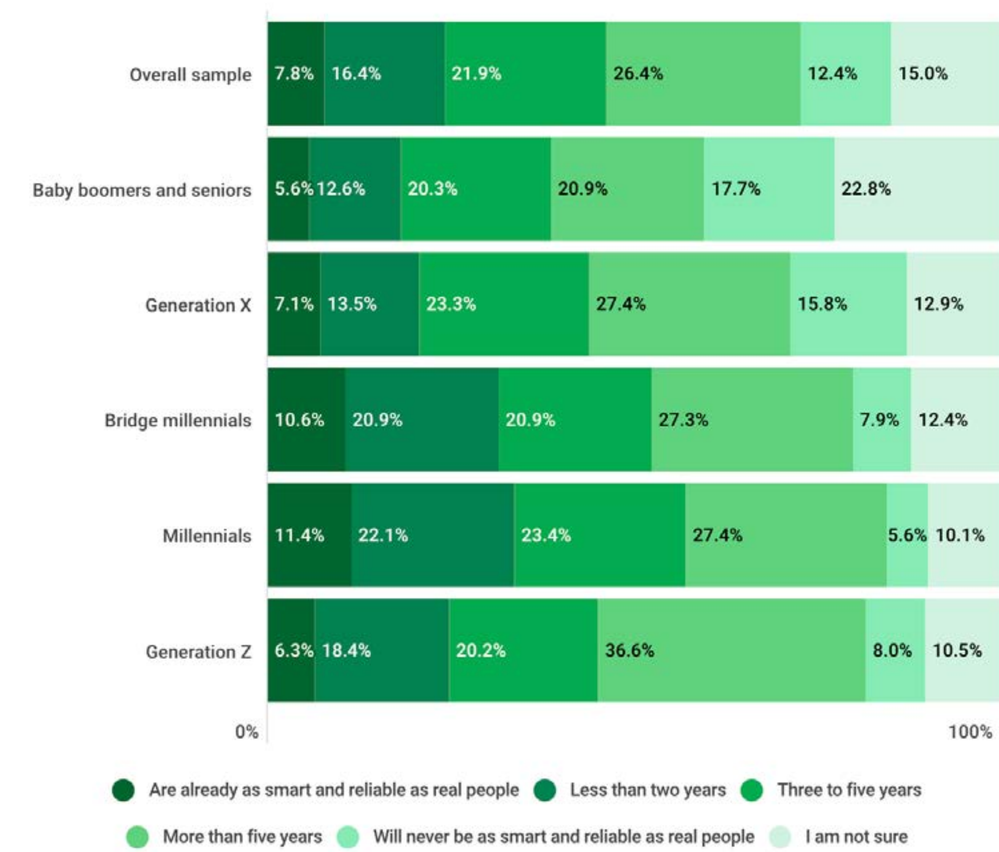
But that's today.

In a March 2023 landmark study, PYMNTS asked 2,939 U.S. consumers about their use of voice and its future: in five years' time, nearly 50% of consumers believe their connected world will be enabled by smart assistants that are merely a spoken word away.

Nearly six in 10 millennials say that too.

Figure 1: When voice will be as smart and reliable as a human

Share of consumers who believe it will take a select amount of time before voice technology reaches the point that voice assistants are as smart and reliable as real people and can assist with daily tasks and activities



Source: PYMNTS
How Consumers Want to Live in the Voice Economy, April 2023
N = 2,939: Complete responses, fielded March 6, 2023 – March 30, 2023

Getting there requires better voice tech, more consumer trust, more innovation, more interoperability, and probably a player or two whose identity is yet to be known to shake things up, forcing new thinking and new business models and new consumer experiences.

What's certain from this research is that consumers seem ready to move from taps and swipes to smart and reliable voice tech that's integrated into their everyday routines. This reality isn't the stuff of science fiction, but the evolution of the voice foundation we have in place today.

Some 168 million U.S. consumers already use that voice foundation to conduct at least six different everyday tasks like getting information, turning TVs and appliances on and off, and ordering food, groceries, or Ubers.

THE COMMERCE INNOVATION THAT'S 200,000 YEARS OLD

The voice economy isn't new. In fact, voice as an enabler to just about any activity, including commerce, is about 200,000 years old. That's when the human anatomy developed sufficiently to enable sounds and words to be spoken. Fifty thousand or so years later, the first origins of language were documented, enabling knowledge to be shared and become the basis for more meaningful and contextual human interactions.

For millennia, voice was the only way that people interacted, and people and businesses transacted. Payment form factors may have evolved from shells to coins to paper currency, checks and plastic cards, but people mostly walked into a store, asked the shopkeeper to show them something, negotiated the price and then left with their purchase.

Voice was ubiquitous — every business could take an order or respond to a request using one. It was secure — version 1.0 of the human as biometric authentication method. And it was personalized — consumers and merchants and business executives could banter back and forth before settling on precisely what was needed and at what price.

The advent of the digital age, beginning with the launch of the commercial internet in the mid-1990s and continuing to mobile phones and apps in the 2010s, gave people and merchants new ways to engage that were far less dependent on walking into a physical store and talking to a salesperson. Keyboards, taps and swipes could replace voice-to-human —either in person or via a call center — to make a sale, get information, do banking, manage financial transactions, and make payments.

Throughout the decade of the 2010s, innovators would use data, the cloud and digital payments to expand access to commerce and its many possibilities. And consumers were ready to take whatever digital innovations came their way. By 2021, 90% of households had access to the internet and at least one mobile device.

By 2022, U.S. households had, on average, 22 connected devices: smartphones, TVs and appliances, voice-activated speakers and cars with voice-enabled capabilities. Digital payments and mobile wallets were capable of igniting commerce throughout these digital channels anytime, anywhere and with anyone. Commerce and everyday life became truly mobile. And the voice economy green shoots began to emerge.

THE CONNECTED ECONOMY TAKES SHAPE

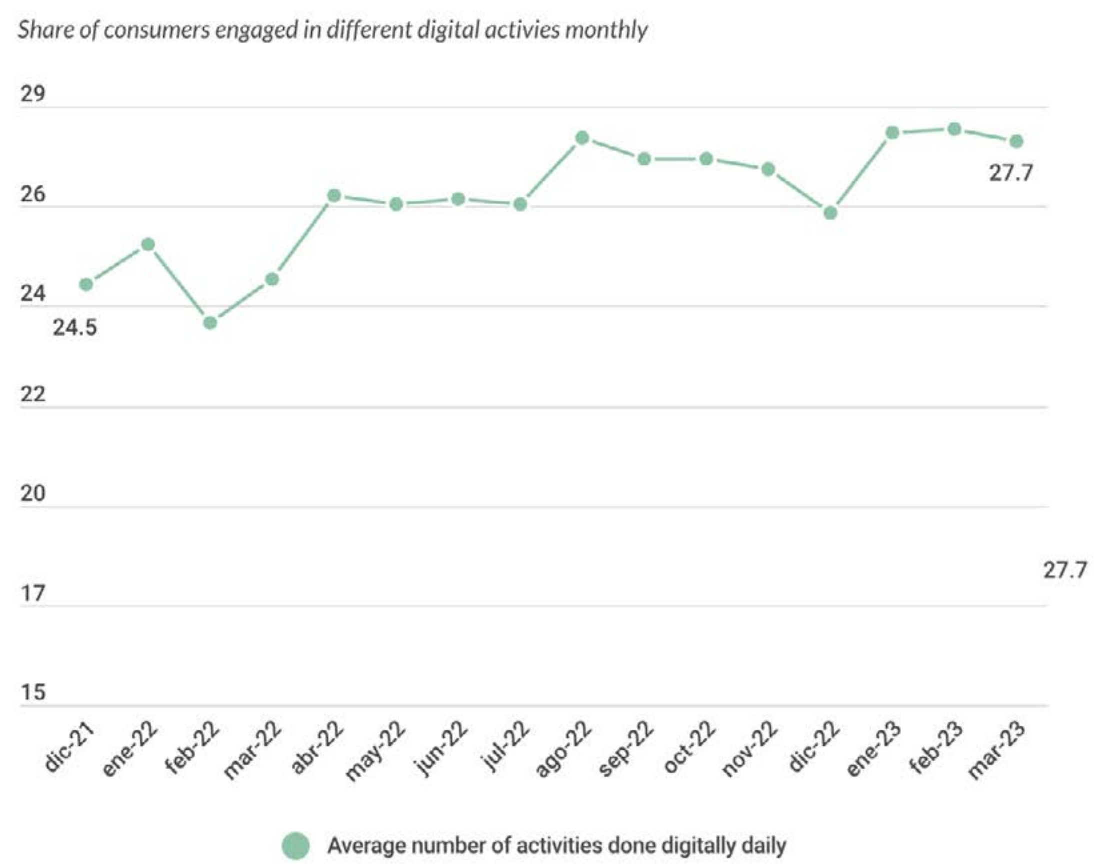
Since 2019, these internet-enabled devices and apps have fast tracked the connected reality of consumers, shifting the focus of innovators from mobile and standalone apps to connected devices and ecosystems that make access to multiple activities more simple and more streamlined.

PYMNTS has been tracking the digital behaviors of U.S. consumers every month since March of 2020. We measure the digital transformation by examining the activities once only conducted in the physical world in three ways: the number of consumers using digital to conduct at least one activity, the number of digital activities that any one consumer engages with and the frequency with which they engage using digital over time.

We find that the digital transformation of the U.S. economy — and that of the world — is undeniable and indelible.

Today, consumers go about their daily routines in a connected world, where 28 of 70 routine activities are now digital to some degree — up 13 percent from last year. Fourteen percent more occasional activities such as shopping in marketplaces and ridesharing are now weekly; 24% of weekly activities such as music streaming and reading the news online are now daily.

Figure 2: Digital activities consumers engage in on a monthly basis



Source: PYMNTS
The Connected Economy Report
N = 2,753: Complete responses, fielded March 9, 2023 – March 14, 2023

Network effects — the flywheel — are starting to spin, boosting digital engagement across the continuum of routine activities. We observe that for every 10% increase in shopping online, buying groceries online increases by 7%, using digital channels for health and wellness increases by 6% and banking using digital channels increases by 4%.

Embedded payment possibilities have sparked the creativity of business leaders and entrepreneurs to design new business models, experiences and commerce opportunities. Even as the physical economy opens, physical remains the least satisfying shopping and payment experience for consumers in the U.S. and around the world.

Over the last three years, we have seen a 40% increase in online grocery orders and a 39% increase in online food shares. In 2019, less than 2% of grocery orders were done online — today that stands at 12%. People still shop in grocery stores, but not for the same things they did when that was the only way to purchase their food.

More recently, we've seen players as diverse as PayPal, Amazon and Uber make it possible for many similar activities to be connected inside of a single digital ecosystem where payments and identity are inextricably linked. A single app for these everyday experiences is something that nearly half (48%) of consumers say they like and will use — as many do already — because it's convenient and more secure than having their identity and payments credentials stored all over the web.

Hold that thought.

It's a blueprint for how the voice economy will likely evolve.

SAY HELLO TO THE CONSUMER'S VOICE-POWERED FUTURE

But in 2023, commerce is on the cusp of another digital commerce breakthrough — one that will take us back to the future in many ways. One where voice is the enabler of routine interactions between people and businesses and commerce transactions, in real time and securely.

Tomorrow, powerful technology will integrate voice and enable commerce from any connected device — some 75 billion of them, it's estimated, by 2030 when 5G becomes 6G — positioning voice to be as ubiquitous as it was 200,00 years ago. Computer power will increase rapidly while sitting in the cloud, and smaller, faster chips will enable smaller, embedded devices.

Artificial intelligence will make voice interactions smart, personalized, adaptive and engaging. As in truly engaging — conversational in every sense of the word. Not just reactive to a wake word and a series of prompts, but proactive and intuitive, anticipating actions based on history and context and anticipating what consumers might want to do next, just like an effective, smart, capable human assistant would do.

Without holidays, sick days or vacations.

Integrations with screens — in a car, at home, on a mobile phone, a TV screen or one of the many displays that will surround us — will add a visual dimension to the voice experience.

Voice biometrics will make those experiences secure.

Like the internet and app economy, entrepreneurs and business leaders will build apps and apps ecosystems to connect devices with AI-powered experiences. Embedded and tokenized payments and identity credentials will make it secure. The consistency and security of those experiences will build trust.

In that world, voice will displace taps and swipes in many situations, making it faster and easier for consumers to get information, buy something or make a reservation. PYMNTS research finds that nearly half of U.S. consumers do believe that in five years' time, a smart voice assistant will be effective at managing the cascade of changes required when there is a sudden change in their plans. More than half believe it will helpful in handling issues related to emergencies that happen when they are driving.

Nearly 30% of U.S. consumers say they'd even pay a monthly fee to access a voice assistant that can do that.

Today some 100 million consumers use their voice to talk to assistants built into their mobile phone (39%), an app on their smartphones (25%) and connected devices like speakers (27%) to complete those activities or connect with call centers. A smaller portion of consumers access voice built into their cars (15%) and wearable devices (12%).

But barely one in ten of all consumers think that voice is capable of being their smart, everyday sidekick today.

HOUSTON, WE HAVE A VOICE PROBLEM

For voice to become the future that many consumers say they want, voice economy enablers must prove it can be trusted — getting consumers over the risk/complexity conundrum that prevents all but the bravest voice pioneers from conducting complex activities where the downside of making a mistake could be disastrous.

After all, it's not the end of the world if Google or Alexa tells you a bad joke. It could be if someone using a deep fake version of your voice authorizes taking $10,000 from your bank account.

The voice experience also needs to be interoperable and consistent — the absence of both creates a bad user experience and too many stutter-steps between devices and apps and operating systems that consumers say wastes time without the certainty of a good outcome.

Right now, more Apple users than Cupertino would like to admit walk into their homes and talk to Alexa to do a variety of things like make a grocery list, confirm the replenishment order, lock the back door, call Mom or Dad, or get the next day's weather forecast.

As car OEMs take back control of the cockpit and throw BigTech out, voice inside the vehicle will become a standalone experience — separate from the smart assistant that opens their garage door, turns on the lights, builds grocery lists and places an order, checks who's at the door, orders a pizza for delivery and an Uber for a ride to the airport the next morning. What may sound like a great idea for the car brand may very well end up being a bad experience for a consumer who doesn't want

Table 1: Different ways consumers have used voice technology in the last 12 months

Figure 2
How consumers use voice technology
Share voice_forweb2 *sed voice technology in select ways in the last 12 months*

	Number of US consumers	Share of US consumers
Used a voice assistant built into my smartphone	100.6M	38.9%
Used voice-activated device	68.5M	26.5%
Used a voice-enabled app on my mobile device	64.3M	24.8%
Called a company's call center and used its voice command system	61.3M	23.7%
Called bank and used its voice command system	45.6M	17.6%
Used voice capabilities built into my car	39.0M	15.1%
Used voice prompts on my wearable device	30.7M	11.9%
Used voice-enabled capabilities on my laptop or desktop computer	28.4M	11.0%

Source: PYMNTS Intelligence
How Consumers Want to Live in the Voice Economy, April 2023
N = 2,939: Complete responses, fielded March 6, 2023 – March 30, 2023

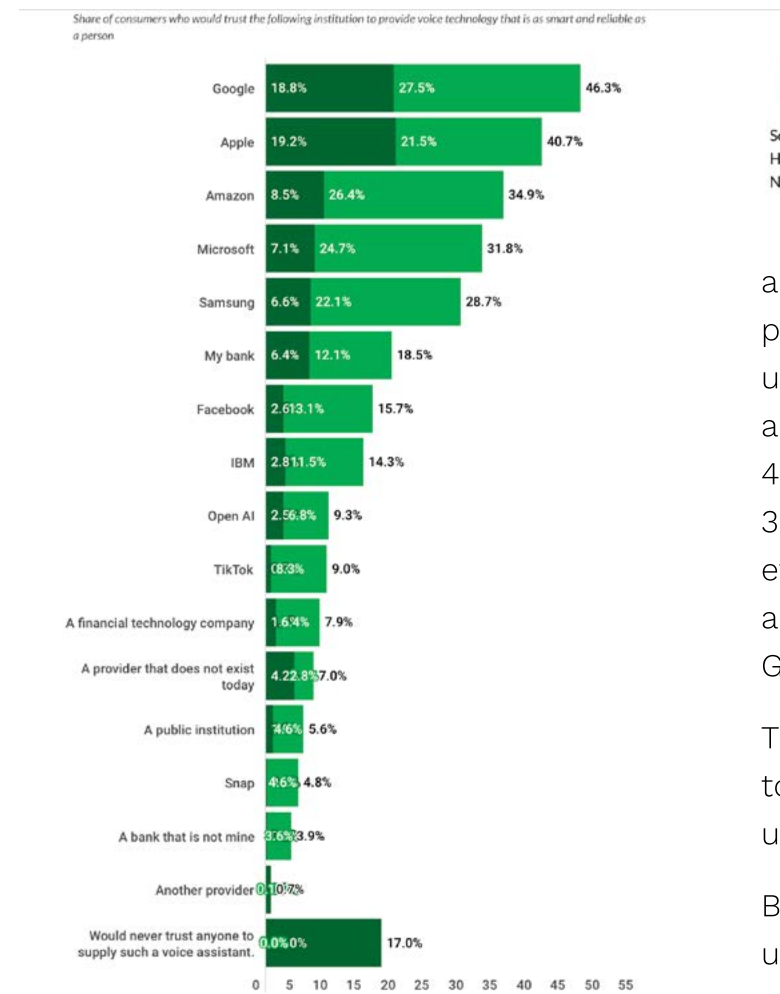
one more digital environment to manage.

Voice-enabled speakers are only as smart and useful as the apps they are integrated with and the datasets they are trained on. Some voice providers operate only in certain categories, like restaurants, or power voice for only specific brand apps — or only work when a car pulls up to the drive thru window.

There's also a lot of confusion among consumers about what a voice-enabled experience is, and therefore who's really delivering it.

Is using my voice asking Siri to dial my bank so that I can talk to a person and get my banking or payments handled a voice-enabled experience or a hands-free version of a mobile phone call? More than half of consumers who said they used voice to open an account or make a payment really just used their voice to ask Siri to dial their bank, where they spoke with a real person.

The result today is voice ecosystem — and voice experience — that is a hodgepodge.



Institution that trust the most
Trust but not the institution that trust the most

Source: PYMNTS
How Consumers Want to Live in the Voice Economy, April 2023
N = 2,939: Complete responses, fielded March 6, 2023 – March 30, 2023

Figure 3: Who do consumers trust to deliver voice technology that is as smart and reliable as real people?

THE VOICE ECONOMY PLAYING FIELD

Who enables the smart, connected-voice experience that 168 million consumers would like to have? That is a work in progress.

Today most consumers think it will be the BigTech player whose handset and operating system are in the palm of their hand, since is how they use voice today. Apple and Google are almost tied for the top spot at 46% and 41%, with Amazon third at 35%. Interesting, perhaps, is that even those who use Amazon apps and speakers today think Apple and Google will dominate.

That's largely because consumers today think of voice as a feature they use on their phone.

But that may not be how things end up.

Like the mobile economy has evolved, the voice economy will likely come down to a few dominant operating systems with apps that are interoperable across devices.

There could be new generative AI-powered plus voice-focused OS — or there could simply be new versions of iOS and Android. I think here is

an opportunity for new operating systems to flourish such as Alexa, which already has hooks into more than 100,000 connected devices and has been sitting in people's kitchens and telling them corny jokes for nearly a decade.

Regardless, innovation will happen at the application level, and innovators will compete to create novel experiences for consumers. Voice operating systems and platforms will have embedded identity and payments credentials at the core. They will simplify the complexity of the hodgepodge that is the voice experience today.

But unlike the mobile economy, voice standards will enable a consistent way for any type of connected device to integrate to any voice operating system, making voice an integrated, ambient part of the environment in which consumers live. Mobile devices will remain important, but over time become less dominant as the consumer's voice interface. Any device will be capable of initiating commerce and accessing information anywhere a consumer is and at any time with any device.

That's what makes the modern-day version of the voice economy so thrilling.

And the voice economy winners will be those who can operate cross-platform, cross-device — with commerce or the potential to embed commerce into the operating system a key requirement.

Whether it will be one of the BigTech players that have a strong voice presence today or someone who's working under the radar remains unclear as things stand now. Lots of things can happen in the next five years.

The sudden emergence of Open AI and Chat GPT has stunned the world with its powerful generative AI engine and massive adoption unlike anything seen in modern times, serving as a reminder that players who can change the world may be hiding in plain sight — until they suddenly aren't.

In fact, 7% of consumers also believe that the voice innovator is someone whose name we don't yet know.

WHAT'S NEXT

Consumers have bought into a future where voice and AI are integrated into their day-to-day — ambient and

always on — largely because voice is not an entirely new consumer technology. Amazon's Echo will be ten years old next year. Siri has been part of the Apple OS since 2011. Hey Google has been around since 2016. Consumers use their voice to order at drive thrus. Chatbots proliferate across banking, retail and financial services. People have been talking to call centers ever since there was a telephone and a customer service department.

They may find today's experience a somewhat disappointing jumble at times, but they see its potential for making the connected world in which they live right now even more connected, more convenient and more secure. More conversational.

Voice pioneers will lead the way. The 44 million Americans who already trust voice enough to transfer money or open a new bank account will endure the frictions and push the voice economy ecosystem to get better.

Before you roll your eyes and say, "What do consumers really know," consider this. PYMNTS research finds that these are the same consumers who predicted COVID would last until 2022 well before epidemiologists did — and have said repeatedly that inflation will persist until late 2024 well before analysts and the Fed acknowledged that a recession is coming, and 2% inflation targets remain elusive.

Consumers have a track record as reliable predictors of what's likely to happen and when.

That's because they're pushing every facet of the economy to meet them where and how they want to shop, buy, pay, have fun, work, travel, stay well, communicate with others and live in their homes.

Like the voice economy of 200,000 years ago, the modern-day voice economy will be ubiquitous, personalized, easy to use and reliable.

Like every other innovation in the digital age, it is the consumer who will bring us into the future and shape it, increasingly, into one where voice becomes an important part of how they live in a connected, digital-first economy.

Like the internet and the app economy, innovators will lay the tracks and correctly anticipate what consumers want.

May 22, 2023

WHY GENERATIVE AI IS A BIGGER THREAT TO APPLE THAN GOOGLE OR AMAZON

The conversation over the last three years about the shift to digital has been largely about the share of consumers who once did most things in the physical world and who now do more of those same things online.

The more interesting conversation is how this shift to digital has reframed the competitive landscape.

New tech has moved the application of digital beyond smartphones and apps to new ecosystems that blend the physical and digital worlds and can be accessed by a variety of connected devices, including cars and voice-activated speakers and earbuds. Many traditional industry sectors are being disrupted by these digital competitors, some new and some old, who appear to have come out of nowhere to take share — and grow it.

For instance, airline CEOs never gave a minute's thought to Zoom, Teams and similar apps as competitors for the business traveler's dollar until client, prospect and staff meetings shifted almost exclusively to online video channels during COVID. Those channels remain a CFO-friendly alternative to frequently hopping on a plane to visit clients or staff in person, reducing both business travel expenses and airline profits.

Car OEMs never thought of Amazon, Apple, or Google as competitors until they saw the opportunity to monetize the cockpit and the user experience while in the car and decided they should create their own car-centric apps and ecosystems to fight back.

Grocers used to think of Whole Foods as their only Amazon grocery competition — and with its small share and Whole Paycheck reputation, they didn't worry too much. Until Amazon Subscribe & Save put a noticeable dent in center-store sales, and now has 7.1% of U.S. consumers ordering products and having them delivered for free this way, according to PYMNTS data.

Then there's OpenAI's ChatGPT.

Its public launch with GPT in November is a disruption like no other we've seen in the modern internet age. Unlike the digital competitors who may have been hiding in plain sight, slowly chipping away at traditional players' market share, ChatGPT came out of nowhere, it seemed, with the potential to change the world.

In a matter of six months, GPT has monopolized nearly every conversation among CEOs, boards and investors about whether it's a threat, an opportunity to fast-track a new way to do business, or both.

Ever since, news reports suggest that Google and Amazon have pinned their respective GPT-anxiety meters now that OpenAI, with Microsoft's support, has created a new way to build and scale computing's next big thing.

I'm not so sure.

For one thing, six months since OpenAI's debut is much too early to predict winners and losers, especially since we know that both Google and Amazon have invested heavily in AI and LLM for many years.

For another, I don't think that winners — at least not the Big Tech winners — will be crowned because they are successful in disrupting search, but because they have been successful in disrupting how search is monetized using large language models.

Winners won't try to force-fit the old cost-per-click model into these new innovative content platforms, but create new models that embed commerce into search and monetize that conversion.

It's a model that potentially favors Amazon and Google more so than Microsoft, given the existing scale of each of their platforms to consumers and businesses globally — the hundreds of millions of tokenized and embedded payments credentials that can enable a transaction and complete a sale today and their cross-platform access to the billions of consumers with smartphones.

And one that puts Apple at risk.

Cupertino's stance on privacy and user data, and its closed ecosystem, may have Apple winning the hearts and minds of consumers but losing the Generative AI war, despite having a 58% share of the U.S. smartphone market to Android's 42%. Unless something changes, Apple may end up playing the role of smartphone, mobile OS and App Store, just like it does today — with an App Store that comes chock-full of everyone else's GPT app innovations.

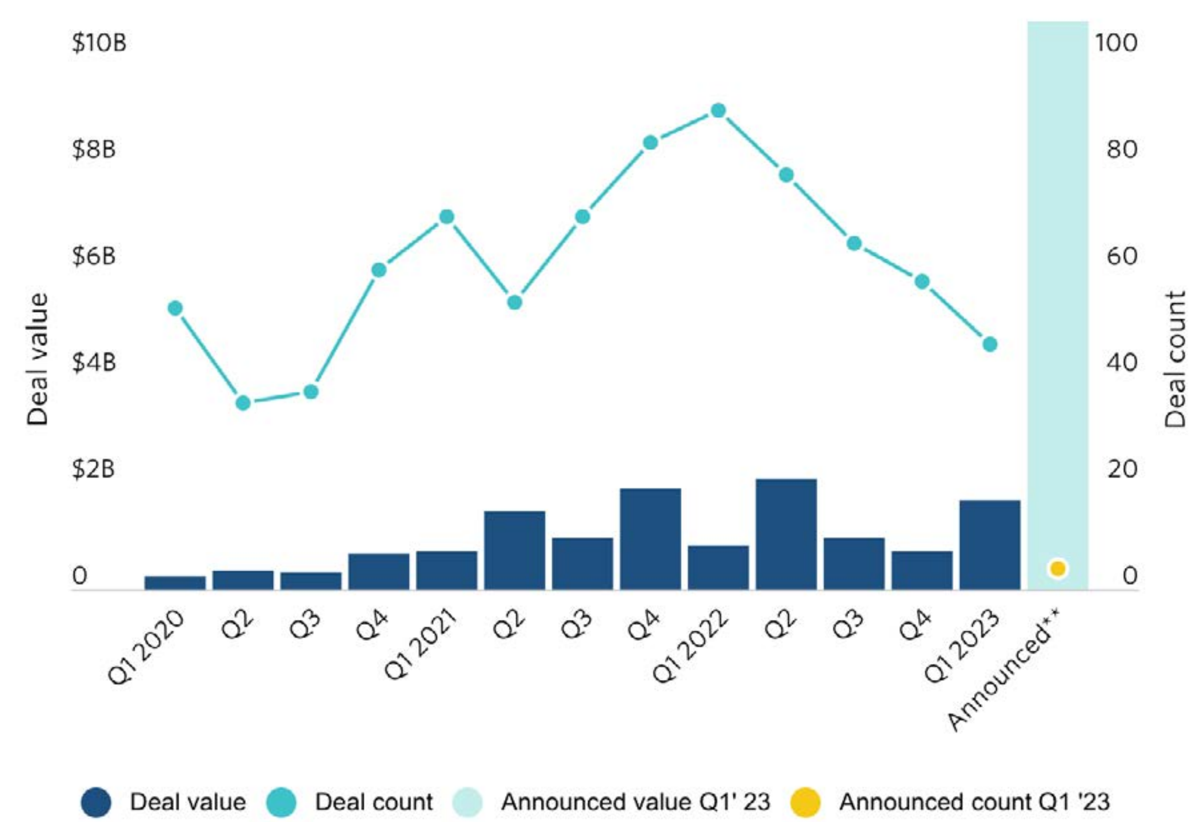
It's already happening. OpenAI's GPT app for iPhone users is now available in the App Store.

EVERYONE'S 15 MINUTES OF GPT FAME

You know the ChatGPT story well by now.

UBS says it's the fastest growing consumer application of all time, capturing 100 million users in just two months with 28 million visits a day to its site by the end of January. Pitchbook reports that in Q1 2023, $1.7 billion was invested in 46 Generative AI startups, with another $10.68 billion announced but not yet closed. VCs report that seed rounds for GPT startups can go as high as

VC deals for generative AI



Source: PitchBook data
Geography: Global
*As of 4/1/2023
**Includes Microsoft's reported $10 billion investment in OpenAI

$15 million and start at $5 million. Those are very big seeds.

Countless press releases tout the various applications of GPT tech to businesses — PR newswire says it has published about 150,000 of them since January. The CE 100 Index, the PYMNTS stock index of the 100 listed companies that are leading the transition to a more digital, connected economy, has seen a boost as companies announce the integration of GPT models into their businesses and the market takes notice. Personally, I have never seen more announcements about company products that start with the prefix "AI" — even for companies that I know that have always used AI as part of their tech.

AI, especially Generative AI, has become the ticket for everyone's 15 minutes of fame.

THE BIG TECH GPT LANDGRAB — GOOGLE

Nowhere has the GPT spotlight shone brighter than on Google and Amazon. Microsoft's $10 billion investment in OpenAI immediately set off news accounts about Bing finally being able to gain share in search — and the advertising dollars it generates.

Whether that's wishful thinking or reality remains to be seen.

ChatGPT isn't exactly Microsoft's first attempt to use AI to make Bing more competitive. It has invested billions in Bing since its launch in 2009. There's not much to show for any of those dollars spent — at least not so far. Google's search share in the U.S. remains almost 15 times that of Bing's (Google at 89% to Bing's 6.3%).

For Microsoft and Bing to win, they must convince users — tons of them, and pretty soon — that it is better, and then they must show merchants that they can drive more sales their way. And then convince Apple and Samsung to ditch Google for Bing to power their search. That's probably not happening anytime soon.

That said, Google has cause for concern when it comes to search and and how to monetize it — which is its giant cash machine today, and largely the result of advertising. Q1 2023 results showed a continued decline in ad revenue from search as

the combination of Apple's privacy blockers and economic conditions throttled results. Google, it was reported, "nervously" rushed out an announcement for Bard, its Generative AI platform, on February 6, 2023 to arrest market concerns that Microsoft might out-search the search giant. Of course, this wasn't really news — Bard has been in development at Google since 2015.

Understanding Google's plans for commerce using Generative AI is perhaps even more fundamentally important than how it will use Bard to make search more efficient, authentic and reliable. Google has been more cautious in its public statements about Generative AI to manage expectations while Bard gets smarter and better behaved.

But the Generative AI ticket that Google needs to punch is getting people to start more of their product searches there. Google may have more search traffic overall than Bing — but depending on whose source you believe, anywhere from half to 65 percent of searches for products start not on Google, but on Amazon.

That's not news or a new fight for Google. Nor are its aspirations to become a payments and commerce force. Over the years, Google's focus has been on using Chrome to make checkout easier with form fill and capturing and storing tokenized payments credentials there to expedite online checkout. It's been less successful in monetizing the GPay and Chrome ecosystem in other, more proactive ways.

The story that's yet to be written is how Bard and its Generative AI models are pointed at moving Google away from an ad-based search platform to a contextual, commerce driven ecosystem — how Google will use Android to distribute Bard and its Generative AI derivatives, and how Cloud will embed those capabilities into other applications and use cases.

THE BIG TECH GPT LANDGRAB — AMAZON

Then there's Amazon. The Economist wrote in 2019 that AI has been a core element of Amazon's strategy since 1999, when Jeff Wilkie joined the firm. The strategy then was to use data and AI to improve Amazon's operations and logistics to the benefit of the consumer. Of course, no one would recognize what they were using back then as AI, given the rapid development in that area. But AI in some form and voice are the DNA of its Alexa voice operating system. According to a study of nearly 3,000 U.S. consumers conducted by PYMNTS in April, 60 percent of U.S. consumers want Alexa to become even smarter as the idea of a smart virtual assistant to simplify the complexity of the daily grind becomes more appealing.

Also in April, Amazon announced the rollout of a suite of Generative AI tools. In addition to using Generative AI to make product searches on the Amazon marketplace more efficient, Amazon is embedding Generative AI tools into AWS so that businesses can build and scale their own GPT use cases using its Bedrock platform. Amazon's expansion into other connected ecosystems like healthcare, grocery, restaurant delivery, streaming services and gaming (remember, it owns Twitch) gives Amazon a number of adjacent ecosystems and content to enable with its Generative AI capabilities.

More recently, Amazon announced that its AI-powered voice assistant, Alexa, has taken a step closer to being Alexa everywhere a consumer wants to take her. In addition to new Echo devices with and without screens suitable for home use, Alexa is now available in earbuds, glasses (not smart glasses, but those with sensors that allow a noise cancelation conversation with Alexa), and a USB plug that takes Alexa inside the car, whether or not the car OS is powered by Alexa.

Amazon Pay is both a payments and identity credential that powers conversion on the Amazon platform, and increasingly off it, as more merchants participate in its Buy with Prime program. Amazon Pay has reinvented store checkout with biometrics and no-checkout checkout in its smaller-format grocery stores.

As a commerce platform accessible to anyone with a smartphone and the Amazon app, it's easy to declare Amazon the player with a running head start to connect search with commerce, since that's its business today. Unlike Microsoft, Google and Apple, it is a commerce platform with embedded credentials and a

ton of data that it can use to make its models smarter and results more relevant to the user. Even AWS, which reported slowing growth, is likely to have a new lease on life as companies clamor to leverage its Bedrock platform and other Generative AI tools to embed LLM into new experiences for their end users.

What Amazon doesn't have is any control over the mobile operating systems and handset OEMs that host its app — and neither does Microsoft. Amazon's Fire Phone was a disaster, mostly because it wasn't better than — or even as good as — existing products that users liked and used. The decision to fork Android made it more challenging for developers who needed to create three versions of their apps, instead of just two — and for a device that had few users. The user/app developer virtuous circle never got off the ground.

Unlike Apple's iOS and Google's Android, both of which can (pretty much) force their apps on the phone because they own the OSs, Amazon depends on users and user downloads to claim real estate on those home screens and dictate how it is used. That hasn't been much of a problem, so far — but it could become one if Apple and Android decide to use Generative AI to impose new rules that govern how they appear and how much it may cost to operate there.

THE BIG TECH GPT LANDGRAB — APPLE

Then there's Apple. We have three data points on Apple's current market position and thinking on Generative AI.

First, during Apple's Q2 2023 earnings call earlier in May, there were the usual vagaries when asked about Generative AI and Apple's plans. Analysts didn't probe further when told by Tim Cook that Apple is "thoughtfully" considering the application of Generative AI and won't comment on product roadmaps.

Second, it's been reported that Apple has posted 100 job openings for engineers with Generative AI experience. Although we don't have any definitive word from Apple HQ on Generative AI, it seems that — of the current crop of Big Tech players — Apple may be the one scrambling the most because they are the furthest behind.

Three, Apple seems fine with having Generative AI apps in the app store.

It's possible that one of the reasons that we may not have heard much from Apple on the topic is because it is a tough one for Apple to navigate.

Apple is no AI novice or lightweight. It's neural network uses AI — and its own AI chip — to improve the iPhones' computational efficiencies so that users have a better experience. But for Apple to compete in the Generative AI space, it needs loads of data. Apple has made a point of stating that it only collects enough data about a user to maintain their accounts. So, it doesn't have much today, other than what people search for in the App store. And that's not much.

Collecting more data isn't straightforward. Apple would have to figure out a way to thread the needle, balancing the image of the platform that protects users' privacy and doesn't collect and monetize their data with a desire to be a player on the Generative AI stage.

And to be able to do that on a global scale, where iOS share is dwarfed by Android.

Also not straightforward: getting consumers to think of — and use — Apple as a commerce platform, which also includes using Apple Pay to pay for purchases. The latter has been a struggle for Apple both on and offline. Going on almost nine years after its launch, PYMNTS data shows that cards at checkout in the store are used almost 31 times more than Apple Pay, which accounts for a tiny 2.1 percent of retail sales. Apple Pay's growth over that time has averaged about .25 basis points per year.

It's also not obvious that consumers think of Apple as a commerce platform, even though they use the iPhone to access apps that connect them to commerce. As commerce becomes more distributed across connected endpoints that cross platforms and operating systems, smartphones will become one of the ways — but not the only way — in which consumers interact with apps and ecosystems. Those interactions could even become device-agnostic over time — where Apple, as a closed

ecosystem, has built an inherent disadvantage.

It's tricky. It may mean that Apple is relegated, perhaps not happily, to playing host to GPT apps in the app store — at least for the foreseeable future. And maybe being the de facto regulator to make sure harmful GPT apps don't get loose.

WHAT'S NEXT

Many of you reading this have played around with GPT and are amazed by its power and potential. Me, too. You may even be a little bit scared of how many industries, including your own, will be changed when these large language models are more refined.

I decided to use it to help with this piece. Not in writing it — which would have saved my Sunday and produced something not nearly as brilliant — but in the image that I used to accompany this piece.

I put into DALL-E a few prompts: disruption, technology, change, Big Tech, future. What you see is the best of what was generated after several iterations — but at least it only cost me only a few cents and a few minutes to produce. I know it's not the greatest image.

Most interesting about the selection of results was that most of the images depicted disruption as rearranging the letters used to spell the word disruption. Disappointing, since rearranging words and spelling seems an elementary interpretation of the concept — and a rather underwhelming way to depict the future of a technology that holds such great potential.

June 12, 2023

FINDING THE DIGITAL ECONOMY'S PRODUCT MARKET FIT

I was recently asked for my advice on a new B2B network aimed at solving a big problem for a segment of small business sellers. The network was built on the blockchain; the design was very clever, well-developed and thoughtful. The consensus from those asking me about it was that it was a winner.

My feedback was that its success was a longshot, and I was dubious.

My advice had little to do with the tech the team was using, the talent of the team, their passion for finding a solution, the significance of the problem or its clever design. In my mind, the innovation failed to address the three things that any new solution must overcome to deliver a successful and profitable outcome in a timeframe that is relevant for the business:

- Is the Friction big enough to create enough value to sustain a business — and an investment?
- Is that friction big enough to overcome the user Inertia to move away from the status quo?
- Is the Time required of the user to make the change consistent with the timeframe needed to solve their problem — and is the new solution available in a Timeframe that is relevant for the user to gain new efficiencies?

In this case, the friction was big enough to build a new solution to solve. But the solution, as designed, required that all participants — who in this case were both SMBs and multinationals — move to something entirely new and unproven…and all move at the same time. Network economics were still TBD, which was important given the profile of the SMB user. The tech had not been tested at scale, something that the multinationals whose presence was necessary for the SMBs to be interested would need to see. The SMBs who were the target of the innovation — and who were mostly unsophisticated users of technology — had to learn an entirely new system workflow and trust it.

I didn't doubt that seven or so years into the future, this network had the potential to be meaningful, but the SMBs with the problem needed a solution more immediately. I posited that the big risk was the classic challenge of getting an entirely new network off the ground, and that other less complex ways of solving this problem would likely emerge sooner. If that were to happen, the outcome could eliminate or minimize the need for such an innovation — time and technology would have moved on.

> THE FIT FRAMEWORK CONVEYS THE COMPLEX INTERDEPENDENCIES **BETWEEN FRICTION, INERTIA, AND TIME IN IDENTIFYING, BUILDING AND SCALING INNOVATION.**

My assessment wasn't just my off-the-cuff reaction. It was based on the framework that I developed three years ago when examining the dynamics associated with the rapid shift to digital by consumers and businesses during the pandemic. I called it the FIT framework to convey the complex interdependencies between friction, inertia, and time in identifying, building and scaling innovation.

Take, for instance, businesses' move from paper checks to digital in the last several years.

Before the pandemic, making that change was a nice-to-have business objective, but not a sword worth falling on when when CFOs built their budgets.

Priorities shifted once CFOs had to endure the friction of signing checks during the pandemic. One too many trips to the homes of their Heads of AP every week to sign checks at the kitchen table or in their driveways forced a new way of thinking.

Suddenly, the inertia that kept "good enough" in place for years met with a big enough friction, and those controlling the purse strings decided digital was in and paper was out. Ever since, we have seen CFOs accelerate their shift to digital processes, move away from paper checks (although too many of them still remain), rewire the office of the CFO and create new efficiencies.

FIS GETS FIT

As it turns out, the FIT Framework is a useful way of examining the market and competitive dynamics of the broader shift to a digital, connected economy.

The news broke last Friday afternoon that FIS acquired Bond, a FinTech platform that allows businesses to offer branded debit and credit products to their end users. Bond was founded in 2019 by a group of serial entrepreneurs and is reported to have raised $42 million since that time. Neither FIS nor Bond has publicly commented on the news.

What's been written so far is speculative and fairly basic, recounting details allegedly taken from an internal memo shared with a news outlet and then mostly speculating about the financial circumstances that could have driven the acquisition.

Students of the FIT Framework will see the rationale for this acquisition immediately.

The source of the Friction for FIS seems obvious: an inflexible monolithic core banking platform at risk from the capabilities of incumbent rivals, modern payments players and FinTechs that are all capturing more and more of the payments and banking economics instead of FIS. That friction was felt by FIS as well as by the banks it serves who want access to embedded banking products to better serve their customers.

We also know that there's nothing like a little competition from every corner of the payments landscape to overcome the Inertia to change.

And there's nothing like Time when it's the enemy and not your friend, because moving fast means buying rather than building a nimble, modular, modern, embedded Banking-as-a-Service infrastructure to keep bank customers competitive. And to expand their market opportunity to the FinTechs in search of an embedded banking solution, with the backing of a massive global player with bank relationships that can be leveraged to their advantage.

FIS likely saw in Bond's tech the ability to power branded embedded banking services at scale, making them available to the customers of the thousands of small banks and credit unions who use the FIS core banking platform. And a whole lot faster and cheaper than FIS could otherwise, even through a partnership with Bond or a similar Banking-as-a-Service FinTech. An acquisition makes Bond an embedded part of the FIS transformation to a modular, agile platform capable of powering a myriad of connected economy use cases using embedded finance.

EVEN IF BUSINESSES STRATEGIES ARE FIT, **THE BUSINESS NEEDS TO CONSTANTLY EVALUATE THE DYNAMIC NATURE OF THE MARKET AND THE EMERGING THREATS FROM COMPETITORS KNOWN AND UNKNOWN.**

Now the hard work of executing against these capabilities begins. The payments and connected economy landscape is evolving quickly, but incumbents don't always keep pace, even with fast-moving, hard-charging FinTech entrepreneurs inside of the company leading the race. Part of that pace is set by the requisite compliance, regulation and governance that comes with being a publicly listed company in the payments and banking space. But part of that is also culture and process, basic things like getting access to systems and data and aligning key stakeholder incentives across the organization.

Even if businesses' strategies are FIT, the business needs to constantly evaluate the dynamic nature of the market and the emerging threats from competitors known and unknown. On Friday, the conversation about FIS was as an "incumbent" bank processor that wants to spin off its merchant business. On Monday, the conversation is about its potential as a global Banking-as-a-Service platform, distributing those services across thousands of banks and FinTechs, at scale.

NOT EVERYTHING IS FIT FOR PURPOSE

In retrospect, one could have seen the implosion of Maersk's TradeLens blockchain Trade Finance network coming, maybe even before it spent many years and hundreds of millions trying to ignite it.

There is no doubt that tracking cargo across the many transportation modalities necessary to deliver a product to a buyer is a fragmented and complex undertaking, no thanks to the paper-based systems, processes and payments that support it today. Maersk, a 119-year-old integrated cargo and logistics business, decided that it was time to digitize the maritime global logistics process and began working with IBM in 2016 to do that. The result was a blockchain network capable of answering two key questions, accurately and in real time: Where is my shipment, and when will it arrive? TradeLens was positioned as an open and neutral platform to digitize and streamline the maritime global supply chain.

Early signals seemed promising — 94 industry participants signed on, and so did 20 ports. Press releases touted the appetite for industry collaboration around a common friction; the will to change seemed evident.

Then came the friction.

There was paying for and allocating the resources needed to support the private blockchains necessary for each participant. There was the realization that all 94 participants had to put all their data on a new and unfamiliar technology to get the full value of the network. The project that had already taken six years required even more investment to build and scale and receive the benefit of being a part of it. Participants lost confidence that they would get a suitable ROI for their participation and began to question the value of their involvement. That started the classic platform death spiral down. IBM and Maersk eventually pulled the plug on TradeLens in December of 2022.

FRAMEWORKS ALLOW EVERYONE TO CRITICALLY DECIDE **WHETHER AN IDEA THAT LOOKS CONVINCING ON A POWERPOINT SLIDE SOLVES ENOUGH OF A PROBLEM TO GET ENOUGH OF THE RIGHT CUSTOMERS TO AGREE.**

TradeLens' failure to ignite went beyond ignoring the basic principles of the FIT framework — it ignored very basic platform design and ignition principles. There was a collective interest in solving a massive industry friction, but not enough of a financial and business incentive to create the critical mass of players whose data was key to network's value. Without their involvement, the platform had little value to any other participant. In the meantime, well-funded FinTechs and FreightTechs emerged with more scalable, reliable solutions that required less time and resources to solve for the global logistics issues TradeLens was established to provide.

GETTING TO PRODUCT/MARKET FIT

So, here's where I'll get a little preachy.

No one can ever be certain that a good idea will turn into a great company, great product or great platform that throws off revenues and profits. What is pretty certain is that the original business model that launched the idea will be morph over time as market dynamics shift. And it will always take more time to build momentum than the deck that got the funding or the green light said it would.

Frameworks can help create more certainty.

Good ones are built on data and past outcomes to help innovators objectively examine the likelihood of success before lots of time and money is spent. Frameworks also allow everyone to critically decide whether an idea that looks convincing on a PowerPoint slide solves enough of a problem to get enough of the right customers to agree.

June 26, 2023

WILL 99 CENTS BURN TOAST AT THE POS?

After spending the last 20 minutes online deliberating over what you really need to round out your summer wardrobe, you're ready to check out. You review your basket, apply the promo codes to get your discount, and check the total before clicking the buy button. It's then that you see a line item: Sales Taxes and Fees.

Curious, you click through, since the "and fees" part of that line item is new. That's when you discover that a surcharge totaling 5% of the order has been added by the carrier contracted by the merchant to deliver the package and is paid to them. The carrier is a familiar name, but a brand you have no direct business relationship with. The explanation for the fee is to "fund investments in better serving" the merchant you just shopped.

Mildly furious, increasingly annoyed and extremely confused — since you have also been charged $12.95 to ship the package — you complete the purchase because you have no time to start the process all over again at another merchant in order to save about $7.25. If you're really annoyed, you might call or text the merchant to ask what's up. That's when you learn that this isn't anything the merchant you just shopped had control over — it is a requirement of doing business with the carrier, and they say they are stuck. After telling the merchant that's their problem, not yours, and that they should find another carrier or negotiate better, you tuck that bit of information away for the next time you are shopping online so that you can avoid that merchant.

This scenario is essentially what the customers of the 40,000+ restaurants who use Toast as their POS provider may start to experience in July.

That's when Toast will add a 99-cent surcharge to the consumer's bill for online orders from one of Toast's restaurants. The charge kicks in on any order totaling $10 or more. Even though 99 cents sounds cheap, as a percent of the order it can be material. On a $20 order a 99-cent surcharge comes to about 5%, like another sales tax. This surcharge is hidden in the fine print, but it clearly states that the fee is paid to Toast and will support its ongoing efforts to improve their restaurant services.

With its tiny-sounding 99-cent-per-order fee, Toast committed two of the most egregious cardinal sins of platform dynamics.

First, failing to recognize who its customer is and who really pays its bills — and going to great lengths not to tick them off.

And second, creating a situation that could rev up platform dynamics in reverse — which can happen very quickly. Once the customers on the side of the platform who pay the bills lose trust, they look for alternatives. The names for this — doom loop and death spiral — say it all.

BURNED TOAST

Toast is a software platform that enables payment processing along with a raft of other solutions and features to help restaurants run their operations more efficiently. Restaurants sign up for Toast and pay them a fee. Toast's customer isn't the end consumer who eats at the restaurant or orders food online — it is the restaurant that takes the orders, prepares the food, delivers the service and is paid directly by the consumer for that service. Toast is largely invisible to the diner.

What's unusual is that Toast, a B2B platform whose customer is the restaurant, is going around the restaurant and charging the restaurant's customer — the consumer — the fee. And Toast can do this because it controls the POS for those restaurants.

So, when Toast decided to get in the middle of the restaurant/customer relationship without their permission — and worse, decided to impose a surcharge directly to the restaurant's customer without their permission, it also shifted any potential consumer backlash about that fee to the restaurant. The restaurant has no ability to opt out — or at least not at the time I wrote this on Sunday — but has all of the responsibility to explain it to their customers and decide how to handle it.

It's also quite possible that despite the fine print — who reads that? — consumers will assume it is the restaurant who decided to tack on the extra fee. Even if consumers make the Toast connection, it's hard to imagine them having much sympathy for an $11B firm that needs to fundraise via a surcharge to wrangle the money needed to up its game.

Restaurant operators have taken to social media to express their displeasure. What could deepen that displeasure further is the reality that it may be up to the restaurant to absorb the cost to keep diners from defecting. Imagine the restaurants' ire if it turns out Toast was operating under that assumption as part of its surcharge-path-to-profitability strategy.

PASSING THE RESPONSIBILITY — AND THE HAT

The Boston Globe first broke this story last week. Toast is a Boston-based FinTech that has built an innovative, vertically-integrated restaurant POS platform. According to the Toast website, it supports 40,000+ restaurants with 85,000 locations on its platform and went public in September of 2021. According to reports, the company processed $27 billion in gross volume across its 85,000 restaurant locations in Q1 2023.

Here's the rub — and presumably their rationale for the fee.

In the ten years Toast has been in market, it has failed to turn a profit. That's neither a shocker nor a news flash. Before mid- to late-2022, it was FinTech-fashionable to lose money.

Like many of its FinTech IPO compadres, it has also seen its stock price hit the skids since its public debut in 2021: down by 61%. Despite the massive comeback in the restaurant and hospitality space, Toast stock has remained relatively unremarkable.

The restaurants that are part of the Toast platform are stuck navigating the market dynamics introduced by the 99-cent surcharge — namely protecting their own margins and the risk that their customers defect to surcharge-free establishments when ordering online.

There are a few headwinds these restaurants will face.

Consumers don't like paying merchant surcharges, particularly not the first time they are presented with one.

For decades, card networks prevented merchants from adding a surcharge to cover their processing fees when consumers pulled out a credit card at checkout. They retreated as a result of settling or losing lawsuits. Today, only two states and one territory prohibit merchants from surcharging, and POS systems now allow merchants to activate that option more easily.

According to PYMNTS research, more than 80% of customers have paid a surcharge to cover credit card processing fees, but more than half of customers (65%) are at least somewhat likely to switch to a merchant that does not charge extra for using their preferred payment method — with 44% of these consumers very likely to switch merchants. Not surprisingly, consumers with more payment options are less bothered by surcharges since they have other payment options to use when presented with a surcharge on a credit card transaction; those who don't have a higher propensity to be dissatisfied. More of those consumers (45%) also say that they would seek other options in the future.

Also not surprising: even though merchants can charge that surcharge, the vast majority don't. PYMNTS data shows that approximately 8% of consumers were asked to pay a surcharge when they visited a restaurant, which suggests that few restaurants add surcharges to credit card transactions when the bill for service is presented.

DEATH BY A THOUSAND CUTS

One of the great things about the evolution of payments in the digital economy is the ability to monetize features and services in new ways. Digital makes it easier for new services to be developed and deployed. "As-a-service" business models help to expand access to many who want and need critical services and for providers to be paid when the services are consumed. Billing practices are more flexible, fluid and capable of aligning consumer needs with payment options.

"Being nickel and dimed" is a century old idiom used to explain the annoying accumulation of tiny little fees over time that become big expenses that never go away. It's also the basis for the war on junk fees that the White House and the CFPB are waging on merchants whose hidden fees can sometimes turn a $150 purchase into a $205 purchase with taxes, service charges and other "as-a-service" fees tacked on.

Behavioral economists and marketing scientists say that drip pricing — where the fees get added on at the end of the shopping journey — works because consumers (like the one in my hypothetical example) have spent a ton of time getting to checkout and don't want to start all over. That's why some merchants continue to do it. What those studies ignore is that many merchants choose not to do this because they know that may be the last shopping journey the consumer has with them.

My sense is that increasingly, consumers are getting tired of being "nickel and dimed." Whether it is being charged for returns or paying a surcharge tacked on for special handling after the product and shipping services were already paid for, consumers are starting to push back against the "nickel and diming" they perceive now when engaging with businesses. For restaurants in particular, tipping now is regarded as an embedded cost of the restaurant experience — not a surcharge per se, but part of the expense of eating out. PYMNTS data show that nearly all consumers (97%) tip and generously when dining in a restaurant where they are served and a little more than half (53%) also tip at QSRs. Essentially adding another “tax” to the online ordering experience may be a breaking point for some

Before Toast went public and during the dark days of COVID, Toast slashed 50% of its workforce while investing in several initiatives intended to help restaurants weather the storm. Like other POS platforms, Toast leaned into the online ordering trend by helping restaurants compete with the aggregators, capture better economics and keep the customer relationship. The commission-free online ordering experience is promoted as a way for restaurants to grow their first-party online business.

Now it’s possible that Toast’s 99-cent decision could unravel all that goodwill — and potentially the viability of its entire platform.

The money is material — but that’s not why it could become a fatal flaw. When Toast went straight to the restaurant’s customer — the consumer — to charge a fee paid by the consumer to Toast, it violated the restaurant’s sacred trust. Restaurants might be left to wonder what’s next — and whether there are more things planned that might leapfrog the restaurant and go straight to the consumer. It’s platform economics 101 to never, ever do that.

Even if Toast comes out this week and says, “No, never mind, we heard you and we messed up,” that doubt will likely remain. Whether that’s strong enough to drive Toast restaurants into the arms of the many competitors who are now very likely reaching out to them is a chapter yet to be written.

In the meantime, Toast might want to have a Plan B for how to pave its path to profitability.

July 17, 2023

FEDNOW'S FUTURE AND WHAT THE TRIPLE CLOCK THEORY SAYS ABOUT IT

Four days from today, the Federal Reserve's instant account-to-account payments rail will go live. FedNow's launch on July 20 will bring the number of real-time rails in the U.S. to two. The first real-time rail to go live was RTP®, operated by The Clearing House, in 2017.

Judging by the barrage of press releases and PR pitches received by PYMNTS over the last several weeks, the launch of FedNow is to payments what the Red Sox winning the World Series in 2004 after an 86 year drought was to baseball: an historic milestone that was a long time in coming.

In many ways, July 20 begins the countdown to ubiquitous instant account-to-account payments in the U.S. TCH with RTP® has been live for six years and counts 274 financial institutions and 65% of U.S. deposits connected to its rail as important milestones of its own. But as even TCH and its member banks will admit, traction around use cases has been scattered, the number of transactions low. TCH with RTP® hasn't yet achieved the critical mass needed to ignite its payments platform. The introduction of FedNow creates competition for RTP® volume and potentially the real-time payments infrastructure for new use cases like merchant payments.

> SO, IT SEEMS, THE RACE FOR **INSTANT PAYMENTS IN THE U.S. IS ON.**

In addition to the U.S. Treasury, FedNow says that 56 "Early Adopters" are certified and ready to move money over its rails at launch. The profile of those early adopters leans heavily to small FIs — 41 of the 56 are FIs, many with profiles like 1st National Bank of Yuma, Buffalo Federal Bank and Consumers Cooperative Credit Union with assets of $550M, $174M and $2.8B respectively — even though four TCH founding members, J.P. Morgan, Wells Fargo, US Bank and BNY Mellon, are also ready to roll on Thursday. There are fifteen technology providers like Adyen, Fiserv, FIS, Jack Henry, Finastra and ACI that banks and FinTechs can use to connect to the FedNow rails.

So, it seems, the race for instant payments in the U.S. is on.

Like any good competitive rivalry stimulated by a new entrant, the watercooler talk now is about how long it will take for either or both networks to reach the point where they support a large volume of transactions and use cases to drive those transactions and ignite real-time account-to-account payments in the U.S.

Knowing that answer — or even how to guess — will depend on the clock you're using to time the race.

THE TRIPLE CLOCK THEORY

Humans have been measuring time for more than five thousand years. It was 1500 BC when the Egyptians invented sundials and water clocks to, among other things, track the blocks of time between sunrise and sunset to better schedule the arrivals and departures of ships bringing goods into the country.

It was the Sumerians who created the base 60 numerical system in the 3rd millennium BC which would become the basis for timekeeping today: Hours were comprised of 60-minute intervals and minutes of 60 second intervals. Mechanical clocks that followed in the mid-to-late 1200s were perfected over the subsequent three hundred years, making it possible for time to be measured systemically and consistently with precision everywhere in the world.

We measure time because there is a finite amount of it — in a day, in a week and over a lifetime. People use time as an organizing construct to manage their daily lives. Athletes count time because they want to beat their personal records. The amount of time that it takes for big things to happen makes news: whether it is how long it takes to capture escaped convicts or how long it might take for inflation to hit the Fed's 2% target. People want to make the most of their time because it is the most precious asset they have. Wasting it is low on everyone's list.

Counting time in the business world is how economists and business leaders measure productivity: the minutes, hours and days needed to complete a task, and the number of people required to deliver the expected outcome. Like people, businesses want to optimize how their workforce's time is spent and are loathe to waste it, even though by some accounts we all waste 24 billion hours a year in unproductive meetings. At least we did until people could multitask under the table with mobile phones or when their cameras are off during Zoom calls.

But it turns out that businesses, themselves, have their own internal clocks — a measure of keeping time often set by how long they've been in the market, the maturity of the markets in which they operate, the number of competitors vying for market share and the tech they use to power, manage and measure their business performance. These internal clocks set the pace for how decisions are made and how effective businesses are in creating a market advantage by continually innovating the products and services that their customers value and want to use.

> THE TRIPLE CLOCK THEORY ANALYSIS HELPS COMPANIES **ANTICIPATE RELEVANT MARKET DYNAMICS TO RESET THEIR INTERNAL CLOCKS.**

The Triple Clock Theory (TCT) is an original framework that my consulting colleagues and I have devised to help businesses understand the pace of their internal clocks so that they can better assess whether their clocks could be cleaned by rivals seen and unseen — pardon the pun. But more importantly, the TCT analysis uses data-driven analysis to help companies anticipate relevant market dynamics to reset their internal clocks to prevent that from happening.

TCT posits that an ***incumbent business clock*** operates at a slower speed than a ***new entrant clock*** when introducing a product or service into the same competitive market. The rationale is as obvious as it is simple: Incumbents have created the market, acquired customers, created barriers to entry and have the assets — and a running head start — to sustain and grow their lead. Once a big incumbent machine gets its gears in motion, its momentum carries it forward, at least in theory. Incumbents assume that their clocks don't have to move as fast because they have a big lead — until, of course, they see faster paced competitors nipping at their heels.

As newbies, challengers' clocks must move rapidly because they face a different reality: They lack clients, market position and the deep pockets to lollygag around. New entrants typically use different tools to help their clocks operate at a faster speed and shape their competitive advantage. Those tools could be anything from a new business model, pricing framework, data or payments capabilities, or user experience. Sometimes powerful new entrants bring all of that wrapped around better and more agile tech that makes switching easy and eliminates friction that still exists in how business is done in that market. They are also leaner so they can move fast.

Then there is the third clock, ***the technology clock***, which is one of the sources of market disruption or competitive opportunity for both incumbents and new entrants. The technology clock can either speed up or slow down their respective internal clocks. New, breakthrough tech can create a better, faster and cheaper way to deliver the same product or service — or spawn new

challengers that use it to leapfrog existing players. Predicting who will gain the most from the influence of the technology clock on their business is not always obvious since the technology clock does not always advantage new entrants.

Generative AI and LLMs are the most recent example of this third technology clock, but there have been others over the years. Most interesting about the Gen AI clock is its ability to not only change the pace of business, but the fundamental ways in which business is done.

In a matter of a few short months, the intellectual value of its potential has been internalized by every business worldwide. Open-source models are eliminating the barriers to entry that often come along with accessing and integrating powerful tech into business.

Both are fast-tracking Gen AI's own path to critical mass and ubiquity.

WATCHING THE REAL-TIME PAYMENTS CLOCK

In 2017, it was the real-time payments technology clock that set out to disrupt how money moved between bank accounts in the U.S. and the rails that, until then, cleared and settled those transactions.

Fundamentally changing the speed for clearing and settling payments was the promise of the first new U.S. payments rail in 40 years, RTP®. The press release announcing the launch described the participation of its then twenty-five owner banks, the biggest of the big in the U.S., along with their expectations of introducing a host of new scenarios using real-time payments and new markets that would see it as a differentiating value proposition for their own products and services.

The stated goal then was to reach ubiquity by 2020 — meaning that every financial institution in the U.S. would be connected to RTP® rails and use it to innovate client-facing payments in those three years post-launch.

Six years later, the U.S. remains a long way from ubiquity and adoption of account-to-account real-time payments even though 11 times more banks are members of the RTP® network today than at launch and nearly two-thirds of U.S. bank deposits are connected to it. Being connected means that those banks can move transactions over it — if they develop use cases around it and promote them.

> THE INTERNAL CLOCKS AT BOTH THE FED AND TCH WILL RUN A LOT FASTER NOW **THAT THERE'S COMPETITION FOR REAL-TIME PAYMENTS TRANSACTIONS.**

Of course, adoption and use go together to a degree. It is hard to get substantial transaction use without widespread network adoption. But ubiquitous adoption doesn't guarantee widespread transaction use, which requires use cases that banks market and customers buy.

Now, most people in and around the payments ecosystem say that the introduction of FedNow will move the U.S. more quickly to that real-time payments ubiquity. The CFPB's desire to accelerate open banking in the U.S. will create more demand for real-time account-to-account payments and move more banks to connect to a real-time network. Merchants, who for decades have tried to find alternatives to card rails for accepting payments, may view FedNow as that alternative.

All of those dynamics will likely quicken the pace of the internal clocks at both the Fed and TCH now that there's competition for real-time payments transactions. I don't think its market entry necessarily gives FedNow an edge.

THE FEDNOW REAL-TIME PAYMENTS CLOCK

In many ways, it makes the march of both rails to ignition — which requires ubiquitous adoptions and widespread use for transactions — more challenging.

For FedNow to scale, early adopters will have to see success — and see it quickly.

Igniting a new payments network requires volume and scale — and how quickly that happens is vital.

Having early adopters connect is one thing, but having them transact is another, as the TCH experience shows. If that takes too long for whatever the reason, early adopters will lose interest — and the traction necessary to create the network effects that drive scale will slow. They will likely shift to other real-time payments alternatives.

The less obvious part of the FedNow challenge is the current lack of interoperability between FedNow and RTP®. Unlike the two ACH networks that are also operated by TCH and the Fed, there is currently no ability for a bank to originate a real-time payment on one rail and a bank not connected to that same rail to receive it. Also notable at the FedNow launch are the number of big banks that aren't connected, at least not yet, but are part of the TCH RTP® scheme — including Bank of America, Citi, and PNC.

In the absence of interoperability, achieving real-time payments ubiquity in the U.S. will require that every bank in the U.S. — all 10,000 of them — be connected to both TCH and FedNow rails. Persuading banks to do that will require the availability of use cases that are compelling enough for consumers and corporates to integrate and support. That seems ambitious and even improbable, particularly since most banks haven't adopted either network.

> ACHIEVING REAL-TIME PAYMENTS UBIQUITY IN THE U.S. WILL REQUIRE THAT **EVERY BANK IN THE U.S. — ALL 10,000 OF THEM — BE CONNECTED TO BOTH TCH AND FEDNOW RAILS.**

More likely is that the big banks and technology partners connected to both will create that missing ubiquity by becoming the real-time payments orchestration layer for banks and other third parties. The decision they then face is how to route transactions.

Since pricing over the network is identical, those decisions will hinge on transaction limits, fraud and security protections, acceptance and the preference of their partners, whose real-time payments use cases today may already be satisfied by existing RTP® rails.

It will also rest with which rail can support important future use cases like Request for Payment, given its potential to ignite mainstream real-time payments use by consumers for bill pay — and in a timeframe that is relevant for end users. The consumer protections required of that use case remain a work in progress for FedNow.

That's not to say that TCH and RTP® have a cake walk to critical mass and ubiquity, either.

THE RTP® REAL-TIME PAYMENTS CLOCK

The lack of an effective RTP® ignition strategy at launch is why connectivity to two-thirds of bank deposits hasn't turned into 100% connectivity, more transaction volume, and a more powerful set of use cases at scale. RTP®'s biggest competitor today isn't FedNow, but Same-Day ACH and wires, both of which have ubiquity and deliver a faster payments outcome that banks know how to monetize. Push to debit transactions over card rails support instant payouts for B2C use cases like insurance claims and gaming payouts and check the instant payments box for those use cases using money mobility rails — and on a global scale.

> TCH WITH RTP® AND THE FED WITH FEDNOW MAY **BOTH THINK THEY CAN OPERATE ON A SLOW CLOCK.**

There's also inertia on the part of corporates who haven't yet invested in real-time payments integration because they aren't sure that every bank account they want to send money can receive a real-time payment. Until they move their ERPs to the cloud, their batch-based ERP systems don't allow them to post payments in real time either, muting their sense of urgency.

Larger corporates see its potential in solving for the nuisance "edge case payments" that are today mostly sent the old-fashioned way with checks but need the ubiquity problem solved first. Banks, corporates and FinTechs could decide that the workaround for the instant ubiquity challenge is to offer choice — RTP® or FedNow will become one of several options, but not the only way to clear and settle good funds instantly.

WATCHING THE CLOCK AND GETTING TO CRITICAL MASS

The FedNow launch on Thursday makes the U.S. unique in the world to have both a central bank and private sector instant account-to-account payments rails. The rationale for the introduction of FedNow was to create a redundant set of rails so FIs have a choice, much as they do when processing ACH transactions today.

In some ways, TCH with RTP® and the Fed with FedNow may both think they can operate on a slower clock –and for different reasons. They are owned and run by large incumbents with staying power and money. They have important relationships that they can leverage to drive volume and scale. But unless one of them can get to ubiquity quickly and banks develop and market use cases to move large volumes of transactions over these rails, both could stall.

That's where the technology clock comes in — as well as the fast clock for smaller and more nimble rivals who may use technology to create something better, faster and cheaper.

As they say, only time will tell.

August 16, 2023

HOW A GENERATION OF CONNECTED MULTITASKERS IS SHAPING THE DIGITAL ECONOMY

Many of you may be reading this article on your smartphone or tablet while sitting in the back of an Uber on the way to the airport, at your desk in the office in between meetings or at the kitchen counter eating breakfast or lunch — even with CNBC or Bloomberg playing on the TV in the background.

Reading it might have reminded you that you need to order groceries for dinner tonight, which you swiped off to do. Thinking of food reminds you to make a dinner reservation for Friday night because friends are coming into town for the weekend. This is all done without keeping you from your next meeting or Zoom call, your trip to the airport, finishing your egg and cheese sandwich — or even reading this article.

According to a new national PYMNTS study of 4,679 consumers between July 9 and 14, 2023, Americans spend about 26% of their time, on average, using smartphones and apps to multitask while doing another primary activity, regardless of whether they do so on a weekday or a weekend. Consumers who care for someone else — a child or a parent,

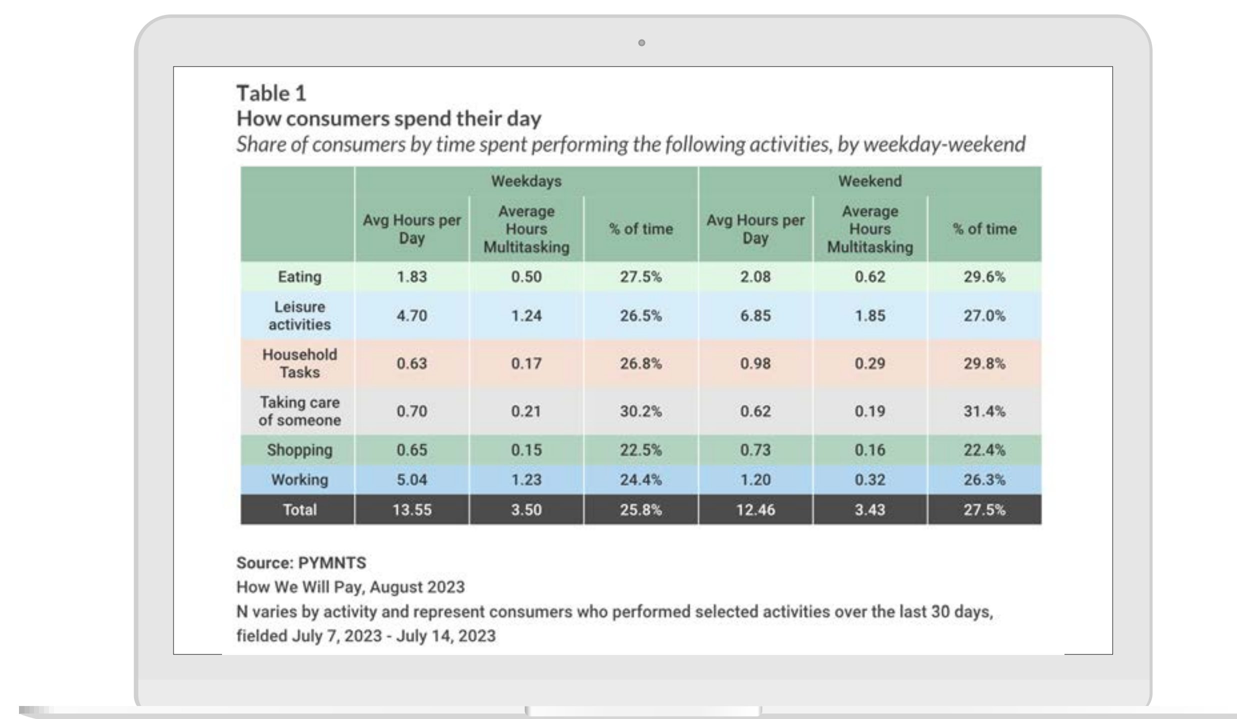


Table 1
How consumers spend their day
Share of consumers by time spent performing the following activities, by weekday-weekend

	Weekdays			Weekend		
	Avg Hours per Day	Average Hours Multitasking	% of time	Avg Hours per Day	Average Hours Multitasking	% of time
Eating	1.83	0.50	27.5%	2.08	0.62	29.6%
Leisure activities	4.70	1.24	26.5%	6.85	1.85	27.0%
Household Tasks	0.63	0.17	26.8%	0.98	0.29	29.8%
Taking care of someone	0.70	0.21	30.2%	0.62	0.19	31.4%
Shopping	0.65	0.15	22.5%	0.73	0.16	22.4%
Working	5.04	1.23	24.4%	1.20	0.32	26.3%
Total	13.55	3.50	25.8%	12.46	3.43	27.5%

Source: PYMNTS
How We Will Pay, August 2023
N varies by activity and represent consumers who performed selected activities over the last 30 days, fielded July 7, 2023 - July 14, 2023

for example — spend about 30 percent of their time doing something else using an app and a connected device. And Americans also spend about 25 percent of their work time multitasking.

Though employers, parents, partners, and friends might call this an unwelcome distraction, these connected multitaskers see a better way to make the best use of the finite 24 hours in a day that they get to spend.

The idea for conducting this PYMNTS research came from looking, year after year, at the results of The American Time Use Study. This government initiative, conducted by Census, documents how people spend 24 hours in their day by calling people and walking them through a 15-minute survey asking about their previous day's activities.

[Just curious – has anyone out there reading this ever been called?]

The Census groups these survey results into big buckets — how much time U.S. consumers spend reading, working, eating, shopping, cleaning, watching TV, etc.

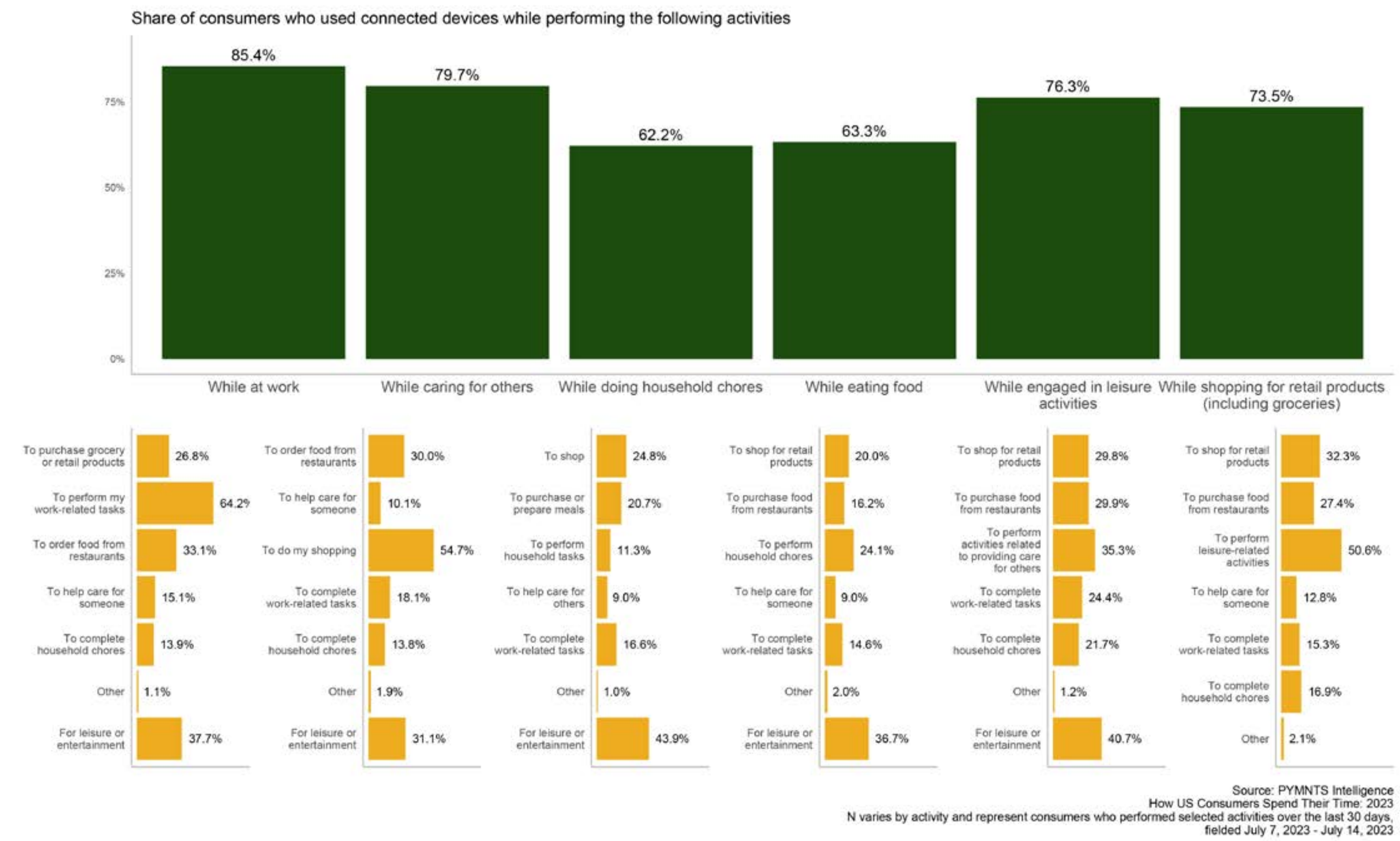
You won't be surprised to learn that since the study began in 2003, there has been an unremarkable shift in how people say they spend 24 hours in their day — a few small shifts here and there in how much time people spend reading or working or sleeping or watching TV.

What we now understand is just asking someone how they spend big chunks of their time minimizes the impact that connected devices and apps have on how consumers really use their time.

In truth, nearly everyone has mastered the art of multitasking — using digital devices and apps to economize on their time.

HOW CONSUMERS REALLY SPEND THEIR TIME

Multitasking isn't new — consumers have been listening to the radio while driving in the car, reading the newspaper while watching TV and listening to music while cleaning for decades. The difference in a modern, digital world is how consumers can



use connected devices and apps to do the things that once required going to a physical place at the same time they are doing something else in the physical world.

It's not just Gen Z and Millennials who are using their connected devices, and mostly their smartphones, to do more than one thing at a time.

According to this PYMNTS study, 95% of the U.S. population has access to a connected device, mostly a smartphone, and uses it to conduct everyday activities while doing something else. Overall, the ability to conduct simple digital tasks like texting someone while eating a meal or adding items to a shopping list using a voice-activated speaker while cooking or cleaning the kitchen is largely universal — how often it's done and what devices are used is more related to a person's lifestyle than their interest in or capability to perform that activity.

We observe that while consumers use digital channels most often to complement their primary activity — working while at work, shopping while at a store — they also engage in five other non-related activities to some degree while doing so: streaming music (hopefully not movies) while working, ordering food while shopping, doing household chores while caring for someone else. More than half of consumers (52%) used a connected device while eating breakfast. Among consumers that commuted to or from work on a weekday, 69% of them used a connected device while doing so to get directions, order at QSR drive-thru or pay for parking.

Most consumers say they use their smartphones to engage in work-related activities while doing most every other activity, including 15 percent who say they check on work during their leisure time.

A new generation of more technologically advanced connected devices and emerging technologies like Generative AI will make this connected multitasking an embedded part of the consumer's daily routine: more integrated, easier, smarter, and more personalized.

Cars that automatically activate gas pumps and make purchases to a registered credential without a swipe today will activate commerce experiences in the car while commuting to the office or taking the kids to football practice. Miniaturized medical devices will monitor a person's vital signs as they go about their daily routine and automatically record that data into their electronic medical record for their doctor to see 24 hours a day to act on as needed. Voice-powered AI operating systems will take the connected multitasking concept to a whole new level, creating an always-on ambient environment where tasks are but a spoken word away — anywhere a consumer may happen to be in the physical world.

TIME SAVING AND SAVING TIME

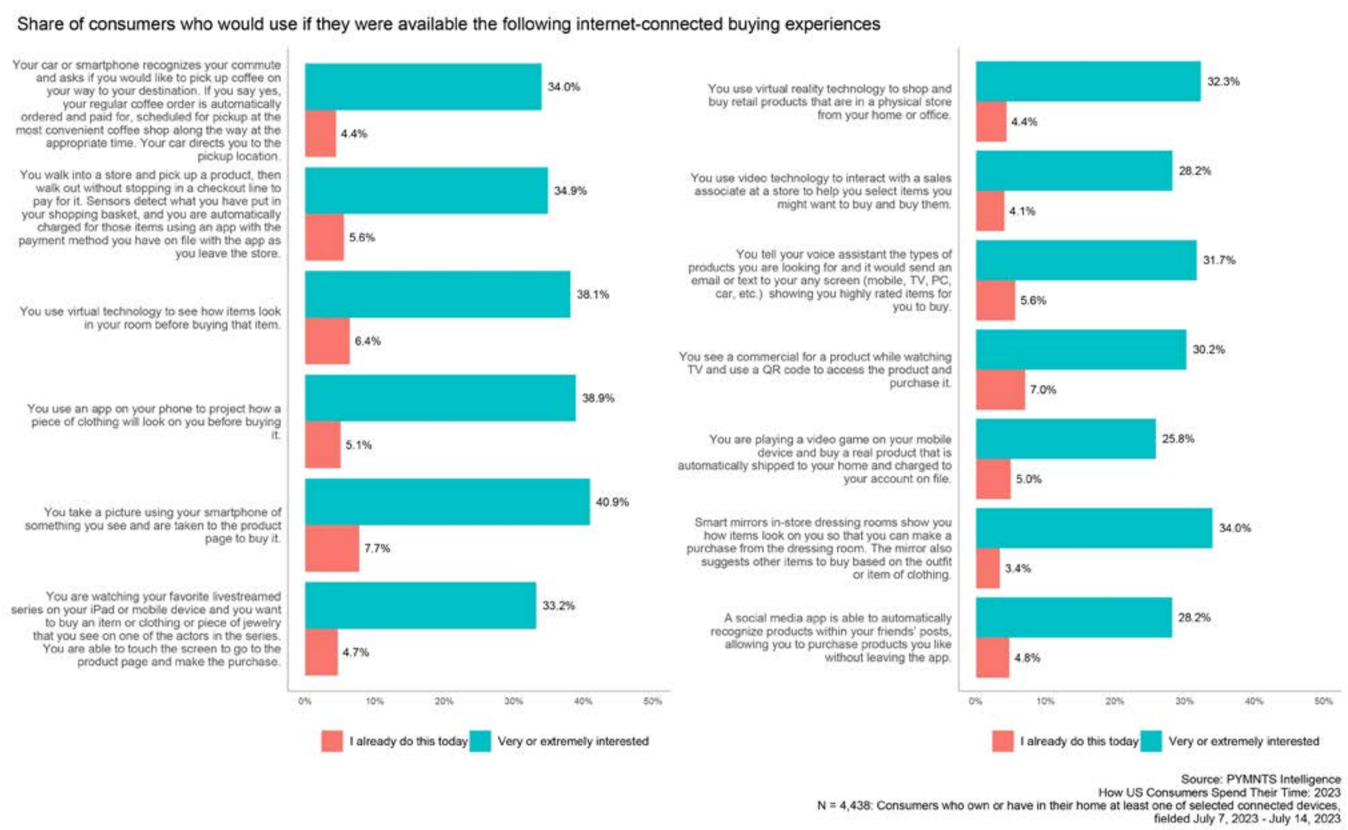
The fact that people have been using connected devices and apps to blur the digital and physical worlds isn't news; I've been writing about it since Uber introduced the app that made it possible for a physical world experience to be activated using a smartphone in 2009. But over the last 14 years, we've seen those lines disappear and shift how consumers use their time in meaningful ways.

For a connected American consumer in 2023, weekends and weekdays now look the same as apps and smartphones break down the constraints once imposed by the physical world.

According to PYMNTS research, as many consumers now say they shop for groceries on weekdays as on the weekend, with millennials favoring weekdays to weekends — and online options influencing those behaviors.

Trips to the physical grocery store no longer have to be a perfunctory Saturday chore with kids in tow. Apps and aggregators and saved shopping lists make it easy for consumers to have groceries delivered on a Thursday afternoon or arranged for pickup curbside on a Wednesday evening on the way home from work — and purchased while streaming a favorite movie, waiting in the doctor's

Source: PYMNTS Intelligence
How US Consumers Spend Their Time: 2023
N = 4,438: Consumers who own or have in their home at least one of selected connected devices, fielded July 7, 2023 - July 14, 2023



office for an appointment, or on the airplane home before takeoff. Buying clothes and sporting goods follows the same pattern, with connected devices and apps giving consumers more choices about how to spend their time.

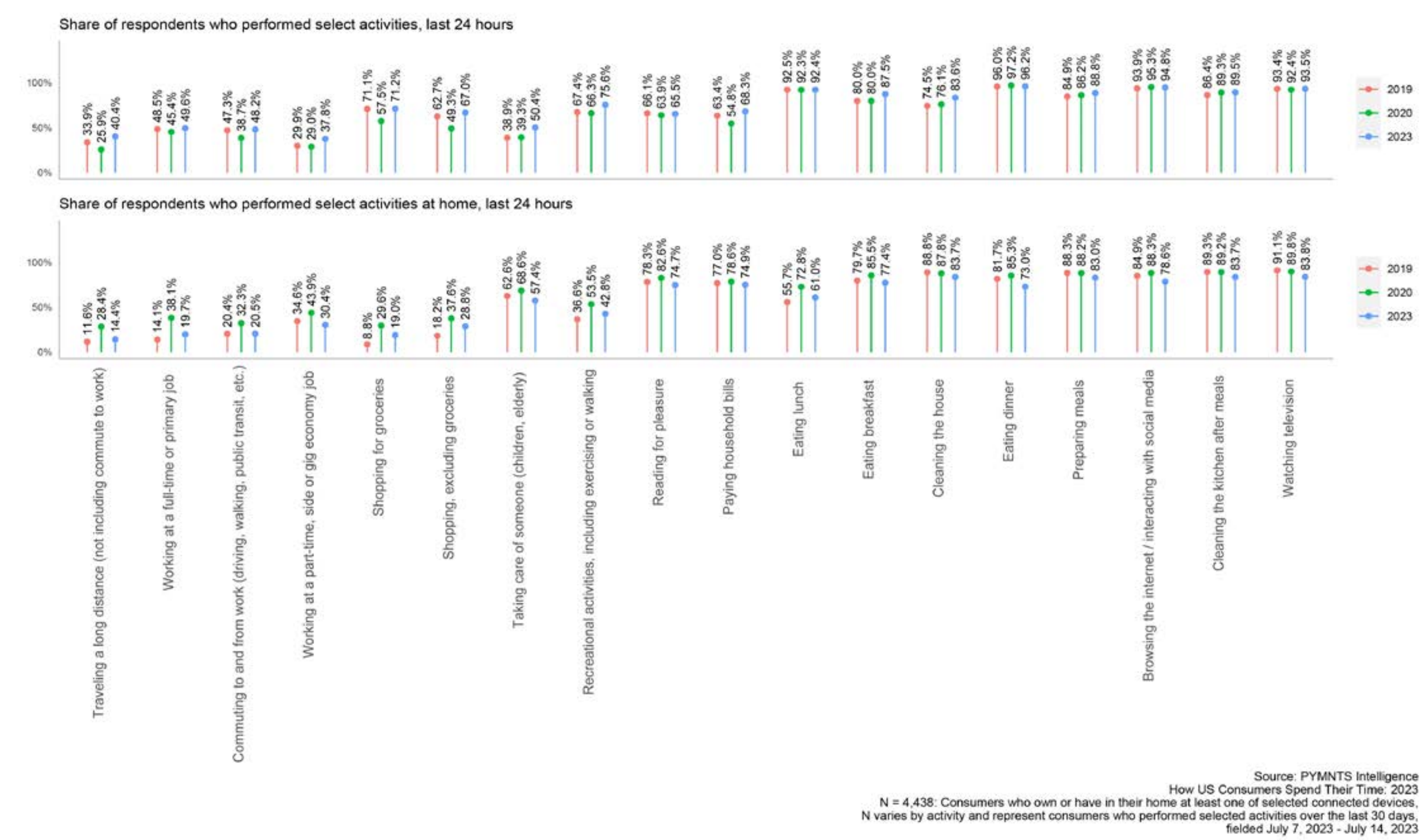
The appetite for accessing these connected experiences that few consumers thought even possible five years ago is only increasing as apps get better, smartphone cameras improve and innovators create new ways to embed new experiences into an expanding variety of apps and connected devices that save consumers time and money.

Connected devices and apps have not only given consumers the tools to multitask, but they have also provided innovators the inspiration to think creatively about using them to save time and reduce friction. More than a third of U.S. consumers are now interested in apps that help them see how clothes fit or how furniture looks in a room before making a purchase or taking a picture of an item and be immediately directed to a product page where it can be bought. Each of those activities, thanks to a smartphone or other connected device, saves time — and can be done while doing other things. More than that, using them also reduces the risk that an item a consumer sees online and loves could instead become a friction-filled return experience that takes up her time.

THE DURABILITY OF THE DIGITAL SHIFT

Three years post-pandemic, questions remain about the durability of the digital shift and whether digital's appeal will wane as consumers quench their thirst for the physical experiences they missed during COVID.

We find the shift to be durable, especially as consumers rethink how they want to spend their time.



We see it in how consumers shop for the one thing that they almost always used to do in a physical store: buy groceries. During the pandemic, many more people shopped online for groceries (from 9% in 2019 to 30% in 2020) and although many of those consumers have returned to the physical store, more than twice as many consumers shop online for groceries in 2023 (19%) as did before the pandemic. That same trend holds for retail shopping as well.

More than just digital-first aficionados, consumers have become connected multitaskers over the last three years, emphasizing the extraordinary advances that digital and connected devices have made in how consumers can spend their time. For most consumers, the distinction between the physical and digital worlds is not becoming irrelevant — it is just a distinction without a difference. That's a wake-up call for the businesses that continue to minimize the importance of embedding digital into their experience as consumers return to the physical world. They've lost sight of the fact that consumers have always lived in the physical world — connected devices and apps have now changed how consumers want to engage within it.

For consumers, digital is no longer a channel.

And for the growing numbers of connected multitaskers, digital and connected devices give them the power to do more with the one thing they can't replace once it's gone: their time.

August 28, 2023

HOW INSTACART IS SHAPING THE NEXT GENERATION OF GROCERY SHOPPER

Instacart filed its S-1 on Friday, August 25 — and with it came a glimmer of hope that the 18-month tech IPO drought may be ending. EquityZen's head of market insights Brianne Lynch reports that some 1400 private companies worth $1B or more are sitting on the sidelines, waiting for a better time to test the waters in the public markets. Whether Instacart opens the Tech IPO floodgates or turns the spigot into something more like a constant trickle, we'll wait to see.

Its filing puts to rest the endless speculation about its financial performance, its business model and its role within the $1.5 trillion U.S. grocery ecosystem.

It also offers new insight into the five ways that Instacart is driving the digital transformation of a sector that, until 2020, generated nearly all its sales from consumers who shopped inside their physical stores.

01

INSTACART IS A PLATFORM, NOT A MARKETPLACE.

Instacart reports that its Marketplace platform reaches more than 95% of U.S. households, with 7.7 million monthly active users who shop at one of the 1400 retailer brands on the platform. Since its launch in 2012, Instacart says that it has processed more than 900 million orders containing some 20 billion items, accounting for $100 billion of gross transaction volume.

On any given day, Instacart says its users can shop one of 50 localized brands and roughly one million items from regional, national and local grocery chains who upload tens of thousands of grocery SKUs onto its platform.

Instacart's S-1 reports that for the first six months of 2023, overall order volume was 132M and revenues were $1.5B, reflecting growth rates of 4% and 31% respectively, compared to the same period in 2022. Its reporting of a $428M profit is admittedly a little sleight of hand, since 83% of it is described as a tax benefit in the filing. That said, being profitable when going public is something about which only few tech companies can boast, so give credit where credit is due.

> INSTACART IS THE GROCERY STORE'S **ADVOCATE, NOT ITS ANTAGONIST**.

Like Amazon, Instacart is a powerful platform that uses sophisticated tech to aggregate a massive and massively fragmented industry and deliver a slick online user experience.

Unlike Amazon, Instacart isn't a marketplace — it doesn't aggregate and sell individual products outside of the branded store experiences on its platform. It also does not produce and sell private label brands. It doesn't show users a choice between Wegman's and Costco's rotisserie chicken offers. Instacart is also licensing its tech so that retail brands can use it to power their own retailer-branded online experience.

Instacart is the grocery store's advocate, not its antagonist.

Instacart makes its money by incenting brands to drive more volume online, taking a commission on those orders and ad revenue from brands who want to boost their sales. It sells subscriptions to consumers that include free shipping and offers co-branded cards that pay interchange when consumers use them. Its incentives are aligned to make grocery stores successful by giving them a better way to compete more effectively in the digital world. This includes Amazon, which has set its sights on grabbing more grocery share and has a captive grocery store with an omnichannel shopping experience and Prime Members to leverage.

Instacart has done all of this for a sector that has historically underinvested in digital technology at scale because its executives never thought that consumers would want to shop for food anywhere but inside their stores. And because they were too small individually to make the investments necessary for state-of-the art tech to simplify the complexity of shopping online for 20 to 30 very different items during one shopping session.

Case in point: Peapod. Peapod, the early innovator in the online grocery delivery space, had a 23-year head start on Instacart, but it is largely invisible in 2023. The big chain in Massachusetts that was Peapod's anchor store, Stop & Shop, is one of the grocers that can now be shopped on the Instacart platform. A poor user experience and limited selection of products available to order online plagued its early attempts to move groceries online — and, ultimately, its opportunity to scale online grocery and delivery.

02

INSTACART PUTS AN END TO PROXIMITY LOYALTY LOCK-IN.

I was one of those 7.7 million Instacart shoppers on Saturday and Sunday. Probably some of you were, too — at least one of those days. During the pandemic I started using Instacart weekly to order groceries for my dad, who lived in another city, and continued that tradition post-pandemic. Some of you probably did that, too.

The ability to reduce the 60 hours a year, on average, that consumers reportedly spend shopping for groceries is a big part of the friction/time value proposition that has helped Instacart scale. Many consumers are willing to trade the value of their time for the cost of the delivery fee.

Those statistics understate one of the biggest advantages that the Instacart platform provides consumers.

> MAYBE THEY'D RATHER TRY A STORE THEY WOULD **OTHERWISE SKIP BECAUSE IT REQUIRES A 40-TO-50-MINUTE ROUND-TRIP DRIVE.**

Instacart has eliminated consumers' need to consider proximity in their decision about where to shop for groceries. Maybe shoppers want to shop using Instacart at the same store they'd otherwise visit in person. But maybe they'd rather try a store they would otherwise skip because it requires a 40-to-50-minute round-trip drive — as many now do. Those are the stores that consumers can shop on the Instacart platform.

The drive-time loyalty lock-in that used to define grocery store competition and shopper behavior is no longer a slam-dunk predictor of who gets the consumer's grocery store spend. Instacart and digital are forcing grocery stores to up their game and changing how grocery stores compete while giving consumers the ultimate choice in where to buy their food.

03
INSTACART GIVES A BOOST TO BRANDS.

Advertising is one of Instacart's revenue bright spots, contributing 30% of overall revenues, and will be important to driving new flows forward. Advertising on the Instacart marketplace gives brands a way to promote their products — and first-party data that they don't get when customers pull those products off their shelves in the store. And they get that data without cannibalizing the grocery store channel that still drives most of their sales.

With that first-party data comes the ability for brands to monitor purchase trends and inform product and promotional strategies. In a world where grocery stores favor their own private label brands, Instacart's ad platform gives brands a way to fight back. Brands also have a shot at putting the purchase of frequently purchased brand name products that are candidates for competitor subscription offerings back in the weekly virtual shopping cart, helped by digital coupons that brands can extend as an incentive to buy.

These offers could potentially chip away at Amazon Subscribe and Save, which is out to claim a big part of the grocery store center-aisle spend. PYMNTS has been tracking Amazon Subscribe and Save consumer trends since 2020 and has observed a slight decline in the number of consumers who say they have used this subscription offer over the last 18 months.

> IN A WORLD WHERE GROCERY STORES FAVOR THEIR OWN PRIVATE LABEL BRANDS, **INSTACART'S AD PLATFORM GIVES BRANDS A WAY TO FIGHT BACK.**

Although it remains one of the more highly valued retail subscriptions, PYMNTS reports the share of consumers with Amazon Subscribe and Save declining from 8.8% in 2021 to 6.4% as of July 2023. As a long-time Amazon Subscribe & Save customer, the frequency with which my preferences are cancelled has increased, along with the prices of the items themselves. For many, the combination of those two things may be enough to seek online alternatives.

04
INSTACART IS CREATING A GROCERY SHOPPING IDENTITY.

Instacart describes itself as a digital-first platform focused on making grocery shopping easy and convenient. With the acquisition of smart cart manufacturer Caper, that value proposition now extends in store. The grocery stores that enable Caper give customers the ability to log into their cart with their Instacart credentials (including payments), scan and bag items as they shop, and skip the checkout line when their shopping journey is complete.

More than a way to deliver an omnichannel experience for grocery stores and Instacart shoppers, it's an opportunity to create a digital grocery shopping identity that also connects to grocery store loyalty programs that can save consumers time and money while shopping in store. It also gives brands another channel to encourage shopper behavior in the moment, offering recommendations based on what is scanned and put in the cart and reminders not to forget the important items on their stored grocery lists.

Although not yet at scale — and not yet at the level of a biometric identity a la the Amazon Palm Pay experience — log in with Instacart at the grocery store could be a first step step in the direction of giving consumers a cross-channel, personalized online grocery identity.

05

INSTACART COULD BECOME AN EVERYDAY SHOPPING PLATFORM.

I sense the virtual eye rolls. But hear me out.

Instacart's growth over the years has been helped by adding more grocery brands to the platform and the order volume that follows. For Instacart's growth to continue, more consumers must buy more of their groceries online, which they will. But Instacart must also add a diverse group of retailers to the platform to keep the order and transaction revenue flywheel going, and new services that drive new payments flows.

> A PERSONALIZED ONLINE GROCERY IDENTITY SAVES **CUSTOMERS TIME AND MONEY REGARDLESS OF HOW AND WHERE THEY SHOP.**

PYMNTS data is clear that consumers want the convenience of buying the things they want every day from a single platform that makes order and delivery easy and convenient. It's how most people use Amazon. Food obviously falls into that category — but so do prescriptions, health and beauty products and what my mother used to call "sundries." According to PYMNTS data, 44% of consumers want the ease and convenience of such an experience on a single platform when it comes to purchasing those products.

That may not be much of a stretch for Instacart, since adding non-grocery brands seems to be part of their strategy. Neither could be adding pharmacy options using some of the new healthtech platforms that are innovating in this space. Or embedding subscription or replenishment options for frequently-purchased products from the grocery stores and retailers consumers shop for on their platform.

THE AMAZON CHALLENGER?

In March of 2020, a paltry 2% of grocery purchases were made online. The pandemic changed all of that, for obvious reasons. It's easy to forget how scared we all were to step foot into a physical store, and the social distancing requirements in physical establishments that made shopping in them in 2020 and even a lot of 2021 extremely challenging. Standing in lines outside of their go-to grocery stores turned a 60 minute weekly shopping trip into a half-day investment of time, complete with masks and gloves.

Consumers turned to online grocery platforms like Instacart as a safer and less friction-filled shopping experience, even for those who did little online shopping before and probably no online grocery shopping at all.

According to the latest PYMNTS study of online grocery conducted in July 2023, nearly 19% of consumers shopped online to buy some of their groceries, even though no one thinks twice today about going to a physical store to shop. Although we have seen the trend moderate somewhat over the last 12 months, buying groceries online is two times the level it was pre-pandemic. Nearly three quarters of those orders were purchased using Instacart, with many of those orders placed by millennials and consumers earning more than $100,000 a year.

More interesting are the trends we observe as more consumers return to work, even if only a few days a week. Unlike some digital trends that moderate as consumers return to the physical world, including their offices, we see an increase in the use of online grocery ordering. Not only does PYMNTS data find that 23% of consumers order groceries while at work, but most online grocery shoppers also place their orders during the week, and not the weekend.

Although consumers are eager to reengage in the physical world, increasing numbers aren't that interested in spending their time shopping for groceries that way. At least not in the way that they did pre-pandemic.

It seems clear that the shift is permanent and increasing. What's not clear is whether Instacart's approach to scaling its platform will position it as the retailer-friendly Amazon challenger. At the moment, it's the closest thing we've seen to a platform that thinks like Amazon — organizing and deploying leading-edge tech at scale for retailers — without some of the conflicts that keep many retailers from participating. Whether that's Instacart or someone else, there's half of all retail sales up for grabs for whoever perfects that balance.

September 14, 2023

WHAT 873 CFOs CAN TEACH BANKS ABOUT WORKING CAPITAL EFFICIENCIES

“You can’t always get what you want” are both lyrics made famous by Mick Jagger in the 1968 rock classic by the same name and very likely the most frequently spoken words by parents everywhere.

It also happens to be a fitting commentary on the working capital needs of a category of companies called Growth Corporates — most typically referred to as the middle market — and the solutions available to support their cashflow requirements.

This is one of several important insights from the 2023-2024 Growth Corporates Working Capital Index (Growth Corporates WCI), the Visa report released yesterday examining the operational efficiency of 873 CFOs in 23 countries and five highly dynamic industry sectors: Fleet/Mobility, Healthcare, Marketplaces, B2B Travel, and Agriculture. Visa commissioned PYMNTS Intelligence to conduct the research and construct the Index.

The Index measures the operational efficiency of Growth Corporate businesses using the Days Payable Outstanding (DPO) metric, and

it makes sense. A business with a mastery of its own cashflow forecasting and management can pay its bills on time, take advantage of favorable pricing or supply opportunistically, and negotiate discounts for early payment. Growth Corporates that can optimize their use of working capital can add as much as $3.3 million annually to their bottom line.

This calculated use of working capital solutions to fund strategic growth initiatives has the knock-on effect of creating a financially healthy supply chain and growth corporate ecosystem — a benefit that 69% of Growth Corporates say is a key priority, as supplier relationships have become an important source of competitive advantage. Growth Corporate CFOs who use working capital solutions to fund scheduled business growth initiatives **and** who have 90% of suppliers integrated into their payment system have a 67% higher probability of seeing improvements to their DPO than their counterparts who don't.

However, Index performance suggests that the working capital solutions used by Growth Corporates may not deliver the operational efficiencies or the optimal working capital ROI needed to support their growth, particularly if they are not available in a timeframe that's relevant for the business.

One of the biggest impediments facing Growth Corporates is the speed to decision — traditional providers of working capital solutions have traditional (and lengthy) risk management parameters, along with credit limits, that impede the nimble financing of initiatives.

The unintended consequence of undue cash flow pressures on these dynamic businesses in today's increasingly constrained and expensive corporate credit market can mute their growth prospects.

FIGURE 1:
The Growth Corporate Working Capital Index
Average index score, by firm category

It's time for solution providers to think beyond the status quo to cultivate relationships with the next generation of industry leaders powering the digital economy.

CREATING OPERATIONAL EFFICIENCIES

Growth Corporates are the middle children of the business world: too big for small business solutions, and too small for the sophisticated working capital solutions of giant multinationals. With annual revenues of between $50 million and $1 billion, these companies, globally, account collectively for $50 trillion in sales, operating in industry verticals undergoing their own rapid shift to digital.

Whether it is the agricultural sector moving from paper invoices and checks to electronic buying and selling, healthcare providers and claims processors using digital to improve the patient/provider experience, or fleet operators and mobility platforms navigating the shift to EV, secular and competitive pressures compel these businesses to seek capital to invest for strategic growth. And to have working capital solutions available — on demand — as the needs of these dynamic businesses arise.

The good news coming out of this report is that many Growth Corporates have access to working capital solutions. Across the companies and sectors studied, 71% reported accessing external sources of working capital over the last 12 months.

Two-thirds of Growth Corporate CFOs who used external sources of working capital in that period did so to support a variety of strategic business needs. Use cases ranged from covering planned cash flow gaps associated with predictable business cycles to funding systems upgrades, buying inventory at discounted pricing, and making investments in business infrastructure to support product development and innovation. These CFOs are expected to see a 33% increase in improved DPO efficiencies compared to those who use external financing only for emergencies and unplanned cash flow shortages.

Top Index performers — those with an Index score of 70 — also have 14 days shorter cash conversion cycles (CCC) and 9 fewer days in inventory outstanding (DIO). Lower DPOs, lower DIOs and shorter cash conversion cycles increase investor confidence and fuel growth initiatives such as expanding product lines, entering new markets, or increasing production capacity — without extended waiting periods for cash to be generated organically. The efficient use of working capital can pay big dividends beyond what's borrowed.

WHY THE INDEX MATTERS

The Growth Corporates Working Capital Index takes a fresh look at the impact of working capital access to the financial performance of the category of businesses forging new paths across the digital economy. The Index ranks firms on a scale from 0 to 100, with 100 representing the perfect ratio of operational efficiency with the use of working capital solutions. The average score for the companies across the sectors and geographies studied was slightly below the halfway mark, at 49, suggesting room for improvement and hinting at a broader misalignment of the needs of these dynamic businesses with the working capital options available to them.

The Index finds that the most widely used external working capital solutions by Growth Corporates are also the more traditional sources of external working capital — the things banks have offered for decades and what their internal underwriting and risk models support.

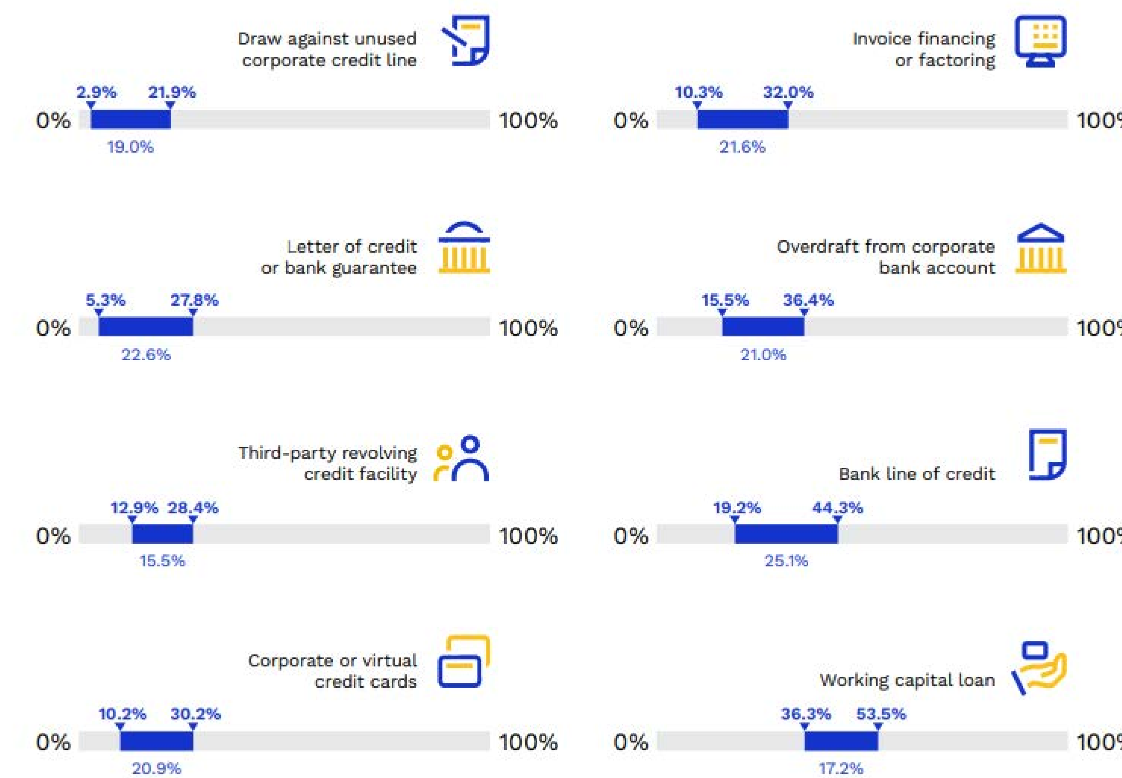
Forty percent of Growth Corporate CFOs use working capital loans and bank lines of credit as their go-to financing options, though many Growth Corporates say they will reduce their reliance on them next year. Interestingly, only 14% of those who plan to use working capital loans as their go-to solution next year are top performers, and only 15% of those planning to use primarily overdrafts are in this tier.

Working capital loans and overdrafts from corporate bank accounts are

FIGURE 10:

Working capital solutions that will be most in demand

Share of companies using select types of working capital solutions, last year versus next year



Source: PYMNTS Intelligence
Growth Corporates Working Capital Index, September 2023
N = 873: Whole sample, fielded March 9, 2023 – June 12, 2023

most used by nearly 50% of firms in the EU. Similarly, Letters of Credit and invoice factoring are most used by Growth Corporates in LAC. Growth Corporates in need of working capital to fund unplanned or unexpected cash flow gaps used solutions such as bank overdrafts or lines of credit due to the nature of their need and the lack of other timely sources of external capital in the last 12 months. Growth Corporates in the smaller revenue range — those between $50M to $250M — most often used bank lines of credit, third-party revolving credit facilities and invoice financing/factoring.

The Index finds that 18 percent of Growth Corporate CFOs sub-optimize their use of working capital, either through lack of access or a misalignment of the working capital solution to their sector-specific needs. Growth Corporates in need of working capital to fund unplanned or unexpected cash flow gaps used solutions such as bank overdrafts or established lines of credit due to the lack of other timely sources of external capital in the last 12 months.

THE NEED TO MIND THE GAP

The gap between Growth Corporate working capital solution relevance and working capital solution usage is an opportunity for solution providers to create a more diverse and accessible portfolio of solutions that can align with the needs of the needs of the businesses operating in these sectors around the world.

Nearly all — 92% — of Growth Corporates say they will seek external

FIGURE 15:

CFO considerations

Share of CFOs identifying the most important feature they consider when selecting working capital financing solutions, by reason for using the solution next year

	TACTICAL		STRATEGIC	
	Emergency	Growth	Cash flow	Growth
COST	**7.0%**	**13.6%**	**8.7%**	**11.8%**
• Low cost	6.3%	6.8%	7.2%	7.5%
• Cost of acceptance	0.6%	6.8%	1.4%	4.2%
ELIGIBILITY	**8.2%**	**13.6%**	**9.6%**	**15.1%**
• Broad eligibility	4.4%	6.8%	5.8%	10.8%
• No or low collateral	3.8%	6.8%	3.8%	4.2%
SECURITY FEATURES	22.8%	11.4%	12.0%	11.8%
EASY TO APPLY	7.0%	0.0%	13.0%	10.4%
HIGHER CREDIT LIMITS	15.8%	20.5%	25.0%	13.2%
TRACKING	**9.5%**	**18.2%**	**8.7%**	**7.1%**
• Payment tracking	5.7%	15.9%	5.3%	4.7%
• Buyer-supplier process tracking integration	3.8%	2.3%	3.4%	2.4%

Source: PYMNTS Intelligence
Growth Corporates Working Capital Index, September 2023
N = 873: Whole sample, fielded March 9, 2023 – June 12, 2023

sources of working capital in the next 12 months; the use of less traditional financing options is being explored by many. The need to tap real-time, on-demand access to credit will increase the use of virtual cards by +196%, and the pooling of credit card lines across their organizations by +655%, particularly in the marketplaces and commercial travel industries, and in CEMEA and Latin America and the Caribbean.

Growth Corporates are also looking beyond the more traditional sources of working capital solutions for advice and products that best fit their needs. Although their banker or a bank remains the leading choice for many Growth Corporates in the marketplaces and commercial travel sectors — and in Asia Pacific and Latin America and the Caribbean geographies — FinTechs and card networks have emerged as sources of working capital given the speed of decision making, acceptable financing terms and borrowing limits.

Because just like Mick said: If you try sometimes, you just might find, you get what you need.

September 25, 2023

WHAT EARLY WARNING'S PAZE HAS IN COMMON WITH AMAZON'S FIRE PHONE

In June of 2014, Amazon launched the Fire phone. Priced at $650 and offered exclusively by AT&T, the phone's big selling point was its "Dynamic Perspective" — a feature that provided a 3D experience using the phone's camera, phone gyroscope and operating system.

And so was the fact that it was from Amazon, the world's biggest online retailer.

Amazon's thesis at the time: use its highly successful eCommerce platform as the cornerstone for a mobile ecosystem powered by the Fire OS, Amazon hardware and apps. With millions of consumers buying from Amazon every day, coupled with the consumer's fascination with smartphones and apps — and about half the market for smartphones still up for grabs in the US in 2014 — what could go wrong?

In August of 2015, Amazon shut down the production of the Fire phone and stopped selling it soon thereafter. The company never said how many Fire phones were sold, which is probably indicative that it didn't sell very many. I can't name anyone who bought one — can you?

Getting consumers to ditch their Apple and Android devices and move to the Fire phone required more than the lure of a 3D experience and a promise that the apps consumers liked and wanted to use would be available, someday.

It was Amazon's decision to use a forked version of Android that put a fork in their mobile ecosystem plans, so to speak. That decision created friction for developers, who had to adapt their app to a third operating system to reach Fire phone users. Developers had to be convinced there were going to be enough Fire phone users to make it financially worthwhile to spend the time.

There weren't and so they didn't, and you know the drill. No users meant no developers, no developers meant no apps, no apps meant no users. Network effects in reverse at rapid speed.

The failure of the Fire phone is a stunning example of platform strategy gone wrong by a company that could give a Masterclass in platforms, ignition, and network effects. But it's also a reminder of the complexity of platform dynamics at work — and the outcome when the competition, and not the customer, becomes the center point of platform strategy.

Amazon wanted to compete with its Big Tech compadres — Apple and Google — both of which had phones and operating systems and app stores, and the lion's share of the 55% of U.S. consumers with smartphones in 2014. Despite being a successful app on both Apple and Android devices, Amazon wanted an ecosystem of its own, and thought it needed its own mobile device to do that.

> IT'S A REMINDER OF THE COMPLEXITY OF PLATFORM DYNAMICS AT WORK — **AND THE OUTCOME WHEN THE COMPETITION, AND NOT THE CUSTOMER, BECOMES THE CENTER POINT OF PLATFORM STRATEGY.**

The company failed to consider that it would take more than the Amazon brand to persuade the millions of consumers who were already shopping with Amazon on other devices to make the switch.

We'll never know what might have happened if Amazon decided against using a forked version of Android that fueled the death spiral that ended in the Fire phone's demise. But we can see what happens when companies, even the biggest ones with the resources and know-how, fail to examine the sources of friction — and therefore the opportunities to create value — when designing and launching a platform from a cold start.

And that brings me to Paze.

PAZED AND CONFUSED

You all know Paze, or maybe you need to be reminded — until last week, it had been a while since we heard from them. Paze, as I wrote earlier this year, was the worst-kept secret in payments when it finally went public with its plans to create a single mobile wallet that all bank customers could use to pay at the online point of sale.

Paze is the product of Early Warning, which operates the Zelle network. The seven U.S. banks who own it report having 150 million consumer debit and credit cards collectively. These seven banks are Bank of America, J.P. Morgan, Capitol One, PNC, Truist and Wells Fargo; many have ambitions, and projects underway, to create their own branded payments ecosystems.

At launch, the Paze CEO said that the wallet would be available for the 2023 holiday shopping season, which kicks off in early October with Amazon Prime Deal Days. He said that he expected Paze to be available as a checkout option on the top 200 eCommerce sites by then.

In a story published last week by The Financial Brand, we learned that rollout will be delayed until early 2024.

In that story, the Paze CEO was reported as saying more of a phased rollout is needed with more time to get merchants on board.

That's the talking point.

Just like the Fire phone, the idea for Paze was cooked up as a way for banks to compete with the general-purpose Pays (Google and Apple) and PayPal. Its key selling proposition to merchants was that it would be free — but not really. The merchant is charged interchange based on whatever method of payment the consumer registers to her Paze wallet and uses to make the purchase. It is inconceivable that Paze and its seven banks would really make Paze free and/or give merchants a break on interchange to accept it. That would risk cannibalizing fee income from other online checkout options, including other wallets and buy buttons.

The "free" part is a shot across the bow at Apple, since banks hate paying the Apple toll when the Apple Wallet is used at the point of sale. Judging by the data, that hasn't amounted to very much — at least not so far. The latest PYMNTS Intelligence data shows that PayPal is used 2.5 times more at online checkout than Apple Pay, with Apple Pay showing modest growth of 2.5 percentage points over the last three years to now 4.1% of online transactions.

From a merchant's perspective, that seems to put Paze on par with every other checkout button, each of which has far more consumer adoption, usage and ubiquity than Paze.

To accept Paze, merchants must take a leap of faith that consumers and incremental volume will follow — and they may require (costly) incentives to accept Paze in order to get the flywheel turning. Even then, merchants must divert resources to integrate it, support it and answer questions about it. Without any sense that there will be consumer preference and volume to follow, even incentives may not be enough for the top-tier merchants to play along — at least not now.

> WITHOUT ANY SENSE THAT THERE WILL BE CONSUMER PREFERENCE AND VOLUME TO FOLLOW, **INCENTIVES ALONE MAY NOT BE ENOUGH FOR THE TOP-TIER MERCHANTS TO PLAY ALONG.**

Just like the Fire phone in 2014, that puts the ball squarely in the consumer's court.

THE PAZE CHECKOUT MAZE

Like the promise of Amazon shoppers and the Fire phone in 2014, having a collective consumer pool of 150 million debit and credit cards doesn't mean that any — or enough — of them will make the switch. To do that, consumers must be convinced that the Paze experience is better, and then use it more than they use other alternatives today.

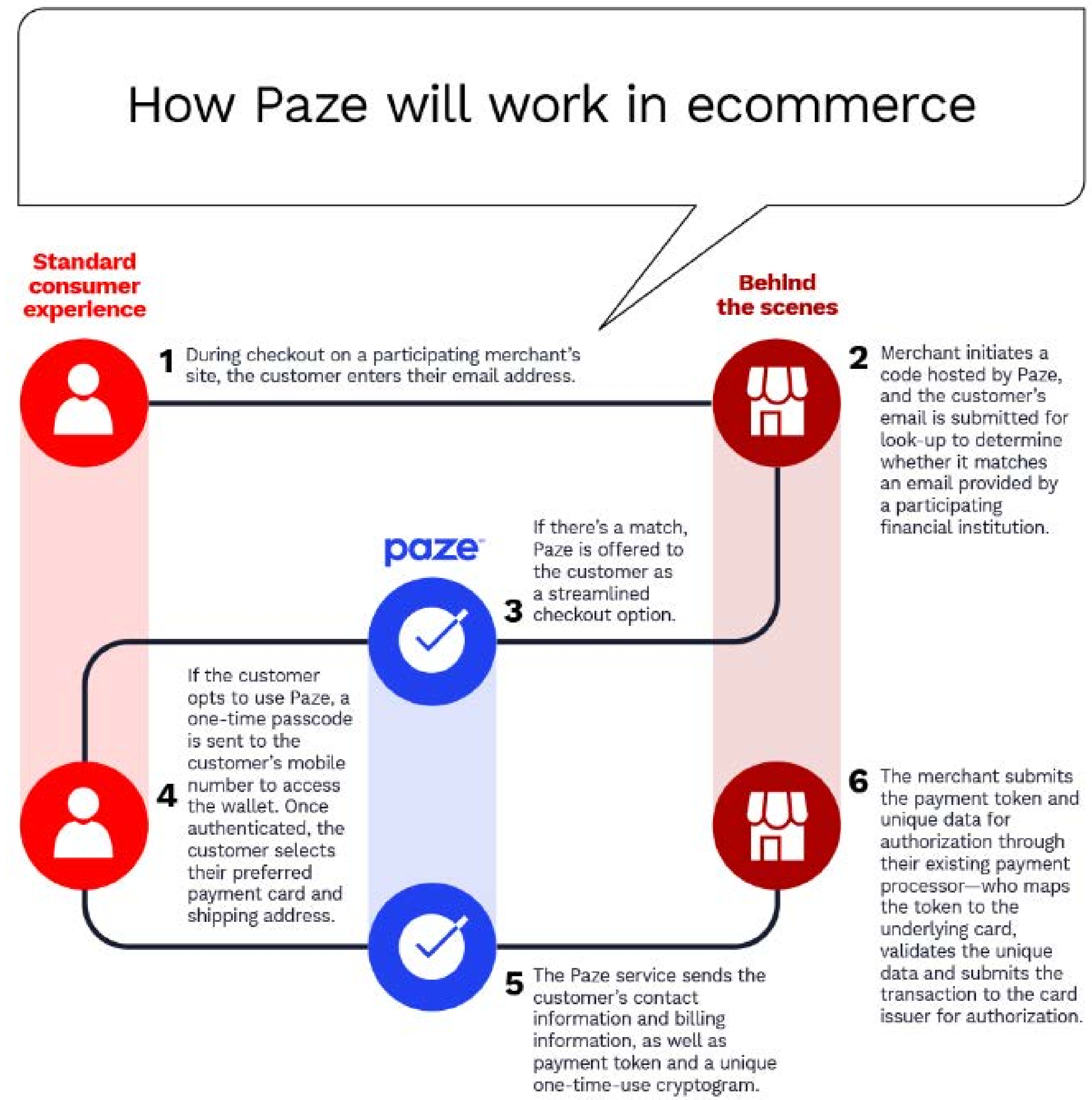
When Square launched in 2009, consumers toting those hundreds of millions of debit and credit cards were given an incentive to use them with taxi drivers and merchants, since the alternative was pulling out cash. That was friction for consumers and merchants, so using their plastic card credentials instead of cash was a no-brainer.

In 2023, the online competition is much stiffer.

Paze touts a seamless checkout using the consumer's email as the alias to a streamlined checkout. That alias is connected to registered card credentials prepopulated by the seven participating banks, and — according to a Paze blog — dynamically updated to offset the risk of a failed payment due to expired cards. And over time, randomly presented to the consumer based on Paze algorithms based on usage.

I have not personally seen a demo of Paze, but here is the flow according to the Financial Brand article, citing Early Warning documents.

A consumer enters her email. If the merchant accepts Paze, she will see an offer to pay using it. If she says yes, a mobile code is



THE FINANCIAL BRAND © June 2023 **SOURCE:** Early Warning Services sent to her phone to authenticate herself, which then takes her back to the confirmation page to confirm shipping and payment credentials, and then to buy.

Lots of steps and lots of clicks.

This is happening while, according to brand new PYMNTS Intelligence data, 51% of consumers used biometrics instead of username and password to make their last purchase online. And 46% of consumers used stored (and tokenized) credentials in the browser (46%) or registered (and tokenized) cards on file (65%) to check out.

And as the digital world is moving to one-click checkout to eliminate steps, save consumers' time and boost merchant conversion.

WAYS TO SOLVE CHECKOUT FRICTION

There are many checkout frictions to solve as time-constrained, digital-first consumers express growing degrees of dissatisfaction with the experiences that waste their time. One of the biggest opportunities we have in payments is to make checkout work harder for the consumer and the merchant without either having to work harder to benefit from that powerful, invisible smart payments experience. That's why introducing extra steps in the process, pop ups that distract without any differentiating value, especially when consumers have other options available across all the sites they regularly shop, seems like a non-starter.

What consumers consistently say they want is an app that can aggregate their shopping, payments and transactional banking activities into a single digital experience. In fact, a PYMNTS study of 3,320 U.S. consumers finds that nearly 80% say this is what they would like to have and use. Not a super app, but an everyday app smart enough to curate and serve relevant prompts for things to buy or offers to consider

— and secure enough to avoid the hopscotching around apps and webs and usernames and passwords to chase that information down.

> TIME-CONSTRAINED, DIGITAL-FIRST CONSUMERS EXPRESS GROWING DEGREES **OF DISSATISFACTION WITH THE EXPERIENCES THAT WASTE THEIR TIME.**

We don't quite know what form this will take or even how consumers envision the experience. Is it a digital front door? Is it an alias or tokenized payment and identity credential to unlock experiences across the online and offline worlds? We see many different players, with scale, pursuing these options and getting consumers on board — or improving the experience for the consumers that already use their payments product. That is where the exciting opportunity to innovate the checkout experience — on and offline — will emerge over the next several years.

That doesn't seem to be where Paze is headed. And I suspect that the Paze we see now is a very different Paze than what was envisioned in the war room that gave birth to it a couple of years back.

I believe it was intended to be a payments network using consumer bank account credentials to pay merchants. And that it was met with a resounding thud by the same banks who have ix-nayed the use of RTP rails for the same reason. Not only is there a loss of fee income, but there is a reeducation of the consumer on the benefits of swapping her debit card or credit card that she knows how to use already for a bank account payment when making everyday purchases. Doing that requires answers to questions related to zero liability and refunds, chargebacks and disputes — all the things that are well-trodden in the card world, but absolutely a work in progress in the pay-by-bank-at-the-point-of-sale world. And the requirement for merchants and issuers to support an entirely new flow without a business model or evidence to support its adoption and usage.

I also believe that, as I stated in my original piece on Paze, the seven owner banks who said yes to the idea and put in a little money to see how it might work would ultimately be conflicted over how Paze operates in the wild. Banks compete for top of wallet, and a consumer-directed bank wallet operated by a bank consortium creates lots of weird dynamics for how that might work. What happens when a Bank of America checking account customer uses her Chase card to pay for most of her purchases on Amazon — which is standard operating procedure today? Would Paze algorithms prompt offers to move the Chase card to a BoA card? How would Chase feel about that? (Three guesses on the answer.)

And what is the business model for Paze? How do banks make money, and what's in it for them if there is no incremental fee income from the rail itself? Is Paze a subsidy for another bank-centric scheme? If so, what? And how does any of this relate to what banks are doing on their own, and/or how the banks already on board the RTP network might use it for account-to-account payments?

There are also larger players, with scale, making inroads in the merchant pay-by-bank space with rails that connect consumers and third parties with this option. And other players that are making it easier for banks to use data to personalize options to use their products at checkout. All these options have scale, business models and momentum that create incentives to get consumers and merchants on board.

DIFFERENT CHECKOUT MOVIE, SAME ENDING

Those of us who've been in payments for a while have seen versions of this movie before — when the competition, not the customer, was the driving force for change. We saw MCX crash and burn, and other attempts to create merchant-centric networks sputter and fail to scale. We've seen network buy buttons disappear, and the effort to aggregate them into a single button — SRC — fade away, too.

> THOSE OF US WHO'VE BEEN IN PAYMENTS FOR A WHILE **HAVE SEEN VERSIONS OF THIS MOVIE BEFORE.**

At the same time, we've seen the success of alternatives that add value to the checkout process — installment payment options offered in the checkout flow or BNPL options that give consumers with limited or no access to credit a way to burnish their credit profile and for merchants to snag a sale. Or the simplicity of registered credentials in browsers or on merchant sites, or branded buy buttons on the sites that consumers shop regularly that make checkout easy-breezy. For all of the merchant kerfuffle over interchange, cards drive conversion and sales.

An early 2024 launch makes it a year post-announcement for its real public unveiling. For Paze, like the Fire phone, getting merchants (or developers for Amazon) is critical. But solving a consumer's problem is make-or-break. And building a solution around that is the opportunity. For Paze, that seems like a big lift — and a short period of time in which to deliver it.

September 25, 2023

THE GREAT CONNECTED CONSUMER PARADOX

It has been reported that by 2010, cable television in the U.S. had sort of hit its stride. Analysts report that 90% of homes with a television had a monthly cable subscription that year, reaching some 105 million homes — most of the population. Hundreds of channels of programming were a remote-control button away, even though most consumers didn't need all their fingers and toes to count the channels they actually watched on a regular basis.

Naturally, cable became the primary outlet for news, trends and sports and replaced the broadcast TV format for movies and weekly series. Cable news and sports channels like CNN, Fox Business, MSNBC and ESPN, among others, snagged tens of millions of 24/7/365 eyeballs and billions in advertising dollars.

Around the same time, increasingly fast broadband/WiFi networks and smartphones with apps were sowing the seeds of cable industry disruption in the form of cord cutters, and later, cord-nevers, two persona groups that would ultimately change the industry's fortunes and future.

Cord cutting started in 2008 — right around the time of the Great Recession — and slowly gained a head of steam as millennials, mostly, gravitated to the streaming content that they could access on their laptops or connected TVs — and soon thereafter, their smartphones. Netflix and specialty websites filled the news and entertainment content gap with better content delivered via new and cheaper business models. The ranks of the cord cutters rose. The rise of smartphones and apps introduced a whole new genre of consumer — the cord-nevers — for whom a cable subscription was considered irrelevant and unnecessary.

It would take another five years, until 2015, for cable providers to introduce skinny bundles at cheaper price points in an attempt to stem subscriber defections and ad dollar decline. But the die had been cast, and the days of accessing content tethered to a stationary device at a fixed location at home were numbered. By then, 64% of all Americans owned a smartphone — including 86% of 18 to 29 year olds.

This newly connected consumer, and the devices and apps they owned and used, created lots of incentives for content creators and distributors to shift their focus to consumers who wanted a diversity of content on demand 24/7/365 with a growing portfolio of connected devices.

> IT WAS THE INDUSTRY'S FAILURE TO RESPOND IN A RELEVANT TIME FRAME WITH **BETTER EXPERIENCES SERVING GENERATION CONNECTED THAT SEALED THEIR FATE.**

You know the rest of the story. More streaming apps and more content meant more reasons to leave cable in the dust or never even bother. Today, the cable industry is on the ropes. A whole new generation of connected consumer now exists whose content preferences and providers are shaped by streaming service innovators who compete for their eyeballs and their dollars.

By the end of 2022, analysts reported that cable companies had only 38M subscribers, with a net loss of 3.5 million subscribers that year. (Don't feel too sorry for them, since they are also the main providers of fixed broadband for homes).

It's a notable lesson in the power of a connected consumer to, en masse, change the course of industries in the space of thirteen years, as well as the traditional players that once served them. For cable, it was initially the confluence of millennials strapped for cash and new players with better options that gave consumers the freedom to access content whenever, wherever, however. It was the industry's failure to respond in a relevant time frame with better experiences serving Generation Connected that sealed their fate.

For payments and financial services, it's a cautionary tale.

WHO IS GENERATION CONNECTED?

In a word, everyone.

Nearly every adult (85%) living in the U.S. has a smartphone. Across generations, the average number of

connected devices owned is five. The only thing that separates Gen X from the super-connected millennials is a smartwatch. I imagine some of you Gen Xers might be going online right now to buy one just to say you have one, too.

> EVERYONE FROM GRANDMA TO GRANDKID CAN DO **ALMOST ANYTHING, ANYTIME AND ANYWHERE USING JUST A SMARTPHONE AND AN APP**.

Smartwatches aside, everyone from Grandma to Grandkid can do almost anything, anytime and anywhere using just a smartphone and an app. Over time we have seen the number of connected devices shrink as smartphones get more powerful and the apps ecosystem expands.

Today, connected devices have made it possible for consumers to do more with the devices they have, time-shift everyday activities and do multiple activities at the same time. Connected devices give consumers options for how they spend the seven days of their week, including using them to avoid going to physical establishments to take care of their business.

For Generation Connected, weekdays and weekends are now indistinguishable.

PYMNTS Intelligence data shows that grocery shopping, a once Saturday morning ritual of schlepping to the grocery store, is now done as much during the week, using apps and websites, as on the weekend. Shopping for clothes is no longer the weekend or after-work trip to the stores or the mall, but nearly evenly divided between weekends and weekdays online — and often while doing other things. People use connected devices to stream almost as much during the week as they do on weekends.

GENERATION CONNECTED'S SUPERPOWER

These digital experiences are contagious. PYMNTS Intelligence data finds a 17% increase in the number of consumers who do at least one activity using a website or an app year over year. In the fall of 2023, 89%

of all consumers do something using a connected device and an app or a website at least once a day.

> GENERATION CONNECTED **HAS PERFECTED THE ART OF MULTITASKING.**

The more consumers use digital methods for one thing, the more they are willing to try digital experiences in related adjacencies because they like the ease and convenience. PYMNTS Intelligence's analysis of 15,000 consumers across 11 countries every quarter over the last three calendar years reveals that for every 10% increase in online shopping there is a 7% increase in using digital channels to shop for groceries and to access healthcare services.

Familiarity with digital experiences not only breeds a heightened level of connectedness, but a consumer who is able to easily straddle the digital and physical worlds without sacrificing the quality of the outcome.

That makes Generation Connected's superpower their ability to do multiple things across dozens — even hundreds — of options, with a tap or a swipe or click, that in a largely analog world required being in separate physical locations to accomplish.

As a result, Generation Connected has perfected the art of multitasking.

A third of consumers order food for delivery while working, and more than a quarter place grocery orders on the job. Nearly one in five consumers check email and take work calls while shopping, 30% shop for retail purchases while taking care of others. Apps and connected devices make those experiences seamless, secure and efficient. And unobtrusive. It takes three minutes between meetings to place an order on Instacart — it takes 60 minutes or more to drive to and from the store and shop.

GENERATION CONNECTED AND THEIR MONEY

The on-demand nature of these connected experiences has only raised the bar for those delivering them, especially when it comes to how consumers pay and are paid.

In an always-on connected world, it's not enough for Generation Connected to get their money faster. They want faster access to good funds on demand — whenever they want it — regardless of whether they need the money right away.

PYMNTS Intelligence data finds that 74% of restaurant and hospitality workers want to access their tips instantly and on demand. Fewer have that option today. Seventy-two percent of consumers chose instant when asked how they'd like to be paid — they just aren't offered that option as much as they would like, or for the use cases that matter the most: refunds, incentives, legal settlements and gaming winnings.

> THE DIGITAL TRANSFORMATION OF EVERY BUSINESS IS BEING DRIVEN BY A CONSUMER **WHOSE OPTIONS ARE NO LONGER LIMITED TO PHYSICAL-WORLD CONSTRAINTS OR THE PERCEIVED RISK OF LEAVING ONE PROVIDER FOR ANOTHER.**

When it comes to paying merchants and businesses, Generation Connected wants choice, showing preference for merchants that accept their favorite way to pay. And with PYMNTS Intelligence data showing consumers using 10 different ways to pay — credit, debit, wallets, prepaid cards, cash, BNPL, installment payments and even the occasional check — ubiquity is very much determined by the consumer.

The pressures of inflation, higher interest rates and the resumption of student loan repayments have also changed consumers' relationship with their money, and where and how they spend it. This is particularly true for the 62% of consumers who, according to September 2023 PYMNTS Intelligence data, say they need their next paycheck to meet their financial obligations.

Loyalty is no longer a given.

Only 17% of grocery shoppers say that they are loyal to a single merchant when buying food; that's 20% for retail purchases. PYMNTS Intelligence data finds that in the last thirty days, consumers have either spent less (66%) or switched to cheaper merchants (54%) when making retail purchases, with 46% saying that the merchant with the best deal wins their business. This goes for high earners, too — more than half of whom (55%) say that they have traded down when making retail purchases, with 44% saying they traded down when buying groceries.

Connected devices and apps make those pivots possible, and even permanent.

PLATFORM POWER AND THE CONNECTED CONSUMER

The digital transformation of every business is being driven by a consumer whose options are no longer limited to physical-world constraints or the perceived risk of leaving one retailer, grocery store, employer, or bank for another.

Or dividing their loyalty among many.

Software platforms give consumers those options. Embedded payments, finance and identity make them accessible, useful and secure.

In payments and financial services, we see Generation Connected's influence taking hold.

Their swift embrace of BNPL and credit card installment options — something that 37% and 44% of consumers now do, according to PYMNTS Intelligence data — gives consumers a more predictable way to manage their spend and their monthly repayments. At the same time, Generation Connected continues to use their traditional debit and credit cards to pay merchants and businesses, with 37% of consumers using debit to pay for their last retail purchase and 29% using credit to do the same.

We see this in the loss of bank deposits when consumers move money to third parties, totaling about $1 trillion between April 2022 and May 2023. We see this as consumers use PayPal 40% more than they use Zelle to send money because it gives them access to people in a much broader network.

> IN PAYMENTS AND FINANCIAL SERVICES, WE SEE **GENERATION CONNECTED'S INFLUENCE TAKING HOLD.**

At the same time, we witness the rise of Big Tech and FinTech players with a critical mass of consumers and a payments relationship of some kind moving into the traditional financial services space. And Generation Connected clicking in. Consumers may not think of Big Tech as "their bank," but they are happy to engage with them in select activities they once mostly did with their primary bank.

In addition to Apple Pay, Apple now has the Apple Card, Apple Pay Later, and Apple Savings, which they say has captured $10B in deposits so far in 2023. Apple has a new source of capital to support its own credit aspirations.

Seventy eight percent of consumers have a PayPal account, with 20% of them using their stored balances to pay for purchases, and another 46% using their bank account credentials to pay when shopping at a merchant.

When it comes to who consumers say they trust to deliver an everyday app experience, 15% more consumers say PayPal than their bank.

Square/Block — with its 53 million Cash App accounts and the 2022 acquisition of Afterpay — now offers an end-to-end debit/credit and banking experience for those consumers. Roughly 11% of consumers consider a non-bank financial service provider their primary bank, meaning it's where their paycheck is deposited.

Amazon has expanded Amazon Pay off Amazon so consumers can use those credentials to pay and get free shipping. The number of things that consumers can use Amazon Pay to buy on the platform has expanded, including for virtual healthcare sessions, prescriptions, food delivery and other adjacent services. Amazon Pay and Chase have recently teamed to offer installment options on the Amazon Chase Card. Amazon offers consumers a stored value card to bank balances for future use.

Forty-six percent of consumers used browser-saved payment credentials in Chrome — that's GPay — across one of 800,000 websites to pay a merchant in their last purchase, giving consumers an online commerce/identity passport across the web. At the same time, Google Wallet is actively expanding its utility to include stored access credentials, including driver's licenses, hotel keys and building access credentials.

Open banking already makes the movement of money out of banks easy, with Plaid accounting for 200 million users and ambitions of its own to launch payments.

This is all coming while GenAI — and all the innovation that it will spawn — will level the playing field and up the ante for every business to use it to improve the digital experience directed to Generation Connected. It's an enhancement that more consumers say will add value to their experiences with businesses than create privacy and security concerns.

HOW GENERATION CONNECTED FITS IN YOUR WORLD

Just like cable and its hundreds of channels back in the day, Generation Connected seeks simplicity in the ever-connected world in which they live. Generation Connected's version of a skinny bundle is not an everything app, but one that helps efficiently navigate their day-to-day. Nearly 8 in ten consumers say that such an everyday app is an experience that sounds good to them. That's even as it's not entirely clear what that looks like — or even what consumers mean when they use that term.

What they seem to want is a better ability to connect what they buy with how much money they can spend, with the ability to see and be served offers and promotions and recommendations for the best way to pay. The opportunity to connect shopping and payments and transactional banking services is appealing. The illusive payments-and-banking-meets-commerce trifecta becomes a fluid and dynamic way for consumers to manage and plan their spend — and then pay.

Banks have consumers' trust as well as their money — and, for most, the positive tailwinds that came from watching the collapse of SVB and the run on that bank and the few others that followed. But they face a new generation of connected consumers shaped by sixteen years of digital and digital-first financial services and payments experience. Today, 28% of consumers say they'd be willing to switch to an alternative provider

with more innovative services. Unsurprisingly, 37% more millennials say that, too.

> THE PARADOX OF GENERATION CONNECTED IS **THAT THE VERY THING THAT MAKES THEM AN ATTRACTIVE TARGET ALSO MAKES THEM A FLIGHT RISK.**

The paradox of Generation Connected is that the very thing that makes them an attractive target also makes them a flight risk. They can just as easily move to you as away from you, if a better experience that saves them time and money or solves a big pain point comes along.

For payments and financial services, the risk that Generation Connected poses is unlike the all-or-nothing scenario faced by the cable providers in the 2010s. Rather, it is the risk that the frictions that consumers tolerated because switching was too hard and too complicated are now the value proposition that innovators build their business and business model around. Generation Connected can test the waters as they did with cable back in the day, having both streaming and cable before finally cutting the cord.

In the not-too-distant future, a network of connected devices and sensors will make engaging with any type of business even easier and those transactions between activities and experiences seamless and secure. Including their payments and financial services provider.

And Generation Connected's relationships with traditional providers will become even easier to break. Traditional players may not even notice in enough time to do something about it.

October 9, 2023

WHY CONSUMERS DON'T CARE ABOUT MONTHLY CPI – AND WHY IT MATTERS

No one really knows the origin of the phrase "seeing is believing." The Oxford Dictionary traces its English language roots to 1609. Others say that it was the Ancient Greeks who first connected the act of seeing something with knowledge. Regardless, it's largely the case that what people see is what people believe. And what they believe shapes their behavior — and the actions of those who'd like to influence it.

It's a fitting aphorism as the financial world eagerly awaits the September CPI report, which will drop on October 12th. Consumers, on the other hand, could not care less.

Whatever the monthly percentage is and whether it is up or down from the month before isn't relevant to them. The average American's view of inflation and the inflation rate is shaped by their costs — what's left in their checking account after they buy the basics, pay the mortgage or the rent and their monthly bills — not the government's monthly inflation report card for what's true on average.

Over the last three years, most consumers have seen double-digit price increases against paychecks that haven't kept pace with inflation. It's that pain in the pocketbook that influences their perception of what the rate of inflation is, what a strong economy looks like and how long it might take to get there.

Most consumers say that's another 20 months away — the Spring of 2025. As far as their perception of a strong economy is concerned, I'll keep you in suspense for a few more sentences.

Many Americans are starting to crack under the pressure of high prices in ways that weren't evident even a year ago. More concerning is how consumers now manage their everyday expenses, including how they prioritize and pay their monthly bills. There the relevant number is 41% — the share of U.S. consumers who now say they make partial payments to meet their monthly financial obligations who didn't before.

So, today we see a consumer whose behavior is much different than it was a year ago — and in ways that will likely impact everyone and every business for the rest of this year and into 2024.

HOW CONSUMERS CALCULATE INFLATION

In a national study of 2,101 consumers conducted by PYMNTS Intelligence between September 7th and September 18th, consumers say they pay, on average, 29% more for retail purchases and, on average, 23% more at the grocery store than they did just a year ago.

They're not entirely wrong.

Since 2019, prices have risen more than 24% cumulatively for both grocery and retail purchases. The result is a consumer whose perception of inflation is based entirely on how much more they spend today versus a year ago. Not the average consumer, but them.

That turns out to be $100 for the basket of groceries and retail products that cost them $89.21 last year. The "good news" that monthly

Figure 3
Average perceived price increases (12-month change) vs. cumulative inflation since 2019

Source: PYMNTS
Consumer Inflation Sentiment #15,
N = 1,801: Consumers who have purchased at least an item across categories and noticed price increases, fielded September 7, 2023 - September 18, 2023

CPI levels are moderating isn't what they see day to day, so many just tune it out.

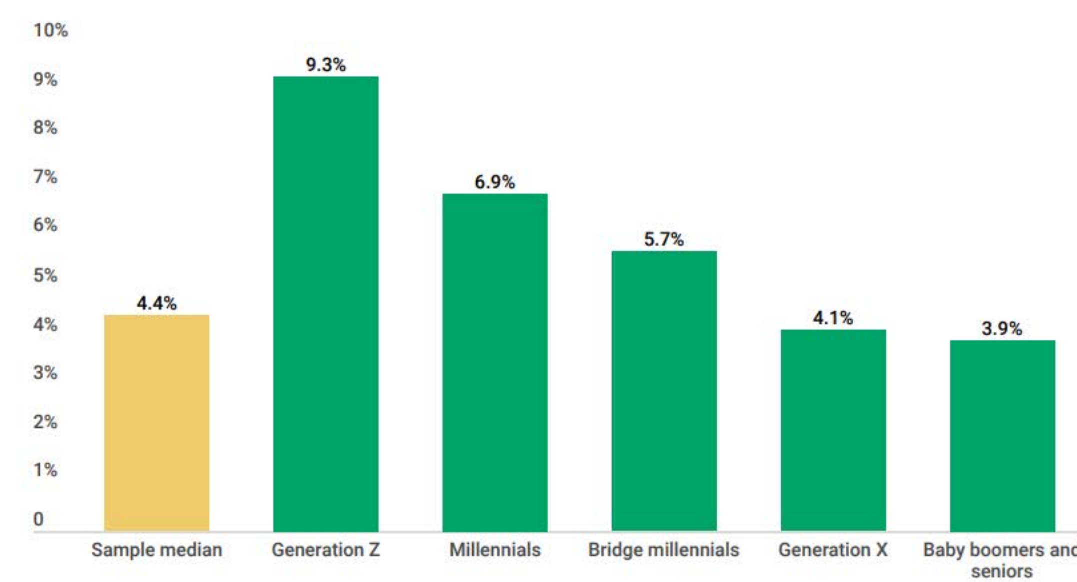
A consumer who measures the annual rate of inflation by her perception of how much more things cost uses that as a benchmark for how she measures a healthy economy. This casts an interesting light on just how high or low an acceptable rate of inflation is.

BEEN THERE DONE THAT, GOT THE HIGH INFLATION T-SHIRT

Experience, as they say, is the best teacher.

The grizzled, battle-hardened Gen Xers and boomers who've been there, done that and gotten a few high inflation/bad economy T-shirts to prove it aren't unduly influenced by what's happened over the last several years, but rather their experiences

Figure 5
Highest acceptable inflation rate in a "strong" economy - Median value, by generation



Source: PYMNTS
Consumer Inflation Sentiment #15,
N = 2117: Complete responses, fielded September 7, 2023 - September 18, 2023

over decades of ups and down. Although they don't believe the economy has to be at a 2% inflation level to be strong, they agree that a rate in the high-three or low-four percent range is both acceptable and even realistic. We understand that Chairman Powell would disagree.

Gen Z and millennials whose strong economy lens is a decade of low inflation and interest rates have a very different perspective. More than half of millennials and Gen Z say their paychecks have either not kept pace with inflation or decreased over the last twelve months. More of their discretionary income is paying for the higher cost of food and rent. For this cohort of consumers, whose perception of inflation is in the mid to high 20s annually, an inflation rate of seven, eight or even 10 percent may feel like a win — and even a path to a stronger economy.

THE BILL PAYMENT PRESSURE COOKER

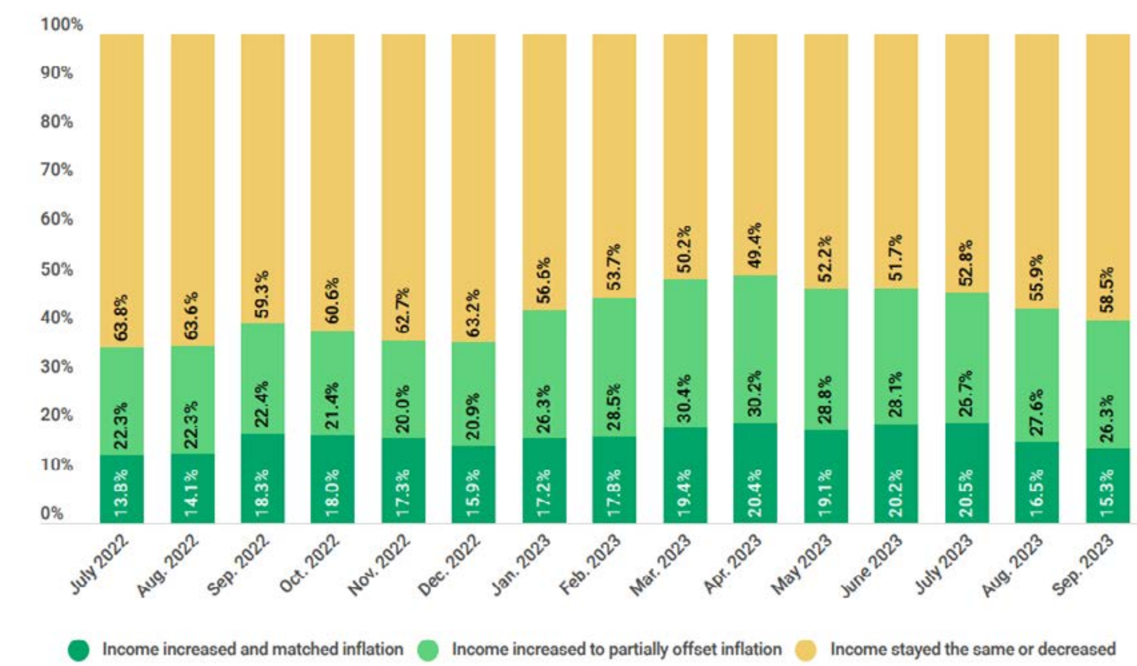
Unsurprisingly, this same PYMNTS Intelligence report finds that 85% of consumers say that inflation has had a negative impact on their financial health.

Sixty two percent of the middle class — those earning between \$50,000 and \$100,000 — say their income has either decreased or stayed the same over the last 12 months. Nearly 70% of those earning less than \$50,000 say they are in the same boat. This is the same group of consumers who've seen their personal cash cushion plummet by a third over the last twelve months. Women, who often play the role of household CFOs, are more worried than men about the impact of inflation on their financial well-being and that of their households.

Sixty-two percent of consumers now live paycheck to paycheck, a number that has spiked a bit since last month, but largely stayed consistent for the last six. Consumers have learned to manage within the constraints of their paychecks and their increasingly expensive monthly financial obligations.

But these same consumers are now dealing with a different paycheck reality. In addition to higher prices, consumers are facing an increase in

Figure 1
Change in income relative to price increases in the last 12 months



Source: PYMNTS
Consumer Inflation Sentiment #15,
N = 2117: Complete responses, fielded September 7, 2023 - September 18, 2023

mortgage, auto and rent payments, adding a couple of hundred dollars or more each month to service their debt. Credit card interest rates are spiking, raising the monthly minimums and the overall cost of their purchases.

According to PYMNTS Intelligence, nearly half (49%) of consumers say that they have trouble paying their bills the way they once did. That's an increase of 7% since this time last year.

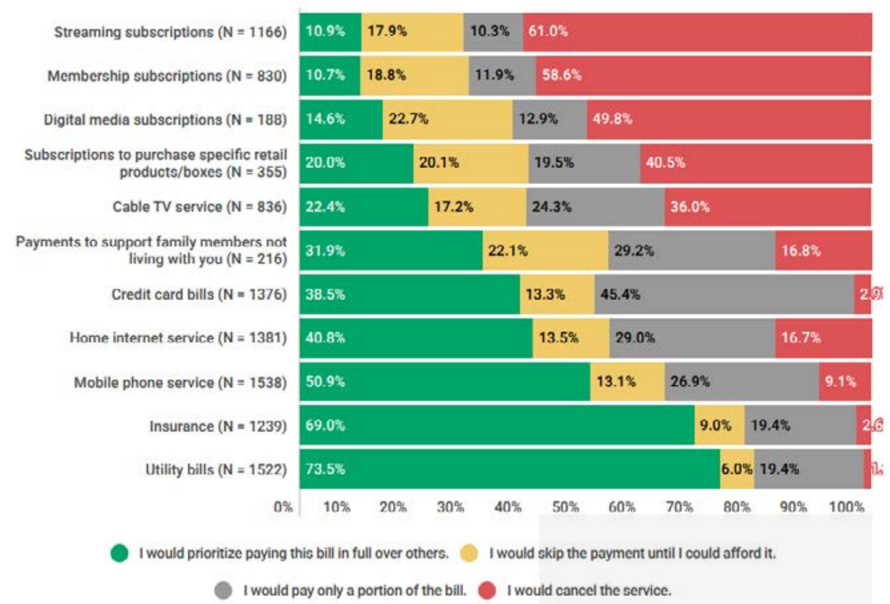
And the way they once did was to prioritize certain bills above all others and pay them, in full, at the end of the month.

Today,

consumers are adapting by making partial payments, something that 41% now say they do. Three in ten consumers make partial payments on their credit card bills, the highest level since the start of the year.

Figure 6a

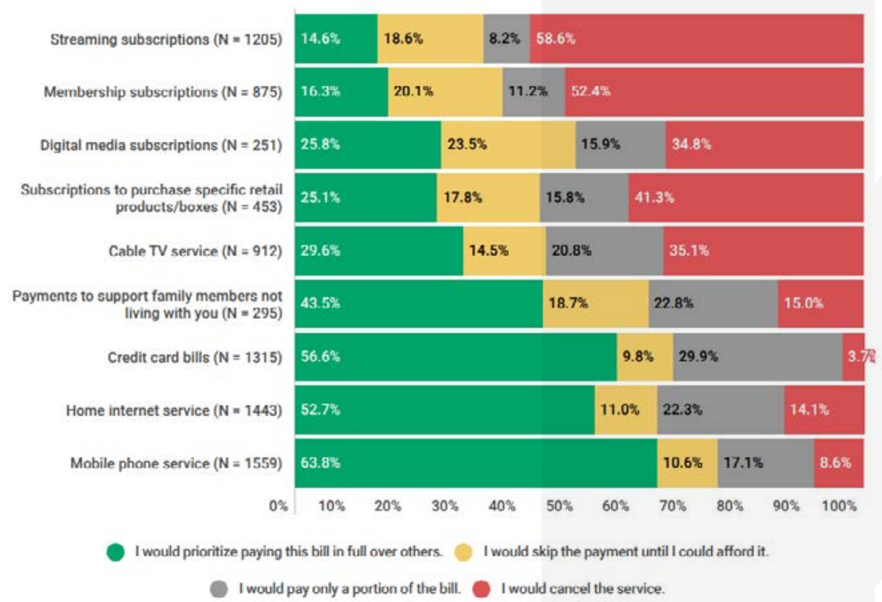
Share of consumers who would take a given action if they were unable to pay all of their bills, by bill (September 2023)



Source: PYMNTS
Consumer Inflation Sentiment #15,
N = varies: consumers who have paid each monthly bill in the last month, fielded September 7, 2023 - September 18, 2023

Figure 6b

Share of consumers who would take a given action if they were unable to pay all of their bills, by bill (September 2022)



Source: PYMNTS
Consumer Inflation Sentiment #3,
N = varies: consumers who have paid each monthly bill in the last month, fielded September 13, 2022 - September 22, 2022

Consumers have also reprioritized the order in which they pay their bills.

After paying their rent or their mortgages, consumers rack and stack their payments based on how essential the service is to them: power/water, mobile phone, internet, and insurance in the event of a catastrophic loss rounded out the top five a year ago. Credit cards came next, and digital media and memberships (think fitness, weight loss) are dead last.

Where the rubber meets the road in 2023 and beyond is what consumers say they will do if money gets really tight. This is where more consumers say they'd make partial payments instead of prioritizing the payment in full of one bill over another. We see the biggest shift in how consumers say they will make credit card payments: a third fewer consumers say they'd prioritize making their credit card payments over another bill. Somewhat surprisingly, the same is true for mobile phones and home internet services. Retail subscriptions look remarkably durable, even as streaming services, digital media and membership services all look like they are ready for the chopping block.

Consumers would opt to do the minimum to keep their accounts in good standing for the services or products they view as essential until the economy or their financial circumstances improve.

It's all that many may be able to do.

WHY PAYMENTS SHOULD CARE

Anyone who has lent or is lending money to consumers, like many do in the payments and financial services sector, needs to pay attention to how consumers are feeling the pinch of rising prices. It is far more multifaceted and variable than anything you can glean from the CPI reports.

And the Fed, and other policymakers who want to change consumer behavior to help steer the economy to a good place, should not overfocus on the mythical average consumer for whom the CPI, and other measures of inflation rates, apply. Instead, they must consider the masses of consumers who do not fit the average. For them, seeing should be believing, too.

October 23, 2023

BUY NOW, PAY LATER IS HAVING ITS KLEENEX MOMENT

Kimberly Clark introduced Kleenex in 1924 as a product used by movie stars instead of face cloths to remove their makeup and keep their skin soft. The key selling point was that the tissues could be discarded after each use, saving women lots of laundry time.

It wouldn't be until Kleenex was rebranded in 1930 as a disposable alternative to the cotton handkerchief that sales really took off. (Little known fact: a Kimberly Clark scientist accidentally discovered this use case after battling a particularly nasty hay fever season.)

The product became so popular that the word "Kleenex" became the generic term to describe any brand of disposable tissue — even though it was (and remains) a registered trademark of Kimberly Clark.

The "Buy Now, Pay Later" space is going through a similar genericization — except in this case, no one owns the trademark.

But ask three people to define "Buy Now, Pay Later" and you might get five different renditions on the theme. Ask three more to define

installment payments, and maybe you'll get a similar result — at a minimum, there will be a lot of overlap.

The point is that the payments industry has come to use the "Buy Now, Pay Later" moniker as shorthand to mean any online point-of-sale credit product that divides everyday retail purchases into smaller, equal payments over a set term to pay in full for a purchase.

Consumers do it, too.

Most use the "Buy Now, Pay Later" label to describe one of several split-payment schemes they may use from time to time to pay for purchases — from merchants, from their card issuers or from FinTechs that have brought a new wave of innovation to the credit space since the early 2000s.

That's not wrong, but it does speak to the challenges of parsing data precisely to understand what split-pay options consumers are using to, well, buy now and pay later — and why.

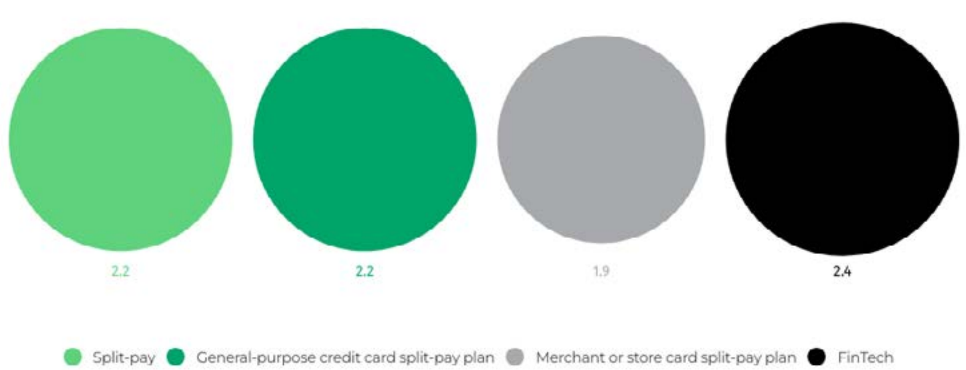
Maybe it's time for a new split-pay credit taxonomy.

THE SPLIT-PAY CREDIT ECONOMY

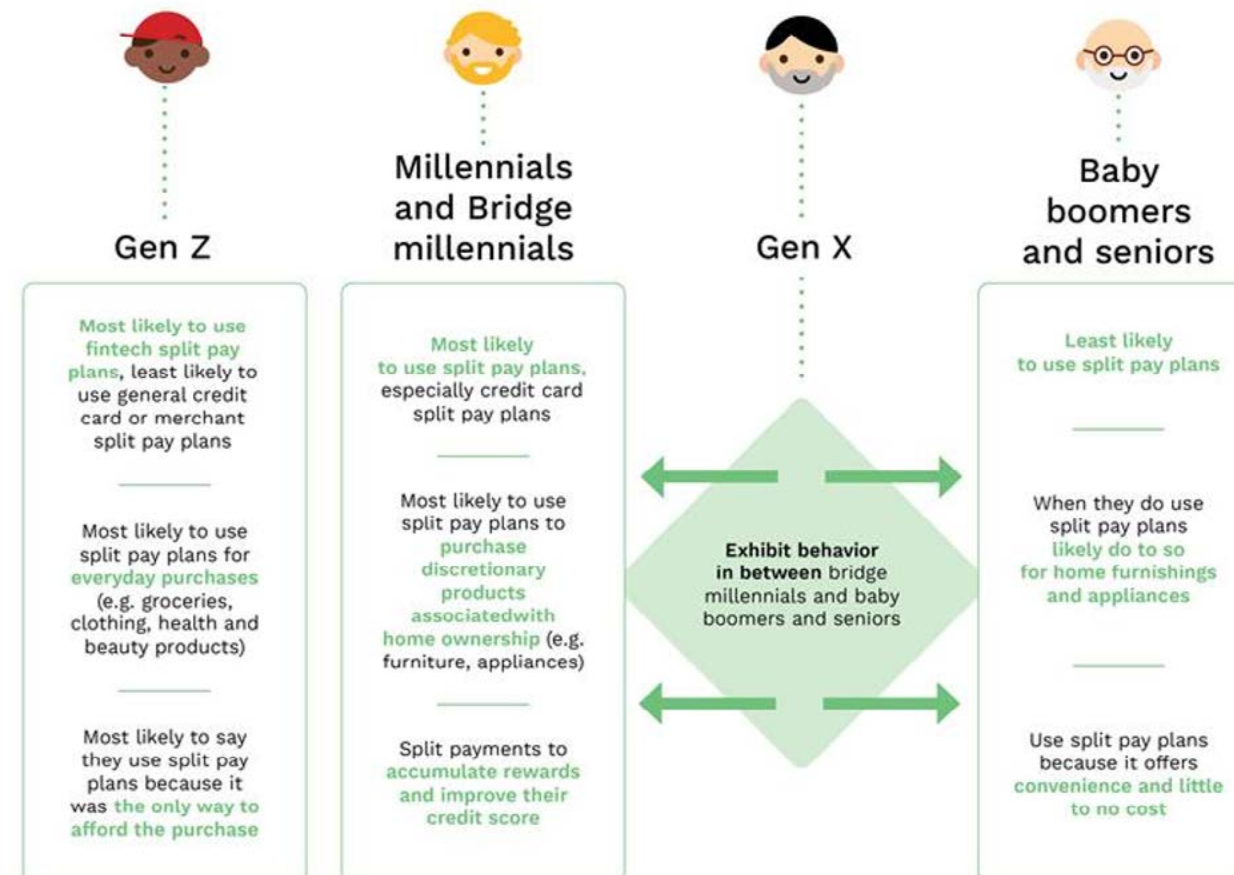
In the last twelve months, PYMNTS Intelligence data finds that roughly 60% of all U.S. consumers used an online point-of-sale payment option that split a retail purchase into equal installments over a set term. The typical U.S. consumer used one twice over the last six months.

Thirty-seven percent of all consumers did that by getting a new loan from a FinTech. An equal share (37%) did the same — but from a merchant to buy something at a specific store. Most of the time these split-pay programs had zero percent interest. Retailers or manufacturers may have subsidized the plan as part of a promotional offer — and the short term, mostly smaller-dollar plans from FinTechs charge no interest or fees, provided the loan is paid according to terms.

Average number of times consumers used Split-pay in the last six (card) or 12 (FinTechs) months



Source: PYMNTS Intelligence
Installment Plans Becoming a Key Part of Shopper's Toolkit, September 2023
N = 1,238: Respondents who have used credit card installment plans; N = 1,000: Respondents who have used merchant or store card installment plans; N = 833: Respondents who used BNPL, fielded Aug 8, 2023 – Aug 12, 2023



Forty five percent of consumers used a split-pay point-of-sale option attached to their network-branded credit card, using their already approved and unused credit line to make the purchase. Over the last several years, more card issuers have offered these options. Most card issuer-centric plans are set up after the purchase is made via the issuer's site or app.

PYMNTS Intelligence research also finds that there are different split-pay strokes for different split-pay folks.

Boomers rarely use split-pay plans but say they like the convenience when they do. Millennials like the rewards with plans that attach to their credit cards; they prefer them about five times more than FinTech schemes that require new loans. Gen Zers use primarily FinTech plans to buy the things they otherwise couldn't, including everyday essentials like food and gas — often because it is the only credit product available to them.

THE SPLIT-PAY CREDIT PERSONAS

Roughly 80% of U.S. consumers have at least one credit card. According to the New York Fed's latest report, those 209 million consumers have racked up $1 trillion in credit card outstandings, with another $3.6 trillion of available credit lines to tap.

Nearly two thirds of consumers (62%) have used those cards online and in store in the last 90 days to buy everything from groceries and clothing to travel — or to pay for out-of-pocket healthcare expenses. According to PYMNTS Intelligence, roughly 56% of consumers now revolve those balances. Far fewer (18%) used store cards to make purchases at merchants.

Here's where the data on point-of-sale split-pay credit gets interesting. And it seems to have a lot to do with whether consumers already have cards in their wallets.

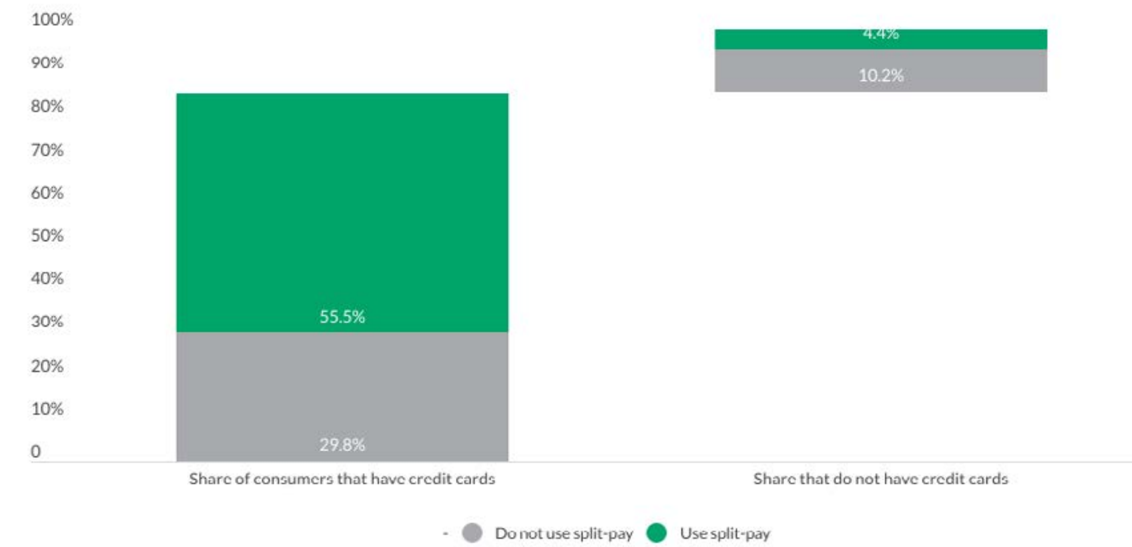
PYMNTS Intelligence studies find that there are three distinct point-of-sale split-pay personas: ***those who have credit cards (from a merchant or from a card issuer) and also use point-of-sale split-pay credit options from time to time*** (56% of consumers), ***those with credit cards (from a merchant or from a card issuer) and who do not*** (30% of consumers), ***and those without any credit cards who use FinTech programs to make and pay for purchases*** (4.4% of consumers). The remaining 10% do not have credit cards (from a merchant or from a card issuer) and do not use split-pay plans.

CREDIT CARD-CARRYING POS SPLIT-PAY USERS

More than half (65%) of U.S. consumers with any form of credit card used a point-of-sale split-pay credit plan to make retail purchases as part of the online checkout flow.

Fifty percent used a split-pay option attached to a network-branded

Credit Haves and Credit Have Nots

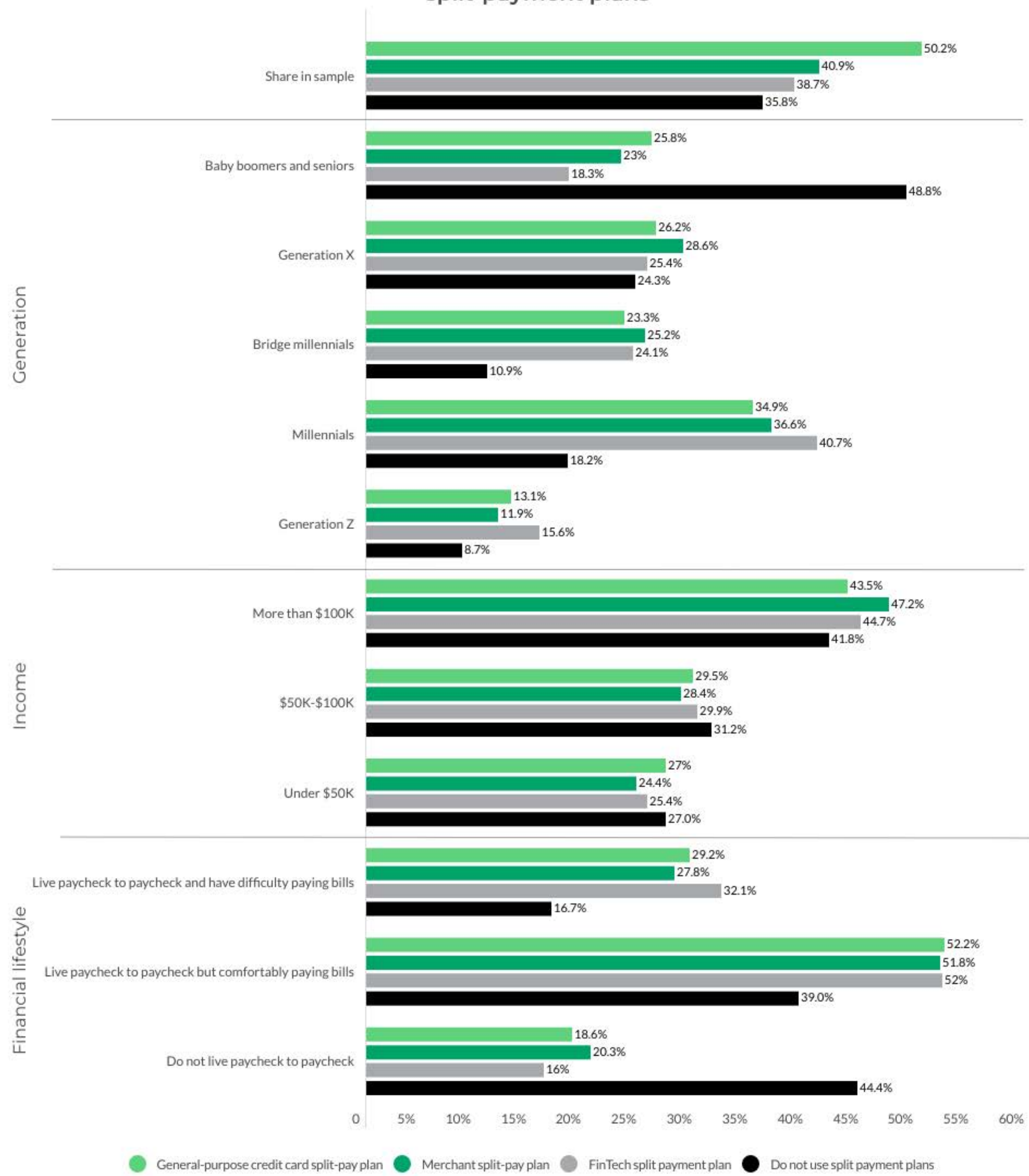


Source: PYMNTS Intelligence
Installment Plans Becoming a Key Part of Shopper's Toolkit, September 2023
N = 2,859: Whole Sample, fielded Aug 8, 2023 – Aug 12, 2023

credit card. The typical user is a bridge millennial earning $91K a year, living paycheck-to-paycheck and comfortably paying the bills. The median purchase amount is $558 over 4 payments, although credit card split-pay users say they find this option valuable when making discretionary purchases (clothing, accessories) of between $2000 and $10,000 over a 10–12-month term. The price points associated with network-branded spilt pay plans are significantly greater for all age and income cohorts.

The 82 million U.S. consumers who opt for a FinTech point-of-sale split pay program make purchases that are 29% lower in value. With a median purchase price of $395 over three to four installments, these split-pay users skew younger and are millennials and Gen Zers with an annual income that's similar at $89,000. FinTech providers are the most common split-pay option among Gen Z credit card owners for three reasons: their card lines are lower, so they want to preserve a credit cushion in the event of an emergency; they may only have one credit card and need an additional form of financing to make a purchase; and/or there is little or no

Shares and demographic composition of credit card owners using various split-payment plans



Source: PYMNTS Intelligence
Installment Plans Becoming a Key Part of Shopper's Toolkit, September 2023
N = 2,376: Respondents who have any type of credit card, fielded Aug 8, 2023 – Aug 12, 2023

cost of doing so (which is what 45% of this persona finds appealing about this option).

For both personas, the availability and convenience of a point-of-sale split-pay credit option at any of the merchants they like to shop is the appeal.

Forty-one percent of credit card users, some 86 million U.S. consumers, used a merchant point-of-sale split-payment plan. The typical persona is a millennial or Gen Xer making over $100,000 living paycheck to paycheck while comfortably paying their bills.

These consumers say they prefer split-payment plans as a convenient way to manage their spending for much larger purchases — largely for home furnishings, appliances and electronics — and obviously at a particular store. The average purchase price is $1575 with a seven-month term.

For this persona, it is merchant preference that drives the interest and the use.

CREDIT CARD CARRIERS WHO DO NOT USE POS SPLIT-PAY

Over sixty percent of consumers with credit cards who don't use point-of-purchase split-pay plans say they don't see the need. They tend to be older (49% are baby boomers, only 8.7% are Gen Z) and high-earners (42% have incomes of over $100,000). They also say they don't live paycheck to paycheck, so dividing purchases into monthly payments over time does not have the same appeal.

A quarter (26%) say these plans will lead them to overspend, and 15% say they already have enough debt and don't want more.

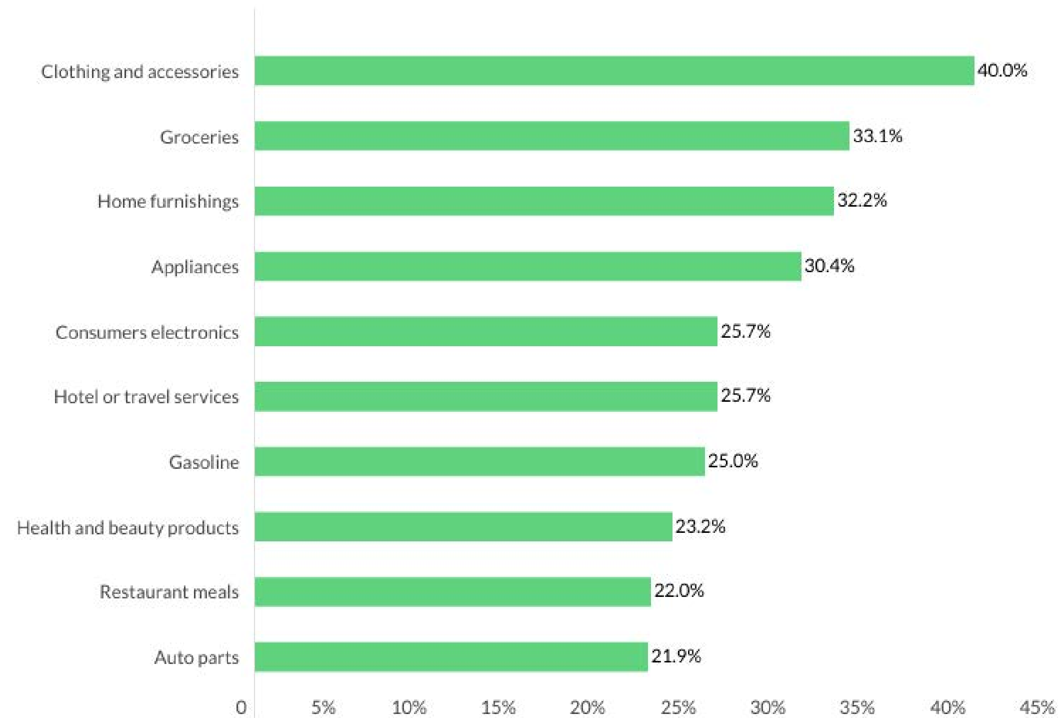
THE CONSUMER WITHOUT CREDIT CARDS

Roughly 20% of the U.S. adult population does not have a credit card — 60% of whom say they don't want one. The 40% of those who don't have a credit card but want credit use point-of-sale split-pay programs to fill their credit needs.

These consumers are more likely to earn less than $50K, and nearly a third (31%) say that absent the split-pay option, a purchase would be

Top 10 most common purchases made using split-pay

Consumers who have credit card, and use split-pay



Source: PYMNTS Intelligence
Installment Plans Becoming a Key Part of Shopper's Toolkit, September 2023
N = 1,427: Respondents who have credit card and have used pay later, fielded Aug 8, 2023 – Aug 12, 2023

impossible for something they want or need to buy.

Unsurprisingly, these consumers use point-of-sale split-pay programs in much the same way that their credit card-toting consumers use their cards: to buy everyday essentials like gas, groceries and food at restaurants.

For example, a third of consumers with credit cards who also use some form of split-pay plan report using them to buy groceries; 21% of consumers whose only credit option is via a FinTech say they do the same.

THE SPLIT-PAY CREDIT ECONOMY AND CONSUMER FINANCIAL HEALTH

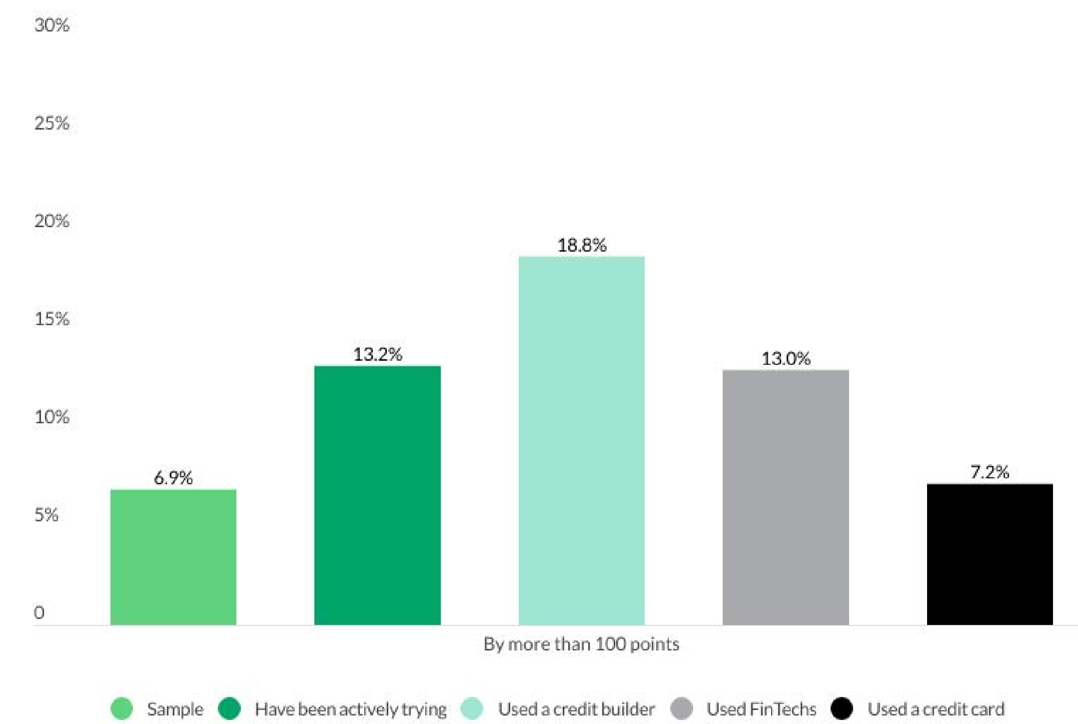
PYMNTS Intelligence recently completed a study on the impact of credit-builder apps and the use of alternative pay programs on the credit scores of consumers.

What we discovered is that consumers without access to traditional credit cards recognize that FinTech programs could be the only shot they have at getting and keeping credit. They appear to work hard to use those options responsibly, with many using them to build a more positive credit profile.

We find that 13% of consumers that used a point-of-sale split-pay program provided by a FinTech were able to increase their credit score by 100 points or more over a period of twenty-four months. That's twice the number of credit card users who also said that improving their credit score was a key priority.

It appears that the discipline of credit-building programs, combined with the small dollar value and short-

Share of consumers who increased their credit score by more of 100 points in the last 24 months



Source: PYMNTS Intelligence
The Credit Accessibility Series, October 2023
N = 2,558: Whole Sample, fielded Aug 21, 2023 – Sep 2, 2023

term payback periods of FinTech plans, may provide the guardrails needed by these consumers to use credit responsibly and build a positive credit profile. It's also how FinTech lenders manage their risk — smaller loans that increase in value over time, provided that the consumer continues to repay their loans on time.

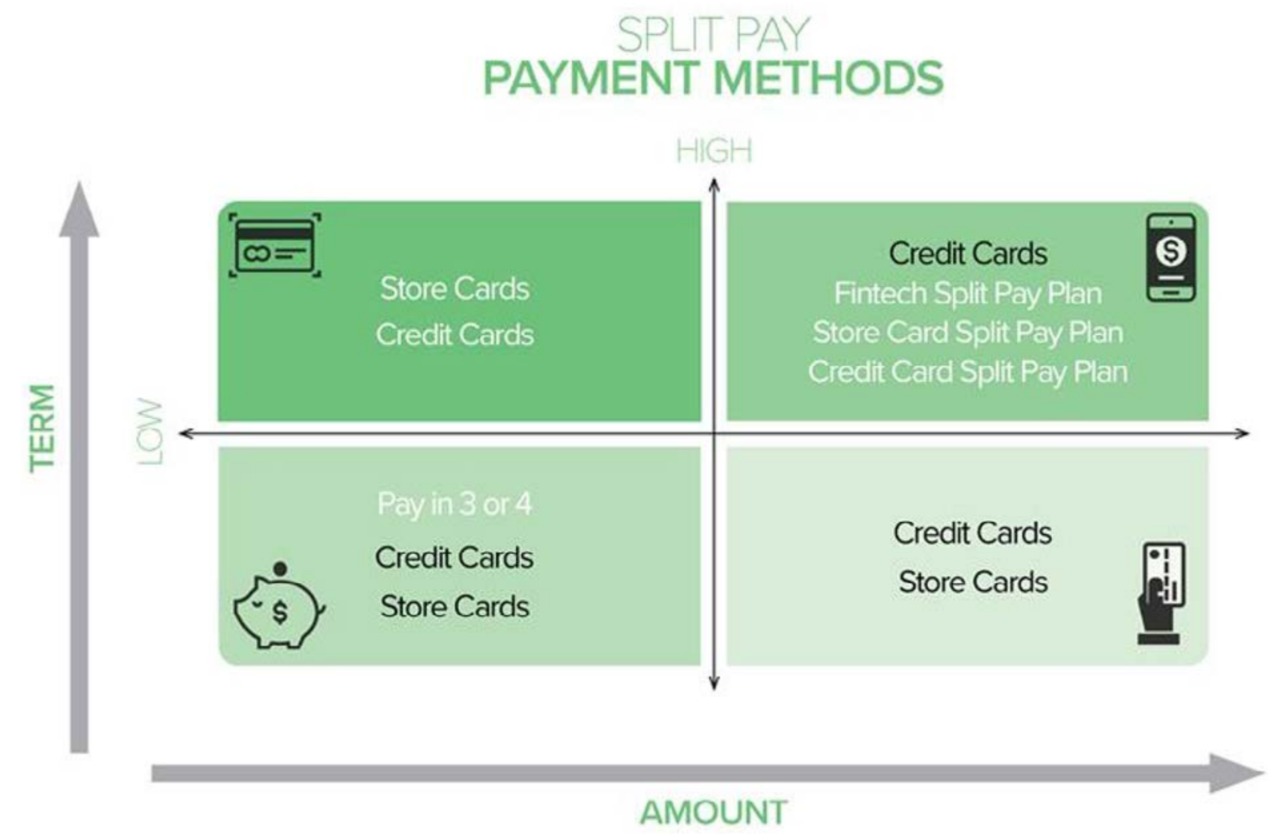
Those same guard rails exist for consumers using split-pay options attached to their credit cards. Even though we find that making those options known to consumers in the purchase flow can boost basket sizes, that higher spend is tied to an already approved credit line. Consumers who use them cite the ease and convenience of not having to apply for a new loan and splitting their payments into equal monthly installments using a credit product they have and use regularly.

WHAT'S IN A SPLIT-PAY NAME?

The online point-of-sale split-pay credit economy got its digital mojo in 2000 with BillMeLater (now PayPal Credit), a FinTech that innovated online point-of-sale credit by making the option available to any merchant that accepted it.

Over time, the split-pay concept has expanded to include innovators that attach split payment to network-branded cards during the checkout flow. Card networks are deploying their own installment programs that deliver the same user experience. More issuers make the option available post-purchase, even as they grapple with the impact of these programs on the interest income they derive from revolvers. Merchants are tapping robust credit marketplaces to match lenders with almost any consumer who shows up at the online point-of-sale and needs financing to pay for essential purchases.

All of these options and providers now enable on- and offline purchases through debit cards and mobile apps. Many are innovating the pre-purchase experience by offering consumers a credit line for that



purchase to help manage spend and payback plans.

One of the most interesting insights that has come from analyzing the point-of-sale split-pay credit economy at such a granular level is that consumers like and use credit — in whatever form they are able to get and use it. But their relationship with credit has changed for all but the 10% of the consumer population who don't use credit and say they don't want any.

Even though September retail sales reporting touted a resilient consumer who's an unstoppable spending machine, we find a retail sales number that is 3% less than sales in the corresponding 2021 period, when adjusted for higher prices and inflation. And a consumer who is quite literally buying less even though they are spending more dollars on those items than they were just a few years ago.

For consumers with credit cards, point-of-sale split-pay plans are another payment tool in their arsenal of credit options to manage their monthly cash flow to make the purchases they want and need. For those who don't have cards to leverage or to use an an option, it is the credit surrogate that serves the same purpose.

For both, it offers the certainty of a payoff, with the predictability of equal payments over time. It's also at a time when most consumers don't see paychecks keeping pace with the higher prices they now pay. In fact, having a clear path to a payoff is the financial discipline that 60% of consumers say they like about these plans and why they use them.

This space will be an interesting one to observe as card issuers seek to create a user experience that is more FinTech than bank: a seamless experience provided as part of the checkout flow that can also help them attract new customers.

As FinTechs seek to create a user experience that acts more like a bank: branded cards that ride the card rails and can be used at any merchant a consumer wants to shop.

As merchants leverage new marketplace lending platforms to expand their customer base to include those credit scores that are sub-prime or even below.

As alternative credit providers use the opportunity to help consumers consolidate and manage their debt and improve their financial health.

And as consumers — 60% of whom now say they live paycheck to paycheck — have a new understanding of how much "higher for longer" interest rates costs them every month, and the impact of the fine print surprise fees on their financial health. Consumers will continue to press for better options across the credit providers they use for a more predictable and certain way to manage their monthly cash flow.

November 3, 2023

CAN SHOP CASH TURN SHOPIFY INTO AN AMAZON CHALLENGER?

I'm feeling flush.

I got an email last Saturday from Shop that I had $43.40 in my Shop wallet to spend on the app. This was news to me, since I never knew I had one.

But now I have one that Shop created for me as part of their Shop Cash program, which they launched in June. Each time I use Shop Pay to check out on various merchant sites, I automatically get 1% cash back deposited into that wallet.

I admit to seeing emails from Shop over the past several months letting me know that I had earned $1 or $2 after checking out with Shop Pay, but I ignored them. The email declaring my $43.40 windfall got my attention, so off I went to the App store to download the Shop app.

I learned a few things, and they provide some insights into the do's and don'ts of platform ignition.

First, I can only spend Shop Cash at the merchants on the Shop app. That was initially a bummer, since what I really wanted was to transfer my $43.40 to my checking account. The promotion is funded by Shopify and intended to drive sales back to participating Shop merchants to keep them sticky. It's also designed to drive more consumers to download the app, shop there and — importantly — show preference for using Shop Pay anywhere they shop.

And here I was hoping to pay for takeout at my local Thai place.

Second, my newfound wealth is spendable on the platform in two ways. I can use it as a straight-up credit at checkout on purchases made in the app. I can also use it with merchants who have opted to turbocharge that cash if I buy something from them. For those who may be unfamiliar, Shopify merchants have the equivalent of a mobile storefront on the app, featuring their full product catalogue. For what it's worth, none of the Shopify merchants I shop offered any turbocharged deals.

Third, once I downloaded the app, I found that my Shop Pay credentials — card, shipping address, etc. — were already pre-populated. Redeeming Shop Cash is a radio-button option on the checkout page and is easy.

THE BIG QUESTION IS WHETHER $43.40 IS ENOUGH **TO TURN ME AND MANY OTHERS WITH SHOP CASH INTO REGULAR SHOP APP USERS.**

I have resisted downloading the Shop app ever since it launched in 2020, even though I got a reminder to do so every time I checked out with a Shopify merchant or used Shop Pay. I didn't see the need to clutter my SMS feed with another unnecessary notification about order details. Carriers and merchants have upped their game when it comes to keeping customers in the loop about shipment and delivery, so getting a third push notification on my home screen seemed intrusive and redundant.

But the email letting me know that I had money to burn was enough to fan the flames of my curiosity. The net-net: I now have a bunch of idle cash in a wallet that I would never have created myself — nor asked Shop to establish on my behalf — available to spend at merchants on the Shop platform.

The big question is whether $43.40 is enough to turn me and many others with Shop Cash into regular Shop app users.

THE SIREN CALL OF PLATFORMS AND ECOSYSTEMS

Over the last 17 years, Shopify has created and scaled a commerce platform that helps small merchants open and operate branded virtual storefronts and accept digital payments. The company does that by making it easy for third parties with value-added services to connect to its platform and merchants to add new capabilities for their shoppers. According to Shopify, today there are millions of merchants across 175 countries on the Shopify platform. Shopify also allows its digital merchants to go omnichannel and open physical storefronts and helps Main Street merchants to extend their presence online.

In 2017, Shopify launched Shop Pay as an alternative "buy button" to move off platform and onto enterprise merchant checkout pages, decoupling payments from its commerce platform and expanding its total addressable market to include larger retailers with more volume. Its online checkout experience is by many accounts best-in-class.

On Shopify's Q3 2023 earnings call, the company reported converting better than 15% of buy buttons on the internet and 35% better than "its competitor." Shop Pay Installments, powered by Affirm, allows qualifying consumers using Shop Pay to check out to divide purchases into equal monthly payments over time.

SHOPIFY HAS NOT MADE IT MUCH OF A SECRET THAT IT **VIEWS AMAZON AS ITS BIGGEST COMPETITOR.**

Shopify has not made it much of a secret that it views Amazon as its biggest competitor, even as the relationship between the two seems best described as "frenemy." It is worth noting that 40% of Shopify sellers also sell on Amazon, and the Shopify APIs make it easy for Shopify sellers to manage multiple ecommerce endpoints (including Amazon) and synch inventory between them. Shopify announced on its Q3 2023 earnings call that it will enable Shopify merchants to more easily integrate and support Buy with Prime on their storefronts. Their deal with Faire gives them a wholesale, B2B opportunity as well by giving merchants a way to shop for inventory inside the Shopify ecosystem.

On the retail front, Shopify is tapping into Amazon's playbook to build a critical mass of consumers to ignite its two-sided network, one it hopes will become a destination for shoppers and the brands hoping to reach them.

To, in effect, out-Amazon Amazon.

SHOP UNTIL YOU DROP (IT?)

The Shop app was launched in 2020 at the height of the COVID-fueled eCommerce wave. The app was designed to track order status on items purchased using Shop Pay or with a Shopify merchant so that consumers always knew when to expect delivery of their purchase.

Before we get into the data weeds here, fair warning: It is nearly impossible to get good data on Shop user engagement, or Shopify merchants generally. Third-party sites report numbers that are all over the place, inconsistent and implausible — my favorite is the one that pegs the number of online merchants using Shopify at 4.4 billion.

Shopify is vague as well, and especially so when it comes to the performance of the Shop app. On the Q3 2023 earnings call, the company declined to provide specific metrics on Shop app. "We're not talking about those metrics, we're not disclosing just yet, but the Shop app is becoming much more popular," said Harley Finkelstein, Shopify's president, when asked.

> IT IS NEARLY IMPOSSIBLE TO GET GOOD DATA ON SHOP **USER ENGAGEMENT, OR SHOPIFY MERCHANTS GENERALLY.**

So, here is what we think we know: Statista reports that after a two-year peak in December 2020, the number of downloads of the Shop app seems to have decreased — and by a lot. They report that the Shop app has 11 million active monthly users down from 19 million in 2020.

It's perhaps not surprising. As the pandemic waned, I suspect merchants and carriers got better about notifying customers about their order and delivery status, and downloads waned as well — according to the Statista data.

Shop's efforts to build out a consumer/merchant marketplace also came at the same time the online marketplace landscape was expanding and intensifying. Pureplay BNPL FinTechs have their own marketplaces as a destination for consumers who wish to shop merchants that accepted that form of payment. New platforms enable creators to operate their own branded storefronts with curated merchandise promoted by influencers on social platforms and inside of those marketplaces.

Amazon has made it easier to open branded storefronts on its platform to capture sales from the 197 million consumers who show up every month to shop there.

Shop Cash launched in June of 2023 — on Shopify's 17th anniversary — as a strategy Shopify hopes will incentivize consumers to show preference for Shop Pay off Shopify, to shop more at Shopify merchants, and then to start their shopping journey with those brands on the app.

It's not a crazy idea. It even got me, who resisted downloading the app for years, to poke around the app and contemplate how to redeem my found money.

That said — and it's still early days — it's hard to know whether it has delivered its intended impact, or if it will. Shopify's not talking, which could be a clue. Usually when results are grand slam home runs, companies are not bashful about dropping hints.

> THE SHOP CASH BALANCE IS NOT CREATING ANY **ADDITIONAL INCENTIVE TO SHOP THE APP — AT LEAST, NOT YET.**

People I've spoken with who have the app say they use it only to track order status but don't shop using it. Those with the app and a Shop Cash balance say it's not creating any additional incentive to shop the app — at least, not yet.

If you do the math, though, you might guess that most customers haven't gotten close to $44.30.

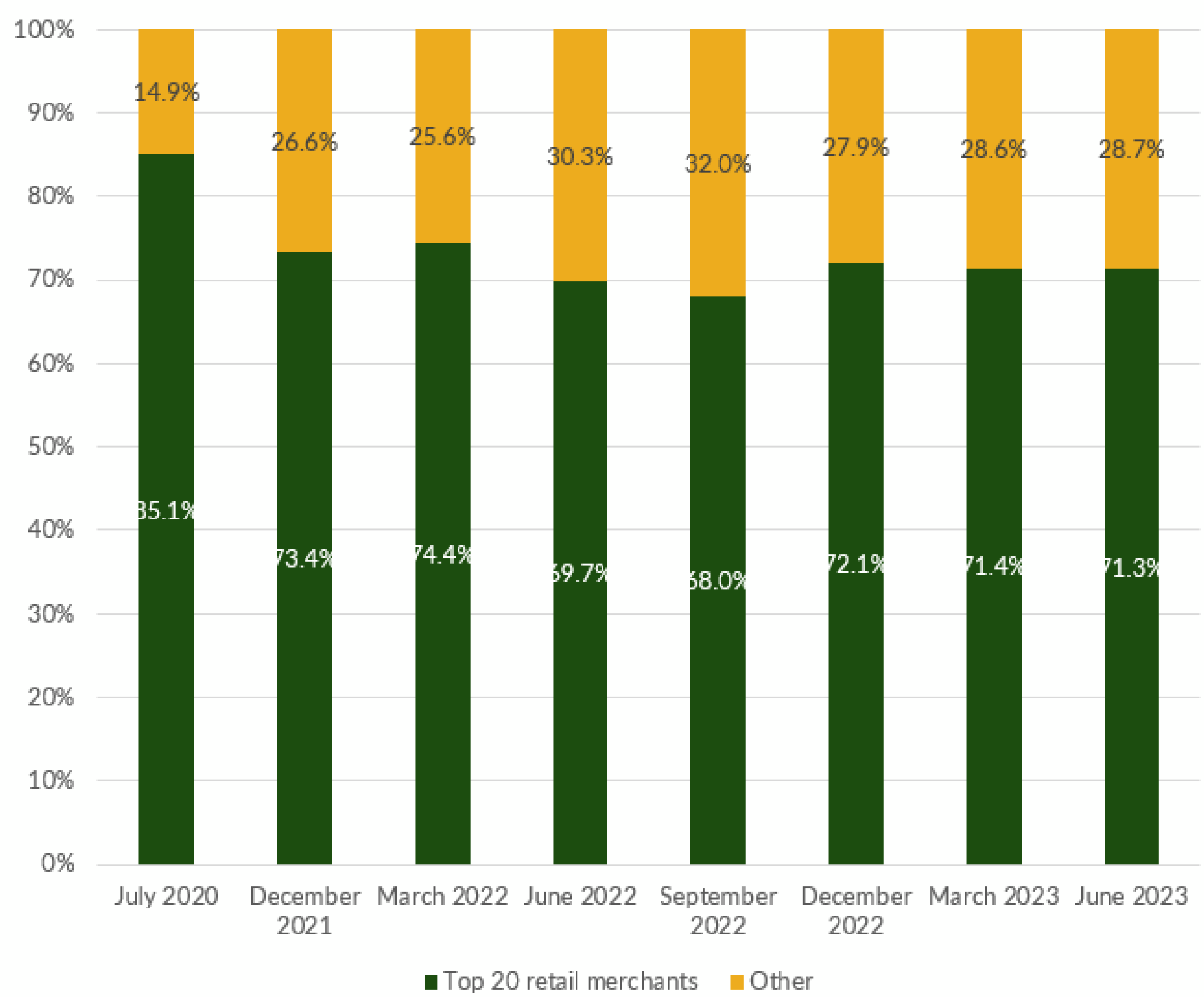
A 1% cash back on a $24 purchase of lip gloss is $0.24; on a $75 sweater it's $0.75. It takes many hundred-dollar purchases to get into the single — much less double — digits to make spending Shop Cash interesting. The rewards aren't material, and the turbocharged offers may not be compelling enough to get a consumer to stop shopping directly with their favorite merchants on their own apps or websites and shop them on the Shop app instead.

Especially when the Amazon Prime Chase card delivers 5% cash back on purchases made on Amazon, including groceries, and sometimes even more on participating purchases. Affirm also powers buy now, pay later on the Amazon site, as does Chase.

One thought is that real competition for Shopify isn't Amazon, but the merchants consumers visit directly when they have something they want to buy.

Many of them are the same Shopify merchants that are in the Shop App. And a very small number of them are other merchants that have become customers' favorites for most of the items they buy.

Share of consumers making their last grocery purchase at the top 20 retail merchants, over time*



THE SHORT LONG TAIL OF RETAIL

There are a lot of places for consumers to shop in the physical and digital worlds. At last count there are roughly 33 million retail establishments in the U.S. Some estimates report as many as 24 million online storefronts globally.

Almost three quarters, 71%, of consumers made their most recent retail purchase at one of the top 20 physical or online retail merchants. More than two thirds made a purchase at one of the top ten. It's a behavior that has been consistent for the last two years.

Consumers have habituated on a small set of merchants because it is easy and convenient. There's a certainty that comes along with shopping at their "go-tos". They know the store, the merchandise, the checkout experience — and they trust them.

There is that long tail, where roughly 30 percent of shoppers say they occasionally make a variety of retail purchases. Many of those merchants are part of the Shopify landscape: the small retailers and direct-to-consumer brands who use Shopify as well as Woo Commerce, Big

Commerce, Squarespace, Wix and others to build and operate their digital storefronts.

These are also the merchants for which purchases are largely discretionary. The clothing and beauty and home furnishings boutiques that are the nice-to-have but not essential. The subscription brands that, unless they are essentials, will be paused or canceled when consumers feel squeezed by higher prices and static paychecks.

Shopify raised its guidance for the rest of the year, anticipating more volume on and off the platform. Analysts report that holiday sales are expected to rise for the 2023 season, as consumers say they'll tighten the purse strings elsewhere but not on gifts for family and friends. We know, however, from our most recent PYMNTS Intelligence data, that 69% of consumers have already cut back on retail purchases, including 66% of high earners. And that 58% of them are trading down or looking for other places to buy those items.

With Shop Cash, Shopify is betting that it — and the Shop app — can be a tailwind for merchants, providing the extra financial incentive of free cash when shopping with them or other merchants that accept Shop Pay. It's also betting that consumers will show more preference for these merchants. And that their first stop will be the Shop App, since they have balances to spend at their favorite merchants and others they might discover while there.

The latter very much depends on the former.

In many ways Shopify has adopted a sound strategy for trying to ignite the Shopify network of merchants and take on Amazon, even at the edges. It has the prospect of getting more consumers to try the app and shop at the merchants there.

It may be worth the 1% Shopify is giving away. At a minimum, the ROI might be better than other things it could have tried — but it's hard to know without seeing the financials.

Can this incentive change behavior and really move the needle? It seems doubtful on its own. It would need to be combined with other strategies that could drive substantially more engagement between consumers and Shopify merchants through the Shop App.

It's unlikely that Amazon is losing sleep over it.

As for me, I have yet to spend my $43.40. Which is now $38.30 because I returned something.

November 20, 2023

THE EXISTENTIAL THREAT THAT MICROSOFT MISSED — AND COULD PUT ITS GENAI FUTURE AT RISK

It was going to be different this time.

The failure of then-Microsoft CEO Steve Balmer in 2007 to recognize the disruptive power of smartphones and app stores to change the world would cost the tech giant billions in failed efforts to play catchup — remember its Nokia acquisition in 2013 for €5 billion? And billions more in missed opportunities until it finally shuttered its smartphone business in 2019.

Bing, with its 3 percent share of the search market, has largely flatlined since Microsoft used the name to rebrand its floundering search engine business in 2009. Consumers don't even use it in markets such as the EU, where regulators have forced remedies intended to give it an advantage over Google's Chrome. As search engines go, it's not very good.

In 2019, Microsoft, with OpenAI, saw an opportunity to deliver a grand slam home run success with the most significant consumer-facing technology innovation of the last three decades: LLMs and Generative AI.

The $1 billion investment the tech giant made in OpenAI that year was one that CEO Satya Nadella thought could level up Microsoft's own AI internal shortcomings, bolster its cloud business and — importantly — close the AI gap with Google. Google, which has used AI since 2001 to improve search, expanded its AI focus in 2017 with the launch of the Google AI division focused on, among other things, innovating the use of large language models and the massive data set that is Google search.

> MICROSOFT, WITH OPENAI, SAW AN OPPORTUNITY TO DELIVER A GRAND SLAM HOME RUN SUCCESS WITH **THE MOST SIGNIFICANT CONSUMER-FACING T ECHNOLOGY INNOVATION OF THE LAST THREE DECADES: LLMS AND GENERATIVE AI.**

In 2021, a year after OpenAI CEO and co-founder Sam Altman changed the platform's status from not-for-profit to a capped for-profit entity, Microsoft added $2 billion to the OpenAI kitty. But it wasn't until its $10 billion investment in January of 2023 — two short months after OpenAI's public launch — that Microsoft was able to change the narrative about the importance of its role in the explosive GenAI movement and the commercialization of the GPT use cases that it hoped would follow.

Microsoft's January 2023 $10 billion investment in OpenAI seemed to have caught Google, Apple and Amazon a bit flat-footed, and each of them began to pour even more billions into rival LLMs to fast-track their progress. Google made a $2 billion investment in Anthropic in October, Amazon made a $4 billion investment in Anthropic in September, and Apple was even forced to say that it's investing $1 billion every year in its own GenAI R&D. Siri, why didn't you tell them to do that sooner?

Until Friday evening, November 17, 2023 it seemed that Nadella and Microsoft, with OpenAI, were sitting comfortably in GenAI catbird's seat with a big stake in an AI platform that was leaps and bounds ahead of most others.

Friday evening's decision by the OpenAI board to oust co-founder and CEO Sam Altman, and the subsequent resignation of co-founder and president Greg Brockman, made Microsoft's perch wobbly. And set in motion a course of events that makes its GenAI future more, not less, cloudy.

Microsoft and OpenAI's investors were unsuccessful at putting Humpty Dumpty back together again and a new interim CEO was named on Sunday. Emmett Shear, the former Twitch CEO, will lead the company. Altman and Brockman were given positions at Microsoft to lead a new "advanced AI team." OpenAI engineers and team members are said to be confused, some outraged, at the whipsaw of events over the last 72 hours at the world's most promising GenAI startup. This confusion could slow Open AI's innovation to a crawl as its technologists mull their options and leave for stabler, richer pastures. Particularly as the fundraise for their stock payouts hangs in the balance.

How OpenAI unraveled so abruptly is a headscratcher; the details are remarkably stunning. It's surprising that Microsoft, a nearly three-trillion-dollar company with lots of sophisticated lawyers, didn't see the proverbial writing on the wall. Shame on me, too, for not looking more closely at the "about us" fine print at OpenAI.

THE DOUBLE EDGE OF HINDSIGHT

As is well known by now, Microsoft poured $13 billion over four years — $10 billion of that in the last eleven months — into an entity over which it has no control, nor a seat on the Board. This document describing OpenAI's governing structure lays it all out.

Before today and after the ousting of Altman and resignation of Brockman, the OpenAI board consisted of four people, including its third co-founder. They were tech-heavy and public policy-focused — and remarkably light on the business skills essential to monetizing and scaling Generative AI.

But none of that should be surprising given its stated mission: the nonprofit's principal beneficiary is humanity, not OpenAI investors or customers. It's not clear from reading the board manifesto what "humanity" as the principal beneficiary means, nor how the board would weigh lost jobs from AI against lives saved from medical advances, for example.

Like most publicly-traded companies worried about investor lawsuits, Microsoft lays out the myriad risks that harm its bottom line. Amazingly, Microsoft's most recent 10-K fails to flag the risk that the technology foundation for its entire AI future — OpenAI — has a governance structure over which Microsoft, as a 49% equity holder, has no control nor seat at the table, and where the board is supposed to make decisions to benefit humanity without any framework other than their own. A board that gets to decide for the world what is good and what is bad, where bad seemed to be making money from the many incredible innovations that its technology would support.

> YOU DON'T NEED TO BE A CORPORATE GOVERNANCE **EXPERT TO FIND THIS MORE THAN A BIT ODD.**

Nor, apparently, a board that felt no duty of responsibility to give its largest investor more than a five-minute heads up that they were going to fire the CEO — who founded it and is widely credited with driving the advances — and potentially crater Microsoft's business. A termination that was not for any malfeasance, which the board has publicly stated, but because they didn't like how Altman was thinking about monetizing the OpenAI GPT asset.

You don't need to be a corporate governance expert to find this more than a bit odd, regulatory considerations notwithstanding.

Yet it was apparently a tradeoff — a roll of the dice — that Microsoft, its board, and everyone else who put money into OpenAI was willing to accept. Provided, of course, that they got a seat at the conference table, with superstars Altman and Brockman at the helm.

Except now they're not. That leaves Microsoft with a dysfunctional OpenAI board and an interim CEO to sort things out. And Altman and Brockman leading a team at Microsoft that presumably includes working with the firm that just fired them.

What a mess.

WHAT'S A BIG TECH GIANT TO DO?

As I write this piece, the situation remains very much in flux despite the illusion that all is right in the Microsoft/OpenAI world. Microsoft and OpenAI investors were unsuccessful at persuading the OpenAI board to reconsider and reinstate Altman and Brockman. Altman, who has tweeted how much he loves OpenAI and its team, and his co-founder are now working for Microsoft, in charge of a new AI initiative. It is unclear what that is, how they and Microsoft will work with OpenAI, and what the structure of that working relationship is with Microsoft.

But Altman and Brockman have all the leverage because they have a track record of building and scaling LLMs and a vision for how to monetize this incredibly disruptive technology.

Microsoft, on the other hand, remains vulnerable because they have very little. Whether they get a board or board observer seat as part of the new OpenAI structure is unclear, but they have few levers to force change. They could threaten to hold back

funding, but turning off the tap could also backfire, since Microsoft has embedded the OpenAI model into every one of its products — including Azure in 2021. Microsoft needs OpenAI to be successful and its LLM to be a strong and continual source of innovation to be viable contender in the GenAI world — and reap the profits from the AI-powered Azure cloud that OpenAI can provide.

The biggest risk, however, may be the stability of OpenAI as a foundational model in the near term.

> MICROSOFT NEEDS OPENAI TO BE SUCCESSFUL AND ITS **LLM TO BE A STRONG AND CONTINUAL SOURCE OF INNOVATION.**

The ousting of a well-respected and brilliant founding team without warning over a lot of vague mumbo jumbo about inconsistent communications has rattled the OpenAI team. Nadella's next big headache is very likely to trying to stop the potential OpenAI brain drain as employees flee for competing LLMs with a less capricious overlord and more stable team. Or to one of the other BigTech players with their own LLM and big Gen AI visions and a checkbook to match.

A brain drain that could soon be followed by developers who now worry about OpenAI's long-term viability and refocus their efforts on other platforms.

It will take months, and maybe many of them, for the current destabilization of the OpenAI business to return to normal, for trust to be restored, for a new board to be created and installed, and for whatever governance changes occur to be socialized and implemented across both businesses — OpenAI's and Microsoft.

In the meantime, AI dollars and talent may flow elsewhere.

On Friday night, Nadella did the only thing he could do: he reaffirmed his commitment to OpenAI, the remaining team and the business. On Sunday night, he did the only thing he could do: he kept Altman and Brockman in the Microsoft tent.

Wall Street is still processing the news. In afterhours trading on Friday night, the stock was down nearly three percent. We'll see how it opens today.

WHAT'S AT STAKE

Timing is everything, right?

Last week I began working on a piece about OpenAI and its potential to create the first voice-activated AI-first operating system, at scale. And with it, Microsoft's opportunity to monetize it in a way that they failed to do with Windows and mobile in the 2010s, leapfrogging the incumbents who thought they had it locked.

Here's why.

A few weeks back, OpenAI announced that it was launching an app store — the same news, ironically, that seemed to rattle the OpenAI board and set Friday's disastrous series of events in motion. For an app store to ignite, it needs users and developers, and OpenAI has a lot of both. The company claims 100 million weekly users after only its first year. There are hundreds (if not thousands) of developers using GPT and its derivatives to create new apps that would ultimately live in the app store.

An app store also needs devices and distribution — and an innovative way to engage with its content. News broke in September that Jony Ive was in talks with OpenAI to create an AI-powered smartphone with $1 billion in funding and support from OpenAI's Altman — and I am sure other connected devices after that. Around the same time, OpenAI announced GPT was voice-activated in five languages and with five different voices.

> IT'S EARLY DAYS, BUT ONE **CAN IMAGINE THAT IT WILL ONLY GET BETTER.**

I also began hearing more and more about people talking to GPT in a very different way than they talk to Alexa or Google or Siri. As in having a conversation with GPT, in the same way they'd have a conversation with a friend or acquaintance. They described those conversations as smart, even intuitive, relevant, even a little serious. If you are curious about how one of these conversations sounds, scroll through this article to the short demo. Spoiler alert, it's early days, but one can imagine that it will only get better.

Well, I guess now that all depends.

THE AI-FIRST VOICE-POWERED FUTURE UP FOR GRABS

The idea of a connected economy, powered by an always-on, ambient network of connected endpoints accessed by voice and powered by AI, is something that I first wrote about in October of 2016 – the year that Google launched Allo, five years after Apple launched Siri and two years after Alexa introduced herself via the Echo device that first sat on our kitchen counters and cracked bad jokes. It's a concept, one of seven that I identified in 2019, as a trendline that would define the decade of the 2020s and influence the digital transformation of nearly every sector in some form or another.

The idea of a smart, powerful, intuitive voice assistant is something that, according to PYMNTS Intelligence research, 60 percent of consumers say they want, and nearly 30 percent of consumers say they'd pay to have. That's because, today, nearly two thirds of consumers use voice to complete simple tasks and believe that voice is the easiest way to manage complex interactions — those unexpected downstream effects that happen when flights are late or kids miss the bus, or emergencies happen.

> A SMART, POWERFUL, I NTUITIVE VOICE ASSISTANT IS **SOMETHING THAT 60 PERCENT OF CONSUMERS SAY THEY WANT.**

Big Tech with their AI-powered voice-activated assistants have been around since Siri in 2011 on the iPhone, Alexa in 2014 with the Echo, and Google Assistant since 2016. Yet none of them have managed to turn voice into a significant ecosystem that can drive revenue. And when compared to OpenAI and GPT, those voice assistants seem not too smart. Even Amazon with Alexa, which I thought was a slam dunk to be that third operating system powered by voice, is redirecting its efforts to LLM in an effort to reclaim its smart voice assistant magic and a shot at an AI-powered commerce ecosystem activated by voice. But all of these early voice platforms are to ChatGPT what the Palm Pilot was to the iPhone.

The immediate crisis at OpenAI may have been addressed with Altman's and Brockman's new position at Microsoft, but there is a lot we still don't know about that arrangement. However, it tells me that there must have been something amiss at Microsoft to have made a multi-billion dollar bet on an entity with such an unstable governance structure over which they had virtually no control.

And that these are still early days in the new AI revolution, with lots of unknowns about who will come out on top in a few years. And how these powerful and smart new ecosystems will evolve.

Over the last seventy-two hours, Nadella's star at Microsoft might have just gotten a little dimmer.

Google's and Amazon's just got a little brighter. Maybe even Apple, too.

OpenAI's crisis is now their even bigger GenAI opportunity.

November 27, 2023

WHO WILL POWER THE GENAI OPERATING SYSTEM?

Silicon Valley's 72-hour OpenAI drama was quelled last week with the return of Sam Altman as CEO to the firm he co-founded in 2015. The board will be reconstituted with grownups who might have more business — and common — sense. Many open questions remain. A burning one: what role will Microsoft have in directing OpenAI's strategy, leadership or governance? And another: how will OpenAI navigate between its "good for humanity" mission and the opportunity to massively commercialize its GPT platform?

Threading that needle may be among the company's most challenging endeavors yet, as the new board is faced with balancing the views of a small number of AI doomsday extremists with the many more who see its potential to change the world, and the people living in it, in a profoundly positive way. And to profit from the innovations that make humans and humanity better off.

It's been reported that one of the issues leading to the ouster of Altman on November 17th was his plan to open an OpenAI app store, along with OpenAI's involvement in a $1 billion AI-smartphone startup with former Apple design chief Jony Ive. That's a development with implications beyond the debate over whether an app store would be good or bad for OpenAI's mission and commercial intent.

One of the most significant implications of the digital transformation of the global economy is the inevitable shift from smartphones and apps to a distributed network of connected devices and smart ecosystems to access information and conduct commerce. GenAI and LLMs will be important catalysts for that change. We will likely see a significant shift in that direction over the next 3-5 years.

> GENAI AND LLMS WILL BE IMPORTANT CATALYSTS FOR **THE INEVITABLE SHIFT FROM SMARTPHONES AND APPS TO A DISTRIBUTED NETWORK OF CONNECTED DEVICES AND SMART ECOSYSTEMS.**

In a GenAI-first world, the consumer's experience in accessing devices and information will change because consumers won't always engage with LLMs and the apps developed using them with taps, swipes or clicks — and possibly not even with a device that's always in their hand. That will, in turn, force a redesign of the devices and device ecosystem where "apps" are accessed by voice or another biometric trigger rather than a single device that is the app ecosystem's centerpiece today.

A change in the business models that support how developers create and monetize "app" experiences is also inevitable as use cases and devices evolve — at a minimum, that could challenge existing operating system models. GenAI LLMs like GPT with scale that operate as apps inside of existing operating systems today will likely see the potential to break out and create their own to get more control over the customer, the experience, the data and the revenues.

TOMORROW'S OPERATING SYSTEM FOR AI

For the last 16 years, since the introduction of the iPhone in 2007 and Android and the app stores in 2008, consumers have lived in the smartphone + app economy.

Today, consumers mainly use smartphones or tablets to access their apps, one at a time, on devices that run the iOS and Android operating systems. They find new apps and download them from the Apple and Google app stores. It's been reported that consumers have 80 apps on their phones, use 30 of them monthly and 9-10 every day.

Marketplaces and software platforms have aggregated many related activities into a single-app experience, saving consumers time and money and home-screen real estate. Ride hailing apps like Uber are now a one-stop shop for mobility and last mile delivery and can help users book travel. Amazon shoppers and Prime Members can buy food, retail and consumer products, have prescriptions refilled, book a virtual healthcare appointment, order food for delivery, and stream content from a single app. B2B commerce marketplaces like Joor help fashion buyers find each other and do business, operate virtual showrooms and trade shows and pay and be paid without hopscotching across different app experiences to do business.

Over the last 16 years, handset manufacturers have created more powerful handsets: hardware with better cameras, faster speeds, 5G and longer battery life. Phones that can make and receive calls — remember when they didn't do that so well? — and stream video content, enable users to make video content and to play games. Operating systems have optimized the performance and security of the apps on those devices.

But the most important innovations — the ones that keep consumers buying phones — are courtesy of the developers who create the new experiences that consumers like, download and want to use with them. Without apps, there is no consumer interest in using the device. Without consumer interest, there are no developers. Without developers, there are no apps. Without developers, apps or users, there are no sales. Even the fanciest of hardware can't overcome that platform dynamic.

> **A NEW GENAI OPERATING SYSTEM COULD POWER AN ALWAYS-ON, CONNECTED AND DISTRIBUTED ECONOMY**, REIMAGINING HOW CONSUMERS INTERACT WITH EACH OTHER AND THE MANY THIRD PARTIES WITH WHICH THEY'D LIKE TO ENGAGE.

That's what makes the idea of a GPT app store plus a new AI-powered smartphone interesting, and potentially powerful. It could become the foundation for a new GenAI operating system — one that would be optimized for many derivative GPT apps that exist today and will come in time. An operating system that could power an always-on, connected and distributed economy, reimagining how consumers interact with each other and the many third parties with which they'd like to engage. Reinventing the interface they use to do that.

But for an app store to ignite, it needs the same thing the Apple and Google Play app stores needed in 2008: a critical mass of developers and users. OpenAI claims to have a lot of both, with 100 million weekly users after only its first year and hundreds (if not thousands) of developers using GPT and its derivatives to create new apps that would ultimately live in a GPT app store.

An app store also needs devices and a vision for how consumers will interface with them to discover and use apps. It was Jony Ive and team who broke us all of our Crackberry habits with a device that wasn't a better version of the mini PC we said we could never live without, but one that gave consumers an entirely new experience they never knew they wanted. It would take only two years for the iPhone to shatter the dominant position Blackberry once had — and another seven for Blackberry to have a zero market share.

We'll know soon whether Jony Ive and the OpenAI team have another transformative megahit in the making, one that is compelling enough for consumers to give up

their iPhones and Android devices right away or over time. They've gotten much of the publicity. There are surely others operating in stealth mode or who can't afford a publicist to share their scoop.

In the meantime, Apple, Google, Amazon and Microsoft are watching, too.

A week ago, the notion of a fractured OpenAI was a reality, as were ways to capitalize on the dysfunction. Now, with an OpenAI organization more or less reassembled, the focus intensifies on how to adapt the operating systems, developers and user to a world that will have GenAI embedded into many of the activities in which consumers now engage.

WHO MIGHT BE NERVOUS

Apple and Google, as the only two mobile operating systems with any scale, each have a massive consumer and developer base and share of the smartphone market to leverage. The Android OS counts 3.3 billion users worldwide and 1.6 billion apps in the Google Play store and a 70% global market share. Apple has 1.96 billion iOS users and 1.46 billion apps in the App Store with a U.S. market share of 57% and 23% globally. Both operating systems are optimized for smartphones and apps today, and both very recently have become laser-focused on adapting them for the GenAI future.

Today, Google seems to have a significant GenAI edge compared with Apple. It's been investing in AI since the early 2000's and has used it to power and perfect search for more than two decades. Google set up the Google Brain AI lab in 2011, acquired DeepMind in 2014, and published the pioneering paper on the use of transformers for powering neural networks. Having AI as a competency is fundamental to the success of Google's core business.

Google introduced its GPT challenger, Bard, in March of 2023 and has invested in other LLMs since then, too. It would be safe to assume that a plan to launch a GenAI app store, develop apps and create new devices over time is a strategic priority. It's permissioned and tokenized identity and payments credentials, with data on consumer purchasing intent, could power a smart, AI-commerce ecosystem. Google has the developer community, users and devices to do that, at scale.

Apple seems far less well-positioned. Since the news of OpenAI's launch of GPT, there have been non-specific announcements about its GenAI plans. Apple says it is working on its own GPT, but what's been reported seems seems scattered, internally driven and slow. Siri isn't that smart, and engineers have said that adapting Siri to GenAI will take time — weeks, months or even a year, depending on the complexity — given its tech architecture. A year seems like a lifetime in a GenAI world that is moving everyone forward at warp speed.

> **IN THE MEANTIME, APPLE, GOOGLE, AMAZON AND MICROSOFT** ARE WATCHING, TOO.

Apple's GenAI and GPT complications come on top of more muted iPhone sales, political and economic challenges in China, and a future where services from apps in the app store are set to drive revenue and margin. It's a strategy that didn't look as risky before GenAI changed how consumers and third parties now wish to engage — but one that could force a rethink of how Apple monetizes its operating system. Currently, apps can't have their own app stores in the Apple ecosystem. It is unclear whether Apple would allow ChatGPT to have its own app store — or if it did, how much it would try to tax those apps. How this gets sorted may have a lot to do with Apple's own iOS future, how regulation and court cases on Apple's policies play out, and the sales it derives from apps and GenAI over time.

Amazon with Alexa seems more like the underdog. It was the first Big Tech player to imagine an AI-based operating system with apps (they call skills) to power a distributed network of devices activated by voice. Amazon claims that 500 million Alexa-powered devices have been sold — everything from Echo devices to smart doorbells, smart appliances, smart lights and blinds, even cars — and 130,000 Alexa apps/skills. They claim 900,000 developers are part of the Amazon ecosystem, using a fork of Android, the FireOS, to create their apps. Consumers use Alexa today to do basic chores and manage basic

activities. At the moment, though, it seems like an ecosystem that lacks energy and momentum.

Amazon has a massive amount of data on consumer purchasing behavior, along with how users engage with a voice assistant. Its own commerce ecosystem connects Prime Members to many of the activities that represent the consumer's daily or frequent interactions, and products they want to purchase and have in the past. It needs to make Alexa smarter, more conversational, and more accessible on the network of devices that consumers have or want to own. Whether that means Amazon needs a totally different set of devices is an unknown — as is the company's appetite for creating them, given recent cutbacks in its hardware division.

All of this could change with the introduction of a conversational Alexa that will be available on Echo devices on an opt-in basis. The experience does not require the user to "Ask Alexa" to generate a response and can complete a variety of tasks in context. The demo I watched featured a conversation about a dinner party including making suggestions for the theme and what to cook, adding items to a shopping list, preparing an email invitation that was sent to the user's phone, offering decorating themes, and setting timers for when to complete certain things related to the event. The flow seemed natural. If real life mimics demo performance, Alexa could become the smart personal assistant consumers say they want and have been looking for — and drive more interest from developers to be part of their ecosystem.

Microsoft, doesn't have a mobile operating system or control a network of mobile devices, with the exception of its tablets. It also doesn't have the sort of data that Google and Amazon have on consumer purchasing or a consumer-facing ecosystem with users to leverage. Yes, it has Bing — and maybe OpenAI will put the GenAI spring in Bing. But even if that happened, it isn't clear that a better Bing would do much to enhance its consumer-facing GenAI prospects.

There's Meta. It has created its own foundational LLM and is pouring billions into creating its own app ecosystem. It lacks its own devices and a commerce ecosystem, but with a massive global user base could emerge as a strong GenAI contender. And in real life, not the metaverse.

WHAT'S NEXT

It is easy to forget that it's been just about a year since OpenAI triggered the world's obsession with GenAI. It's not even a year since Microsoft announced its $10 billion investment in OpenAI that started the Big Tech GenAI race. We are — quite literally — at the beginning.

> LIKE EVERY OTHER APP STORE THAT'S BEEN **SUCCESSFUL, CONSUMERS WILL LEAD THE WAY.**

GPT still hallucinates, and produces content that thinks we are still dealing with COVID when asked about current events. Google's GenAI search is getting better with each search, but the current user interface is messy and hard to navigate.

Humane AI launched a magnetic pin that uses voice and the palm of a person's hand to access content, but I can't imagine reading anything more than five words on my hand — can you?

But it's evidence that innovators are thinking differently about how consumers, content and devices can interact inside of a voice-activated ecosystem that that isn't smartphone-centric.

Like every other app store that's been successful, consumers will lead the way. Developers will create experiences that wow them, save them time, eliminate friction and give them a really great reason to break with the habits they've perfected over the last 16 years. Or not. But the massive consumer uptake of ChatGPT at this early stage tells us a lot about where this might go. There's going to be an AI-based app ecosystem — probably more than one. The question even GPT can't answer: who is going to own these ecosystems, and who isn't?

December 4, 2023

WHAT ELECTRIC VEHICLES, IMPOSSIBLE FOODS AND BUY NOW, PAY LATER TEACH US ABOUT EARLY ADOPTERS

It seemed impossible.

A product that looked like beef, bled like beef, and cooked like beef made entirely out of plants. But Impossible Foods and its founder, Patrick Brown, had a vision to disrupt the $270 billion U.S. meat industry, giving meat eaters a healthier and a more environmentally friendly alternative that looked and tasted like the real thing.

Brown and Impossible Foods launched in 2016 with a plant-based ground beef product — the closest thing one could get to a mass market launch, given ground beef accounted for 60% of all meat products sold then. A partnership with Restaurant Brands to create the Impossible Whopper, Burger King's meatless alternative to its fan favorite, drove brand awareness and sales at the chain and in the grocery stores. By the end of 2019, Impossible Foods products, including its chicken and pork alternatives, could be found in more than 10,000 grocery stores including Walmart. More than 17,000 U.S. restaurants put Impossible Food products on the menu. The firm struck private label partnerships, including one with Kroger to expand distribution.

By the end of 2019, sales of Impossible Food products had increased 35% from the year before. Between 2019 and 2020 sales grew by more than 76%. Consumers, feeling flush with COVID money and time to cook at home, were willing to give these plant-based alternatives a try, even though they were a more expensive alternative to the meat products that once filled their shopping carts. In 2021, Impossible Foods raised $500 million on a valuation of $7 billion — a year in which VC investments in plant-based meatless alternatives also spiked.

> EARLY ADOPTERS ARE SO COMMITTED TO A NEW PRODUCT AND **ITS VALUE THAT THEY WILL SWITCH EVEN IF IT MEANS MAKING TRADEOFFS.**

Today, the value of Impossible Foods stock is down by 89% since 2021, according to Bloomberg, and down 90% for its Beyond Meat competitor over the same period. The company that tracks market data on food sales, Circana, reports that between 2022 and 2023 sales of all plant-based meat products sold in the meat case declined by 20% as measured by units sold. Units sold in the frozen section were down by 8% over the same period, they report. Grocery stores are reported to be pulling back orders. VCs have lost interest in the category.

Nearly seven years after their initial introduction, sales of plant-based meat alternatives account for a smidge of more than 1% of all meat sales today. That share has mostly flatlined since 2021.

Food inflation is partly to blame — but so, too, it seems, is the mainstream consumer's appetite for buying meat that isn't really meat. Brown's vision was to disrupt the market for red meat by capturing a share of the 95% of U.S. consumers who aren't vegetarians but could be persuaded to sort of fake it 'til they make it by putting plant-based alternatives on the menu. On paper, it had all the makings of a massive total addressable market win.

And early sales seemed encouraging. Impossible Foods reported that 95% of its buyers were, in fact, meat eaters. But not enough of those early adopters turned into what's needed to drive sales and profits and increase market share over time. Surveys of consumers report cost and taste — the two fundamental reasons consumers buy and eat food — as the two reasons they don't buy plant-based meat products.

The Impossible Foods experience is just one example of the siren song of early adopters, who sometimes show up at a business's front door as curiosity seekers in disguise willing to give anything a try at least once. But early adopters are so committed to a new product and its value that they will switch even if it means making tough tradeoffs — they figure it out or find workarounds. The trick for businesses is to understand those missed signals and frictions, and to find ways to address them so that more of the right consumers are persuaded to get on board, creating the consumer adoption — and word of mouth — needed to grow sales and drive profits over time.

In the case of Impossible Foods, based on the numbers that analysts report, 99% of consumer's food dollars for meat don't seem to support making that switch — being okay with eating something that just tastes okay as a tradeoff for a healthier food option. Perhaps enough of them never will for one important reason: When most consumers really want meat, they want to stick with the real thing. Maybe the real appeal is to those already committed to a vegan lifestyle who want to introduce a meatless alternative into their diets.

EV'S EARLY ADOPTERS AND THE MAINSTREAM CONSUMER CHALLENGES

Electric vehicles are having their own early adopter moment.

The EV early adopter profiles are a company's dream: established, affluent, college-educated people (mostly men) living in the largest car markets in the country: California, Texas, Florida, and New York.

These early adopters got their first taste with the Tesla Roadster, the EV car shot heard round the world, when it was introduced in 2008 as the world's very first all-electric luxury car. Priced at $109,000, it could travel 245 miles on a single charge, and go from zero to 60 in roughly four seconds. With a top speed of 125 miles per hour, Tesla advertised its fuel efficiency as the same as going 135 miles on a single gallon of gas.

> **GETTING THE MAINSTREAM CONSUMER OVER THE EV HUMP MEANS ADDRESSING, HEAD ON, MANY OF THE FRICTIONS** THAT THE EARLY ADOPTERS LIVING IN BIG CITIES ON THE COASTS WITH GARAGES AND CHARGING STATIONS DIDN'T HAVE OR WERE WILLING AND ABLE TO OVERCOME.

It would take roughly thirty hours to recharge the battery plugged into a wall socket at home. But that didn't bother these early Tesla adopters too much. What they wanted most was to be first — the early adopters of disruptive technology in the form of a cool sports car to tool around town or travel short distances. Battery life didn't matter much since they had probably had another car to drive while the Roadster was otherwise occupied for 30 hours in their garages powering up. By the end of 2009, 937 such people in 18 countries bought Roadsters.

Tesla's innovation went well beyond the engine used to power the car, to how the driver would experience driving, and the ease with which new features and modules could be added and monetized over time. The ranks of early adopters swelled as more Tesla models were introduced and stories of how cool the car was to drive went viral. That would set in motion a race by every other OEM to launch their own EV vehicles and create a new software-powered driving experience that would appeal to both early adopters and the mainstream consumer looking for a new car to buy. Government subsidies for buying one in the U.S. and other places for EVs didn't hurt.

In 2023, things are now starting to look a little wobbly.

Recent news reports suggest that even as EV sales remain strong, they are slowing. In 2021, 86% of consumers reported having an interest in buying an electric vehicle. In 2023, that share has dropped to 67%. Dealers are slashing prices to boost sales and OEMs are beginning to reconsider investments once allocated to build out EV plants even as they remain bullish on the future of EVs.

But they may also be starting to recognize that getting the mainstream consumer over the EV hump means addressing, head on, many of the frictions that the early adopters living in big cities on the coasts with garages and charging stations didn't have or were willing and able to overcome.

Battery anxiety is the biggest — and a real blocker, especially since charging stations are few and far between and the driving ranges for most EV cars remain less than 400 miles. Consumers aren't familiar enough with how EVs work to correlate driving conditions with battery life and the software for reporting it can be unreliable. Driving longer distances in unfamiliar places may make many nervous.

That nervousness is made more real when considering that there are only 160,000 charging stations in the U.S. right now — and even fewer super charging stations that provide a top up in thirty minutes. Most require

3 to 4 hours to get to a full charge. Running low on gas is a 10-minute diversion to a gas station that can be found on nearly every corner of every major thoroughfare. Running low on a charge can be up to 240 minutes of downtime, and that's assuming that the consumer can find a place to top up. The Biden Administration said that it will pay for the development of 500,000 stations; 700,000 are said to be needed if 40% of U.S. cars are EV. But that will take time.

Not everyone with a car has the luxury of living in a place where an overnight charge is possible. Consumers without garages, driveways or places where they can conveniently plug in their car seem out of luck until there is a greater density of charging stations. Consumers who need their cars to travel long distances each day may choose to wait until battery range improves, charging stations appear or alternative sources for charging are available.

Or decide to buy a gas-powered car or a hybrid instead.

At least for now, that's a choice that 92% of car owners seem happy to have made. And where the incumbent OEMs may find that they have a competitive advantage over time. At the end of Q3, EV vehicles represented 7.9% of all passenger vehicle sales sold in the U.S., of which Tesla has a 50% share.

Getting that 7.9% to 40% or more in six years will require the coordination of key stakeholders to ignite the EV ecosystem.

The problem facing that EV ecosystem today is there were not enough early adopters to create sufficient demand for suppliers of charging stations, so the U.S. lacks the density of fast charging stations that later adopters of EVs would require to give up gas. And investors in EVs may have underestimated the importance of that and overestimated the willingness of consumers to overlook battery anxiety based on the enthusiasm of those early adopters.

BUY NOW, PAY LATER EARLY ADOPTERS OPEN THE FLOODGATES

Buy Now, Pay Later is the credit innovation that regulators love to hate, the debt trap they said would get consumers without credit in over their heads with products they are ill-equipped to understand and use responsibly. What we have learned over the last several years is that Buy Now Pay Later and its many Pay Later derivatives is a way to pay that nearly two thirds (65%) of U.S. consumers with any form of credit card — and 60% of all consumers — have used to over the last twelve months to make retail purchases.

And it took a few early FinTech challengers in the mid-2010s to change how everyone is now adapting their credit products for a consumer in search of a more predictable way to pay for what they buy.

> STARTUPS, INVESTORS AND COMPANIES NEED TO THINK CAREFULLY ABOUT **EARLY ADOPTERS, HOW TO READ THEM AND HOW TO SIZE THE MATURE MARKET.**

According to PYMNTS Intelligence, 13% of consumers used some form of Pay Later over the last 30 days, a share that has grown steadily each year. Which provider consumers use and for how long depends on a lot of things: how much available balance they have on their existing cards, how many cards they have, the amount of the purchase and the terms offered.

For consumers with credit cards, these programs are just another payment tool in their arsenal of credit options to manage their monthly cash flow. Millennials with cards, but perhaps with lower credit lines, opt for FinTechs to make smaller dollar purchases over three to four payments. Older Millennials and Gen Xers with cards opt for merchant installment programs or post-purchase split payment plans attached to an issuer-branded card to make slightly larger purchases over a longer period of time.

For consumers without credit cards, Buy Now, Pay Later is the credit surrogate that helps build their credit history and onramp to more traditional credit products.

What the early Buy Now, Pay Later adopters have proven is how mainstream the desire for the certainty of a payoff, with the predictability of equal payments over time, has become for consumers, including those with multiple credit options and prime and super prime FICO scores. Consumers established preference for merchants accepting one of the many FinTech Pay Later plans, and are happy to trade off shopping at any merchant for those where those Pay Later plans were offered. Having a clear path to a payoff is the financial discipline that 60% of consumers say they like about these plans and why they use them. Preserving their cash cushions comes in as a close second.

These early adopters have also forced the mainstreaming of pay later options across all the credit providers with whom they have a relationship today. Card issuers seek to create a user experience that is more FinTech than bank with a better user experience embedded into the consumer's path to purchase and partnerships with large retail merchants, marketplaces and PSPs. FinTechs are creating a user experience that is more bank than FinTech with the introduction of cards that expands Pay Later acceptance to any merchant the consumer wants to shop.

SIZING UP THE EARLY ADOPTERS

Startups, investors and companies need to think carefully about the consumers who show up first to try their product, how to read their signals as they use it, and how to size the mature market in which those consumers live today.

Many people may have loved the the idea of a vegan substitute for beef that was a lot better than the V.1 versions found in the frozen foods section of the grocery store until they tasted it enough times to decide it wasn't worth the cost/

taste/healthy foods tradeoff. Word probably got around, making it harder to get market momentum. Short of improving the product, changing taste buds or banning cattle, that's a tough problem to solve. The product just may be more niche than investors thought and early adopters in unusual economic circumstances may have led them to believe.

EVs have a classic platform ignition problem combined with a technology problem. Consumers like the look and feel of the cars, so interest in buying one is there. But EV OEMs need to figure out a way to increase the density of fast charging stations, which are still less convenient than gas, to overcome the anxiety of having a dead car and a lot of wasted time to bring it back to health. They need to increase battery life and charging speed to make the charging headache more bearable and to get more mainstream customers on board.

The rapid uptake of BNPL, which is unabated, is a wake-up call for banks and card issuers: there was a pent-up demand for a different way of lending money and paying it back that FinTechs tapped and consumers embraced. One of the most interesting insights that has come from analyzing the Pay Later credit economy is that consumers like and use credit, in whatever form they are able to get it. But the relationship with credit has changed for all but 10% of the consumer population who don't use credit and say they don't want any. The option of having a predictable way to repay what's purchased is beginning to seem as ubiquitous as the credit card products that have been around for more than sixty years.

December 18, 2023

PAYPAL: THE ONLINE PAYMENTS FRICTION FIGHTER THAT BECAME FRICTION

I have perfected the art of multitasking.

Thanks to my mobile devices, the internet, apps and embedded payments, I can book airline tickets while waiting for a Zoom call to start, shop for holiday gifts while in the back of an Uber on the way to the airport, buy groceries while waiting for my dinner guests to join me at a restaurant, find and buy a car while waiting for the plane to take off (I actually saw someone do that a few months back), and pay the dog walker while sitting in the lobby waiting for a meeting to start. In a few minutes I can accomplish tasks that once required being a in totally different physical location. My digital multitasking experiences are fast, easy and hassle free. It's become my expectation. And yours too, I'm sure.

While on my Saturday morning run, I received a notification on my phone that an item on my wish list was now in stock. Since I intended this item as a holiday gift, I stopped running so that I could buy it — I didn't want to lose it. Within a few seconds, I got to the checkout page where I selected PayPal to complete the purchase.

I was taken from the merchant site to the PayPal log in screen, where I had to enter my email or phone number, then wait for a mobile code since I can never remember my password. I was then taken back to the PayPal page to complete the purchase, where it felt like an eternity for the transaction to process — the little wheel kept spinning and spinning. I cancelled the transaction, returned to the checkout page, and completed the purchase in less than ten seconds with Apple Pay.

My PayPal experience on Saturday wasn't unfamiliar. I have had a PayPal account since 1999. I have done thousands of transactions with them. I have enrolled in One Touch on all my devices and use PayPal on all of them. (Note: It's up to the merchant to enable that experience on their sites, which is why it can be inconsistent from site to site.)

> **A BUSINESS THAT SOLVES FRICTION AT ONE POINT IN TIME CAN BE A SOURCE OF FRICTION** AT A LATER POINT IN TIME WHEN OTHER ALTERNATIVES CAN PROVIDE A BETTER EXPERIENCE.

The three-step process PayPal-checkout-jitter-jive (click on checkout page, enter mobile code after logging in, then click back to the merchant page) was a friction that I was happy to put up with for many years because of the convenience of using PayPal at most of the merchants I shopped online. It kept me from having to enter and save my card credentials at every merchant. It made shopping online efficient. It was great during those days.

Not so much anymore.

Friction is all relative. A business that solves friction at one point in time can be a source of friction at a later point in time when other alternatives can provide a better experience.

And relative to its competitors, PayPal introduces a friction that my inner multitasker is less willing to tolerate now. PayPal has a lot of company on checkout pages that make the experience easy and truly one touch or an easy double click. The PayPal checkout experience, by comparison, appears unchanged from the late 2010s, old and clunky. Where there are other options, I now often choose one of them.

The payments innovator that unlocked online payments at scale by removing friction at checkout — and became the wallet that owned the online checkout experience — is now at risk because they create too much of it, relative to others. PayPal's Q3 2023 earnings reflect this, too. Branded checkout volumes are not growing as robustly as they once did. Active users are in decline.

Friction and its impact on a company's prospects is a topic I have been writing about since 2019. It is also the foundation for the FITTM Framework that I introduced that year. This framework gets its name by examining the interdependencies among Friction, Inertia and Time as a proxy for assessing opportunities for disruptive innovation — and the future success of any business, regardless of its stage or stature.

For further reading: Using FIT Framework to Drive Success in a Digital World

I define ***Friction*** by how much hassle the prevailing status quo creates and whether that hassle is big enough for a large enough group of people to build a business around.

Inertia is defined as whether the alternative to the current friction is so much better that a critical mass of customers will move away from the status quo to something new.

Time is simply about whether the swishy new alternative saves time and is available to customers in a timeframe that is relevant to them.

Plainly speaking, the FIT™ Framework is a rigorous analytic framework, informed by hundreds of business experiences. It is predictive in determining whether the juice is worth the squeeze for enough customers to invest time and money in building and scaling profitable business.

> ONE COMPANY'S FRICTION OFTEN BECOMES A CHALLENGER'S OPPORTUNITY TO USE MODERN TECHNOLOGY **TO CREATE A DIFFERENT EXPERIENCE THAT CAN QUICKLY CHANGE MARKET DYNAMICS IN THEIR FAVOR.**

My Saturday morning PayPal experience is a great illustration of why understanding those interdependencies matters, particularly in a highly competitive space like payments, and why it isn't enough to assume that market share will always mean customer preference.

And how one company's friction often becomes a challenger's opportunity to use modern technology to create a different experience that can quickly change market dynamics in their favor.

FIGHTING ONLINE CHECKOUT FRICTION

PayPal's origins are certainly quite familiar.

Transacting on eBay was one big ball of friction when it launched in 1995. Buyers who found stuff to buy from sellers on the platform indicated their interest in the item, then put a check in the mail. Days later, banks got the checks and had to clear them, then send the seller the money once the item was sent to the buyer. Transactions took weeks not days, and were a hassle for everyone: buyers, sellers, eBay, and the banks with the responsibility of managing the flow of funds.

PayPal launched in 1998, went public for the first time in 2002 and was sold to eBay that same year for $1.5 billion. It became the trusted payments intermediary on the eBay platform — establishing merchant accounts for sellers and payments accounts linked to buyer bank accounts — making money movement faster, secure and digital. It was an amazing friction fighter, making it so easy for buyers, sellers and eBay alike to do business with each other.

It and eBay grew like a rocket ship, and PayPal with its thousands — then millions, then tens of millions — of buyer accounts moved off eBay to create a network of merchants that wanted an easier way to sell and accept payments online. PayPal's second IPO and decision to add issuer cards more easily in its wallet drove more merchant acceptance and consumer usage. Today, PayPal is the most widely accepted digital wallet, with nearly 76% of all U.S. merchants accepting it and roughly 237 million US consumers with an active PayPal account.

The One Touch experience in 2014 was a first — a breakthrough — that sidestepped the need to authenticate the user for every transaction. For both consumers and merchants that was a huge deal at the time, if merchants adapted their checkout to enable that smoother experience for the buyer. Even though the experience still added steps to the checkout process, it saved time by eliminating the hassle of entering card credentials on sites consumers wanted to shop. The benefit to the merchant was more sales, particularly for smaller merchants where consumers were reluctant to enter and store card credentials.

For many years, guest checkout and registered card credentials were PayPal's only competition. Other "buy buttons" were a long way from ubiquitous and the card networks abandoned their own buy button ambitions after a few years. Merchants' efforts to create their own never got off the ground. Ambitions around a secure remote commerce button sort of imploded. But PayPal's two-sided network continued to

crank, more users brought in more merchants, more merchants brought in more users — the flywheel went into overdrive.

For years, it was the best checkout experience on the web — and its user numbers, merchant acceptance and GMV proved it. When PYMNTS Intelligence published its Buy Button Index in May 2022, merchants that enabled PayPal were proven to save consumers an average of 51 seconds at checkout, a time savings of 43% when PayPal as not used on those same sites.

But paying with or without PayPal is no longer the only choice facing consumers when shopping online or in their mobile apps.

> **UBIQUITY IS NO LONGER ABOUT ONE WALLET BEING ACCEPTED EVERYWHERE,** BUT WHICH PAYMENT EXPERIENCE MOVES A BUYER THROUGH THE VIRTUAL CHECKOUT LINE THE FASTEST AND EASIEST.

Google made it possible to store credentials in the Chrome browser in 2015, providing payments choice at guest checkout using Autofill on any connected device. Shop Pay, introduced in 2017, created a true one-touch checkout experience by taking the customers of Shopify merchants directly to a checkout page to complete the purchase in one click. Amazon Pay moved off Amazon, as did Amazon's merchant services — including free shipping with Buy with Prime and fulfillment — to create its own two-sided network. Apple Pay, where available, is a fast double-click. GPay offers payments choice and soon BNPL options as part of the payment mix. BNPL and pay later options are now proliferating. Seeing multiple options on the checkout page is no longer unusual, and consumers have already registered their card credentials in many of them.

This dynamic has changed the consumer's perception of ubiquity, choice, and friction.

Choice is no longer between entering credentials from scratch at a guest checkout or PayPal. Consumers can choose from multiple "buy button" or wallet options each time they visit a merchant checkout page. What used to look like a jumbled-up Nascar page a few years back is more organized today, and not as off-putting or confusing.

Ubiquity is no longer about one wallet being accepted everywhere, but which payment experience moves a buyer through the virtual checkout line the fastest and easiest. Why? Because consumers have their cards registered on all of the ones they use.

PAYPAL, I HARDLY KNEW YE

I'm not the only digital card-carrying member of Generation Multitasker. More than half of baby boomers and 70% of millennials use their mobile devices to compress time and place and do multiple things at the same time, according to recently published PYMNTS Intelligence data. As people become more mobile, return to the office, and get out and about more with family and friends, the ease with which consumers and businesses can interact with their assorted connected devices will decide consumer preference and, by design, their loyalty.

With study after study suggesting that payments preferences play a huge role in establishing that choice, having a seamless or invisible payments experience will become a critical capability. Innovations in checking out will reflect these expectations, and innovators will use new technology to make interactions, well, invisible — a non-experience that becomes a fluid part of the customer buying journey. Eliminating friction and saving time is where innovators are focused, and to the successful friction fighters will go the spoils.

Everyone — from issuers to card networks to merchants and innovators across the payments ecosystem — is focused on what they can do to further reduce, or eliminate, the hassle of checkout and boost conversion for the merchant. It's no longer a tough slog to convince consumers there is a better way.

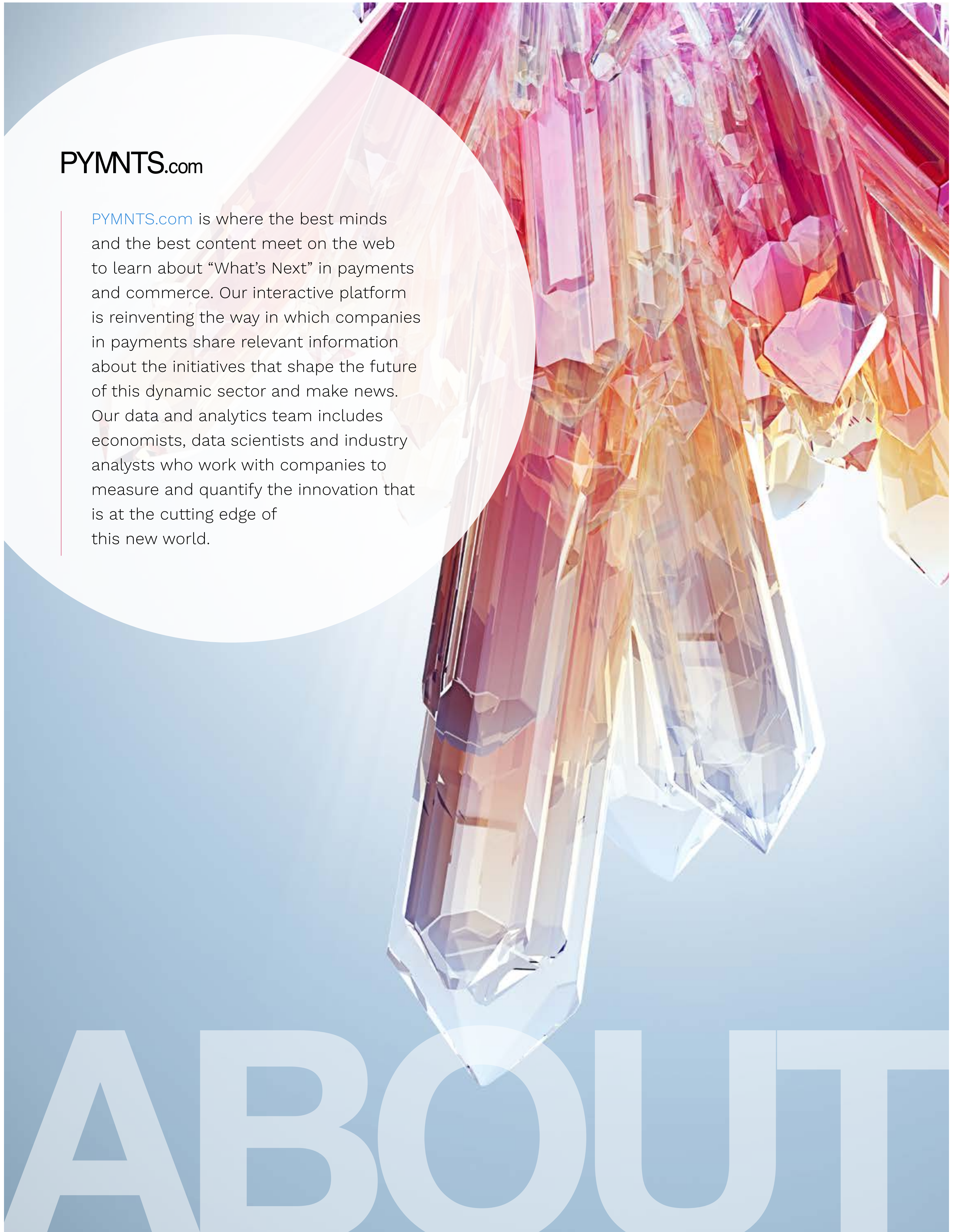
The risk to PayPal is that there are a lot of people like me who can still be counted as active PayPal users, but who transact at a much lower volume than in years past as alternatives make paying for something online or in app more efficient. That the spend that used to flow through PayPal will find its way through other channels — and those other channels now include Apple Pay for iPhone users, who skew to a more affluent user base and drive a disproportionate share of retail spend.

> **ELIMINATING FRICTION AND SAVING TIME IS WHERE INNOVATORS ARE FOCUSED,** AND TO THE SUCCESSFUL FRICTION FIGHTERS WILL GO THE SPOILS.

As any platform innovator will tell you, it is much faster to lose network mojo than to build it. PayPal has done a remarkable job over the last 25 years of building an online payments network that is the envy of many of its fiercest rivals. It has added capabilities that position it as a viable alternative for capturing the "everyday app" opportunity that 79% of consumers say they would love to have.

Last Saturday was a stark reminder of how the PayPal I once knew is getting tougher to recognize in a connected economy where ease and convenience will drive adoption, usage and scale. PayPal has an incredible foundation to leverage and a global presence and merchant acceptance that remains unmatched. I am quite sure that managing the friction/inertia/time dynamic is a high priority for the new PayPal executive team, even though they may not refer to it in those exact terms.

This new team now includes one of the most accomplished professionals in payments leading its global markets focus. It's a team with all the right incentives to turn things around. Let's see what 2024 has in store.



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