stripe

February 27, 2025

Dear Stripe community,

Businesses on Stripe generated $1.4 trillion in total payment volume in 2024, up 38% from the prior year, and reaching a scale equivalent to around 1.3% of global GDP. We attribute this year's rapid growth in part to our long-standing investments in building machine learning and artificial intelligence into our products. These bets continue to pay off, increasing revenue for existing customers, encouraging more businesses to switch to Stripe, and helping new companies reach significant scale unprecedentedly quickly—more on all of those points later. Future growth rates will fluctuate (2024 was an unusually good year), but we're as enthusiastic as ever about the long-term trends in the internet economy.

Stripe was profitable in 2024, and we expect to be so in 2025 and beyond. Durable profitability allows us to plow back much of our operating earnings into research and development. In each of the last six years, Stripe has reinvested a much higher proportion of our earnings in R&D than any comparable company. We believe this ability will prove particularly important in the coming years, as stablecoins, AI, and other forces reshape the landscape. Stripe's growth to date is evidence of the intense market demand for programmable financial services. The associated transformation is still early.

Stripe Billing is an example of such an investment bearing fruit. Over the last year, Billing was designated as a market leader in its own right by both Forrester and Gartner, recognizing its power and maturity. As we forecast in our 2023 letter, Stripe's Revenue and Finance Automation Suite, with Billing at its core, has now passed a $500 million revenue run rate. Billing is being used by more than 300,000 companies, manages nearly 200 million active subscriptions, and is emerging as the revenue engine of the AI era.

The businesses on Stripe span every chromosome of the economic genome, from top corporate leaders (half of the Fortune 100 uses Stripe) to hyper-growth companies (we count 80% of the Forbes Cloud 100 and 78% of the Forbes AI 50 as customers[1]) to newly formed upstarts (one in six new Delaware corporations incorporates with Stripe Atlas). At any scale, Stripe customers share one important characteristic: outsized growth. In aggregate, the revenue that businesses process on Stripe is growing seven times faster than that of all companies in the S&P 500.

Creative destruction and reconstruction

The US corporate sector is both a cradle of invention and a densely populated graveyard of companies that had fabulous futures in their pasts. Of the 500 companies in the S&P 500 at its inception in 1957, only 53 remain in the index today. (More than half of that remaining 53 use Stripe.)

Back in 1957, companies could expect to remain in the index for 61 years. In 1980, the average tenure was 36 years. Today, it's just under 20 years.[2] Enduring businesses are increasingly rare.

Established businesses are coming to Stripe as they seek to modernize and buck this trend. Here are some examples of organizations from across the centuries and how they're working with Stripe:

- The University of Oxford (founded 1096)[3] now accepts student payments online. Oxonians can pay for their books or boat club memberships with Apple Pay or Link.

- The Church of England (founded 1534) now collects donations online and can programmatically fund more than 16,000 parish churches around the UK.

- The Gaelic Athletic Association (founded 1884) has digitized 2,200 clubs with 600,000 members across Ireland and the world.

- The Hershey Company (founded 1894) is now letting candy connoisseurs buy everything from Hershey's Kisses to Reese's Pieces in bulk directly online.

- PepsiCo (founded 1898) is saving time for its business customers (e.g., restaurants, grocery stores), allowing them to automatically restock supplies of Pepsi brands like Gatorade, SodaStream, Rockstar Energy, Lay's, Doritos, and more.

- Comcast (founded 1963) automated its entire TV advertising booking process. On Universal Ads, anyone can now buy a TV spot and run it on NBCUniversal or Fox like they would on Facebook.

- NVIDIA (founded 1993) is allowing developers to buy GPUs on a self-serve basis, and is even selling compute as a cloud service.

- Perplexity (founded 2022), an AI search engine with 500 million monthly queries, is moving from human commerce to machine commerce with Stripe.

In many cases, companies are using Stripe to reinvent their business models. In others, they're simply looking to increase their revenue from existing activities—with striking results. Some examples from last year that stood out to us include:

- Hertz moved its payments to Stripe in 2024. The company has since seen a 4% increase in authorization rates for its online payments.

- Turo, the world's largest car-sharing marketplace, used our Optimized Checkout Suite and saw a 4.7% increase in recaptured revenue—equivalent to an additional $114 million each year.

- Intercom increased conversion by 2.1% and saved countless developer hours after moving to Stripe Billing.

- Forbes switched to Stripe to manage its subscription payments, and it has seen a 23% uplift in revenue in the past 6 months alone.

- News Corp Australia, the parent company of Sky News Australia, has seen a 5% increase in authorization rates. It has also retained more than 10,000 readers that would have otherwise inadvertently churned.

These improvements are partly attributable to the scale of the Stripe data network: we're continually retraining dozens of machine learning models that optimize every part of the transaction flow over an economy-scale dataset. The resulting optimizations are big enough that businesses see them in their top-line revenue figures. Businesses simply start making more money when they switch to Stripe.

The other reason established companies come to Stripe is because the payments landscape continues to evolve so rapidly. Businesses need to adapt to the proliferation of new payment methods and business models, the growing sophistication of fraudulent actors, the ever more exacting expectations of consumers, and the transformation in the commerce experience instigated by AI. Our customers recognize that being on a legacy payments platform puts them at risk of being left behind.

The AI economy

We're seeing an AI boom on Stripe. We are partnered with a large number of companies with rapidly growing businesses including OpenAI, Anthropic, Suno, Perplexity, Midjourney, Cognition, ElevenLabs, LangChain, Pinecone, Mistral, Cohere, Sierra, Decagon, Invideo, and countless others that aren't yet household names (but may become so at any moment). Our 2024 data shows these startups are building businesses at record pace.

Source: Stripe data

Cursor, the AI-powered coding assistant, raced to over $100 million in recurring revenue in just 3 years. We're also seeing the likes of Lovable (which hit $17 million ARR in just 3 months), Bolt (achieving $20 million ARR in 2 months), and Qodo radically lower the barrier for turning software ideas into working applications.

Much as SaaS started horizontal and then went vertical (first Salesforce and then Toast), we're seeing a similar dynamic playing out in AI: we started with ChatGPT, but are now seeing a proliferation of industry-specific tools. Some people have called these startups "LLM wrappers"; those people are missing the point. The O-ring model in economics shows that in a process with interdependent tasks, the overall output or productivity is limited by the least effective component, not just in terms of cost but in the success of the entire system. In a similar vein, we see these new industry-specific AI tools as ensuring that individual industries can properly realize the economic impact of LLMs, and that the contextual, data, and workflow integration will prove enduringly valuable.

Examples in this vein include Abridge, Nabla, and DeepScribe, which are rethinking medical and patient care, while Studeo is reshaping how real estate businesses market property. Architects are using SketchPro to instantly render designs with simple text prompts, restaurants are using Slang.ai to take phone reservations, and property managers are unifying customer support with HostAI. Harvey, whose AI legal assistant is used by many Fortune 500 companies, quadrupled revenue in 2024.

AI will even change the basic modalities of online commerce. We've long optimized checkouts for humans, but we're now doing the same for AI agents, starting with our Agent SDK, launched last November. We're also making it easy for agents to spend money with virtual cards created through Stripe Issuing, which allows users to approve or decline authorizations programmatically, ensuring that agents only buy what you want them to. (And, yes, there are built-in spending controls: nobody wants a T-1000 going wild on the family credit card.)

Our agent toolkit is already being downloaded by developers thousands of times every week as startups build new kinds of autonomous critters. ElevenLabs used our toolkit to let a voice agent autonomously manage subscriptions and refunds, while Perplexity and Payman are using Stripe to enable new agentic ways to spend and move money.

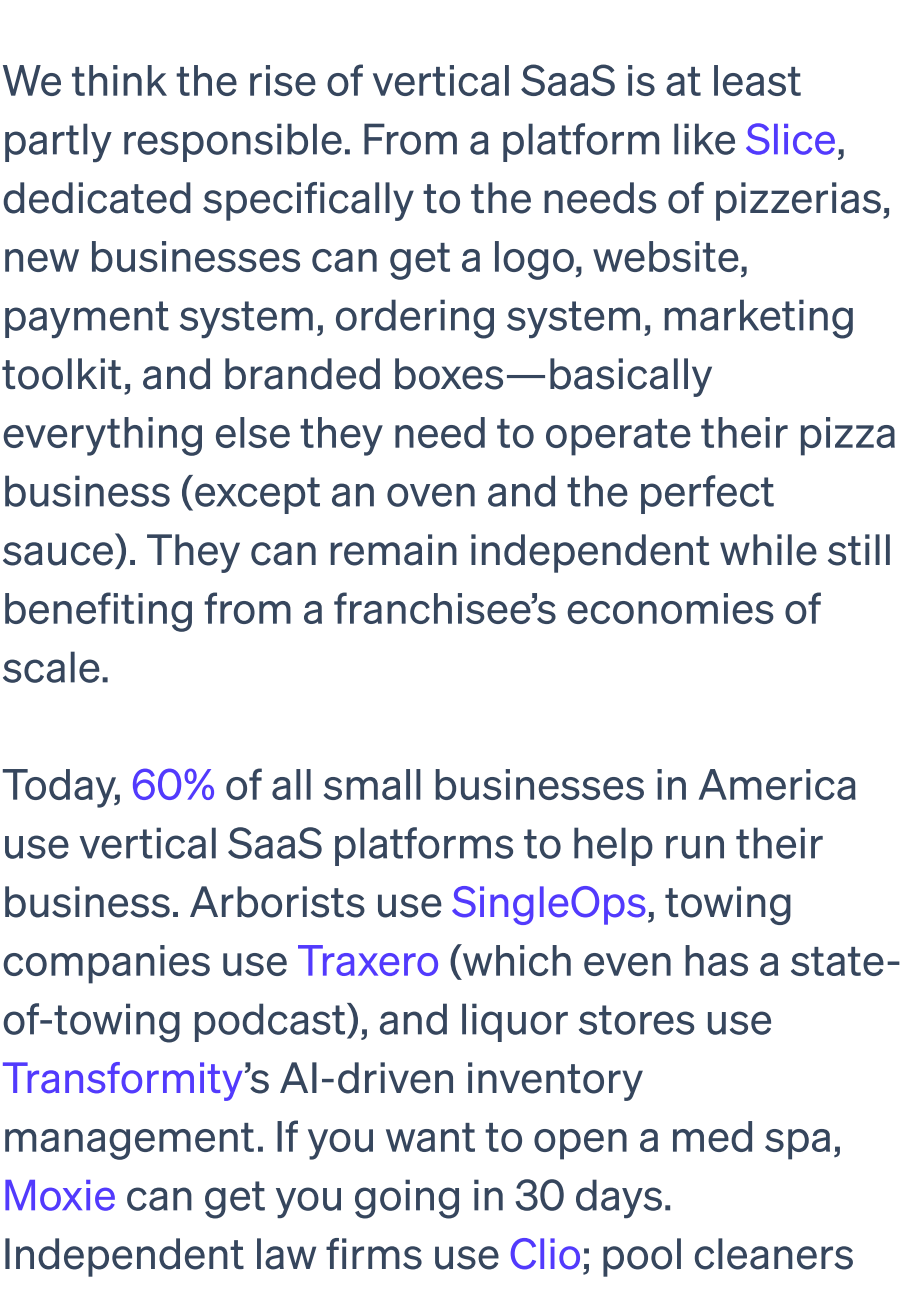
Overall, we are ensuring that Stripe is well-positioned to serve the next chapter of the economy. More than 700 AI agent startups launched on Stripe last year, a figure that we expect will be substantially eclipsed by the total in 2025.

Vertical SaaS: Main Street's growth lever

From 2005 to 2017, independent pizzerias in the United States saw a decline in numbers as the industry franchised. Then that trend inverted in 2017. By 2023, more independent pizzerias launched in America than in any other year on record.

We think the rise of vertical SaaS is at least partly responsible. From a platform like Slice, dedicated specifically to the needs of pizzerias, new businesses can get a logo, website, payment system, ordering system, marketing toolkit, and branded boxes—basically everything else they need to operate their pizza business (except an oven and the perfect sauce). They can remain independent while still benefiting from a franchisee's economies of scale.

Today, 60% of all small businesses in America use vertical SaaS platforms to help run their business. Arborists use SingleOps, towing companies use Traxero (which even has a state-of-towing podcast), and liquor stores use Transformity's AI-driven inventory management. If you want to open a med spa, Moxie can get you going in 30 days. Independent law firms use Clio; pool cleaners use Skimmer; churches use Tithe.ly, Subsplash, or Pushpay; synagogues use Shulware; truck dealerships use Procede; and funeral homes use Meadow Memorials or Tribute Technology.



Source: Stripe data

These platforms and more than 14,000 others use Stripe to offer payments services to their customers. And across nearly every sector of the economy, we see more and more independent businesses leveraging software platforms for impressive growth. In the US, 6.3% of SMBs powered by vertical SaaS platforms on Stripe earn $1 million in total revenue in their first year—nearly 60% more than in one benchmarked comparison set.

The 43% of US GDP that is driven by small businesses contains untapped potential energy. 77% of these businesses say growth capital is hard to come by. Vertical SaaS, with Stripe Capital, can help. Last year, hundreds of thousands of independent businesses using platforms like Jobber or Housecall Pro logged in to their software to find an offer for growth capital waiting for them. Funds arrive in under 48 hours and are repaid as a percentage of sales. No lengthy applications to fill out, no trips to the bank with reams of printed PDFs, no denial from an underwriter who can't wrap their head around the business. The majority of recipients report using the loans for growth investments, and 98% of companies that receive funding this way say they'd do it again.

We see significant potential for vertical SaaS platforms beyond financial services. We wrote earlier in this letter about the rise of vertical AI, and it's unsurprising that vertical SaaS companies are leading protagonists. Jobber Copilot analyzes data, prepares marketing campaigns, and even automatically responds to customer calls on behalf of home services businesses; Practice Better is enabling health professionals to take better notes and focus on their patients; and Fundraise Up is giving charities AI to encourage their donors to be even more generous. It took many years for smaller companies to benefit from previous technological revolutions, but vertical SaaS is bringing AI to the small business economy right away.

Vertical SaaS started and is most mature in the US, but is now becoming a global phenomenon. Over a quarter of Australian small businesses are using vertical SaaS, as are nearly a fifth of small businesses in the UK. Other markets like Singapore (14%), France (8%), and Germany (5%) are more nascent, but adoption is growing quickly. We're seeing platforms like ServiceM8 and Ignition in Australia (for tradespeople and professional services, respectively), allO in Germany (for restaurants), Playtomic in Spain and Anybuddy in France (for sports clubs), and Canterly in Singapore (for equestrian management) all taking off.

All countries want their small businesses to succeed, yet economics research consistently finds that large firms are faster in adopting technology. Vertical SaaS is how we ensure that small and medium-sized businesses fully benefit from software, the internet, and AI. This in turn highlights why internet-native, programmable financial services are so important: they're the foundation that vertical SaaS platforms need to flourish.

Fighting industrialized fraud

Fraud is a bigger drag on the global economy than you might think: one report found that fraud cost 3% of a typical online business's revenue. Fraudulent actors today operate on an industrial scale, with teams of engineers, managers, and data analysts. (We are yet to verify whether they have HR departments. If you know, please tell us so we can give them some peer feedback.) Fraudulent actors generally target times when fraud teams are offline—we see more fraud on Saturdays, Sundays, and Mondays—but we see subtler patterns, too, like the fraudsters' own work schedules. Fraudsters are particular about their lunch breaks.

The most effective lever we have to keep businesses safe is Stripe's reputation network. Data from $1.4 trillion in annual payments volume means that each payment makes the next payment safer, a flywheel spinning with now-considerable momentum. Stripe Radar develops a notion of trust for not only credit cards but email addresses, IP addresses, phone numbers, shipping addresses, devices, and many more details besides. This trust allows Stripe to precisely distinguish between expected and suspicious behavior.

In doing so, scale matters. When a credit card is used for a payment, there is a greater than 92% chance that Stripe has encountered the same card before. We can then compare this transaction to prior behavior. For instance, if we see a card being used with a new email address, the very newness of the email address is a suspicious fact (with a 60% higher likelihood of fraud).

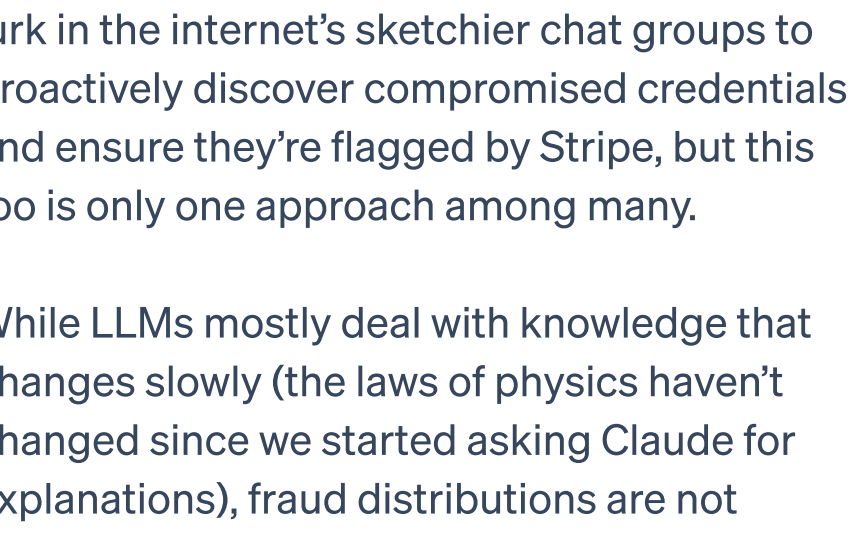
There are less obvious patterns to watch for, too. Our models passively learn which shipping addresses are owned by freight forwarders—the improbable number of distinct buyers per address, billing addresses far from shipping addresses, etc.—and weigh that fact an appropriate amount. (We're happy to facilitate commerce for people on the move; we don't want anyone defrauding innocent businesses.) No single data point is dispositive, but, across thousands of them, we can piece together an accurate picture.

Fraud is an adversarial business: fraudulent actors are always refining their methods. Last year, we saw card testers ("card testing" refers to illicit attempts to identify valid card credentials) move from guessing card details to online card skimming. Criminals use social media to share fake websites with too-good-to-be-true deals, with the sole aim of stealing your credit card number. Those payment details are often sold off in tranches that are then tested out in the wild. Detecting this activity isn't trivial. You might think the obvious approach is to monitor for sudden payment volume spikes on a single business, but this is easily confused with genuine flash sales or a new product launch—which would be the very worst time to wrongly intervene! Our counterintelligence teams also lurk in the internet's sketchier chat groups to proactively discover compromised credentials and ensure they're flagged by Stripe, but this too is only one approach among many.

While LLMs mostly deal with knowledge that changes slowly (the laws of physics haven't changed since we started asking Claude for explanations), fraud distributions are not stationary: fraudulent actors adapt their behavior as soon as they're thwarted. As such, we also enable our models to adapt in real time, so that future decisions benefit from all prior data. When a Stripe Radar fraud model makes a decision on a payment, it knows about events that occurred 100 milliseconds ago across the Stripe network. (We've open-sourced some of the infrastructure we built for this.)

With these and other techniques, we reduced card testing on Stripe by over 80% in the past two years, protecting our customers from billions of fraudulent transactions. Fraudsters: you're going to have to start working through your lunch breaks.

Successful card testing attempts on Stripe



Source: Stripe data

Stablecoins: Room-temperature superconductors for financial services

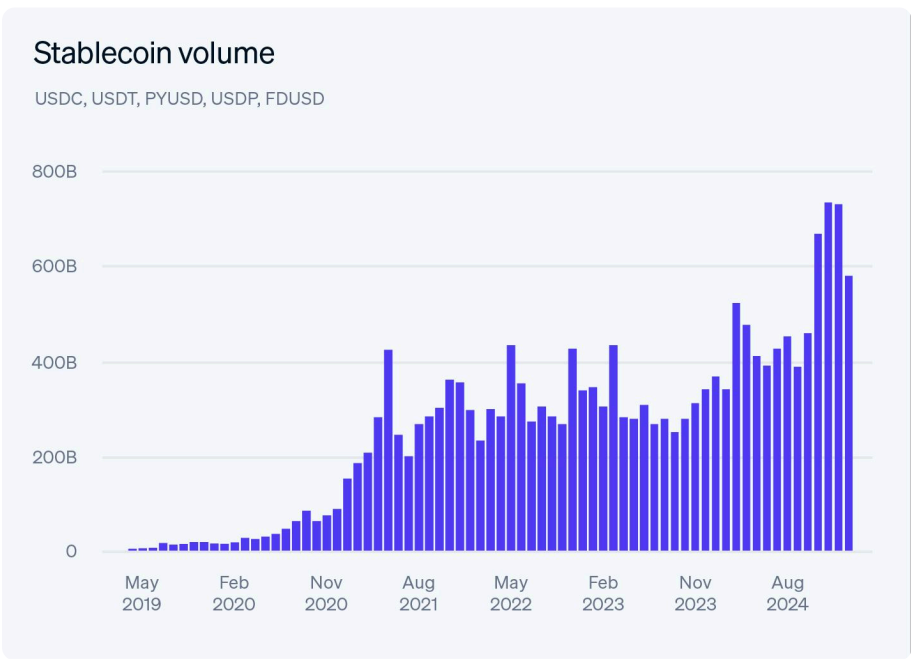
In October, we announced our acquisition of Bridge, the world's leading stablecoin orchestration platform. Bridge enables businesses to do almost anything involving stablecoins: they make stablecoin-based applications easy to deploy and scale. They're used by everyone from Scale AI to the world's largest hodler, the US government.

The top stablecoin use cases today involve tangible, real-world activity. CFOs use stable coins to manage corporate treasury, immigrants use them for remittance, citizens of countries with unstable currencies use them for dependable savings, and payments teams use themit to enable customers from countries with low card penetration. Some of our favorite examples: SpaceX uses Bridge to repatriate funds from Starlink sales in Argentina, Nigeria, and other markets. DolarApp, a neobank in Mexico, uses Bridge to help individuals receive USD payments from payroll providers like Deel (a global payroll provider). Airtm uses Bridge to disburse payments to workers all over Latin America.

Why care about stablecoins? Improvements to the basic usability of money make economies more prosperous. Consider the transitions from coins to banknotes, from the gold standard to fiat currency, and from paper instruments to electronic payments. Stablecoins are a new branch of the money tree. Such transitions occur with some regularity over the centuries, and the effects tend to be large.

Stablecoins have four important properties relative to the status quo. They make money movement cheaper, they make money movement faster, they are decentralized and open-access (and thus globally available from day one), and they are programmable. Everything interesting follows from these characteristics.

The speed and cost advantages that stablecoins now enjoy are recent advances in the cryptocurrency ecosystem. Beginning with the invention of modern cryptocurrency with the Bitcoin whitepaper of 2008, it has taken many years of research and patient systems engineering to make the decentralized technologies competitive with existing financial infrastructure. The fundamentals for stablecoin adoption have only recently fallen into place, enabling the explosive growth we now see. Stablecoin transaction volumes more than doubled between Q4 2023 and Q4 2024, and the number of monthly active stablecoin wallets has now reached 40 million.



Source: Visa Onchain Analytics, adjusted transaction volume

For too long the crypto economy was an isolated atoll, with vibrant native customs but few exports to the rest of the world. A token for increasing leverage in trading NFTs? An interesting practice, but probably not one that's going to reshape global commerce. Stablecoins, though, are an immensely important export to the rest of the world.

In reasoning about stablecoins, two comparisons are relevant: the petrodollars and eurodollars. The petrodollar system refers to agreements between the US and Gulf states (originally just Saudi Arabia) to have international oil purchases priced in dollars and much of the proceeds reinvested in US Treasuries in exchange for military and security guarantees. These agreements created more demand for US dollars, in turn allowing America to maintain lower interest rates and strengthening the dollar's position as the world's preeminent reserve currency. Stablecoin issuers will, in a similar way, be large buyers of US debt and create more dollar strength.

The eurodollar system in turn provides an interesting comparison around access to the dollar. Eurodollars refers to a system of US dollar storage at banks outside the United States—the confusing name stems from European banks being the first hub for this activity, though it now happens around the world. Eurodollars became very popular among non-US corporations despite being far unwieldier than stablecoins. We expect that stablecoins, as an easier-to-use and more accessible version of eurodollars, will bring similar benefits to a much broader group of actors. We further note with interest that, despite regulatory uncertainty in the United States, early stablecoin adoption has shown a notable US dollar preference, with an estimated 99% of stablecoin balances being USD-based.

Macro effects aside, Stripe's platform will be the best way to build with stablecoins. We are already in discussions with some of the world's largest enterprises, helping them assemble stablecoin strategies, such as faster global expansion or easier custody of funds. If your business has needs or ideas in this space, please do get in touch.

European prosperity

In recent months, spurred significantly by Mario Draghi's report for the European Commission, Europe's economic challenges have come to the forefront of public discussion. While the economies of the US and Europe were similarly productive in 1990, there has since been a stark divergence, with US productivity per hour worked reaching $104, as compared with a plateau of something closer to $85 per hour in Europe. Contrary to popular belief, the European economy isn't weakened because people take longer lunch breaks or because the continent takes the month of August off.[4] (European working hours have actually been increasing.) The European economy is challenged because it's getting less output from each hour worked. In his report, Draghi appropriately describes this as an "existential challenge" for the continent.

Source: OECD, 2020 (PPP, constant prices). Adjusted from 2010 to 2024 dollars using GDP price deflator.

One might wonder: how closely do these macroeconomic figures connect to the experiences of the kinds of entrepreneurs and high-growth companies that Stripe works with? We recently ran a survey of US and European founders, and the answer is: distressingly closely. 45% of European founders say that the European business climate is getting worse (compared with only 15% of US founders). Even more strikingly, founders in Europe are twice as likely to see North America as an opportunity for growth than Europe itself. Furthermore, 66% of European founders say that European technology-related policy changes over the past four years have been unhelpful. (13% say they've helped.)

Some say that the European economy has lost its way and that the decline can't be arrested. We can't allow that to happen. We are proud Europeans, Stripe maintains a headquarters in Ireland (in addition to South San Francisco), and Stripe serves a very large number of businesses across the European continent. We thought we would take this opportunity to highlight a few points that we observe from our position at the intersection of technology and financial services.

First, the evidence suggests that Europe needs a broader, deeper, and more diverse array of financing solutions. In the US, almost 80% of corporate lending is now from non-bank sources, compared to just 32% in the EU. This raises the cost of capital for European firms, which in turn lowers investment rates. (A 2019 IMF report expands on this point.) The European VC landscape is similarly behind: while the US invests around 0.7% of GDP in high-growth firms, that figure is less than 0.3% in Europe. Some of this difference stems from more conservative sources of wealth: large US pension funds, for example, have spotted the attractive returns of the venture sector, thus helping finance its growth, but large pools of European capital have generally shied away.

Large-scale capital market reform is not sexy, but we think it would be tremendously beneficial for the European economy. In the meantime, we'll do what we can ourselves: Stripe Capital is not large today, but we hope to expand our offering in order to fuel the growth of Europe's firms.

Second, Europe clearly needs major regulatory reform and simplification. EU Commission President Ursula von der Leyen recently said that there is "too much complexity" and that "administrative procedures are too cumbersome." To make this concrete, one German entrepreneur recently reported:

> *"My previous (non-German) company was incorporated in Delaware and I opened a bank account within a few days. When fundraising, the only thing between investors committing capital and me receiving the money was an electronic signature via Docusign and the investors wiring the funds. Because of the notary system in Germany, the process for my new company will be incredibly painful. Setting up the corporate structure will take 2–3 months. Explaining the need for physical signatures to American angel investors makes fundraising difficult. I will need to burn through my savings for 4–5 months longer than I would need to if I was opening a business in the US."*

We don't think that anyone in Europe deliberately made it a policy goal to discourage the creation or success of new firms, but this has been the inadvertent result. GDPR alone is estimated to have reduced profits for small tech firms in Europe by up to 12%. Those cookie banners hurt, whether you accept them or not.

Third, Europe's labor rules and limits on corporate restructuring make adaptation harder. The IMF recently measured a 2 percentage point annual gap between US and European productivity stemming from differences in allocative efficiency: that is, how effectively individuals and firms across the economy deploy their efforts against that which is most productive. A 2-point gap is huge: the difference between 1% and 3% GDP growth, for example, amounts to 22% versus 80% growth over just 20 years.

Source: IMF, World Economic Outlook, April 2024

This allocative gap is visible in "job dynamism" (measured by summing job creation and destruction rates), which has declined in Europe in the 21st century, and "business dynamism" (measured by summing business creation and destruction rates), which durably lags that of the US. Left unchecked, this gap is likely to grow further. We expect significantly greater technology dislocations over the next decade than over the one just gone by, and much of Europe's economic outcome will be determined by the readiness with which European firms and economies can reconfigure themselves in response.

Source: European Centre for International Political Economy (ECIPE)

Source: OECD

Europe has a strong track record in overcoming existential crises. In all the ways we can, we will continue to support Europe's economic growth and innovation in our work with millions of European businesses. As Mario Draghi said to the European Parliament last week:

> *"To cope with these challenges, it's increasingly clear that we need to act more and more as if we were one state.... The response must be fast, because time is not on our side.... [It] must be commensurate with the size of the challenges, and it must be laser focused on the sectors that will drive the growth. Speed, scale, and intensity will be essential."*

We could not agree more.

Looking ahead

There are many valuable things that one can work on in the world, but hardly a day goes by without us reflecting on how fortunate we are to play a small role in supporting the collective work of Stripe's customers. The businesses we work with are advancing the prosperity of our societies in ways large and small, and their ingenuity is why we're excited to get to work every day. To customers reading this letter: thank you for your trust.

If this letter has piqued your interest in how technology is remaking the world around us, consider joining us at Stripe Sessions, our in-person annual conference, taking place May 6–8 at the Moscone Center in San Francisco. You'll hear from industry leaders, founders, and developers all building on Stripe, and we'll share our plans for the year ahead. You can register at sessions.stripe.com.

Until next year,

Patrick and John

---

[1] Stripe is used by all of the businesses in the AI 50 that are selling a product online. 11 of them don't yet do so.

[2] Based on the methodology developed by Innosight, "2021 Corporate Longevity Forecast," which extrapolates annualized rates.

[3] Despite Oxford's preeminence in many research matters, nobody has been able to definitively figure out when exactly the university got its start. The earliest evidence of teaching dates to 1096.

[4] We are, however, eagerly waiting for the economic impact analysis of the plastic caps and lids directive.