

Solving the ATM Paradox

A Policy Roadmap for the Future of Cash

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 CashEssentials

"The most important financial innovation that I have seen in the past 20 years is the automatic teller machine. That really helps people and prevents visits to the bank and is a real convenience. How many other innovations can you tell me that have been as important to the individual as the automatic teller machine?"

**Paul Volcker, former Chair of the US Federal Reserve
(Dec. 2009)**

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ABOUT THIS PAPER

In April 2025, CashEssentials launched a research project analysing how and by whom ATM interchange fees are set and whether they enable a viable ATM market. We also analysed alternative business models. Within this framework, Guillaume Lepecq and Matt Sykes reviewed the literature and drafted a white paper highlighting the key issues with the current ATM interchange model and how this was negatively impacting access to cash. A research seminar was then held in Warsaw on 3 November, bringing together a panel of international specialists:

- Roel Van Ahholt, De Nederlandsche Bank
- Graham Mott, LINK
- Franz Seitz, Weiden Technical University of Applied Sciences
- Nicholas Smedley, FINDI
- Marek Szafirski, Euronet

The present document summarises the main take-aways of the research and the discussions at the research seminar. We would like to extend our warm gratitude to both the panellists and the participants who have made this research possible. The authors would also like to thank Martin Croot, Concha Jimenez and Franz Seitz for their invaluable comments.

ABOUT CASHESSENTIALS

CashEssentials is a global, independent think tank, whose mission is to monitor ongoing developments and undertake research and analysis on cash and its future, while providing a platform for balanced inquiry and debate about cash, payments and monetary systems, for the benefit, viability and well-being of all. Banknotes and coins are a collective good integral to society and its proper functioning. The evolution of cash, therefore, should be shaped collectively, that is, in the joint long-term interest of individuals, businesses, regulators, non-state actors and society. In our view, the future of money is not just a technology issue. It is fundamentally a socio-economic issue: the future of the monetary system should be efficient; fair; inclusive; resilient; sustainable; respectful of individual privacy and include a vision for human betterment. A part of that solution is cash.

In a rapidly digitizing society, we believe in the imperative of keeping cash up-to-date and open to change, as it possesses a set of unique attributes. Cash is non-discriminatory and can be used by everyone; protects individual privacy; is a crisis safehaven – cash does not crash – and is a friend of the poor and unbanked.

ABOUT THE CPT GROUP

The CPT Group is an international advisory and research firm focused on the structure, performance and long-term sustainability of the cash cycle and broader payments systems. We work primarily with central banks and system-level stakeholders on questions of cash system design, access, resilience and oversight, particularly as usage patterns change and traditional infrastructure comes under pressure.

Our work covers cash system architecture, market and operator analysis, benchmarking, access to cash, secure infrastructure and automation, and the practical implications of policy and market change. We bring together experience from central banking, financial institutions and cash service providers, allowing us to provide independent, evidence-based insight grounded in how cash systems actually operate. The focus is not on disruption or advocacy for particular models, but on helping authorities and industry participants make informed decisions that support efficient, resilient and inclusive cash systems over time.

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Introduction

The global debate surrounding cash has undergone profound transformation over the past few decades. In 2016, Kenneth Rogoff, Harvard economist and former Chief Economist at the International Monetary Fund, ignited widespread discussion with his book *The Curse of Cash*, in which he argued for the gradual phasing out of physical currency. Rogoff contended that large-denomination banknotes facilitated tax evasion, crime, and corruption, and that eliminating cash would enhance monetary policy effectiveness and financial transparency.

Yet, as the debate evolved, so too did the perspectives of key stakeholders. Ajay Banga, former CEO of Mastercard and a long-time advocate for digital payments, initially championed the idea of a "world beyond cash." However, by the end of his tenure, he acknowledged a more nuanced reality: "I think cashless, actually, is something we're not going to get to and we probably shouldn't." This shift in stance reflects a broader recognition of the enduring economic and social importance of cash—its role in fostering financial inclusion, protecting privacy, ensuring economic resilience, and serving as a public good.

Public demand for cash is growing. The value of cash in circulation is increasing at a rate faster than economic growth in most economies. However, the viability of cash depends on the ability to maintain a functioning infrastructure. One key element of this infrastructure—automated teller machines (ATMs)—has experienced a notable decline over the past decade. This decline is not due to a lack of demand, as cash usage remains robust. Instead, it suggests that supply-side factors, particularly the sustainability of ATM business models, are at play.

In this paper, we explore the challenges and opportunities facing ATM business models. If ATMs are to remain a viable and accessible service, they must generate reasonable economic return for their operators. To this end, we structure our analysis as follows: In Section 1, we review the global evolution of ATM numbers and their distribution. In Section 2, we analyse how ATM business models operate and how they have evolved in response to changing economic and technological landscapes. Finally, in Section 3, we examine different policy responses from around the world and propose recommendations to ensure the future viability of ATMs.

By addressing these issues, we aim to contribute to the ongoing discussion on how to sustain a balanced and inclusive payment ecosystem, where both cash and digital payments can coexist effectively.

Executive Summary

The ATM Paradox: Rising Cash Demand, Declining ATM Networks

Despite the increasing demand for cash globally, ATM networks are declining in both advanced and emerging economies. This paradox is not driven by a reduction in cash usage—public demand for cash remains robust, with cash in circulation growing faster than GDP in many countries—but by the unsustainability of current ATM business models. ATMs are the most critical channel for cash distribution, handling an estimated 79% of cash withdrawals in the Eurozone and serving as a lifeline for financial inclusion, especially in rural and underserved areas. Yet, ATM numbers are falling at alarming rates, with some countries experiencing annual declines exceeding 10%. The decline is supply-side driven, rooted in the economic unviability of operating ATMs under current conditions.

ATMs remain the most efficient and accessible channel for cash distribution, offering 24/7 availability, broad geographic coverage, and essential services like deposits, bill payments, and mini-statements. However, alternatives are not replacing ATMs. Bank branches are closing even faster than ATMs; cashback or cash-in-shop (withdrawal without a purchase) at retail lacks scalability and consumer awareness. The decline risks creating "cash deserts," undermining economic resilience, and excluding vulnerable populations—including the elderly, low-income individuals, and those in remote areas—who rely on cash for daily transactions.

The Root Cause: A Business Model Under Pressure

The core issue lies in the ATM interchange fee system. The mechanism was initially designed to compensate ATM operators for providing access to other banks' customers. Today, this system is failing due to three critical flaws:

- 1. Revenue-Cost Mismatch:** ATM operators face a structural imbalance: 50-90% of their costs are fixed (rent, maintenance, depreciation, security), while revenues are variable, tied to transaction volumes. When transaction volumes decline—due to digital payment growth, branch closures, or economic shocks—operators cannot proportionally reduce costs, leading to rapid margin erosion. The levels of interchange fees have remained stable, in some cases for more than 10-15 years. This further illustrates that the fee-setting process is not aligned with the rising operational and inflationary costs.
- 2. Lack of Transparency and Control:** Interchange fees are set behind closed doors by card schemes such as Visa and Mastercard, often without input from ATM operators. There is a structural imbalance between issuers—who are generally larger and more international—and acquirers. Furthermore, card issuers, who pay the ATM interchange fees, have little interest in supporting the cash infrastructure, as their strategic focus lies in promoting digital payments, which offer higher margins and data value. As a result, fees are frequently disconnected from actual costs, sometimes falling below cost-recovery levels.
- 3. Market Failure:** ATM operators lack control over two critical factors: transaction volumes (influenced by consumer behaviour and bank policies) and interchange fee levels (set by schemes and issuers). This creates a vicious cycle: as unprofitable ATMs close, access to cash diminishes, further reducing transaction volumes and accelerating network decline. The system lacks a stabiliser to halt this downward spiral, threatening financial inclusion and economic resilience.

Lessons from Global Case Studies

Several countries have implemented innovative solutions to sustain ATM networks:

- **United Kingdom:** The LINK network sets interchange fees via board discretion, with subsidies for low-volume rural sites. This model balances cost efficiency with geographic coverage, protecting ATMs that are the "last in town."
- **India:** The Reserve Bank of India (RBI) increased regulated interchange fees, enabling a 10-15% annual growth in ATM deployment. India's white-label ATM model and "unified banking centres" combine cash access with digital services, such as bill payments, remittances, and KYC verification, making ATMs commercially viable while promoting financial inclusion.
- **Netherlands:** Dutch banks pooled their ATM estates and established Geldmaat as a joint venture. The model uses owner fees from large banks and fallback interchange, with upcoming legislation requiring banks to offer free ATM withdrawals funded through account fees. This ensures equitable cost-sharing and widespread access.
- **Poland:** Independent ATM deployers (IADs), who operate 76% of ATMs, were facing unsustainably low interchange fees. The IADs commissioned an independent cost study which involved institutional stakeholders, to outline the risks. This led to an increase in interchange by both Visa and Mastercard.

Recommendations: Fixing the ATM Business Model

To ensure the long-term viability of ATMs, a multi-stakeholder approach is required, combining regulatory intervention, commercial innovation, and public-private partnerships. Key recommendations include:

1. Reform Interchange Fee Structures

- **Transparency and Cost-Based Pricing:** Mandate that interchange fees be publicly disclosed and tied to actual operational costs, including cash logistics, maintenance, and security. Annual independent cost studies should inform fee-setting, with representation from ATM operators.
- **Variable Fee Components:** Introduce a two-part interchange fee with a fixed fee for baseline costs and a variable percentage of the withdrawal amount to reflect cash-handling expenses. This encourages larger, less frequent withdrawals, reducing operational strain.
- **Regulated Minimum Fees:** In markets where interchange fees are suppressed, regulators should set minimum levels to ensure cost recovery. For example, the Reserve Bank of India successfully lobbied for fee increases, driving ATM growth in underserved areas.

2. Public Sector Intervention

- **Targeted Subsidies:** Governments and central banks should subsidise ATMs in rural, remote and low-income areas. Austria's central plans to sponsor up to 120 ATMs in underserved regions.
- **Universal Service Obligations:** Require banks to maintain a minimum ATM density proportional to their market share, including digital banks. The UK's Financial Services and Markets Act (2023) empowers regulators to designate "cash access points" and require banks to fill gaps left by closures.

3. Encourage Competition and Innovation

- **Deregulation for Non-Bank Operators:** Permit fintechs, retailers, and postal services to deploy ATMs, subject to security and AML standards. This diversifies the market and improves coverage.
- **Diversified Revenue Models:** streamline the regulatory environment to enable ATM operators to offer value-added services, such as bill payments, remittances, government benefit disbursements, and merchant cash deposits. In India, ATMs double as "unified banking centres," combining digital and physical services to enhance viability.

4. Strengthen Monitoring and Resilience

- **Centralised Data Collection:** Central banks should track ATM deployment, usage, and fee structures in real time to identify "cash deserts."
- **Resilience Planning:** Integrate ATMs into national emergency plans, with backup power, satellite connectivity, regional cash reserves and mobile ATMs.

5. Clarify Regulatory Mandates

- **Public Good vs. Private Good:** If the institution of cash is defined as a public good, then the costs of ATMs should be shared equitably—such as through bank account fees—rather than burdening ATM users alone.
- **Consumer Protection:** Mandate clear fee disclosure at ATMs and educate the public on alternatives like cashback. Protect vulnerable groups with fee waivers or subsidies.

6. Foster International Cooperation

- **Harmonise Standards:** Collaborate with international bodies (IMF, World Bank, BIS) to align ATM fee structures and access standards. Share best practices, such as the Euro Retail Payments Board (ERPB), to create a level playing field.

A Call to Action

The decline of ATMs is not inevitable—it is the result of fixable market failures. By implementing these recommendations, policymakers, regulators, and industry stakeholders can:

- Preserve cash access for all citizens, regardless of location or income.
- Strengthen economic resilience by maintaining a robust and redundant cash infrastructure.
- Future-proof ATMs through innovation, ensuring they remain relevant alongside digital payments.

The time to act is now. Without intervention, the erosion of ATM networks will deepen financial exclusion and undermine the stability of the payment ecosystem. The solutions exist; what is needed is political will and collaboration.

I. The Situation of ATMs around the Globe

1. ATMs are a Critical Part of Cash Infrastructure

Automated Teller Machines (ATMs) have become the single most important channel for delivering cash to the public across almost every market.

It is estimated that there are currently some 3 million ATMs globally. While in many advanced markets the national ATM estate is reducing, on the other hand there continue to be emerging markets in which ATMs are growing rapidly or which are even deploying ATMs for the first time (for example, Tuvalu in the South Pacific, installing their first ATM in 2025). There are some 50-100 billion ATM transactions globally each year¹, representing an estimated value in the vicinity of \$8.73 trillion or 7% of GDP².

Illustration 1 visualises the global distribution of ATMs per 100,000 adults for the year 2023. It underscores the uneven global distribution of ATMs, with significant disparities between developed and developing regions. While ATMs remain a critical component of financial infrastructure in many parts of the world, their availability varies widely, reflecting broader economic and infrastructural inequalities.

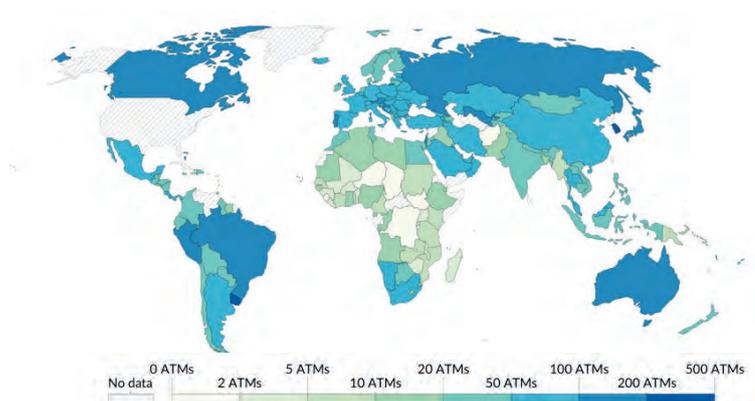
Illustration 1: Global ATMs per population

Automated teller machines (ATMs), 2023

Number of automated teller machines (ATMs) per 100,000 adults. ATMs are computerised telecommunications devices that provide clients of a financial institution with access to financial transactions in a public place.

Data source: International Monetary Fund, via World Bank (2025)

OurWorldinData.org/economic-growth | CC BY



ATMs provide an essential distribution channel for banks, particularly as banks restructure (and reduce) their branch footprint. ATMs are often available 24/7 and can be enabled to provide a range of services including deposits, withdrawals, bill payments, and mini statements, along with availability of multiple languages which supports accessibility. ATMs can support financial inclusion through deployment in under-banked populations particularly in remote areas. ATMs have become an increasingly important tool in crises where physical cash is needed prior to natural disasters, or during power outages or payment system failures, or to support recovery efforts after crises

ATMs are a critical part of the global cash system. They have also increasingly become a proxy for the health of the overall cash system.

¹ Unconfirmed sources suggest global transactions of 86.7bn. 50-100bn transactions is an author estimate based on monthly average transactions of between 1,200 and 2,800.

² In 2024, cash withdrawals in the euro area amounted to \$1.49 trillion (ECB) or 7% of GDP. By extrapolating the figure to the global GDP, this amounts to \$8.73 trillion.

2. ATM Numbers Are Declining in both Advanced and Emerging Economies

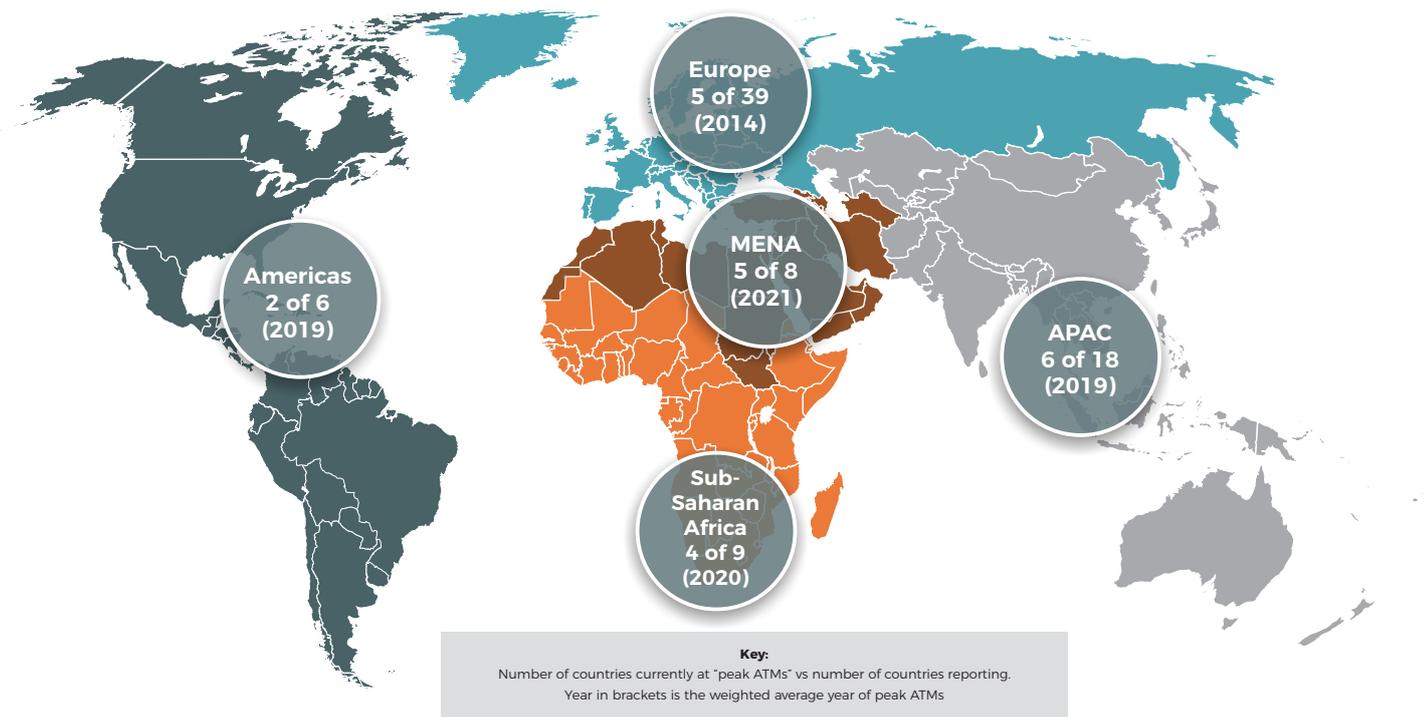
ATMs numbers have been declining in more and more countries. In some cases, the change has been drastic, while in others the decline rate is more gradual.

In the analysis contained in this section we have drawn extensively from data sourced from the International Monetary Fund via FRED, the ECB 2024 SPACE study, the Reserve Bank of Australia, the 2024 UK Cash and Cash Machines Report, and where no other data is available, the Worldpay Global Payments Report. More detailed analytical tables are contained in the appendix.

I. Beyond Peak ATMs

As a broad statement, a growing number of countries transitioned past “peak ATMs” – the highest number of ATMs deployed in the country. Illustration 2 shows a visual summary at a regional level. Across the five regions, only the MENA region had a majority of reporting countries where ATM fleets were still growing. In all regions, the average year where peak ATMs were seen was between 2014 and 2021, so shrinking ATM networks is not a new phenomenon.

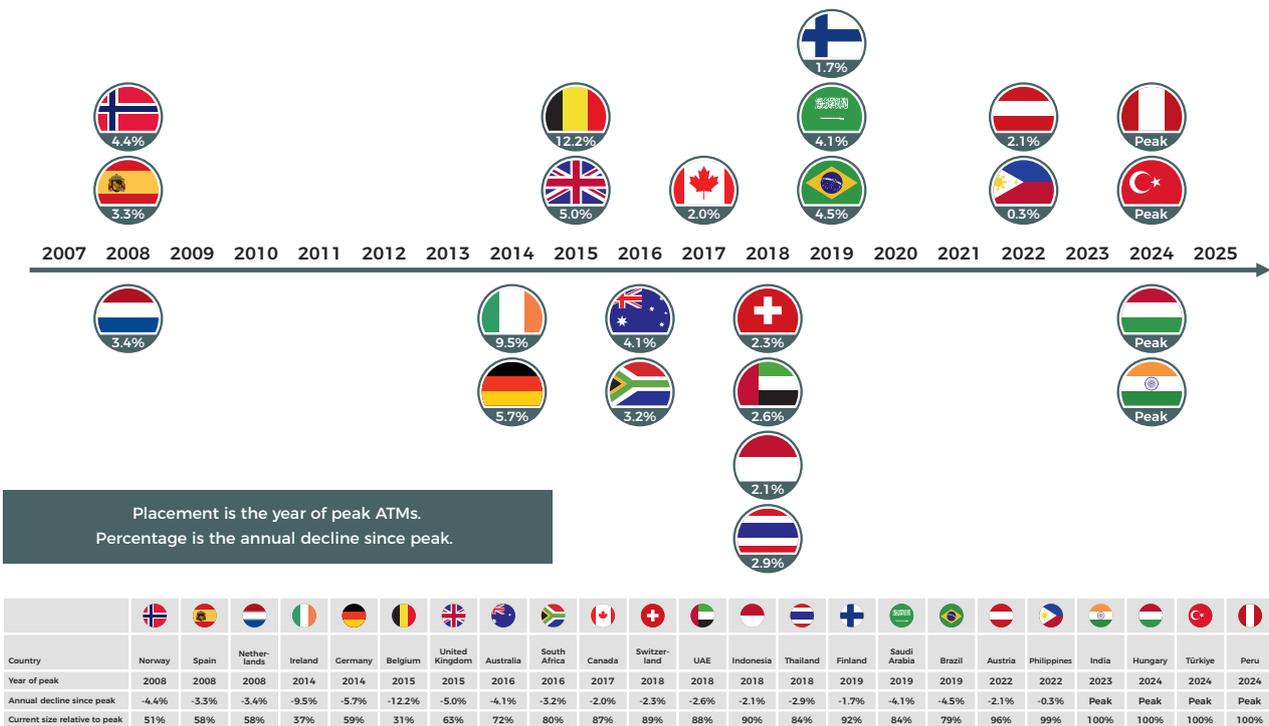
Illustration 2: Countries at peak ATM and average year of peak ATMs in each region



Sources: CashEssentials calculations based on International Monetary Fund, ECB 2024 SPACE study, the Reserve Bank of Australia, the 2024 UK Cash and Cash Machines Report, and where no other data is available, the Worldpay Global Payments Report.

Compiling a sample of 23 countries, Illustration 3 illustrates at a country level the change profile we are seeing. The position of each country on the horizontal axis shows the year of peak ATMs, the size of the flag illustrates the current size of the country's ATM estate relative to peak, and the percentage is the annual decline relative to peak. On the one hand, the inference is obvious – the further back in time that peak levels were reached, the greater the overall reduction. But to stop here hides a more important finding: change is not linear, and annual decline rates can at times be surprisingly large (Belgium=12.2%, Ireland=9.5%) and can be a 'fast start' (Brazil=21% decline in five years). It is not possible to make broad assumptions on what change profile a country might experience, because it very much depends on the dynamics at play in each country.

Illustration 3: Sample countries year of peak ATMs and change since peak



Sources CashEssentials calculations based on International Monetary Fund, ECB 2024 SPACE study, the Reserve Bank of Australia, the 2024 UK Cash and Cash Machines Report, and where no other data is available, the Worldpay Global Payments Report.

II. The ATM Paradox: more Cash, less ATMs

One explanation often used for the decline in ATM networks is the reduction of cash as a share of total payments. However, Chart 1 challenges this view. Mapping the annual decline rates with cash as a share of total payments³, it is quite evident that there is a poor relationship between these two phenomena. The correlation across the 37 countries where both data points are available is 0.191 – a particularly weak correlation.

Chart 1: ATM network decline rates vs cash as a percentage of payments

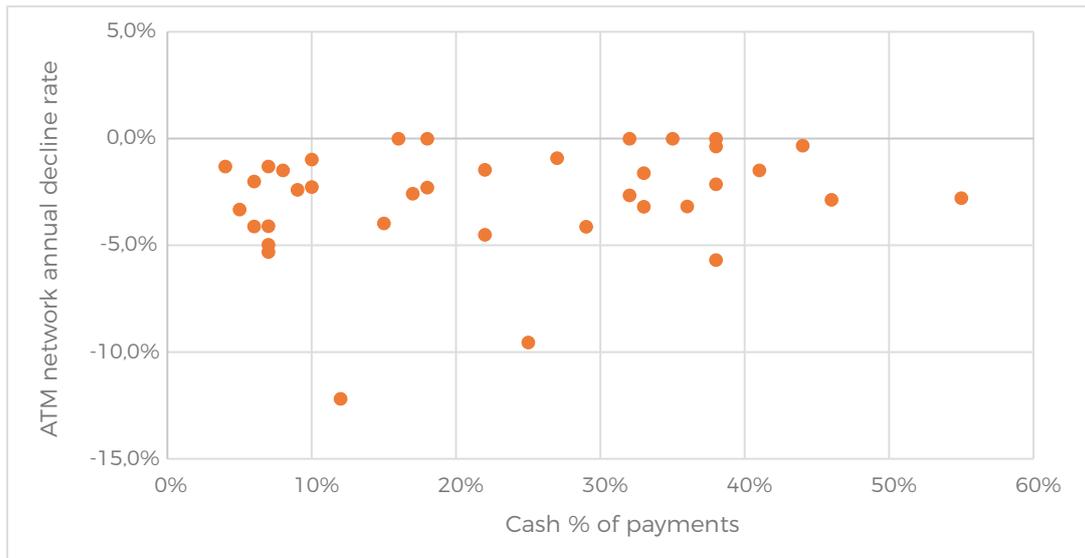


Chart 1 Sources : CashEssentials calculations based on International Monetary Fund, ECB 2024 SPACE study, the Reserve Bank of Australia, the 2024 UK Cash and Cash Machines Report, and where no other data is available, the Worldpay Global Payments Report.

An important dynamic at the national level is changes of bank-owned/operated ATMs and independently owned/operated ATMs. The Independent ATM Deployer (IAD) models vary widely, and the impact of bank and IAD ATM network ownership has important implications for national availability of ATMs. This trend adds further importance to the health of the ATM business model as while banks can in theory generate revenue from other channels (e.g. bank fees) and operate loss-making ATM estates, this is not the case for IADs.

³ To allow consistency of comparison, cash as a share of payments has been drawn exclusively from the 2024 Worldpay Global Payments Report. In the authors' experience the Worldpay report data is not consistent with other, more robust datasets such as central bank payment diaries, however it has been used in this chart because we understand that measurement is consistent across countries and therefore the shape of the comparative data is relevant.

3. Alternative Cash Disbursement Methods cannot Replace ATMs

The decline in the number of ATMs has led some to suggest that alternative cash disbursement methods—such as withdrawals at bank branches, post office, or at retail stores—could eventually replace ATMs. However, despite their convenience in specific scenarios, these alternatives remain niche solutions rather than viable replacements for ATMs. While they can complement cash distribution, they lack the scalability, universality, privacy and efficiency of ATMs. Their limited adoption, inconsistent business models, and inability to match the reliability of ATMs make them unsuitable as a primary cash access channel

I. Branch Withdrawals: A Declining and Unsustainable Option

Over the past decade, the number of bank branches worldwide has been steadily declining, a trend accelerated by the rise of digital banking and the pursuit of cost efficiency. Between 2008 and 2023, the number of bank branches in the EU-27 dropped by 43% (ECB, 2024). In the United States, over 3,000 branches were closed in 2025 alone, continuing a long-term trend of consolidation.

Alongside branch closures, many of the remaining bank branches have reduced or eliminated cash services altogether. Maintaining cash services is seen as costly and labour-intensive, requiring staff training, security measures, and physical infrastructure. Banks no longer see the provision of cash services as a core banking service.

Relying on branches for cash disbursement is no longer a sustainable option. Operating hours are limited, and their geographic distribution is uneven, particularly in rural or low-income areas. As a result, branches cannot serve as a reliable alternative to ATMs, which offer 24/7 availability, broader geographic coverage, and lower operational costs per transaction.

II. Cashback and Cash-in-Shop: Underdeveloped and Lacking a Universal Business Model

Cashback enables consumers to withdraw cash at a retail location during a purchase. The cash is dispensed alongside the receipt.

Cash-in-Shop enables consumers to withdraw cash at a retail location without requiring a purchase. This model is less common and typically involves a partnership between retailers and banks or payment networks.

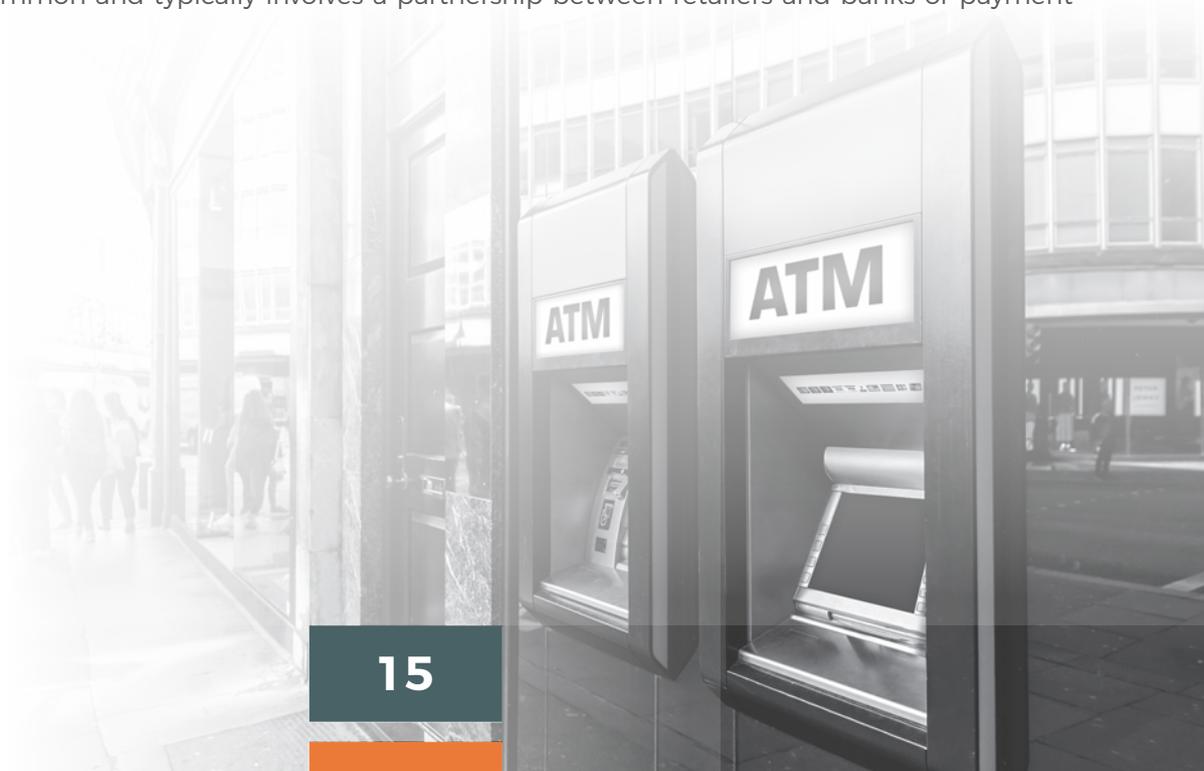


Table 1: Comparison of ATMs and cash access alternatives

Feature	ATMs	Cashback	Cash-in-Shop
Availability	24/7 in most cases, widespread	Limited to store hours	Limited to store hours
Withdrawal Limits	High	Low	Low
Speed & Convenience	Instant, no purchase required	Requires a transaction	No purchase required
Security	Designed for cash handling	Dependent on retail security	Dependent on retail security
Accessibility	Universal (all cardholders)	Limited by retailer and bank policies	Limited by retailer and bank policies
Operational Efficiency	High	Low (manual, staff training)	Low (manual, staff training)
Banknote Quality	High	Unknown	Unknown

Both cashback and cash-in-shop solutions face several challenges that limit their adoption and effectiveness as alternatives to ATMs:

- 1. Lack of Universal Standards:** Unlike ATMs, which operate under uniform technical and financial regulations, cashback and cash-in-shop services vary significantly by retailer, bank, and country. This inconsistency creates confusion for consumers and complicates widespread adoption.
- 2. Limited Availability:** Participation by retailers is often inconsistent due to security concerns, operational complexity, or low consumer demand. As a result, these services are not universally available, leaving gaps in coverage.
- 3. Regulatory Challenges:** Unlike ATMs, which are specifically designed for secure cash handling, retail stores lack the infrastructure to manage large-scale cash distribution while complying with financial regulations including anti-money laundering (AML) and know-your-customer (KYC) regulations. This creates legal and operational risks for retailers.
- 4. Low Revenue Incentives:** Retailers earn little to no revenue from providing cash disbursement services. Without financial incentives from banks or payment schemes, these services are often seen as unattractive propositions for retailers. Scheme rules also apply to cashback and cash-in-shop.
- 5. Lack of Economies of Scale:** Cash-in-shop models are less efficient than ATMs, which are optimised for high-volume, automated cash distribution. The absence of economies of scale makes these alternatives less viable for large-scale adoption.
- 6. Balanced in- and outflows:** The service depends on the availability of cash at the store, i.e. on a sufficient share of consumers holding and paying in cash, which was likely withdrawn from an ATM.

III. Even in Advanced Economies, Alternative Methods Have Never Gained Substantial Traction

While cashback and cash-in-shop services offer convenient supplementary options for accessing cash, they lack the infrastructure, scalability, and consumer trust to replace ATMs. The European Central Bank's (ECB) SPACE 2024 survey highlights that 79% of cash withdrawals in the Eurozone still occur at ATMs, with cashback accounting for less than 5% of transactions.

These alternatives are best viewed as complements to ATMs, providing additional access points in areas where ATMs are less available. However, due to their constraints—such as limited availability, regulatory challenges, and low revenue incentives—they are unlikely to surpass ATMs as the primary method for cash withdrawals.

Cashback services require a purchase, which limits their usefulness for consumers who only need cash. As for cash-in-shop solutions, they lack visibility. In the UK, "cashback without purchase" schemes have been introduced, but only 16% of shoppers are aware of them, and just 5% have actually used them (Which?, 2024).

II. How ATMs Generate Revenue

1. ATM Interchange: how does it work?

I. What is ATM Interchange?

ATM interchange - also referred to as Cash Disbursement Fees or Service Fees - is the fee paid by the cardholder's bank (the issuer) or payment service provider to the ATM owner or operator's bank (the acquirer), whenever a customer uses an ATM outside of their own bank's network and is routed via a scheme.

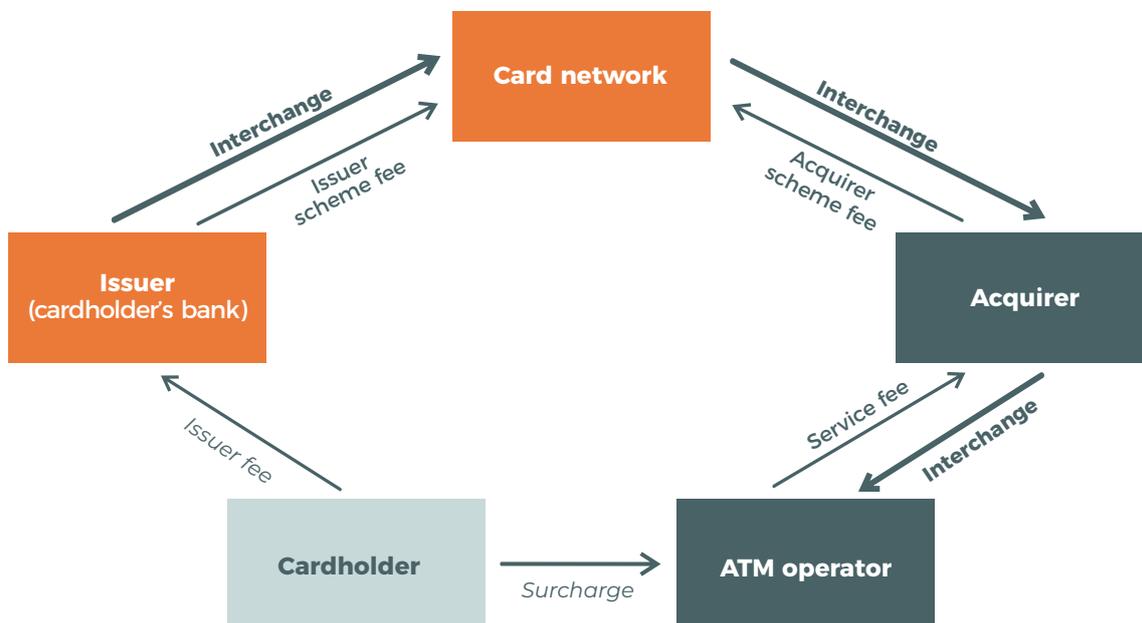
It is distinct from the more visible ATM surcharge (a fee charged directly to the cardholder at the machine) and from the broader card interchange applied to retail transactions.

The purpose of ATM interchange is to compensate the ATM owner for providing access to cash and related services to non-customers. When ATM interchange was originally introduced over 25 years ago, it was to theoretically cover core operating costs such as cash replenishment, machine maintenance, and security, while also providing a revenue stream that sustains ATM deployment.

Rules vary across markets and schemes, ranging from interchange being practically the only fee model available to ATM operators to interchange being abolished.

II. How ATM Interchange Works

Illustration 4: The flow of fees and revenue in an ATM transaction



As depicted in Illustration 4, the fee charging of an ATM transaction, including interchange, is multi-party and multi-layered.

For an 'off-us' ATM transaction – i.e. a transaction at an ATM that is not operated by the customer's bank – there are typically at least five parties involved:

- The cardholder
- The ATM operator, who is the party who has economic and operational responsibility for the ATM (and who may also be the acquirer)
- The acquirer, who captures the transaction and processes it, and plays a clearing role through the banking system or card scheme.
- The issuer, who is the cardholder's bank and is responsible for remitting cardholder funds through the banking system or card scheme
- The card scheme, who facilitates the payment network

The fees that may apply to any ATM transaction (e.g. withdrawals, balance enquiries, declines) include:

- For the cardholder, any combination of no fees, issuer fees⁴ paid to their bank, and surcharge (or access fee) paid to the ATM operator
- Interchange is paid from the issuer to the acquirer and is typically paid to the ATM operator. Interchange is part of card scheme governance, so if it flows to the ATM operator this is a commercial agreement, not part of scheme rules

Various access fees and services fees paid between the ATM operator, the acquirer, the issuer, and the card scheme, ostensibly for services provided to facilitate the transaction.

Fees are typically expressed as a fixed amount, though some fees can also be based on a percentage of value. Fee settings vary by country, card network, and other market dynamics. The wide variability across countries, raises serious questions on the process to set interchange fees. In Europe, fee levels vary on a scale of 1 to 10 in terms of domestic interchange.

III. Why Do ATM Interchange Fees Exist?

Historically, ATM interchange was introduced to enable the sharing of ATM networks. It ensured that banks had an incentive to allow cardholders of other banks to use their ATMs, providing a way to fairly compensate the ATM owner (initially just banks) for the transaction. As ATM deployment models evolved and IADs began to establish ATM fleets, interchange provided an important commercial mechanism to support the development of ATM infrastructure. This expanded consumer access to cash.

⁴ Issuer fees are also referred to as disloyalty fees, foreign fees, out-of-network fees, and other-bank ATM fees. They are charged by a cardholder's bank to the cardholder for using an ATM not deployed by that bank

IV. ATM Interchange vs. Card Interchange: Key Differences

Interchange as a financial mechanism is central to the broader payments ecosystem and forms the backbone of merchant/retail card payments. However, there are important differences between interchange in the context of ATM networks and in the context of merchant payments. Table 2 illustrates some of these differences.

Table 2. ATM and Card Interchange

Feature	ATM Interchange	Card Interchange
Fee Direction	Issuer → Acquirer	Acquirer → Issuer
Transaction Type	Cash withdrawals, balance inquiries	Purchase transactions
Primary Beneficiary	ATM operator (acquirer)	Card issuer
Primary Economic Benefit of the Exchange	ATM operator	Merchant
Purpose	Cover ATM operational costs	Compensate for transaction risk and cost

Importantly, the relativity of the value of interchange to the economic benefit of the exchange is a key difference:

- In the case of an ATM withdrawal, interchange can make up a material portion of the gross revenue of the transaction for the ATM operator
- In the case of a retail payment, interchange as a cost makes up a fractional portion of the gross revenue of the sale for the merchant

To this end – while not to diminish the need for fair merchant interchange settings – the impact of ineffective settings on ATM interchange has a much more significant effect on ATM owners than it does on merchants.

V. Controversies and Challenges

The inception of ATM interchange was based on sound economic principles to promote usage and access. However, as the cash and payments landscape has evolved, there is an argument that interchange in its current form is now doing the opposite of its original intent, and that both regulated models around interchange and purely market-driven interchange settings are problematic for consumer interests, ATM operator viability, and more broadly access to cash.

One example of the ATM industry dealing with the interchange challenge is **Australia**. In 2009, the Reserve Bank of Australia and the payments industry agreed to reform Australia's ATM system through the abolition of interchange. The basis for this move was to address "concerns regarding efficiency, deployment of ATMs, the transparency of fees and the sufficiency of competition." The first-order effect of this change was that interchange dropped to nil, issuer or foreign fees (charged by issuing banks to their cardholders) dropped to nil, and surcharges were introduced for off-us transactions. In the Australian experience, issuer fee charging was commonplace amongst banks prior to the change. The typical surcharge setting was comparable to the previous issuer fee – meaning that cardholders had the same cost for using an ATM that wasn't their bank's as they did under the interchange model. But the difference was: (a) the distorted economics of interchange were removed, (b) there was a decline in off-us transactions, possibly because while cardholders incurred the same cost a surcharge sent a clear "in-transaction" signal of the fee, and (c) there was a step-change in ATMs per population, which was maintained for some 6-7 years despite reducing cash usage in this time.

In the **Netherlands**, the ATM interchange fee structure underwent significant changes starting in 2019, when the three largest banks pooled their ATMs into the Geldmaat joint venture. Previously, bilateral fee agreements existed between banks, but after the merger, the large banks stopped acquiring ATM transactions directly and instead relied on a third-party acquirer through Geldmaat. This shift resulted in smaller banks facing much higher interchange fees, as they now had to pay fees to Geldmaat's acquirer, while larger banks—already paying an owner fee—did not experience increased costs. The Dutch competition authority (ACM) investigated the arrangement in 2019 after smaller banks complained but closed the case after determining that larger banks were not incurring higher costs. Five years later, another interchange fee increase occurred: despite stable cash demand, a PwC study on ATM transaction costs led MasterCard and Visa to raise fees to match these cost levels in 2024, suddenly doubling the fees for smaller banks without public outcry. The Dutch experience highlights that in markets where ATMs are free to use and surcharging is absent, interchange dynamics become critical, as acquirers benefit from higher fallback interchange fees. Banks seeking adjustments must either secure unanimous agreement or present an independent cost study to payment schemes. The case also underscores that in countries with independent ATM deployers, there is typically more pressure to reduce interchange fees—a trend that can be countered by conducting independent cost-per-transaction studies and negotiating with schemes. The story illustrates how structural changes in ATM ownership and acquirer models can lead to unexpected fee hikes, especially for smaller players, and the importance of transparency and cost-based fee setting in such environments.

2. The ATM Business Model is Under Pressure

At the heart of the challenge is the fundamental business model of ATM networks. With reference to Table 3, depending on the deployment model, fixed costs of an ATM network typically sit around 35-40% of the total cost of operation (if the deployment is a merchant commission model, where the merchant receives a fee for each transaction) or around 65-70% (if the deployment is a property rental model). In a rising activity environment this creates commercial opportunity – once the fixed cost is covered, the margin on variable costs can be significant. However, in a falling activity environment it puts extreme pressure on the ATM operator.

In most industries, an operator has reasonable optionality around their price settings. However, for ATM operators this is frequently not the case. Much of the time, revenue is derived from interchange. And interchange is generally set without any material consultation with the ATM industry or operators, and by organisations whose broader strategies may prioritise digital payments over cash. ATM operators are essentially volume takers and price takers.

The result for an ATM operator is a revenue model that is largely beyond their control (no macro influence over activity levels, often no influence over price settings) and a cost model with a high fixed cost component. This forces the ATM operator toward an often binary decision: keep an ATM in operation or remove it.

Table 3: Cost dynamics on a typical ATM operator income statement

Item	Variability nature	Match to revenue change	% of revenue estimate
Revenue	Variable to transaction number or volume		100%
Transaction processing costs (incl. scheme fees)	Variable to transaction number or volume	High match	2-4%
Cash logistics costs	Variable to movements	Mid-low match	5-10%
Cash funding costs	Variable to holdings	Mid-low match	5-10%
Device repairs and maintenance	Variable to device intensity	Low match	4-7%
Rent or merchant commissions	Fixed to site or variable to transaction number	No match or high match	20-40%
Device monitoring	Fixed to site	No match	1-3%
Device communications	Fixed to site	No match	1-3%
Device security	Fixed to site	No match	1-3%
ATM cleaning	Fixed to site	No match	1-3%
Device depreciation	Fixed to site	No match	8-15%
Device software	Fixed to site	No match	4-8%
Device forecasting/reconciliation	Fixed to site	No match	1-3%
Indirect costs		No match	5-15%

Note: percentage of revenue estimates based on reviews of published annual reports of Cardtronics Inc., Euronet Worldwide Inc., India 1 Payments Limited, and authors' own experience

The effectiveness – or dysfunctionality – of the ATM business model becomes increasingly relevant with any shift toward IADs as compared to bank operators. For IADs their entire business is based on the commercial viability and success of the ATM fleet, which is a derivation of the viability of each individual ATM. In contrast, bank operators have a larger set of decision points – customer service, access and complaints; community service; overall network provision; brand visibility – which can result in longer support for commercially unviable locations. Each of these decision sets are based around private company commercial interest in some form. This is completely reasonable, but there are country-level consequences of private companies having all responsibility for national infrastructure.

It may be argued that it is economically rational and efficient to close under-performing ATMs, because this allows volume to aggregate around a smaller number of ATMs, driving volume-per-ATM upward and making them more economically viable. But this is a short-term mindset. The erosion of ATM network presence is often not proportionate to where there is ATM need, and the complete removal of perceived duplication or overlap creates increasing risk in the national cash system.

3. What are the issues with ATM interchange?

ATM interchange fees have become a source of significant dysfunction in the cash infrastructure, against initial intentions. The current system is plagued by a lack of transparency, inconsistent fee structures, and a fundamental disconnect between the fees charged and the actual costs of operating ATMs. These issues not only undermine the financial sustainability of ATM operators but also threaten access to cash for consumers, particularly in underserved communities.

I. The Black Box: A Lack of Transparency in Fee Setting

One of the most pressing issues with ATM interchange is its opacity. Fees are typically negotiated behind closed doors between card networks—such as Visa and Mastercard—and financial institutions, with little to no public disclosure or regulatory oversight. This means the ATM interchange is set without participation of the ATM operator, who relies on it. Additionally, the parties negotiating have a strong interest in supporting digital payments, rather than cash. This lack of transparency makes it nearly impossible for consumers, ATM operators, or even regulators to understand how fees are determined or justified.

For consumers, this means they often remain unaware of the indirect costs they bear, whether through higher banking fees or surcharges at ATMs. For ATM operators, especially independent deployers, the inability to anticipate or influence interchange rates creates financial uncertainty, making it difficult to plan investments or maintain service quality. Regulators, too, are frequently ill-informed about the mechanics of these fees, which limits their ability to intervene effectively. Without clear visibility into how interchange fees are set, the market lacks the necessary competition and accountability.

II. Wild Variations: Fees Differ Dramatically Across Markets

ATM interchange fees vary significantly from one country to another, even within the same card scheme. These disparities create confusion for consumers, particularly travellers, who may face unexpectedly high fees when withdrawing cash abroad. They also place smaller ATM operators at a disadvantage, as they struggle to compete with larger players who can absorb the fees or negotiate lower fees. Further, there are anecdotal accounts of ATM interchange fees varying in Europe by up to a factor of 10, suggesting that interchange setting bears no reference to underlying costs.

The reasons for these variations are complex. Regulatory differences, market concentration, and the dominance of a few card schemes all contribute to an uneven playing field. This inconsistency not only distorts competition but also perpetuates inequalities in access to cash, particularly in regions where fees are disproportionately high relative to local incomes.

III. Disconnected from Reality: Fees Bear Little Relation to Actual Costs

A fundamental flaw in the current interchange system is that fees are not tied to the real costs of providing ATM services. Studies have shown that ATM interchange fees often do not cover the actual expenses associated with cash handling, device maintenance, and security⁵. Instead of covering operational costs, these fees frequently serve as a profit centre for card networks and issuing banks, while ATM operators—who bear the brunt of these costs—are left with shrinking margins.

IV. The Wrong Hands: Fees Set by Parties Outside the Cash Cycle

This misalignment creates a dysfunctional incentive structure. Card networks and issuing banks benefit from low ATM interchange fees, while ATM operators—especially independent ones—struggle to remain viable. The result is a system where those who provide the essential service of cash distribution are squeezed, while those who set the fees face no pressure to align them with economic reality.

ATM interchange fees are controlled by entities that have no direct involvement in the cash infrastructure. Card networks and issuing banks, which set these fees, are not responsible for the day-to-day costs of ATM operations, such as cash replenishment, maintenance, or security. This disconnect leads to fee structures that prioritise the interests of card networks and banks over the sustainability of the ATM ecosystem.

For ATM operators, this creates a significant power imbalance. They have little to no say in fee determination, yet their entire business model depends on these revenues. The consequence is a system where the declining profitability and viability of ATM networks is a consequence of broader industry trends favouring digital payments. This undermines the long-term viability of ATMs and, by extension, access to cash.

⁵ Manikowski, A. "ATM Domestic Interchange Fees versus Transactions Costs", paper presented at the ATM Industry Association Europe and Emerging Markets Symposium, Royal Garden Hotel, London, 9th October 2024. Also discussed in detail in Part III of the forthcoming "Determinants of ATM Network Management – A Profitability Analysis" by Arkadiusz Manikowski and Rafał Zbyrowski, 2025.

V. The implications

The flaws in the ATM interchange system have far-reaching consequences for stakeholders.

For Consumers

High or unpredictable interchange fees often translate into higher banking fees, surcharges, or reduced access to free ATMs. In many cases, consumers in low-income or rural areas are hit the hardest, as ATM operators in these regions may be forced to close unprofitable machines, creating "cash deserts" where access to physical currency is severely limited.

The erosion of the ATM network disproportionately affects vulnerable populations—including the elderly, underbanked, and those in remote areas—who depend on cash for their daily transactions. Without a sustainable interchange model, the risk of financial and payment exclusion grows, as does the potential for systemic fragility in the cash infrastructure.

For ATM Operators

Independent ATM deployers, who rely on interchange revenue to cover their costs, are particularly vulnerable. Squeezed margins force many operators to reduce services, consolidate networks, or exit the market altogether. This consolidation reduces competition, limits consumer choice, and further exacerbates the decline in ATM availability.

VI. Toward a More Balanced System

The current ATM interchange system is at risk. It is opaque, inconsistent, and disconnected from the real costs of providing cash access. Without meaningful reform, the system will continue to hurt consumers, stifle innovation, and threaten the financial inclusion that cash provides.

Policymakers, regulators, and industry stakeholders should work together to restore, transparency, and competition to the ATM ecosystem. This includes rethinking how fees are set, ensuring they reflect actual costs, and giving ATM operators a seat at the table. Only then can we build a sustainable model that supports access to cash for all.

VII. The Future of ATM Interchange



The payments ecosystem continues to evolve. While reform and regulation may be needed, payments innovation should not be seen as a threat, but as an opportunity for continued innovation in ATM channels. For example, expansion of cardless ATM access, the use of real-time payment rails to facilitate withdrawals, the use of open banking to facilitate more complex financial interactions, the potential for retail Central Bank Digital Currencies (CBDC) to provide a connection between two forms of central bank money, along with technology innovation around mobile devices all have the potential to continue the transformation journey of ATMs.



There is also potential in commercial innovation in the ATM industry. As banks continue to outsource not only parts of their service stack but the entire ATM channel, new commercial models can open up, which could decrease the influence and relevance of ATM interchange to operators.



ATM interchange remains a complex and central financial mechanism within the commercial structure of the ATM industry. Its original intent was to foster the viability of shared ATM networks. This purpose remains relevant, but the interchange model is struggling to deliver on that purpose. ATM interchange fees continue to play a critical, though often opaque, role in maintaining widespread access to physical cash. They represent a key compensation mechanism for the operational costs associated with maintaining the ATM infrastructure.



Moving forward, the key challenge for regulators and card schemes is to balance the interests of the various stakeholders: ensuring sufficient compensation for ATM owners, managing costs for issuing banks, and maintaining reasonable affordability for the end consumer. Interchange settings are in need of review. The future may see the economic and social importance of ATM networks grow further, due to the increasingly recognised need to protect cash together with continued reduction in bank branches. This would push the interchange mechanism to the forefront of policy debates, including financial inclusion and resilience.

III. Fixing the Problem

1. Why is this a Market Failure?

The viability of the ATM business model is being undermined by a market failure, driven by two external factors beyond the control of ATM operators: interchange fee structures and declining cash withdrawal activity.

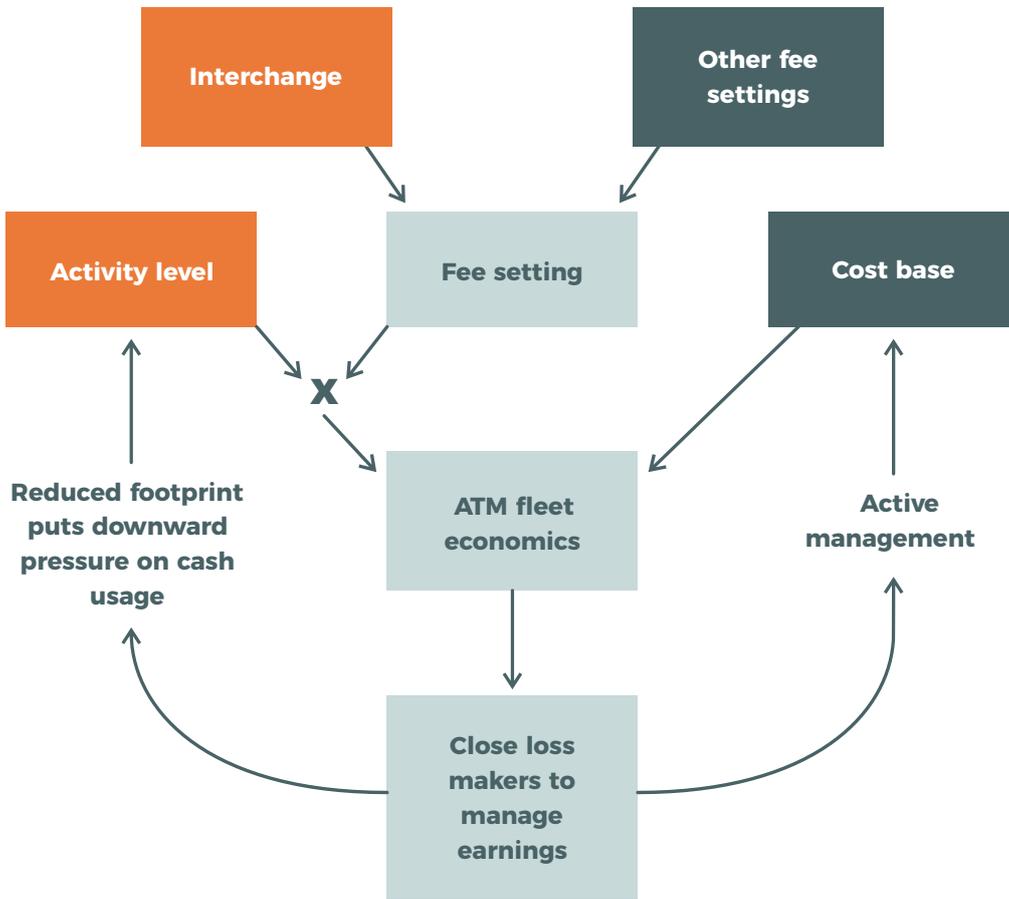
The issue of interchange fees exemplifies a classic market dysfunction. It is characterised by information asymmetry, where ATM operators lack transparency into fee-setting processes, and unequal – even absent – bargaining power, as card schemes unilaterally determine terms. In many countries, competition is limited to a small handful of international card schemes, which means that the absence of meaningful competition further exacerbates these imbalances. Operators have little recourse but to accept conditions that undermine their profitability.

The decline in cash withdrawal activity, meanwhile, represents a failed positive externality. While robust ATM networks provide broad societal benefits such as financial inclusion, crisis resilience, and trust in the monetary system, these advantages are not reflected in the market's revenue models. Instead of being rewarded for contributing to public good, operators face a self-perpetuating cycle: as ATMs become scarcer, cash withdrawals decline further, justifying additional closures. The market's inability to internalise the collective value of cash access leads to underinvestment, even though the infrastructure remains essential for vulnerable populations, small businesses, and economic stability.

ATM operators have some control over their cost base. However, the primary lever they have is to close loss-making ATMs. Illustration 5 shows how this has a perpetuating effect, because fewer ATMs mean fewer ways for consumers to access cash, which puts downward pressure on cash usage, which leads to lower activity levels and higher average costs on remaining ATMs.

This market failure has important implications for access to cash, economic resilience, and financial inclusion.

Illustration 5: The vicious cycle of ATM closures and reducing ATM usage



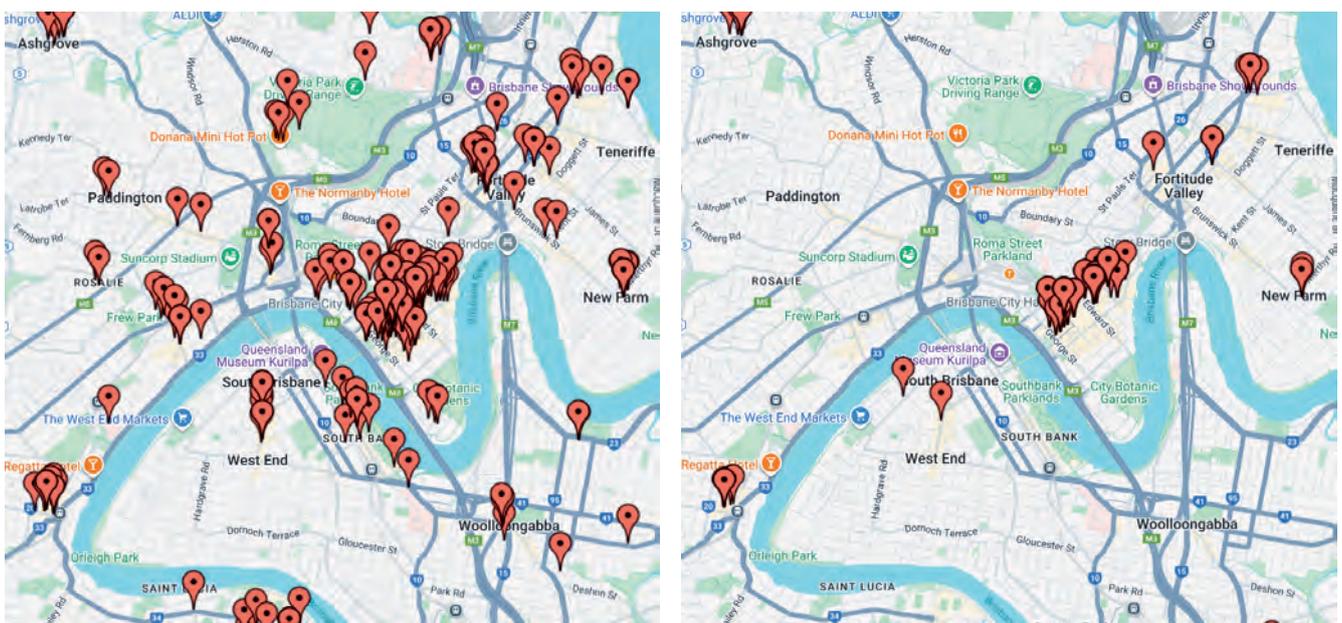
I. Access to Cash

The most visible symptom of this market failure is the reduction in the public's ability to access cash. As ATM operators withdraw machines that are no longer commercially viable, the geographic density of ATM networks declines. This results in reduced proximity, increased travel time and costs, and in some cases, the complete removal of local cash access points.

The consequences go beyond mere inconvenience. Where once multiple ATMs created redundancy in case of outages or maintenance, today's reduced density creates fragility. If a single machine fails (due to maintenance, vandalism, or a cash-out), there may be no viable alternative nearby.

Illustration 6 shows maps of bank ATM presence in inner Brisbane (Australia) in 2017 and in 2024. These maps provide a powerful visual of the impact that a significant loss in ATM density has on communities. There are many pockets where there is no bank ATM available, and for many to access a bank ATM they would need to significantly detour, or drive. It also illustrates the single point of failure risk to ATM networks, where previously there were multiple ATMs, in the present there is not.

Illustration 6: Bank ATM presence in Inner Brisbane, 2017 vs 2024



II. Economic Resilience

ATMs form part of a broader payments infrastructure, and their decline undermines the resilience of that system. While digital payments are now ubiquitous in many economies, cash remains a critical fail-safe around crisis periods, especially during power outages, natural disasters, cyber incidents, or telecom failures.

In recent years, events such as the Australian bushfires, the war in Ukraine and power outages in Spain have exposed the vulnerabilities of digital-only infrastructure. In some affected towns, ATMs continued to function temporarily and became a critical source of liquidity. But as ATM numbers fall and remaining devices become concentrated in fewer hands (such as a single IAD), the resilience that cash offers diminishes.

The issue is not just about cash's technical and psychological resilience, but about the distributed nature of the network. A diverse, redundant system of multiple operators and sites is more robust than one dominated by one or two commercial players. Centralising ATM infrastructure may drive efficiency, but if it is not well-planned then it undermines contingency. In other words: Cash has to function properly in normal times so that it can fulfil its stabilising properties in crisis times.

III. Financial Inclusion

A very direct consequence of the market failure is its impact on vulnerable populations. Vulnerable populations include those who are underbanked, elderly, disabled, of lower socio-economic status, recently migrated, who disproportionately rely on cash without any other means of payment. In less advanced economies, the segment of the population that relies completely on cash is much broader.

These groups often lack the means, literacy, or trust to fully participate in digital financial services. Cash serves as an accessible, universal instrument that enables participation in daily life. As ATM numbers reduce because the business model isn't viable, there is no alternate solution for these groups.

2. What Measures Have Been Taken So Far?

A growing number of countries are adopting measures to support ongoing ATM deployment, either through commercial models or regulatory means.

Commercial models that seek to make ATM networks viable include ATM pooling, white label networks, and fee-free network models. Examples of these models are shown in Table 4.

Table 4: Commercial models for ATM networks

Country	Network	Description
United Kingdom	LINK Scheme	Network for banks and IADs to provide fee-free and/or surcharged ATMs across the UK. Link sets interchange fees for the network.
Netherlands	Geldmaat	Major banks created Geldmaat as a joint venture and pooled their ATM estates. Network rebranded as Geldmaat and rationalised to manage cost base. Direct fee model to banks.
Belgium	Batopin	Major banks created Batopin as a joint venture and pooled their ATM estates. Network branded as Bancontact and rationalised to manage cost base. Direct fee model to banks.
Australia	ATMx Precinct	Both networks created through acquisition of large offsite bank ATM networks. Both built as operator-led fee-free networks, using an access fee model for customer banks. Now owned by the same operator
India	FINDI	Partnered model to support the deployment of banking service hubs, including ATMs, to improve the density of banking and cash access services across the country
USA	Allpoint	Created as a surcharge-free network, particularly for smaller US banks to have national ATM network presence. Limited penetration in larger banks. Direct fee model to member banks.

On the legislative front, there are a growing list of examples where regulators and/or governments have been stepping in to ensure ongoing ATM access. For example:

- **Austria:** The central bank of Austria (OeNB) has launched an initiative to support the deployment of ATMs in rural communities, where ATMs may otherwise be unviable.
- **Sweden:** Obligations on large banks to provide cash services, including cash withdrawals.
- **United Kingdom:** Growing powers (for the Bank of England and the Financial Conduct Authority) and responsibilities (for UK banks) around ensuring access to cash where branches or ATMs are closed.
- **Ireland:** Rules for ATM density across a range of measures, with the largest banks holding responsibility for ensuring sufficient ATMs.
- **Belgium:** The Belgian Competition Authority raised concerns that the national network, Batopin, had insufficient coverage. In response, Batopin committed to ensuring that 95% of Belgians would have an ATM within 5km of their home.

3. Recommendations for policymakers

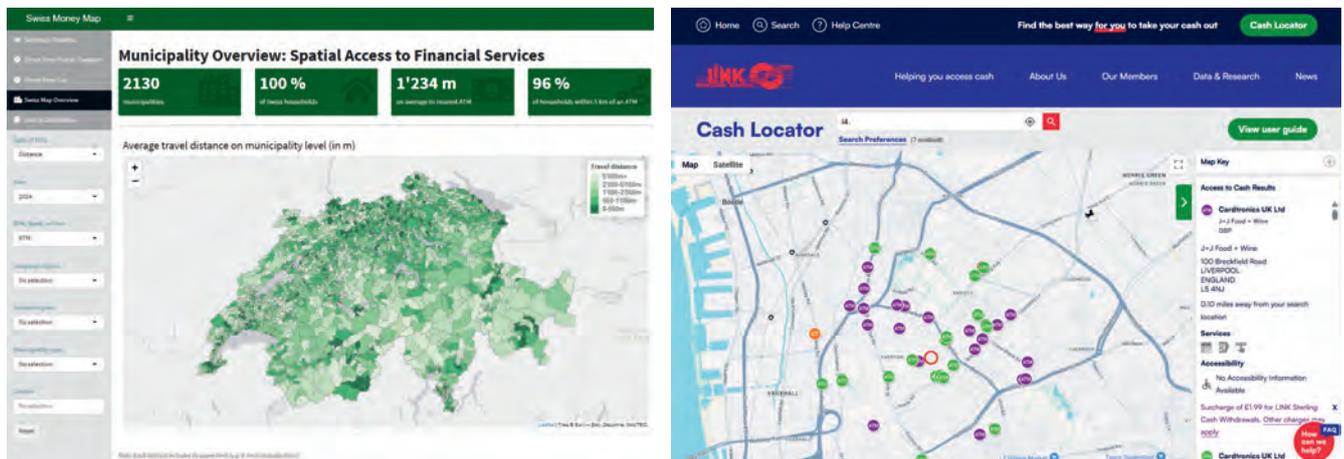
I. Monitoring and Data Collection

Policymakers should establish a centralised monitoring system to track ATM deployment, usage patterns, and fee structures. This system should:

- Collect real-time data on ATM locations, uptime, and transaction volumes.
- Identify "cash deserts" and areas at risk of losing ATM access.
- Publish annual reports on the state of the ATM network, including trends in interchange fees and surcharges.

A growing number of countries publish data on ATM and branch availability and closures. These include Switzerland (<https://dashboard.moneymap.ch/>), and the UK (<https://www.link.co.uk/cash-locator>) as shown in Illustration 7.

Illustration 7: Consumer interfaces of Swiss and UK dashboards



Unfortunately, in many cases the data is infrequent and delayed.

Action Steps:

- Partner with central banks, financial regulators, and ATM networks to standardise data collection.
- Use geographic information systems (GIS) to visualise ATM density and accessibility.

II. Regulating ATM Interchange Fees

ATM Interchange fees are a critical lever for sustaining ATM networks. Policymakers should:

- Mandate transparency: Require card networks to publicly disclose interchange fee structures and methodologies.
- Introduce cost-based pricing: Ensure fees reflect the actual costs of ATM network operators, including cash logistics, maintenance, and security.
- Include ATM operators in fee-setting: Create advisory boards with representation from ATM operators, banks, and consumer groups to review and adjust fees.
- Cap fees in monopolistic markets: Where a single operator or card network dominates, impose fee caps to prevent abuse of market power.

III. Public Sector Support for ATM Deployment

Where commercial models fail, governments or central banks should intervene to fund or subsidise ATMs, particularly in:

- Rural and remote areas.
- Low-income urban neighbourhoods.
- Tourist destinations and transport hubs.

Implementation Models:

- Direct subsidies: Grants or tax incentives for operators deploying ATMs in underserved areas.
- Public-private partnerships (PPPs): Collaborate with banks, post offices, or retailers to host ATMs. For example, France's La Banque Postale operates ATMs in post offices, ensuring nationwide coverage.
- Universal service obligations: Require banks to maintain a minimum number of ATMs proportional to their market share, including digital banks.

IV. Deregulation to Encourage Competition

To diversify the ATM market and improve coverage:

- Allow non-bank ATM deployers: Permit fintechs, retailers, and postal services to operate ATMs, subject to anti-money laundering (AML) and security standards.
- Simplify licensing: Streamline the process for new entrants to deploy ATMs, reducing barriers to market entry.
- Promote white-label ATMs: Enable independent operators to offer ATMs under a shared brand, reducing costs and improving consumer trust.

V. Legislative Safeguards for Cash Access

Policymakers should enact laws to:

- Protect existing ATMs: Require banks to justify ATM closures and provide alternatives (e.g., shared branches, mobile ATMs).
- Set minimum density standards: Define maximum distances or travel times to the nearest ATM, with stricter rules for vulnerable areas.
- Penalise non-compliance: Impose fines or corrective actions on banks or operators that fail to meet access standards.
- A growing number of legislatures are moving towards mandating the acceptance of cash by retailers.

VI. Innovation and Alternative Models

Encourage the adoption of new technologies and business models to modernise ATMs:

- Cardless withdrawals: Promote ATMs that allow withdrawals via mobile banking apps or QR codes.
- Multi-function ATMs: Support machines that offer bill payments, top-ups for digital wallets, and government disbursements (e.g., social benefits).
- Surcharge-free networks: Expand networks, which offer no-fee withdrawals for participating banks' customers.

VII. Ensuring Resilience During Crises

ATMs play a vital role in emergencies. Policymakers should:

- Require backup power and connectivity: Mandate that ATMs in disaster-prone areas have battery or generator backup.
- Encourage Mobile ATMs i.e. autonomous devices that can be temporarily deployed in disaster zones, remote areas, or any location where temporary or additional cash access is needed.
- Integrate ATMs into emergency plans: Ensure ATMs are prioritised for restoration after power outages or natural disasters.
- Stockpile cash: Maintain regional cash reserves to replenish ATMs quickly during crises.

VIII. Consumer Protection and Education

- Fee transparency: Mandate clear disclosure of all ATM fees (interchange, surcharges, foreign transaction fees) at the point of transaction.
- Educate consumers: Launch campaigns to inform the public about:
 - Locations of free or low-cost ATMs.
 - Alternatives like cashback at retail stores.
 - Rights to complain about high fees or poor service.
- Protect vulnerable groups: Offer fee waivers or subsidies for low-income individuals, seniors, and people with disabilities.

IX. International Cooperation

Given the global nature of card networks and cash flows, policymakers should:

- Harmonise regulations: Work with international bodies (e.g., IMF, World Bank, BIS) to align ATM fee structures and access standards.
- Share best practices: Create forums for countries to exchange successful policies, such as the Euro Retail Payments Board (ERPB).

X. A Call to Action

The decline of ATMs is not inevitable—it is the result of market failures, regulatory gaps, and short-term commercial decisions. By implementing the recommendations above, policymakers can:

- Preserve access to cash for all citizens, regardless of location or income.
- Strengthen economic resilience by maintaining a robust and redundant cash infrastructure.
- Foster innovation in ATM services, ensuring they remain relevant in a digital age.

Next Steps for Policymakers:

1. Convene a task force with representatives from central banks, ATM operators (banks and IADs), consumer groups, and fintechs to develop a national ATM strategy.
2. Pilot reforms in high-risk areas (e.g., rural regions, low-income urban centres) and scale successful models.
3. Monitor and adapt: Regularly review the impact of policies and adjust based on evolving technology and consumer needs.

IV. Conclusion and Next Steps

The global ATM network stands at a crossroads. Despite the enduring demand for cash, the infrastructure that supports its distribution is under unprecedented strain. The decline in ATM numbers, the unsustainability of current business models, and the systemic issues with ATM interchange fees all point to a market failure—one that threatens financial and payments inclusion, economic resilience, and the accessibility of cash. This report has explored the root causes of this challenge, from the misalignment of ATM interchange fees with operational costs to the lack of transparency and regulatory oversight that perpetuates inequities in the system. It has also highlighted the consequences: shrinking ATM networks, the rise of "cash deserts," and the disproportionate impact on vulnerable populations.

Yet, the story of ATMs is not one of inevitable decline. It is a call to action. The solutions exist, as demonstrated by successful initiatives in countries like the Netherlands, India and Austria, and where public-private partnerships, regulatory intervention, and innovative commercial arrangements have helped sustain ATM access. By adopting a proactive, multi-stakeholder approach, policymakers, financial institutions, and ATM operators can reverse these trends and ensure that cash remains accessible, reliable, and inclusive.

I. Key Takeaways

- 1. ATMs remain essential** — not just as a legacy system, but as a dynamic and evolving pillar of financial access. They provide a critical fail-safe during crises, support financial inclusion, and serve as a bridge for those underserved by digital payments.
- 2. The current business model is under pressure.** Interchange fees, which were designed to foster shared ATM networks, now often undermine the very operators they were meant to support. Reform is urgently needed to align fees with costs, increase transparency, and restore resilience.
- 3. Regulation and public intervention work.** Where governments and regulators have stepped in—whether through fee caps, density requirements, or subsidies—ATM networks have proven more resilient.
- 4. Innovation and competition can drive sustainability.** New technologies, such as cardless withdrawals and integration with digital wallets, offer opportunities to modernise ATMs without endangering inclusion. Meanwhile, deregulation that allows non-bank players to enter the market can increase competition and improve coverage.
- 5. Collaboration is critical.** Banks, independent ATM deployers, fintechs, and policymakers must work together to design solutions that balance commercial viability with social responsibility.

II. Next Steps: Adapting to a Rapidly Evolving Payment Landscape

The payment ecosystem is undergoing a seismic shift. The **generalisation of real-time payments** and the emergence of **central bank digital currencies (CBDCs)** could reshape how cash is accessed and distributed. Both innovations present potential alternatives to traditional scheme-based ATM transactions:

- **Real-time payments** and CBDCs have the potential to provide alternate transaction routing, therefore enabling instant, low-cost cash withdrawals at ATMs without relying on card networks, reducing dependency on interchange fee. However, these alternatives are not silver bullets. Like ATMs, they will require viable business models to ensure their sustainability and widespread adoption. Questions remain about how real-time payment systems and CBDCs can be integrated into existing cash infrastructure, who will bear the costs and the revenues. These are complex challenges that demand further research, pilot programs, and international cooperation.

III. A Roadmap for the Future

The decline of ATMs is not a foregone conclusion. With the right policies, investments, and collaborations, we can build a balanced payment ecosystem where cash and digital solutions coexist, ensuring that no one is left behind. The time to act is now—before the cost of inaction becomes irreversible.

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