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RetailEconomics

Payment Resilience in an Uncertain World

USA

January 2026

Introduction

Businesses serving US consumers are facing a growing range of disruptions that affect everyday trading. From extreme weather events and localised power outages to network failures and cyber incidents affecting cloud-based infrastructure, disruption is no longer a rarity. It has become a recurring operational reality, with direct consequences for payment reliability in retail and hospitality.

Recent events across the US have shown how quickly these pressures can reach the front line. Extended power interruptions, regional connectivity issues and precautionary shutdowns linked to cyber incidents have, at times, left stores, restaurants and venues temporarily unable to accept card or mobile payments. In many cases, the impact has not stemmed from a single system failure, but from knock-on effects across interconnected payment, network and operational systems. Even short periods of downtime can become highly disruptive when they occur during busy trading hours.

At the same time, consumer expectations continue to rise. US shoppers increasingly expect payments to be fast, reliable and frictionless, whether in a large grocery store, a busy downtown restaurant or a high-footfall entertainment venue. When payments fail, the risk extends beyond lost sales. Disruption can undermine trust, damage brand perception and reduce the likelihood of repeat visits.

This report provides a data-led assessment of how payment disruption is affecting retail and hospitality businesses across the United States. Drawing on survey findings from businesses and consumers across five major consumer spending states, alongside outage patterns and economic modelling, it examines where vulnerabilities are emerging, how customer behaviour shifts when systems fail, and how prepared businesses are to respond.

In a market shaped by rising expectations and increasing digital reliance, strengthening payment resilience is becoming essential to protecting both everyday trading and long-term commercial performance.

Payment failures put $44.4 billion of US retail and hospitality sales at risk every year

Frequent, interconnected failures are increasing pressure on everyday trading

Across US retail and hospitality, disruptions to payment systems are putting **$44.4 billion** in annual sales at risk. With transactions increasingly dependent on always-on, connected payment systems, even brief interruptions are now felt immediately at the point of sale, disrupting service, frustrating customers and directly impacting revenue

On average, US businesses report over **five payment disruptions each year**, with clear variation at state level (Fig. 2). Almost two-thirds of incidents (63%) occur during busy trading periods, when footfall is high, teams are stretched, and seasonal demand peaks, amplifying the commercial impact when systems fail.

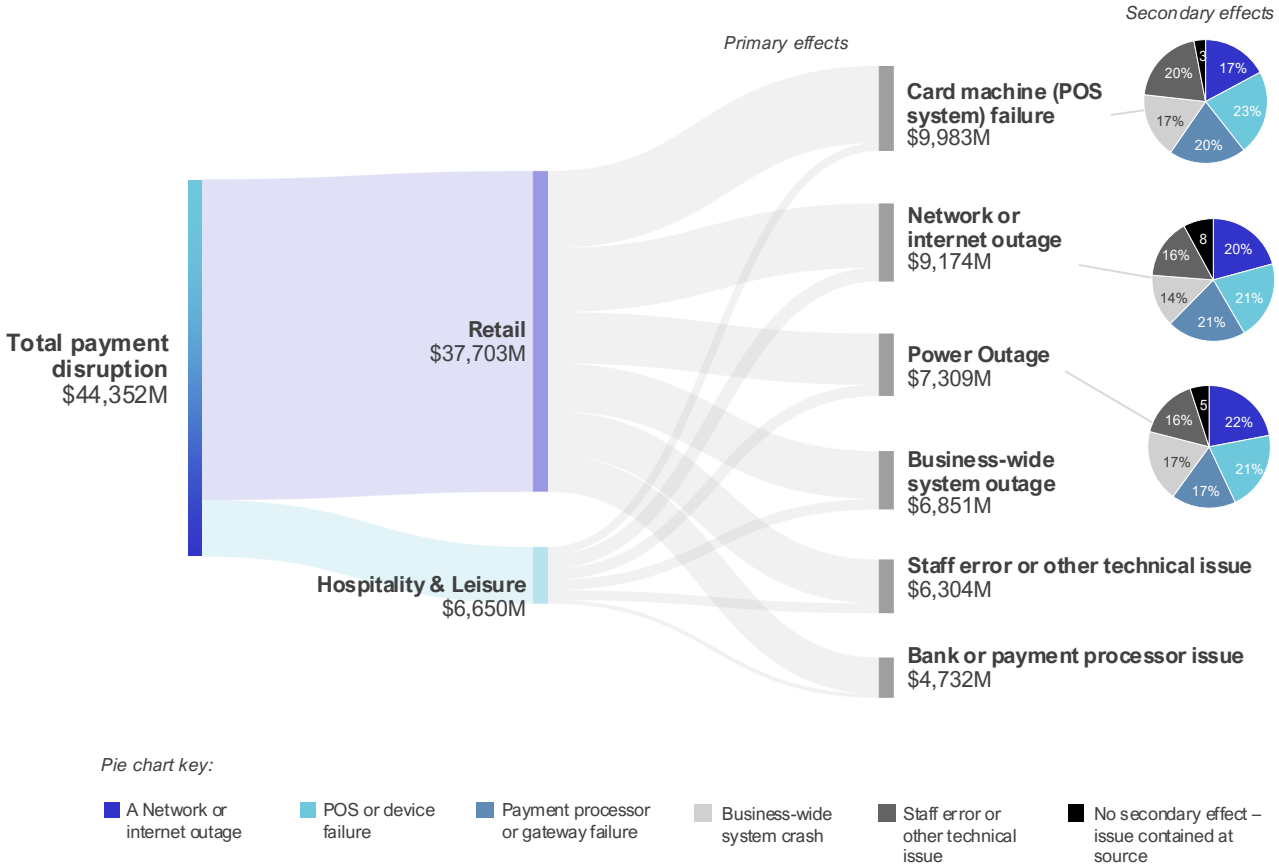
Our research identifies three primary pressure points where risk is concentrated:

1. **Card machine and POS reliability:** Terminal failures account for nearly $10 billion (23%) of total at-risk revenue, making robust hardware and rapid recovery capabilities essential.
2. **Network resilience:** Internet and network outages put $9.2 billion (21%) of revenue at risk, reinforcing the need for stable connectivity and effective failover solutions.
3. **Power continuity:** Power-related issues place $7.3 billion (16%) at risk each year, underlining the value of onsite backup systems that keep payments online when the grid fails.

Crucially, these failures rarely stay contained. A single outage can cascade across the wider payment environment, disrupting terminals, Wi-Fi, mobile ordering, cloud-based tools and digital tills simultaneously. It is this interdependence that turns short interruptions into material trading losses.

Strategic takeaway: True resilience requires more than patching individual weak spots. US operators need integrated, end-to-end payment ecosystems that can absorb shocks, minimise downtime and protect revenue at critical moments.

Fig 1: The cost of disruption: Retail and hospitality payment failures by source



Source: FreedomPay, Retail Economics

Impact of payment disruptions by state

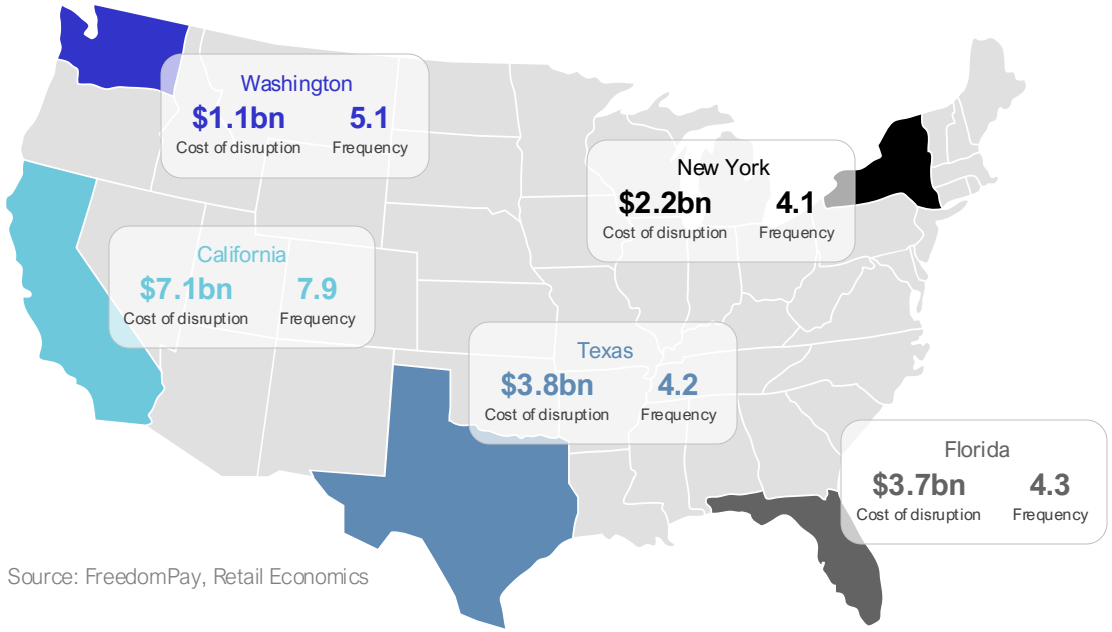
The map below shows how the frequency and cost of payment disruptions vary across major US consumer spending states, based on incidents reported by retail and hospitality businesses over the past 12 months.

Together, California, Texas, Florida, New York and Washington account for around **40% of total at-risk revenue**, despite representing closer to **35% of the US population**.

California stands out, accounting for **$7.1 billion in at-risk** revenue (16% of the national total). This reflects the scale and structure of its retail and hospitality landscape, with activity spread across multiple large metropolitan areas, high average transaction values, and heavy reliance on digital payments. Greater exposure to localised power and grid-related interruptions further increases disruption risk.

Other large states, including Texas, Florida and New York, show different combinations of frequency and cost, reinforcing that exposure is shaped by where and how trading activity takes place, not simply how often systems fail.

Fig 2: Cost of disruption by state: In the past 12 months, how many times, if ever, has your store/venue experienced a payment system disruption affecting customer transactions?

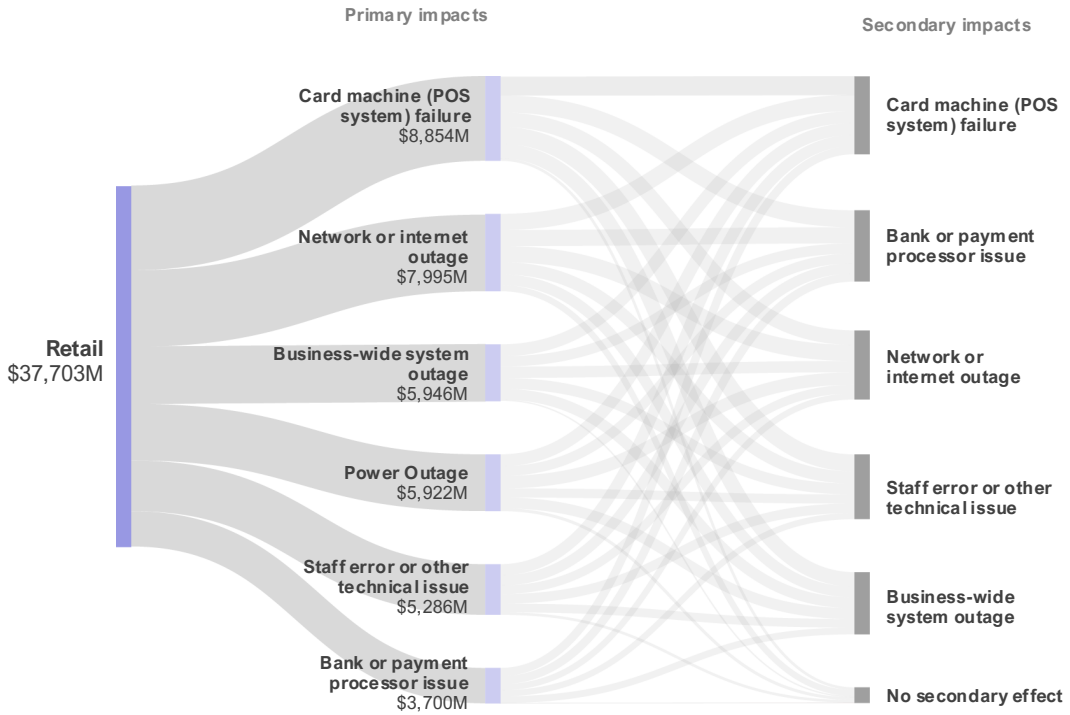


Source: FreedomPay, Retail Economics

Cost of payment disruption by industry

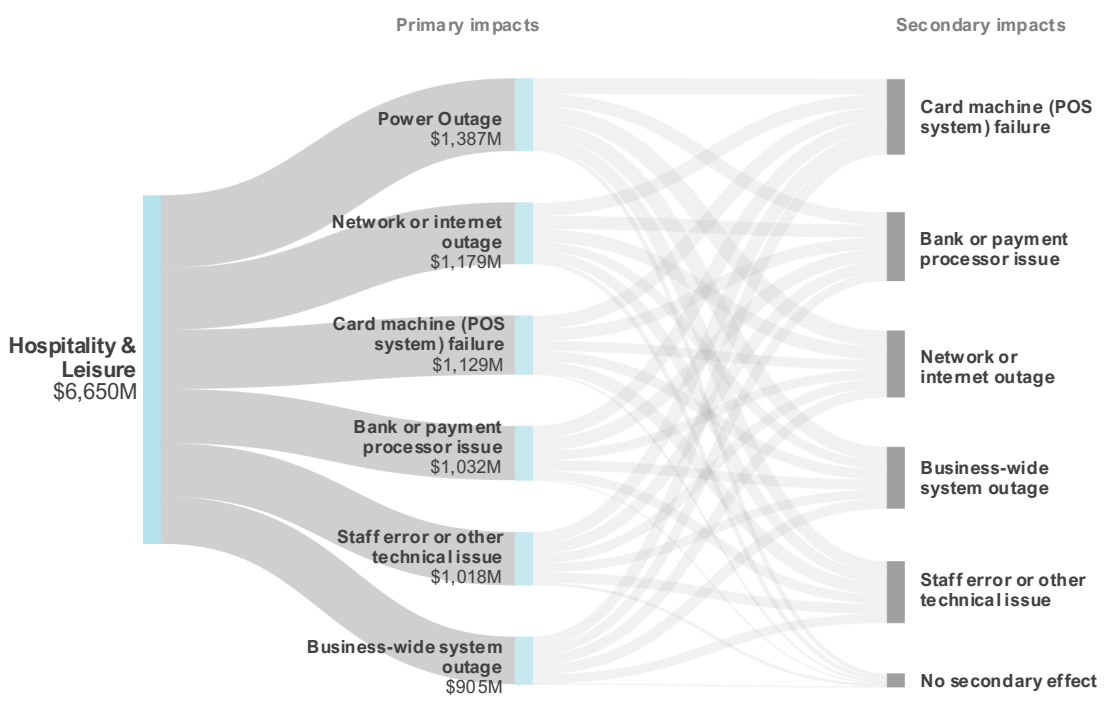
Retail accounts for $37.7 billion, or 85% of total revenue at risk. This reflects the scale of the US retail sector across food and non-food, with larger store estates, higher transaction volumes and significantly more payment touchpoints in operation. The more tills, devices and service counters in use, the greater the exposure when systems fail. By contrast, hospitality typically operates with fewer fixed payment points and lower transaction throughput, which limits the absolute revenue at risk during disruption.

Fig 3: Retail impact: $37.7 billion



Source: FreedomPay, Retail Economics

Fig 4: Hospitality & Leisure impact: $6.7 billion



Source: FreedomPay, Retail Economics

When systems go down, consumers don’t hang around

Most customers are willing to tolerate a brief delay of up to 7 minutes.

In practice, payment disruptions in the US last far longer - with systems usually taking up to two hours to be fully restored.

Today’s consumers expect transactions to be quick and seamless. When payments slow or stop, patience wears thin. Delays don’t just interrupt a sale - they damage the experience, erode trust and reduce the likelihood that customers return.

To understand where patience breaks down, we used a Van Westendorp sensitivity model to assess how long consumers are willing to wait when a payment problem occurs while they are already in a store or venue (Fig. 5).

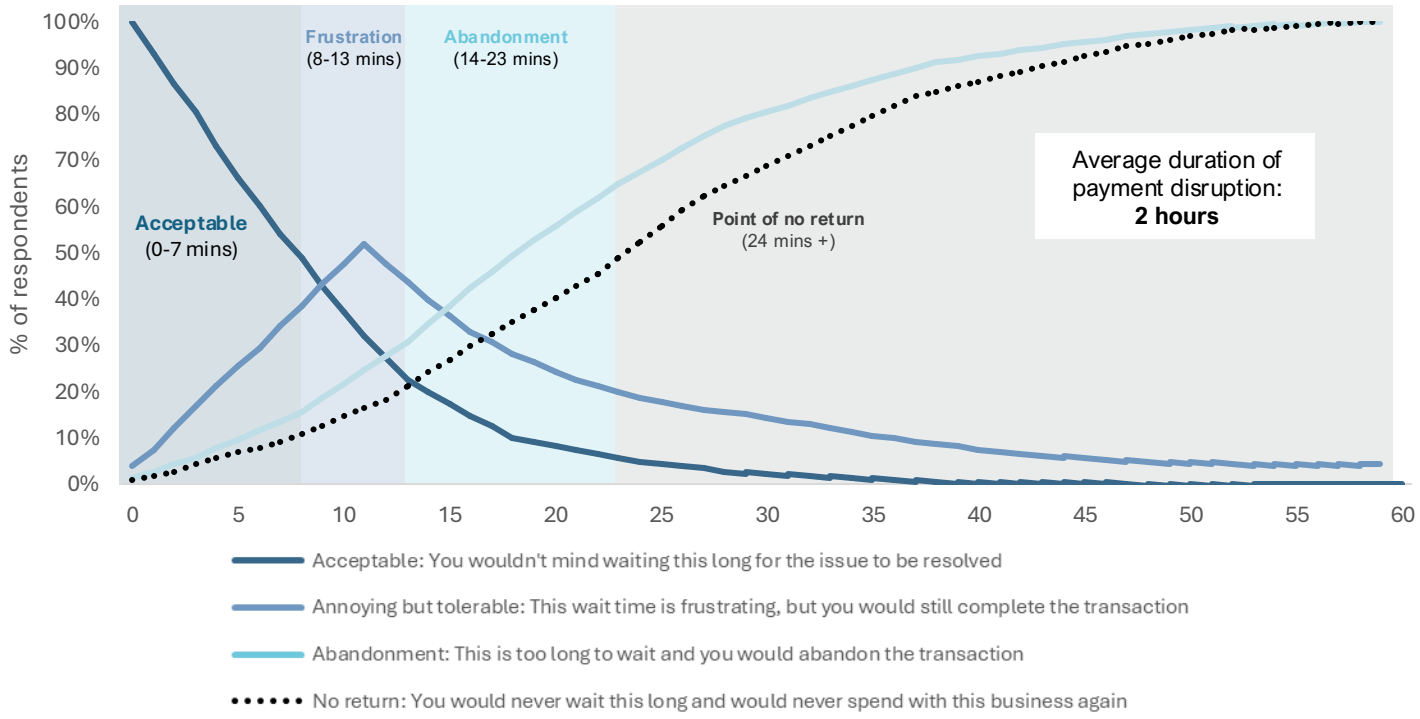
Four clear thresholds emerge:

- **0-7 minutes - acceptable:** Most customers will tolerate a brief delay before completing payment, with limited impact on completion.
- **8-13 minutes - pressure builds**: Frustration rises quickly. Some customers abandon, while others attempt to wait or look for an alternative.
- **14–23 mins - abandonment zone:** At this point, most consumers say they would walk away without completing the transaction.
- **24 mins or more - point of no return:** Delays of this length go beyond lost sales; with many consumers saying they would actively avoid returning.

The mismatch is clear. While consumer tolerance is measured in minutes, a **typical payment outage lasts almost two hours,** pushing well beyond what consumers are willing to accept.

Strategic takeaway: When minutes matter, resilience must be built into the payment flow. Platforms that detect issues early, route around failures and restore service fast are critical to protecting revenue and customer trust.

Fig 5: Consumer tolerance thresholds during payment failures



Source: FreedomPay, Retail Economics

Fix outages fast or face the cost

Recovering payment systems in under seven minutes avoids more than 90% of potential losses

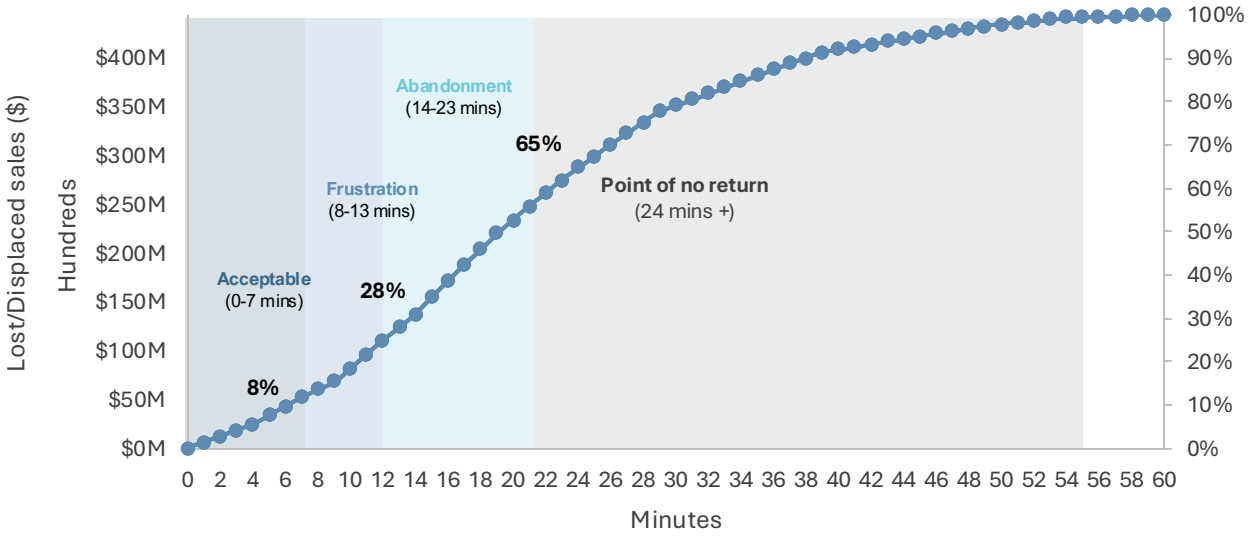
When payment disruptions stretch beyond what customers are prepared to tolerate, the financial impact compounds fast. Initial patience quickly gives way to abandonment, with losses accelerating as outages drag on (Fig 6).

The modelling points to a clear tipping point, with most financial exposure concentrated early in the outage lifecycle:

- **First 7 minutes:** Customer tolerance is relatively high, and losses remain contained, accounting for **less than 8% of total at-risk revenue**.
- **Minutes 8–13:** The situation deteriorates rapidly. Lost sales rise sharply, averaging over **$1.2 billion per minute nationwide** during this critical phase.
- **Minutes 14–23:** Financial exposure continues to mount. By minute 24, around **65% of total at-risk revenue has already been lost.**
- **Beyond 23 minutes:** The pace of loss slows, the damage is largely irreversible, and customers have walked away and are unlikely to return.

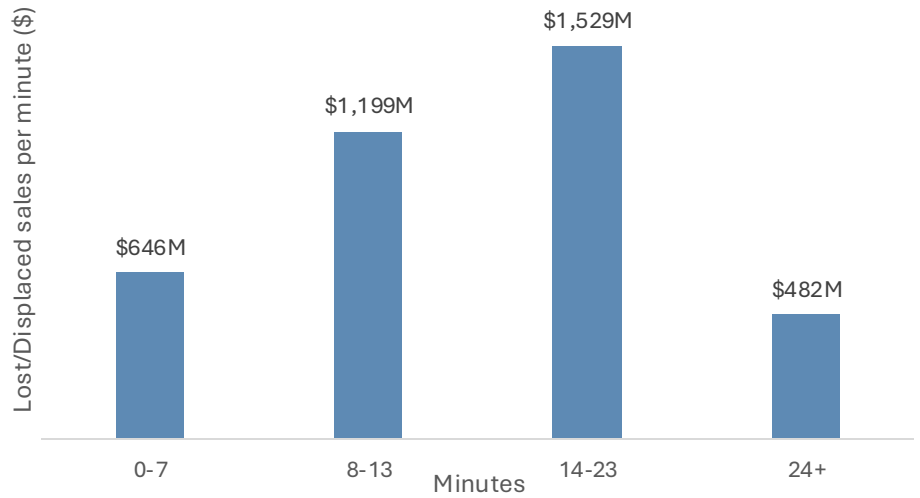
Strategic takeaway: Fast recovery changes the outcome. **Resolving payment disruptions within seven minutes prevents more than 90% of potential losses**. Businesses with real-time visibility and rapid recovery capabilities contain the impact early; those without face disproportionate financial losses.

Fig 6: How revenue impact builds over time during a payment disruption



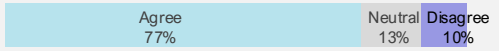
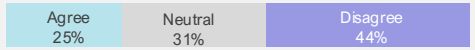
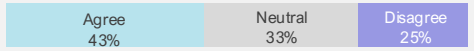
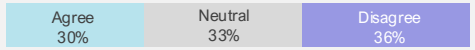
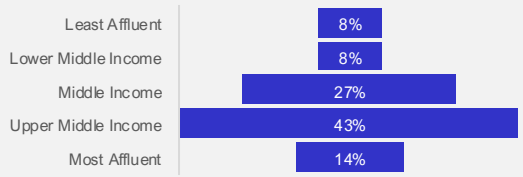
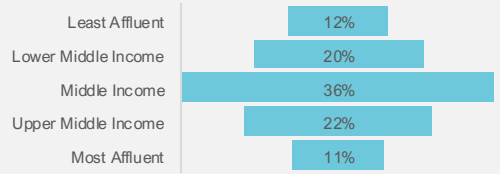
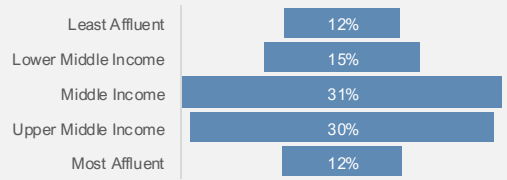
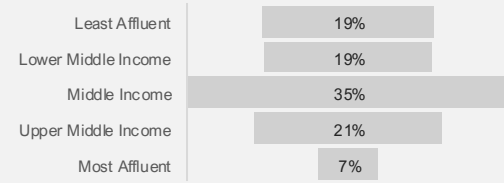
Source: FreedomPay, Retail Economics

Fig 7: Revenue at risk per minute rises sharply between minutes 8 and 23



Source: FreedomPay, Retail Economics

Consumer personas: The four main types of consumers when it comes to payment disruption

Persona % of total	1. High-Risk Critics (18%)	2. Silent Walkouts (30%)	3. Willing Workarounds (33%)	4. Cash-Ready Completers (19%)
Tolerance	Low Tolerance	Moderate-Low Tolerance	Moderate-High Tolerance	High Tolerance
Characteristics	• Affluent, frequent shoppers who expect seamless payments and react strongly when things go wrong. • Quick to blame the store or staff, likely to complain publicly, and show very little loyalty. • Even if they have cash to complete the purchase, a single disruption can be enough to lose their trust.	• Shoppers with low tolerance for delays who avoid confrontation. • Rarely carry cash and have limited alternatives during an outage, so they tend to walk out quietly if the issue isn't fixed quickly. • They don't blame staff or complain publicly and usually return another day.	• Younger, digitally minded shoppers who don't typically carry cash. • When a payment fails, they stay calm, often trying another method or heading to an ATM rather than abandoning the purchase. • Rarely complain and generally accept disruptions, making them loyal in attitude but unprepared in practice.	• Typically older or rural shoppers who usually carry cash as a backup option. • Stay calm during outages, pay another way without frustration, and rarely complain. • Pose little operational or reputational risk, though repeated failures may quietly erode trust over time
Payment method				
Typical age	Millennials (29-44)	Gen X (45-60)	Gen Z (18-28) & Millennials (29-44)	Baby Boomers (61-79)
Most likely to blame	The store and its staff	The payment system	The payment system	None (recognise disruptions can happen)
Loyalty impact	"A single payment failure reduces my trust in a business" 	"A single payment failure reduces my trust in a business" 	"A single payment failure reduces my trust in a business" 	"A single payment failure reduces my trust in a business" 
Income				
Commercial signal	**Recover fast to protect trust** Low tolerance means even brief failures can trigger blame and reputational damage. Rapid recovery is key.	**Resilience prevents invisible loss** These customers don't complain or wait. If payments fail, transactions are simply abandoned.	**Flexibility keeps transactions moving** More patient, but only if alternatives exist. Backup systems and fallback options protect completion.	**Consistency sustains goodwill** Higher tolerance provides breathing room, but repeated disruption still erodes confidence over time.

Source: FreedomPay, Retail Economics

Cash is no longer a reliable fallback

Businesses overestimate customers' ability and willingness to use cash when payments fail

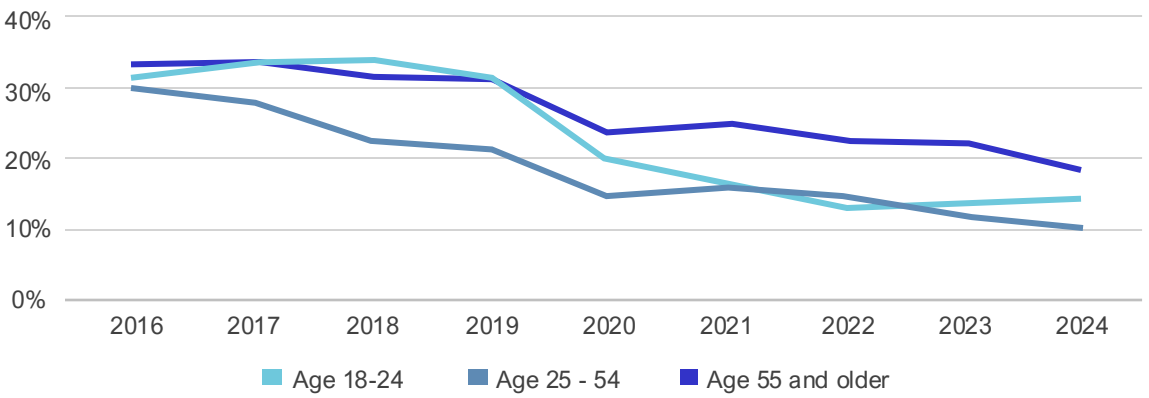
Nearly eight in ten US consumers now say debit or credit cards are their preferred way to pay, up from two-thirds in 2016 (Fig 8). Over the same period, the share of cash transactions has fallen sharply, from around one in three payments to closer to 15% today, driven by the rise of contactless cards and mobile wallets such as Apple Pay. As a result, most everyday purchases now depend on digital payment systems working at the point of sale.

When those systems fail, cash is no longer a dependable fallback. Fewer than 30% of Americans say they always carry cash when visiting stores or restaurants, falling to just 25% among Millennials, one of the most commercially important spending groups.

Businesses also overestimate how easily transactions can be recovered. While many expect customers to walk to a nearby ATM and return, more than a quarter of consumers say they would be unlikely to do so (Fig 10). In practice, shoppers are often unwilling to leave and come back, meaning purchases are more likely to be abandoned than completed.

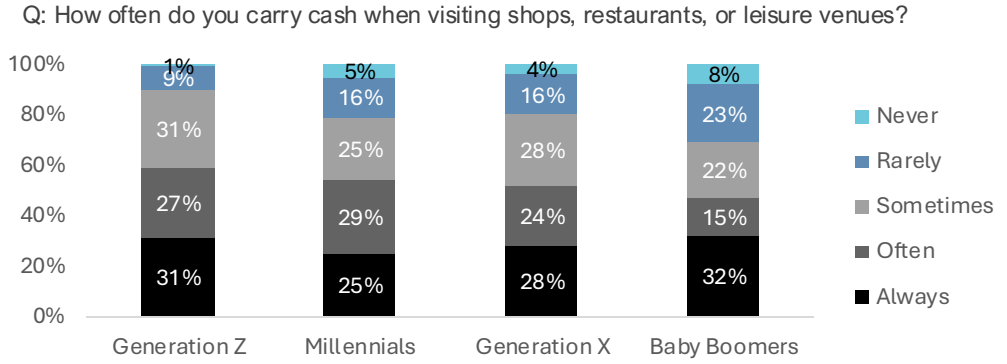
Taken together, this exposes a clear vulnerability. As digital payments become the default, relying on cash withdrawal as a fallback is increasingly unreliable, leaving businesses exposed when payment systems go down.

Fig 8: Share of cash payments by age group



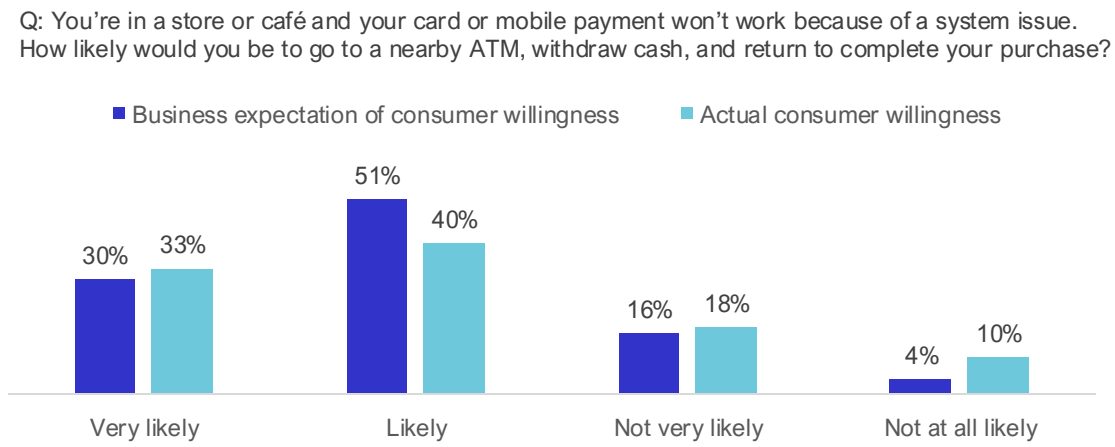
Source: United States Federal Reserve, 2025

Fig 9: One in five US consumers rarely or never carry cash when visiting shops or restaurants



Source: FreedomPay, Retail Economics

Fig 10: 28% of US consumers wouldn't go to a nearby ATM and return during a payment outage



Source: FreedomPay, Retail Economics

When payments fail, reputational risk follows

Outages don't just cost revenue – they expose brands and frontline teams to heightened risk

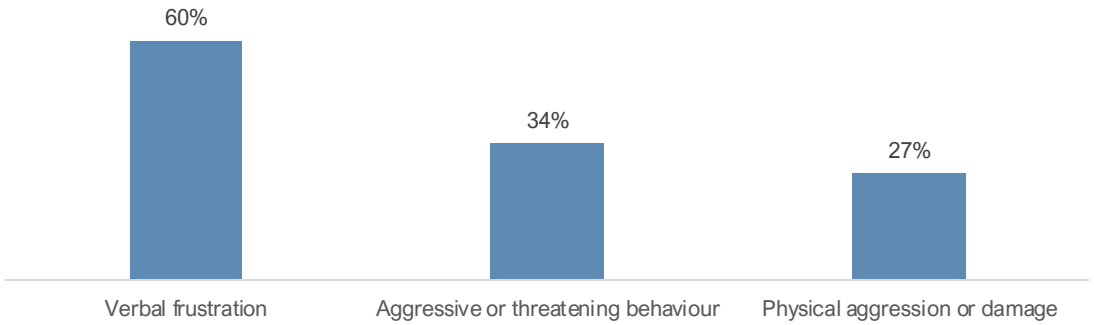
When asked what worries them most during a payment disruption, US businesses point to lost revenue as the primary concern, ahead of reputational damage or customer trust. But focusing only on the transaction understates the wider impact. Payment failures are increasingly visible, emotionally charged moments that shape how customers judge a business in real time.

Younger consumers, particularly Gen Z and Millennials, are far more likely to hold the business directly responsible when payments fail – and to share negative experiences online. Tolerance is also lower in urban and inner-city locations, where digital payments are the default and expectations are highest. This creates an uneven risk profile. Downtown stores, busy restaurants and high-footfall venues face greater reputational exposure, where even short outages can quickly become public brand moments.

The impact also extends beyond perception to frontline safety. Over a third of US businesses (35%) say they are concerned about abuse towards staff during payment disruptions. That concern is well founded. Six in ten retail and hospitality managers report that they or their colleagues have experienced verbal abuse from customers during payment failures, and one in four can recall incidents of physical aggression linked to these events.

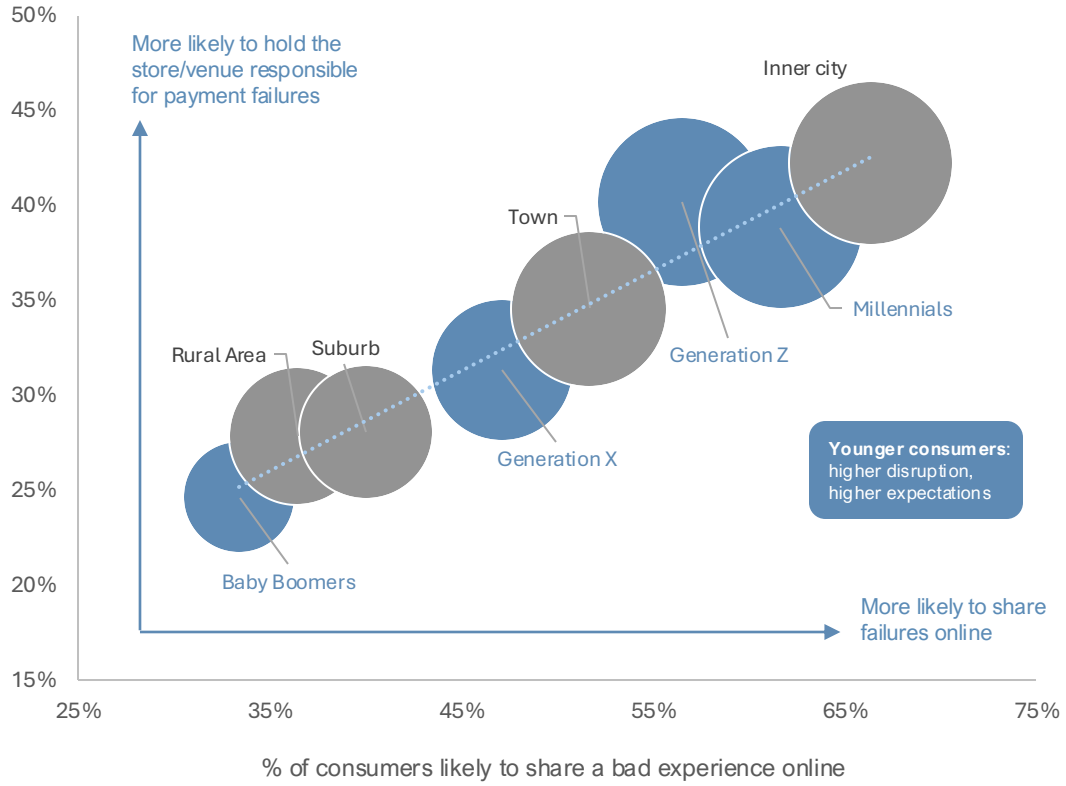
Fig 11: Around a third of workers have experienced aggressive or threatening behaviour from disruptions

Q: Have you, or any of your colleagues, experienced any of the following from customers as a result of a payment disruption?



Source: FreedomPay, Retail Economics

Fig 12: Younger and urban consumers are more likely to blame businesses and vocalise payment failures



Source: FreedomPay, Retail Economics

Progress made, but gaps remain in payment resilience

15% of US retail and hospitality businesses lack a secure digital backup when systems fail

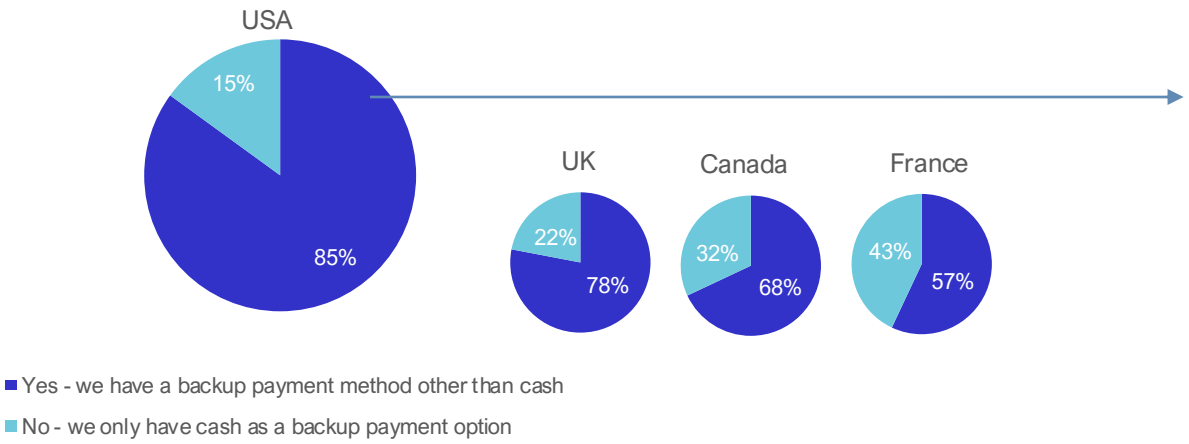
Payment disruptions are increasingly visible to customers, and while US businesses are relatively well prepared by international standards, gaps remain. Around 15% of retail and hospitality businesses report having no secure digital backup in place, leaving them exposed when core payment systems fail (Fig. 13).

Encouragingly, many operators have invested in resilience but coverage is uneven:

- **56% support offline card processing** to maintain transactions during connectivity failures
- **51% offer mobile-based options** such as QR codes or app-based checkouts.
- **44% have invested in secondary internet connections** to keep POS systems online

Fig 13: Backup systems are in place, but digital payment resilience varies

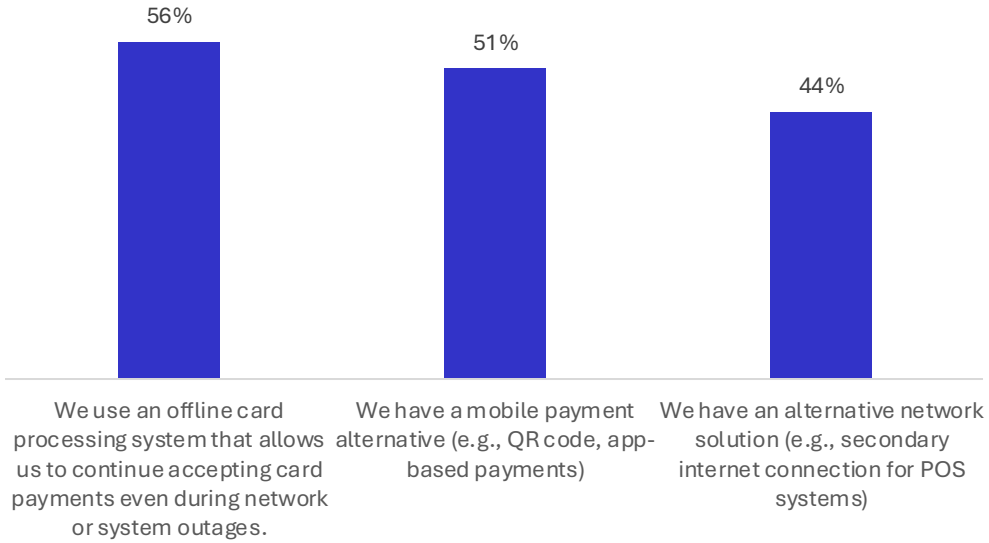
Q: Does your store/venue have a backup payment method in place in case of a payment system failure?



Source: FreedomPay, Retail Economics

This points to progress, but also a patchwork approach. Not all businesses are equally protected, and resilience often depends on which safeguards happen to be in place rather than a fully integrated strategy. During peak trading periods or high-footfall moments, these gaps become more exposed, when customer tolerance is lowest and reputational risk is highest.

Strategic takeaway: Today more than ever, payment resilience is about protecting reputation, people and trust due to the trading environment. Businesses that invest in layered, reliable backup solutions are better placed to contain disruption, support frontline teams and prevent short outages from escalating into visible brand events.



Note: Businesses may have more than one of these back-up payment methods so figures do not total 100%

Source: FreedomPay, Retail Economics

Conclusion

Payment disruption is now a clear and growing commercial risk for US retail, hospitality and leisure. This research estimates that **$44.4bn in annual sales is at risk from payment system failures,** with businesses reporting an average of five disruptions each year. Today, disruption is an operational reality that leaders must actively plan for.

The analysis shows that the financial impact escalates fast. Losses are heavily front-loaded, with the bulk of at-risk revenue lost in the opening stages of an outage. Restoring payments within the first seven minutes can prevent around 90% of potential losses, underlining how decisive early detection and rapid recovery have become. Delays beyond this window quickly lock in lost sales.

Consumer behaviour compounds the impact. Expectations for seamless payment experiences are high, and tolerance is limited. As digital and contactless payments have become the default, cash is no longer a dependable fallback. When systems fail, transactions are increasingly abandoned rather than delayed, accelerating revenue loss and weakening customer confidence.

Payment failures erode trust, heighten pressure on frontline staff and expose brands to reputational risk, particularly among younger and urban consumers who are less forgiving. Despite this, preparedness remains uneven, with many businesses still reliant on fragmented or single-point backup solutions.

In an environment defined by volatility and rising expectations, resilience can no longer be reactive. Businesses must move towards integrated, intelligent payment ecosystems that can withstand disruption, recover rapidly and protect both revenue and trust at the moments that matter most.

About the research

This report combines proprietary survey data with economic modelling and outage pattern analysis to quantify the commercial impact of payment disruption across US retail, hospitality, and leisure.

The research is based on two nationally representative surveys conducted in November 2025 across California, Florida, Texas, New York and Washington - the five largest US consumer spending states.

This includes: (1) A consumer survey of **5,000 US adults**; and (2) A business survey of **200 retail and hospitality store and venue managers**, weighted by business size and format to reflect the structure of the industry.

Together, these datasets provide a detailed view of how payment failures affect both customer behaviour and frontline operations, covering disruption frequency and duration, wait-time tolerance, fallback behaviours and transaction abandonment.

To estimate commercial impact, survey findings were integrated with external data from the US Census Bureau, Bureau of Economic Analysis, Bureau of Labor Statistics, Federal Reserve Economic Data (FRED) and historical power outage records from the Department of Energy. Disruption scenarios were mapped against typical and peak trading periods and layered with survey responses to model sales at risk.

Key definitions

Payment disruption: Any incident where customers are unable to complete an in-person transaction due to issues at the business, including power outages, POS or terminal failures, network or connectivity issues, or wider system downtime. Customer-side issues such as insufficient funds or issuer declines are excluded. The focus is on disruptions that materially prevent normal payment processing, rather than brief glitches resolved immediately.

Hospitality & leisure: Businesses where customers pay in person at the point of service for food, drink or entertainment. This includes restaurants, cafés, bars, nightlife venues, cinemas, theatres, live-music venues, amusement centres and sports arenas. Accommodation providers (e.g. hotels and short-term rentals), where payments are typically taken online or at check-in/check-out, are excluded.

The result is a robust, data-led model estimating that payment disruption places up to $44.4bn in annual sales at risk across US retail and hospitality.

For more information on the methodology, please contact Retail Economics.

Appendix

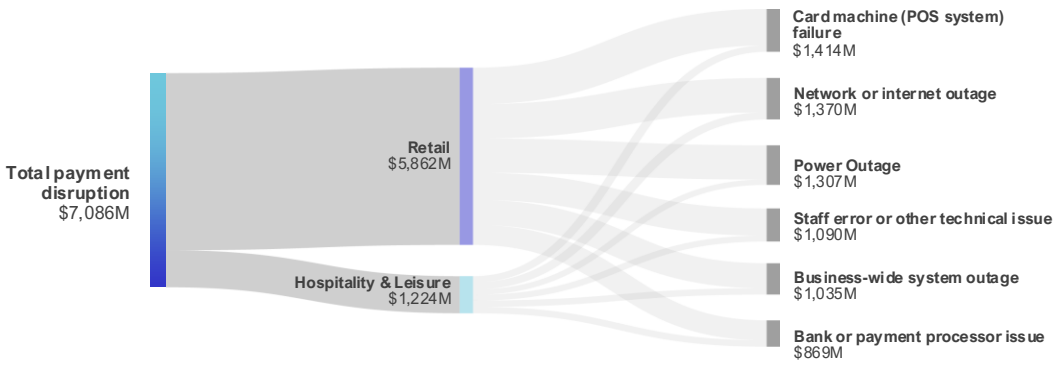
State analysis

January 2026

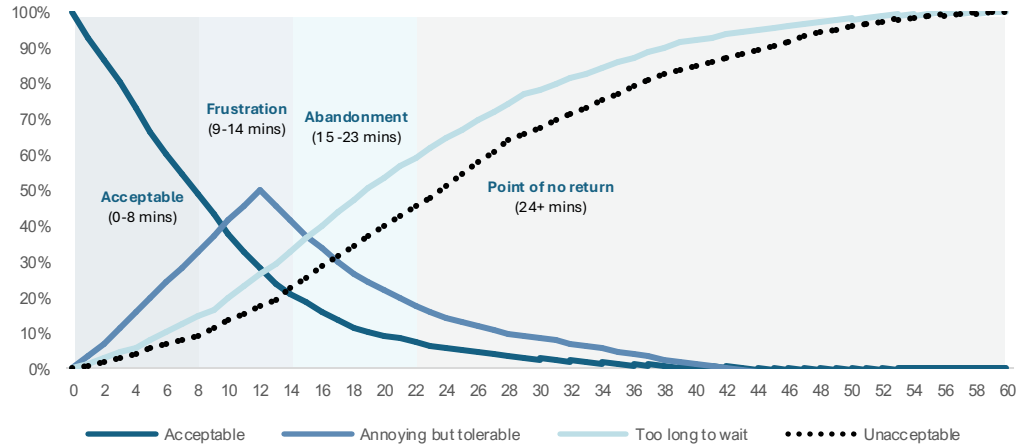
California

The following charts provide a focus on the state of California. They show the cost of disruption by source and time, consumer tolerance thresholds, and the four key consumer personas for that region.

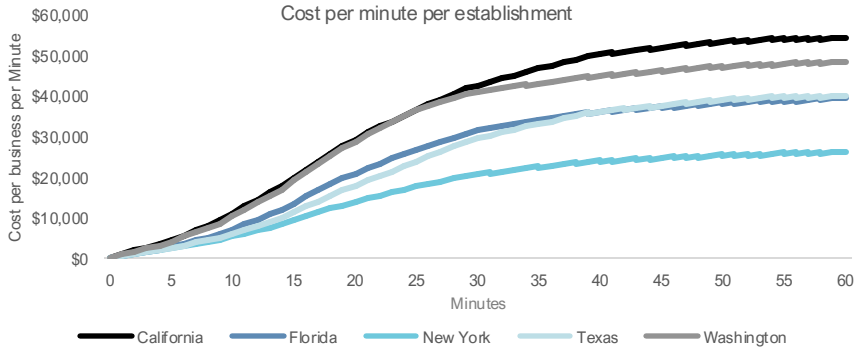
The cost of disruption: Retail and hospitality payment failures by source



Consumer tolerance thresholds during payment failures



Cost of disruption by time

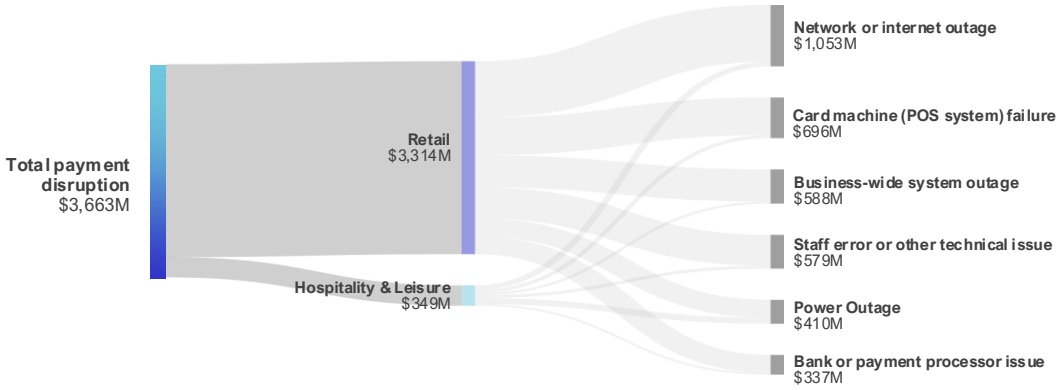


Distribution of payment disruption personas

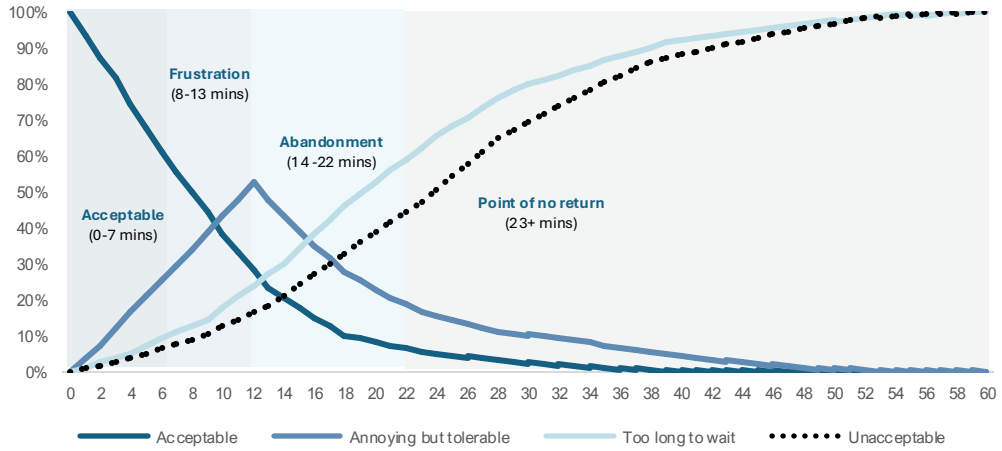
Florida

The following charts provide a focus on the state of Florida. They show the cost of disruption by source and time, consumer tolerance thresholds, and the four key consumer personas for that region.

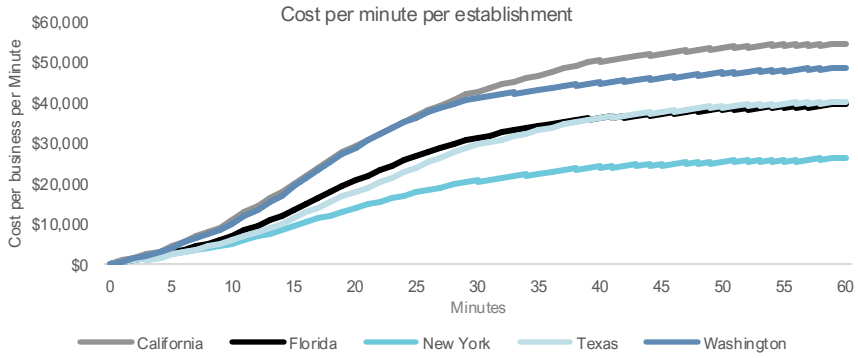
The cost of disruption: Retail and hospitality payment failures by source



Consumer tolerance thresholds during payment failures



Cost of disruption by time

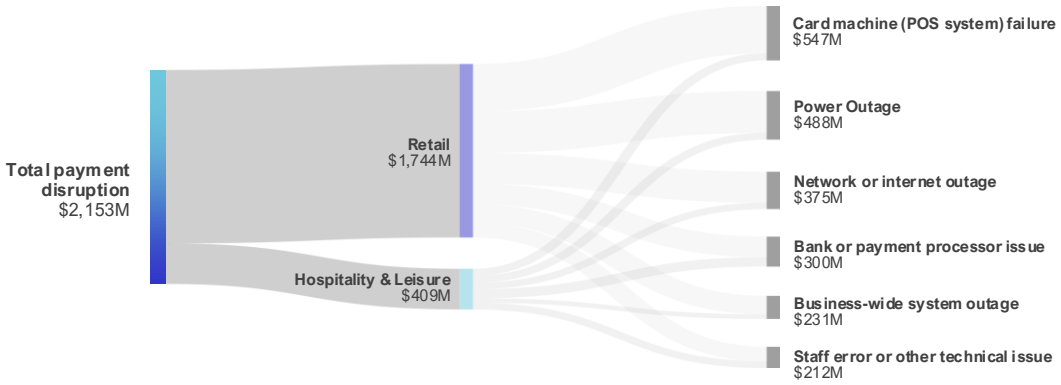


Distribution of payment disruption personas

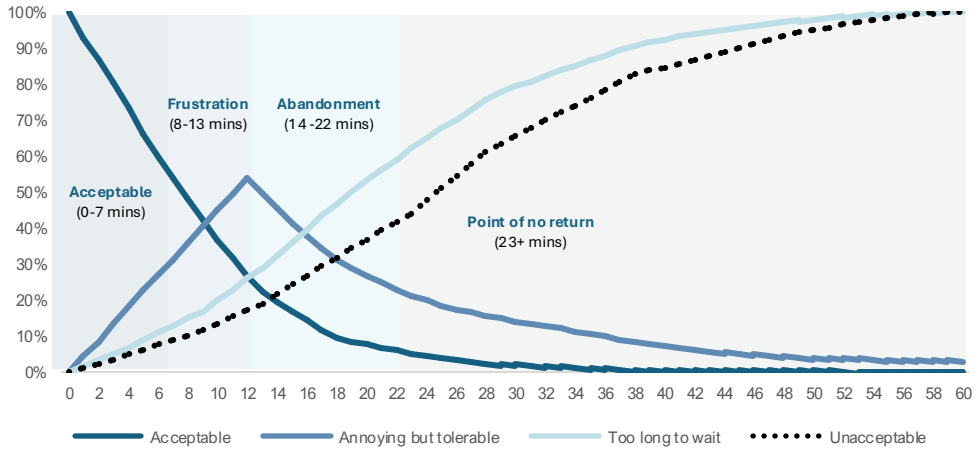
New York

The following charts provide a focus on the state of New York. They show the cost of disruption by source and time, consumer tolerance thresholds, and the four key consumer personas for that region.

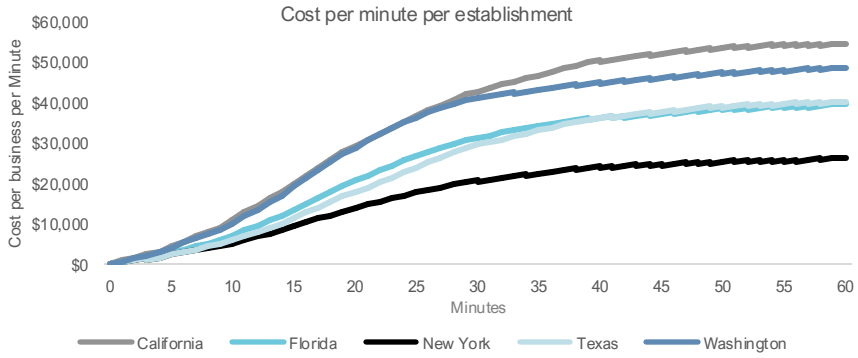
The cost of disruption: Retail and hospitality payment failures by source



Consumer tolerance thresholds during payment failures



Cost of disruption by time

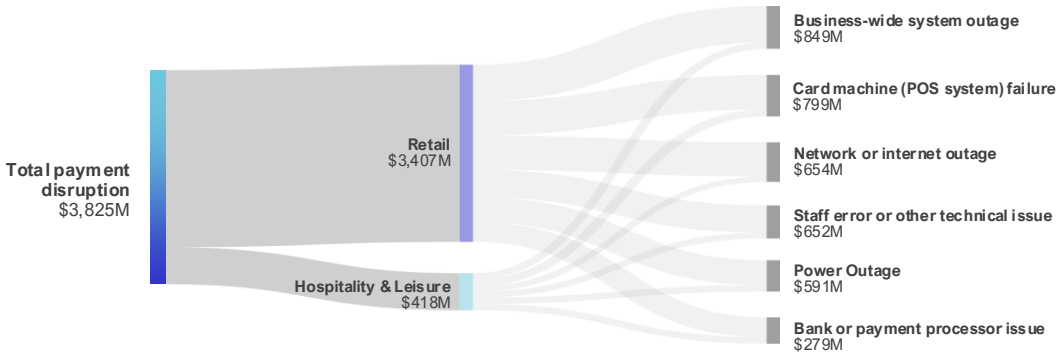


Distribution of payment disruption personas

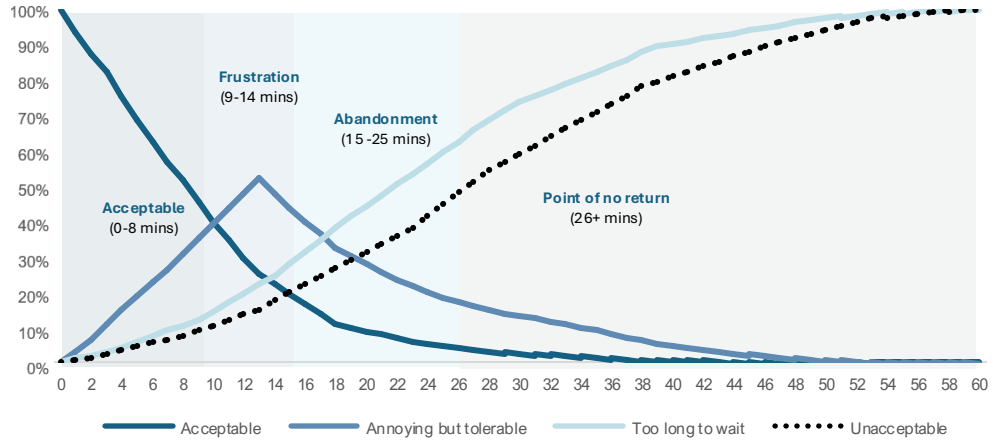
Texas

The following charts provide a focus on the state of Texas. They show the cost of disruption by source and time, consumer tolerance thresholds, and the four key consumer personas for that region.

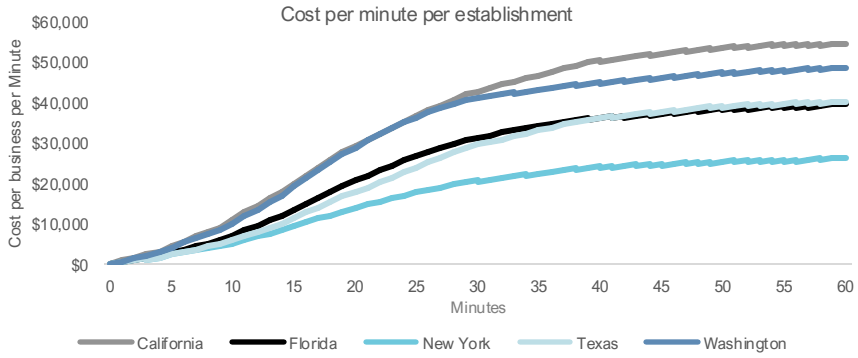
The cost of disruption: Retail and hospitality payment failures by source



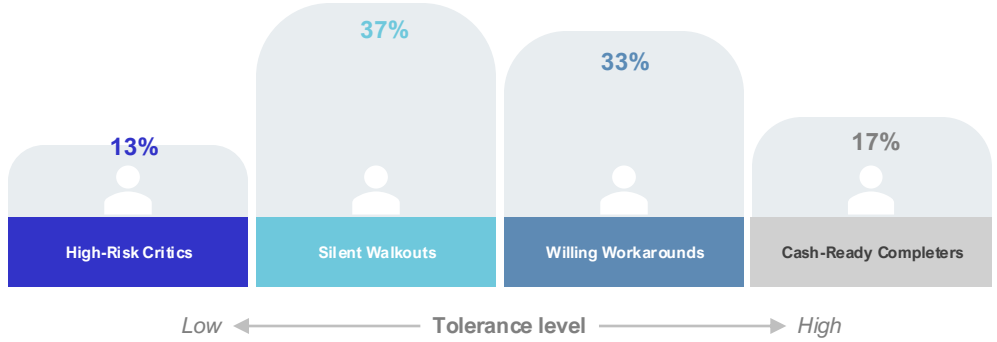
Consumer tolerance thresholds during payment failures



Cost of disruption by time



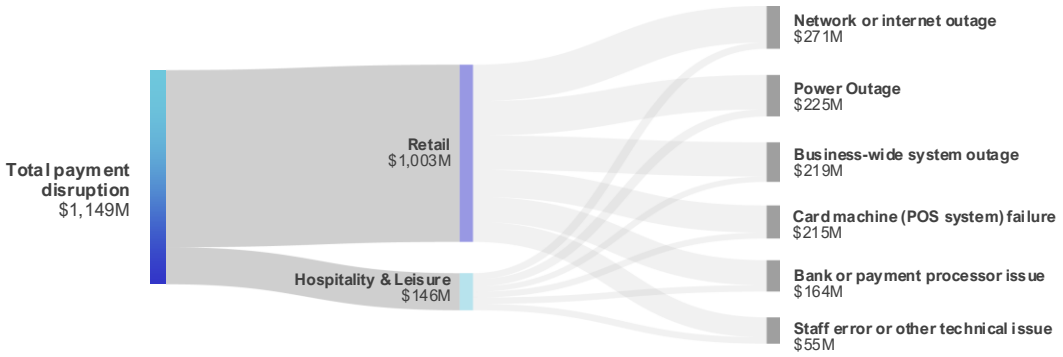
Distribution of payment disruption personas



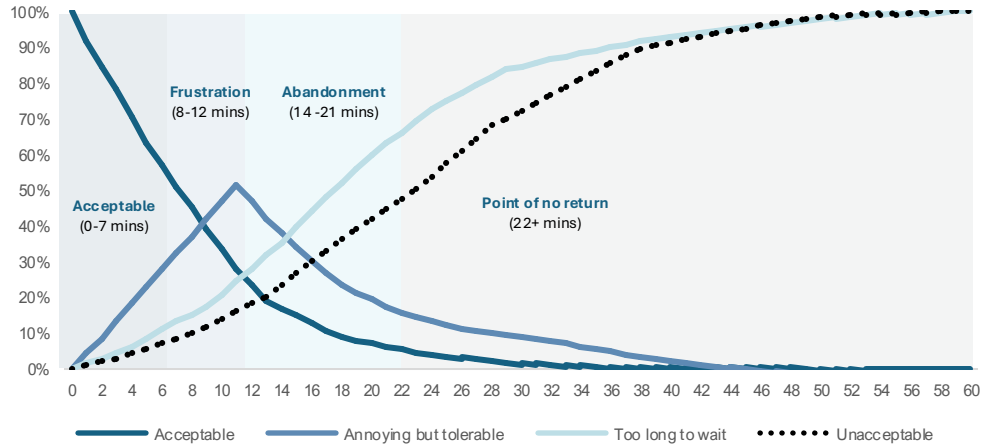
Washington

The following charts provide a focus on the state of Washington. They show the cost of disruption by source and time, consumer tolerance thresholds, and the four key consumer personas for that region.

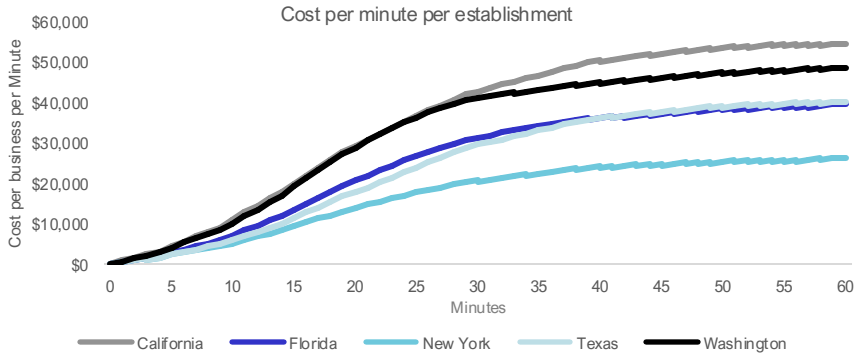
The cost of disruption: Retail and hospitality payment failures by source



Consumer tolerance thresholds during payment failures



Cost of disruption by time



Distribution of payment disruption personas

About FreedomPay

FreedomPay is the global leader in Next Level Commerce™—transforming the way businesses power payments and experiences across the world. More than a payment solution, FreedomPay is a world-class independent payment gateway engineered to simplify complexity, break down the barriers of legacy systems, and revolutionize every point of interaction—whether in-store, online, or mobile. Chosen by the leading brands across retail, hospitality, sports and entertainment, food service, healthcare and higher education, FreedomPay delivers technology strength, integration breadth, and deep expertise in global payments innovation.

As one of the first solutions in North America validated by the PCI Security Standards Council for P2PE, FreedomPay sets the gold standard for payment security, trust, and performance. With a unified technology stack, lightning-fast APIs, and integrated solutions across payments, FreedomPay gives businesses total peace of mind plus the freedom to choose any hardware provider. Move faster, act smarter, and lead markets—not chase them. www.freedompay.com

About Dynatrace

Dynatrace is advancing observability for today's digital businesses, helping to transform the complexity of modern digital ecosystems into powerful business assets. By leveraging AI-powered insights, Dynatrace enables organizations to analyze, automate, and innovate faster to drive their business forward. To learn more about how Dynatrace can help your business, visit www.dynatrace.com, visit our blog and follow us on LinkedIn and X @dynatrace.

About Retail Economics

Retail Economics is an independent economics research consultancy focused on the consumer and retail industry. We analyse the complex retail economic landscape and draw out actionable insight for our clients. Leveraging our own proprietary retail data and applying rigorous economic analysis, we transform information into points of action.
Our service provides unbiased research and analysis on the key economic and social drivers behind the retail sector, helping to inform critical business decisions and giving you a competitive edge through deeper insights. www.retaileconomics.co.uk

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