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WHITEPAPER

ACH modernization starts here

How to build the foundations of a unified payments strategy

The Register®

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HOW TO USE THIS WHITEPAPER

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Introduction

Automated Clearing House (ACH), the network that carries direct deposit payments, has just marked its half-century of operation. It has become an integral part of the US economy, funneling deposits to 94 percent of American workers according to the National Automated Clearing House Association (Nacha), which created and runs the system. The system accounts for roughly 40 percent of the value of non-cash payments in the US.[1]

94%

of American workers receive their deposits through ACH, according to Nacha[1]

~40%

of the value of non-cash payments in the US runs on ACH[1]

50 yrs

ACH has just marked its half-century of operation

While ACH has become a heritage system that underpins the US economy, it is also in need of modernization. Many financial institutions continue to rely on ACH infrastructure designed for an earlier era of batch-based payments, creating growing operational, integration and resource challenges. In the meantime, payments have innovated around it.

Now things are finally shifting thanks in part to new measures from Nacha along with a variety of market and technical pressures.

Financial institutions know they need to modernize ACH, but concerns about disruption, migration risk and competing priorities often delay action. The more strategic opportunity is not simply to replace their ACH systems. It is to modernize ACH as part of a unified money movement strategy.

In this whitepaper, we will look at the challenges and opportunities surrounding ACH modernization. We will explore how the FIS Money Movement Hub Powered by AWS, can help financial institutions with this modernization process through a unified payments platform, flexible cloud infrastructure and integrated data capabilities.

CHAPTER 01

Why ACH modernization has become a strategic priority



ACH was designed for a time when batch-based payments were the norm. Its roots go back to the Special Committee on Paperless Entries, formed in 1968 by California bankers who were eyeing rising check volume as a major problem. As such, it was implemented on mainframe architectures that are still in use today within many US banks.

That inertia is finally cracking as financial institutions and their customers come under increasing pressure in three areas:

Regulatory pressure

Nacha introduced expanded fraud-monitoring requirements in two phases during 2026, increasing expectations across the ACH ecosystem. The rules require Originating Depository Financial Institutions (ODFIs) and relevant non-consumer Originators, Third-Party Service Providers and Third-Party Senders to establish risk-based processes intended to identify ACH entries initiated due to fraud. They also require Receiving Depository Financial Institutions (RDFIs) to implement risk-based processes intended to identify incoming ACH credit entries initiated due to fraud.[2]

Technical pressure

Operators of other payment rails have not stood still. For example, the Fedwire payment rail migrated to ISO 20022 in July 2025.[3] In addition, instant payment rails had an impact. Corporate treasurers now expect real-time visibility on their payments to help them make financial decisions.

The widening gap between ACH and other payment rails is beginning to show up in operations. Banks are having to translate between ACH and other payment systems using either in-house code or third-party middleware. It also means that their downstream analytics and sanctions screening systems must reconcile two schemas.

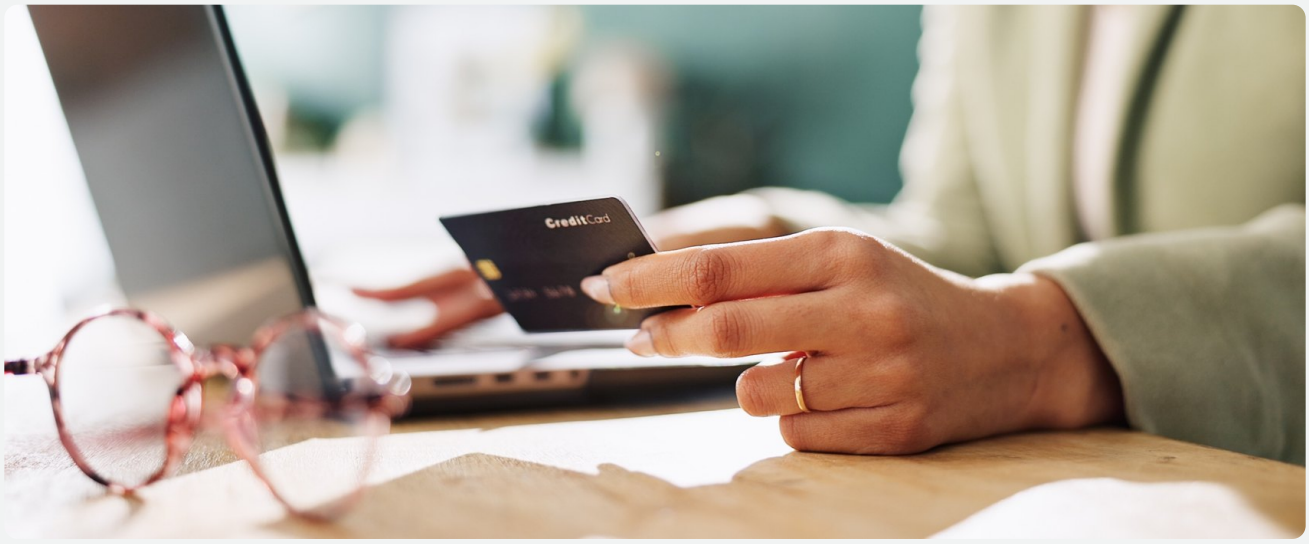
Organizational pressure

Talent is becoming a significant problem for banks relying heavily on ACH. Many of the people trained on this system have left the industry or are moving towards retirement age. They have documented their procedures, of course, but much operational expertise remains tacit, locked in people's heads rather than committed to paper. The new staff coming into the banking workforce have been exposed to newer payment technologies than ACH, and they have been trained on newer infrastructure, rather than the COBOL-based mainframes on which much of ACH was built.

CHAPTER 02

Why evolving fraud risks demand a more connected monitoring model

Nacha's 2026 rule amendments expand risk-based fraud-monitoring responsibilities across ODFIs, relevant non-consumer Originators, Third-Party Service Providers and Third-Party Senders, while also requiring RDFIs to monitor incoming ACH credits for suspected fraud.[2]



PHASE 1

March 20, 2026

Took effect on March 20, 2026. It applied to all ODFIs; non-consumer Originators, Third-Party Service Providers and Third-Party Senders with annual ACH origination volume of six million or more in 2023; and RDFIs with annual ACH receipt volume of 10 million or more in 2023.

PHASE 2

June 19, 2026

Extended the requirements to the remaining non-consumer Originators, Third-Party Service Providers and Third-Party Senders, as well as all remaining RDFIs. It had an official effective date of June 19, 2026, with June 22, 2026, identified by Nacha as the practical compliance date because June 19 was a federal holiday.[4]

This change expands the role of RDFIs by requiring risk-based processes for inbound ACH credit activity. A risk-based approach may consider factors such as transaction velocity, SEC code anomalies and account characteristics or historical activity.

Previously, debit-side threats were the biggest worry for banks, but threats such as business email compromise (BEC) have grown more prevalent. BEC accounted for 21,489 complaints to the FBI's Internet Crime Complaint Center in 2023, amounting to $2.9 billion in reported losses.[8] According to LSEG Risk Intelligence, global authorized push payment fraud losses could reach $331 billion by 2027.[5]

This isn't just a B2B problem. A 2024 PYMNTS Intelligence and Featurespace study of 10,000 consumers found half of all fraud victims considered switching financial providers. One in three actually followed through with it.[6]

$2.9B

in reported business email compromise losses in 2023, from 21,489 complaints to the FBI's IC3[8]

$331B

global authorized push payment fraud losses could reach this level by 2027, per LSEG Risk Intelligence[5]

1 in 3

Half of fraud victims considered switching financial providers; one in three followed through[6]

Stacey Gross, who leads FIS's ACH product and previously ran ACH operations at a bank, describes the shift plainly.

> *"In many credit-push fraud cases, the customer technically authorizes the transaction after being deceived. For years, the industry has focused primarily on debit fraud, which means inbound credits have not always received the same level of attention."*
>
> **Stacey Gross, ACH product lead, FIS**

Banks have been grappling with the problem. Some institutions are finding that monitoring approaches historically focused on debit-side risks need to evolve to address fraud involving inbound ACH credits.

CHAPTER 03

Why modernizing ACH in isolation can perpetuate fragmentation

These pressures clearly show that it's time for a change, but it isn't as simple as removing ACH altogether. This system is embedded in all aspects of financial operations for banks and many customers, ranging from payroll and benefits through to bill payments. Rip and replace isn't feasible, but modernization is.

However, that modernization is a big enough problem on its own. Getting new capabilities inside a legacy ACH stack in the middle of a two-phase compliance cycle is a daunting prospect.

Many institutions have used middleware or translation layers as a pragmatic way to extend existing infrastructure. This can address immediate requirements by allowing financial institutions running both Nacha and ISO schemes to use in-house translation systems or third-party bridges. However, the approach may add complexity as payment types and origination sources expand, while leaving ACH separate from other payment environments.

Integrating Nacha and ISO translation natively into a single payments platform carries several benefits:

Simplification

Native integration removes licensing and technology complexity.

Richer data

It also unlocks ISO 20022's richer data payload. That carries into sanctions screening, remittance reconciliation, and downstream analytics.

Cross-channel visibility

A single view across multiple payment rails can provide greater context for fraud monitoring and help institutions identify patterns that may be difficult to see in siloed systems.

Unified routing

Routing all payments through a single hub simplifies the payments process and also enables banks to automatically choose the best route based on their own needs. It's one of the top reasons why 45 percent of US banks were planning significant payments modernization in 2025.[7]

CHAPTER 04

From ACH replacement to a money movement strategy

Banks face two choices when modernizing their ACH systems. They can update the existing siloed system separate from the wire, RTP, and FedNow rails. The alternative is to treat ACH as part of a broader payment rails modernization where they unify all of them onto a single platform.

The latter means a more strategic shift up front, but it also carries longer-term benefits. A shared platform gives banks a single operating model and console for all payment rails,

including ACH. It also turns payment data from a purely operational tool into a strategic asset.

These benefits surface in several areas:

Automation

Processing a central corpus of payment data in real time, as payments arrive, cuts cost and improves accuracy. Payment routing between ACH, wire, and instant payment rails has historically been a manual process that bogged down operational staff. A single money movement platform enables banks to set automated routing rules based on centrally defined parameters such as cost, timing, and risk.

Exception handling

A unified payments platform also simplifies exception handling. Enriched, centralized data enables the bank to compare return rates side by side based on client, SEC code, and channel. Leakage in one channel becomes visible against the performance of another. That enables the operations team to focus on problem areas before they have a significant effect on straight-through processing rates. Automated repair and return rules leave staff with time for the edge cases that need judgment.

Risk management

A unified platform also changes risk management for a bank. Payment signals arriving on different technology stacks may not be flagged as suspicious because there is no cohesive view. A unified money movement stack consumes every incoming payment flow in the same monitoring plane, giving a single picture of correlated inbound events that can be scored inline for risk.

Risk management becomes even more effective when institutions can analyze aggregated payment activity across channels and payment types. This broader context can help reveal patterns that may be difficult to identify within individual payment silos. When a bank has access to aggregated, anonymized payment activity from its peers, it can spot patterns that no single bank could when relying purely on its own data.

Customer benefits: from operations to insights

Corporate treasury customers also benefit from a unified money movement hub. They can send payments on their own timetable in either ISO 20022 or Nacha format. The platform accepts and reformats those payments inline with no effect on corporate client payment schedules or current messaging protocols.



Corporate treasury customers will also welcome more visibility into their own payment behavior, cash movement, and liquidity positions. This turns enriched payment data into a potential revenue model. In a volatile economic environment, any tool that can help to improve a company's working capital situation is especially valuable.

FIS MONEY MOVEMENT HUB

Launched in May 2025, the FIS Money Movement Hub takes this unified approach to payments. It presents FedNow, RTP, ACH, wire, and P2P to banks via a single API. And it also handles the ACH lifecycle from end to end, from origination through settlement to returns. Hosted on AWS, the FIS Money Movement Hub features a Data Lake component that collects and enriches payment data with the help of AWS machine learning services. AWS security controls protect each bank's data inside the platform, and the behavior the models learn from is anonymized across that population.

CHAPTER 05

The importance of cloud computing to ACH modernization

Many banks have a legacy of on-premises technology stacks. Cloud computing providers, such as AWS, provide an opportunity to help ease the modernization process.

Cloud computing provides a level of resilience that is difficult to achieve in many on-premises environments. Cloud architectures can support resilience through deployment across multiple availability zones, reducing reliance on a single location.

Flexible computing and storage capacity also gives banks a backstop against volume spikes. Payment volumes can be volatile, especially when clients hit regular payroll events. Flexing compute capacity to cope keeps performance smooth on the customer side, while reducing headaches for operational staff in financial institutions.

The pace of development also tends to increase when software providers build on the cloud. Cloud-native development flows through deployment tooling built for regular, fast releases covering security updates and new features.

Finally, cloud computing providers like AWS have strong controls and compliance infrastructure so that activity is logged and auditable.

CHAPTER 06

Managing migration risk

Banks appreciate the strategic case for a unified platform, but many will be daunted by the transitional challenge. The scope of such a project extends to the entire payment infrastructure rather than just ACH. So it becomes more difficult for them to prioritize.

1

Pre-implementation review

Banks must review their existing ACH system and payments infrastructure, identify legacy configurations that may no longer be needed and map the required environment to the proposed unified platform. Examining the ACH estate often reveals origination profiles and configurations that no longer serve live clients or workflows. Retiring them helps to narrow project scope and make migration more efficient.

2

Scripted migration

Scripted tooling can carry across large volumes of client profiles with their SEC codes and settlement structures.

3

System cutover

Shadow production is a tried-and-true cutover method. The new unified platform processes live traffic in concert with the legacy systems, and operations teams then compare the two outputs. Cutover happens only when the two systems agree.

CHAPTER 07

Where ACH modernization goes next



ACH remains a fundamental part of the US payments ecosystem. Financial institutions will continue to rely on it, even as expectations around speed, visibility, fraud monitoring and operational efficiency evolve.

By bringing ACH into a unified, cloud-native money movement strategy, financial institutions can reduce operational complexity, strengthen visibility across payment rails and build a more adaptable foundation for future innovation. FIS Money Movement Hub, built on AWS, provides a path to modernize ACH as part of that broader transformation. Modernize ACH. Move money forward.

Modernize ACH. Move money forward.

To see how the FIS Money Movement Hub, built on AWS, can anchor your ACH modernization, get in touch with FIS today. Learn more at FISglobal.com.

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About FIS and AWS

About FIS

FIS is a financial technology company providing solutions to financial institutions, businesses and developers. We unlock financial technology that underpins the world's financial system. Our people are dedicated to advancing the way the world pays, banks and invests, by helping our clients confidently run, grow and protect their businesses. Our expertise comes from decades of experience helping financial institutions and businesses adapt to meet the needs of their customers by harnessing the power that comes when reliability meets innovation in financial technology. Headquartered in Jacksonville, Florida, FIS is a member of the Fortune 500® and the Standard & Poor's 500® Index. To learn more, visit FISglobal.com. Follow FIS on LinkedIn, Facebook and X (@FISglobal).

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Since 2006, Amazon Web Services has been the world's most comprehensive and broadly adopted cloud. AWS has been continually expanding its services to support virtually any workload, and it now has more than 240 fully featured services for compute, storage, databases, networking, analytics, machine learning and artificial intelligence (AI), Internet of Things (IoT), mobile, security, hybrid, media, and application development, deployment, and management from 114 Availability Zones within 36 geographic regions, with announced plans for 16 more Availability Zones and five more AWS Regions in Chile, New Zealand, the Kingdom of Saudi Arabia, Taiwan, and the AWS European Sovereign Cloud. Millions of customers—including the fastest-growing startups, largest enterprises, and leading government agencies—trust AWS to power their infrastructure, become more agile, and lower costs. To learn more about AWS, visit aws.amazon.com.

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