

AIM Evaluation: The Leading Providers of U.S. Cash Management, 2018

Aitë

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IMPACT POINTS

- As the financial services industry embraces digital transformation strategies in an effort to meet new client expectations and an expanded definition of banking, many institutions are looking to replace older, less intuitive cash management solutions with modern, next-generation ones.
- Leveraging the Aite Impact Matrix (AIM), a proprietary Aite Group vendor assessment framework, this Impact Report evaluates the overall competitive position of each vendor, focusing on vendor stability, client strength, product features, and client services.
- The following criteria were applied to develop a list of eligible vendor participants:

 bank awareness of the vendor as a provider of a viable cash management offering,
 successful implementation of a cash management solution at a minimum of one U.S.-based financial institution and an ability to provide client references, and
 ability to offer a full out-of-the-box cash management solution as opposed to just components of one.
- A total of eight vendors agreed to be evaluated under the AIM framework.
- The U.S. cash management landscape is a mature one. Most of the technology providers are established vendors with strong financials and broad product portfolios. Despite these vendors' size, there has been a fair amount of consolidation among players within the last few years, leaving banks with fewer options and creating an opportunity for non-U.S.-based players to potentially enter the market.
- Several trends are shaping the present and future cash management market and the ways in which the leading technology providers must serve their bank clients. Trends include a focus on experience over functionality, persona-based banking, improved data delivery, more frequent product releases, fully application programming interface (API)-enabled architectures, and plans to create financial technology ecosystems.
- The number of new cash management contracts continues to grow. What is especially exciting is the momentum building among large and midsize banks; 37% of the top six to 70 U.S. banks (ranked by total assets) are forecast to sign a new cash management vendor contract between 2018 and 2020.
- Achieving best-in-class status in Aite Group's AIM, a highly governed and quantitative vendor evaluation methodology introduced via this report, are Bottomline Technologies, Q2, and ACI Worldwide (ACI).

INTRODUCTION

Next-generation digital technologies are creating opportunities for banks to not only better address evolving market needs and expectations but also differentiate themselves in areas that are becoming commoditized. Most business and corporate customers see little difference from one bank's cash management product portfolio to that of another. Banks are not winning business based on the products they offer, but rather based on the ways in which they deliver them and the tools available to support and enhance their value. As such, banks striving to effectively compete in this space must take a step back to analyze their digital cash management capabilities and user experience. In doing so, many are finding outdated systems, clunky user interfaces, siloed infrastructures, and paper-based processes that are no longer acceptable to bank clients. They have little choice but to replace their digital cash management platforms to remain competitive; investing in new technology has become table stakes for success.

This Impact Report explores some of the key trends within the U.S. cash management market and discusses the ways in which technology is evolving to address new market needs and challenges. This Impact Report also compares and contrasts the offerings and strategies of the leading vendors and highlights their primary strengths and challenges. Finally, to help financial institutions make more informed decisions as they select new technology partners, the report recognizes specific vendors for their strengths in critical areas.

METHODOLOGY

Leveraging the AIM, a proprietary Aite Group vendor assessment framework, this Impact Report evaluates the overall competitive position of each vendor, focusing on vendor stability, client strength, product features, and client services.

The following criteria were applied to develop a list of vendors for participation:

- Bank awareness of the vendor as a provider of a viable cash management offering
- Successful implementation of a cash management solution at a minimum of one U.S.-based financial institution and an ability to provide client references
- Ability to offer a full out-of-the-box cash management solution as opposed to just components of one

Participating vendors were required to complete a detailed product request for information (RFI) comprising both qualitative and quantitative questions, conduct a product demo and briefing, and provide active client references.

AIM INTRODUCED

The AIM is a comprehensive proprietary vendor evaluation process designed to provide a holistic analysis of participating vendors and identify market leaders in each evaluated vendor market. By incorporating many aspects of a vendor's essential characteristics for success and growth, including financial and client stability, product features, and customer service, the AIM provides an actionable guide for market participants looking for viable third-party vendor solutions and services. Figure 1 highlights the key stages of the AIM methodology.

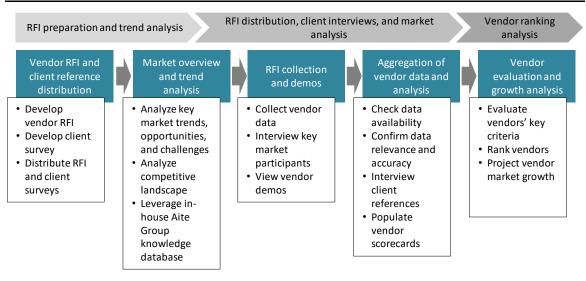


Figure 1: AIM Methodology

Source: Aite Group

To ensure full transparency in terms of key areas of measurement and evaluation, Aite Group shares the entire AIM with each vendor prior to publication. Each participating vendor also provides client references to measure their overall satisfaction. Details of the client reference survey and questions to be discussed with clients are shared with each participating vendor prior to the interviews. Aite Group reserves the right to identify and interview other clients that may not be recommended by participating vendors to validate certain areas of analysis.

AIM COMPONENTS

The AIM has four key components: vendor stability, client strength, product features, and client services. Examples of the criteria that could be included in each component are listed in Figure 2.

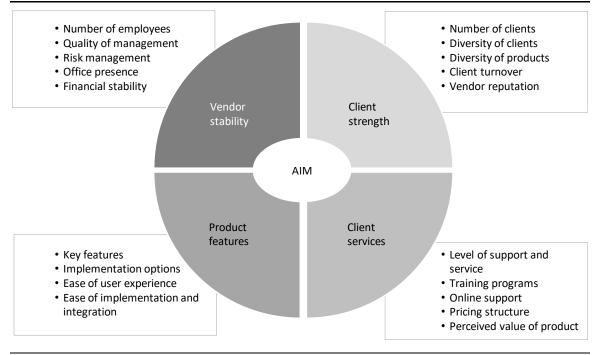


Figure 2: AIM Key Components

Source: Aite Group

VENDOR STABILITY

The vendor stability component evaluates the overall strength of the vendors in terms of financial stability, management reputation, risk management, and global presence. This component determines whether a given vendor has the basic foundation to compete and sustain its overall market presence.

CLIENT STRENGTH

The client strength component focuses on the number and diversity of customers for vendors, vendor reputation among the clients, and overall customer turnover. This component measures whether a given vendor has a strong foundation of clients and a robust client pipeline to sustain its growth trajectory.

PRODUCT FEATURES

The product features component analyzes the key features and functionality of vendor solutions and services, including implementation options, user experience, and the strength of the future product roadmap. This component measures whether the vendor offers enough key features and functionality to remain competitive.

CLIENT SERVICES

The client services component evaluates the comprehensive nature of the vendor's client support and service infrastructure. This component measures whether the vendor provides robust service and support to provide real value to the clients.

After a comprehensive analysis, Aite Group can assess participating vendors within the four key evaluation components (Figure 3).

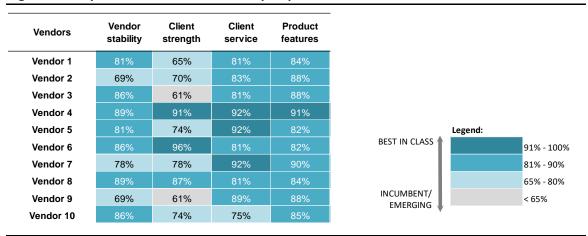


Figure 3: Sample Assessment via Heat Map Representation

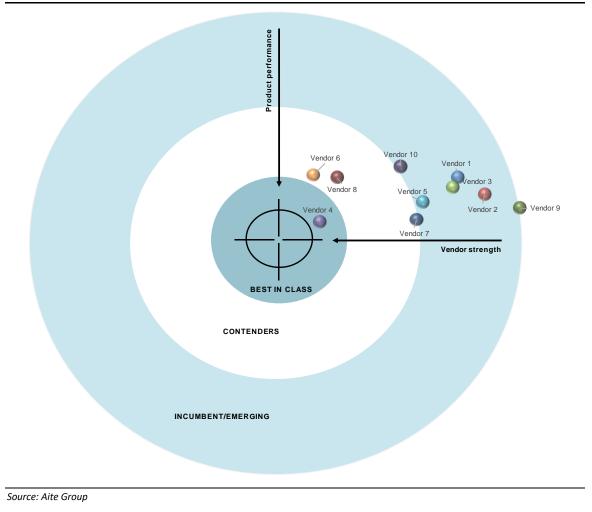
Source: Aite Group

The AIM leverages these four components to create a concise composite evaluation that identifies market-leading vendors:

- Vendor strength: Combining the scores from the vendor stability and client strength components, this criterion measures the vendor's overall long-term business viability as a product and service provider.
- **Product performance:** Combining the scores from the product features and client services components, this criterion measures the product's ability to deliver key functionality and support.

Figure 4 provides a sample output of the AIM, presenting those market-leading vendors that provide robust product performance and that showcase their ability to execute on their long-term strategies.

Figure 4: Sample AIM



The AIM highlights three specific types of vendor groupings as a result of the analysis:

- **Best in class:** Vendors in this grouping represent the leaders in the particular vendor market, with strong financials, diverse client bases, and robust product offerings with industry-leading functionality and reliable client service. These are essentially the leading vendors that everyone else is chasing.
- **Contenders:** Contenders have created stable businesses and client bases as well as competitive product offerings. But they struggle at times to identify the next big market trend or product features, or lack consistent research and development or IT investment, leading to a failure to update overall performance and infrastructure. Contenders' overall competitive positions will vary a bit, from vendors that are having a tough time keeping up with the best-in-class vendors—due to a lack of resources or stable but outdated technology stacks—to vendors that are just inches away from joining the best-in-class grouping if only they could properly execute on the next release or successfully capture a new client segment.

• Incumbent or emerging: This last grouping represents vendors that either have a large potential for future growth or are established vendors with stagnating offerings. This group may represent startups or vendors with limited resources. They may exhibit unstable business models, low client count, and limited client service capabilities. However, this group of vendors may also support innovative product features and transformative business models that will help them hone in on the AIM framework.

The relative positions of vendors that have been bucketed into these three distinct vendor groupings within the AIM are, of course, not static. In fact, an emerging vendor of today may, given the speed of innovation in recent years, find itself in the best-in-class grouping five years from now.

The beauty of the AIM is that by leveraging this framework, Aite Group analysts can pinpoint vendors' strengths and weaknesses, and vendors can utilize this framework to make sure they are on the right path to reaching the coveted best-in-class position. The flexibility of the AIM is also designed to be beneficial for those financial institutions looking to make vendor decisions tied to their unique set of internal requirements.

THE MARKET

This section provides information and analysis around the following issues:

- Key market trends
- Key drivers and challenges of adoption
- Key purchasing factors
- Key functionality

KEY MARKET TRENDS

The following market trends are shaping the present and future cash management market and the ways in which the leading technology providers must serve their bank clients (Table A).

Table A: The Market

Market trends	Market implications
Focus on user experience over functionality	Corporate treasurers increasingly expect banks to understand their customer journeys, to know who they are, and to be able to provide recommendations through analytics and eventually machine learning. While functionality is important, most banks believe all of the leading providers offer the core capabilities. Technology vendors must sell an experience rather than functionality.
The shift to persona-based banking	Technology platforms must be flexible and able to offer differentiated customer journeys and workflows based on end-user role, level of sophistication, and need.
Improved data delivery	The market demands a shift toward more consolidated data and reporting with greater automation and real-time capabilities.
More frequent product releases	Vendors' shift to agile development methodologies is resulting in more frequent, smaller releases than the one or two larger ones we used to see in the past. As a result, more banks enjoy new enhancements faster.
Fully API-enabled architectures	API architectures will be especially critical as banks continue to invest more heavily in emerging fintech providers to expand their capabilities, and as corporate customers demonstrate increased interest in accessing their data and performing their transactions from their own systems.

Market trends	Market implications
Plans to create fintech storefronts and	Vendors are looking to identify and integrate with a
ecosystems	set of hand-picked fintech providers on behalf of
	their bank customers that don't have the resources
	to do the vetting on their own. Bank customers can
	then quickly "switch on" the new capabilities of
	their choice without lengthy implementations.

Source: Aite Group

FOCUS ON USER EXPERIENCE OVER FUNCTIONALITY

The bar has risen significantly for user experience. Corporate treasurers increasingly expect banks to understand their customer journeys, to know who they are, and to be able to provide recommendations through analytics. In the not-too-distant future, they will also increasingly expect machine learning capabilities to further enhance their digital experience. Some already do. Additionally, across all their transaction executions and interactions with the bank, corporate treasurers expect the same ease of use, simple navigation, and modern presentation offered by other industries. They see great value in dashboards and wizards, and seek a tablet-like look and feel with self-service capabilities. Such expectations have forced the leading technology providers to focus the majority of their enhancement efforts on user experience. In a commoditized industry such as cash management, most customers view the product offerings across banks to be very similar, and user experience has in many ways become the product and point of differentiation. This is pushing the leading vendors to do user interface refreshes, work more closely with user experience teams, and continue to make user interface enhancements that enable the following:

- More drag-and-drop functionality and the elimination of drop-down menus
- The ability to more easily create, customize, and favorite reports and links
- The ability to more easily group accounts
- More persona-based banking

THE SHIFT TO PERSONA-BASED BANKING

To cut costs and operate more efficiently, banks want a single platform to meet all of their clients' needs. Such a strategy requires persona-based banking in which clients enjoy a customized experience and journey based on their roles, levels of sophistication, and needs, as opposed to a one-size-fits-all approach.

INCORPORATION OF MORE ANALYTICS AND MACHINE LEARNING CAPABILITIES

Vendors are moving forward with efforts to make their solutions smarter, more user-friendly, and automated with learning capabilities. This is especially true for fraud detection, but vendors are also enhancing their cash management solutions with capabilities such as more intelligent cash flow forecasting that recognizes and learns from past activities to anticipate future ones. In fact, machine learning is beginning to creep onto the many leading vendors' roadmaps. In

addition to creating smarter forecasts, it will also be leveraged to automatically perform repetitive tasks for users, improve overall efficiencies, and anticipate future needs. Voice banking has also been a focus for some vendors.

IMPROVED DATA DELIVERY

In addition to new user interface rollouts, technology providers also recognize that delivering the right user experience goes beyond just a modern look and feel and system navigation. It also includes improved data delivery. The market demands a shift toward more consolidated data and systems as well as automated real-time reporting. The ways banks currently present data to their clients remain siloed, due in part to their siloed technical architectures. This creates extra steps, which are often manual or necessitate spreadsheets, for banks' corporate customers. Aite Group estimates that less than 20% of corporate treasurers consider bank reports to be flexible enough to meet their needs and deliver information in the format they require. Further, more than 50% admit to a dependency on Microsoft Excel to meet all or some of their reporting needs. Some next-generation cash management platforms enable banks to provide some level of consolidation for payment initiation, but more progress is needed. Technology is evolving to address this need and is enabling banks to move forward with critical strategies around both integrated receivables and payments hubs. Some of the leading cash management providers already offer payment hub solutions; however, most are missing out on opportunities in integrated receivables, a space that remains largely dominated by another group of vendors.

MORE FREQUENT PRODUCT RELEASES

Vendors' shift to agile development is resulting in more frequent, smaller releases than the one or two larger ones per year we used to see in the past. This provides a larger number of banks with access to more enhancements at a faster rate and reduces some of the risk associated with larger upgrades. Agile development also enables technology providers to work more closely with their bank customers and end users as new enhancements are created to continually test and ensure that they are on the right track.

FULLY API-ENABLED ARCHITECTURES

Vendors recognize that APIs need to be a part of their strategy, messaging, and roadmap. Engaging in open banking in Europe has helped many of the vendors better understand the implications for the U.S. market. Such architectures will be especially critical as banks continue to invest more heavily in emerging fintech providers to expand their capabilities, and as corporate customers demonstrate increased interest in accessing their data and performing their transactions from their own systems, as opposed to always entering the bank portal.

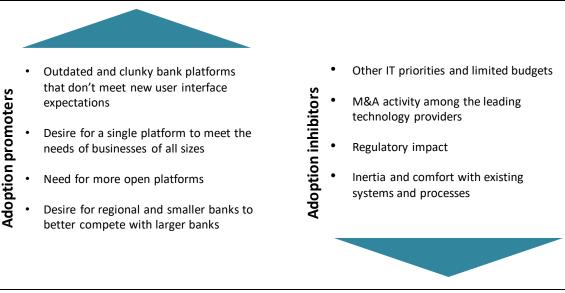
PLANS TO CREATE FINTECH STOREFRONTS AND ECOSYSTEMS

The market is experiencing a burgeoning number of small, focused fintech solutions aimed at business customers, especially small and midsize ones. Fintech companies have done a hard pivot away from financial institution disruption and toward financial institution enablement and partnership. More and more banks and credit unions are looking for new and unique ways to partner with fintech companies across multiple markets, and many fintech companies have engaged. Vendors are looking to identify leading fintech companies (in different areas such as invoicing/receivables management, forecasting, payroll, and expense management) on behalf of their clients and via APIs integrate these fintech firms' offerings with their own. This is especially appealing for banks beyond the top 20, which often don't have the internal resources to do most of the necessary vetting and due diligence on their own and instead will look to their primary technology partners to do it on their behalf. At the same time, some of these banks, as well as most of the larger ones, also want cash management platforms to be flexible enough that they can easily partner directly with third-party providers of their choice. Most of these initiatives are geared toward small-business customers but apply to larger businesses as well. Vendors will be looking for guidance from their bank customers to determine areas of focus for fintech company partnerships.

KEY DRIVERS AND CHALLENGES OF REPLACEMENT

More banks than ever before are in the process of replacing or are looking to replace their cash management solutions. Figure 5 identifies the factors that are contributing to replacement as well as those that pose challenges for vendors attempting to penetrate additional prospects.

Figure 5: Factors for and Against Replacement



Source: Aite Group

- Drivers for replacement are as follows:
 - Outdated and clunky platforms at most banks that don't meet new user interface expectations: Greater customer demand around user experience is no longer enabling banks to use sophisticated functionality as an excuse for a clunky user interface. It is time for the user experience on the corporate side of the bank to catch up to that on the retail side and to that provided by other industries, to which it is now compared.
 - Desire for a single platform to meet the needs of small businesses and large corporations: The needs of small businesses are starting to more closely

mirror the needs of commercial customers rather than consumers. This trend necessitates the need for banks to abandon the past strategy of serving them from retail platforms and to instead migrate them over to cash management platforms. However, implementing this plan requires a cash management platform that is user-friendly enough for small-business users and that can be customized to meet their specific needs. These tools should also have wizard capabilities to guide users through more challenging processes (such as selecting the right payment type) as well as the necessary money management tools to help them address key challenges.

- **Desire for more open platforms:** As the definition of cash management continues to expand, the need is growing for banks to be able to partner with other third parties to more quickly and effectively meet new market needs.
- Desire for regional and smaller banks to better compete with larger players: As smaller banks look to move further upmarket and attract the business of larger corporate customers, they need platforms capable of competing head to head with those offered by some of the largest banks.
- Challenges slowing down replacement for some banks follow:
 - Other IT priorities and limited budgets: Most banks, especially smaller ones, have limited IT budgets, forcing them to prioritize and often table initiatives they would like to move forward with.
 - Mergers-and-acquisitions (M&A) activity among the leading technology providers: This has resulted in some banks holding off on signing with a vendor as they wait to see the M&A activity's impact on cash management offerings. Fortunately, this activity has begun to slow down, and more banks are ready to make a decision.
 - Regulatory impact: While banks have adjusted to the new normal and learned to operate among the slew of new regulations that have been implemented over the last decade, regulatory compliance continues to eat away at a large share of their IT budgets.
 - Inertia and comfort with existing systems and processes: Change is never easy and requires strong communication from the top down to get all affected parties on board. Some banks embrace such communication, while others do not.

KEY PURCHASING FACTORS

While there are many different reasons to purchase a new cash management solution, the following factors represent buyers' key considerations when evaluating solutions:

• Modern user interface with intuitive navigation and functionality for use by both small businesses and large corporate customers

- Componentization, not customization—a unique customer experience that is user/persona-based but doesn't make banks touch code, which prevents them from taking new releases easily. Banks want to be protected from themselves!
- A well-thought-out and forward-thinking product roadmap that addresses expected market needs and aligns with the bank's strategy
- Customer-driven dashboards and widgets
- A single code base across channels
- A vendor culture that aligns with that of the bank
- Regular, small upgrades, as opposed to one or two large upgrades each year

KEY FUNCTIONALITY

When it comes to key functionality, a set of minimum requirements must be met to sustain the basic needs of the clients. These minimum requirements are typically the same across the different regions and are found in nearly all vendors in the market.

In order to increase overall adoption and capture additional market share, vendors are focused on developing competitive differentiators. Competitive differentiators might not be attractive to all potential clients but are currently driving key client adoption and could mean the difference for those banks looking for specific functionality needs. Features noted as next-generation functionalities could become the standard industry practice over the next few years; on the other hand, they could be completely ignored. Given the limited resources within each vendor, it is imperative that appropriate investments are made across the needs of past, current, and future clients (Figure 6).

Figure 6: Key Functionality Trends

Minimum requirement	Competitive differentiators	Next-generation functionalities
 Fully customizable dashboard with widgets Modern user interface Real-time capabilities Granular entitlements with easy setup Core functionalities such as information reporting, book transfers, consolidated payments, and positive pay Responsive design Mobile capabilities Secure messaging Single sign-on capabilities Advanced security beyond passwords, such as soft tokens, multifactor authentication, or biometrics Component-based architecture 	 Single code base Fully API-enabled architecture Persona-based workflows Embedded analytics for fraud detection Strong data delivery capabilities between the bank and client systems Drag-and-drop capabilities for greater usability Highly customizable reporting capabilities Frequent small releases 	 Chat and chatbot capabilities Advanced analytics and machine leaming Payment wizards Fintech ecosystem Advanced use of biometric security Voice banking • Minimum requirement: Functionalities considered competitive requirement • Competitive differentiators: Functionalities that might not be required by all potential clients but could mean the difference for those banks looking for specific functionality needs • Next-generation functionalities: Ambitious functionalities that could become the standard industry practice within the next few years or could, on the other hand, be completely ignored

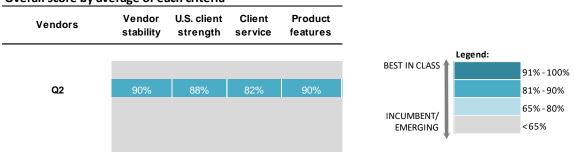
Source: Aite Group

AIM EVALUATION

THE AIM COMPONENTS ANALYSIS

Figure 7 overviews how the vendor scored in the various areas of importance. Each vendor is rated, in part, based on its own data provided when responding to the RFI distributed by Aite Group as well as on product demos and follow-up discussions as part of the AIM process. Ratings are also driven by the examined vendors' reference customers to support a multidimensional rating.

Figure 7: AIM Components Analysis by Heat Map



Overall score by average of each criteria

Source: Vendors, Aite Group

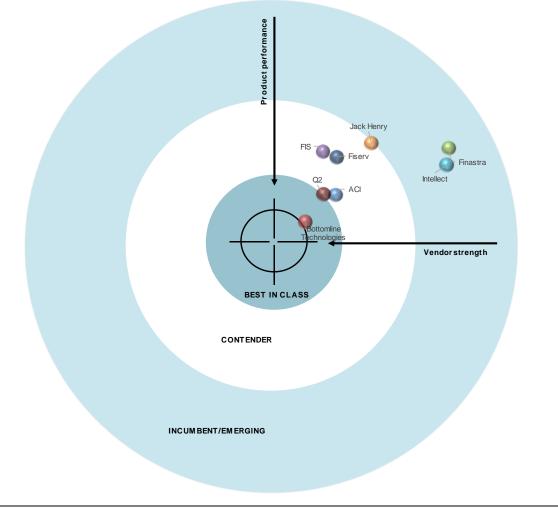
THE AIM RECOGNITION

To recap, the final results of the AIM recognition are driven by three major factors:

- Vendor-provided information based on Aite Group's detailed AIM RFI document
- Feedback from participating vendors' client references and/or feedback sourced independently by Aite Group
- Analysis based on market knowledge and product demos provided by participating vendors

Figure 8 represents the final AIM evaluation, highlighting the leading vendors in the market.

Figure 8: U.S. Cash Management AIM



Source: Vendors, Aite Group

BEST-IN-CLASS VENDOR(S): BOTTOMLINE TECHNOLOGIES, Q2, AND ACI

Bottomline Technologies was the only vendor to fully fall within the best-in-class area of Aite Group's AIM. This vendor scored well in all categories, and as mentioned previously, offers the market a solid offering that is both user-friendly and robust from a functionality standpoint. The vendor's management team actively communicates with clients, and its solution has successfully been deployed by all sizes of banks serving small businesses up to large corporations.

Q2 and ACI also scored very well in our analysis, both landing right on the cusp of the best-inclass category. Q2 is a newer player in the space but has made its mark over the last two years, largely as a result of its strong user experience and ability to quickly build out the necessary functionality to address client needs. Finally, ACI has been a longtime leader in the U.S. cash management space. Its overall score was hurt in part by some clients leaving because it moved its Enterprise Banker offering to mature status, but the vendor seems to be back on track and working hard to correct past issues.

VENDOR PROFILE

Q2

Austin, Texas-based Q2 was founded in 2004 and provides the financial services industry with secure, cloud-based virtual banking solutions. Its sole focus is on the digital banking space, and its offering delivers capabilities to consumers, small businesses, and corporations, all from a single platform and across all customer touch points—online, mobile, tablet, and voice. The vendor has seen tremendous growth over the last few years in both its client base and annual revenue. Its 2017 revenue was US\$194 million, up 29% from the previous year.

Q2's roots are in consumer and small-business banking; however, with the help of critical partnerships with commercially focused banks, it has been able to build out its solution over the last several years to meet the needs of corporate customers as well. For example, it partnered with First Hawaiian Bank for its corporate dashboard, batch FX wires, and information reporting enhancements, and with Trustmark and Apple Bank for same-day ACH, positive pay enhancements, and BAI filtering. These partnerships helped the vendor to more quickly fill some gaps in the development of certain capabilities and to deliver on promises made at client signing. The vendor feels it has filled most of the major gaps in recent months, and it has begun signing on larger banks without development caveats. Requests for new functionality are still being made, but the current offering more closely mirrors market expectations than it has in the past.

Acquisitions have also helped the vendor to build out its solution. Q2 acquired Centrix in 2015 to enable clients to action positive pay from any device. This acquisition also enabled the vendor to implement ACH positive pay recently and give users the ability to set up and modify rules via a mobile device if they choose. Having check and ACH positive pay in a single location is very convenient and was made possible through the Centrix acquisition.

Q2 offers the market two options to meet the needs of business and corporate customers:

- Q2 Business Banking was launched in January 2007 and is the company's smallbusiness banking solution.
- Q2 Corporate Banking was released in January 2015 and is the vendor's cash management solution designed to serve the needs of all sizes of businesses, including the largest. It has more robust and sophisticated functionality than Q2 Business Banking and thus is the product that will be profiled in this report.

AITE GROUP'S TAKE

Q2 offers the market a single digital banking platform and architecture that powers a financial institution's entire digital banking experience across channels and customer segments. As one of the newer players in the cash management space, it has been able to catapult ahead of many of the legacy solutions in the market not only by learning from other providers' mistakes but more importantly by leveraging its knowledge of consumer and small-business usability expectations to build a corporate banking user experience that stands out from much of the competition. Its

sweet spot remains among banks with between US\$1 billion and US\$30 billion in assets, but the vendor is seeing the appeal of its single platform concept moving further upmarket. In fact, Aite Group analysts have seen a noticeable difference over the last year or so in the number of top 70 banks now considering this vendor to be one of their top contenders as they look to replace their current cash management offerings. User experience is undoubtedly the greatest driver for this increased market attention, but the vendor is also beginning to reap the rewards of an aggressive product roadmap and very committed customers that helped it build out its solution over the last several months. The fact that the vendor has successfully filled many of the functionality gaps it once had is making banks far more confident that it can now serve the needs of their cash management customers. Q2 now makes the shortlist of most banks in the market for a new solution and is increasingly winning several of those deals.

Another strength and differentiator for Q2 and its cash management offering is its embedded fraud capabilities, which receive continued investment. The vendor has data scientists on staff, and its built-in security capabilities enable banks to quickly flag potential fraudulent actions early on in the process to increase their chances of blocking them. In addition to leveraging analytics for fraud prevention, Q2 customers benefit from the vendor's recommendations engine to help them quickly spot new opportunities for growth in all channels and identify cross-sell opportunities to improve their institution's bottom line.

BASIC FIRM AND PRODUCT INFORMATION

- Headquarters: Austin, Texas
- Launched: 2004
- Number of employees: Between 900 and 950
- **Ownership and annual revenue**: The vendor generated US\$194 million in revenue during 2017. Between 25% and 50% of the company's revenue is related to its small-business and cash management offerings. More than 15% of company revenue is reinvested in research and development.
- **M&A activity:** Significant M&A activity (over the last three years) has affected Q2's cash management strategy or offering:
 - Centrix: Acquired in 2015, Centrix significantly enhanced Q2's cash management capabilities with enhanced check positive pay, ACH positive pay, and account reconciliation capabilities. Further, the Centrix Payments IQ product provides Q2 cash management users with ACH aggregation, automation, and risk management reporting.
 - Social Money and Unbill: Acquired in 2016, Social Money and Unbill provide the foundational technology assets for the Q2 Open business unit. Q2 Open provides API technologies that enable banks, credit unions, or fintech companies to build deposit and payment products. Through Q2 Open, customers are able to build custom solutions or buy Q2-built solutions to get to market faster. Q2 Open consists of CorePro (a financial-institutioncompliant, cloud-based deposit platform for accounts and debit cards) and

Biller Direct (a next-generation payment platform that empowers data aggregation, presentment, and card payments).

- Name of primary cash management solution: Q2 Corporate Banking
- Target customer base: The target market for Q2 Corporate Banking is categorized by asset sizes: Tier-1 (US\$5 billion to US\$90 billion in assets), Tier-2 (US\$900 million to US\$5 billion), and Tier-3 (US\$900 million and below).
- Number of U.S.-based clients: Approximately 350 banks and credit unions run Q2 Business Banking, and 143 run Q2 Corporate Banking, 6% of which (nine) have greater than US\$9 billion assets. Below is a breakdown of Q2 Corporate Banking clients by asset size:
 - Top four banks: None
 - Super-regional banks (greater than US\$100 billion in assets): None
 - Regional banks (US\$9 billion to US\$100 billion in assets): Nine
 - Small banks (US\$5 billion to US\$9 billion in assets): 13
 - Community banks (less than US\$5 billion in assets): 100
 - Credit unions: 21
- Number of new cash management clients: Q2 averages about 25 new cash management client wins per year. (These numbers only include new solution deployments and not the addition of new modules or migration from another cash management solution offered by this vendor.)
 - 2016: 20 banks and six credit unions
 - 2017: 28 banks and 10 credit unions
 - First half of 2018: 19 banks and three credit unions
- Percentage of total U.S.-based cash management clients that have deployed its full cash management suite (not just one or two modules such as ACH or wires): Approximately 68% have deployed the full suite. Q2 offers a Corporate Lite package that does not include all cash management functionality. Forty-two of 143 cash management customers have purchased the Corporate Lite package.
- **Global footprint**: Q2 does not sell its cash management platform outside the U.S.
- Implementation options: Q2 Corporate Banking is deployed as ASP/on-demand.

KEY FEATURES AND FUNCTIONALITY BASED ON PRODUCT DEMO

• As mentioned previously, Q2 has worked closely with several of its large clients to fill gaps in its cash management offering. One such enhancement is its new information reporting landing page, which offers more options for running reports from the landing page and better search capabilities.

- Several features within the solution provide end users with fast access to the information they need most often. For example, a favorite reporting tool allows users to simply color a star (by clicking it) to designate a favorite. Favorites are brought to the top of the list on the landing page but not the main login landing page, which the vendor is working on.
- The solution also offers lots of wizards throughout, including one for uploading files with the ability to easily save file mapping. Even though APIs will eventually replace file mapping, it hasn't happened yet; until then this capability is more user-friendly than what has been observed in other offerings.
- As mentioned previously, embedded fraud capabilities within the Q2 platform are a key differentiator for this vendor and its offering. Q2 Secure provides an array of fraud prevention and mitigation tools built natively into the Q2 platform. This includes multifactor and out-of-band authentication as well as the Centrix Payments I.Q. System (PIQS), which provides ACH activity reporting and ACH file validation. Q2 Sentinel leverages bank users' transactional and behavioral data to identify and halt suspicious transactions in real time, before they are completed. Finally, Q2 Patrol monitors user actions and presents an in-session identity-validation prompt when certain high-risk activities, including changes to alert delivery options or profile information, are attempted during a session that has been rated as potentially fraudulent.
- Q2 Smart is an analytics and data-science-driven recommendation engine that integrates seamlessly with Q2 Corporate Banking and leverages the behavioral analytics modeling of the Q2 Sentinel security product to help guide a financial institution's messaging efforts for greater growth and cross-sell opportunities.

SOLUTION USABILITY

- While the vendor has made a lot of functionality enhancements to its offering over the last few years as it played catch up in some instances and tried to introduce new innovations to the market, it never lost sight of customer experience, at which it excels. A system usability scale score is analyzed for every new capability added to the solution.
- Q2 Corporate Banking has a lot of great features to enhance user experience. For example, it offers a lot of proactive messages throughout a user's digital experience to better inform the user about transaction errors. Another example is the ability to view USD conversion rates for international wires made by U.S.-based customers.
- The modern user interface and drag-and-drop capabilities throughout the solution are especially slick.

MOBILE BANKING CAPABILITIES

• Q2's mobile offering is homegrown. It offers all the critical mobile capabilities most banks are currently asking for, including payment approvals, initiation, positive pay decisioning, mobile capture, password reset, and out-of-band security. It supports

both mobile browsers and native apps on devices running Apple iOS, Google Android, and Windows.

TOP THREE AREAS OF FOCUS FOR ENHANCEMENTS OVER THE LAST SIX MONTHS

As the provider of a newer solution to the market, Q2 is still filling functionality gaps while ensuring that it maintains its strong user experience. The following enhancements were recently made to its platform:

- Enhanced payment capabilities:
 - Payment workflows redesigned based on usability testing
 - ACH file mapping for support of external file formats
 - Additional ACH SEC code support (WEB and TEL)
 - Cross-border payment capabilities and support, including FX
 - Advanced ACH payment expansion, including support of same-day ACH debits and credits
 - EFTPS tax payment addenda service for quick time-to-market loading of new or edited tax payment formats at the U.S. federal and state level
- Integration of acquired solutions:
 - Deep integration of Centrix technology assets to allow for mobile-friendly, multiscreen check, ACH and reverse positive pay, full and partial account reconciliation, and holistic ACH activity reporting and alerting

KEY NEW FEATURES/FUNCTIONALITIES TO BE ADDED TO THE SOLUTION OVER THE NEXT SIX TO 12 MONTHS

- SUS-based usability improvements in information reporting
- Advanced ACH origination and transaction management, including reversals, CTX origination, and wage garnishment
- Creating unique views and experiences tailored to an individual company's digital banking needs
- Expanding file import capabilities, including supporting the creation and editing of templates

API STRATEGY

 The Q2 Caliper SDK offers Q2 customers the same tools that Q2 has used internally for more than seven years as well as access to the Q2 Dev Environment on a full stack of the Q2 platform, the full set of Q2 Caliper APIs, training, certification, code review and deployment, tech support, and more. It is more than just documentation and code samples—it is intended to be a robust developer community where ideas, support, and prebuilt customizations are freely shared between Q2 developers, financial institution developers, or even outsourced development shops in a financial institution's local community.

 Business system gateway architecture already exists that will connect the Q2 system to a library of business systems such as SAP or Oracle, Stripe, or Salesforce.com. The ultimate goal is to help banks continue to move upmarket and retain or attract the business of large corporations as customers grow. This is in proof of concept today, and the vendor is working to determine and identify use cases. The architecture is there, but solutions and integration are being worked on for early 2019 availability.

CLIENT FEEDBACK

Q2 clients describe Q2 Corporate Banking as having a flexible and modern architecture with a strong user experience. One bank noted that the solution's intuitiveness and thoughtful navigation enable new users to get up to speed quickly without training. This provides a competitive advantage over bank competitors running more dated solutions with complex workflows. Clients also comment that service and support are good. The vendor is quick to get back to them, and upgrades and new releases are going smoother than in the past.

The management team also scores very high grades from Q2 clients who state the vendor is very transparent and willing to listen, solicits feedback, and implements client suggestions. It has monthly user group meetings, and executives get together in person with clients once a year. While some of the beta clients admit that a lot of the troubleshooting burden has fallen on the banks, they believe it is a more than fair tradeoff, given the large influence they have had over the solution roadmap.

Most clients believe solution functionality has improved a great deal over the last year, with several now believing the solution sufficiently meets most of their customers' needs. While more capabilities can certainly be added, they feel the largest gaps have been filled and that most needed enhancements going forward are more about building out some of the current functionality to bring it to the next level, as opposed to designing brand new modules. However, a few noted some challenges when serving their largest customers. Those institutions would like to see further enhancements to reporting and state that their customers sometimes struggle from a lack of ad hoc report capabilities and say that some reports are not yet up to NACHA standards. Another wish list item is for the system to more easily push information, such as daily feeds, to clients.

While the feedback is mostly positive, clients would like to see Q2 watch out for a few things. As its client base quickly grows, some of the early adopters that enjoyed a great deal of input into the solution's early design are starting to feel as though most new enhancements are being driven by new customers and that the vendor is at risk of not taking an independent look at the roadmap to ensure that all market needs are being met. A growing client base also puts strain on a vendor's staffing and could start to affect service. However, while there are certainly challenges associated with being an early adopter or beta tester of a relatively new solution, most Q2 clients feel the benefits outweigh the costs.

Strengths	Challenges
The great user interface makes its solution stand out from many competitors.	Some capabilities, such as reporting, need to be further built out to meet the needs of larger corporations.
It offers embedded fraud capabilities within a single-platform multidevice architecture.	Some clients feel most new enhancements are being driven by new clients and want to see the vendor take more of an independent look at market trends.
Because of growing momentum and brand awareness due to a strong user interface, Q2 is now regarded as one of the leaders in the space.	

Table B: Key Strengths and Challenges—Q2

Source: Aite Group

ADDITIONAL AWARDS

This section includes some additional awards in areas banks often consider when selecting new vendor partners.

BEST USER EXPERIENCE: Q2

While many of the vendors profiled in this report have made significant enhancements to their user interfaces over the last couple of years, Q2 continues to stay slightly ahead with overall usability and bells and whistles. Its superior user experience is largely what has enabled this vendor to grow its brand in the cash management space so quickly and make the shortlist of most banks looking for a new solution.

THE VENDOR TO WATCH AWARD: Q2, INTELLECT, AND JACK HENRY

There is a three-way tie in this category between Q2, Intellect, and Jack Henry. While each vendor is receiving the award for a very different reason, Aite Group believes the marketplace should keep an eye on all three vendors, as each has the potential to surprise the market over the coming months.

• Q2: Q2 has made its mark in the cash management space over the last couple of years. Just a short time ago this vendor only played in the consumer and small-business banking spaces. It now makes the shortlist of most banks looking for a new cash management solution, largely due to its superior user experience. Its brand and reputation as a strong contender continue to grow. If the vendor keeps investing in new functionalities it will likely move even further upmarket with new bank wins.

CONCLUSION

Banks:

- The number of banks replacing their cash management solutions is on the rise. Those banks continuing to run legacy systems risk looking dated and out of touch with new customer expectations.
- When selecting a new vendor partner, don't just consider functionality and intuitive workflows. Vendors should also demonstrate knowledge of key market trends, a clearly thought out and communicated roadmap, and a culture that aligns with that of the bank.
- Work with technology partners to better understand your bank's goals beyond traditional banking capabilities. As vendors look to build out their fintech ecosystems, they will be looking for input form their clients.

Vendors:

- For the more established vendors, functionality is important, but user experience is most critical to banks and thus should represent the greatest share of new enhancements. Newer vendors must continue filling in gaps and demonstrating an ability to meet the needs of businesses of all sizes.
- Banks are attracted to vendors that are able to demonstrate knowledge of industry trends and the ways in which bank customers will leverage their platform. Sales demos should walk bankers through persona-driven workflows and day-in-the-life scenarios as opposed to traditional methods of demonstrating capabilities on a module-by-module basis.
- Be sure to stress your solution's ability to enable customization without changes to code. Banks have paid the price for high levels of customization in the past and now want offerings that more easily enable them to take advantage of new releases and upgrades.
- Adopt agile development methodologies and strive for smaller, more frequent releases and service packs, as opposed to larger and less frequent releases once or twice a year.
- Focus greater attention on incorporating machine learning and fintech company ecosystems into your offering as differentiators.

RELATED AITE GROUP RESEARCH

Banks' Readiness for B2B Real-Time Payments, May 2018.

U.S. Cash Management: Why 86% of Corporate Banks Are Upgrading, May 2018.

Payments Hubs: What Are They and Why?, March 2018.

Global Payments Regulation, 2018: From Compliance to Innovation, February 2018.

Creating the User Experience Your Cash Management Customers Expect, September 2017.

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