ASSOCIATION FOR FINANCIAL PROFESSIONALS

AFP® PAYMENTS GUIDE

APIs: The Search for Ubiquity and Standardization

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APIs: The Search for Ubiquity and Standardization

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Emerging financial technologies are impacting businesses at a rapid pace. For banking and the payments process, fintech applications are making it easier and more efficient for Corporate Treasurers to obtain a holistic view of their financial situation and manage their working capital.

The application programming interface (API) is a technology protocol that has the ability to transform communication of financial data between companies and banks. As APIs are starting to permeate financial services, it is essential that CFOs and Corporate Treasurers have the latest information to inform their decision-making in this evolving technology environment.

To address this need, MUFG Union Bank, N.A. is pleased to sponsor our seventh AFP Payments Guide titled *APIs: The Search for Ubiquity and Standardization*. This guide outlines the potential roadblocks for success as well as the opportunities that APIs can bring to payments and key stakeholders.

We would like to thank the AFP for its leadership in educating readers of this guide on the impact that APIs are having on payments by providing information to meet their client and partner needs. MUFG Union Bank is proud to support the AFP in providing educational resources to financial professionals and to serve as the sponsor of the AFP Pinnacle Awards that spotlight innovation in treasury and finance.

Best regards,

INTRODUCTION

Application programming interfaces (APIs) are emerging as the key to improving payments between corporates and banks. And with new initiatives like the Revised Payments Services Directive (PSD2) in Europe, APIs are quickly infiltrating the psyche of businesses around the globe. But without standardization, APIs cannot be as effective as they need to be.

This AFP Payments Guide, underwritten by MUFG Union Bank, will explore why APIs can and will be so useful for corporate treasury professionals. It will also delve into why API standards are a necessity—and how a number of prominent players in the payments space are working to make them a reality.

> "By using APIs or an API-based service, a corporate treasurer could gather the financial information from their various banks into one location, and thereby get a holistic view of the company's financial situation."

2 WHAT IS AN API?

What is an application programming interface (API), and why should treasury professionals care? An API is a technology protocol that allows for disparate software programs to communicate with one another. Broadly speaking, APIs help programmers build better software applications. One popular API is the Google Maps API that lets developers easily embed Google Maps on web pages.

In the case of financial services, APIs are the key to open banking. Open banking is the process of sharing customer data between financial institutions and third parties in a secure way, with customer consent. This communication is done through APIs that allow third-parties to access that information. In doing so, greater transparency and competition can be achieved within the financial services infrastructure.

"For the past couple of years, the term fintech has become mainstream," said Magnus Carlsson, AFP's manager of treasury and payments. "As the API is a new technology that can be used as a method of communication of financial data, and can be leveraged by various stakeholders, it fits in with this term very well. Because of its capabilities of capturing financial data from different sources, APIs could present many potential use cases in the financial services space."

This in turn provides opportunities for corporate treasury, Carlsson noted. "By using APIs or an API-based service, a corporate treasurer could gather the financial information from their various banks into one location, and thereby get a holistic view of the company's financial situation," he said.

APIs also have the potential to move corporates beyond the batch process for payments, eventually allowing for a real-time connection. "A common complaint for treasury teams has been that they want real-time visibility of banking activity within their cash and treasury management platforms," said Bob Stark, vice president of strategy for Kyriba. "APIs offer the opportunity to make intraday reporting into real-time reporting."

The thirst for this information varies among organizations. But oftentimes banks will only offer first and second presentment in their intraday reporting. For treasurers to check on particular transactions, they may have to actually go into the bank portal because the bank isn't providing that visibility quick enough via BAI or MT reporting. But API connectivity will offer more, once banks are in a position to leverage its potential. Eventually, APIs will provide treasurers with instant visibility into their payment conformations and eBAM processes.

3 OPEN BANKING INITIATIVES

A number of initiatives have been launched over the past several years that have brought APIs to the forefront. Some of these endeavors are centered on APIs themselves, while others apply them as a critical component to achieving a goal.

PSD2

The use of APIs in treasury is a fairly recent development, largely following the adoption of the EU Directive, the Revised Payments Services Directive (PSD2) by the European Commission, which went into effect in Europe a year ago. The directive's goal is improving competition in banking and payments in the European Union. But since the implementation, APIs have begun to find their way into corporations and banking outside of Europe.

"PSD2 mandates that banks open up their platforms through APIs to payment services providers and account information service providers to be able to initiate payments or provide account information," Stark said. "That's where it all started; it forced banks to publish APIs and connect to technology providers that want to specialize in initiation and delivery of payments. Many expect this will open the door to new ways of sending payments."

Similar open banking initiatives have also arisen in other regions.[1] In the UK, the Competition and Markets Authority directed nine banks to allow their customers to share their data with other banks and third parties. In Australia, the four major banks are slated to begin to sharing information with other financial services providers next year as part of a government mandate. And in Japan, regulators have been taking cues from Europe and have amended the Banking Act, requiring at least 80 banks to open their APIs by 2020. Hong Kong, Singapore and Mexico have also embarked on API initiatives.

As for the United States, it is unlikely that there will ever be a mandate like PSD2. Nevertheless, U.S. banks have begun to migrate towards open banking, as it presents significant opportunities for them. As Carlsson explained in a 2018 article, "there do seem to be some indications that U.S. banks are already realizing that this trend would actually open up not only their data, but potentially also new business opportunities."

Open banking also presents opportunities for corporates; Carlsson noted that if corporate customers grant them permission to use their bank account details and receive the payment straight from the customer's bank, they could bypass intermediaries. "In other words, this could mean that corporates could get paid directly, and potentially much cheaper," he wrote.

SWIFT GPI

SWIFT's global payments innovation (gpi) initiative, which went live in early 2017, relies on APIs to provide banks' corporate customers with faster, more transparent and traceable cross-border payments. A special tracking feature provides treasurers with a real-time view of their transactions, which includes confirmations when payments are credited to recipients' accounts. Additionally, gpi's transparency ensures that remittance information is transferred unaltered to recipients.

"The tracking service is a cloud-based service which uses ISO 20022 APIs to reach all the banks in the chain," said Harry Newman, global head of banking of SWIFT, during a conference session on gpi. "It enables you to track, end-to-end, a transaction."

At the same session, Todd Roberts, senior vice president of enterprise innovation for CIBC stressed the importance that corporate treasurers place on visibility. "Corporates expect greater certainty and information about the transaction," he said. "Greater information about the process is unquestionably important to them in terms of how they manage their business."

Of course, like anything, adoption of gpi will take some time. Roberts believes the biggest barrier to corporate adoption is the complexity of integration. To that end, SWIFT and its bank network need to have an eye on connectivity between parties, using efficient, modern infrastructures like APIs to facilitate that connectivity.

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[1] API Standardization – Shaping the Financial Services Industry https://www.nacha.org/news/api-standardization-industry-group-releases-white-paper-outlining-groups-approach-progress-and

NACHA

In the United States, no organization has been more proactive on APIs than NACHA. Over the past year, the payments organization has made major strides in furthering the progress of API standardization.

In a recent whitepaper, NACHA made the case for standardization, noting that banks currently use "disparate and customized formats to share information, employing different nomenclatures for common terms and processes. Without standardization, every time a developer tries to create or update an app, changes to that app will be required to interact with each bank. With standardization, a developer could design and implement one app that would interact with countless banks without needing modifications."

NACHA noted that if 1,000 banks enable a common service using 1,000 different APIs, that's far from efficient. Thus standardization— and standardization with the proper governance—is a "critical component to ensure consistency, compatibility, effectiveness, sustainability and interoperability."

Accenture partnership

NACHA's API Standardization Industry Group (ASIG) joined forces with Accenture at the beginning of 2018 to put together a community of resources to support API standardization across the U.S. payments system. These resources include developer tools, training materials, product blogs, articles and code samples, all of which can help the financial services industry

> " "This initiative will support next-generation market innovation, new operating efficiencies for industry participants and better experiences for retail, corporate and internal industry users."

develop solutions through collaboration. As U.S. financial services firms work to improve the digital experience for their corporate customers, APIs will become increasingly important.

Prior to the Accenture partnership, ASIG had identified 16 APIs that it sees having an immediate impact on the payments ecosystem and the financial services industry these were divided into three categories: fraud and risk reduction, data sharing and payment access. ASIG and Accenture focused on five of those APIs to start.

"To foster adoption, drive innovation and simplify integration of the APIs we've identified, we felt it was critical to offer the payments ecosystem tools to educate, develop, test and provide feedback," said George Throckmorton, managing director for NACHA. "By partnering with Accenture, we're able to offer business and technical resources via a digitally enabled platform with all the tools needed for successful deployment of APIs."

Conrad Sheehan, a managing director in Accenture's payments practice, added that this resource will help the industry pivot toward more open and interoperable

banking. "This initiative will support next-generation market innovation, new operating efficiencies for industry participants and better experiences for retail, corporate and internal industry users," he said.

Carlsson noted that API technology is making more and more inroads in the payments industry, but standardization is a key challenge. Therefore, collaboration like the NACHA/Accenture joint venture will be critical for the development of solid standards.

Shortly after the partnership was announced, 2018, ASIG launched an online community in collaboration with Accenture and Google to support the development and adoption of standardized APIs across the financial services industry.

The online community allowed industry stakeholders to access information, tools and resources, as well as test standardized APIs. Throckmorton called the launch "a big step forward" in the effort to further API standardization. "Through this resource, we hope to further development efforts, foster adoption, and support deployment—all in an effort to better meet the evolving needs of the financial services industry," he said.

> "Account validation for billers, corporates and anyone who is originating ACH transactions and even other payment types has been a high priority. How do I eliminate administrative returns that I get from the account number being incorrect? How do I validate before I initiate a payment? There are many options for account validation today, including the ACH network, but this is an opportunity for us to standardize how those work."

Standardized APIs

Coinciding with the launch of the online community was the release of two standardized APIs for testing. The first was ASIG's *Account Validation* API, which helps to ensure that bank accounts are valid and payments are posted as desired.

"Account validation for billers, corporates and anyone who is originating ACH transactions and even other payment types has been a high priority," Throckmorton said. "How do I eliminate administrative returns that I get from the account number being incorrect? How do I validate before I initiate a payment? There are many options for account validation today, including the ACH network, but this is an opportunity for us to standardize how those work."

Throckmorton added that if a corporate wanted to validate all of its accounts across the United States or globally, it would be a huge advantage to have one standard implementation. "I wouldn't have to choose for each one and rebuild from scratch," he said. "That is one of the benefits of standardization."

ASIG also launched the *Get Bank Contact Information* API, which allows originating financial institutions to find and alert the appropriate individuals at the receiving banks of potential fraud. Throckmorton noted that while this API is for bank use, it can benefit corporate treasurers as well. "Imagine a corporate calls their bank and says, 'I think I've had fraud occur on the account.' So an investigation ensues and yes, there has been fraud. The first thing that needs to happen is to contact the financial institutions where that money has gone to, so it doesn't go down the mule accounts and can't be recovered," he said.
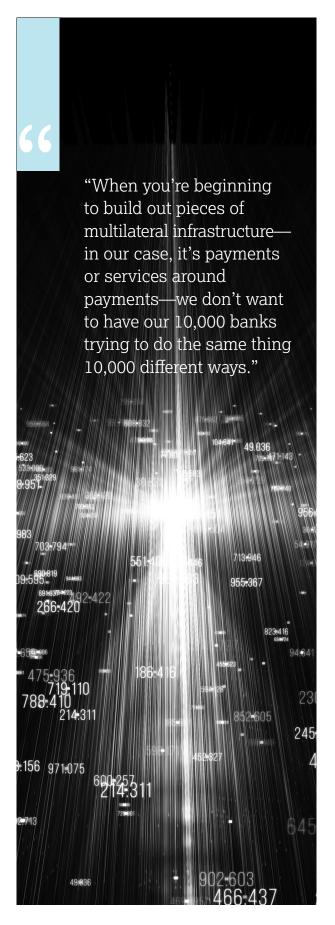
Throckmorton noted that in today's environment, that process is very manual. But with a standardized API, the process is simplified. "One system talks to another, and the phone number is laid right in front of me so I can call that bank and stop those funds," he said.

Out of the initial 16 APIs that NACHA had identified, *Account Validation* and *Get Bank Contact Information* were selected to be the ones released first because they were seen as potentially having the biggest immediate impact. The group is exploring proof-of-concept adoption projects with a number of global organizations to test and validate the APIs.

"Industry engagement is a key component to our continued success," Throckmorton said. "From participation to testing to adoption—it is all important. This engagement, coupled with structured and transparent governance, will help ensure an effective development and API lifecycle to support standardization into the future."

Carlsson commended ASIG for using APIs to address significant pain points for both corporates and financial institutions. "The standardization of APIs for the financial industry is going to be vital going forward, and these two areas are a great start," he said.

Sheehan stressed the importance of API standardization. "When you're beginning to build out pieces of multilateral infrastructure—in our case, it's payments or services around payments—we don't want to have our 10,000 banks trying to do the same thing 10,000 different ways," he said.

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This also applies to corporate treasury, Sheehan noted. Simply put, treasury departments with banking partners all over the world don't want to have to interact differently with each one, especially when each bank is essentially providing the same services. "So can we begin to establish standards around essentially noncompetitive services, so that we can all write the same code, test the same way and move it into production the same way?" he asked.

Sheehan also provided some insights on why Accenture specifically wanted to partner with NACHA for this initiative. "With NACHA, a rulemaking body at the center of the ACH network and indeed the payments industry in the United States, we could envision needed services that all banks have around the payment network," he said. "So why don't we begin to establish a set of capabilities around APIs that begin to drive out some standards, so that every bank, large and small, will begin to write and perform the same services, the same way."

Sheehan used the *Get Bank Contact Information* API as an example of how standardization can make the entire system run more efficiently. "If I don't know who the contact at the receiving bank is, I may have to Google it and find out. I might get a 1-800 number," he said. "Wouldn't it be a lot faster and more efficient if I could simply invoke an API to get that information? And if we do it all the same way, we have the scale economies that are inherent in a network.

IFX Forum

Just a few weeks after ASIG announced its partnership with Accenture, the NACHA group revealed that it was also teaming up with the Interactive Financial eXchange (IFX) Forum to further the development of standardized APIs.

ASIG began working directly with the IFX Open Banking APIs Working Group and set its sites on a lofty goal— global AFP standardization. ASIG's aim was to create an "API Playbook" that would serve as a tool to assist banks, fintech companies and other payments industry stakeholders in the creation of a standardized API ecosystem.

Carlsson called the NACHA/ IFX partnership "a powerful collaboration that has the potential of getting things moving in the standards field."

IFX Forum President Richard Urban noted that both organizations share common interests. "The IFX Forum and NACHA combination will enable natural and timely alignment that is synergistic and healthy for all members from a technical and business perspective," he said.

AFINIS

In the fall of 2018, NACHA took the next step in its push for API standardization with the launch of a new organization and three new APIs that could benefit corporate treasury functions.

The ASIG and IFM partnership is now known as Afinis, a membership-based organization that supports long-term standards and adoption. According to NACHA, Afinis is a collaborative venue for developing API products for financial institutions, technology providers, businesses and governments.

Janet Estep, president and CEO of NACHA, called API standardization "critical" for the financial services industry to achieve its full potential. "Afinis is a membership-based organization that collaborates openly with groups from around the world to share learning, reduce duplicative efforts, and create and adopt standards that lessen friction and improve the ability to bring innovations more quickly to market," she said.

Afinis stakeholders will work together to:

- Broaden the use of standardized APIs in the United States and globally
- Develop an environment that supports the discovery, testing and adoption of standards
- Support decision-making on technologies, standard lifecycles, and user terms
- Leverage NACHA's core competencies to develop and maintain rules and standards
- Engage with other standards bodies, countries, and market infrastructures to achieve interoperability, and develop relevant guidelines
- Support the IFX standards user community to foster better awareness and adoption.

"Standardization is so important and this development is very encouraging, especially since it is being done at a fairly early date for APIs," said Magnus Carlsson, AFP's manager of treasury and payments. "To fight fragmentation in API technology development is good news. Standardization at an early stage prevents having to reinvent the wheel later on."

Standardized APIs

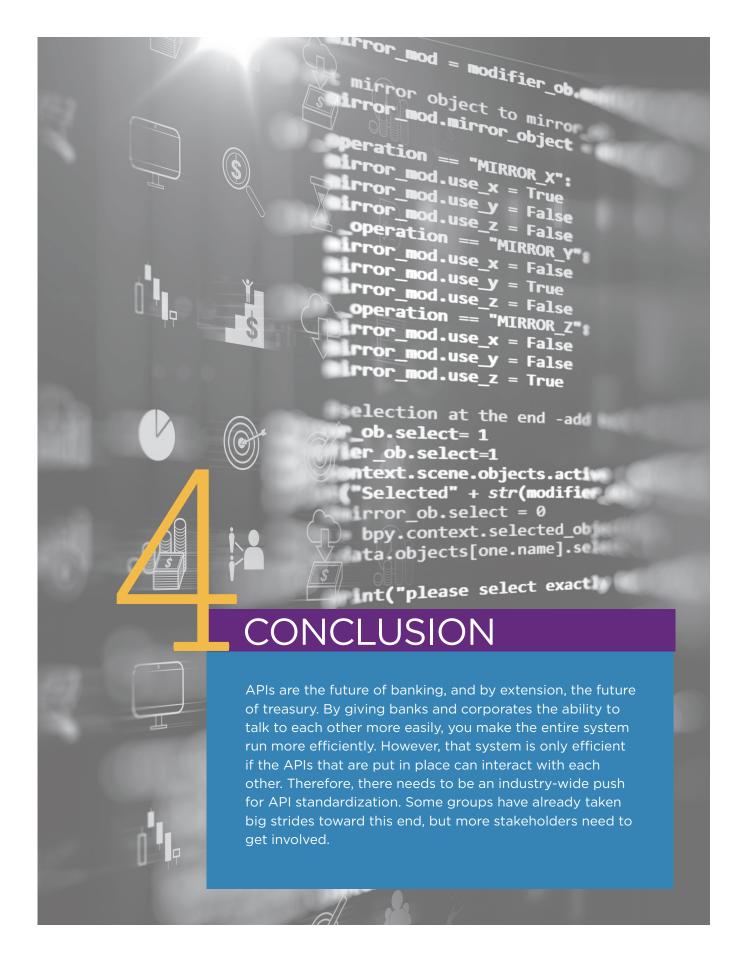Afinis has already revealed three new standardized APIs that it is developing.

Get Transaction Status: This API allows an originator or originating depository financial institution (ODFI) to check the status of a submitted payment instruction to verify that funds were deposited to or withdrawn from a receiving account.

B2B Payments Interoperability: Businesses want to be able to make B2B payments without multiple enrollments or needing to learn multiple systems and formats. This API allows companies to obtain correct payment information and remittance requirements to pay other companies via ACH.

Originate ACH Payment: This standardized API enables businesses to submit ACH payment instructions without needing to access multiple systems and track scheduling. This provides companies with more consistency across banking relationships, improved reporting capabilities and access to faster payments.

Joining Afinis

Afinis' membership is comprised of thought leaders and technologists from multiple sectors, including financial institutions, solution providers, businesses, government agencies, and nonprofits. Members will be able to influence the governance lifecycle of standardized APIs. Afinis welcomes new members; interested parties can learn more here.

4 CONCLUSION

APIs are the future of banking, and by extension, the future of treasury. By giving banks and corporates the ability to talk to each other more easily, you make the entire system run more efficiently. However, that system is only efficient if the APIs that are put in place can interact with each other. Therefore, there needs to be an industry-wide push for API standardization. Some groups have already taken big strides toward this end, but more stakeholders need to get involved.

KEY TAKEAWAYS

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SWIFT gpi relies on APIs to provide banks' corporate customers with faster, more transparent and traceable cross-border payments.

1

APIs are technology protocols that allow for disparate software programs to communicate with one another.

4

NACHA sees API standardization with the proper governance as a critical component to ensure "consistency, compatibility, effectiveness, sustainability and interoperability."

2

The use of APIs in treasury is a fairly recent development, largely following the adoption of PSD2. The directive's goal is improving competition in banking and payments in the European Union.

5

NACHA and IFX Forum have launched Afinis, a new organization that focuses on API standardization, as well as three new APIs that could benefit corporate treasury functions.

About the Author

Andrew Deichler is the editorial manager for the Association for Financial Professionals (AFP). He produces content for a number of media outlets, including AFP Exchange, Inside Treasury, and Treasury & Finance Week. Deichler regularly reports on a variety of complex topics, including payments fraud, emerging technologies and financial regulation.

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