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Make it happen

Whitepaper

A new frontier in **Transaction** Banking

Unlocking the value of Open API Technology

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Executive summary

The COVID-19 pandemic has accelerated the ongoing digital transformation within corporates. This has also forced treasurers to digitise their business operations and look for digital solutions in the market. Traditional digital channels are poorly equipped to handle realtime, on-demand access to data and other digital capabilities. Open API technology is enabling real-time data accessibility to meet ever-evolving treasury needs in the digital era.
Open APIs provide opportunities across all domains of treasury services, including embedded finance opportunities to enhance the customer experience. APIs can simplify and improve how treasurers work together with their transaction banks in terms of:

1. Digitisation and automation of processes
2. Fast and flexible integration to systems
3. Centralisation and embeddedness of bank connectivity (multi-banking)
4. Real-time and on-demand information to support data-driven decision-making
5. Self-service bank account management
6. Enabling transformational solutions

In this context, emerging API use cases in transaction banking include Payments, Reporting, Electronic Bank Account Management (e-BAM), Liquidity Optimisation, FX and Risk Management as well as Financing (Lending, Trade Finance, Supply Chain Finance).

Accelerated by regulatory developments such as PSD2, API-enabled products and services have been primarily focused on the retail segment. However, the use of Open API technology in transaction banking is gaining traction. This is evidenced by corporates increasingly buying into leveraging Open API technology to improve their treasury operations.

Although APIs are likely to play a growing role in shaping 'real-time, on-demand treasury', APIs have no intrinsic value. API-based connectivity needs to provide real value-add compared to traditional connectivity channels. For transaction banks to have a right to play in this value space, they first need to future-proof their IT infrastructure and operating model. Next, they need to understand customer pain points and translate those into value-added propositions beyond payments and reporting. A seamless API onboarding process and solid developer experience are two hygiene factors for the adoption of APIs and thus for the success of transaction banks in this space.

As a result, API partnerships are essential for the go-to-market approach and to increase the adoption of APIs at scale. API connectivity needs to be secure and flexible to ensure trust in digital ecosystems. API standardisation could further boost the adoption of APIs at scale.

As treasurers form an integral part of the API ecosystem, they need to address various internal considerations by identifying current pain points (e.g. in infrastructure and digitisation) and formulate a vision for real-time treasury enabled via APIs. The new frontier in transaction banking will be tackled successfully when corporates, transaction banks and technology partners work together.

Preface by RBI

What makes transaction banking – and cash management in particular – so fascinating is that it has been rapidly evolving from the start, and will continue to do so. This is true both for new products and for the reinvention of underlying infrastructures.

Open application programming interfaces (APIs) are key facilitators of data exchange and enable realtime visibility, instant initiation, and processing, as well as intelligent banking. APIs are clearly gaining traction, with specialised corporate offerings increasing across various aspects of the treasury area.

They are attracting growing attention on the consumer side as well; corporate and institutional customers are increasingly interested in bank APIs. Even though customers are to some extent still content with traditional channels and products, they are also beginning to see the added value of APIs and are intensifying their efforts to explore the technology. In other words, the corporate API market is still immature, but it is growing rapidly, and leading banks are now stepping in and setting the pace. It is crucial to enforce the digitisation and automation of manual processes, including the automation of various paper-based/manual workflows like onboarding and KYC processes. One general trend is that treasurers are seeking to manage all their bankrelated treasury jobs across multiple banks in a single system/application ('one-stop shop'). This multi-bank approach can also be reinforced by APIs.

The clear vision is to transform from operational treasury to strategic (real-time) treasury functions. Classical bank account management needs to be reinvented by dynamic balance sheet management, while the management of bank relationships needs strong acceleration via ecosystem partners like ERPsystem providers.

We are looking forward to unlocking API benefits for our customers, allowing us to support them even better in their daily operations. We hope you will find this an interesting read and we look forward to receiving your feedback!

Sabine Zucker
Head of Trade Finance and Transaction Banking
Raiffeisen Bank International

Susanne Prager
Head of Group Cash Management
Raiffeisen Bank International

Preface by INNOPAY

Corporate Treasury does not operate as an island; it interacts with – and is supported by – a complex ecosystem that surrounds it. Transaction banking plays a crucial role within this ecosystem. As a result, transaction banks are continually innovating to enable corporate treasurers to leverage industry developments.

One of these developments – which will be further elaborated in this paper – is Open API technology as an enabler for 'Banking as a Service'. It is a driver for changing business models, the rising importance of corporate sustainability (ESG) and value creation in digital ecosystems, all of which are topics at the top of the strategic agenda.

Transaction banks and corporates alike are exploring what Open API technology and 'Banking as a Service' can mean for their business and operating model. It is time to look beyond the legacy way of working since no one can afford to get left behind in the rapidly evolving digital ecosystems that 'embed' financial products and services at the point of relevance.

APIs – as a complement to traditional connectivity channels – have the potential to transform the way corporate treasurers consume products and services from their banks. Efficient API connectivity could help treasurers address their priorities in real-time, on-demand cash, liquidity, and risk management. Additionally, it could help to streamline and potentially automate processes that typically create major operational overheads for treasurers, such as electronic bank account management (eBAM) and Know Your Customer (KYC).

There could be no better time to publish this report to share our mutual experiences with Raiffeisen Bank International regarding the evolving API landscape, including API strategies & roadmap development, digital partnership modelling and actual API implementation.

I hope you will enjoy reading all about it!

Mounaim Cortet
Director & Country Manager DACH
INNOPAY

1. Introduction

The COVID-19 pandemic has accelerated the ongoing digital transformation within corporates
In the past two years, the COVID-19 pandemic has brought challenging times for corporate treasurers. When the first wave hit economies across the globe, treasurers were focused on gaining quick access to the company's liquidity situation, stabilising working capital and supply chains, and forecasting cash flows. Additionally, many corporates have changed their business models to accommodate new digital distribution and sales channels in a trend towards direct-to-consumer models.

This has also forced treasurers to digitise their business operations and look for digital solutions in the market
This drove a dramatic shift in corporate treasury, with access to real-time data and the ability to respond to market developments as fast as possible becoming crucial business enablers. Furthermore, the digital transformation does not stop at treasury departments. The pandemic has shown the importance of digital workstations for treasurers, and the shift towards direct-to-consumer models has increased the appetite for innovative digital payment and collection solutions.

Traditional digital channels are poorly equipped to handle real-time access to data and other digital capabilities
Against this backdrop, many treasurers have realised that there is a mismatch between how digital transaction banking services are provided today and their actual need for real-time information on cash flows and digital payment methods, or the ability to remotely manage bank accounts and cash pools. Currently, accessing and integrating banking data, products and services is mostly based on traditional legacy channels such as host-to-host connections with SFTP, regional protocols (e.g. EBICs) or networks (e.g. SWIFT) which are now known to have shortcomings.

Firstly, it is a complex, lengthy, rigid and costly project to integrate bank services with these traditional channels. Additionally, these channels rely on manual processing of data files in batches, creating cumbersome manual work within the corporate to gather financial data from multiple banks, match different payment formats or change bank account settings. Data is mostly presented in hindsight (D-1) and it can take multiple days to process transactions. This makes it hard for treasurers to create a timely, accurate and holistic picture of the company's financial situation and apply the right measures for optimising liquidity and managing risk in real-time.

Open API technology is enabling real-time data accessibility to meet ever-evolving treasury needs in the digital era
Forward-thinking transaction banks and treasurers have recognised Open API technology as a key technology that can overcome today's shortcomings of legacy channels. It can fundamentally change how treasurers can access and process data and related products and services from their banks. See Figure 1 for a comparison of traditional bank connectivity channels versus Open APIs, summarising the key benefits for treasury departments.

Open APIs provide opportunities across all domains of treasury services
API technology enables transaction banks to provide core cash management services like account statements and balance reports in real time, to pre-validate and execute transactions in seconds and to support seamless self-service management of bank accounts, users and settings. With account information becoming available in real time, liquidity management can also move towards real time, with APIs enabling self-service management of cash pool settings and on-demand sweeps. Even risk management can become more dynamic with the availability of real-time feeds for FX rates and automated hedging solutions.

New payment methods are leveraging API technology to enable faster and cheaper collection and management of disbursements with virtual cards and accounts. Moreover, APIs show great potential to digitise other areas of treasury services like trade fi nance or supply chain financing. The automated exchange of data between multiple participants can replace current cumbersome manual processes for exchanging paper-based information and improve due diligence with enriched data. These examples illustrate that APIs will enable opportunities across all domains of treasury services provided by transaction banks.

APIs enable embedded finance opportunities to enhance the customer experience

APIs also open up the possibility to work together with technology partners to seamlessly integrate the services outlined above with the preferred systems that treasurers use daily, such as Enterprise Resource Planning (ERP) systems, Treasury Management Systems (TMS), e-commerce platforms and a variety of specialised fintech applications. Treasurers can 'embed' financial products and services at the point of relevance, create a holistic and centralised real-time overview of the company's financial situation, automate processes to manage risk and liquidity, and perform cumbersome administrative tasks in minutes rather than hours.

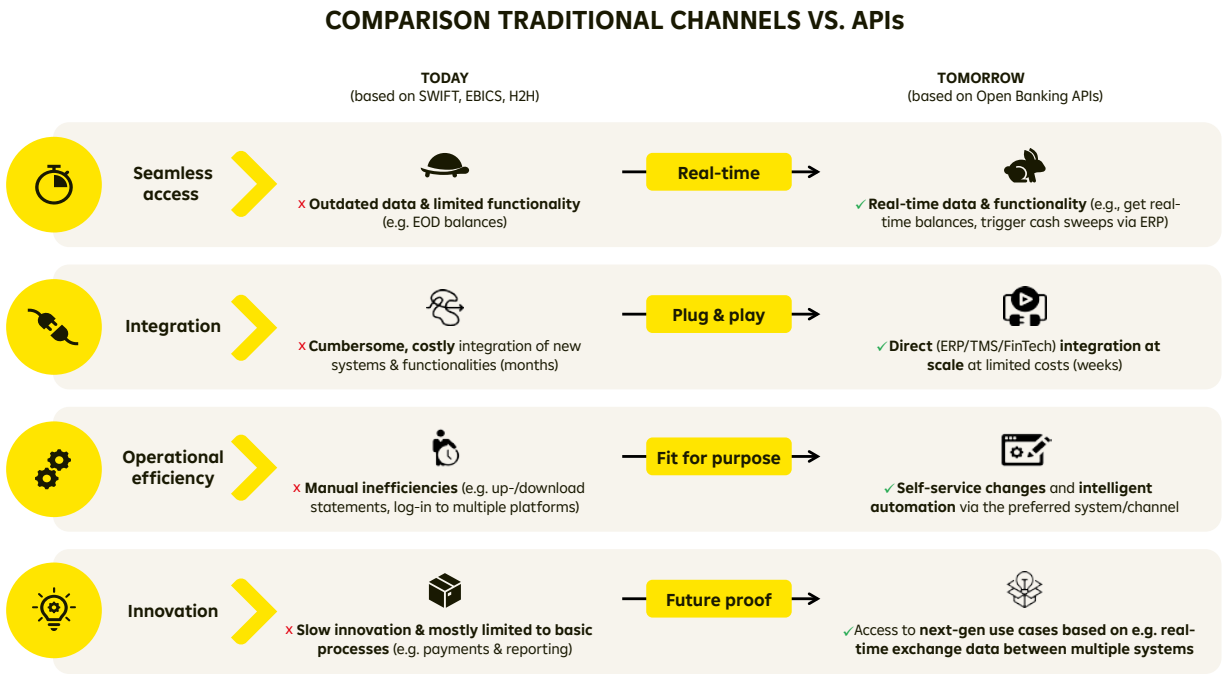


Figure 1: Bank connectivity benchmark

2. How APIs will drive the next evolution in transaction banking

RBI – and INNOPAY – conducted numerous client workshops to validate the expected value creation opportunities of Open API technology for corporate treasurers.

Client workshops revealed six overarching themes of API benefits

The main purpose of the workshops was to find out more about the concrete needs of treasurers when executing their necessary treasury jobs and how API technology can support in addressing those needs. These workshops led to the identification of six overarching themes that illustrate how APIs can simplify and improve how treasurers work together with their transaction banks:

1. Digitisation and automation of processes:
APIs enable automated communication between systems. This creates substantial savings potential (in cost and time) by automating business processes and workflows.

2. Fast and flexible integration into systems:
APIs allow data, products, and services of transaction banks to be seamlessly integrated into the preferred system of choice without the need for lengthy IT implementation projects which place demands on scarce IT resources. Similarly, established integrations can be adapted in days rather than weeks or months.

OVERVIEW API DOMAINS AND RELATED VALUE CREATION OPPORTUNITIES

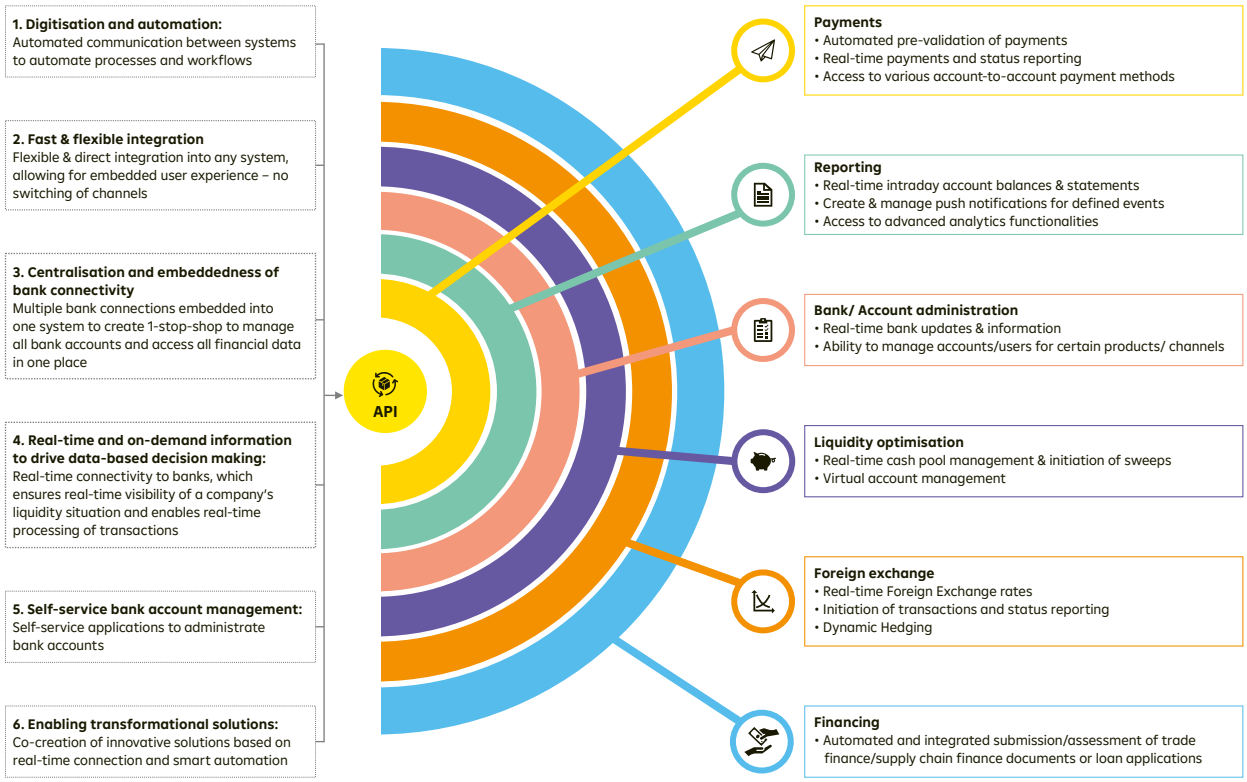


Figure 2: Summary of the six key API benefits in the context of a number of value-creating API uses cases.

3. Centralisation and embeddedness of bank connectivity (multi-banking):
Through APIs, corporates can embed multiple bank connections into their system of choice, creating a 'one-stop shop' for initiating payments, managing all bank accounts, and accessing all financial data. APIs enable this in a faster, better, and more costeffective manner than is currently possible with traditional channels.

4. Real-time and on-demand information to support data-driven decision-making:
API integrations provide real-time connectivity to transaction banks, which ensures real-time visibility of a company's liquidity position and enables real-time processing of transactions.

Case Study: The journey towards real-time treasury

Real-time treasury is becoming a target vision for many corporates, but the concept can be difficult to concretely visualise and deliver upon. However, at one corporate – a leading provider in base chemicals, fertilisers, and the mechanical recycling of plastics – thistarget vision is becoming a reality more quickly than for many similar-sized corporates. This is thanks to a healthy dose of ambition and a culture of technological leadership across the business, including in the treasury function.

The Challenge
Historically, the corporate in this case study had relied on end-of-day statements for visibility of its balances and transactions via the SWIFT connection to its bank. The limited frequency of updates, along with occasional delays, restricted the corporate's ability to dynamically manage liquidity and risk. However, given the nature of the global and complex markets the company operates in, as well as the ever-more rapid changes in the macro environment, this was no longer a fit-for-purpose approach that contributed to its ongoing growth ambition.

The Solution & Result
The corporate realised relatively early that APIs could meet its evolving needs for real-time visibility on balances and transactions. Thanks to the integration of the APIs directly into its existing ERP system, the corporate is now able to access crucial banking services on one secure, consolidated platform. This removes the need to work through multiple portals, ensuring more secure and convenient access to real-time financial data. With real-time visibility of balances and a more accurate view of the cash position, the corporate can act on issues sooner and respond more quickly to changes in the macro environment, while streamlining workflows and automating previously manual tasks.
The result is a more digitised, streamlined, fit-for-purpose treasury, supporting the growth of the company.

The Outlook
The corporate opted to maintain the existing SWIFT connection for payments, since efficient processes are already in place for this. However, the treasury team have been so impressed by the benefits that API connectivity delivers that they are looking into how APIs could enhance the payment experience and other areas of treasury and finance in the future (e.g. payment pre-validation, payment tracking, e-BAM, audit reporting).

The corporate continues to identify and respond to the ongoing needs in treasury as it increasingly functions in real time, creating a need for better, more immediate visibility into data, seamless automated processes, and tools to dynamically manage liquidity and risks. Since the concept of real-time treasury is still new, the corporate is working closely across treasury and other internal functions, with the transaction banks and with external technology partners to fully understand the implications and respond to emerging needs.

5. Self-service bank account management:
APIs reduce a corporate's dependency on transaction banks' support teams and reduce friction by enabling self-service applications to be directly embedded into the system of choice. For example, corporates can change user signing rights or account settings themselves, without relying on the bank's support staff.

6. Enabling transformational solutions:
APIs allow for the collaborative development of innovative solutions leveraging real-time system connections and related opportunities for data exchange and smart automation.

Emerging API use cases in transaction banking
APIs enable numerous value-creating use cases when the overarching themes are applied to the different domains of treasury activities. To provide guidance for treasurers and banks, a selected number of use cases are elaborated below to illustrate the value creation potential in different domains. These use cases have also been validated with corporate clients in the above-mentioned series of workshops.

Payments
In the core domain of payments, most treasurers have acknowledged that current infrastructure and messaging standards (e.g. Pain 001 or SWIFT MT 101) serve core needs in corporate payments. However, one use case immediately comes to mind when thinking about API-enabled payments: instant payments. Over the past years, numerous payment schemes have emerged in various regions across the globe enabling the initiation and settlement of transactions in seconds. From SEPA instant payments, UK faster payments and PIX in Brazil, to India's UPI scheme – instant payments are quickly becoming the 'new normal', which has new implications for managing risks and optimising liquidity. Instant payments have value for businesses operating in a digital ('gig') economy, where speed of collection and disbursement can result in a competitive advantage (e.g. instant payment for drivers in mobility-sharing services).

As instant payments are only gradually being adopted in the corporate space, there is still a strong need for the tracking of payments across their lifecycle. Once initiated, APIs can enable higher transparency around the status of the payment. This transparency can increase, with more banks enabling API-based status tracking of payments (based on Pain 002 messages, potentially enriched with other relevant status messages). The developments around SWIFT gpi already illustrate the value of tracking international payments in real-time across the globe.
In terms of efficiency, one very interesting use case is the pre-validation of payments. With a pre-validation API, corporates receive instant feedback for an erroneous or potentially fraudulent payment before it is processed by the bank. This will help to improve STP rates and compliance with AML/CTF regulations.

APIs have also cleared the way for cost-efficient account-to account-based payment methods like request-to-pay or buy-now-pay-later solutions that corporates can integrate into their e-commerce offering to enhance the payment mix for their customers. Successful adoption of virtual card solutions by retail clients (e.g. with Apple Pay, Google Pay) has also pushed the provision of virtual card solutions on the corporate side. Virtual corporate cards provide a secure, controlled and efficient way of processing employer payments for business travel and other expenses. The benefits are realised through easily adjustable and transparent limit management, combined with instant reconciliation if they are integrated in related travel expense management tools.

Reporting
With instant payments becoming the new normal, there is also a growing need for real-time access to information on account balances and cash flows. APIs enable corporates to receive account information in real time, moving from end-of-day or intraday statements (CAMT.052/.053 and MT 940/942) to on-demand, real-time account statements and balances. This will provide treasurers with an optimally accurate picture of cash flows to improve forecasts and determine liquidity needs more dynamically whenever needed. This use case becomes even more powerful when all the relevant bank partners of a corporate provide this information in real time and directly embedded into an ERP or TMS. Treasurers can use the capabilities of such systems to create a suitable
dashboard to report to the CFO and to leverage smart analytics to improve their decision-making. This can be even further enhanced with event-based push notifications on critical movements for accounts (e.g. account limit exceeded). Additionally, the transmission of information that is required for recurring audit and compliance purposes can be automated to eliminate cumbersome interactions and correspondence between auditors, regulatory authorities, bank operations departments and corporate treasury departments.

Electronic Bank Account Management (e-BAM)
Further cumbersome manual processes for managing users and bank account settings can be dismissed by applying API technology. The whole lifecycle management of an account – usually referred to as e-BAM – can be provided to corporates in a self-service manner, so that corporate employees can open or close a bank account in just a few clicks, directly from their preferred treasury workstation. Additionally, an overview of signature rights and respective limits can be received – and any necessary changes can be made – within minutes, without any direct interaction with bank employees.

Liquidity optimisation
By providing an accurate and real-time overview of a company's liquidity position, APIs also enable new possibilities related to real-time management of liquidity. One example is the self-service initiation of account sweeps when liquidity needs are changing throughout the day, thus eliminating the need to rely on end-of-day-based cash pooling structures and enabling new opportunities for short-term (intraday) investments on money markets. This can be combined with virtual account/IBAN structures for efficient collection of cash and improved management of sub and master accounts.

FX and risk management
On the risk management side, more transparency through real-time information and more efficiency through real-time processing of transactions is helping treasurers to manage exposures. In the FX domain, for instance. APIs can deliver real-time rates for FX transactions and enable automated dynamic hedging of FX risk based on this information. Additionally, APIs can support in the collection of structured data from various new sources to improve transparency on cash flows in line with AML regulations by automatically flagging potentially fraudulent transactions at an early stage.

Financing
Multi-stakeholder set-ups in which an automated exchange of data can create high efficiency gains are particularly interesting for the areas of both trade finance and supply chain finance. In these areas, releasing a payment/credit is typically dependent on the exchange of various documents between multiple parties (e.g. for guarantees or letters of credit). Here, APIs can enable corporates and transaction banks to automatically submit the required data and to validate invoices in real time. Subsequently, this can trigger automatic evaluation of financing options and related loan disbursements. This substantially speeds up the process and improves risk management for transaction banks and corporates alike.

Further innovative use cases are expected to emerge as more transaction banks and corporates explore the opportunities of API technology. Moreover, since API technology also enables a faster time to market for new applications, innovation cycles with global transaction banks are likely to receive an extra boost.

"APIs can already improve the customer experience on existing 'bread and butter' cash management functionalities. However, the real value-add is being fueled by its potential to create innovative transformational products, where traditional protocols face limitations."

Philipp Höfer
Group Product Owner Cash Management
Raiffeisen Bank International

3. Status quo of Open APIs in transaction banking

In the context of the potential of Open APIs to transform corporate-to-bank connectivity, this chapter outlines the current state of the market on both the supply and demand side. How are frontrunning transaction banks enhancing their product and service portfolio with APIs? And, in turn, how are these services being received by corporate clients?

Accelerated by regulatory developments such as PSD2, current API-enabled products and services are primarily focused on the retail segment Many European banks have started their API transformation journey by building the APIs necessary to comply with regulatory requirements as stipulated in PSD2. Even though API standards remain a problem (e.g. in Europe alone, multiple standards emerged for implementing PSD2), numerous fintechs and banks have developed innovative use cases. The focus is mainly on the retail segment, covering private individuals in particular and, to some extent, also the longtail of SMEs. Moreover, business propositions targeted at this segment are mainly focused on leveraging access to account information.

Relevant examples include multi-bank account aggregation and value-added services (around financial planning, savings and investments), instant credit decisions, credit affordability analysis, smart onboarding (account verification, auto-filling forms) and subscription management. More recently, growth can be observed in the number of account-to-account (A2A) payment propositions, in line with other developments around buy-now-pay-later and requestto- pay propositions. A2A payments can be seen as a complementary payment method (besides cards and other alternative payment methods) that can better serve specific merchant verticals in a B2C context (e.g. recurring, gaming, non-profit, wealth management).

Gradually, corporates are increasingly buying into Open API technology to improve their treasury operations.

Increasing focus on Open APIs in the corporate domain triggers treasurer's attention for Open API technology Recently, however, there has been a perceptive shift towards the corporate domain. As leading transaction banks are shaping and gradually rolling out their API product portfolios, they are closely engaging with their corporate clients to obtain input and understand their specific needs. Corporate treasurers are becoming involved in these conversations with their transaction banking partners and learning about the potential benefits of API technology for their treasury operations. As a result, many treasurers are starting to realise the shortcomings of traditional channels and how Open API technology can improve their treasury operations and workflows.

Survey results underline growing interest in API solutions among corporate treasurers. For instance, according to the European Association of Corporate Treasurers, approximately 50% of treasurers interviewed consider real-time information, real-time liquidity and instant payments to be a topic of interest in the next two years. Additionally, out of 200 surveyed treasury professionals, 35% are using or plan to use APIs in the next 12 months.

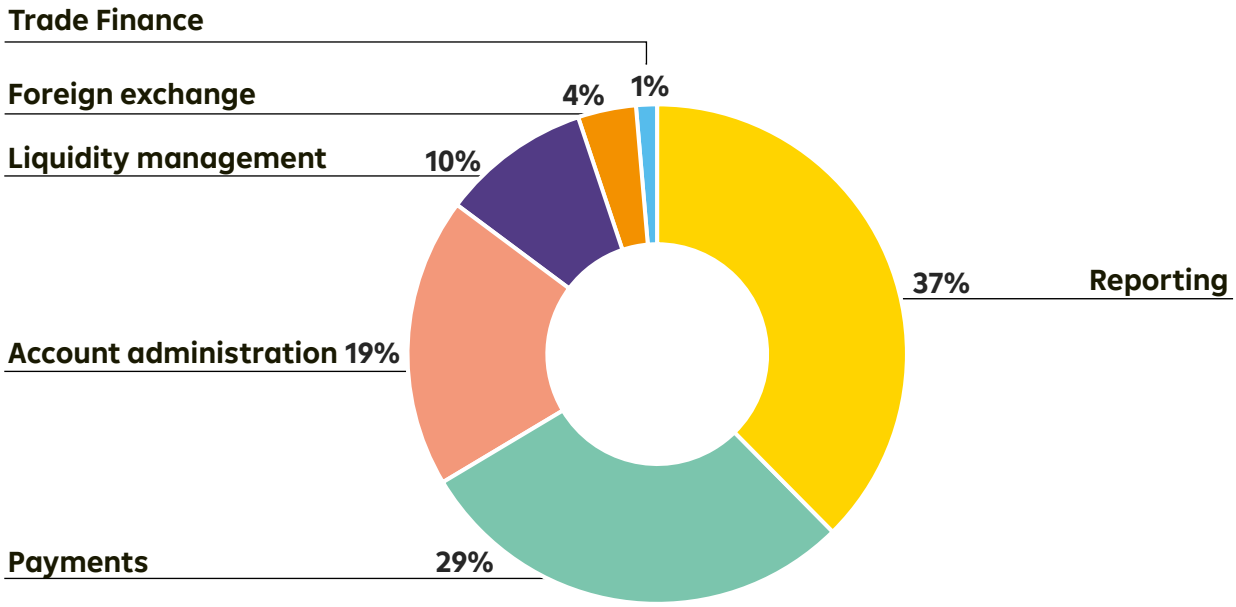
Leading transaction banks are expanding their API product portfolios As mentioned above, there is growing focus on leveraging Open API technology in the corporate banking domain. According to data from the INNOPAY Open Banking Monitor, leading transaction banks are accelerating their API portfolios for corporate clients in the areas of cash management, lending, trade and supply chain finance.

Figure 3 reveals that most corporate banking APIs clearly remain focused on the 'bread and butter' of transaction banking, i.e. payments and reporting. Many European transaction banks are further expanding the core functionalities and leveraging the capabilities they have already put in place for regulatory PSD2 compliance. This includes enhancements in security models that further streamline account access and payment initiation, enriched account statements accessible on demand and in real time, as well as account notification services to keep track of relevant events on payment accounts.

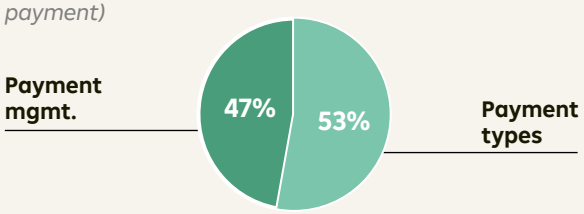
Moving beyond payments and account information, transaction banks are making their first moves in areas like FX and liquidity management. This starts with relatively simple APIs exposing real-time FX market rates, up to full automation of trades on FX spots or forwards to create dynamic and automated hedging workflows for treasury departments.

% OF APIs PER CASH MANAGEMENT / TRADE FINANCE

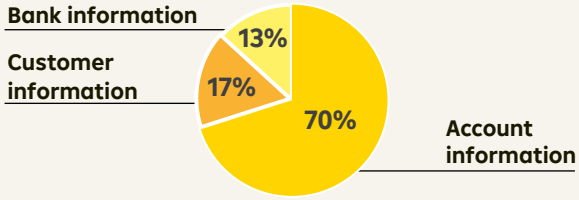
1.540 API functionalities observed across 78 banks



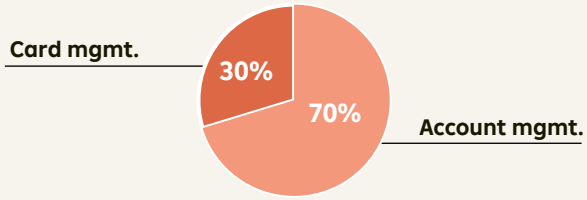
Payments
APIs which initiate different types of payments or allow for management of payments (e.g. set recurring payment)



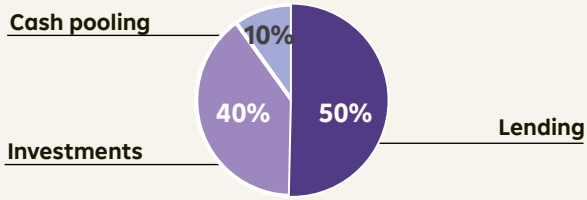
Reporting
APIs which retrieve information related to the account, the customer or the bank's service offering



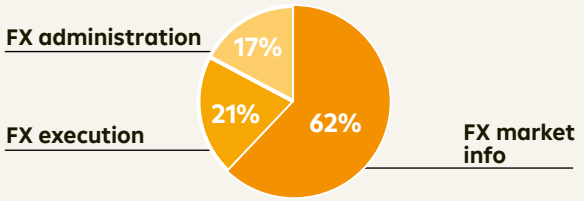
Bank / Account administration
APIs which perform actions or modifications related to account or card settings



Liquidity optimisation
APIs related to management of cash positioning and accessibility



Foreign exchange
APIs related to the trading of currencies (i.e. Forex)



Trade Finance
APIs related to facilitation of domestic & international trade transactions and insurance of the associated risks

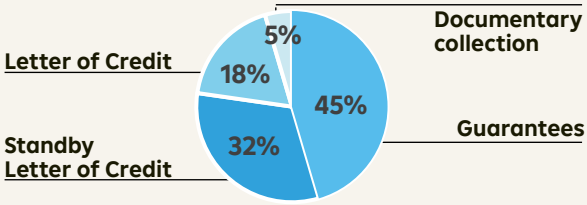


Figure 3: INNOPAY Open Banking Monitor: Overview of Open APIs for transaction banking

When it comes to cash management and treasury, the SWIFT network certainly plays an important role in facilitating standardisation and cross-border interactions between financial institutions and corporates. Also, SWIFT has recognised the strategic importance of APIs in its network and has launched a developer portal and a strategic roadmap that shows the current API portfolio and forthcoming plans. Banks can build on these APIs to provide new APIs to corporates that leverage the capabilities of the SWIFT network.

To bring supply and demand together, transaction banks need to consider some key principles when designing their API strategies and roadmaps. Similarly, treasurers need to be aware of several critical aspects when moving towards API-based bank connectivity. These aspects are outlined in the next chapter.

4. Strategic considerations towards real-time treasury

To make real-time treasury a reality, both sides of the market – i.e. transaction banks and corporates – need to work together to seize the new opportunities enabled by Open API technology. Figure 4 summarises the key strategic considerations for transaction banks that have just started or those that seek to accelerate their Open API transformation journey. In addition, this final chapter elaborates on the crucial considerations for corporate treasurers who are interested in the concept of real-time treasury.

4.1 Strategic considerations for transaction banks

Transaction banks need to do their homework and create a micro service-oriented infrastructure and operating model allowing them to efficiently develop, deploy and sustain APIs

APIs are merely interfaces towards a corporate that are designed to enable real-time communication between systems, thus effectively facilitating new use cases. To make full use of the potential of this new connectivity, however, banks also need to redesign their own back-end infrastructure, operations and processes. For example, to allow for the end-to-end optimisation of the payment process, systems need to be 'real-time ready' and able to cope with a high number of transaction requests. Additionally, internal systems need to communicate to allow for pre-validation checks across the whole bank network, and employees need to be trained to efficiently manage and support real-time operations. Without a fitting IT infrastructure and operating model, APIs will fail to deliver on their promise and will achieve little more than a superficial change. Things might look more modern, but it will still be the same motor under the hood.

Transaction banks need to understand customer pain points and translate them into value-added propositions

API technology holds great potential for both corporates and transaction banks, but the technology as such has no standalone value. Transaction banks need to have a clear view of how their API-enabled products and services are attractive for corporates. This requires banks to invest in understanding the exact needs of corporates and to translate current pain points within treasury jobs and user journeys into specific API propositions. Put simply, it is about making APIs central to the propositions and considering how APIs can enable new features, services or customer-experience enhancements.

Seamless onboarding and good developer experience are key hygiene factors for the adoption of APIs

Many transaction banks have already launched developer portals that enable clients and partners to explore the API catalogue and learn about the benefits, and provide guidance and support for how to use the APIs. In the case of a more advanced API portfolio, a developer portal that pro-

Figure 4: Strategic considerations for transaction banks and corporate treasurers when moving towards real-time treasury with Open APIs

vides a comprehensive overall developer experience becomes even more important. Developer portals can be considered as an 'online storefront' for APIs and should therefore be treated as such. This means it is essential to create a great developer experience on the portal. This includes fast and easy onboarding process, clear documentation of APIs and guidance on usage as well as authentication procedures and testing facilities (API sandbox environment) mirroring production environments. Inspired by Big Tech players like Google or Apple, many banks have also invested in building whole communities around their developer portal to spur innovation. Dedicated community events (e.g. hackathons) also prove to be beneficial in facilitating interaction and co-creation. They are an effective way of bringing together various parties, exchanging ideas, collecting feedback and working together on creating, testing and further improving transformational solutions.

API partnerships are essential for the go-tomarket approach and to increase adoption of APIs at scale

With APIs, banks can deliver seamlessly embedded finance propositions for their corporate clients. Transaction banks can team up with providers of ERP, TMS and specialised FinTechs as part of their go-to-market approach and enable frictionless API integrations into the preferred workstations of treasurers at scale. This will enhance user experiences, drive efficiency and enable new automated workfl ows for corporates. For these partnerships, both transaction banks and technology partners need to work together on a 'plug-and-play' onboarding experience for corporates. However, identifying and selecting the right technology partners to deliver such an experience could be a challenging endeavour for transaction banks. Figure 5 illustrates the complex corporate treasury technology landscape that transaction banks need to navigate for scaled adoption of their API-enabled propositions.

API connectivity needs to be secure and flexible to ensure trust in digital ecosystems

To promote the adoption of APIs, transaction banks need to ensure that APIs support at least equally secure and efficient communication as the traditional connectivity and communication channels (e.g. H2H, SWIFT, EBICS). Many important topics related to API security have already been addressed through various existing initiatives, industry standards and protocols (e.g. FAPI, Berlin Group, OAuth 2.0). The main challenges lie in selecting the right security configuration while ensuring a seamless customer journey that meets the bank's and corporate's requirements in terms of process and workflow, flexibility, internal security and operational risk control. In today's corporate banking environment, authentication and authorisation procedures need to be highly customisable in line with the corporate's specific needs. It is not uncommon to see variations of the 4-eyes, 8-eyes or even 20-eyes

authorisation principle in order to execute specific transactions. These authorisation procedures should preferably be manageable across the corporate's main transaction banks from within the preferred corporate workstation (i.e. ERP/TMS) to limit the overheads associated with authorisation management.

Lack of standardisation will impact the adoption of APIs at scale

Various market actors including banks, corporates and technology partners frequently name the lack of API standardisation as a barrier to the adoption of API technology. For corporates and their technology partners, the integration and maintenance of several different bank API connections is a cumbersome activity that does not add any value. Besides aligning with existing standards where possible, transaction banks can pursue various options to deal with this fragmentation issue, including:

- Pro-actively monitoring and engaging in API standardisation initiatives related to the development of standards. The Berlin Group Open Finance API Framework is a good starting point for this in Europe, while the SWIFT API Roadmap provides a more global perspective.
- Engaging with technology partners. Incumbent ERP and TMS providers and specialised FinTech aggregators are building API platforms that reduce the burden of dealing with multiple API connections. Incumbent ERP providers (e.g. SAP, Oracle) have built connectivity modules that enable corporates to manage multi-bank connectivity via API. Additionally, several FinTechs have emerged that specialise in aggregating transaction banking APIs and embedding value-added services via native apps in corporate workstations.

Transaction banks that are leading the way in the use of API technology have successfully managed to address the considerations outlined above and have positioned these connectivity tools at the centre of their business and innovation agenda. Similarly, corporates that seek to reap the benefits of API technology in their treasury operations need to carefully consider the implications. These will be elaborated in the following section.

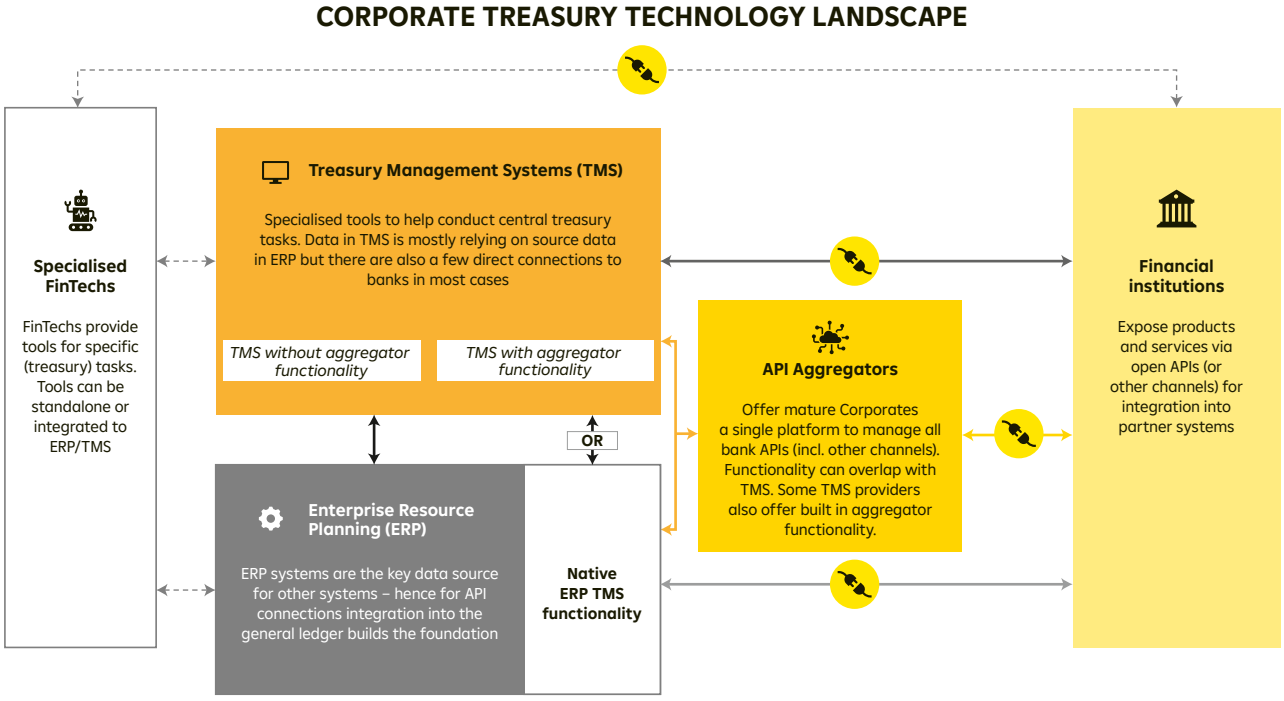


Figure 5: Overview of the corporate treasury technology landscape and related Open API partnership options

4.2 Strategic considerations for corporate treasurers

Treasurers need to identify current pain points and formulate a vision for real-time treasury enabled via APIs
Corporate treasurers need to think strategically about how to capture value from APIs in their daily treasury operations and formulate an associated vision. Treasurers should think about how their ideal concept of real-time treasury looks and the implications for internal infrastructure, current management reporting, forecasting cycles, risk management as well as liquidity planning and allocation.

Defining concrete targets supports structured end-to-end analysis of the gap between the formulated vision and the current bank connectivity set-up
In this context, it is important to map out the key pain points experienced today and the areas that could be improved by leveraging Open API technology. The gap analysis includes reviewing the current bank connectivity and internal infrastructure (ERP/TMS) set-ups across countries and entities against the strategic goals formulated in the vision. This requires treasurers to look at their end-to-end technology stack to identify friction points that could hamper efforts to accelerate and standardise data and transaction flows, and to subsequently improve access to – and the quality of – that data. Other factors that can be helpful to assess the current situation and define objectives to be achieved with API connectivity include targets for straight through processing (STP) rates for payments initiated, parameters and frequency for bank statement reports, and cash flow forecasting accuracy.

These five assessment criteria provide guidance for treasurers when engaging with their transaction bank partners on API connectivity
Once the vision, pain points and gaps have been defined, treasurers can engage with their preferred bank partners to evaluate relevant API propositions. To discuss the best set-up for API connectivity, treasurers can use the following five criteria as guidance:

1. Automation: Do API connections enable automation of workflows and create considerable efficiency gains?

2. Business intelligence: Do API connections help to create better business intelligence (e.g. real-time information, new insights, higher data accuracy, etc.) that support business objectives?

3. Flexibility: Do API connections allow sufficient flexibility when changing the set-up in the future (e.g. changing to a different ERP or TMS provider) and create options to retrieve or process data with banks on demand?

4. Reliability and security: Do API connections enable a stable and reliable bank connection and provide the necessary security levels?

5. Costs: Do the costs of integrating APIs (including potential partners involved in the onboarding to APIs) support a positive business case in view of the benefits expected from the other criteria and when compared against existing channels?

"Even though the market is still at an early stage, Open API technology marks a new frontier for transaction banks and treasurers globally. It requires an ecosystem approach in which banks, corporates and technology providers collaborate to drive API adoption at scale and to create a future-proof standard for corporate-to-bank connectivity over the coming years."

Björn Zaksek
Cash Management Expert | Raiffeisen Bank International

Summary

Understanding the corporate system landscape is key to drive the large scale adoption of Open APIs

It is essential to understand the system landscape corporate treasury professionals are dealing with. In today's world many treasurers still make use of different online banking portals to retrieve the necessary data or to execute transactions. Traditional channels (e.g., H2H, EBICS, SWIFT) have addressed this suboptimal experience to some extent already by enabling multi-banking from a single system. As outlined in this paper, Open API technology can further enhance the multi-banking experience and so much more.

APIs enable banks to create seamless embedded finance experiences by partnering with the corporates' chosen system providers. By integrating bank services directly into the treasurers' preferred workstations, there is no longer a need to switch between various online portals and spend time on manually retrieving and processing bank data.

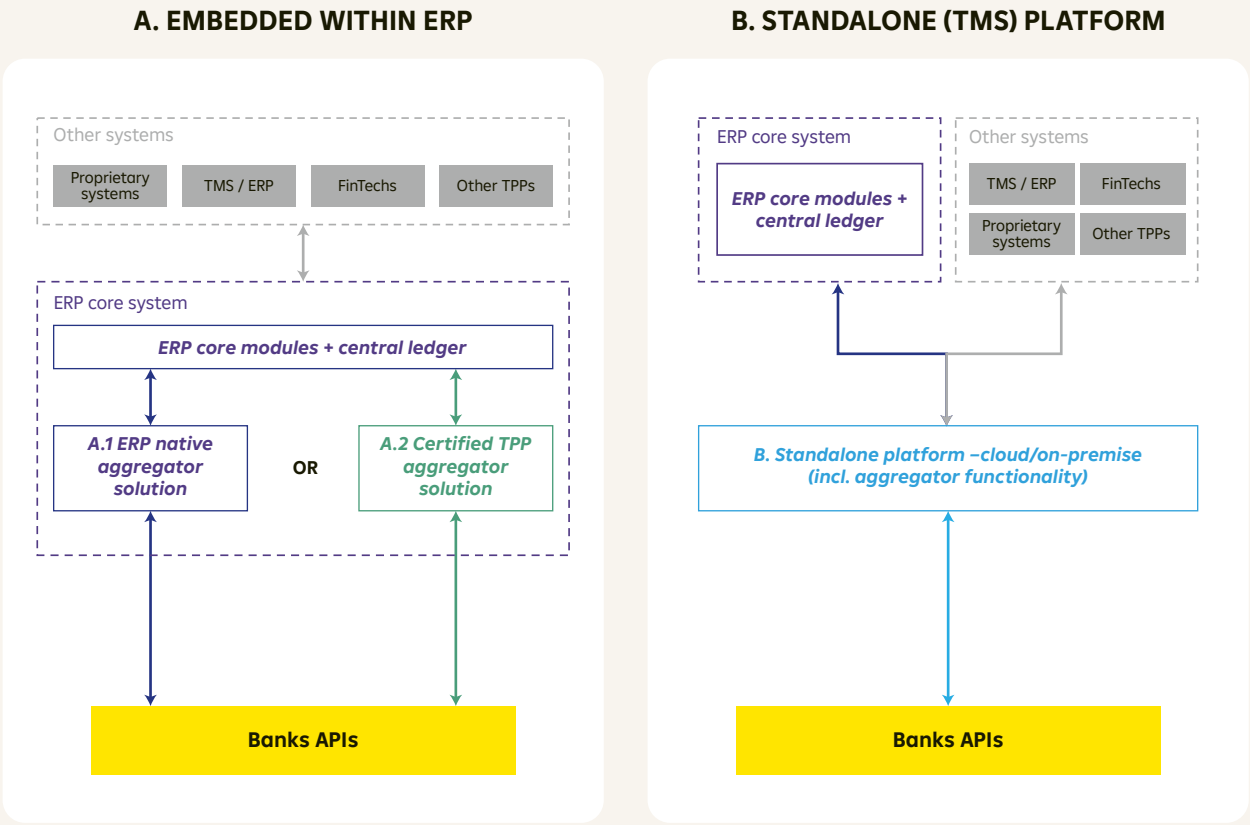


Figure 6: Consumption of APIs is dependent on corporate's system landscapes and requires offering multiple integration options

Key considerations

- Corporate treasury professionals prefer to manage all their operations centrally via a single system
- Most corporates use an ERP system as their 'single source of truth', meaning that solutions based on Open APIs require a connection to the ERP system
- This leads to two general options for integrating Open APIs:

1. Directly embedded within ERP: keep everything in one place and manage bank operations within dedicated ERP modules (native or via certified applications)

2. Indirectly via standalone platforms: use specialised applications (TMS) to manage bank operations and remain flexible

For both options, new specialised B2B FinTechs are entering the market specialising in the integration and aggregation of bank's treasury APIs into ERP and TMS. These FinTechs (also referred to as "treasury aggregators") typically are certified partners of the large ERP players such as SAP. They leverage UI design systems like SAP fiori to build dedicated business applications accessible via SAP fiori apps.

These apps enable basic services such as delivering real-time account information from multiple banks into a single dashboard, multi-bank payment initiation to more sophisticated services around cash visibility, cash forecasting, FX, financing, reconciliation and more. Similarly, more mature treasury aggregation platforms such as TIS have also added API connectivity to their portfolio and have partnered with transaction banks to build seamless user experience for the consumption of bank APIs.

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