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GLOBAL PAYMENTS 2016

COMPETING IN OPEN SEAS

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INTRODUCTION

The world of payments remains in constant flux, reflecting an ongoing rebalancing of power among incumbent banks, digital giants, financial technology (fintech) startups, card networks, and, of course, consumers and merchants.

At the top of the collective agenda in 2016 is the digitization of payments, which has come with more than its share of hype. Historically, transformation in the payments industry has tended to occur more like a crescendo than a big bang. Today, although the momentum brought about by fintech startups is strong, there is still uncertainty as to whether they—either in collaboration or in competition with digital giants and banking incumbents—will drive a true shift in competitive dynamics. Over the next ten years, we are likely to hear a fintech cacophony, but much of it will eventually subside because success in payments-related businesses remains difficult to achieve. Still, it's safe to assume that at least a few fintechs will prosper and be highly disruptive to the status quo: witness the lesson learned by long-established banks in China, where fintechs have become dominant players in payments. A competitive eye on the digital giants, a few of which are also staking claims to the payments landscape, will be necessary as well.

What can banking incumbents do in the face of these developments? First, they need to forge a digital strategy that enables them not only to survive meaningful incursions by nonbanks but also to thrive and take control of their own digital destinies. They must deliver compelling end-to-end customer experiences that maximize security, minimize complexity, and add value beyond pure payments. Given current pressures on revenues, they must also prioritize investments and review their sourcing and operating models in order to reduce costs. And time is of the essence. As Bill Gates once said, "We always overestimate the change that will occur in the next two years and underestimate the change that will occur in the next ten. Don't let yourself be lulled into inaction."

It is therefore critical for incumbent banks to map out diverse scenarios with some key questions in mind. How will customers' payments behavior change over the next decade? How will control of customer engagement and brand image diminish as the Internet of Things evolves, as so-called open banking grows, and as commercial customers interface with more third-party providers?[1] Banks must also foster a culture of innovation in order to navigate uncertainty (for example, with regard to the pace of m-wallet adoption) and resolve tough dilemmas such as whether or not to collaborate with fintechs

that can become competitors—and adapt as appropriate. This adaptation will involve deploying an agile approach to product development and overhauling organizational structures to reduce decision layers. One objective will be to emerge as more-streamlined entities. Another will be to navigate through the fog of disruption that has settled upon the industry. Ultimately, the winners will be those that learn how best to compete in truly open seas with highly diverse players.

This year's Global Payments report, BCG's 14th annual study of the industry, addresses these dynamics across the various payments-related businesses. This year also marks the third edition of our Global Payments Model Interactive, available on bcgperspectives.com, which explores how regions and segments of the payments market will shift from year-end 2015 through 2025. The interactive provides extensive detail on the volume and value of noncash transactions and also on revenues.

A note about our Global Payments model: payments revenues include direct and indirect revenues generated by noncash payment services (excluding interbank transfers). They are the sum of the following:

- Account revenues: spread (net interest) income on current account balances (also known as checking or demand-deposit accounts) plus account maintenance fees

- Transaction-related revenues: transaction-specific revenues on cards (interchange fees, merchant acquiring fees, and currency conversion fees for cross-border card transactions) and noncard payment methods (typically assessed on a percentage or fixed basis), as well as fees for overdrafts and nonsufficient funds

- Nontransaction-related card revenues: monthly or annual card membership fees, credit card spread (net interest income), penalty fees, and other service fees

Retail payments are defined as transactions initiated by consumers. Wholesale payments are transactions initiated by businesses or governments.

As always, our aim in *Global Payments 2016: Competing in Open Seas* is to provide institutions in the payments and transaction-banking businesses with a clear understanding of the fundamental changes shaping the industry, and to offer recommendations on which specific actions should be taken by various types of players.

Note

1. BCG defines *open banking* as enabling digitally focused companies to leverage traditional banking services, ranging from customer access to basic account information to complex multiparty cross-border transactions, in real time and with little or no human intervention.

GLOBAL OVERVIEW

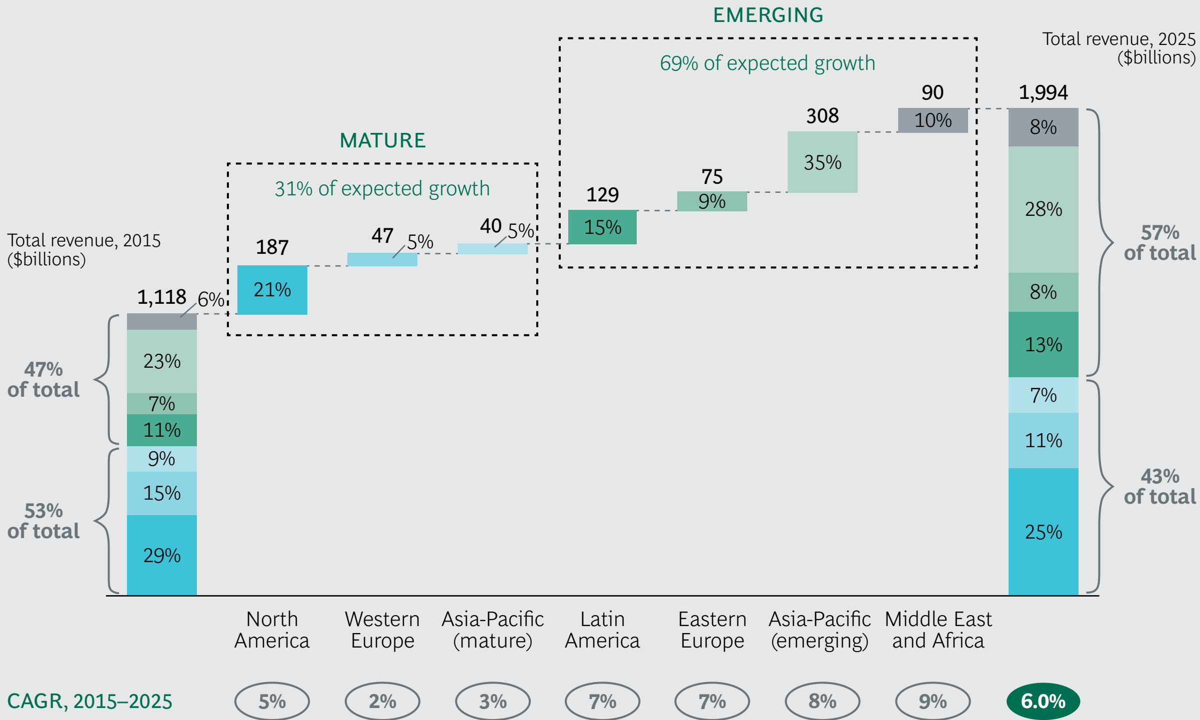
A SHIFTING LANDSCAPE

With more than $870 billion in industry revenue growth up for grabs through 2025, and with competition stiffening, it is imperative that payments stakeholders understand revenue trends and the factors that are driving shifts in the competitive landscape.

The Revenue Stakes

In 2015, payments industry revenues hit $1.1 trillion, representing 29% of global banking revenues. By 2025, they are projected to reach nearly $2 trillion, a compound annual growth rate of 6.0%. (See Exhibit 1.) The growth engines will be transaction-related

Exhibit 1 | Payments Industry Revenues Will Reach Nearly $2 Trillion in 2025



Source: BCG Global Payments Model, 2016.
Note: Totals may reflect rounding. The Middle East and Africa revenue pool includes the rest of the world.

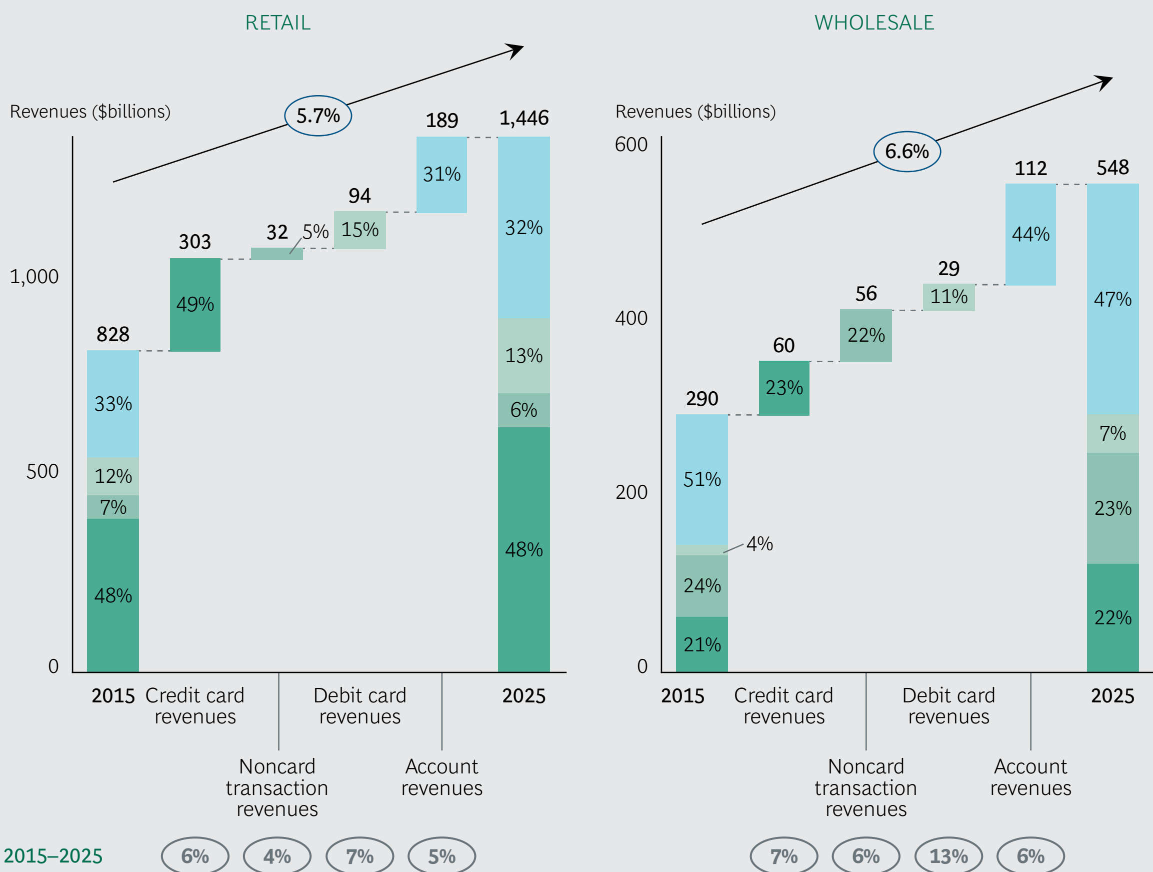
revenues (an estimated 40% of the total) and account revenues (34%). Account-revenue growth will be driven by increasing average account balances and numbers of accounts. Transaction-related revenues will be fueled by rising transaction values and volumes, mainly in rapidly developing economies (RDEs)—stemming from the migration from cash to e-payments and from broader financial inclusion. Indeed, RDEs are already enjoying stronger growth than mature markets in all metrics, although macroeconomic drivers such as GDP and per-capita income have slowed somewhat.

Retail payments generated 74% of total payments revenues in 2015, and will continue to dominate through 2025—accounting for 71% of total revenue growth and reaching nearly $1.5 trillion in 2025. (See Exhibit 2.) However, growth in wholesale payments revenues is projected to outpace retail payments growth—a compound annual rate of 6.6% versus 5.7%—with account revenues representing 44% of that growth. Higher wholesale growth is being driven by increases in card revenues, which face less price pressure than on the retail side.

Agents of Change

A confluence of forces is reshaping the payments industry. Three in particular will continue to influence the pace and path of transformation over the next few years: technological advances, shifting customer

Exhibit 2 | Retail Payments Transactions Will Remain the Dominant Revenue Generator Through 2025



Source: BCG Global Payments Model, 2015; BCG analysis.
Note: On a product-line basis, card revenues include transaction-specific fees (interchange fees, merchant acquiring fees, and currency conversion fees for cross-border transactions), monthly or annual card membership fees, and, as applicable, fees on overdrafts and nonsufficient funds as well as net interest income, penalty fees, and other service fees (e.g., cash withdrawal fees). Noncard transaction revenues include transaction-specific fees on noncard payment types and, as applicable, fees for overdrafts and nonsufficient funds; prepaid cards are included in noncard transaction revenues. Account revenues consist of net interest income and maintenance fees on current accounts (DDAs). Totals and percentages may reflect rounding.

expectations and behavior, and regulatory initiatives.

Technological Advances. Improvements in cloud computing, sensors, and wireless communication are enabling the Internet of Things to become a reality. Cloud computing is powering software-as-a-service (SaaS), which is driving new consumer and merchant value propositions (such as easier financial management and integrated point-of-sale systems, respectively). Application programming interfaces (APIs) are revolutionizing data and service delivery among providers and their customers. In addition, biometrics are enabling quantum leaps in user-friendly authentication, and blockchain technology is increasingly being used to enable transactions. Further down the road, chatbots and virtual personal assistants will yet again alter the shopping value chain and payment experience. For example, a bot can enhance the purchase experience by providing information such as the name of a popular restaurant near the site of a concert for which tickets have just been bought.

Shifting Customer Expectations and Behavior. As fintechs and digital giants such as Apple and Google harness technological advances, consumer expectations are shifting and becoming ever more challenging. People now expect seamless and transparent end-to-end experiences that permit unprecedented levels of ease and convenience. Given the short product-development cycles of fintechs, it can be difficult for incumbents to keep up. At least one major survey in 2015 indicated a decline in US consumer satisfaction with mobile banking, with inadequate clarity of information and difficult navigation cited as specific pain points.

Customers are also demonstrating a willingness to adopt new form factors and payment types, although predicting the pace of adoption is challenging. While overall consumer response to the m-wallet launches of the “Pays” (such as Apple Pay, Android Pay, and Samsung Pay) has been tepid, there are examples of both strong early adoption and accelerated late adoption. Consumers in China, for example, have been enthusiastic adopters of new payment types such as WeChat Pay. Consumers in Europe have recently warmed to the use of contactless payments, following four years of only modest enthusiasm (other than in select countries such as Poland). In fact, growth in contactless cards in Europe spiked between 2013 and 2015, growing from less than 2% of card transactions at the point of sale (POS) to nearly 20%, suggesting that incumbents cannot rely on early take-up rates as indicators of medium- to long-term adoption.

Corporate treasurers now expect banks to behave like tech companies.

Further, consumers are increasingly embracing in-browser e- and m-commerce, as well as in-app purchases. Given three possible growth scenarios, BCG forecasts that all digital payments—in-browser, in-app, and proximity (such as the use of m-wallets at the POS)—will grow from around 6% currently to nearly 20% of total retail sales worldwide by 2020 under a moderate growth path, with the strongest rise recorded by proximity payments. (See Exhibit 3.)

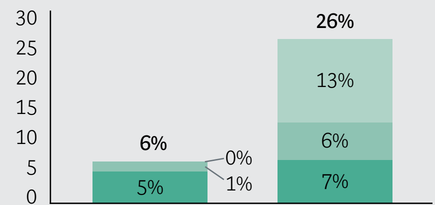
The needs and expectations of commercial customers are also shifting. Corporate treasurers are increasingly being called upon to understand how technology can make their operations more efficient and effective. Many now expect banks to behave like tech companies and to assist them in enhancing their IT infrastructure.

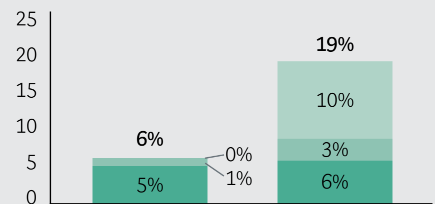
Regulatory Initiatives. Of course, transformation in payments is being further propelled by regulatory initiatives aimed at driving financial inclusion, consumer protection, competition, and infrastructure improvements. For example, governments in RDEs are making a concerted effort to reduce their rates of unbanked consumers and to migrate cash transactions to e-payments. Domestic regulators as well as supranational entities are opening payments channels to nonbank competition through measures such as the

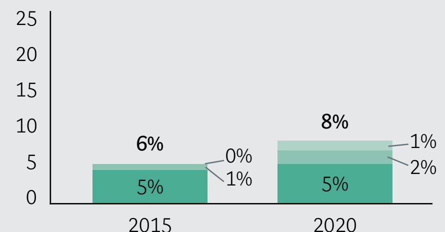
Exhibit 3 | Digital Payments Could Follow Three Potential Growth Scenarios

SCENARIO	ASSUMPTIONS
BULLISH	The growing convenience of online channels, increased security, and the Internet of Things will disrupt key verticals, such as same-day delivery of groceries; strong smartphone adoption. The "Pays" succeed and a significant proportion of smartphone users adopt proximity (m-wallet at the point of sale) as their payment method of choice.
MODERATE	The growth of digital commerce continues at our projected pace with the expected degree of innovation; moderate smartphone adoption. The "Pays" gain traction but do not reach their full potential, owing to delays in adoption in certain merchant and consumer segments.
CAUTIOUS	The growth among digital channels becomes saturated and is more in line with the growth in overall commerce; slow smartphone adoption in RDEs. The "Pays" do not expand beyond early adapters because key merchants hold out.

DIGITAL PAYMENTS[1]







In-browser | In-app | Proximity

Sources: Goldman Sachs Research; US Census Bureau; *eMarketer*; BCG analysis.
Note: The "Pays" are m-wallets such as Apple Pay, Android Pay, and Samsung Pay.
[1]Digital payments = proximity (m-wallet used at the POS) + in-app + in-browser (e- and m-commerce).
[2]Excludes travel, motor vehicle and parts dealers, gasoline stations, and food service.

second Payment Services Directive (PSD2) in Europe, the Unified Payments Interface (UPI) in India, and Measures for Payment and Settlement in China. And regulators in mature markets and RDEs alike are pushing for a faster-payments—also known as instant payments or real-time, low-value payments—infrastructure in order to allow for clearing, posting to the account, and payment confirmation within a matter of seconds (although settlement can be deferred). (See the sidebar "Faster Payments: 'Uber-izing' the Order-to-Reconciliation Cycle.")

Taken as whole, the above forces are driving the next phase of market evolution. And as the Internet of Things expands over the next decade, we will witness a multitude of new payment opportunities that reach far beyond the world of smartphones. These will involve watches and other devices, appliances, cars, and so-called purchase buttons such as the Amazon Dash Replenishment Service, already launched in the US. The Internet of Things will also introduce machine-initiated payments (such as a milk reorder sensor in a refrigerator) and, along with mobile apps, make "check-in"—the consumer simply logs in and makes a purchase, with no additional card or data entry required—a more commonplace way of transacting. In addition, an increasing share of payments may be made within social media networks, and payment initiation will be speech-enabled. Google's Hands Free is a harbinger of things to come.

Dealing with New Dynamics

The current pain points and poor user experiences in many types of transactions make the payments business ripe for both further disruption by fintechs and digital giants and the

FASTER PAYMENTS
"Uber-izing" the Order-to-Reconciliation Cycle

Imagine a seamless order-to-reconciliation process. First, a buyer sends an electronic purchase order to a supplier, who flips it into an e-invoice back to the buyer with a one-click pay button that initiates immediate payment and transmits rich remittance information back to the supplier. Welcome to the potential brave new world of the faster-payments infrastructure, which combines e-invoicing and payment with contextual data, and delivers instant fulfillment through immediate payment confirmation.

The momentum behind faster payments is accelerating as regulators—and to a lesser degree, the private sector—drive implementation. Nearly 75% of implementation has been government-driven, the primary objective being to build a next-generation platform, often including the use of ISO 20022, while at the same time reducing float. Eighteen countries, in both mature markets and RDEs, have already implemented some form of faster payments. Thirteen more, including Australia and the US, are in the process of adopting such a system. The next frontier could very well be cross-border functionality in high-transaction corridors (such as between the US and Canada and within the European Union).

Critical to the adoption of faster payments is the ability to add value by improving the end-to-end user experience and maximizing access. Value must be recognized by both businesses and consumers in order for providers to earn a reasonable return on their investment and be willing to innovate further. And while speed adds value, consumers are truly willing to pay only in a select number of time-critical situations. The greatest value-added will be generated by contextual data (such as rich remittance data) that travels with the payment, and by overlay services that could add tremendous value for business payments (such as Australia's New Payments Platform, whose initial set of services includes fast payment, request for payment, and payment with attached PDF files).

Of course, value-added alone is not sufficient to drive adoption, because access must also be maximized (as several countries have pushed to achieve). For example, the UK has introduced a new access model that lowers barriers for smaller participants (such as technical-access and risk-management teams), and India is building its Unified Payments Interface (UPI) that will enable multiple payment-initiation channels to link to the faster-payments infrastructure.

emergence of new industry dynamics. But disrupters will not necessarily triumph over banking incumbents. Many that succeed will partner with traditional players—as have, for example, the "Pays" in C2B payments, as well as various e-invoicing and blockchain providers in B2B. Although there have been a few clear winners over the past 20 years—such as Alipay, WeChat Pay, PayPal, Square, and Stripe—these have been the exceptions rather than the rule.

Indeed, only a small number of current start-ups will generate the required network effect and scale to move forward on their own. As for the digital giants, despite their immense resources, the past five years have seen a few missteps—one common mistake being the belief that a technical solution will always resonate with the customer.

Of course, given that we are early in the crescendo, banking incumbents still have the potential to become digital maestros. They cannot wait too long, however. They must proactively either fight off or team with the fintechs and digital giants that are courting their customers and threatening to drain select revenue pools. They must develop robust strategic plans both to harness technological advances and to meet shifting customer expectations.

RETAIL PAYMENTS

MAPPING YOUR DIGITAL DESTINY

Although the digital crescendo in payments is under way, few clear leaders have emerged—and incumbents still have a good chance to become principals in the orchestra. They must practice hard, though, to develop and deliver a superior end-to-end customer experience, drive agile product development, and leverage APIs. Moreover, they will need highly focused strategies in order to fund investments in a lower-revenue environment. Fintechs, for their part, are creating superb user experiences, but few have generated a sufficient network effect or diversified their offerings beyond payments.

> Bank incumbents can still deliver more value to consumers than fintechs can.

Indeed, banking incumbents today can still deliver more value to consumers than can fintechs—most of which tend to provide a single service. For example, many banks have a mobile-banking app that has successfully entered the thin ranks of frequently used apps—such as an m-wallet that allows the consumer to check account balances before making a purchase. Moreover, unlike fintechs (which rely on e-mail for customer support), banks have high-touch customer service channels in their call centers and branches. That said, the banks' advantage is diminishing as fintechs strive to leverage their customer bases and increase the stickiness of their apps.

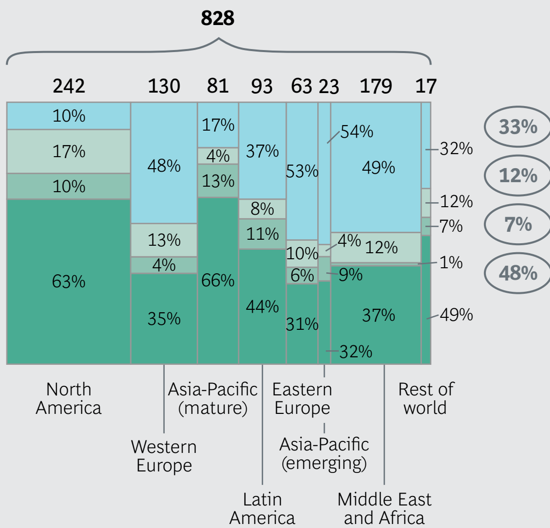
Below, we take a regional look at how incumbents in retail payments can excel in an increasingly digital world. Their focus will vary depending on the potential pockets of growth. In RDEs, both credit and debit cards are attractive areas, whereas in mature markets it is account revenues that tend to be the growth engines. Overall, growth in retail payments revenues will be driven by account and debit card revenues. Moreover, across regions, there are vast differences in both the retail payments revenue mix and growth projections through 2025. (See Exhibit 4.)

Europe: Navigating a World Without Walls

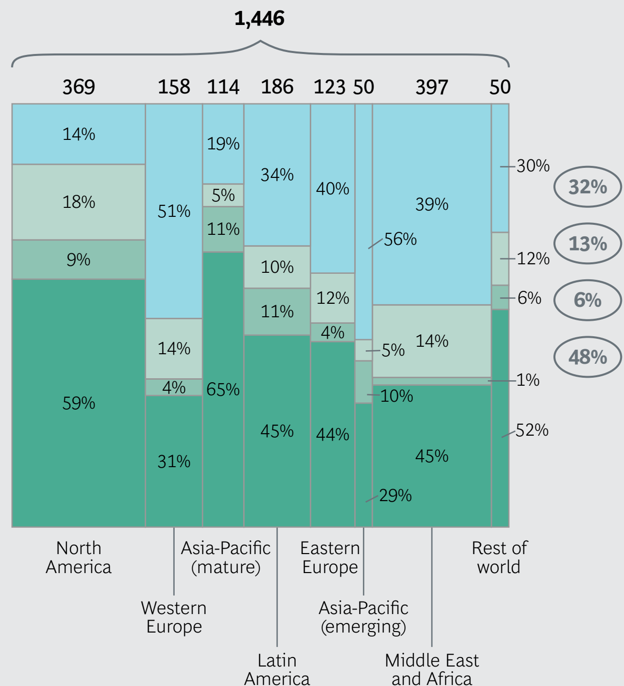
Although European payments providers are still digesting the interchange regulations that came into force in 2015, they are already bracing for the next regulatory initiative, PSD2, which is likely to have an even more profound impact—not only on payments but also on overall daily banking services. (See the sidebar "The Key Components of PSD2.") PSD2 aims to create a more open banking landscape by granting third parties access to customers' accounts in exchange for compli-

EXHIBIT 4 | Retail Payments Revenue Mix and Growth Differ by Region

GLOBAL RETAIL PAYMENTS REVENUES, 2015 ($BILLIONS)



PROJECTED GLOBAL RETAIL PAYMENTS REVENUES, 2025 ($BILLIONS)



Credit card revenues
Noncard transaction revenues
Debit card revenues
Account revenues
Global share

Source: BCG Global Payments Model, 2016.
Note: On a product-line basis, card revenues include transaction-specific fees (interchange fees, merchant acquiring fees, and currency conversion fees for cross-border transactions), monthly or annual card membership fees, and, as applicable, fees on overdrafts and nonsufficient funds as well as net interest income, penalty fees, and other service fees (e.g., cash withdrawal fees). Noncard transaction revenues include transaction-specific fees on noncard payment types and, as applicable, fees for overdrafts and nonsufficient funds; prepaid cards are included in noncard transaction revenues. Account revenues consist of net interest income and maintenance fees on current accounts (DDAs). Totals and percentages may reflect rounding.

ance with minimal rules and the application of strong customer authentication. After full implementation, scheduled for January 2018, third parties will be allowed to access account information and initiate payment transactions directly from the account, provided they have the consent of the customer.

PSD2 will cause the retail banking landscape to be more open and competitive by enabling new value propositions and business models, such as the following:

- *Account Aggregation.* Examples include Numbrs, Bankin', and Spiir in Europe, which give users a consolidated view of their total finances across banks, enriched with personal financial-management tools.
- *Collection of Transaction Data.* Institutions with the right analytical capabilities will be able to evaluate loan applicants' credit scores more accurately and target their offers accordingly. They will also be in a position to offer a raft of new customized services, such as contextual financial advice, push alerts, and loyalty programs.
- *Alternative Payment Initiation Services.* Third parties (such as Germany's Sofort) can offer options to pull funds directly from a customer's bank account. Combined with faster payments, such services may well become lower-cost alternatives to card payments.
- *Ecosystem Development.* Large cross-industry players such as e-commerce or messag-

THE KEY COMPONENTS OF PSD2

The revised Payment Services Directive (PSD2) has five key components that providers of payment services must comply with:

- *The Access-to-Accounts Rule (XS2A).* Banks and other account-holding institutions are required to share information concerning the "payment account" with authorized third parties—provided the end user has given its consent. The level of information is limited to that which is necessary to offer the service of the third party.

- *Payment Initiation Services (PIS).* Newly licensed players—for example, merchants such as Amazon, or third-party payment providers such as Sofort—are allowed to initiate payments directly from the user's bank account provided they have consent of the end user.

- *Strong Customer Authentication (SCA).* Payment service providers must require at least two strong and unrelated elements of authentication. This rule is accompanied by a shift in liability to the party that fails to support SCA. The European Banking Authority is still in the process of defining the regulatory technical standards for striking the right balance between security and convenience.

- *Application Programming Interfaces (APIs).* Banks must build APIs that allow the sharing of information with authorized third parties.

- *Other Provisions.* These include complements to earlier legislation on consumer protection, the banning of surcharges, and transactions with only one party (either the payer or payee) in the EU.

PSD2 still needs to be adopted by individual EU member states but is expected to be in force by January 2018.

ing giants can leverage PSD2 to create product ecosystems that build on the main customer relationship to cross-sell various financial services.

In addition to new value propositions for individual consumers, we also expect disruption in corporate banking. In the highly profitable segment of midsize companies with complex needs and international business, attackers could launch cash-management solutions or provide the integration of payments with third-party software such as accounting software, ERP systems, or invoicing platforms.

The immediate effect of PSD2 will likely be tighter competition among banks, which will be advantageous to institutions that can leverage their agile organizations and infrastructure to seize opportunities. The second-order effect may well be a wave of bank disintermediation, with third parties "owning" the customer through well-designed interfaces, links with payment services, and personal-finance management tools. We expect a select number of digital players—either digital giants or new fintech players—to emerge as winners.

Our recent discussions with banks have confirmed that PSD2 is high on their agendas despite generally low levels of preparedness. Indeed, although most banks have ad hoc working groups, few have taken a bankwide approach to delivering a focused strategy and an implementation roadmap. Our view is that banks cannot afford to wait if they hope to withstand increased competition and turn PSD2 to their advantage.

To be sure, most banks will need to revamp the customer journey—streamlining and redesigning processes and interactions to remove friction, making better use of data, adding alerts and advice, and providing greater convenience and engagement. In addition, digitally agile banks with strong innovation capabilities can leverage PSD2 to develop

new value propositions, push data and analytics to the next level, launch their own aggregator offerings, and selectively open the bank to third parties through APIs.

For banks that are able to act promptly, we believe that PSD2 represents a unique opportunity to capture additional market share and enhance control of the primary customer-bank relationship—all in a more open and innovative financial ecosystem.

North America: Leveraging Digital Opportunities

With a retail-payments revenue pool of $242 billion (nearly 30% of the global retail total), it's no surprise that North America has been home to 60% of payments-related investment in fintechs from 2010 through 2015. The largest source of revenue (63%) is being generated by the credit-card value chain, providing a strong rationale for focusing on this particular area. BCG also believes that incumbents should dedicate attention and resources to faster-payments initiatives, which are in various stages of development but likely to be mainstream within five to ten years in the US and Canada.

Credit Cards: Leveraging Digital Marketing and Engagement. The roles of issuers and card networks have been strengthened by the so-called Pays, which are using established card rails and tokenization standards. Moreover, the Pays have added a new form factor and enhanced security through touch ID.

Still, there are other developments—such as Pay with Amazon and new entrants offering credit at the point of sale—that threaten to overshadow issuers' brands and erode net interest income. The Pays have raised the stakes and opened a new market-share battlefield: the quest to be the default card in m-wallets. Issuers need to be proactive and secure the future of their revenue streams. A successful strategy rests on marketing excellence and superior customer engagement that results in differentiated services and special offers (such as rewards and terms by segment).

In addition, optimizing the return on investment in digital marketing across search, display, and social channels is a key area of marketing excellence. BCG has found that credit-card issuers can increase their ROI in digital marketing by up to 40% with the right technology and processes. The key is precision—using customer data to deliver the right messages to the right customers at the right time. Rather than blanketing mass audiences, the highest-ROI campaigns are personalized. Each creative message, data source, and advertising impression is monitored closely, and budgets are reallocated to top performers.

> Credit-card issuers can increase their ROI in digital marketing by up to 40%.

Yet while access to richer data has enabled issuers to move beyond traditional mass marketing and to track impact better, issuers have had mixed success in unlocking digital marketing's potential. One reason is that marketers still struggle to find the right balance between data-driven and human-driven insights. Measuring the impact of digital channels and devices is perhaps the greatest challenge facing issuers today—but it is a key enabler in correctly allocating marketing expenditures across channels, devices, and creative formats.

We have found three common traits among issuers that are successful in digital marketing:

- A culture of innovation, characterized by creating new formats, testing and optimizing digital performance across new channels, and measuring KPIs
- A "digital first, digital everywhere" mindset, led by senior leadership and focused on the always-connected consumer
- Streamlined processes and clearly defined responsibilities across internal and external teams

By developing such traits, issuers can expand their reach while improving effectiveness and engagement and reducing wasteful spending—

all of which will drive ROI. Generally speaking, value from digital marketing activities must be delivered across multiple dimensions while maintaining quality control and tailoring content to a greater degree. (See Exhibit 5.)

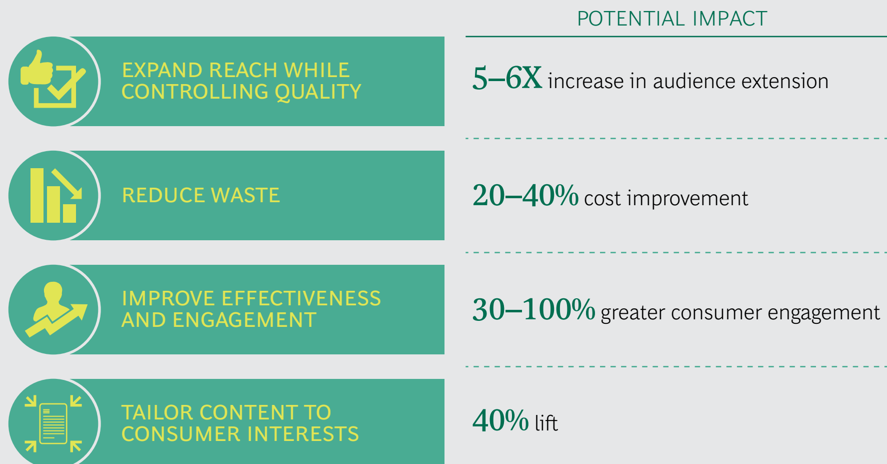
Issuers can also differentiate themselves by improving their daily engagement with consumers. Beginning with authentication, issuers can increase security and ease of use through biometrics. While many have initiated fingerprint identification, a further leap is voice ID, coupled with speech recognition. With consumer expectations being set by leading nonbank app providers, there is room for steady enhancement of app features. Issuers need to respond by developing an enhancement plan that includes features such as strengthened fraud protection and personalized alerts.

Issuers also have room to raise the bar on the mobile-app user experience, enhancing payment functionality and offering additional value-added services such as budgeting tools. The demand for such tools is clearly strong, as evidenced by the breakout success of Toronto-Dominion Bank's MySpend app, which has been ranked #1 in downloads in Canada (and not just in the finance category but overall). The jury is still out, however, on whether top issuers should have a separate app for credit-card holders or embed such tools in their mobile-banking apps. Few have the issuer-acquirer scale required to launch their own Pay facility.

Beyond offering useful features, issuers need to think about how to spur usage by educating their customers. We have observed that leading players in m-banking spend up to ten times as much as competitors—both on marketing features and by tying promotions and rewards programs to successful external apps, such as those of quick-service restaurants.

Faster Payments: Making Preparations Now. Although the notion of faster payments was a mere hypothesis just five years ago, and often dismissed at that, today the concept is becoming a reality. For example, a US Federal Reserve task force is in the process of examining more than a dozen proposals for a faster-payments platform. In Canada, Payments Canada (formerly the Canadian Payments Association) is evaluating options. Given the fact that many North American banks' core processing systems are batch-centric, it is imperative that banks address how to adapt their back-end systems to the requirements of faster payments. In addition to making order-manager systems and processing engines that operate in real time, all related interfaces, integration layers, and connectors must also be real-time ready. Depending on both the age and capabilities of the current system and the IT architecture, updating can easily be a multimillion-dollar

Exhibit 5 | Value From Digital Marketing Activities Must Be Delivered Across Multiple Dimensions



Source: BCG experience.

effort with a time frame of more than two years.

Ultimately, the success of faster payments will rest on banks' ability to ease customer pain points, improve transaction flow, and deliver value-added services beyond mere speed—such as real-time confirmation and contextual data that includes e-invoicing and rich remittance advice. BCG estimates that 5% of total volume benefits from speed, whereas at least 25% benefits from deeper, more granular data. The largest beneficiaries are businesses transacting with other businesses that receive checks and ACH payments without remittance advices (B2B), and businesses that make one-off payments (such as insurance reimbursements) to consumers (B2C). Given the monetization potential, banks should incorporate faster payments into their treasury-services product strategy. Interviews with businesses of all sizes have revealed that basic "request for payment" e-mail functionality—with a pay button and the ability to receive payment deposit confirmation—would be a significant digital leap forward.

Moreover, while B2B and B2C show direct monetization potential, person-to-person (P2P) can also generate indirect revenues both by deepening customer relationships and by educating consumers about faster payments, which in turn will drive adoption of B2C faster-payments platforms.

RDEs: The Attackers Are Through the Gate

RDEs are showing robust overall growth in payments-related businesses despite the slowdown in GDP growth in some countries. Growth has been driven by generally stronger macroeconomics (compared with mature markets), government initiatives that are expanding the banked population, private-sector investment that is fueling card penetration and the growth of POS terminals, and a mobilization of consumers that is broadening browser-based and in-app commerce.

These drivers, in turn, are continuing to propel the migration from cash to noncash payment types, as seen in the growth of noncash transactions per capita. (See Exhibit 6.) Correspondingly, the estimated annual growth in the value of bank-card payments in emerging markets from 2015 through 2025 is estimated to be almost double the rate in mature markets (11% versus 6%). India and China are expected to lead the boom with annual growth in noncash payment values of 17% and 11%, respectively.

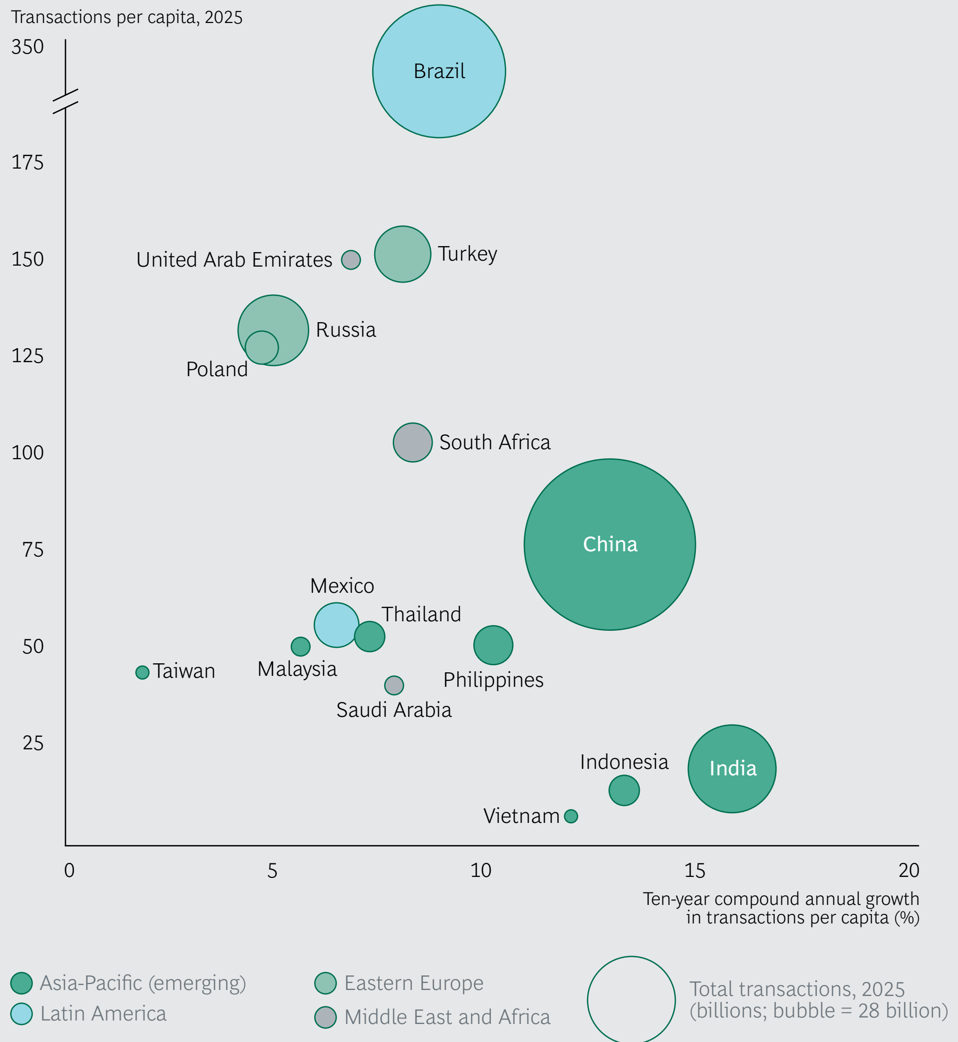
Yet while RDEs share common growth drivers, they are experiencing notably different transformations in different regions. The competitive dynamics, pace of digitization, and role of fintechs vary significantly. For example, incumbents are taking the digital lead in Latin America—but not so in China. The lesson to be learned is that incumbents must carefully monitor new entrants, develop scenarios, and anticipate disruptive business models in order to survive and thrive.

Incumbents must excel at providing the newly banked with digital payment services.

Latin America. Across Latin America, there are examples of incumbents that have responded to the threat of digital disruption, harnessing tech advances to their advantage and developing new business models and value propositions. One example is Prisma Medios de Pago (formerly Visa Argentina, a bank-owned merchant acquirer and payments processor) that has significantly and successfully boosted its digital lineup, including Todo Pago (an e-wallet, mobile POS, and P2P offering). Another example is Elo in Brazil, a payment network formed in 2010 (initially by Banco do Brasil and Bradesco, then joined by Caixa), which focused initially on domestic-only cards for lower-income Brazilians and later expanded to internationally accepted cards (through a partnership with Discover) and to wealthier segments.

While incumbents have thus far been able to go on the offensive, they must excel at effectively providing the newly banked with digital payment services. They must also contin-

EXHIBIT 6 | Noncash Payment Transactions Are Poised to Grow Significantly in RDEs



Source: BCG Global Payments Model, 2016.

ue to innovate in order to defend their market positions against new entrants such as Nubank, a mobile credit-card app in Brazil, and the recently merged micro-acquirers Payleven and SumUp. Incumbents further need to stay abreast of regulatory initiatives regarding fintechs and new payment rails. They must engage with regulators to strike the delicate balance between ensuring security and privacy and encouraging innovation.

China. Digitization arrived in China with fintechs bursting through the gate. Indeed, many incumbents underestimated both the early signs of the fintechs' strength and the pace of consumer and business adoption. As a result, Ant Financial (which runs Alipay) and Tencent (which launched WeChat Pay) are winning the digital payments game and show no sign of slowing down. On the contrary, they are looking for new markets to conquer. Alipay dominates digital payments (in-browser, in-app, and proximity) with about 60% of the market and 450 million active users, or about three times the number of credit-card holders in China. While part of the fintechs' success can be attributed to adoption by millennials (the largest population segment), older segments are also adopting digital payments, as evidenced by the increasing number of hotels—particularly luxury hotels—accepting WeChat Pay. Part of the appeal of digital payments over traditional credit cards is transaction speed and the

absence of penalty fees, along with relatively low demand for credit.

The success of Alipay and WeChat Pay lies not only in being early movers in a scale- and network-effect-driven business but also in the ability to listen to the voice of their customers—both consumers and merchants—and respond with new services. For example, these players have embedded their payment functionality into apps that they have either built or invested in, such as ride-hailing, food delivery, and entertainment ticket apps.

India. In India, the digital crescendo is building. At the macro level, financial inclusion initiatives are enabling an increasing number of consumers to migrate from cash to e-payments. Within payments, two factors are generating new opportunities and potentially shifting the competitive dynamics. First, the Reserve Bank of India has established new guidelines to license so-called payment banks. Second, the National Payments Corporation of India is launching the Unified Payments Interface (UPI), which will provide an open-architecture payment layer (including APIs), a directory (with simple virtual account addresses), and easy authentication that enables mobile payments, including debit payments. UPI will act as a catalyst for innovation on two fronts-—wallets and acquiring—and in the process give incumbents an opportunity to establish themselves as digital maestros.

Critical to incumbents' success will be developing a strategy that targets both consumers and merchants and that extends beyond traditional customer bases to the mass market. On the consumer side, UPI offers a chance to launch an enhanced m-wallet and to partner with payment banks to offer complementary services, such as a new bank account for those with balances above a certain level. On the merchant side, offering UPI acceptance services could improve merchant acquiring economics by increasing value per terminal and by potentially boosting margins as a result of lower interchange and network fees than on debit cards.

WHOLESALE TRANSACTION BANKING

LEVERAGING "FIN" AND "TECH"

CURRENTLY, ABOUT ONE-THIRD OF payments-related fintech investment is going to B2B providers. Although B2B does not grab as many headlines as C2B, significant pain points still exist for banks' corporate customers, and the opportunity to solve problems and deliver value is sizable. Indeed, banks that act decisively are in a prime position to be a core partner in corporate treasurers' digital transformations.

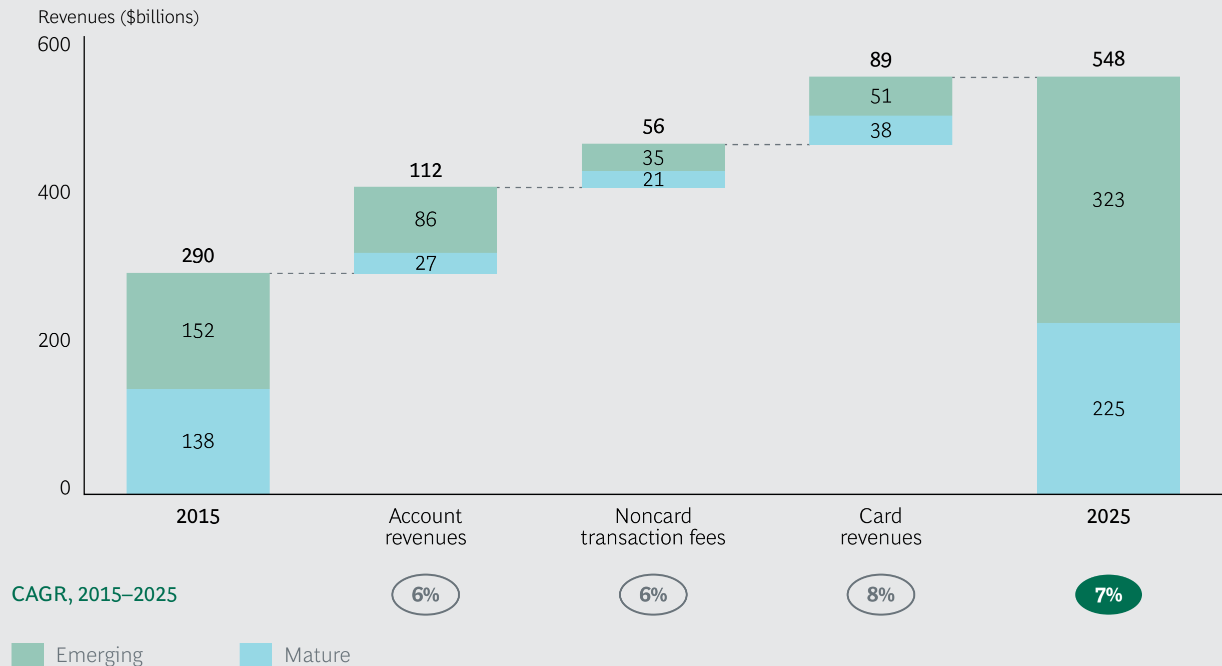
The stakes, of course, are high. Wholesale transaction banking—which includes payments, cash management, and trade finance—generated about $370 billion in revenues globally in 2015. Account and payment revenues (included in BCG's Global Payments Model) represented $290 billion of that total and are expected to reach $548 billion by 2025, a CAGR of nearly 7%. (See Exhibit 7.) In general, growth will be driven by increasing volumes and deposit balances, as well as by improving spreads. The importance of these drivers, however, will vary by region. In RDEs, account revenues stand out as a dominant growth engine.

Overall, even though growth projections for revenue pools are solid, it is becoming increasingly challenging to excel in wholesale transaction banking. Regulation has intensified competition and also made it more difficult to do business, especially with regard to "know your customer" (KYC) regulations. Shortcomings in banking services, along with the wish of some corporations to be "bank agnostic," have opened the revenue doors to fintechs and digital giants. Such players are not likely to displace transaction-banking business models outright, but some entrants are successfully making inroads with specialized services and customer-friendly interfaces. In addition, the increasing adoption of treasury management systems (TMS) and enterprise resource planning (ERP) platforms gives corporate treasurers a powerful alternative to bank portals.

> Shortcomings in banking services have opened the doors to fintechs and digital giants.

Nonetheless, banks can combine their financial expertise with their tech acumen to fulfill the trusted advisor role, simplify treasurer's lives, and fuel growth with what we call "smart selling." In addressing these calls to action, we will incorporate relevant findings from a recent global survey of corporate treasurers conducted by BCG and BNP Paribas. (See *Corporate Treasury Insights 2016: It's All About Security and Client Experience,* a Focus report by BCG and BNP Paribas, May 2016.)

Exhibit 7 | Wholesale Account and Payment Revenues Are Forecast to Reach $548 Billion by 2025



Sources: BCG Global Payments Model, 2015; BCG analysis.
Note: Wholesale includes business and government. Account revenues consist of net interest income and maintenance fees on current accounts (DDAs). Cards include small business credit and debit cards and commercial cards (travel and entertainment; purchasing cards). Card revenues consist of transaction-specific fees (interchange fees, merchant acquiring fees, and currency conversion fees for cross-border transactions), monthly or annual card membership fees, and net interest income, penalty fees, and other service fees (e.g., cash withdrawal fees). Noncard transaction revenues include transaction-specific fees and fees for overdrafts and nonsufficient funds. Totals may reflect rounding.

Fulfilling the Trusted Advisor Role

In our view, wholesale transaction banking is far from becoming a commodity. Rather, it is ready for a renaissance driven by service innovation. The renaissance begins with the bank playing the role of key advisor: sitting down with corporate clients, learning what their priorities and pain points are, and figuring out the best solutions. Treasurers would clearly like banks to assume this role in many areas, including risk management and cybersecurity, as well as data and analytics.

Risk Management and Cybersecurity. Many treasurers are ill equipped to oversee the growing set of risks that they face—especially in the critical area of cybersecurity. Among treasurers in our survey who cited cyber attacks as a significant risk, more than half reported they had not deployed (or were unaware of) mitigation measures such as staff awareness training, authentication tokens, and fraud-detection tools. In addition, approximately three-quarters of respondents said they did not use cognitive systems, infrastructure defense barriers, or network traffic monitoring mechanisms. Banks can fill that void by providing advisory services and certification of their clients' IT security. Some banks could go a step further by building in-house solutions or partnering with tech providers that specialize in cybersecurity.

To be sure, survey respondents signaled that they would look favorably on banks that take proactive measures to share their expertise and help strengthen internal control procedures and IT infrastructure. One treasurer noted, "I would pay for advisory services from my bank to diagnose such things as the security level of my systems and to help me understand what I should improve."

Data and Analytics. Corporate treasurers are increasingly in need of advanced data analysis but often find current tools inadequate—because the tools either do not deliver as promised or are not sufficiently customized. While cash-flow forecasting tools are always

in demand, treasurers are also seeking advanced FX exposure analysis and metrics in areas such as peer-group performance, working capital, and payment efficiency. Banks that can offer flexible tools and provide analytics advisory services that meet the individualized needs of treasurers will be very well positioned. As one treasurer stated, "There are great opportunities for concrete consulting assignments for banks." Another noted that "these are things where banks are in the pole position."

Simplifying Treasurers' Lives

"We want simplicity" is a recurring plea of corporate treasurers, many of whom remain focused on traditional products. A sizable number of treasurers still feel that most banking products are commodities, and they value fair pricing and quality of execution more than pure product innovation. But simplifying treasurers' lives is no simple endeavor. It involves easing the complexity and friction that is inherent in many customer journeys, as well as truly becoming part of the treasurer's tech ecosystem.

Easing Customer Journeys. Treasurers are engulfed in a morass of banking paperwork. They have valid complaints regarding inefficient processes that result in difficult customer transactions, such as those involving the opening of new accounts. While some banks have helped battle the paper overload by offering electronic-bank-account and signatory management, few have made further inroads. As a result, there is a significant opportunity for banks to differentiate themselves on this front. Banks that take a client-centric perspective in overhauling processes will benefit from a virtuous circle: faster customer onboarding, higher satisfaction, earlier revenue streams, stronger cross-selling, and greater loyalty.

Indeed, banks can stand out by focusing on several specific areas. First, they should simplify, standardize, and automate forms, maintaining a central depository of data that is accessible bankwide. Second, they should explore the potential of proprietary or shared blockchain-based solutions to allow them to function as a decentralized, fully secure repository of data. (See the sidebar "A Reality Check on Blockchain.") Third, many

A REALITY CHECK ON BLOCKCHAIN

Blockchain is one of the most-hyped technologies to come along in a great while. It is also one whose label is being applied loosely and, according to some, falsely. Yet beyond the hype and the debate, it's clear that the concept of blockchain is spurring both innovative thinking and targeted investment aimed at solving pain points in payments. Banks should thus evaluate blockchain's potential as a technological improvement to their current operations and as a means of launching new business models.

Blockchain technology is showing promise in critical areas such as trade finance and cross-border transactions for commercial customers, consumers, and even banks (internal cross-border transactions). Such innovations may have profound implications for correspondent banking and remittances. Indeed, global banks need to explore how blockchain technologies can simplify and streamline their correspondent bank networks, while domestic banks with international aspirations should determine if there is a platform that could facilitate their ability to provide cross-border services.

Beyond cross-border payments, blockchain may help overcome m-wallet interoperability challenges. For example, Stellar is applying its blockchain platform to enable the interoperability of m-wallets in Nigeria. For corporate treasurers, the leap to blockchain is a long one, although many report that they find the technology conceptually appealing. For blockchain to gain traction, banks will need to provide a controlled, regulated ecosystem and battle-tested use cases. Demand from multinational corporations should be robust given that, for some, the majority of their transactions are intracompany and often cross-border.

treasurers would like banks to go one step further and share relevant KYC data with third parties such as external FX trading-platform providers.

Banks can also leverage their unique competitive advantage over fintechs and digital giants to assist companies in meeting their compliance and regulatory requirements. Several treasurers in our survey expressed interest in bank support, with responses such as "I expect my banks to provide me with regular updates on regulatory changes that could affect my company" and "I would love to have my banks helping me handle China's compliance requirements." Beyond KYC and compliance, banks can further add insight by helping corporations evaluate vendor risk.

Another area ripe for simplification is cross-border transactions, which have vast room for improvement not only from a client perspective but also from an operational-efficiency standpoint. Most cross-border transactions run through a correspondent-banking network, which can be slow, opaque, and expensive. Recognizing that they must develop a better model, more than 75 leading global banks, along with SWIFT, launched the global payments innovation initiative (GPII) with a goal of providing same-day use of funds, fee transparency, end-to-end payments tracking, and rich payment information. The GPII comprises a service-level agreement rule book, a platform for smart collaboration (such as enhanced compliance practices and optimized intraday liquidity flows), and SWIFT platform enhancements (such as centralized payments tracking). Set to go live in early 2017, the GPII is a prime example of how banks and third parties can collaborate to deliver simplicity and remain competitive in the face of fintech incursions.

Becoming Part of the Treasurer's Tech Ecosystem. Our survey revealed that many treasurers still consider banks to be the gold standard when it comes to IT system quality. And although many treasurers claim to be bank-platform agnostic, they still expect banks to position themselves at the center of their tech ecosystems in order to help them not only carry out but also simplify their jobs. Treasurers are increasingly called upon to understand how technology can make their operations more efficient and effective. Most, however, have not been trained in cutting-edge technology. Given that banks are at the nexus of systems, connectivity, and massive amounts of data, they are in a prime position to support treasurers in optimizing their tech infrastructure. As one treasurer described it, "Banks are now IT companies selling financial solutions." Indeed, many treasurers now expect banks to behave like tech companies. They also question the traditionally segregated front, middle, and back office structure that can impede access to banks' IT teams.

As one treasurer said, "Banks are now IT companies selling financial solutions."

Banks can respond to these needs by bringing the tech side to the client earlier in the process and by encouraging ongoing engagement. A myriad of benefits can result. First, the tech side hears the customer's voice directly. Second, closer tech-client ties foster codevelopment opportunities and facilitate beta-testing of new products and services. Ultimately, reducing friction should result in cost savings.

Banks' evolution toward providing more technology assistance should also involve exploring new solutions such as APIs, through which banks can facilitate access to their services and data, and provide (as one survey respondent put it) "plug-and-play solutions." The few pioneering banks that offer APIs view them as an additional channel, not as a substitute for pushing services and data through their portal or ERP integration. For commercial customers undertaking large numbers of transactions or massive information processing (such as accounts receivables reconciliation), APIs enable seamless integration of data access into their platforms.

Another area in which banks can provide vital support is in digitizing the financial supply chain (from order to reconciliation),

which remains fraught with paper and manual processes and has accordingly attracted fintechs as well as digital giants. While treasurers report that they like the specialized value propositions of fintechs, 90% indicate that fintechs are not yet capable of meeting the full array of corporate treasury needs. Moreover, treasurers are wary of fintechs' long-term sustainability. As a result, banks have an opportunity to team with fintechs to integrate solutions into their global offerings. In particular, e-invoicing and integration into accounting systems have been successful initiatives. These integrated services are particularly valued by middle-market companies, which typically do not have the in-house IT capabilities to digitize their financial supply chain. Another area ripe for digitization is merchant acquiring. (See the sidebar "Winning in the Merchant Acquiring Game.")

WINNING IN THE DIGITAL MERCHANT ACQUIRING GAME

Merchant acquiring is experiencing a renaissance, highlighted by the current unprecedented rate of industry consolidation and digital transformation. This renaissance is being fueled by the rise of digital commerce and by technological advancements that are spawning inexpensive hardware and software-as-a-service (SaaS), enabling easy integration. Digital disruption is allowing both incumbents and new entrants to offer new value propositions, redefining the power of scale and generating both new business models and an extended value chain. Not all stakeholders, however, will be able to reap the rewards.

The renaissance in merchant acquiring is concentrated in the small and medium-size enterprise (SME) segment and is being driven by advances in integrated POS (IPOS) systems. IPOS systems combine a cash register system, a POS terminal, and value-added software. For merchant acquirers, selling IPOS systems is a powerful business model that combines an attractive business segment with an attractive value-added service. In most markets, the SME segment is the dominant revenue generator—typically accounting for about 65 percent of revenues and less than 30 percent of purchase value—and it has also experienced less margin compression than the large-merchant segment. The benefits of offering IPOS systems to SMEs are many: margin preservation, a compelling sales pitch that competes more on value than on cost, and access to SKU (stock-keeping unit) data. Our experience suggests that the margin decline for a merchant using an IPOS system is three percentage points less, on average, than the margin decline for a merchant not using an IPOS system.

In order to excel in the IPOS game, acquirers must strive for three key success factors:

- Deliver differentiated value-added services, which is of paramount importance in increasing retention, minimizing the impact of margin compression, and generating additional revenues. Acquirers need to prioritize the right value-added services at the industry vertical level.

- Achieve distribution scale at the industry vertical level, which is required to realize the potential of an integration-driven strategy. To excel in delivering IPOS systems—one of the most attractive value-added services—an industry-specific approach is critical.

- Execute an effective acquisition and partnering strategy, which is critical to achieving the first two success factors. Merchant acquirers, depending on their individual market share and product scope, can potentially pursue three acquisition plays: gain distribution scale; extend and differentiate capabilities in the core business; and expand into adjacent merchant services. Partnering is another option that can build distribution scale and extend capabilities, in addition to providing experience in new markets or products.

Fueling Growth with "Smart Selling"

Beyond responding to the voice of the treasurer, one of the greatest opportunities for boosting wholesale transaction-banking revenues is in enhanced cross- and upselling, or what we call smart selling. BCG's experience with smart selling has shown that a significant portion of revenue-growth opportunity is concentrated in a bank's existing clients, whereas business from new clients tends to be relatively minimal and can take years to develop. Many banks have an incomplete understanding of the client wallet—especially by industry, size, and region—and have fairly rudimentary selling approaches, typically leading to poor conversion. BCG has found that within an individual bank, there can be large disparities in sales force performance across comparable clients. With a smart selling approach, banks can turbocharge growth by 10% to 15% within 12 to 18 months and achieve a far higher conversion rate. (See Exhibit 8.)

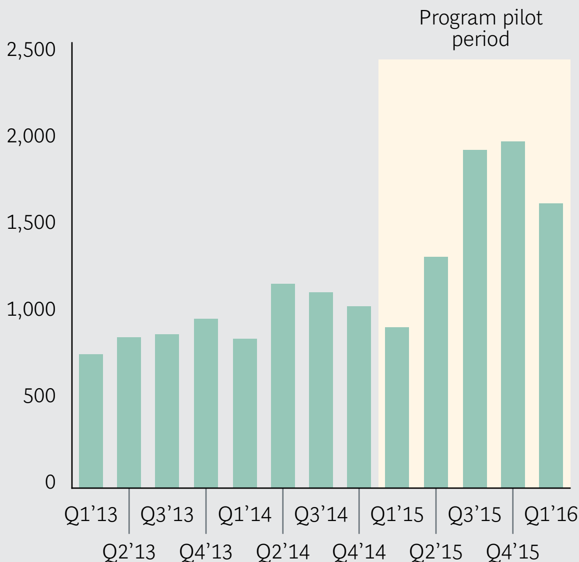
Smart selling essentially comprises four components: sizing the wallet and identifying opportunities; validating with relationship managers (RMs) and sales teams; developing a sales plan and tracking results; and creating and embedding a toolkit.

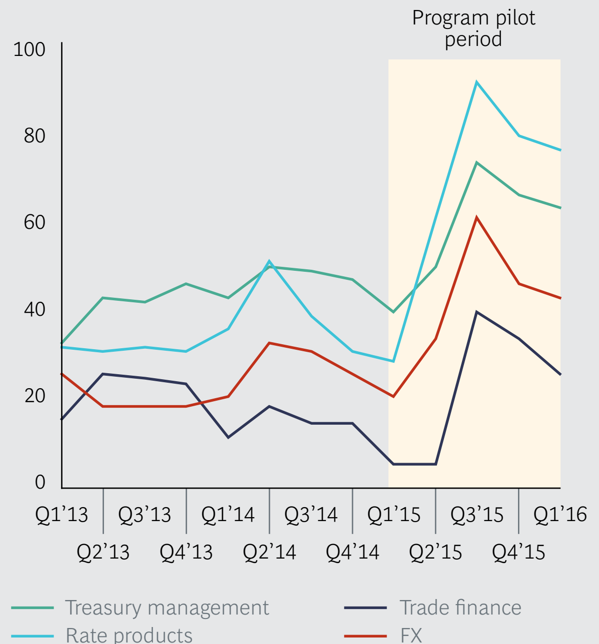
Sizing the Wallet and Identifying Opportunities. BCG has developed a proprietary "market cube" model segmented by revenue, industry, and product type, which can be combined with client data to generate a share-of-wallet opportunity map at both the client and product level, identifying cross- and upsell opportunities.

Validating with RMs and Sales Teams. Critical to the success of a smart selling initiative is buy-in from the RMs and product sales teams. The process must result in not only validating the opportunities but also identifying and overcoming historical challenges to seizing these opportunities. Ultimately, the RMs and product sales teams must jointly commit to pursuing the opportunities with an agreed-upon time frame and conversion goal.

Developing a Sales Plan and Tracking Results. BCG has found that "closed loop"

EXHIBIT 8 | Smart Selling Programs Can Significantly Boost Revenues





Source: BCG case experience.

account planning and sales execution processes can drive transparency and positive operating momentum. Account planning starts with the prioritization of opportunities on the basis of a portfolio heat map, and is completed at the start of each sales cycle. RMs and product specialists meet with clients and track their results using a sales funnel approach.

Creating and Embedding a Toolkit. Execution and tracking excellence requires arming RMs and product sales teams with key tools such as a share-of-wallet calculator and an account-planning and tracking tool. In addition, effective incentive systems and coaching must be put in place.

Another initiative that has proven to be highly successful is so-called smart pricing. This involves stronger governance and discipline in enforcing pricing protocols, the implementation of effective sales incentives (such as a focus on margins instead of on revenues), the repricing of existing business (for example, eliminating unjustified discounts and reinstating omitted charges), and improved price realization on new business. BCG has found that fee revenues can be increased by 12% to 17% through smart pricing.

Ultimately, the payments industry is being transformed in ways that can play to the strengths of not only fintechs and digital giants but also bank incumbents themselves. It is clear, moreover, that although ongoing change and disruption in the industry are here to stay, the exact types of players that will emerge as true long-term winners is not. Finally, amid a great deal of industry uncertainty, there is one fact that remains absolutely certain: Inaction is not an option for players that wish to achieve or maintain market-leading positions. In order to win, institutions must capitalize on the disruption—and find a smart way to compete in today's wide-open payments seas.

FOR FURTHER READING

The Boston Consulting Group has published other reports and articles that may be of interest to senior financial executives. Recent examples include those listed here.

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An article by The Boston Consulting Group, August 2016

Doubling Down on Data: Global Asset Management 2016
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An article by The Boston Consulting Group, February 2016

NOTE TO THE READER

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