

THOUGHT LEADERSHIP

**REAL-TIME, ANY-TO-ANY  
PAYMENTS: IMAGINATION  
REALIZED, COMMERCE  
EVOLVED**

## TABLE OF CONTENTS

THE PROBLEM WITH PAYMENTS TODAY .....	3
CURRENT PAYMENT OPTIONS CONSIDERED .....	4
 POWERS ANY-TO-ANY PAYMENTS.....	5
OVERCOMING THE CHALLENGES OF REAL-TIME, ANY-TO-ANY PAYMENTS .....	5
THE BENEFITS OF REAL-TIME, ANY-TO-ANY PAYMENTS .....	6
THE HEART OF REAL-TIME, ANY-TO-ANY PAYMENTS.....	7
SUMMARY .....	7



# UP DRIVES HIGHER PROFITS FROM PAYMENTS

Imagine a world in which consumers have control over their money and are connected directly to their payments mechanism of choice no matter where they are. In this world, shoppers pay anyone directly from their current/ checking accounts, banks reclaim a direct relationship with consumers and retailers drive store spending. Payment stakeholders collectively benefit by driving out inefficiencies in the payments ecosystem, thereby reducing costs and protecting margins in the face of relentless change and regulation. Most importantly, consumers have the ultimate control over their money and are able to instantly access it to pay others, no matter where either party is on the globe. The world of real-time payments is becoming a reality and along with it, the enablement of cheap, quick, universal and secure electronic payments.

## THE PROBLEM WITH PAYMENTS TODAY

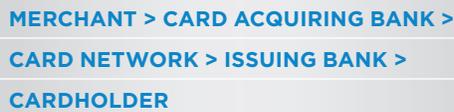
Many consumers errantly believe payments are currently processed in real time. Most do not understand the complexity of what occurs after they swipe their credit or debit cards or authorize online, card-not-present transactions. The current ACH and card network systems, while optimized and convenient, are also incredibly complex and inefficient.

Broadly, in an ACH system, originators deliver transactions to banks. Each bank in the system chooses an operator who forwards and sorts transactions to receiving banks and other operators as follows<sup>1</sup>:

RECEIVER	ORIGINATOR
RDFI	ODFI

This system is further complicated by constantly evolving payment options like card-not-present transactions and decoupled debit cards that use the ACH rails to create new ways for payments to occur.

Like the ACH system, the credit card network is equally convenient and complex. What appears to consumers as a simple debit and credit process involves a global interconnected network with multiple players filling different roles. In general, open-loop card networks operate by connecting two separate value chains (the issuing and acquiring processes) at the point of sale, as follows:



Within the above process, a card network interchange functions to establish fees that retailers and banks must pay for the upkeep and convenience of the system. After a consumer swipes a card at one of many types of merchant terminals on the market, an acquirer must route the transaction to the correct payment card network, which then routes the transaction to the appropriate issuing bank, which then charges the cardholder's account.

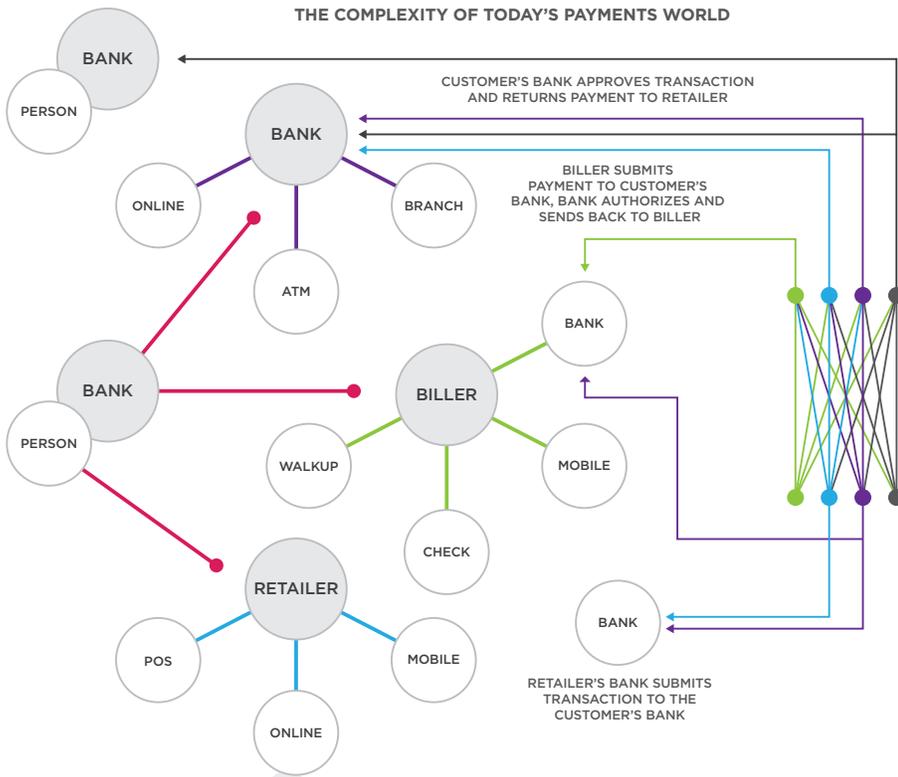
When contrasted with the complexity of our current card and ACH networks,

## THE COMPLEXITY OF OUR CURRENT PAYMENTS SYSTEM

Consumers and businesses have multiple electronic options when it comes to paying for goods or services rendered. They can pay by credit, debit or prepaid card; ACH transaction or alternative networks. While the current infrastructure works effectively today, it was built during an age when paper reigned, in which the mass-market Internet and smartphones did not exist. Current payment systems were built for a world where electronic networks either didn't exist or were too slow to be used for business. Technology has shifted that landscape and paper-based payment systems have fallen behind by not leveraging the limitless bandwidth, consumer protections and ubiquitous access to online information that now enables more efficient payment alternatives.

the simplicity and revenue potential of a real-time payments system that makes a transfer from one account to another using a bank app on a smartphone, a non-branded card via an ATM or any other bank channel, is appealing in its ability to increase efficiency to current payment systems.

THE COMPLEXITY OF TODAY'S PAYMENTS WORLD



CURRENT PAYMENT OPTIONS CONSIDERED

Built over the past 40 years, the card infrastructure is resilient, quick and, despite recent data breaches, generally secure. However, paying by card is expensive. Governments across the world agree and have been regulating away interchange revenues. While such actions delight retailers and billers (such as consumer finance, insurance, utility and other billers), they often hurt financial institutions that have to increasingly alter their business models to continue making a profit from their card operations. Despite the reduction in interchange expense, retailers and billers continue to cite interchange as a significant pain point.

ACH payments are direct debits, card-based transactions or bulk payments. While inexpensive and scalable, ACH networks do not offer the real-time fraud detection that the card infrastructure does. Payment recipients (which are often retailers and municipalities) assume an increased risk of non-payment since settlements can take up to

three days to actualize, at which point payers may not have sufficient funds in their accounts to cover payments. Additionally, payers can dispute ACH transactions months after they occur, driving the need for businesses to maintain a capital cushion to mitigate the risk of disputed payments.

Alternative networks like PayPal, Skrill and Payzal offer a faster alternative to traditional payment mechanisms. These networks typically require a bank account to deposit and withdraw funds, are simple to use and offer built-in security capabilities like funds verification. However, they can be expensive and are not open loop or accepted everywhere. They speed up the payment process by leveraging

THE ECONOMIC IMPACT OF ALTERNATIVE NETWORKS

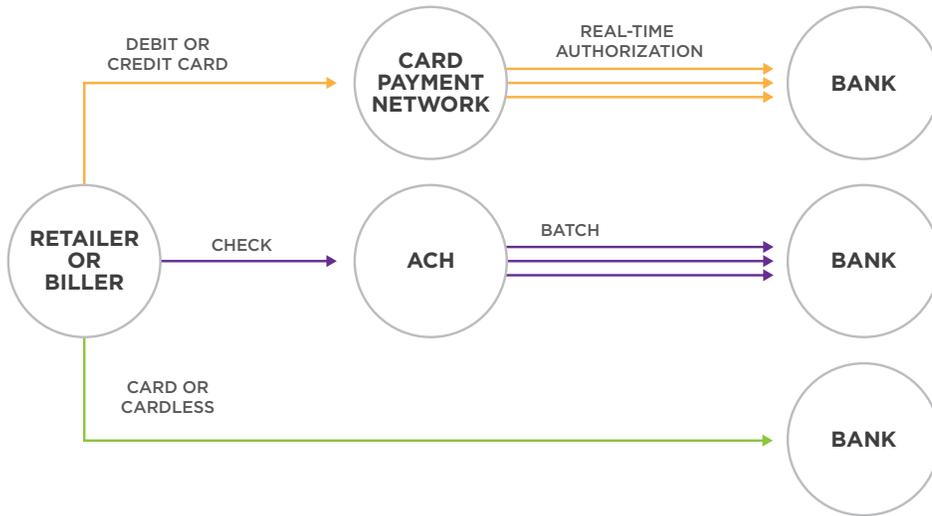
To appreciate the potential negative impact associated with payments executed large scale through alternative networks, consider an example involving three people (Persons A, B and C) who make transactions with each other around a table. Person A owes Person B \$50. Person B owes Person C \$100. Person C owes Person A \$75. Person A puts \$50 on the table. Person B puts down \$100 and Person C puts down \$75.

In the middle of the table lies a fee of 3 percent plus the aggregate transaction amount of \$225, totaling \$231.75. All three parties execute their payments at the same time: Person A ends up with \$75, Person B receives \$50 and Person C gets \$100. The money on the table has moved around within the system and \$6.75 has been taken out of the economy to pay for the maintenance of the system. Parties cannot access their funds for three days and \$225 goes out of the economic system, losing the multiplier effect. In actuality, lost funds due to maintenance and transaction fees is a problem for every payment system: Merchants pay a substantial fee to offer the convenience of cards as a payment option to customers, ACH fees are leveraged in multiple countries and, finally, receivers of ACH transactions must wait a few days after the process begins to receive their money.

the underwriting ability of payers' issuing banks to mitigate the risk of insufficient funds in payers' accounts and enabling instant payments by linking transactions to payers' bank accounts. Accounts can be funded

PAYMENT TYPE	POSITIVE FUNDS VERIFICATION	FAST	LOW-COST	
CARD-BASED	●	●	●	● YES ● NO
BULK/BATCH	●	●	●	
ALTERNATE	●	●	●	
IMAGINE WITH	●	●	●	

THE SIMPLICITY OF REAL-TIME, ANY-TO-ANY PAYMENTS



by a card payment or through ACH networks, so although it is a third option, alternative networks rely on the two original payment networks to operate. Because these networks require pools of funding, which cannot be easily accessed or made readily available, they are difficult to regulate and are worrisome to governments worldwide.

**UP POWERS ANY-TO-ANY PAYMENTS**

**REAL-TIME PAYMENTS: AN EVOLUTIONARY ALTERNATIVE**

Real-time payments using a variety of channels and devices like smartphones, non-branded cards, mobile phones, laptops and computers to deliver instant, secure and inexpensive payments directly between two parties anywhere in the world offer an evolutionary alternative to current payment options.

**A NEW WAY OF PAYING: CONSUMER ANY-TO-ANY**

The term “any-to-any” is used to describe the connection from one party to any other party and can include payments involving unbanked individuals with access to prepaid cards. With UP BASE24-eps® as the enabling technology, real-time payments facilitate quick, secure, cheap and regulated transactions between consumers and retailers,

financial institutions and billers. Payment stakeholders can make both a direct connection to each other and offer a benefit to their customers by enabling person-to-person (P2P), person-to-business and business-to-business payments.

**OVERCOMING THE CHALLENGES OF REAL-TIME, ANY-TO-ANY PAYMENTS**

Current payment systems are entrenched into consumer behavior. Consumers will therefore have to be incented to adopt real-time payments if the large-scale acceptance required for its success is to be achieved. Ubiquity sounds like an insurmountable task, but the benefits for consumers and stakeholders make this challenge smaller than it first appears. Despite these challenges, there are significant reasons for moving away from the existing payments infrastructure. Current payment systems are entrenched in expensive legacy systems that are difficult and costly for banks, billers and retailers to replace. Industry experts state that flexible payment

**THE CHANGING FACE OF P2P PAYMENTS**

Real-time, any-to-any payments make P2P payments faster and easier than current payment methods. People living in the same city can currently avail themselves of cash, check, card and online payment methods like Amazon WebPay, Obopay and others. Recent Mercator Advisory Group research suggests that American consumers are becoming very comfortable using electronic means to make payments to others. Nearly 50 percent of survey respondents transferred money to others electronically.<sup>2</sup> It’s worth noting that of those payments, 39 percent were initiated online and 15 percent were initiated by mobile phone. Mercator expects the use of mobile and tablet devices to initiate P2P payments to increase over time.

People wishing to complete a transaction in separate cities assume risk by sending cash, experience time delays with checks and pay more to use alternative payment networks than the transaction seems worth. As is currently being borne out in emerging markets, real-time

payments on mobile devices require only a phone number or email address to complete and are an intuitive, safe, quick and convenient way for people to pay each other. P2P technology is enabling anyone to pay anyone else for any number of common activities; friends can pay each other for a shared cab ride or dinner bill, while parents can pay their babysitters by transferring money from their accounts to the sitters’ straight from their device of choice. An April 2013 report by Consumer Action News<sup>3</sup> indicates that consumers are very receptive to the idea of electronic P2P payments with 77 percent of those surveyed saying they’d recommend using P2P payments and 51 percent of those who hadn’t used a P2P payment service saying it was only because they didn’t know the option existed. In many cases, free services offered by financial institutions like Barclays PingIt and ABSA CashSend further reduce the risk and cost of P2P payments in a real-time, any-to-any payments environment.

STAKEHOLDERS	REAL-TIME PAYMENT BENEFITS
CONSUMERS	<ul style="list-style-type: none"> <li>- Real-time access to funds</li> <li>- Secure access to trusted funding source</li> <li>- Intuitive, easy to use</li> </ul>
FINANCIAL INSTITUTIONS	<ul style="list-style-type: none"> <li>- Brand is front and center in the consumer's mind</li> <li>- New revenue streams</li> <li>- Efficient payment process</li> <li>- Less risk</li> <li>- Bank account becomes the center of the payments experience</li> </ul>
RETAILERS	<ul style="list-style-type: none"> <li>- Lower costs</li> <li>- Less payment risk</li> <li>- Faster funds availability</li> <li>- Platform that can be leveraged</li> </ul>
BILLERS	<ul style="list-style-type: none"> <li>- Lower costs</li> <li>- Settled funds in real time</li> <li>- Deeper customer relationships</li> </ul>
GOVERNMENTS	<ul style="list-style-type: none"> <li>- Less payments friction</li> <li>- Consumer choice</li> <li>- Less risk from new money pools</li> </ul>

technology can have maintenance costs of 21 percent of an IT budget, as opposed to 36 percent for legacy applications. Additionally, the ROI for flexible technology is over 300 percent for a five-year period and 860 percent+ over a 10-year time frame.<sup>4</sup>

## THE BENEFITS OF REAL-TIME, ANY-TO-ANY PAYMENTS

The benefits of real-time, any-to-any payments abound for consumers, financial institutions, retailers and governments. If these benefits are clearly and consistently communicated to all stakeholders and consumers, this communication can drive consumer adoption of real-time payments as a dominant payment option.

### CONSUMERS

Real-time payments return consumers to the center of the payments world with security and speed. Whether they're paying each other, small businesses, large retailers or billers, consumers control their money with real-time payments. Consumers would appreciate the lower cost, instant

performance and accompanying real-time rewards offered by real-time payments. This type of network would prove intuitive, easy to use and would enable consumers to pay for charitable gifts, groceries, fuel, clothes, utility bills, association dues and almost anything imaginable from their smartphones. Consumers benefit from value-added paid services like P2P payments, fraud protection and liquidity management as well as freebies like real-time reward offers and check replacement.

### FINANCIAL INSTITUTIONS

Financial institutions benefit from the inexpensive, conservative, efficient nature of real-time, any-to-any payments. While it's true that financial institutions would lose money from interchange fees, conservative estimates project over \$5.5B annually in new revenue derived from consumption fees on services that consumers are demanding, such as P2P payments and increased fraud protection, as well as more effective cross-selling and merchant funded rewards. Furthermore there is an estimated \$5B in savings

from lowered attrition and saved acquisition costs.

Financial institutions get to create new business models where they are price makers, rather than price takers. They can create value for the financial system and start charging for the value rather than assuming an arbitrary price. Additionally, financial institutions can put the consumer at the center of the payments world and the consumer will reciprocate by placing the brand of the financial institution at the front and center of their mind.

### RETAILERS AND BILLERS

Retailers and billers benefit from significantly reduced costs as they are unhinged from the existing networks. Additionally, retailers will reduce their exposure to card data breaches, enabling them to better protect their brands. Real-time, any-to-any payments give them more insight and control into what consumers buy, which ultimately leads to increased sales revenue. By storing purchasing data within the servers connected to apps on consumers'

smartphones and other devices, retailers and billers can leverage loyalty program rewards and big data generated through their direct connection with consumers' accounts. They will benefit from a faster receipt of funds for non-card transactions, dramatically driving down the time for collection, delinquencies and the cost of operating capital. The cost savings could be significant with a 100 percent adoption resulting in savings of \$6B globally for retailers and \$5B for billers.

## GOVERNMENTS

Alternative networks cause concern for governments by removing payments from the economy and banking system and hindering regulation efforts. Real-time, any-to-any payments benefit governments by creating less payments friction, less risk from new money pools and increased economic velocity. The faster settlement of payments, particularly ACH payments, will generate a daily economic boost by freeing money tied up in the current payment networks. With more money in the system and recipients in possession of that money instantaneously, an acceleration effect can lead to increased economic velocity.

## THE HEART OF REAL-TIME, ANY-TO-ANY PAYMENTS

The success of real-time payments taking off as a widely accepted payments mechanism depends largely on the network effect. With social media networks Twitter and Facebook, the value and success of the real-time payments network depends on the number of users connected to it. The payoff for successfully getting consumers to change their payments behavior is huge. If large retailers with thousands of locations and large banks join the real-time payments network, all parties involved will benefit.

## REAL-TIME PAYMENTS ENABLE CROSS-SELLING OPPORTUNITIES FOR RETAILERS

A strong value proposition of implementing a real-time payments system is the cross-selling opportunities it enables for merchants, particularly retailers. With access to the purchasing data on customers' mobile devices, retailers can crosscheck that data against a customer relationship management (CRM) system for cross-selling opportunities. Retailers can then leverage those opportunities and combine them with loyalty reward offers

to generate increased sales and revenue. Additionally, by working closely with their banking counterparts, they can start to offer merchant-funded rewards. This will optimize their marketing spend by ensuring their cost is contingent upon a sale. Industry data shows that effective merchant-funded reward programs can lead to increased revenue from increased conversion rates, larger average and acquisition of new customers.

Cards (credit, debit, prepaid, etc.) dominate the current payments culture. Consumers and retailers are going to have to be incented to shift their payment habits from swiping credit cards to alternative—but equally convenient—payment habits. Consumers are used to selecting from multiple cards to make payments. Retailers are used to providing the equipment and participation in the back-end processing to make card payments possible. For real-time payments to work, consumers will have to be incented with loyalty rewards, discounts, convenience and a strong communications campaign to develop new payment habits. Retailers can be incented with lower fees, faster receipt of payments and direct access to a lot of consumer purchasing data, which they can use to expand and more effectively target their customer bases.

## SUMMARY

In seeking to replace the complex card payment systems currently in place, real-time, any-to-any payments must gain the participation of large retailers and banks to create a network effect capable of propelling the new system forward. With effective communications and marketing of the advantages of real-time, any-to-any payments (i.e., speed, efficiency,

lower cost, regulation and increased economic velocity) as well as fraud prevention and loyalty components in place, the potential real-time, any-to-any payments network is poised to introduce the next step in the evolution of payments.

### Sources cited

1. Benson, C. C., Loftesness, S. *Payments Systems in the U.S.* Glenbrook Press, Menlo Park, CA, 2010
2. Mazursky, R. G. *P2P Payments: Financial Institution vs. Third-Party Digital Solutions.* Mercator Advisory Group Research Note, February, 2014
3. Susswein, R. *Survey Finds Satisfaction Among P2P Payments Users.* Consumer Action News, May 2013, p. 1, 4. Accessed online via pdf on 2-14-14 at: [http://www.consumer-action.org/downloads/english/CA\\_News-P2P-payments.pdf](http://www.consumer-action.org/downloads/english/CA_News-P2P-payments.pdf)
4. CEBTower Group Commercial Banking, *CBBO Implementing a Flexible Technology Infrastructure, 2013*

## **OTHER THOUGHT LEADERSHIP TOPICS DISCUSSED BY ACI**

WHAT A PROFIT-GENERATING  
RETAIL PAYMENTS ENGINE LOOKS  
LIKE

BRINGING MERCHANT ACQUIRERS  
INTO THE 21ST CENTURY

IS YOUR ISSUING SYSTEM HOLDING  
YOU BACK?

THE RISING PROBLEM OF DISPUTES

OVUM DECISION MATRIX: SELECTING  
AN ELECTRONIC PAYMENT SWITCH  
PLATFORM

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