

The Economic Benefits of an Independent, Interoperable Directory for Faster Payments

EXECUTIVE SUMMARY

The Faster Payments Council (FPC) Directory Models Work Group believes that the addition of an independent directory, one that is interoperable across several faster payment solutions, will generate economic benefits for various participants in the payments industry. A directory that allows for business and consumer payment data and entries, permits data ownership by companies and individuals, and limits access to trusted entities like financial institutions and authentication services could significantly increase the adoption and volume of faster payments and decrease costs for industry participants.

This white paper looks at several areas by which a directory may establish economic benefits, both incremental revenue and cost savings, and attempts to quantify those benefits. If an independent, interoperable directory for faster payments existed, then these eleven (11) factors as determined by the FPC Directory Models Work Group which, would contribute to the economic benefit of entities sending and receiving faster payments. The following table summarizes descriptions of various impacts that such a directory might have on faster payments. Context for these impacts and sources for estimates are provided in their respective paragraphs in the body of the paper.

Impact Area	Economic Benefit
1. Incorrectly routed business to business (B2B) payments	An estimated \$188 million that stakeholders across the payments ecosystem will benefit from by having accurate directory entries maintained and updated by the payee, based on data from the UK’s Faster Payments metrics on the cost of mis-routed payments, extrapolated to the U.S. Faster Payments market. There are additional costs not captured here (e.g., involving the non-recourse of funds sent inadvertently to a wrong account, legal costs to revoke funds, and other exception processing costs). Avoiding these costs would also add to the savings realized.
2. Incorrectly routed consumer to business (C2B)	Based on the cost of exception processing provided by a Nacha study, incorrectly routed C2B payments cost the industry \$720 million.
3. Payee is hesitant to provide details to payer	A theoretical benefit of \$242.6 billion, extrapolated from the savings experienced from the implementation of UPI in India, is an upper bound as to what could be derived by consumer trust and confidence gained through alias-based directory look-ups.
4. Fraud benefit of not exposing underlying account info	The benefit is assumed to be significant but cannot be explicitly estimated in this paper.

Impact Area	Economic Benefit
5. Regulatory & Compliance savings	Roughly \$90 million in savings just for utility companies could be recognized, based on savings on compliance, plus any cost of potential breaches.
6. Ability to automate routing decisioning based on directory data reflecting types of faster payments accepted by a payee	While not all payments will have the ability, or the need, to be decided, a theoretical upper bound of as much as \$94.1 billion is estimated for the ability to automate payment from among multiple options.
7. The benefit of real-time bill presentment, the Request for Payment (RfP)	No specific amount was estimated here, but several pain points that faster payment RfPs can address are described for both consumer-to-business (C2B) as well as for business-to-business (B2B) payments.
8. Directory facilitates move from check to electronic payments	A theoretical savings of \$13 billion could be argued if <i>all</i> checks were to be moved to faster payments. A less optimistic but more realistic estimate of economic benefit can be defined as, for each one (1) percent of payments that can be moved from check to faster payments, a savings of \$130 million could be achieved. While there is no definitive data to determine how many percentage points having a directory would move the needle, even if business leveraged a directory to facilitate electronic payments instead of sending checks for just a few percentage points, the economic benefit to industry would still be substantial.
9. Directory could allow for vetting of entries, determine “fit” of payment	No specific amount was calculated here, but the following economic assessment that a centralized vetted faster payment directory can help expose or exclude ‘bad actors’ from a trusted directory would greatly benefit all users of the directory and increase trust and confidence in the directory. This centralized vetting capability could drive greater efficiencies and lower costs for all users of the directory.
10. Additional Factors	The directory could increase connectivity and reach between directory services without having to replicate all the information and resources or subscribe to multiple payment network services to send and/or receive. It could provide for effective interoperability between existing directories.
11. Future Considerations	<p>There are additional, unquantified economic benefits by encouraging consumer and business usage of:</p> <ul style="list-style-type: none"> - Directory mapping of non-DDA accounts - Ability for receivers to update account(s) associated with alias - Ability for receivers to have one alias and determine where money is routed



Faster payments hold the promise of providing American businesses and citizens with more efficient and secure transactions. Coupled with interoperable directory services, faster payment solutions can play an even greater role by enabling participants to realize economic benefits ranging from fewer incorrectly routed B2B payments to regulatory and compliance cost savings. The directory has the potential to increase connectivity and reach between disparate directory services without necessitating the replication of all the business and customer information and resources.



Introduction to the Economic Benefits of an Independent, Interoperable Directory for Faster Payments

Faster payments as an industry segment are experiencing exponential growth in the United States. The Faster Payments Council (FPC) Directory Models Work Group believes that the addition of an independent directory, one that is interoperable across several faster payment solutions, will drive economic benefit to various participants in the payments industry.

What is an independent and interoperable directory and how can it benefit faster payments adoption?

There are many forms of payments directories and various governance models. An *independent* directory implies that no single entity could control ownership of the information within the directory. *Interoperable* implies that the directory could allow for entries to look up and route using any of multiple methods of payments. These methods may include a demand deposit account (DDA), a debit card number, or other means of specifying a payment destination consistent with the Faster Payments Council definition of “faster payments.”¹ If industry participants agree to establish, maintain, and use an interoperable model, the directory would facilitate searches of payees using name, alias, social media “handle,” company name, or any other feasible identifier which links an entry in the directory to a payee’s preferred method of payment.

This white paper looks at various ways that a directory may establish economic benefits and attempts to quantify those benefits. In some cases, quantifying an economic benefit from the usage of faster payments was not feasible, so this working group examined surrogate payment systems, such as the American ACH (Automated Clearing House) network and faster payments in Europe, and then extrapolated those estimates to expected volumes of faster payments in the United States. This white paper also considers a possible future whereby, if the directory could be extensible such that accounts other than DDA and debit account numbers could be referenced by the directory, then additional benefits may be realized.

¹ Source: <https://fasterpaymentscouncil.org/blog/1487/What-s-in-a-Faster-Payment-or-Faster-Payments-System-for-That-Matter-#:~:text=Faster%20payments%20can%20mean%20different,even%20an%20instant%20message%20transfer.&text=These%20are%20the%20attributes%20the,seek%20to%20enable%20faster%20payments.>

Scope of this white paper

This white paper does not seek to recommend or compare different models of a faster payments directory. Directories are expected to have the ability to contain entries for payments to faster payments networks, and to allow a recipient to register and a sender to discover payment routing options. This white paper assumes that an interoperable directory is a key economic benefit for faster payments but makes no specific assumption regarding underlying interoperability between payment networks, payment platforms, or differing payment message formats. A directory does not resolve situations in which senders and recipients lack a common network/payment platform/payment method.

The following are factors as determined by the FPC Directory Models Work Group which, if an independent, interoperable directory for faster payments existed, would contribute to the economic benefit of entities sending and receiving faster payments. The calculations of cost savings or increased usage are estimates intended to illustrate the potential impact of a centralized directory service. Some of these economic benefits may be mutually exclusive.

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1 Incorrectly Routed B2B Payments

In the segment of business-to-business (B2B) electronic payments, there is no central directory containing the routing and account information necessary to reach *all* businesses for payment purposes. There are several B2B directories that facilitate automating a business's accounts payable processing. These multiple directories are not interoperable, and information for one company may be replicated across multiple directories in different ways or with slight variations. This leads to the potential for misrouted payments, which are exceptions to normal payments flow, when the underlying payment information changes but the directory entries are not all updated. Buyers struggle to obtain and maintain supplier payment information to avoid exceptions, which often requires contacting each individual supplier or obligating enrollment in multiple accounts payable solutions.

Suppliers can change any number of key details that would impact their buyer's ability to pay electronically; however, changes to vendor account information are among the most consequential. When this happens, information must be updated in each instance where this data exists. Other problems can arise from new account information disrupting pre-authorized auto debits for bill payments. These issues are not limited to account information; corporate card accounts can also receive credits and debits and therefore may experience similar problems if business vendors do not have access to updated information.

Estimating the cost of misrouted B2B payments

The current volume of faster payments remains smaller than that of ACH credit transactions, but it is forecasted to grow substantially over the next several years. In a recent white paper, ACI and research



firm GlobalData Plc forecast that U.S. real-time payment transactions will balloon from 734 million transactions in 2019 to 4.2 billion by 2024.²

The actual cost to process a B2B payment exception varies widely among businesses. Using an estimate from a supplier management company of two hours per exception at a loaded rate of \$90/hour, one can see the magnitude of the potential impacts from eliminating payment exceptions altogether.³ B2B transactions represent 16 percent of all ACH transactions.⁴ Using that same mix, of the 4.2 billion real-time payments forecasted, 680 million will be B2B transactions. Although only a small fraction of those payments is misrouted, to the individual businesses that experiences misrouted payment, the economic benefit of minimizing or possibly eliminating these is significant.

Using the UK’s Faster Payments metrics as a surrogate, 0.0015 payments are reported as misrouted.⁵ Assuming a similar ratio in the U.S., an industry-wide estimate of the cost of B2B misrouted payments is:

680 million * 0.0015 = 1 million misrouted payments @ \$180 each misrouted payment, yields an aggregate economic impact of \$188 million.

While this number is an aggregate, it does show that stakeholders across the board will benefit from having accurate directory entries maintained and updated by the payee. There are additional costs, not captured here, involving the non-recourse of funds sent inadvertently to a wrong account, legal costs to revoke funds, and other exception processing costs.

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2 Incorrectly Routed C2B and B2C Payments

The Consumer-to-Business (C2B) and Business-to-Consumer (B2C) electronic payment segments have similar issues as B2B payments, due to the larger volume. There are many points in the C2B and B2C payment process where exceptions may occur, such as the use of pre-authorized customer bank or card accounts to auto debit payment of their monthly bills. In faster payments, which focuses on credit-push versus debit-pull payments, the use of the routing information can be turned around to where the directory can look up how to route a request for payment to the customer being billed. The customer, in turn, can then credit-push their payment to the biller.

To narrow the scope of this analysis, the work group examined the specific type of bill pay exceptions in which a biller receives a payment but cannot post as a credit to the consumer’s account at the biller. While this represents just one slice of all types of payments, the positive impact of a directory on C2B

² Source: <https://www.digitaltransactions.net/u-s-real-time-payment-volume-could-top-4-2-billion-by-2024-aci-report-finds/#:~:text=In%20its%20E2%80%9CPrime%20Time%20for,to%204.2%20billion%20by%202024.>

³ Source: <https://www.epiqtech.com/supplier-onboarding-process.htm>

⁴ Source: <https://www.nacha.org/news/ach-network-volume-jumps-in-third-quarter#:~:text=Through%20the%20first%20Nine%20months,%25%20and%2047%25%2C%20respectively>

⁵ Source: <https://www.fasterpayments.org.uk/sites/default/files/Monthly%20Payment%20Statistics%20Dec%202020.pdf>

credit push payments could be extrapolated to the total volume of incorrectly routed C2B and B2C payments.

Estimating the cost of misrouted C2B payments

The cost of misrouted C2B payments involves exception processing, that is, researching and correcting payments by the back office staff. To quantify the economic impact of misrouted faster payments, one can look at previous studies of misrouted credit payments in the ACH network. Nacha conducted a study in 2012 called “Bill Payment Exceptions Benchmarking Study” which determined that there were 130 million bill pay exceptions in one year, which cost the industry \$720 million.⁶ While a directory will not eliminate all exceptions, even a 10 percent decrease in exceptions would yield a benefit of \$72 million.

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3 Payee is Hesitant to Provide Details to Payer

Individuals may feel comfortable providing their bank account routing information to trusted entities. Setting up Direct Deposit for their paychecks or setting up auto pay for their mobile phone service are two examples. However, that trust does not extend to people outside of immediate families, or businesses that are not in the circle of trust. It is also a matter of convenience. Most individuals cannot recite their debit card number or their bank account number and routing number from memory, but an email or phone number is something that can be given out without any effort. Closed loop P2P applications have removed the need for knowing account or card numbers plagued by enabling users to identify by an alias, an email address, phone number, or another identity used to transact with the application. This capability has enabled the dramatic growth in P2P applications such as Venmo, Zelle, and others.⁷

A directory for faster payments that allows users to be identified by an alias may generate economic benefit by encouraging usage. Payees that are otherwise hesitant to provide bank account routing information to be paid, may be much more willing to participate if they only need to provide their faster payments alias. To quantify this, an interesting case study can be seen in India.

Estimating the economic benefit

Two different payment systems were initiated contemporaneously in India. The Immediate Payment Service (IMPS) service was launched in India in 2010. It is an instant payment inter-bank electronic funds transfer system. IMPS payments require the sender to know and input the beneficiary’s (i.e., recipient’s) account number, account type, IFSC Code, name, and contact details.⁸

⁶ Source: 2012 “Nacha Bill Payment Exceptions Benchmarking Study”

⁷ Source: <https://www.paymentsjournal.com/venmo-and-zelle-report-p2p-volume-growth/>

⁸ Source: <https://www.paisabazaar.com/banking/what-is-imps/#:~:text=%20The%20major%20banks%20which%20are%20offering%20IMPS,41%20Vijaya%20Bank%2C%2042%20Yes%20Bank.%20More%20>

The Unified Payments Interface (UPI) is an instant real-time payment system developed by National Payments Corporation of India facilitating inter-bank transactions, first introduced in 2016. For UPI payments, there are three ways to transfer money: 1) enter the virtual payment address (VPA) of the receiver; 2) enter the account number and IFSC code of the receiver; or 3) scan the receiver’s QR code.⁹

Using data from the National Payments Corporation of India, one can see that usage of UPI at the end of 2019 was 71 percent greater than IMPS due in large part from the flexibility granted by the ability to use an alias or QR code in addition to having the sender have knowledge of recipient’s bank account routing information.¹⁰

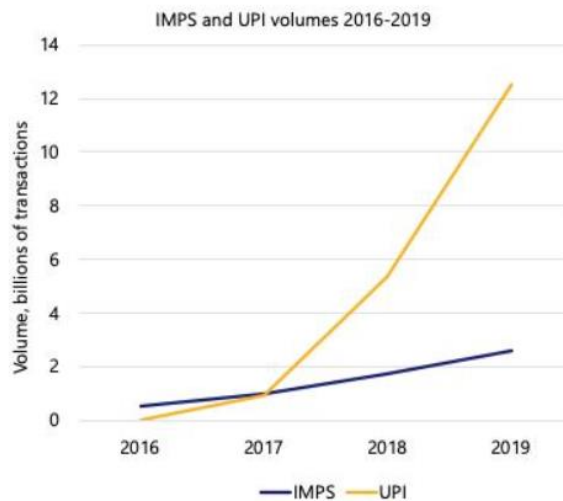


Image source: Lipis Advisors

The average ticket size of payments on the UPI network is around Rs 1800 (\$24.26 USD), representing an economic benefit of \$242.6B USD.¹¹

That economic benefit does not directly translate to the US market. There are already several established alias-based P2P payment systems, some of which already utilize or have plans to leverage real-time payment services. However, these various P2P payment services are disparate, and do not allow payments originated on one service to be sent directly to a different service. A directory independent of the existing P2P payment services, that can facilitate P2P payments through alias-based routing, could tap into the potential for that uplift, thus generating economic benefit for end users.

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⁹ Source: https://economictimes.indiatimes.com/wealth/save/how-does-upi-work/articleshow/74960590.cms?utm_source=contentofinterest&utm_medium=text&utm_campaign=cppst

¹⁰ Source: <https://www.npci.org.in/statistics>

¹¹ Source: <https://blog.cashfree.com/upi-india-growth-trend-real-numbers-factual-analysis/>

4 Fraud Benefit of Not Exposing Underlying Account Information

A key feature of most P2P payment services is the use of aliases to mask actual payment credentials outside of the trusted network to mitigate fraudulent activity. However, there is no standardized way to process the alias across faster payment networks. A directory that would allow these transactions to be processed without exposing payment credentials would greatly benefit the industry. Since the actual payment credentials would not be exposed, fraud would not only be mitigated on the faster payments rail but in the overall payments ecosystem as well.

The use of the alias in the directory could also be setup for lookup only purposes, so that no one could pull out a list of these aliases from the directory. This limitation would further encourage use of the directory by only permitting users of other services to find routing information for their customer to send a credit-push payment or to request the return of a payment.

The routing information could also be limited to tokenized keys that the receiving service can use, or to initiate a request for payment that only needs to include the tokenized key. These tokenized keys remove the need for communication between the participating services of the directory to pass sensitive account information that end users want to avoid sharing in the directory.

In general, it is difficult to determine the source of payment credential compromise especially when payment credentials are used across different channels. As such, a hard dollar economic benefit for this directory attribute cannot be estimated at this time.

5 Regulatory, Compliance and Remediation Savings

Payment card credentials stored on behalf of businesses' customers represent a risk, regardless of whether it is cloud-based or stored on local servers. To mitigate the risk of storing such information, companies are encouraged to comply with industry best practices such as those developed by The Payment Card Industry (PCI) as it pertains to the storage of credit and debit card-associated data. Companies either have an in-house compliance program or pay a third party to certify compliance and to maintain that standing. The fees to become PCI compliant, and maintain that standing annually, can range from approximately \$1,000 annually to over \$50,000 annually, depending on the size of the business.¹²

One of the goals of a faster payments directory would be to obviate the storing of payment account information in disparate private databases and replace the need for storing account information with a directory lookup. By not storing payment account information, businesses could reduce or ultimately eliminate the cost of compliance associated with storing payments data. It should be noted that the

¹² Source: <https://squareup.com/us/en/townsquare/pci-compliance>

entries in the directory are not limited to making credit-push payments; the directory would be also used for routing of Requests for Payment.

Estimating the economic benefit

It is nearly impossible to estimate how many businesses maintain payment information for suppliers, vendors, clients, etc. Yet looking at an analysis of just one vertical, electrical utility companies in the United States., shows the enormous value in eliminating the cost of compliance. An estimated 3,300 electric utility companies operate in the United States; approximately, two hundred companies serve most customers.¹³

Assuming that those two hundred companies are at the top of the dollar range for PCI compliance, \$50,000, and the remaining 3,100 companies are in the middle of the cost range, \$26,000, this vertical alone could gross an economic benefit of $(200 * \$50,000) + (3,100 * \$26,000)$, or over \$90 million.

Business email compromise (BEC) or email account compromise (EAC) are other factors that a business using a directory for payment routing should consider. BEC/EAC is a sophisticated scam targeting both businesses and individuals performing a transfer of funds. The scam is frequently carried out when a subject compromises legitimate business email accounts through social engineering or computer intrusion techniques to conduct unauthorized transfers of funds. In 2019, occurrences of BEC/EAC resulted in adjusted losses of over \$1.7 billion.¹⁴ If a business relied only on vetted, secure directory entries, this type of scam may be mitigated.

A third factor is the reduction in the cost of compliance. The need to maintain compliance to store card data would not be eliminated until every customer of that business had a directory entry. Nonetheless, there is still a significant advantage simply for this one industry vertical. Extrapolating this benefit across the many other business segments that also store payment information would multiply this benefit.

In addition, many companies that store card data have moved to a scheme where the card numbers are tokenized. This tokenization is provided by a third party, sometimes at considerable expense. Using a directory has the potential to reduce the complexity and expense.

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6 Ability to Automate Based on Directory Data Reflecting Types of Faster Payments Accepted by a Payee

Looking at B2B payments on a one-to-one basis, a business typically has one payment routing entry for a supplier. However, that supplier may be capable of receiving payments over multiple payment channels, and those different payment channels could be reflected in a directory. Each payment channel may involve different account information or the same accounts; in either case, having a directory where the

¹³ Source: <https://www.statista.com/statistics/237773/the-largest-electric-utilities-in-the-us-based-on-market-value/#:~:text=The%20number%20of%20electric%20utility,to%20the%20majority%20of%20users.>

¹⁴ Source: https://www.nacha.org/sites/default/files/2020-02/2019_IC3Report.pdf



recipient could indicate all the faster payments types it is willing to accept allows for greater flexibility on the part of the sender to automate payment based on multiple criteria. Criteria could include when settlement needs to occur, the dollar amount of the payment, time of day or day of week, or if the recipient accepts real-time or credit-push payments.

For example, if a payment amount is greater than what is allowed over one payment network, the sender can check the directory to see if the payee also participates on another payment network with a higher threshold. For another example, if settlement must occur on the same day, but the last ACH window has passed or if the payment falls on a holiday, then RTP and push-to-card may remain as options if indicated in the directory. In both examples, the directory allows the sender to be aware of what the recipient supports. The sender may also want to consider the cost charged by the payment service provider for various options. There is no assumption that the directory has knowledge of costs, but rather that the sender has knowledge of the cost of sending via its payment network connections.

Estimating the economic benefit

While a directory does not in-and-of-itself automate the payment decision, it could provide underlying data enabling a business to automate the decision among payment routing options. One estimate of the difference between a more manual decision and a more automated payment decision is 90 minutes. At \$90 an hour, that reflects a potential cost savings of \$135 per payment.¹⁵

Using the previously cited estimate of 680 million B2B faster payments, the upper bound of the potential economic benefit of the ability to automate decisioning of payment channels could be as high as $680 * \$135 = \91 billion. Not all payments will have the ability, or the need, to be decisioned. The true magnitude of the economic benefit in this regard will be much smaller than the stated potential. Nevertheless, if the decision factors were to be extended to include additional payment options, such as other closed loop payment systems, then the potential increases further.

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7 The Benefit of Real-Time Bill Presentment – the Request for Payment

Real-time payments bring a unique and powerful feature to the faster payments industry – a Request for Payment (RfP) message, similar to bill presentment in the bill pay segment. RfP presents an opportunity for the U.S. banking industry to create a powerful new service - the ability to securely present bills through online banking portals, in real-time, for credit union members and bank clients. Payors will have the ability to see and immediately pay bills in the financial institution’s real-time payment portal or bill pay app or schedule the payment at a later date. This capability applies to both consumer billing (B2C) as well as B2B billing and payment. Billers are notified that their bills are received and can match the bill to the payment immediately upon receipt. Recurring and subscription billing may also benefit by leveraging

¹⁵ Source: <https://www.epiqtech.com/supplier-onboarding-process.htm>

a directory upon exception processing, such as a failed payment, to determine if an alternate routing for the RfP is available.

Current bill presentment market overview

According to an Aite report, out of the 15.5 billion consumer bills paid in 2019, approximately 65 percent are made as one-time payments, and 35 percent are set up on a recurring basis. Of all bills paid, ACH continues to be the most used payment method, with more bills paid with ACH than debit and credit cards combined. The trend of moving to digital applies here - most bill payments continue to move online. In terms of bill categories, utilities contributed to largest category by number of bills and credit card by Gross Dollar Volume (GDV).

A survey in that same Aite report shows that paying bills via the biller's website, also referred to as "Biller Direct" is the channel of choice for most customers to make bill payments today, with 76 percent of bills being paid via this channel in 2020, up from 62 percent in 2010. This includes demographics such as Gen Z and Gen X, who pay 79 percent of their bills through this channel.¹⁶

Existing pain points

Consumers' bill payment experiences are plagued with the possibility of late and lengthy payment processing times and complex bills. Late fees are a major concern for customers who cannot pay their bills fast enough. At the same time, customer expectations are also changing: 74 percent of customers expect payments to be processed immediately or within a few seconds.¹⁷ The timing, therefore, is ripe for financial institutions to offer real-time payments as customers look for immediate payment options.

Billers too are faced with multiple billing and payment related challenges.¹⁸ When it comes to paper bills, they must deal with high costs and inefficient reconciliation. As customers move towards Biller Direct as a preferred channel, costs related to bill presentment and contact centers are also becoming significant. Billers can anticipate the positive impact of real-time payments and may see the benefit of leveraging the RfP capability within the next several years. However, most of these billers are still in nascent stages of adoption largely due to unawareness, implementation and transaction cost, and inconsistent bank readiness.

Real-time Request for Payment may solve these pain points

B2B invoices are sent "out-of-band" of the payments networks. Although some payment providers facilitate data, documents, and accounts-payable information together with the payment, back-office work is required to re-associate the invoice with the payment. Since the RfP travels on the same rails as the payment, there is a possibility of automating the association of bill and payment.

This benefit extends to consumer payments as well. Assuming consumer payments are made in response to a Request for Payment, billers may be able to more easily and quickly reconcile and

¹⁶Source: [Aite Consumer Bill Pay Study 2020](#)

¹⁷ Source: [Fiserv Consumer Payments Study 2020](#),

¹⁸ Source: [Levvel Research- 2021 Real-Time Payments for Businesses](#)

streamline the accounts receivable process, thereby achieving greater visibility into payment details in the remittance. Billers also benefit from the immediacy and finality of funds, while also enhancing customer experience.

For the consumer, real-time bill presentment offers payers greater visibility and control over bills which can be conveniently accessed through their secure online banking portal. Integrated PDF capabilities give customers seamless, easy-to-reach information and context about their bills. In addition to the benefit of receiving bills in real-time, the immediacy of real-time payments adds the potential for a day of additional liquidity and allows for last-minute bill pay and emergency transfers.

8 Directory Facilitates Move from Check to Electronic Payments

The use of checks in B2B payments is still significant. According to the Association for Financial Professionals, 42 percent of B2B transactions use checks, although the use of ACH and other payment methods to convert check payments to electronic is growing.¹⁹ Real-time payments and the structured, data-rich Request for Payment message will not only further chip away at the use of checks but will also offer new and better options to these slower and more limited electronic payment methods. The inclusion of an interoperable directory to route these real-time transactions will facilitate this transition by removing the need for the sender to know specific account information for the recipient. It is not expected that a directory will drive this percentage to zero, nevertheless, it is useful to look at the upper bounds of the economic benefit that a directory could have in moving this number significantly downward.

Estimating the economic benefit

Based on numbers provided by Nacha, there were 1.3 billion B2B payments made by check in one quarter of 2019.²⁰ Extrapolating this out to a full year is 5.5 billion B2B check payments, although check usage continues to decline.

According to a Payments Cost Benchmarking survey by the Association for Finance Professionals, the median cost to a business for a check transaction is \$3.00, versus \$0.26 to \$0.50 for an ACH transaction.²¹

¹⁹ Source: <https://www.afponline.org/ideas-inspiration/topics/articles/Details/survey-check-use-drops-to-a-new-low-for-b2b-payments>

²⁰ Source: <https://www.nacha.org/news/report-finds-b2b-check-payments-down-sharply>

²¹ Source: <https://tipalti.com/check-vs-ach-costs/#:~:text=According%20to%20the%20Payments%20Cost,anywhere%20from%20%240.26%20to%20%240.50>

Given this input, the upper end of the economic benefit converting B2B payments from check to electronic is (\$3.00-\$0.50) * 5.5 billion, or \$13 billion. To state this another way, each one (1) percent of payments that can be moved to an electronic form represents an economic benefit of \$130 million.

It is acknowledged that this is purely a theoretical number, as there is no definitive data to determine how much of an impact having a directory would encourage B2B payments to move from check to electronic. However, even if businesses leveraged a directory to facilitate electronic payments instead of sending checks for even just some of their payments, the economic benefit to industry would still be substantial.

9 Directory Could Allow for Vetting of Entries, Determine “Fit” of Payment.

For directories to be successful, users must feel confident that they are operating in a secure environment where all participants have been vetted and “bad actors” are removed. One of the ways in which a real-time directory service could help remove “bad actors” is to employ a capability that card networks leverage today – keeping a list of “bad actors.”

Some card networks utilize a capability to help merchant acquirers reduce risk associated with onboarding merchants. Typically, acquirers are required to check each merchant before they are onboarded to see if they are on the terminated list. Merchant acquirers are underwriting the risk of each merchant they onboard and are liable for fraud, chargebacks, etc.

This concept translates well to a faster payments directory. A centralized capability that helps expose or exclude “bad actors” from a trusted directory would greatly benefit all users of the directory. This centralized vetting capability would drive greater efficiencies and lower costs for all users of the directory.

There is not a specific data sources to estimate cost savings resulting from the deployment of this type of capability. However, a Finextra blog provides a data point that hints at the magnitude of the problem in the card payment transactions: “Fake companies that did little or no legitimate business or worked together with other stores to run their credit card transactions ... managed to steal \$200 million from banks between 2003 and 2013.”²²

²² Source: <https://www.finextra.com/blogposting/14769/three-types-of-merchant-fraud-a-guide-for-merchant-acquirers>

10 Additional Factors

Obtaining payee specifications is a key constraint on the ability to “pay everyone” electronically; payers need to know where to direct a payment and they will benefit from information about the payee’s ability to accept an electronic payment before originating an electronic payment. A ubiquitous directory, if it could be achieved, could facilitate payer access to payee payment specifications that presently reside in separate directories and provider services. However, the Directory Models Work Group acknowledges that many hurdles, such as technical complexity, need to be addressed through industry collaboration to work toward solutions that could drive a ubiquitous model. If the industry succeeds, such a directory could foster the evolution of electronic credit payments by providing interoperability without requiring individuals and companies to participate in multiple directories. Moreover, it could also permit the owner of the data to remain in control of their content.

Current business models focus on growing participation in each service and compete on providing services that require access to similar information (i.e., how to send a payment to a payee).

Independent directory services provide valuable payment/receipt services, but the consequence of this scenario is that payees are invited to join multiple directory services, and that payers have no way of sending an electronic payment to their payees that are not listed with their directory service. Therefore, trading partner reach is maximized only by participating in multiple directory services; this action is not scalable for either payer or payee, especially considering the need for separate contracts, connectivity, and data maintenance. This issue is especially problematic for small businesses and for consumers, who may infrequently make payments to various parties.

The directory could increase connectivity and reach between directory services without having to replicate all the information and resources. It could provide for effective interoperability between existing directories.

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11 Future Considerations

Directory Mapping of non-DDA Accounts

Some individuals may prefer to have payments routed to an alternative payment account, that is, an account of record mapped to a stored-value account that may not necessarily be a DDA. This could include general-purpose-reloadable prepaid accounts and closed loop stored-value accounts.

By providing consumers a choice of payment account, they may be more likely to utilize the faster payments options compared to other payments options, thereby increasing overall usage of the system. This may generate economic benefit by encouraging usage. Additionally, if more accounts of record could be mapped to non-DDA stored-value accounts, there would be a greater potential of serving the un/under-banked. For example, if third-party stored-value wallets were to be included for payments,



usage of faster payments could be expanded to include un/under-banked individuals whose only accounts may be this type of wallet.

Ability for Receivers to Update Account(s) Associated with Alias

The ability for receivers to update accounts associated with an alias may also provide economic benefit by encouraging usage. Consumers or businesses could have the ability to specify where funds go, thereby empowering users with greater control of their funds and saving time by allowing users to fund accounts as needed. This convenience could be even more important for business customers as it could allow them to specify the appropriate accounts receivable to which the business would prefer to have the funds applied.

Ability for Receivers to Have One Alias and Determine Where Money is Routed

Some individuals may prefer an option to be notified of a payment being received, and then choosing where to route that money. This type of flexibility in a directory could provide economic benefit by encouraging usage.

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Summary

Faster payments hold the promise of providing American businesses and citizens with more efficient and secure transactions. Coupled with interoperable directory services, faster payment solutions can play an even greater role by enabling participants of all payment networks to realize economic benefits ranging from fewer incorrectly routed B2B payments to regulatory and compliance cost savings.

Although there are many ways in which interoperable directories could bolster the capabilities of faster payment systems and expand their usage, the industry has not yet mapped out a path to achieve and implement such services across the board. Further education and sustained efforts to build awareness of the potential benefits are critical to foster constructive dialogues between all payment system participants to work towards an interoperable, independent faster payments directory.



Thank you to the members of the FPC Directory Models Work Group who contributed to this white paper.

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