

White Paper

Fees & Commissions in the Pay



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Executive Summary

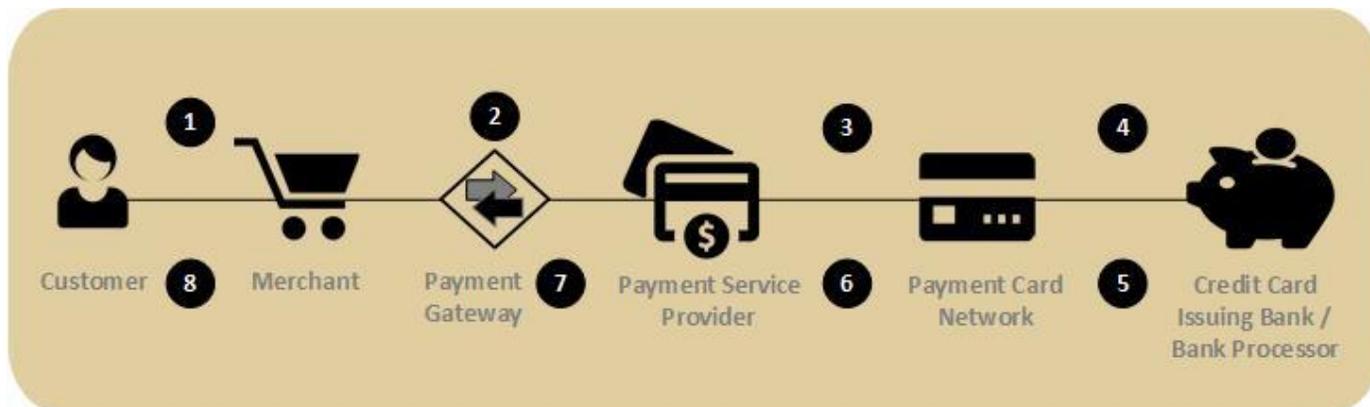
The profitability of financial transaction networks can be strongly impacted by the application and recovery of fees that the various participants pay one another for some component of servicing of financial transactions. Yet, the calculation and payment of fees among participants in a financial transaction network can be a complex process because of the many processing participants in such an environment, their business relationships with one another, the processing services that they provide, as well as the various rules and regulations that guide their collective behavior.

This paper describes the various processing players in a financial transaction network, their roles in such a network, the transaction types that they process, and the conventions that guide the payment of fees during transaction processing. It also presents some of the hurdles that processors need to overcome in order to successfully function.

Finally, a powerful software tool, Concourse – Fees & Commissions™, offered by Baldwin Hackett & Meeks, Inc. (BHMI) as part of its Concourse Financial Software Suite® is introduced. Concourse – Fees & Commissions is a rules-based product that allows the creation of an almost unlimited range of fee configurations without software modifications. The product is designed to accommodate the needs of any processor involved in financial transaction processing. Fees are computed in near real-time, thereby permitting both back-office processing staff and financial stakeholders to have an ongoing view of fee positions. Because no software development is involved in creating pricing programs or fee plans, new and updated fee structures can be implemented within a short period of time – in many cases within a single day. Because system engineers and software developers are not required to implement new plans, costs to support fee plans are significantly reduced – the individuals responsible for crafting the business plans for feeing clients can also be the implementers of these plans.

Introduction to Financial Services Fees

Anyone who has spent time in the payments industry is aware that there is no free lunch when it comes to the cost of financial transactions. All participants involved in the entering, routing, authorizing, and settling of payment transactions either charge fees or receive fees for their roles in the overall processing of these transactions. Consider the processing of a simple credit card purchase from a merchant as illustrated below:



1. The customer pays the merchant for the purchase with a branded payment card that the merchant enters via a card terminal / scanner.
2. The payment transaction is electronically routed by a payment gateway to a payment service provider (PSP). PSPs are sometimes called “merchant acquirers” or just “acquirers.”
3. The PSP provides connectivity to one or more payment card networks. The transaction is routed to the payment card network associated with the payment card used for the purchase.
4. The payment card network provides connectivity to an assortment of banks that issue payment cards (issuing banks). These banks may actually use issuing bank processors to handle payment authorizations and related accounting. The transaction is routed by the payment card network to the bank or bank processor that issued the card used by the customer.
5. After ensuring that the customer’s card is valid with a credit limit that will cover the cost of the customer purchase, the issuing bank returns an electronic response to the payment card network approving the customer’s purchase.
6. The payment card network routes the approval response back to the PSP.
7. The PSP returns the approval response to the merchant’s card scanner that displays the status of the approved payment transaction.
8. The merchant concludes the logical payment / approval process by presenting the receipt for the purchase to the customer.

Afterward, at the end of a specified period of time (end of shift, end of day, etc.), the merchant will send a batch of all approved transactions to the PSP for clearing and settlement. The PSP will generate a clearing file with the approved transactions in it and forward it to the payment card network. The payment card network will notify the PSP of rejected clearing items and forward the accepted transactions to the issuing bank for settlement. The PSP will use the results of the clearing process with the card payment network to settle transactions and related fees with the merchant. All settled payments will be deposited into the merchant's bank account discounted by generated fees.

Given this transaction flow, what kinds of fees are involved, and who pays what to whom?

Although there may be variances, the types of fees and the fee payers / payees involved in the cycle just described are generally as follows:

- **Interchange Fees**
These are fees paid by a PSP to an issuing bank or issuing bank processor through a payment network. The fee rates are set by the various payment card networks and are determined by a variety of factors, including transaction amount, payment card type, acceptance method (card present, card not present, etc.), industry type (travel / entertainment vs. other types), time delay sending approved transactions to the PSP for clearing and settlement, and others. Fees are typically based on a fixed amount per transaction type as well as a percentage of the total transaction amount. An interchange fee is only charged for each approved transaction submitted by a merchant in a batch.
- **Assessment Fees**
An assessment fee is either paid by a PSP to the payment card network associated with a purchase or paid by a merchant to the payment card network. Like interchange fees, assessment fees are typically based on a fixed amount per transaction type as well as a percentage of the total transaction amount. Unlike an interchange fee, an assessment fee is charged for a transaction even if the transaction is rejected by the issuing bank. Additionally, a portion of the assessment fee is charged for settling each approved transaction submitted by a merchant in a batch.
- **Payment Gateway Fees**
If a merchant is connected to a PSP via a payment gateway provided by a third party, the merchant will be subject to a separate set of fees payable to the payment gateway provider. The fee structure will vary with each provider but can consist of a monthly fee, a flat fee per transaction, a percentage of a transaction amount, or a combination of all three. In addition, if the payment gateway provider also supplies the card scanners used by a merchant, an additional terminal fee could be assessed.

- Issuing Bank Processor Fees

Issuing banks frequently do not operate their own in-house developed software systems for processing credit card transactions. They may (1) outsource processing responsibilities to an issuing bank processor (particularly true for smaller issuing banks) or (2) license and customize software from an issuing bank processor that is then operated by the issuing bank. For the former case, an issuing bank will pay its bank processor an operations fee, possibly consisting of a base fee, a per-transaction fee, or a percentage of total payments processed in a given period. For the latter case, the issuing bank will pay its chosen processor a license fee, a fee for necessary customizations, and a maintenance fee to ensure that any necessary software changes or fixes can be completed in a timely fashion.

- Payment Service Provider Fees

As noted above, a PSP has to pay interchange fees to an issuing bank and assessment fees to a payment card network if these latter fees are not paid directly by a merchant. These fees are incorporated into fees charged by a PSP to merchants. In addition, the PSP will also include an additional fee to cover the PSP's costs of doing business and profit. These additional PSP fees can consist of a flat fee per transaction, a percentage of the amount of the transaction, or a combination of the two. However, PSPs can be creative in their pricing structures to address the needs or preferences of individual merchants. Some alternative PSP pricing schemes might include:

- Tiered Pricing – A PSP will have a different cost for each type of transaction that it processes – for example, payment card networks have different PSP interchange fees for different classes of transactions. A PSP may create a separate feeing category for each type of transaction that the PSP processes that includes its total costs for the associated transaction type plus its profit, which can be set separately for each category. These category fees are then charged to a merchant.
- Blended Rate Pricing – A PSP can consider all of the different kinds of cards and transaction types that a merchant handles and derive a single blended rate for all transactions. The result can be that the PSP might lose money on certain types of transactions but more than compensate for such losses with gains from other types of transactions.
- Interchange Plus Pricing – This pricing method takes the PSP's cost of each transaction from a payment card network and adds some additional amount – either a fixed amount or a percentage – to it. The PSP is guaranteed a profit on each transaction.
- Differential Pricing – Payment card networks typically categorize transactions they process as “qualified,” “mid-qualified,” and “non-qualified.” Qualified transactions are charged the lowest transaction fees by a payment card network, and the other two categories are subject to surcharges. In order for a transaction to be qualified, its processing has to meet certain criteria set by a payment card network (with possible additional requirements imposed by a PSP). Requirements may include features such as transaction data being input directly from a card scanner rather than being keyed in by

a merchant or transaction batches provided by a merchant within 24 hours of transaction occurrence. Transactions that fail to meet qualified criteria are downgraded to “mid-qualified” or “non-qualified,” which are then assessed higher fees. A PSP may quote fees to a merchant based on all transactions being qualified transactions. However, transactions that fail to meet qualified criteria are subject to increased interchange fees imposed by the payment card network plus additional surcharges imposed by the PSP.

In addition to the transaction-related fees noted above, merchants may be subject to additional non-transaction fees from a PSP or payment gateway provider. The following fees have been identified by the Merchant Maverick¹ as potential fee components of plans offered by these processors:

- **Monthly or Annual Fee**
Standard fee paid to a processor
- **Monthly Minimum Fee**
Minimum transaction processing charge per month; if actual monthly processing fees are less than this minimum amount, a merchant will still have to pay the monthly minimum fee
- **IRS Reporting Fee**
Fee charged by a processor to file the annual transaction volume report to the Internal Revenue Service
- **PCI Compliance Fee**
Fee charged by a processor to cover the cost of maintaining security standards as mandated by the Payment Card Industry Security Council and to help a merchant maintain PCI security standards
- **PCI Non-Compliance Fee**
Fee charged by a processor if a merchant fails to comply with PCI security standards
- **Terminal Purchase Fee**
One time cost of a card scanning device
- **Terminal Lease Fee**
Monthly or annual cost to lease a card scanning device if it is not purchased
- **Terminal Insurance Fee**
Annual warranty fee for a card scanning device typically associated with plans providing “free” devices
- **Payment Gateway Monthly Fee**
Standard fee paid for access to a payment gateway
- **Payment Gateway Setup Fee**
One-time fee to set up a connection to a payment gateway

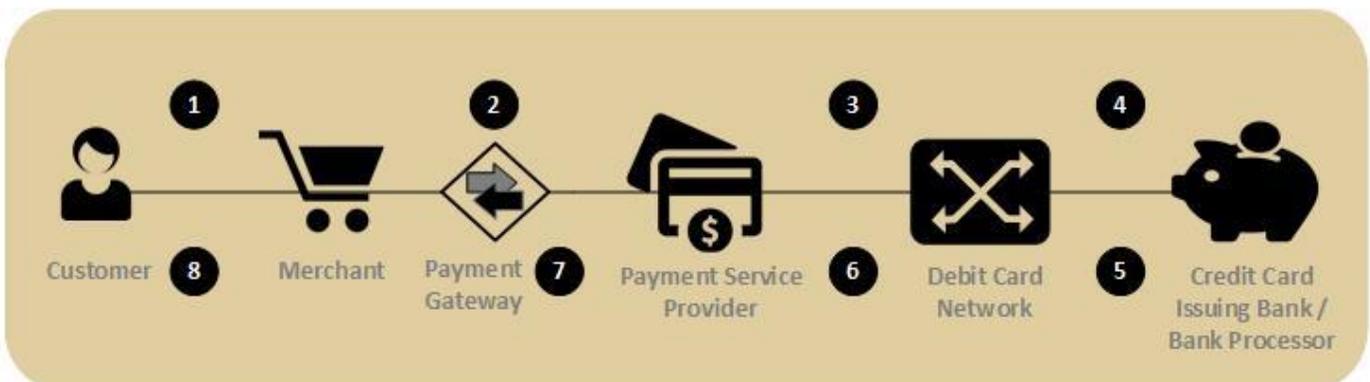
- **Merchant Club Fee**
Fee for access to additional processor benefits, e.g., free printer paper
- **Reprogramming Fee**
Fee for reprogramming a card scanning device to maintain compatibility with a payment gateway
- **Early Termination Fee**
Fee to opt out of a processor plan before its normal termination date
- **Statement Fee**
Fee to processor for preparing periodic statements submitted to a merchant
- **Online Reporting Fee**
Fee to enable a merchant to see current account status online
- **Application Fee**
Fee to process a merchant's application to sign up with a processor
- **Address Verification Service (AVS) Fee**
Typically used for telephone or Internet-originated orders, an AVS fee can be charged for card-not-present purchases to help ensure that a purchaser is a valid card owner
- **Voice Authorization Fee**
Fee for calling into a bank or other call center to validate some aspect of a card purchase before it can be authorized
- **Retrieval Request Fee**
Fee charged whenever a customer initiates a chargeback claim for a purchase; fee is assessed even if the chargeback is later denied
- **Chargeback Fee**
Fee charged if a chargeback claim is approved; fee assessed in addition to purchase amount returned to a customer
- **Batch Fee**
Fee charged whenever a merchant submits a batch of approved transactions to a PSP for payment
- **Non-Sufficient Funds (NSF) Fee**
Fee charged if a merchant has insufficient funds in its funding bank account to pay for its processor fees

Other Transaction Types, Players, and Fees

Debit Card Transactions

Purchases funded by debit cards result in funds being functionally transferred from a purchaser's bank account and deposited into a merchant's bank account. The transaction paths and the associated fees can differ depending on whether a transaction is a signature debit transaction or a PIN debit transaction.

- **Signature Debit Transactions**
Signature debit transactions are processed like credit card transactions. They are processed through a payment card network, like Visa or Mastercard, and conclude by a merchant presenting the charge (debit) receipt for the purchase to the customer. All feeing opportunities are the same as those for credit card transactions with a merchant generally paying most of the fees that are charged by the various parties processing the transaction and its response. The primary difference between credit card transaction processing and signature debit card processing is the interchange fee. Typically, the fee percentages and amounts for types of credit card transactions are different from those of signature debit card transactions. In fact, if the issuing bank for a debit card has assets greater than \$10 billion, then there is a legal cap on the interchange fee that can be charged for debit card transactions. These restrictions do not apply to debit cards issued by banks with a value less than \$10 billion. Nevertheless, the structure of signature debit transactions and associated fees parallels that of credit card transactions.
- **PIN Debit Transactions**
PIN debit transactions follow a different transaction path with a feeing plan that is different from that of signature debit transactions. The primary difference is that the payment card networks are not used to convey transactions to issuing banks; instead, ATM / banking networks are used. Therefore, instead of transactions being handled by Visa or Mastercard credit card networks, they are handled by switching networks like NYCE, SHAZAM, or STAR. The diagram below illustrates transaction processing for PIN debit transactions:



1. The customer pays the merchant for the purchase with a debit card; the purchaser typically enters a four digit personal identification number (PIN) in the card scanning device as a security code.
2. The payment transaction is electronically routed by a payment gateway to a PSP.
3. The PSP provides connectivity to one or more switching networks for PIN debit card routing.
4. The switching network provides connectivity to an assortment of banks that issue debit cards. Like credit card issuing banks, these banks may actually use issuing bank processors to handle payment authorizations and related accounting. The transaction is routed by the switching network to the bank or bank processor that issued the debit card used by the customer.
5. After ensuring that the customer's debit card is valid with a bank account balance that will cover the cost of the customer purchase, the issuing bank returns an electronic response to the switching network approving the customer's purchase.
6. The switching network routes the approval response back to the PSP.
7. The PSP returns the approval response to the merchant's card scanning device that displays the status of the approved payment transaction.
8. The customer is presented a receipt for the purchase, no signature needed. In fact, a customer can frequently request a debit card amount for a purchase that exceeds the amount of the purchase itself and receive the resulting overage as cash back.

Like credit card transactions and signature debit card transactions, there are interchange fees that merchants pay to issuing banks. Switching networks that route messages between PSPs and issuing banks are paid fees by issuing banks, PSPs (ultimately merchants), or both depending on routing arrangements among the parties.

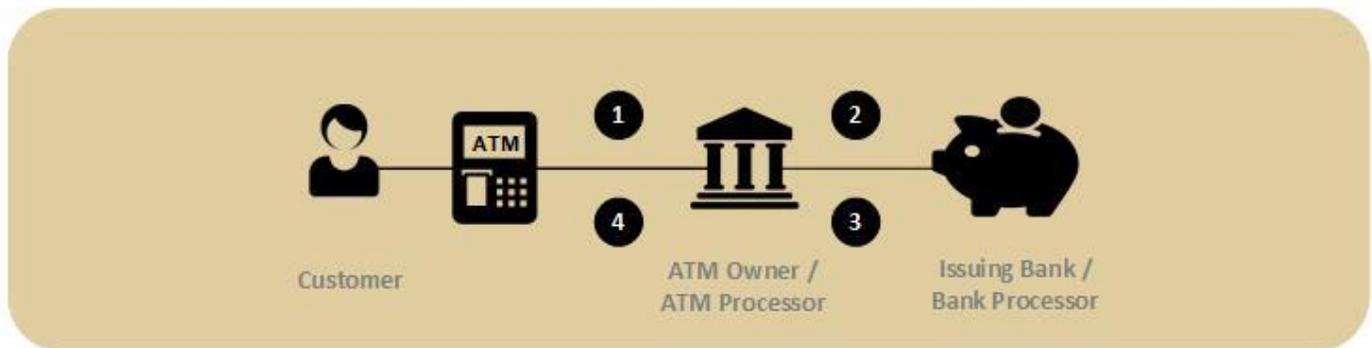
PIN debit interchange fees tend to be lower than signature debit interchange fees. Consequently, merchants prefer PIN debit transactions and issuing banks prefer signature debit transactions. In fact, some banks charge their clients a fee for each PIN debit purchase they make as compensation for the banks' signature debit "lost profits."

ATM Withdrawals

The processing of cash withdrawals from an ATM can assume various forms depending on who controls the ATM at which a withdrawal is made and the bank that is the funding source for the withdrawal (issuing bank). The examples below illustrate a number of ATM withdrawal scenarios:

- **The Issuing Bank Owns or Controls the ATM**

This is the simplest ATM withdrawal scenario. In this situation a customer is withdrawing funds from an ATM associated with the customer's bank. The diagram below illustrates the flow of the withdrawal transaction:

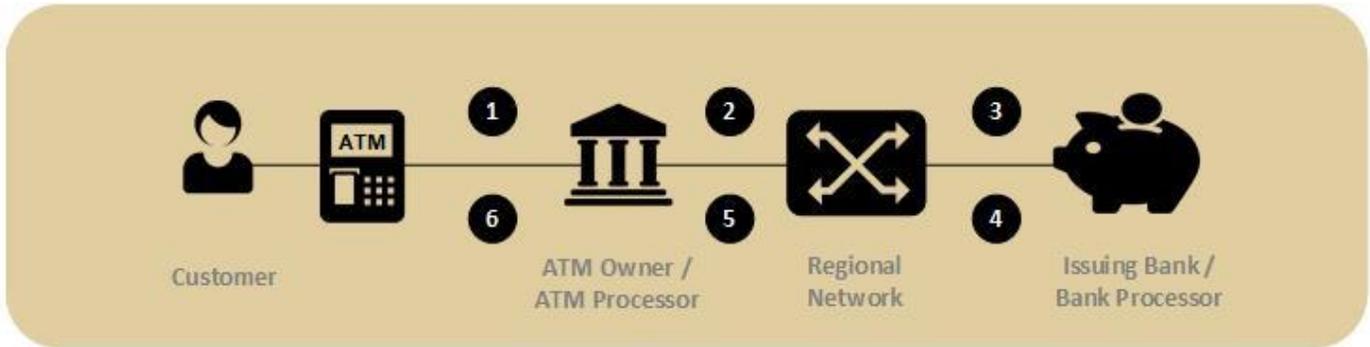


1. The customer requests a cash withdrawal from an ATM owned or controlled by the customer's bank; i.e., the cash will be withdrawn from an account at that bank.
2. The ATM owner / processor routes the withdrawal request to the issuing bank or a processor carrying out functions for the issuing bank.
3. Assuming that there are sufficient funds in the customer's account to fulfill the cash withdrawal request, the issuing bank / processor returns an approval response to the ATM owner / processor.
4. The ATM owner / processor issues a cash dispense command to the ATM for the requested funds, and the customer receives the requested cash.

In this scenario, there are typically no fees associated with handling the ATM transaction. However, if the issuing bank contracts with another organization to perform ATM processing functions, there may be fees paid by the issuing bank to the ATM processor. These fees will be dependent on the contractual agreement between the issuing bank and ATM processor. This is similar to the issuing bank contracting with a third party bank processor (see "Issuing Bank Processor Fees" above).

- **The Issuing Bank Does Not Own or Control the ATM**

In this scenario, the entity owning or controlling the ATM used by a customer is not the issuing bank. For example, a customer may wish to withdraw cash from an ATM associated with Bank X whereas the customer's bank account is with Bank Y. In this situation the routing of a cash withdrawal transaction appears below:

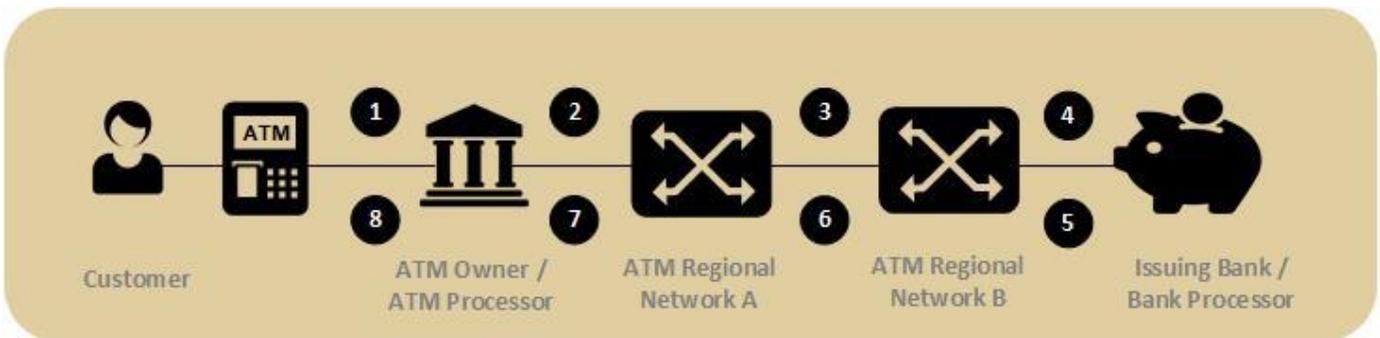


1. The customer requests a cash withdrawal from an ATM not owned or controlled by the customer's bank; i.e., the cash will be withdrawn from an account not associated with the ATM owner / processor.
2. The ATM owner / processor routes the withdrawal request to a regional network or switch that provides connectivity between the ATM owner / processor and the issuing bank. The regional network will either be an ATM / banking network, like NYCE, SHAZAM, or STAR, or it will be a shared network set up and operated by a group of cooperating banks who also share the cost of operating the network, like the Canadian network, Interac.
3. The regional network will determine the network location of the issuing bank and will route the cash withdrawal request to the issuing bank / processor.
4. Assuming that there are sufficient funds in the customer's account to fulfill the cash withdrawal request and any generated fees, the issuing bank / processor returns an approval response to the regional network.
5. The regional network will route the approval response to the ATM owner / processor.
6. The ATM owner / processor issues a cash dispense command to the ATM for the requested funds, and the customer receives the requested cash.

Other than possible fees paid by an ATM owner to the ATM processor or paid by an issuing bank to the bank processor, the following fee payments are associated with the withdrawal transaction described above:

- The customer may pay a processing fee called a "convenience fee" to the ATM owner for use of the "foreign" ATM. This fee will be debited against the customer's account with the issuing bank and paid by the issuing bank to the ATM owner.
- The issuing bank will pay an interchange fee to the ATM owner as compensation for the foreign cash dispense.

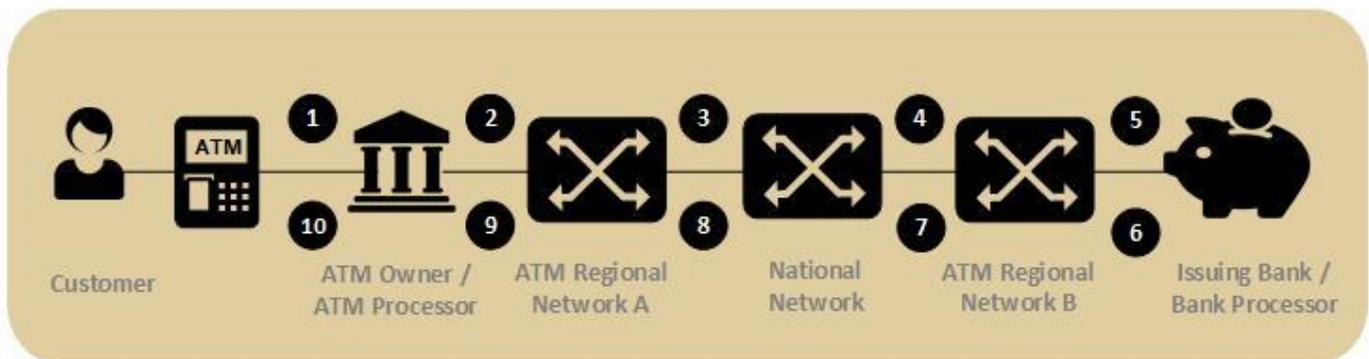
- The issuing bank will pay a fee to the regional network for routing the withdrawal transaction to the issuing bank. This will be true if the regional network is an ATM / banking network, like NYCE, SHAZAM, or STAR. If it is a cooperative shared network, like CO-OP, that includes the ATM owner and the issuing bank, then any fees are payable based on rules set by the shared network.
 - The customer may pay a fee to the issuing bank for the foreign transaction. This fee will typically be debited against the customer's account with the issuing bank.
- **The Issuing Bank and the ATM are on Different Regional Networks that are Connected**
 This scenario is similar to the one described immediately above, but the ATM and the issuing bank are not on the same regional network. But the two networks can directly exchange transactions that originate from an entity on one network for delivery to an entity on the other network. This scenario is depicted in the diagram below:



1. The customer requests a cash withdrawal from an ATM not owned or controlled by the customer's bank; i.e., the cash will be withdrawn from an account not associated with the ATM owner / processor.
2. The ATM owner / processor routes the withdrawal request to regional network A to handle routing to the destination issuing bank.
3. Regional network A recognizes that the issuing bank is not on the network, but it is on regional network B. Regional network A routes the withdrawal request to regional network B via the shared gateway.
4. Regional network B determines the network location of the issuing bank and routes the cash withdrawal request to the issuing bank / processor.
5. Assuming that there are sufficient funds in the customer's account to fulfill the cash withdrawal request and any generated fees, the issuing bank / processor returns an approval response to regional network B.
6. Regional network B returns the approval response to regional network A via the shared gateway for routing back to the ATM owner / processor.
7. Regional network A routes the approval response to the ATM owner / processor.
8. The ATM owner / processor issues a cash dispense command to the ATM for the requested funds, and the customer receives the requested cash.

Again, other than possible fees paid by an ATM owner to the ATM processor or paid by an issuing bank to the bank processor, the following fee payments are associated with the withdrawal transaction described above:

- The customer may pay a convenience fee to the ATM owner for use of the foreign ATM. This fee will be debited against the customer’s account with the issuing bank and paid by the issuing bank to the ATM owner.
 - The issuing bank will pay an interchange fee to the ATM owner as compensation for the foreign cash dispense.
 - The issuing bank will pay a fee to regional network B for routing the withdrawal transaction to the ATM owner / processor.
 - The ATM owner / processor will pay a fee to regional network A for routing the withdrawal transaction to the issuing bank.
 - The customer may pay a fee to the issuing bank for the foreign transaction. This fee will typically be debited against the customer’s account with the issuing bank.
- **The Issuing Bank and the ATM are on Different Regional Networks that are not Connected**
 This scenario is similar to that described immediately above, but the regional networks associated with the ATM and the issuing bank are not directly connected. In this situation, a third “national network” is needed to bridge between the two regional networks. Mastercard and Visa both operate national networks that could be used to bridge transactions between disconnected regional networks. This scenario is depicted in the diagram below:



1. The customer requests a cash withdrawal from an ATM not owned or controlled by the customer’s bank; i.e., the cash will be withdrawn from an account not associated with the ATM owner / processor.
2. The ATM owner / processor routes the withdrawal request to regional network A to handle routing to the destination issuing bank.
3. Regional network A recognizes that the issuing bank is not on the network and is unsure of the network on which the issuing bank is located. It routes the withdrawal request to the national network via the shared gateway for routing resolution.

4. The national network determines that the issuing bank is defined on regional network B. It routes the withdrawal request to regional network B via the shared gateway.
5. Regional network B determines the network location of the issuing bank and routes the cash withdrawal request to the issuing bank / processor.
6. Assuming that there are sufficient funds in the customer's account to fulfill the cash withdrawal request and any generated fees, the issuing bank / processor returns an approval response to regional network B.
7. Regional network B routes the approval response to the national network via the shared gateway.
8. The national network routes the approval response to regional network A via the shared gateway.
9. Regional network A routes the approval response to the ATM owner / processor.
10. The ATM owner / processor issues a cash dispense command to the ATM for the requested funds, and the customer receives the requested cash.

Other than possible fees paid by an ATM owner to the ATM processor or paid by an issuing bank to the bank processor, the following fee payments are associated with the withdrawal transaction described above:

- The customer may pay a convenience fee to the ATM owner for use of the foreign ATM. This fee will be debited against the customer's account with the issuing bank and paid by the issuing bank to the ATM owner.
- The issuing bank will pay an interchange fee to the ATM owner as compensation for the foreign cash dispense.
- The issuing bank will pay a fee to regional network B for routing the withdrawal transaction to the ATM owner / processor.
- The issuing bank will also pay a fee to the national switch for bridging the withdrawal request / approval response between the two regional networks.
- The ATM owner / processor will pay a fee to regional network A for routing the withdrawal transaction to the issuing bank.
- The customer may pay a fee to the issuing bank for the foreign transaction. This fee will typically be debited against the customer's account with the issuing bank.

Person-to-Person (P2P) Networks

In recent years, significant interest and accompanying growth have occurred in the area of P2P payments. P2P payments networks, which are operated by banks, bank consortia, and commercial operators, allow individuals to easily and directly pay other individuals using laptops, tablets, smart phones, or other Internet-enabled devices. Depending on the P2P service involved, payment sources can be electronic wallets, debit cards, prepaid cards, credit cards, or individual banking accounts. Payment destinations can be wallets, debit cards, prepaid cards, or individual accounts.

Many P2P networks can also be used to pay merchants for goods or services – one P2P provider, Venmo, even allows multiple payers to share payments for merchant purchases.

Feeing conventions associated with P2P payments vary because the individual payer is the acquirer in a pure P2P environment remitting funds from an electronic wallet or banking account. And most P2P networks do not charge any fee to either the payment sender or receiver for such funds transfers – although the Popmoney network charges \$.95 to senders for transfers. Other feeing types associated with P2P payments include:

- P2P networks operated by banking consortia
Generally, these P2P networks do not charge individuals for bank-account-to-bank-account transfers (or wallet-to-wallet transfers for wallet-based networks). However, members of the consortia involved in such transfers may pay fees to one another or to the network depending on the contractual relationships among the consortia members. Consortia members may charge individuals who hold accounts involved in transfers a fee, but this is typically not done.
- P2P transfers using a debit card or credit card as a funding source
In these cases the P2P network serves as an acquirer that then has to pay interchange fees to the card issuer. The fee structure for such payments is the same as the fee structure for standard debit or credit card payments. Therefore, the cost of such a payment is passed to the payment sender, possibly including an additional amount to pay the P2P network for operational costs and profit.
- Debit card or credit card payment to a merchant
As noted above, P2P networks frequently allow participants to pay for merchant services using a debit or credit card as a funding source. In such cases, the feeing profile looks like the profile for a standard debit or credit card payment with the merchant typically paying the interchange (and related) fees to the issuing bank.

Because of the widespread expectation that P2P payments should be no-cost (or low cost) transactions, P2P networks have sought alternative ways to monetize their operations. Some operators have issued their own debit cards so they can receive interchange fees for debit card transactions. Other operators have considered selling additional market messaging services to merchants using their large user bases as inducements.

Independent Sales Organizations

Given the descriptions above, one can see that the financial fee environment is complex given the multiplicity of participants and that the feeing types, amounts, payees, and payers vary with the types of transactions being processed and the relationships of the participants to one another. And, it's still more complex because of the involvement of independent sales organizations.

Technically, the only members allowed to have a direct involvement in the processing of transactions through the Visa and Mastercard networks are financial institutions that are members of the Visa or Mastercard card associations. However, a separate class of participant participates in transaction processing on these networks, namely, independent sales organizations (ISOs). Essentially, ISOs act as agents for one or more PSPs reselling PSP services to merchants. Consequently, a merchant may sign up for merchant processing services with an ISO, but the services are actually provided by a supporting PSP. However, ISOs may offer services that extend beyond those offered by a PSP, such as validating accounts, handling customer service, providing POS hardware, managing inventory, driving ATMs, etc. This is a synergistic arrangement because PSPs do not necessarily want to provide all functions related to financial transaction processing and ISOs can build successful businesses around offered services. For example, in the credit card, debit card, and ATM examples presented previously, the following functions might be provided by an ISO backed by a PSP:

- **PSP Extended Service Provider**
As noted previously, a PSP interfaces with merchants to process credit or debit card transactions. Actual transaction processing functions are provided by a PSP, but an ISO may have provided card scanning and POS devices, payment gateway services, and customer support in case of problems or questions.
- **ATM Processor**
All ATMs are driven by software to interact with ATMs to accept cash withdrawal requests and to dispense cash for approved transactions. An ISO may own and operate the hardware and software platform that drives a network of ATMs backed by one or more PSPs.
- **ATM Owner**
In many cases a financial institution may not even own the ATMs that its customers use to withdraw funds from their accounts. These may be owned by an ISO. In fact, there is a subclass of ISO known as an Independent ATM Deployer (IAD) that may own ATMs located at geographically dispersed locations. IADs would typically be responsible for maintaining their ATMs and supplying them with cash.

So what is the significance of ISOs in the feeing world? Because ISOs receive funds from feeing, the number of fee types and relationships is significantly expanded. For example, many of the transaction flows presented previously are, in fact, more complicated by the existence of ISOs performing a subset of the described transaction functions. In addition, because there may be a number of separate processors involved in a single function, new feeing requirements may arise that may reset previous feeing arrangements.

Rebates and Commissions

As if the feeing landscape were not complicated enough, there are other competitive factors to be considered. Generally, a processor that is handling financial transactions will generate more revenue with increased transaction volumes. So a primary commercial question for a processor is always “How do I increase the number of transactions that I process in a given period of time?” Not surprisingly, this means offering attractive commercial terms to a processor’s potential customer base to acquire more customers and their transaction volumes. A not uncommon approach to this situation is to reward a potential customer with a share of processor revenue, particularly if revenue exceeds a targeted level. For example, a PSP might offer a chain of drugstores a rebate of 20% of the monthly fees that the drugstores pay the PSP if the drugstores generate more than 20,000 transactions in a given month. Or, the PSP might offer an additional rebate of 5% of monthly fees if the monthly transaction dollar volume exceeds \$250,000. The opportunity for the drugstore chain owner to gain back some transaction costs might win business for the PSP and perhaps induce the drugstores to encourage customers to increase credit or debit card usage.

Additionally, a processor might offer financial compensation to a third party who pays no fees as an inducement to establish a business relationship or obtain some services for the processor. Some examples include:

- \$5,000 sales commission by a regional network to a third party marketing / sales organization for each new switching client brought to the regional network.
- \$50 per store commission to a convenience store chain by an IAD if the average number of ATM withdrawals per convenience store exceeds 300 per month.
- 5% commission to a casino by a PSP / IAD for each cash withdrawal made from ATMs on the casino floor; an extra 2% withdrawal commission if the total amount of ATM withdrawals exceeds \$5,000,000 in a given month.

Hurdles for Processors

- ***Keeping Up with Fee Inflow and Outflow***

As the previous part of this paper indicates, the number of factors for a processor involved in financial transactions to keep straight when accounting for fees, commissions, and rebates can be overwhelming. And the problem increases for processors in the real world. For example, the number of feeing “rules” that guide the actions of significant processors can exceed 35,000. And the number of variables that can be incorporated into a single rule can exceed 6,000. This is the environment in which processors operate while ensuring that they are obtaining correct feeing revenue from appropriate transaction participants as well as remitting correct feeing revenue to appropriate transaction participants.

- ***Creative Pricing Schemes***

In addition to following all of the applicable feeing rules, processors have to offer creative feeing plans to current clients to prevent poaching by competitors and to offer creative feeing plans to potential clients to win business against competitors. Creative plans could call for variable feeing tiers, bundled fees, rebates, commissions, and possibly new factors not considered by competitors.

- ***Flexible Implementation***

Offering a potential client an attractive business proposal that can't be delivered for six months loses its effectiveness. Offering the same proposal with a four day go-live has far greater appeal. Additionally, offering a proposal with a given structure to a potential client may not generate much interest. However, a potential client might note some special business feature or function that would have a great deal of appeal. Telling the potential client "Yes, we can do that" wins the deal; telling the potential client "No, we can't quite do that" loses the deal. Flexibility can win business.

- ***Doing What Needs to be Done Cost Effectively***

If a processor can overcome all of the hurdles noted above but requires a cadre of system engineers supported by a staff of software programmers to do it, then profits go out of the window. Ideally, the individuals responsible for business planning and procedures, along with sales and marketing, should be able to implement new business features supporting business operations and growth. Where ideas are created should be where ideas are implemented.

Meet Concourse – Fees & Commissions

Concourse – Fees & Commissions is a member of the Concourse Financial Software Suite, a set of software products designed to address the needs of financial back offices. More importantly, it is designed to address the entire fee, commission, and rebate complexity noted previously, while providing expanded opportunities for processors to offer quick, creative options to customers without having to resort to software modification with its resulting overhead.

All Inclusive

Concourse – Fees & Commissions is intended to support any fee-related participant in financial transaction processing. For example, all of the following processor types are supported:

- Third Party Processors
- Payment Service Providers
- Independent Service Organizations
- Merchant Service Providers
- P2P Networks
- Acquiring Banks
- Issuing Banks
- Independent ATM Deployers
- Card Networks

Powerful

Almost any type of fee structure or configuration that can be imagined can be implemented. For example, all of the feeing examples noted previously can be supported by Concourse – Fees & Commissions. Some additional feeing examples include:

- Regional network: Charge a switch participant \$0.05 per transaction for the first 1,000,000 transactions per day; automatically charge \$0.03 per transaction for the next 2,000,000 per day; automatically charge \$0.015 per transaction thereafter.
- ISO: Provide a bonus commission of \$0.01 to an IAD for each ATM transaction in the IAD's network; if the IAD generates 50,000 network transactions in a given day, convert the \$.01 per transaction bonus commission to \$0.02 per transaction.
- PSP: For the first month after a chain of clothing stores inaugurates service with a PSP, there will be no processing fees for credit card transactions; the offer is restricted to stores in the state of Washington. Afterward, fees are reset to standard contracted rates.
- PSP / ATM Owner: Give a \$3 per ATM withdrawal commission to an operator of casinos in Las Vegas and Reno; if the *average* number of transactions per casino in Las Vegas exceeds 1,500 in a given day,

change the \$3 per ATM withdrawal commission to \$4; if *any* casino in Reno exceeds 2,000 transactions per day, change the \$3 per ATM withdrawal commission to \$5.

- Regional network: Give a per transaction interchange fee of .75% + \$0.15 to an issuer, and charge a per transaction interchange fee of .75% + \$0.18 to a merchant acquirer; if the total dollar volume from the merchant acquirer exceeds \$10,000,000 in a given month, rebate the equivalent of \$.02 per transaction for all credit card transactions processed during the month.

Rules-Based, Unlimited Variables

Concourse – Fees & Commissions is rules-based using a powerful rules engine. This means that all fee calculations are expressed using configured rules – there is no software written to express the logic of a fee calculation. Available fee options are practically unlimited, including:

- Interchange Fees
- Gateway Fees
- Processing Fees
- Service Fees
- Recurring Fees
- Commissions
- Rebates
- Transaction-Based Fees
- Volume-Based Fees
- Percentage-Based Fees
- Threshold-Based Fees
- Flat or Tiered Fees

Some additional capabilities include:

- Define an unlimited number of fees and commissions based on specific business relationships
- Assess one to many fees or commissions per transaction or period
- Support recurring fees that are billed once per period
- Support fee assessment in different currency codes
- Establish unique fee assessment periods for clients (e.g., daily, weekly, monthly, quarterly, annually)

Rules are expressed using a point-and-click graphical interface that permits rules to be as complex as needed to represent desired logic. Rules can incorporate variable data from:

- Any data field in a transaction processed by Concourse – Fees & Commissions.

- Any other data that has been loaded into the underpinning Concourse repository using one or more data loaders, including the Concourse Business Configuration Loader that loads any external relevant data into the repository based on user-defined configurations.

Concourse users have made extensive use of this facility to greatly extend the number of data attributes that can be incorporated into one or more rules. Some Concourse – Fees & Commissions clients have tapped as many as 6,000 data attributes referenced by rules – without code changes.

Concourse – Fees & Commissions clients typically incorporate 25,000 – 35,000 rules in their overall fee configurations.

Near Real-Time Rules Assessments

Concourse – Fees & Commissions operates in near real-time. This means that as soon as transactions have been logged into a processor’s environment, the transactions are picked up by Concourse and processed by its rules engine. This also permits clients to use Concourse’s browser-based interface to view the ongoing status of fees positions. It also means that daily (or other periodic) summaries are immediately available for review because partial processing summaries are created and continuously updated in near real-time throughout a processing day. This greatly shortens end-of-day processing and facilitates tighter service level agreements.

Nimble

Because Concourse – Fees & Commissions logic is rules-based, new feeing plans can be created and put into production in short periods of time – in many cases new feeing plans can be created within a day. No new software has to be created, and the number of parties required to implement a new feeing plan and bring it into production is significantly reduced.

Test Drive New Plans

Even though new feeing plans can be created in short periods of time, there may be concern that the derived plans may not produce the results intended by creators. Using Concourse – Fees & Commissions new plans can be test driven as follows:

- Load historical transactions into the test fees configuration and review feeing summaries to determine if produced results are as expected.
- Load live transactions into the test fees configuration executing in audit mode in which produced results are not “real” but allow review to determine if desired results are produced.

After trial runs and necessary adjustments, the new feeing configuration can be put into production.

One additional virtue of audited trial runs is that a processor can create fee rules that parallel those of a processing partner. The generated fee results can then be compared to those of the processing partner at the end of a processing period to validate the correctness of the partner's fee results. For example, an issuing bank may wish to validate the interchange fees charged by a regional network. The issuing bank can create audited fee rules that mimic the interchange fee rules published by the regional network to ensure that interchange fees charged to the issuing bank are correct. Differences can be negotiated between the issuing bank and regional network.

Fee Tiering

Although not a new concept in the PSP environment, fee tiering in a Concourse – Fees & Commissions environment assumes an expanded quality. Fee pricing can automatically change based on the numbers and types of transactions that have been processed in a given period of time. In fact, fee amounts associated with transactions that have been processed in a given period can be different based on one or more processing thresholds having been attained during the period. Concourse provides for two distinct types of tier processing:

- **Earn-a-Tier**
In this type of tiering, fees for transactions will be based on a given formula. However, if the numbers of transactions exceed a specified tier threshold, a different fee formula will be applied to these transactions to derive a different, typically lower fee amount. In other words, in order to qualify for lower fees, a transaction originator will have to produce a certain volume of transactions in a given period. If the designated volume is achieved during the period, then lower fees will apply; otherwise, the original, higher fees will apply. There can be as many earn-a-tier tiers as needed.
- **Fill-a-Tier**
In this type of tiering, fees for transactions will be based on a given formula. However, after a designated volume threshold has been passed in a given period, a different fee formula will be applied to all transactions above the designated threshold. There can be as many fill-a-tier thresholds as needed, and the fee for each transaction in a given threshold-defined tier can be different from the fee for each transaction in a different tier.

Conclusions

The feeing environment associated with processing financial transactions can be complex with large numbers of participants, roles, business relationships, rules, regulations, and transaction types. And everything needs to be correctly accounted to ensure that fee paying processors are paying all appropriate parties in accordance with rules, regulations, and business relationships. Similarly, processor fee payees need to ensure that they are being paid correctly in accordance with established rules, regulations, and business relationships. On top of these requirements is the need to be competitive – to offer attractive feeing plans to current and potential clients that somehow have greater appeal than those offered by competitors. This means fee proposals have to be creative, offering some features or capabilities that can't be met by the competition. Additionally, feeing plans need to be turned up quickly to increase their appeal to customers, and they need to be implemented in a cost effective manner to ensure that generated revenue does not disappear in implementation and support costs.

Concourse – Fees & Commissions is a software tool that allows the creation of an almost unlimited variety of fee plans using its powerful rules-based architecture. Any participating processor in a financial transaction environment can benefit from Concourse's ability to define creative fee plans using data attributes from financial transactions as well as relevant data loaded into the Concourse repository using its flexible Business Configuration Loader.

Concourse – Fees & Commissions feeing plan implementations are fast – after deciding how a feeing plan should be configured from a business perspective, it can generally be ready to go within days, sometimes within a single day. This is because Concourse implementations do not require software changes; plans are implemented via rule configurations. Therefore, software developers are not needed, and the whole software development life cycle process can be avoided. New fee plans can be test driven before they are put into production to ensure that they do what was intended.

Essentially, Concourse – Fees & Commissions simplifies the task of creating and managing complex feeing configurations, while improving the competitive posture of financial transaction processors.

References

1. Amad Ebrahimi (2015), **A Visual Guide to Credit Card Processing Fees and Rates [Infographic]**; Merchant Maverick website, www.merchantmaverick.com.

About BHMI

BHMI is an elite group of technologists who have been creating primary business applications since 1986. BHMI's core competency is creating enterprise software applications that are continuously available, highly scalable, and undeniably reliable.

Since the payments industry is becoming more competitive and complex, the back-end processing of card transactions can no longer be a static function – it must be fluid, dynamic and agile. Addressing this urgent need, BHMI is best known as the creator of the Concourse Financial Software Suite – a flexible, rules-based solution that allows financial services companies to adapt back office processing to meet market changes as soon as they occur.

The following modules within Concourse work together to provide the industry's most agile solution in this new age of frictionless payments:

- Concourse – Core
- Concourse – Extended Settlement
- Concourse – Reconciliation
- Concourse – Fees & Commissions
- Concourse – Disputes



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