Digital Wallets in Visa's Ecosystem: Policies & Requirements

Contents

Backdrop

The Visa acceptance ecosystem covers all commerce types, including the face-to-face, unattended, mobile and e-commerce environments; it helps to increase electronic payment acceptance for sellers, allowing a variety of ways to connect to Visa either directly, through an acquirer or via a third-party. With the increased growth of e-commerce and particularly digital wallets, it is important that Visa continues to foster innovation and support new payments experiences across the ecosystem.

Visa Participation in Digital Wallets

With the increased growth of e-commerce and particularly digital wallets, one of Visa's top priorities is to continually foster innovation and support new payment experiences across the ecosystem while supporting core payment experiences. Visa supports digital wallets in several ways, including funding wallet accounts, cashing out stored funds and enabling access to Visa's unparalleled acceptance network. However, a small subset of digital wallet functionality introduces potential risks to Visa's ecosystem, stakeholders and customers; and it is important for acquirers, issuers and digital wallets operators to understand the requirements for safe operation and what activities are not appropriate.

This guide is intended to provide a greater understanding of the different types of digital wallets in Visa's ecosystem, as well as guidance on the policies, technical and operational requirements and restrictions applicable to each of them; including support of "Back-to-back funding"[1]

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[1] Also known as "live-load", "real-time load" or "purchase-driven load/funding"

capability when combined with general purpose payment network products at the "front" of the wallet.

Side-by-side comparisons of Visa's digital wallet policy and technical requirements are included on pages 7-9, and sample transaction flows on pages 11-12.

Digital Wallet Types and Requirements

Digital wallets are software-based systems that (i) store information about a customer's Visa credentials used to fund the wallet's account and (ii) are used to make payments – either purchases from sellers or money remittance (i.e. person-to-person "P2P" transfers). In Visa's ecosystem, digital wallets share the following common features:

- Functionality that can be used at more than one seller[2].

- Stores and transmits payment credentials from the customer to the seller to initiate transactions, or from the sender to the recipient for a P2P transfer (e.g. Visa account number (PAN) or payment token).

There are many distinct features that digital wallets may support, based on the flows of funds, processing infrastructure supported on their platform and ultimately the role Visa's payment credentials play in the wallet. These different features determine the way Visa categorizes the digital wallet, and therefore what activity is permitted or prohibited.

Visa defines three different types of digital wallets. This section will describe each type, as well as the most important policies that apply each wallet type. All wallet types must also comply with the requirements in the following section, *"Common Requirements"*.

Pass-Through Digital Wallets

Overview

Pass-Through Digital Wallets are typically mobile phone-based solutions that allow customers to pay in-store (as a tap to pay transaction) or online, usually via a tokenized, digital version of their physical Visa product. Pass-Through Digital Wallets may also be embedded on "wearables" (e.g. smart watches) or browser-based "card on file" solutions specifically for conducting online/e-commerce transactions.

Key Requirements

Transactions initiated using Pass-Through Digital Wallets transmit the customer's payment credential to the seller, who then processes the transaction directly with their acquirer like any other Visa payment transaction. The wallet operator, therefore, is not involved in the movement of funds, and *no* funds are stored in/by the wallet.

Stored Value Digital Wallets

Overview

Stored Value Digital Wallets operate like prepaid cards by assigning a separate "account" to the customer, which the customer pre-loads with funds using their Visa payment credential, before being able to transact with sellers connected to the digital wallet's platform or complete a P2P transfer to other users of the wallet's platform. Generally, customers & sellers are either transacting within the Stored Value Digital Wallet's proprietary network of connected users, or within the Visa ecosystem if the wallet has attached a Visa product (e.g. a prepaid credential) to the "front" of the wallet, so the wallet uses Visa to make purchases, cash withdrawals etc.

Key Requirements

The wallet may allow different funding options for the customer (e.g. manual/ad-hoc loads, recurring loads or balance-driven loads), but the customer's

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[2] *Single brand merchant wallets and straight-through P2P providers (that do not store funds) are not categorized as digital wallets in Visa Rules. Further explanation on merchant wallets on page 4*

wallet-assigned account *must always* hold a balance of pre-loaded funds to be able to transact.

Sellers directly connected to the digital wallet's platform are connected to the digital wallet to accept pre-loaded funds from digital wallet-assigned accounts, via the digital wallet's brand; they are *not* accepting Visa payment credentials directly for payment when the customer pays using the digital wallet.

Stored Value Digital Wallets must only work with acquirers located in the same country[3] to load funds from a linked Visa payment credential. When loading funds into the digital wallet account from a linked Visa payment credential, the Stored Value Digital Wallet and the wallet's acquirer must process the transaction as an Account Funding Transaction (AFT) with a Business Application Identifier (BAI) of "FT" (Funds Transfer), along with the Stored Value Digital Wallet's Merchant Category Code (MCC).

Staged Digital Wallets

Overview

Staged Digital Wallets are capable of conducting "back-to-back funding" transactions – also known as a "live-load" or "real-time load" – which permits the customer to undertake transactions with sellers on the digital wallet's platform when there are not sufficient funds in the digital wallet-assigned account to complete the transaction (which may include a "zero balance").

For a "back-to-back funding" transaction, the funding or reimbursement transaction from the underlying Visa payment credential:

(i)   Exactly matches the amount of the transaction attempted by the customer

(ii)   Equals the remainder of the purchase amount, if also partially funded by an existing balance in the digital wallet-

assigned account (which may include another store of value e.g. "pay with points"), or

(iii)   Is completed by multiple automated loads of a pre-determined value

Further explanation of "back-to-back funding" transactions, including examples, is included on pages 13. It is important to note that all digital wallets *capable* of "back-to-back funding" transactions to complete a purchase are classified as Staged Digital Wallets, even if the wallet also enables pre-loaded funds to be stored.

Key Requirements

Transactions within Staged Digital Wallets are always between connected users i.e. customers who hold accounts with the Staged Digital Wallet and sellers directly connected to the Staged Digital Wallet's platform. Staged Digital Wallets must hold acceptance contracts with all sellers on their platform and must *not* contract with sellers located in another country[4].

Unlike Stored Value Digital Wallets, Staged Digital Wallets are *not* permitted to assign a Visa or other general-purpose payment network product (e.g. a prepaid credential) to the "front" of the digital wallet account to make purchases, cash withdrawals or P2P transfers by using the back-to-back (live load) functionality. Use of the Staged Digital Wallet back-to-back functionality must only occur within the wallet's own proprietary network of connected users and sellers.

In order to load funds or complete "back-to-back funding" transactions from a linked Visa payment credential, Staged Digital Wallets must only partner with an acquirer who is located in the same country[4].

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[3] In Visa's Europe region, the acquirer and Stored Value Digital Wallet operator may be in different countries within Europe. Consult the Visa Rules for information

[4] In Visa's Europe region, the acquirer, Staged Digital Wallet & seller may be in different countries within Europe. Consult the Visa Rules for more information

Acquirers must also ensure that Staged Digital Wallets are registered with Visa; refer to [Visa Third Party Agent](#) on visa.com for further information on registration process.

Staged Digital Wallets must differentiate "load" or "top-up" transactions and "back-to-back funding" purchases to ensure that the applicable data elements in the Visa transaction are correct. When loading funds into the digital wallet account from a linked Visa payment credential, the Staged Digital Wallet and the wallet's acquirer must process the transaction as an AFT with a BAI of "WT" (Wallet Transfer), along with the Staged Digital Wallet's MCC. When completing a "back-to-back funding" transaction, the transaction must be processed as a Purchase, also with a BAI of WT, but with the *seller's* MCC and not the wallet's MCC. For P2P use cases, e.g., sending/ receiving funds, process the transaction as AFT/ OCT, with the appropriate BAI (refer to the latest AFT Processing Guide for details).

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Note on Merchant Wallets: Merchant Wallets are not a distinct wallet category in the Digital wallet Framework. Depending on the functionality that the merchant wallet supports, some merchant wallets may qualify as either Stored Value Wallets or Staged Digital Wallets.

(i) Merchant Wallets used within Merchant's single brand and single Merchant Category Code (MCC), are categorized as Single Merchant Wallets, and process their transactions as purchase. This applies to both pre-funding of the wallet before the cardholder makes a purchase and back-to back funding transactions.

(ii) Merchant Wallets used throughout *multiple Merchant brands* within the *same parent corporation*, with the *same MCC* are categorized as:

   o Single Merchant Wallets, where the wallet operator requires *pre-funding* of the wallet balance; or

   o Staged Digital wallets, where the wallet operator supports back-to-back transactions. These wallets must comply with all requirements applicable to Staged Digital Wallets

(iii) Merchant Wallet used throughout *multiple merchant brands* within the *same parent corporation*, *multiple MCCs* are categorized as:

   o Stored Value wallets, where the wallet operator requires *pre-funding* of the wallet balance. These wallets must comply with all requirements applicable to Stored Value Digital Wallets; or

   o Staged Digital wallets, where the wallet operator supports *back-to-back funding*. These wallets must comply with all requirements applicable to Staged Digital Wallets

Additional information is available in the merchant wallet definition and treatment table on page 10.

Common Requirements

There are some policy requirements that apply across all three digital wallet categories.

Consumer Disclosure & Consent

Visa requires all digital wallet operators to obtain appropriate customer consent, to load and hold the customer's Visa credentials in the wallet for future use. If the digital wallet operator is also enrolled in the Visa Token Service, additional disclosure and approval may be required.

Also, on the payment page and any page that shows the customer's payment account information, digital wallets must ensure that they display (i) the last four digits of the customer's Visa payment credential and (ii) either the Visa brand mark or "Visa" in text next to a Visa payment option.

General Digital Wallet Acceptance

In general, there are no merchant category restrictions for digital wallets.

Staged Digital Wallets are not permitted to

link to *other* digital wallets or be acquired by payment facilitators.

High-Brand Risk Sellers

Additional obligations and requirements apply if Stored Value & Staged Digital Wallets directly connect with sellers in certain high-risk categories, e.g. gambling. Specifically, acquirers must ensure that the digital wallet and all connected high-risk sellers are registered with Visa under Visa's High- Brand Risk Merchant program.

Additionally, transactions must include the high-risk seller's MCC, in place of the digital wallet's MCC. This means either:

(i) The digital wallet creates two separate accounts (or "purses") for the customer; one that can be used for general transactions and another that can *only* be used by the registered high-risk seller(s). In this case, the "general purse" is coded with the digital wallet's applicable MCC, whereas funding the "high-risk seller purse" must be coded with the high-risk seller's MCC.

   The store of funds in the "general purse" must never be used to conduct transactions with high-risk sellers.

(ii) If the digital wallet cannot create separate accounts (or "purses"), then *every* transaction must be coded with the high- risk seller's MCC, even if not all transactions are classified high-risk.

Evolution & Growth Trajectory

It's not unusual for a digital wallet to develop and evolve over time, expanding its functionality and the way in which it can be used to support a growing customer/user base.

As the digital wallet grows and expands, it's important to understand that functional evolution can affect the way the digital wallet is classified

and therefore, how it must operate within the Visa ecosystem. Digital wallet operators (and their acquirers) must consider how new functionality or transaction types fit within Visa's policies and ecosystem; it may mean that the digital wallet shifts from one type of digital wallet classification to another. For example:

> A Stored Value Digital Wallet that solely functions to enable P2P transfers might expand and start allowing customers to make purchases from sellers with the balance in the digital wallet's account. Its status does not change, and it remains a Stored Value Digital Wallet.

> At its next expansion phase, it facilitates certain purchases with "back-to-back funding". Even though these purchases may be a small percent of total volume, the Stored Value Digital Wallet is now capable of "back-to-back funding" transactions, and it must now be classified as a Staged Digital Wallet.

This has two important implications:

- A Stored Value Digital Wallet "fronted" by a Visa or other general-purpose payment network product (e.g. a prepaid credential) must not engage in "back-to-back funding" for *any* transactions
- Before a Stored Value Digital Wallet with only proprietary network acceptance (i.e. not "fronted" by a Visa or other general-purpose payment network product) begins to support "back-to-back funding" transactions, it must be registered with Visa as a Staged Digital Wallet and ensure to support all requirements for Staged Digital Wallet Operators.

Visa Rules

The operating requirements governing each of these different entities are subject to, and a part of, the Visa Rules. For further information on operational requirements, including rules pertaining to disputes, merchant descriptors, and all other aspects of these programs, please consult the [Visa Rules](#).

Additional Resources

Online: For more information on recommended best practices, dispute management, security and risk policies or to stay up to date with Visa announcements, visit the [Merchant Resource Library](#) on visa.com.

Digital Wallet Operators: Contact your Visa acquirer

Acquirers: Contact your Visa Account Executive or Account Manager

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Comparison of Requirements

	Requirement	Pass-Through Digital Wallet	Stored Value Digital Wallet	Staged Digital Wallet
Acquirer & Contract Requirements	Additional acquirer capitalization standard	No	No	Yes
	Digital Wallet Operator (DWO) registration & approval with Visa[5]	No	No[6]	Yes[6]
	DWO contract with acquirer	No	Yes	Yes
	DWO contract with sellers	No	No	Yes
	Direct seller contract with acquirer	Yes	No	No
	Eligible to be acquired by payment facilitators or other DWOs?	Yes, for transactions processed through payment facilitators No, for other DWOs	Yes	No
	Seller located in acquirer country?	All applicable seller/acquirer combinations	DWO must be located in Acquirer's country[3]; seller may be in another country	DWO & seller must be located in Acquirer's country[4]
	Merchant location determined by	Seller	DWO	DWO
Acceptance Brand	Acceptance mark at seller's POS, website or mobile app.	Visa	DWO's brand Visa or other general-purpose payment network if the wallet is "fronted" by a Visa payment credential or other general-purpose payment network credential (e.g. prepaid card)	DWO's brand

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	Requirement	Pass-Through Digital Wallet	Stored Value Digital Wallet	Staged Digital Wallet
Transaction Responsibility	**Who is the "merchant"?**	Seller	DWO	DWO
	Name in transaction record & customer's statement	Seller	DWO	*Pre-load:* DWO Name *Back-to-back funding transaction:* DWO*Seller Name
	Dispute resolution provided by	Seller	DWO	DWO
Transaction Processing	**Transaction type**	Purchase	Account Funding Transaction (AFT)	*Pre-load:* Account Funding Transaction (AFT) *Back-to-back funding transaction:* Purchase
	Merchant Category Code (MCC)	Seller's line of business	Either: 6540 (Stored Value) for digital wallets with most transactions through a proprietary multi-retailer network 4829 (Money Transfer) for digital wallets with most transactions as P2P 6012 (Financial Institution) if eligible If the DWO enables transactions with certain high-risk sellers, the seller's MCC must be used[6]	*Pre-load:* 6051 (Non-Financial Institution) *Back-to-back funding transaction:* seller's line of business If the DWO enables transactions with certain high-risk sellers, the seller's MCC must be used[6]

[5] If the DWO intends to be a token requestor, the DWO must be registered with Visa's Token Service.

[6] If the DWO enables transactions with certain high-risk sellers, the DWO & each high-risk seller must be registered with Visa under Visa's High-Brand Risk program.

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	Requirement	Pass-Through Digital Wallet	Stored Value Digital Wallet	Staged Digital Wallet
Identifiers	Unique identifier included in transactions	No	No	Merchant Verification Value (MVV)
	Business Application Identifier (BAI)	None	Funds Transfer (FT)	Wallet Transfer (WT)
Additional Functionality	Back-to-back Funding allowed	N/A; does not store funds	No	Yes
	Visa/non-Visa general purpose payment network product at the "front" of the DWO account (e.g. a prepaid credential)	N/A; transactions facilitated using digital tokens representing underlying Visa credential	Yes	No
Pricing	Entity-based Visa transaction pricing	No	No	Yes[7]

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[7] Pricing may vary between countries and Visa regions.

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Merchant Wallets Definition and Treatment

| Merchant Wallet	Definition	Treatment
Single Corporation, single or multiple Brands (single MCC)	This Corporation may have multiple location outlets, single or multiple brands, but all within the same merchant category code (MCC). Stored funds can only be used within the Corporation's single or multiple brands.	I. Single Corporation, single or multiple brands (single MCC), no back-to-back transactions supported. Treat as: (i) purchase transaction; (ii) MCC of the merchant/seller II. Single Corporation, multiple brands (single MCC), back-to-back transactions supported. Treat as: Stage Digital Wallet
Single Corporation, multiple Brands (multiple MCC)	This Corporation has multiple brands, location outlets and multiple merchant categories. Stored funds can only be used within the Corporation's Brands. I. If the wallet requires pre-loading of the funds define as Stored Value wallet II. If back-to-back transactions are supported, define as Stage Digital Wallet	III. Wallet requires pre-loading of the funds treat as Stored Value Wallet IV. Wallet supports back-to-back transactions, treat as Stage Digital Wallet

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Sample Transactions

Pass-Through Digital Wallet

Transactions initiated using Pass-Through Digital Wallets transmit the customer's payment credential (usually tokenized) to the merchant, who then processes the transaction directly with their acquirer like any other Visa payment transaction. The transaction may be either in-store via the merchant's tap to pay terminal, or online as an e-commerce transaction on the merchant's website.
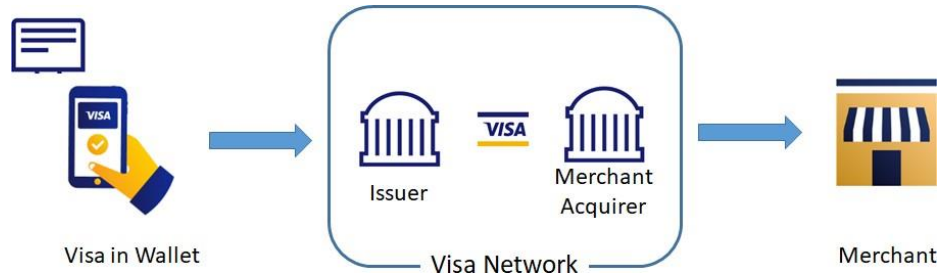
Stored Value Digital Wallet

Stored Value Digital Wallets assign a separate "account" to the customer, which the customer pre-loads with funds using their Visa payment credential, before being able to transact with sellers connected to the digital wallet's platform or complete a P2P transfer to other users of the wallet's platform. Generally, customers & sellers are transacting within the Stored Value Digital Wallet's proprietary network of connected users.
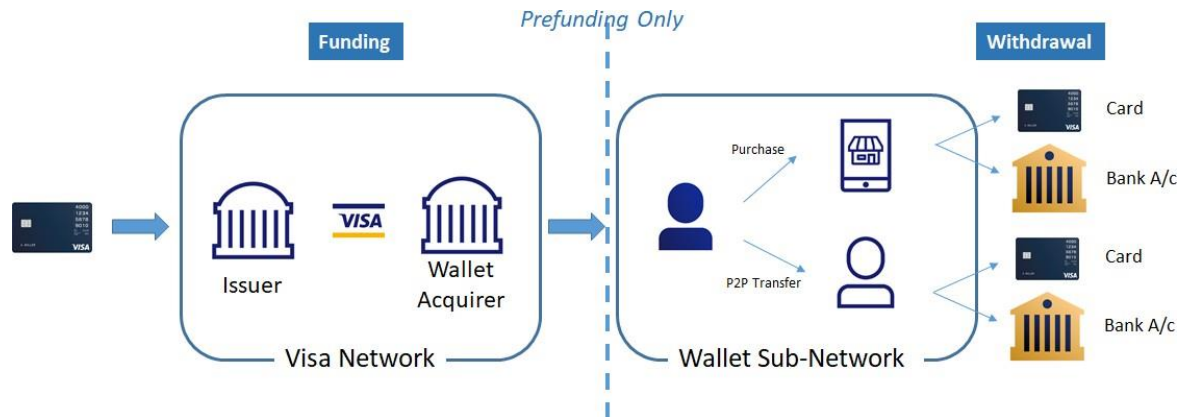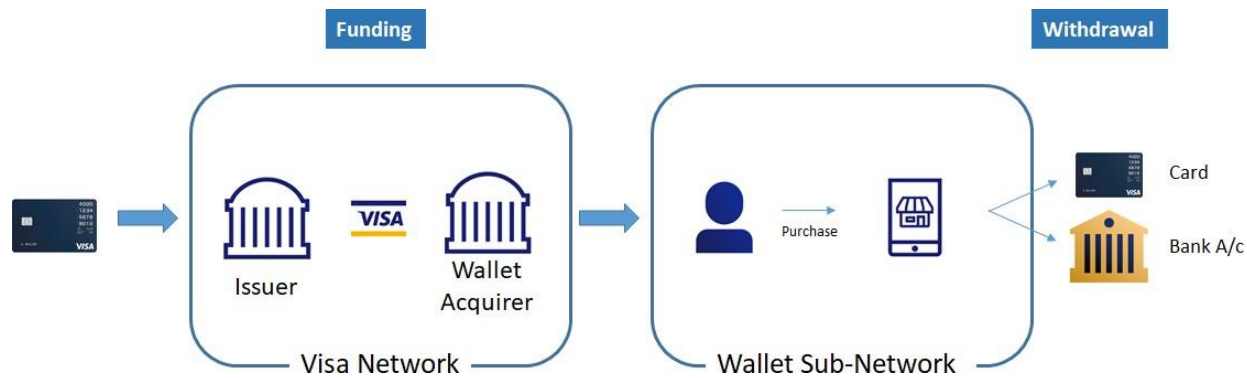

Note: *If the Stored Value Digital Wallet assigns a Visa or other general-purpose payment network credential (e.g. prepaid card) to the "front" of the wallet, all transactions with the "front card" are processed as a regular transaction outside the digital wallet's proprietary network, subject to the policies & processing requirements of the network brand on the card (i.e. Visa or another general-purpose payment network).*

Staged Digital Wallet

Staged Digital Wallets assign a separate "account" to the customer, which the customer may pre-load with funds, but may also facilitate "back-to-back funding" transactions – also known as a "live-load" or "real-time load" – which permits the customer to undertake transactions with sellers or other users on the digital wallet's platform when there are not sufficient funds in the digital wallet-assigned account to complete the transaction.

The customer may transact with sellers connected to the digital wallet's proprietary network or complete a P2P transfer to other users of the wallet's platform. When transacting, the customer is **only** able to transact within the Staged Digital Wallet's proprietary network of connected sellers.

Note: Staged Digital Wallets must **not** assign a Visa or other general-purpose payment network credential (e.g. prepaid card) to the "front" of the wallet; use of the Staged Digital Wallet's account must only occur within the wallet's own proprietary network.

"Back-to-back Funding"

Many digital wallets and prepaid instruments carry a balance. Many also offer automated reloads from a Visa payment credential kept on file, either on a recurring basis or triggered when the wallet's balance hits a certain amount, almost always as the result of a purchase. Depending on the way the load and transaction is conducted, it may or may not be considered "back-to-back funding":

(i)   *Rules-Driven Load* – these are **not** defined as "back-to-back funding" if the load is a single, predetermined amount
(ii)   *Live/Real-Time Load* – these **are** "back-to-back funding" transactions

"Back-to-back funding" – also known as a "purchase-driven load", "live-load" or "real-time load" – is a payment flow that automatically transfers value via a funding transaction that is directly connected to a specific purchase[8]. It enables the customer to complete transactions on the digital wallet's platform when there are not sufficient (or zero) funds in the digital wallet-assigned account. The funding transaction from the underlying Visa payment credential either:

(i)   Exactly matches the amount of the transaction attempted by the customer
(ii)   Equals the remainder of the purchase amount, if the purchase is also partially funded by an existing balance in the digital wallet-assigned account, or
(iii)   Facilitates multiple loads of smaller default amounts to cover the purchase amount (in full or part)

        Additionally, the digital wallet may also enable the consumer to pay with another store of value (e.g., "pay with points") if there is not sufficient currency-denominated value to cover the full purchase, and the wallet pulls the delta to complete the purchase; this is also "back-to-back funding".

Further examples of funding use-cases are included on the following page.

The functionality to support "back-to-back funding" transactions is **only** permitted for use by registered and approved Staged Digital Wallets.

Stored Value Digital Wallets and issuers/operators of other Visa or non-Visa general purpose payment products must **not** support "back-to-back funding" if the product is either (i) funded or (ii) "fronted" by a Visa payment credential.

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[8] The transfer of value to the digital wallet-assigned account may be either (i) a pre-load prior to, or (ii) a reimbursement after the transaction is completed.

October 2024

Card Fronting

Card fronting is strictly prohibited by Visa Rules. Card fronting is when two or more different payment credentials or cards are linked together to complete a single Transaction using back-to-back funding. Digital wallet operators must *not* support back-to-back funding capability when combined with general-purpose payment network products at the "front" of the wallet.

For example, it is impermissible if the "fronting" card operates with "insufficient funds" and is funded directly by another card in the same transaction. Note, that if the "fronting" general-purpose payment network credential is pre-funded and has sufficient funds to complete a transaction, it is considered a "good funds" model. This model is allowed by Visa.

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Funding Type	Functionality	Stored Value Digital Wallet	Staged Digital Wallet
Ad Hoc Funding	Customer-initiated load of funds for any amount ***Example:*** *Single load of $50*	✓	✓
Pre set or Rules Driven Funding	Automatic load of a fixed amount based on a regular frequency or minimum balance ***Examples:*** • *Monthly load of $100* • *Top up $50 when the balance hits $10*	✓	✓
Back-to-back Funding Transaction *Also known as purchase-driven, live-load or real-time funding*	Automated, purchase-driven live-load (or immediate reimbursement) pulling funds from a linked funding source, enabling the customer to complete a transaction without sufficient wallet balance (or zero balance) ***Example:*** *Attempted purchase of $100 with a $25 wallet balance triggers either[9]:* • *Live-load for $100, ignoring wallet's balance* • *Live-load for $75 to cover the difference between the wallet's balance & transaction total* • *3 x $25 "pre-set" loads cover the difference between the wallet's balance & transaction total*	✘	✓

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