Exhibit B to CardWare Inc.'s P.R. 3-1 Disclosure of Asserted Claims and Infringement Contentions
Infringement of U.S. Patent No. 10,628,820

This claim chart is based on publicly available literature. Plaintiff will be seeking internal documentation, including technical documentation such as schematics and datasheets, and source code in discovery and therefore Plaintiff reserves the right to amend or further supplement this claim chart.

Samsung Electronics Co., Ltd. and Samsung Electronics America, Inc. ("Defendants") directly infringe U.S. Patent No. 10,628,820 (the "'820 patent")—either literally or under the doctrine of equivalents—by making, using, selling, offering for sale, and/or importing into the United States Samsung Money by SoFi card alone and/or with Samsung Pay-enabled products and/or technology, including Samsung mobile phones and watches covered by one or more claims of the '820 patent. Unless otherwise noted, Plaintiff's allegations include Samsung Money by SoFi card alone and/or with Samsung Pay and all Samsung Pay-enabled products, as well as any products or cards with similar functionality, including as might be contained within Samsung Wallet (collectively, "the '820 Accused Products").

Defendants indirectly infringe the '820 patent by inducing others (including customers) to infringe and/or by contributing to others' infringement of the '820 patent—either literally or under the doctrine of equivalents. Defendants, having actual knowledge of the '820 patent, actively and knowingly induced and contributed to their customers' and/or other third parties' infringement by (1) supplying the Accused Products; (2) encouraging, aiding, or otherwise causing third parties to import, sell, offer for sale, and use the '820 Accused Products; and (3) providing information and technical support to customers, including promotional materials, product manuals, brochures, videos, demonstrations, and website materials encouraging customers to purchase and use the Accused Products and instructing their customers on how to use the '820 Accused Products. In addition, Defendants knowingly supply to its customer and/or other third parties the '820 Accused Products, which products are then used in an infringing manner, and which products are not a staple article of commerce suitable for non-infringing use.

To the extent certain acts or steps constituting part of the infringement are performed by another entity besides Defendants (e.g., a third party payment processor or token service provider), those acts may be attributed to Defendants because Defendants and the other entity, or entities, are acting in a joint enterprise with respect to the infringement, or, in the alternative, Defendants direct or control the other entity or entities' performance, such as by conditioning their participation in the accused system or method on their performance of certain steps and establishing the manner and/or timing of that performance.

Examples of how the '820 Accused Products infringe the asserted claims of the '820 patent are detailed in this claim chart. To the extent any limitation is not literally present, it is present under the doctrine of equivalents. The products included in this claim chart are representative; other Accused Products function in generally the same manner as one or more of the examples provided herein, and contain generally the same components. CardWare reserves its right to amend these contentions under the procedures set forth in P.R. 3-6.

I. Claim 1 and Dependent Claims 2-10

Claim Language	Samsung Money by SoFi Card
1[Pre]: A payment device comprising:	To the extent the preamble is limiting, a Samsung Money by SoFi card meets this limitation based on at least the following information:

1
SAMSUNG 1102

Claim Language	Samsung Money by SoFi Card
	 One card. **Two ways to pay.** Sign up to receive a digital card in Samsung Pay and a physical card in the mail. Use your card wherever you are worldwide with Samsung Pay. *Samsung Money by SoFi*, Samsung, https://www.samsung.com/us/samsung-pay/samsung-money-by-sofi/ (last visited Sept. 5, 2022).
1[a]: a thin shaped body having no fixed payment numbers disposed thereon;	A Samsung Money by SoFi card meets this limitation based on at least the following information: Samsung Knox. The physical debit card will not display the card number, expiration date, or CVC. Should users need that information, they can easily find it within the "Money" tab of the Samsung Pay app, which is further protected by biometric or PIN authentication. Users assume zero liability should an unauthorized transaction occur. *Introducing Samsung Money by SoFi: Do More With Your Money*, Samsung (May 27, 2020), https://news.samsung.com/us/introducing-samsung-money-samsung-pay-sofi/.
1[b]: a memory;	A Samsung Money by SoFi card meets this limitation based on at least the following information:

2

Claim Language	Samsung Money by SoFi Card
	 One card. **Two ways to pay.** Sign up to receive a digital card in Samsung Pay and a physical card in the mail. Use your card wherever you are worldwide with Samsung Pay. *Samsung Money by SoFi*, Samsung, https://www.samsung.com/us/samsung-pay/samsung-money-by-sofi/ (last visited Apr. 20, 2022). The distinguishing feature of EMV chip transactions is that the payment application is resident in a secure chip that is embedded in a plastic payment card (often referred to as a chip card or smart card), a personal device such as a mobile phone or other form factors such as wristbands or watches. The secure chip provides three key elements: • It can perform processing functions. • It is able to store confidential information very securely. • It can perform cryptographic processing. A Guide to EMV Chip Technology, Version 2.0 at 5 *available at* https://www.emvco.com/wp-content/uploads/2017/05/A_Guide_to_EMV_Chip_Technology_v2.0_20141120122132753.pdf. *See also* EMVCo, LLC, *EMV Level 1 Specifications for Payment Systems, EMV Contactless Interface Specification* at 4, 25 (Feb. 2018, v. 3.0) *available at* https://www.emvco.com/wp-content/uploads/documents/EMV-Level-1-Contactless-Interface-Specification-V3.0-180423.pdf.
1[c]: a cryptographic processor coupled to the memory; and	A Samsung Money by SoFi card meets this limitation based on at least the following information:

3

Claim Language	Samsung Money by SoFi Card
	How do I use my Samsung Money by SoFi debit card to make purchases at a chip-enabled terminal? Insert the chip end of your debit card into the terminal with the chip facing upwards. Follow the prompts on the terminal screen, and if necessary, either sign or enter your PIN. Keep the card in the terminal until you are prompted to remove it. Otherwise, the transaction will be canceled. **What is chip card technology?** Chip card technology enhances card security for electronic payments. When inserted into a chip-enabled terminal at a merchant, the chip on the debit card generates a unique transaction code that is shared with the merchant. This makes the card difficult to copy. *Frequently asked questions about Samsung Money by SoFi in Samsung Pay*, Samsung, https://www.samsung.com/us/support/answer/ANS00087025/ (last visited Sept. 5, 2022). The distinguishing feature of EMV chip transactions is that the payment application is resident in a secure chip that is embedded in a plastic payment card (often referred to as a chip card or smart card), a personal device such as a mobile phone or other form factors such as wristbands or watches. The secure chip provides three key elements: • It can perform processing functions. • It is able to store confidential information very securely. • It can perform cryptographic processing. A Guide to EMV Chip Technology, Version 2.0 at 5 *available at* https://www.emvco.com/wp-content/uploads/2017/05/A_Guide_to_EMV_Chip_Technology_v2.0_20141120122132753.pdf.
1[d]: a reader interface, including at least one interface selected from set comprising: a magnetic-stripe, a smart card reader device, a mag-stripe inductor interface, an RF	A Samsung Money by SoFi card meets this limitation based on at least the following information: A Samsung Money by SoFi card has at least a magnetic-stripe interface, a smart card reader interface, and an NFC interface.

Claim Language	Samsung Money by SoFi Card
interface, an NFC interface, and a wireless interface, and	 *Introducing Samsung Money by SoFi: Do More With Your Money*, Samsung (May 27, 2020), https://news.samsung.com/us/introducing-samsung-money-samsung-pay-sofi/. **Can I use my Samsung Money by SoFi debit card at locations without a chip-enabled terminal?** Yes, you can use the magnetic stripe on the physical debit card at merchants and ATMs that don't have chip-enabled terminals. You can also use your digital card at contactless-pay-enabled terminals. **How do I use my Samsung Money by SoFi debit card to make purchases at a chip-enabled terminal?** Insert the chip end of your debit card into the terminal with the chip facing upwards. Follow the prompts on the terminal screen, and if necessary, either sign or enter your PIN. Keep the card in the terminal until you are prompted to remove it. Otherwise, the transaction will be canceled. *Frequently asked questions about Samsung Money by SoFi in Samsung Pay*, Samsung, https://www.samsung.com/us/support/answer/ANS00087025/ (last visited Sept. 5, 2022). *See also* EMVCo, LLC, *A Guide to EMV Chip Technology, Version 2.0* at 5 *available at* https://www.emvco.com/wp-content/uploads/2017/05/A_Guide_to_EMV_Chip_Technology_v2.0_20141120122132753.pdf.

Claim Language	Samsung Money by SoFi Card
	 Samsung Money by SoFi, Samsung, https://www.samsung.com/us/samsung-pay/samsung-money-by-sofi/ (last visited Apr. 20, 2022).

Claim Language	Samsung Money by SoFi Card
	How do I activate my card? Your virtual card will be automatically registered to your Samsung Pay wallet shortly after adding funds to your Samsung Money by SoFi cash management account. A physical card will also be mailed to the address you provided. To activate your physical card: 1. In the Samsung Pay app, go to the **Money** tab. 2. Swipe to **Card on the way**, and then tap **I got my card**. 3. Tap your card on the back of the phone to activate. If you have a Galaxy Flip, tap your card towards the bottom of your phone instead. Here are some helpful tips if your phone doesn't register your card: • When tapping, place the upper portion of your phone (the camera area) onto the card's chip. • Make sure NFC is turned on. From the Home screen, swipe up to access Apps. Tap **Settings**, and then tap **Connections**. Tap **NFC and payment**, and then tap the **switch** to enable or disable the option. • Remove any covering, like protective cases or card holder pouches, from the back of the phone. *Frequently asked questions about Samsung Money by SoFi in Samsung Pay*, Samsung, https://www.samsung.com/us/support/answer/ANS00087025/ (last visited Sept. 5, 2022).
1[e]: wherein payment information for a transaction is operable to be conveyed via the reader interface and comprises limited-use payment information, and	A Samsung Money by SoFi card meets this limitation based on at least the following information: A Samsung Money by SoFi card conveys payment information via one of three reader interfaces: ISO7812 Magnetic Stripe, ISO7816 Smart Card, and ISO14443 NFC, as shown above in Claim 1[d]. The payment information conveyed on those interfaces comprises limited-use payment information that is limited in scope of use to only those three supported card reader facilities. Specifically: First, where the reader interface is the magnetic stripe, the magnetic stripe conveys the limited-use payment information, including the Primary Account Number ("PAN"), Expiration ("EXP"), Cardholder Name ("CHN"), and Card Validation Value 1 ("CVV1") according to ISO7812. The information stored on the magnetic stripe is not sufficient for card-not-present transactions (e.g., online and phone transactions). The

Claim Language	Samsung Money by SoFi Card
	CVV2 information is required for card-not-present transactions; however, the magnetic stripe does not store CVV2 information. Second, where the reader interface is the NFC interface, the NFC chip conveys the limited-use payment information, including the PAN, EXP, and CHN, and is operable to generate CVV3 information according to the EMV/NFC ISO14443 standard. Again, the CVV3 is not useable in place of CVV2 for card-not-present transactions. The information stored on the NFC is not sufficient for card-not-present transactions (e.g., online and phone transactions). The CVV2 information is required for card-not-present transactions; however, the NFC does not store CVV2 information. Third, where the reader interface is the smart card reader interface, the smart card reader chip conveys the limited-use payment information, including the PAN, EXP, and CHN, and is operable to generate CVV3 information as per the per the EMV and ISO7816 standards. The CVV3 is not useable in place of CVV2 for card-not-present transactions. The information stored on the smart card is not sufficient for card-not-present transactions (e.g., online and phone transactions). The CVV2 information is required for card-not-present transactions; however, the smart card does not store CVV2 information. Thus, the payment card information is limited-in-use to physical card reader facilities and cannot be used for card-not-present (CNP) transactions, including online or over-the-phone. *See* ISO/IEC7812-1:2017 *available at* https://www.iso.org/standard/70484.html; ISO/IEC14443-4:2018 *available at* https://www.iso.org/standard/73599.html; ISO/IEC 7816-8:2021 *available at* https://www.iso.org/standard/79893.html; ISO/IEC 7816-8:2019 *available at*; https://www.iso.org/standard/75844.html; EMVCo, LLC, *EMV Level 1 Specifications for Payment Systems, EMV Contactless Interface Specification* at 4 (Feb. 2018, v. 3.0) *available at* https://www.emvco.com/wp-content/uploads/documents/EMV-Level-1-Contactless-Interface-Specification-V3.0-180423.pdf.
1[f]: wherein further the limited-use payment information is to be used in place of card issuer payment information for payment transactions by said device at payment card reader facilities.	A Samsung Money by SoFi card meets this limitation based on at least the following information: As described for Claim 1[e], the limited-use payment information (*i.e.*, PAN, EXP, CHN, and one of the CVV1 and CVV3) is used instead of the complete card issuer payment information for payment transactions (which includes the CVV2). *See also* ISO/IEC7812-1:2017 *available at* https://www.iso.org/standard/70484.html; ISO/IEC14443-4:2018 *available at* https://www.iso.org/standard/73599.html; ISO/IEC 7816-8:2021 *available at* https://www.iso.org/standard/79893.html; ISO/IEC 7816-8:2019 *available at*; https://www.iso.org/standard/75844.html; EMVCo, LLC, *EMV Level 1 Specifications for Payment Systems,*

Claim Language	Samsung Money by SoFi Card
	EMV Contactless Interface Specification at 4 (Feb. 2018, v. 3.0) *available at* https://www.emvco.com/wp-content/uploads/documents/EMV-Level-1-Contactless-Interface-Specification-V3.0-180423.pdf.
2: The device of Claim 1, wherein the body comprises fixed payment information disposed thereon and wherein the fixed payment information includes only: a card-holder name; a payment issuing logo; and a card payment network logo and wherein further, the body is free of any account numbers, expiration dates, card security codes, or other fixed payment numbers, disposed thereon.	A Samsung Money by SoFi card meets this limitation based on at least the following information: Samsung Knox. The physical debit card will not display the card number, expiration date, or CVC. Should users need that information, they can easily find it within the "Money" tab of the Samsung Pay app, which is further protected by biometric or PIN authentication. Users assume zero liability should an unauthorized transaction occur. *Introducing Samsung Money by SoFi: Do More With Your Money*, Samsung (May 27, 2020), https://news.samsung.com/us/introducing-samsung-money-samsung-pay-sofi/.
4: The device of claim 1, wherein said limited-use payment information is provided by a card issuing authority for use by the	A Samsung Money by SoFi card meets this limitation based on at least the following information: As described in Claim 1[e], the limited-use information (e.g., CVV1 and CVV3) are provided by the card issuing authority (e.g., Bancorp Bank) for use by the payment device. *See also Introducing Samsung Money*

<table>
<tr><th>Claim Language</th><th>Samsung Money by SoFi Card</th></tr>
<tr><td>payment device and wherein the card processing authority rejects as invalid, any use of said limited-use payment information obtained via any means other than: a payment card reader reading said limited-use payment information from the reader interface.</td><td>by SoFi: Do More With Your Money, Samsung (May 27, 2020), https://news.samsung.com/us/introducing-samsung-money-samsung-pay-sofi/.

As described in Claim 1[e], the limited-use information is only useable with particular card reader interface(s) (e.g., magnetic stripe reader, smart card reader, and/or NFC). Thus, a card processing authority will reject use of the limited-use payment information when it is not obtained via the corresponding card reader interface (e.g., if a CVV1 is attempted to be used in place of a CVV2 during a card-not-present transaction).</td></tr>
<tr><td>10[a]: The device of claim 1, wherein the processor cryptographically dynamically generates a one-time limited-use number based on combination of a card device transaction sequence count, and at least one of a set of information including:
a user information;
a user card account number;
a device account number;
device secret keys;
card issuer keys;
a time;
a merchant;
a location;
an online address;
a payment information;
a card reader information;
an account information;
an amount;
a transaction information; and
a cryptographic combination of at least two of the above set of information, and</td><td>A Samsung Money by SoFi card meets this limitation based on at least the following information:

8.1 Application Cryptogram Generation

8.1.1 Data Selection

An Application Cryptogram consists of a Message Authentication Code (MAC) generated over data:
• referenced in the ICC's DOLs and transmitted from the terminal to the ICC in the GENERATE AC or other command, and
• accessed internally by the ICC.

The recommended minimum set of data elements to be included in Application Cryptogram generation is specified in Table 26.

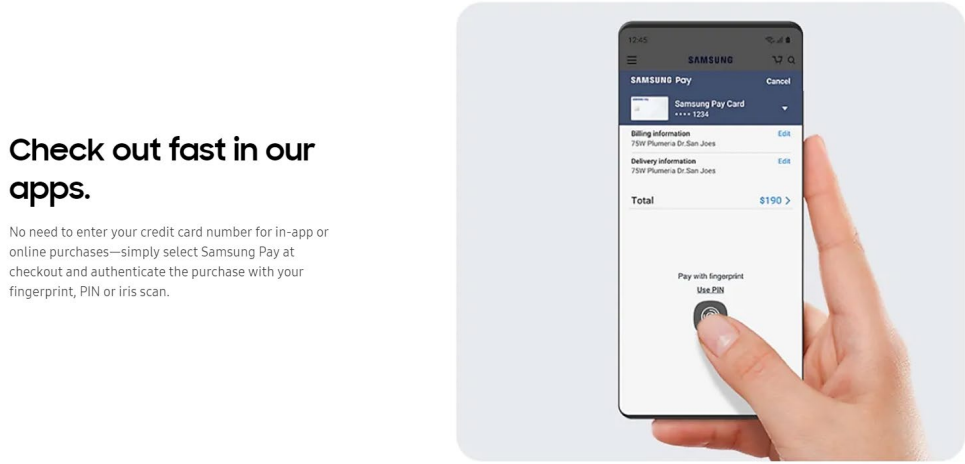
<table><tr><th>Value</th><th>Source</th></tr><tr><td>Amount, Authorised (Numeric)</td><td>Terminal</td></tr><tr><td>Amount, Other (Numeric)</td><td>Terminal</td></tr><tr><td>Terminal Country Code</td><td>Terminal</td></tr><tr><td>Terminal Verification Results</td><td>Terminal</td></tr><tr><td>Transaction Currency Code</td><td>Terminal</td></tr><tr><td>Transaction Date</td><td>Terminal</td></tr><tr><td>Transaction Type</td><td>Terminal</td></tr><tr><td>Unpredictable Number</td><td>Terminal</td></tr><tr><td>Application Interchange Profile</td><td>ICC</td></tr><tr><td>Application Transaction Counter</td><td>ICC</td></tr></table>
Table 26: Recommended Minimum Set of Data Elements for Application Cryptogram Generation

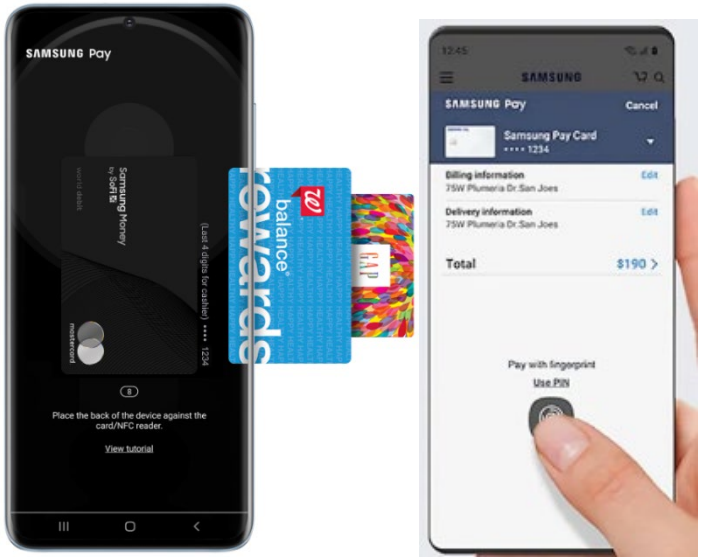
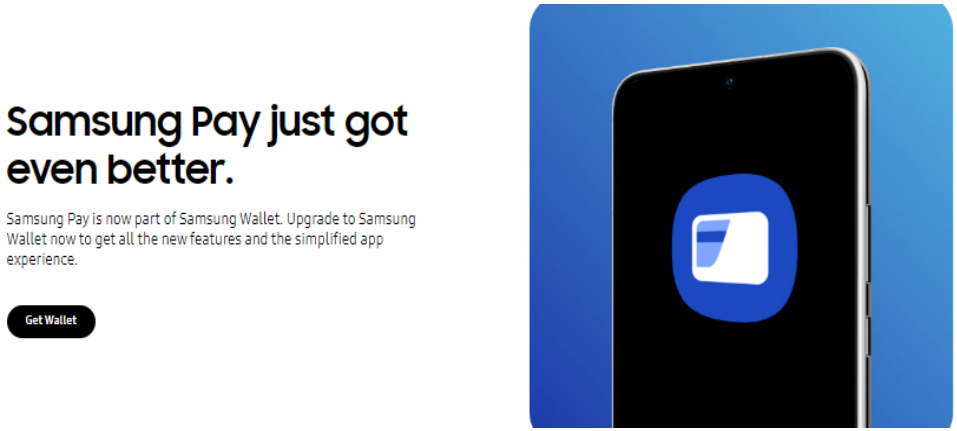
EMV, Integrated Circuit Card Specifications for Payment Systems: Book 2: Security and Key Management (ver. 4.3, Nov. 2011) at 88, available at https://www.emvco.com/wp-content/uploads/2017/05/EMV_v4.3_Book_2_Security_and_Key_Management_20120607061923900.pdf.</td></tr>
</table>

Claim Language	Samsung Money by SoFi Card
10[b]: wherein the processor increments the card device transaction sequence count on each transaction.	A Samsung Money by SoFi card meets this limitation based on at least the following information: The EMV chip on a card device stores and increments an application transaction counter (ATC). **D3 Application Transaction Counter Considerations** This specification describes a two byte (16 bit) counter (the ATC) that is incremented during each transaction from a nominal starting value of '0000' to a maximum of 'FFFF'. With one increment per card session it gives an expected card life of 65,535 transactions. The counter results in uniqueness to the cryptograms and provides tracking values for the host verification services, allowing replayed transactions and cloned cards to be identified. It may also be used in session key derivation schemes, such as the scheme described in Annex A1.3. To avoid attacks based on session truncation, the counter should be incremented at the start of each transaction (for example during processing of the GET PROCESSING OPTIONS command). To prevent attacks based on duplicate data the counter should not be allowed to roll-over and the application should be blocked once the counter reaches 'FFFF'. Issuers should be aware that few, if any, cards in normal use will approach the 65,535 transaction limit (60 per day every day for a 3 year card) and that cards with a high count may have been subject to attack. If a card with a shorter lifetime is desired, consideration may be given to a lower limit, or to starting the counter at an intermediate value. EMV, *Integrated Circuit Card Specifications for Payment Systems: Book 2: Security and Key Management* (ver. 4.3, Nov. 2011) at 147, *available at* https://www.emvco.com/wp-content/uploads/2017/05/EMV_v4.3_Book_2_Security_and_Key_Management_20120607061923900.pdf. Name: Application Transaction Counter (ATC) Description: Counter maintained by the application in the ICC (incrementing the ATC is managed by the ICC) Source: ICC Format: b Template: 77 or 80 Tag: 9F36 Length: 2 P/C: primitive *EMV tag 9F36 (Application Transaction Counter (ATC))*, https://emvlab.org/emvtags/show/t9F36/ (last visited Sept. 7, 2022).

11

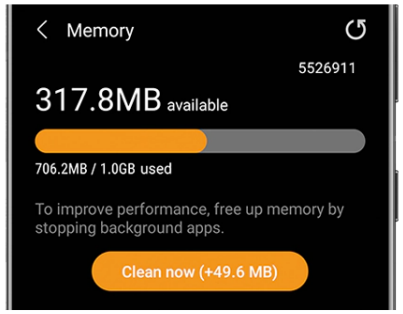
II. Claim 11 and Dependent Claim 12

Claim Language	Samsung Money by SoFi Card with a Samsung Pay- and/or Samsung Wallet-enabled computing device
11[Pre]: An online payment system, the system comprising:	To the extent the preamble is limiting, a Samsung Money by SoFi card with a Samsung Pay- and/or Samsung Wallet-enabled computing device, such as a phone or watch, meets this limitation based on at least the following information: *Samsung Money by SoFi*, Samsung, https://www.samsung.com/us/samsung-pay/samsung-money-by-sofi/ (last visited Sept. 5, 2022).  *Samsung Pay*, Samsung, https://www.samsung.com/us/samsung-pay/ (last visited Sept. 5, 2022).
11[a]: a thin payment device comprising no fixed payment numbers visible thereon; and	*See* Claim 1[a].

Claim Language	Samsung Money by SoFi Card with a Samsung Pay- and/or Samsung Wallet-enabled computing device
11[b]: a personal computing device, wherein the personal computing device comprises:	A Samsung Money by SoFi card with a Samsung Pay- and/or Samsung Wallet-enabled computing device, such as a phone or watch, meets this limitation based on at least the following information:  *Samsung Pay*, Samsung, https://www.samsung.com/us/samsung-pay/ (last visited Aug. 29, 2022); *Commonly-asked questions about Samsung Pay*, Samsung, https://www.samsung.com/us/support/answer/ ANS00080583/ (last visited Aug. 29, 2022). *See also* Lexy Savvides, *Samsung Pay: Everything you need to know (FAQ)*, CNET (July 21, 2021 3:00 a.m. PT), https://www.cnet.com/how-to/samsung-pay-everything-you-need-to-know-faq-mobile-wallet/.  *Samsung Wallet*, Samsung, https://www.samsung.com/us/samsung-wallet/.

13

Claim Language	Samsung Money by SoFi Card with a Samsung Pay- and/or Samsung Wallet-enabled computing device
	 Before using Samsung Pay **Note:** **Samsung Wallet** is available for devices running Android 9 or higher. Here's what you'll need before you can use Samsung Pay: • A **compatible** Samsung phone or watch • NFC or MST support on your phone or watch • A **Samsung account** • A **supported credit, debit, or gift card** from a participating bank, credit union, or vendor • A registered fingerprint or Samsung Pay PIN • Be located in the country of the participating bank, so the bank can verify your card *Set up Samsung Pay on your phone or watch*, Samsung, https://www.samsung.com/us/support/answer/ANS00045081/ (last visited Aug. 28, 2022).
11[c]: a processor;	A Samsung Money by SoFi card with a Samsung Pay- and/or Samsung Wallet-enabled computing device, such as a phone or watch, meets this limitation based on at least the following information: As the name suggests, the Octa-core processor is made up of eight processor cores that power Galaxy smartphones. The processor enables Galaxy smartphones to carry out more advanced tasks such as handling high resolution videos and graphic-heavy games without draining the battery, making the devices capable and efficient.The Octa-core processor also gives Galaxy devices faster load times. *Samsung's Galaxy smartphones run on either Octa-core (2.3GHz Quad + 1.6GHz Quad) or Quad-core (2.15GHz + 1.6GHz Dual) processors, depending on the country or carrier. *What is an Octa-core processor?*, Samsung, https://www.samsung.com/global/galaxy/what-is/octa-core-processor/ (last visited Aug. 29, 2022). **Smartphone** Samsung Exynos processors for smartphone is designed to deliver superior experience with powerful performance, energy efficiency and fast internet connection. Galaxy S22 Ultra | Exynos 2200 View all

Claim Language	Samsung Money by SoFi Card with a Samsung Pay- and/or Samsung Wallet-enabled computing device
	Smartwatch Samsung Exynos Processors specifically designed for smartwatch has realized the ultra-low power consumption in ultra-mini size with ultra-advanced functionalities. **Galaxy Watch4** | Exynos W920 **View all** *Showcase*, Samsung, https://semiconductor.samsung.com/processor/showcase/?wcmmode=disabled (last visited Aug. 29, 2022); *Wearable Processor*, Samsung, https://semiconductor.samsung.com/processor/wearable-processor/ (last visited Aug. 29, 2022).
11[d]: a memory;	A Samsung Money by SoFi card with a Samsung Pay- and/or Samsung Wallet-enabled computing device, such as a phone or watch, meets this limitation based on at least the following information: e built-in storage on Galaxy S20 phones comes in handy with its massive capacities. Gala: 0 5G offers 128GB storage with 12GB RAM, and the LTE version has 128GB storage with 8C M. Galaxy S20+ 5G offers your choice of 512, 256, or 128GB storage with 12GB RAM, and tl version has 128GB storage with 8GB RAM. Then Galaxy S20 Ultra has three choices on bc 5G and LTE versions: 512GB storage with 16GB RAM, 256GB with 12GB RAM, or 128GB wi 12GB RAM. Even though some models come with storage that rivals most laptops, you can take your memory to the next level with the addition of a microSD card. Adding up to 1TB with expandable memory means your Galaxy S20, S20+, or S20 Ultra can hold up to 1.5TB of memory. That's a lot of photos, videos, and more! *What are storage options on Galaxy devices?*, Samsung, https://www.samsung.com/global/galaxy/what-is/storage/ (last visited Aug. 29, 2022). Stop apps that are running in the background, so your watch has room to breathe. 1. From your phone, open the **Galaxy Wearable** app, and then tap **About watch** or **About Gear**. **Note:** On the Galaxy Watch3, tap **Watch settings** after opening the app. 2. Tap **Memory**. 3. Deselect the apps you want to keep running, and then tap **Clean now**. 

Claim Language	Samsung Money by SoFi Card with a Samsung Pay- and/or Samsung Wallet-enabled computing device
	Keep your Samsung smart watch running in top shape, Samsung, https://www.samsung.com/us/support/answer/ANS00078033/ (last visited Aug. 29, 2022).
11[e]: a wireless interface;	A Samsung Money by SoFi card with a Samsung Pay- and/or Samsung Wallet-enabled computing device, such as a phone or watch, meets this limitation based on at least the following information: Wi-Fi is a wireless connection that uses radio frequency signals to connect your devices instead of wires. Meaning you can take your Galaxy into various rooms in your house—even if the router isn't in that room—and still have internet access. It can also be faster than a data connection and is especially useful if you don't have an unlimited data plan. Galaxy S20, S20+, and S20 Ultra support Wi-Fi 802.11 a/b/g/n/ac/ax (2.4/5GHz), VHT80 MU-MIMO, and 1024QAM wireless networking. When connected to Wi-Fi, apps and features on your Galaxy phone that need an internet connection can be used with ease, such as Live Translation and Bixby Vision. Galaxy S20, S20+, and S20 Ultra have strong network capabilities to be able to connect to a diverse range of routers with a quick and stable connection. *What is Wi-Fi and what type of network do Galaxy S20, S20+, and S20 Ultra support?*, Samsung, https://www.samsung.com/global/galaxy/what-is/network/ (last visited Aug. 29, 2022). Wi-Fi on a watch? Yes, it's possible with your Samsung smart watch. You can sync Wi-Fi profiles from your phone, so your watch will automatically connect to Wi-Fi networks that your phone has used before. With the Remote Connection feature, your watch can sync with your phone over the cloud. All of your watch's functions will be available, except for transferring music and images from your phone. *Use Remote connection features on your Samsung smart watch*, Samsung, https://www.samsung.com/us/support/answer/ANS00061431/ (last visited Aug. 29, 2022).

Claim Language	Samsung Money by SoFi Card with a Samsung Pay- and/or Samsung Wallet-enabled computing device
	 Samsung Pay, Samsung, https://www.samsung.com/us/samsung-pay/ (last visited Aug. 29, 2022); *Samsung Money by SoFi*, Samsung, https://www.samsung.com/us/samsung-pay/samsung-money-by-sofi/ (last visited Aug. 29, 2022). **Make a payment using the app** With Samsung Pay, you can purchase things without digging through your wallet. When you're ready to pay, open **Samsung Pay** on your phone. Tap **Pay**, and select your preferred card. Tap **PIN** or **IRIS**, and then enter the required security information. Or if you have fingerprint security set up, simply place your finger on your phone's fingerprint scanner. Next, hold the back of the phone up to the contactless reader and perform your desired actions to complete your purchase.

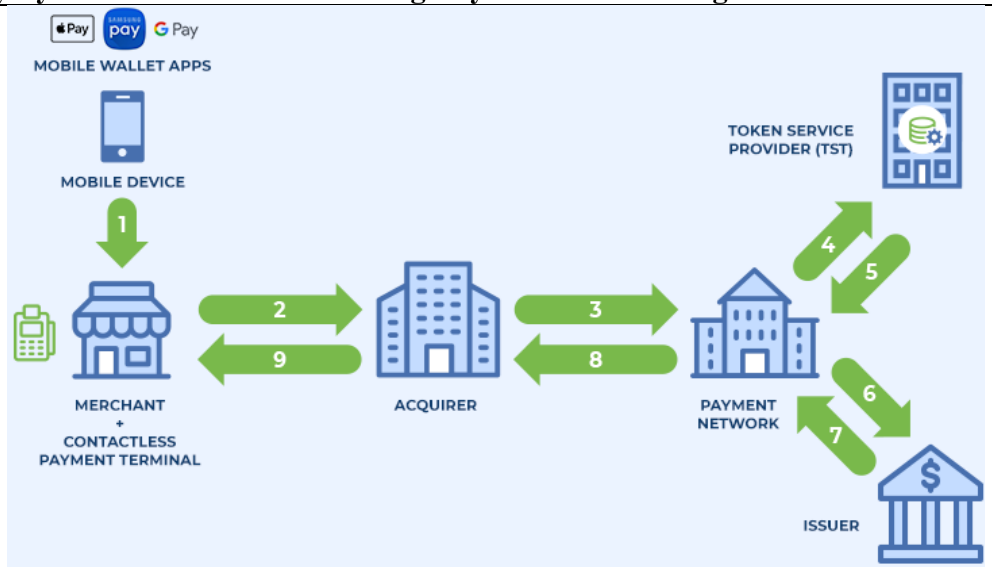
Claim Language	Samsung Money by SoFi Card with a Samsung Pay- and/or Samsung Wallet-enabled computing device
	Make a payment using a Galaxy watch Samsung Pay can also be used on your Galaxy watch when you'd like to make quick in-store payments. Just make sure you have the **Samsung Pay feature set up on your watch** before you start making in-store purchases. 1. On your watch, press and hold the **Back** button to launch Samsung Pay. 2. Then, either rotate the bezel or swipe on the screen to locate your desired card. 3. Next, hold your wrist that's wearing the watch near an NFC reader or payment terminal. If you're having trouble, make sure to place the watch one inch or less from the terminal. *Make an in-store payment with Samsung Pay*, Samsung, https://www.samsung.com/us/support/answer/ANS00045102/ (last visited Aug. 29, 2022).
11[f]: a display operable to provide a visual user-interface operable for performing online transactions; and	A Samsung Money by SoFi card with a Samsung Pay- and/or Samsung Wallet-enabled computing device, such as a phone or watch, meets this limitation based on at least the following information: **Touchscreen issues on a Galaxy phone or tablet** Your Galaxy phone's or tablet's touchscreen is the main way of navigating your device, so we understand how worrisome it can be when the touch function isn't working properly. However, there are some simple ways to get the touchscreen working again when it's frozen, unresponsive, or acting funny. *Touchscreen issues on a Galaxy phone or tablet*, Samsung, https://www.samsung.com/us/support/troubleshooting/TSG01213974/ (last visited Aug. 29, 2022). **Samsung smart watch does not turn on when using waking-up gestures** Your watch is smart enough to know when to turn itself on and off. You can also manually change these wake-up settings to fit your preferences. However, if certain silent modes are turned on, such as Good night mode, the watch screen may not wake up when the wrist you're wearing the watch on is raised. Please follow the guidelines below to learn how to use wake-up gestures and adjust the feature's settings.

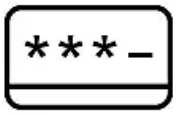
Claim Language	Samsung Money by SoFi Card with a Samsung Pay- and/or Samsung Wallet-enabled computing device
	Samsung smart watch does not turn on when using waking-up gestures, Samsung, https://www.samsung.com/us/support/troubleshooting/TSG01003202/ (last visited Aug. 29, 2022). *See also What is the Infinity Display?*, Samsung, https://www.samsung.com/global/galaxy/what-is/infinity-display/ (last visited Sept. 5, 2022); *What is Infinity-O Display?*, Samsung, https://www.samsung.com/global/galaxy/what-is/infinity-o-display/ (last visited Sept. 5, 2022). *See also* Claim 11[g].
11[g]: a user-interface coupled to the processor, and	A Samsung Money by SoFi card with a Samsung Pay- and/or Samsung Wallet-enabled computing device, such as a phone or watch, meets this limitation based on at least the following information: **Make a payment using the app** With Samsung Pay, you can purchase things without digging through your wallet. When you're ready to pay, open **Samsung Pay** on your phone. Tap **Pay**, and select your preferred card. Tap **PIN** or **IRIS**, and then enter the required security information. Or if you have fingerprint security set up, simply place your finger on your phone's fingerprint scanner. Next, hold the back of the phone up to the contactless reader and perform your desired actions to complete your purchase. **Make a payment using a Galaxy watch** Samsung Pay can also be used on your Galaxy watch when you'd like to make quick in-store payments. Just make sure you have the **Samsung Pay feature set up on your watch** before you start making in-store purchases. 1. On your watch, press and hold the **Back** button to launch Samsung Pay. 2. Then, either rotate the bezel or swipe on the screen to locate your desired card. 3. Next, hold your wrist that's wearing the watch near an NFC reader or payment terminal. If you're having trouble, make sure to place the watch one inch or less from the terminal.

Claim Language	Samsung Money by SoFi Card with a Samsung Pay- and/or Samsung Wallet-enabled computing device
	Make an in-store payment with Samsung Pay, Samsung, https://www.samsung.com/us/support/answer/ANS00045102/ (last visited Aug. 29, 2022). Iris scanner Fingerprint scanner User authentication Every transaction is authenticated by your fingerprint, PIN or facial recognition. If your phone is lost or stolen, you can remotely lock or erase your Samsung Pay account with Find My Mobile.* *Samsung Pay*, Samsung, https://www.samsung.com/us/samsung-pay/ (last visited Aug. 29, 2022).
11[h]: wherein the wireless interface is operable to wirelessly obtain card device payment account information, and	A Samsung Money by SoFi card with a Samsung Pay- and/or Samsung Wallet-enabled computing device, such as a phone or watch, meets this limitation based on at least the following information: A Samsung Pay- and/or Samsung Wallet-enabled computing device wirelessly receives a token, which corresponds to a PAN, from the token service provider (TSP). **3.1 In-Store EMV Contactless Payments with Device-Centric Digital Wallets** Apple, Google, and Samsung were among the first to implement EMV payment tokens in digital wallets that hold credentials for several payments use cases. These device-centric digital wallets play the role of a token requestor; they may capture the cardholder's PAN and request that it be replaced with a payment token from a TSP. Tokenization of payment credentials in digital wallets enables issuers to establish a secure presence on a wallet. US Payments Forum, *EMV Payment Tokenization Primer and Lessons Learned* at 12 (June 2019), *available at* https://www.uspaymentsforum.org/wp-content/uploads/2019/06/EMV-Payment-Tokenization-Primer-Lessons-Learned-FINAL-June-2019.pdf.

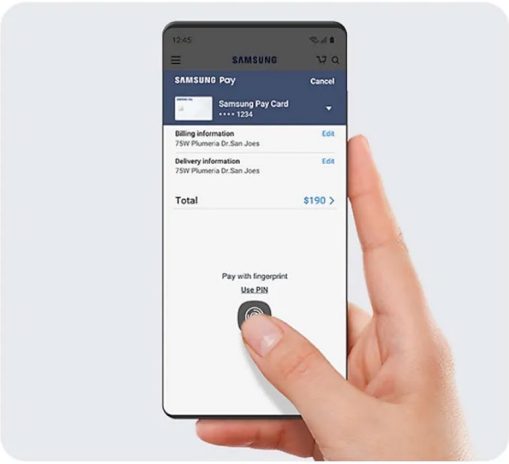
Claim Language	Samsung Money by SoFi Card with a Samsung Pay- and/or Samsung Wallet-enabled computing device
	5.1.3.2 Token Generation Token Generation is the process of creating a Payment Token and its associated Token Expiry Date and mapping it to a specific underlying PAN, for use by a specific Token Requestor and Token Domain(s), as identified the Token Requestor ID. The Token Service Provider SHALL facilitate the generation of a Payment Token and related data. This may be in response to a Token Request from a registered Token Requestor with a valid Token Requestor ID or an existing Payment Token may be mapped to an underlying PAN in response to a Token Request from a registered Token Requestor with a valid Token Requestor ID. **5.1.3.3 Token Issuance** Token Issuance is the process of issuing a Payment Token and related data in preparation for Token Provisioning. The Token Service Provider SHALL manage Token Requests based on the Token Requestor ID. Token Service Providers SHALL manage the issuance of Payment Tokens. Payment Tokens SHALL only be issued through the response to a Token Request from a registered Token Requestor with a valid Token Requestor ID. **5.1.3.4 Token Provisioning** Token Provisioning is the process of delivering a Payment Token and related data to the Token Location. Token Provisioning SHOULD be carried out by the Token Service Provider or by other authorised entities on its behalf. The methodologies associated with Token Provisioning may be proprietary to each Token Programme and are outside the scope of this technical framework. EMVCo, EMV® Payment Tokenisation Specification – Technical Framework v2.1 at 35–36 (Jun. 14, 2019), *available at* https://www.emvco.com/emv-technologies/payment-tokenisation/. 2. **What is a token and how is it generated?** A digital token is created to represent consumers' payment credentials. By substituting the real card number with a token, Samsung Pay avoids putting the real card numbers at risk of theft and misuse. Like credit and debit card numbers, the purpose of the digital token is to route transactions to the correct payment network and issuer. Samsung Pay does not store credit or debit card numbers. Instead, Samsung Pay uses tokens for transactions. Tokens are generated by the payment network, and not by the Samsung Pay handset. The card issuers and payment networks set the rules and parameters of the tokenization service, conduct account verification and cardholder authorization during the token request stage (when the token is provisioned), and authorize transactions. *FAQs*, Samsung (Aug. 7, 2016), https://security.samsungmobile.com/doc/Press_Guidance_Samsung_Pay.pdf.

Claim Language	Samsung Money by SoFi Card with a Samsung Pay- and/or Samsung Wallet-enabled computing device
	In general terms, the process for registering a card in a mobile wallet is as follows: 1. The cardholder uses a device that supports the digital wallet application and registers a card, entering the data into the application. 2. The application sends the data to a *Token Requestor* (TR). 3. The TR sends the data to the *Token Service Provider* (TSP) with which it is registered and makes a registration request for a new token. 4. The TSP verifies the data with the card issuer. 5. If everything is correct, the TSP registers the PAN and links it to a new token in a secure database (*Token Vault*). Along with the TR identifier, the token expiration date, and a number of additional security features called *Token Domain*, including restrictions on the use of the new token on certain channels, use by a particular merchant, limitation on the number of permitted uses, and verification of the cryptogram. 6. The TSP notifies the application of the newly generated token. 7. The application stores the generated token (*Device Account Number* (DAN) for Apple Pay or Digitized PAN (DPAN) for Samsung Pay) in a secure location (Secure Element (SE) or Host Card Emulation (HCE)).

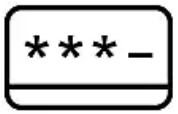
Claim Language	Samsung Money by SoFi Card with a Samsung Pay- and/or Samsung Wallet-enabled computing device
	 *Mobile payments with digital wallets and tokenization: How Google Pay, Apple Pay and Samsung Pay protect your card details*, Advantio (Feb. 22, 2021), https://www.advantio.com/blog/mobile-payments-with-digital-wallets-and-tokenization-how-google-pay-apple-pay-and-samsung-pay-protect-your-card-details.
11[i]: wherein the processor is operable to generate limited-use payment information based on the card device payment account information, and	A Samsung Money by SoFi card with a Samsung Pay- and/or Samsung Wallet-enabled computing device, such as a phone or watch, meets this limitation based on at least the following information: A Samsung Pay- and/or Samsung Wallet-enabled computing device generates a cryptogram that is of limited use for a single transaction. The combination of information transmitted for each transaction, which includes the cryptogram, is also of limited use for that transaction.

Claim Language	Samsung Money by SoFi Card with a Samsung Pay- and/or Samsung Wallet-enabled computing device
	 Data security Tokenization creates a unique randomized set of numbers to be used at each new transaction, so your real card number is never used from your phone. *Samsung Pay*, Samsung, https://www.samsung.com/us/samsung-pay/ (last visited Sept. 5, 2022). The cryptogram (dCVV) is generated using at least three pieces of information: the digital token (which represents the card device payment account information), the application transaction counter (ATC), and a secret key. 1. **How does Samsung Pay work?** Each time Samsung Pay is used for a transaction, the Samsung Pay handset sends at least three pieces of information. The first is a digital token that represents the credit or debit card information. The digital token is a surrogate credit or debit card number. The digital token's primary purpose is to route transactions to the correct payment network and to the correct issuer. The second piece of information is the application transaction counter (ATC). The ATC is a counter that is updated for every transaction. Its purpose is to help ensure that the same transaction information cannot be replayed to make multiple purchases. Payment networks use this number to track the sequence of transactions and determine whether an attempted transaction is older than the last one approved or is otherwise out of sequence. If so, it is an indication that something is amiss, and appropriate action can be taken. The third piece of information is the cryptogram. The cryptogram is an authentication code generated using, at a minimum, a secret key, the digital token and the ATC. Cryptograms serve to validate that the transaction information has not been modified and that it was generated by the expected user's handset.

Claim Language	Samsung Money by SoFi Card with a Samsung Pay- and/or Samsung Wallet-enabled computing device
	3. **How is a cryptogram generated?** A cryptogram is generated using at least three pieces of information: the digital token, the application transaction counter (ATC), and a secret key. The cryptogram is designed to appear fully random to anyone that does not have the secret key. This works to prevent a cryptogram from being guessed. The secret key is generated by the payment networks and is protected, end to end, between the payment networks and TrustZone on the device. Only one cryptogram can be generated per explicit user authorization. The cryptograms are used to tie an ATC to a digital token and help to prevent modification of the ATC. This in turn helps to prevent transaction information used for one purchase from being reused for multiple purchases. *FAQs*, Samsung (Aug. 7, 2016), https://security.samsungmobile.com/doc/Press_Guidance_Samsung_Pay.pdf. Based on testing, the CVV value is changed for each transaction when using Samsung Pay MST.
11[j]: wherein the personal computing device is operable to generate complete payment information, including the limited-use payment information, and to convey said complete payment information via at least one interface of a set comprising: said display; and the wireless interface, and	A Samsung Money by SoFi card with a Samsung Pay- and/or Samsung Wallet-enabled computing device, such as a phone or watch, meets this limitation based on at least the following information: The digital token and cryptogram, as described in Claims 11[h] and 11[i], constitute complete payment information.

Claim Language	Samsung Money by SoFi Card with a Samsung Pay- and/or Samsung Wallet-enabled computing device
	1. How does Samsung Pay work? Each time Samsung Pay is used for a transaction, the Samsung Pay handset sends at least three pieces of information. The first is a digital token that represents the credit or debit card information. The digital token is a surrogate credit or debit card number. The digital token's primary purpose is to route transactions to the correct payment network and to the correct issuer. The second piece of information is the application transaction counter (ATC). The ATC is a counter that is updated for every transaction. Its purpose is to help ensure that the same transaction information cannot be replayed to make multiple purchases. Payment networks use this number to track the sequence of transactions and determine whether an attempted transaction is older than the last one approved or is otherwise out of sequence. If so, it is an indication that something is amiss, and appropriate action can be taken. The third piece of information is the cryptogram. The cryptogram is an authentication code generated using, at a minimum, a secret key, the digital token and the ATC. Cryptograms serve to validate that the transaction information has not been modified and that it was generated by the expected user's handset. *FAQs*, Samsung (Aug. 7, 2016), https://security.samsungmobile.com/doc/Press_Guidance_Samsung_Pay.pdf. The payment information is conveyed via a wireless interface in order to perform a transaction. **Check out fast in our apps.** No need to enter your credit card number for in-app or online purchases—simply select Samsung Pay at checkout and authenticate the purchase with your fingerprint, PIN or iris scan.  *Samsung Pay*, Samsung, https://www.samsung.com/us/samsung-pay/ (last visited Sept. 5, 2022).

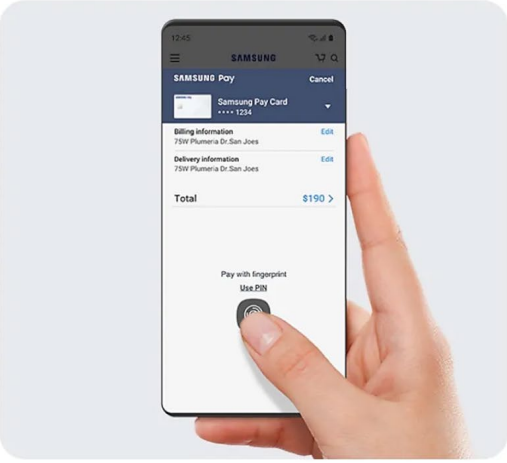
Claim Language	Samsung Money by SoFi Card with a Samsung Pay- and/or Samsung Wallet-enabled computing device
	  Samsung Pay, Samsung, https://www.samsung.com/us/samsung-pay/ (last visited Aug. 28, 2022). **Make a payment using the app** With Samsung Pay, you can purchase things without digging through your wallet. When you're ready to pay, open **Samsung Pay** on your phone. Tap **Pay**, and select your preferred card. Tap **PIN** or **IRIS**, and then enter the required security information. Or if you have fingerprint security set up, simply place your finger on your phone's fingerprint scanner. Next, hold the back of the phone up to the contactless reader and perform your desired actions to complete your purchase.

Claim Language	Samsung Money by SoFi Card with a Samsung Pay- and/or Samsung Wallet-enabled computing device
	Make a payment using a Galaxy watch Samsung Pay can also be used on your Galaxy watch when you'd like to make quick in-store payments. Just make sure you have the **Samsung Pay feature set up on your watch** before you start making in-store purchases. 1. On your watch, press and hold the **Back** button to launch Samsung Pay. 2. Then, either rotate the bezel or swipe on the screen to locate your desired card. 3. Next, hold your wrist that's wearing the watch near an NFC reader or payment terminal. If you're having trouble, make sure to place the watch one inch or less from the terminal. *Make an in-store payment with Samsung Pay*, Samsung, https://www.samsung.com/us/support/answer/ANS00045102/ (Aug. 28, 2022).
11[k]: wherein the limited-use payment information is configured to be used in place of a card issuer payment information.	A Samsung Money by SoFi card with a Samsung Pay- and/or Samsung Wallet-enabled computing device, such as a phone or watch, meets this limitation based on at least the following information: The digital token and cryptogram are used in place of card issuer payment information such as the Primary Account Number.  **Data security** Tokenization creates a unique randomized set of numbers to be used at each new transaction, so your real card number is never used from your phone. *Samsung Pay*, Samsung, https://www.samsung.com/us/samsung-pay/ (last visited Sept. 5, 2022).

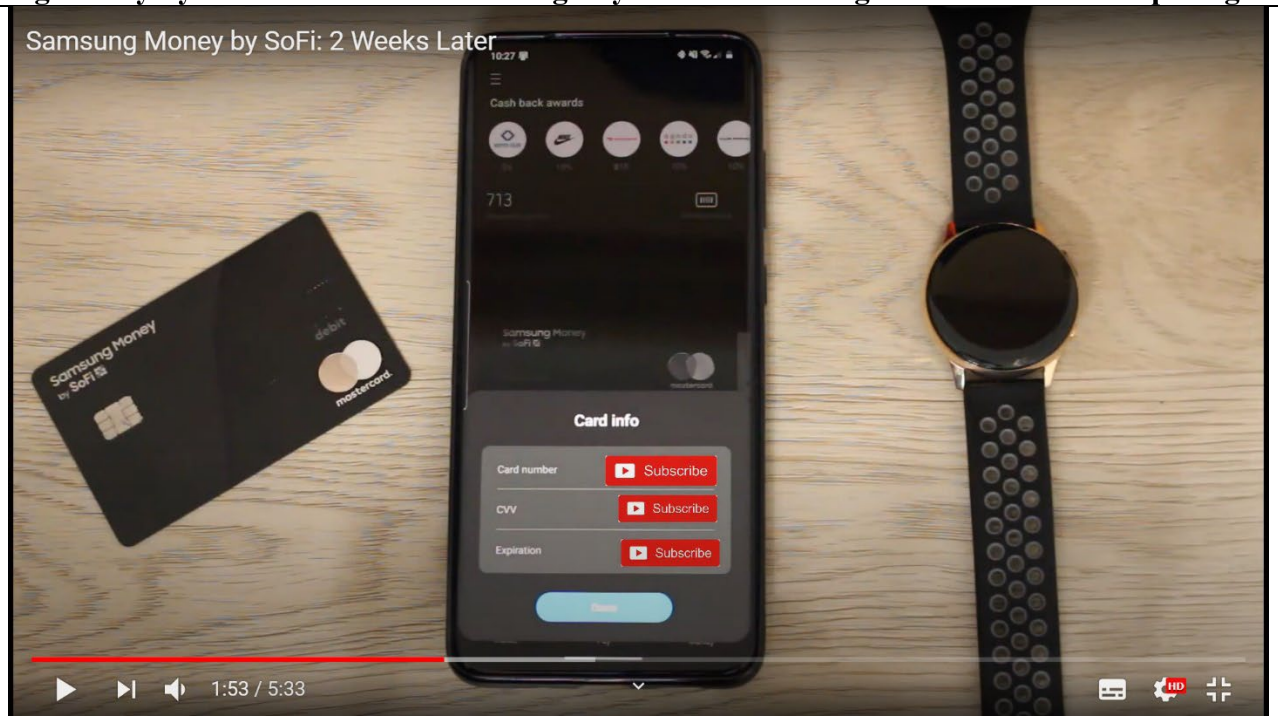
Claim Language	Samsung Money by SoFi Card with a Samsung Pay- and/or Samsung Wallet-enabled computing device
	1. **How does Samsung Pay work?** Each time Samsung Pay is used for a transaction, the Samsung Pay handset sends at least three pieces of information. The first is a digital token that represents the credit or debit card information. The digital token is a surrogate credit or debit card number. The digital token's primary purpose is to route transactions to the correct payment network and to the correct issuer. The second piece of information is the application transaction counter (ATC). The ATC is a counter that is updated for every transaction. Its purpose is to help ensure that the same transaction information cannot be replayed to make multiple purchases. Payment networks use this number to track the sequence of transactions and determine whether an attempted transaction is older than the last one approved or is otherwise out of sequence. If so, it is an indication that something is amiss, and appropriate action can be taken. The third piece of information is the cryptogram. The cryptogram is an authentication code generated using, at a minimum, a secret key, the digital token and the ATC. Cryptograms serve to validate that the transaction information has not been modified and that it was generated by the expected user's handset. *FAQs*, Samsung (Aug. 7, 2016), https://security.samsungmobile.com/doc/Press_Guidance_Samsung_Pay.pdf.
12: The system of claim 11, wherein the thin payment device bears no fixed payment numbers, and bears only: the cardholders name; a brand logo; and the card payment network logo.	*See* Claim 2.

III. Claim 15 and Dependent Claims 16-20

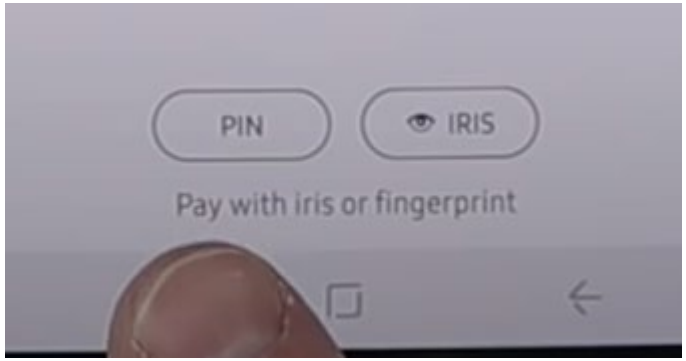
Claim Language	Samsung Money by SoFi Card with a Samsung Pay- and/or Samsung Wallet-enabled computing device
15[Pre]: An online payment system comprising:	To the extent the preamble is limiting, a Samsung Money by SoFi card with a Samsung Pay- and/or Samsung Wallet-enabled computing device, such as a phone or watch, meets this limitation based on at least the following information:

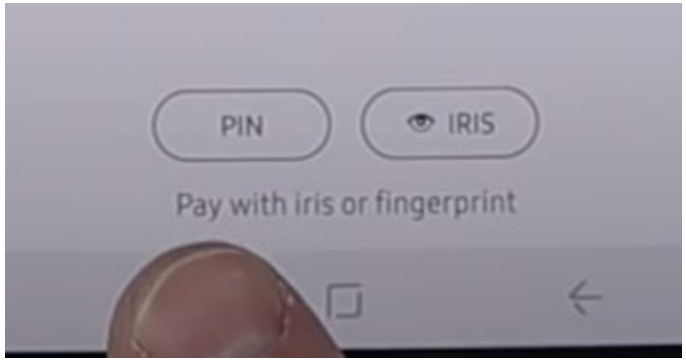
Claim Language	Samsung Money by SoFi Card with a Samsung Pay- and/or Samsung Wallet-enabled computing device
	 One card. **Two ways to pay.** Sign up to receive a digital card in Samsung Pay and a physical card in the mail. Use your card wherever you are worldwide with Samsung Pay. *Samsung Money by SoFi*, Samsung, https://www.samsung.com/us/samsung-pay/samsung-money-by-sofi/ (last visited Sept. 5, 2022). **Check out fast in our apps.** No need to enter your credit card number for in-app or online purchases—simply select Samsung Pay at checkout and authenticate the purchase with your fingerprint, PIN or iris scan.  *Samsung Pay*, Samsung, https://www.samsung.com/us/samsung-pay/ (last visited Sept. 5, 2022).
15[a]: a thin card-shaped payment card device that bears no fixed payment numbers on the card device; and	*See* Claim 1[a].
15[b]: a computing device operable for completing an online payment transaction and comprising:	*See* Claim 11[b].
15[c]: a display;	*See* Claim 11[f].

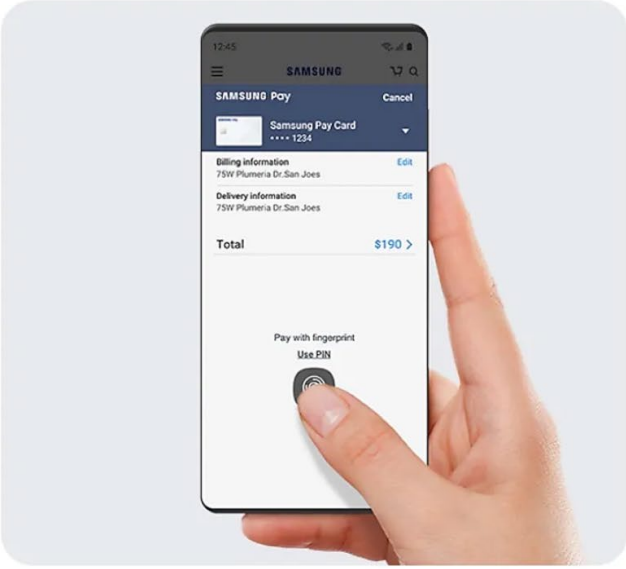
Claim Language	Samsung Money by SoFi Card with a Samsung Pay- and/or Samsung Wallet-enabled computing device
15[d]: a user-interface;	*See* Claim 11[g].
15[e]: a processor; and	*See* Claim 11[c].
15[f]: a memory for storing a payment card information accessible to the processor,	A Samsung Money by SoFi card with a Samsung Pay- and/or Samsung Wallet-enabled computing device, such as a phone or watch, meets this limitation based on at least the following information: The memory of the Samsung Pay and/or Samsung Wallet-enabled computing device stores the Primary Account Number ("PAN"), the CVV2, and the expiration date of the Samsung Card associated therewith and other information associated with the Samsung Card. Samsung Knox. The physical debit card will not display the card number, expiration date, or CVC. Should users need that information, they can easily find it within the "Money" tab of the Samsung Pay app, which is further protected by biometric or PIN authentication. Users assume zero liability should an unauthorized transaction occur. *Introducing Samsung Money by SoFi: Do More With Your Money*, Samsung (May 27, 2020), https://news.samsung.com/us/introducing-samsung-money-samsung-pay-sofi/.

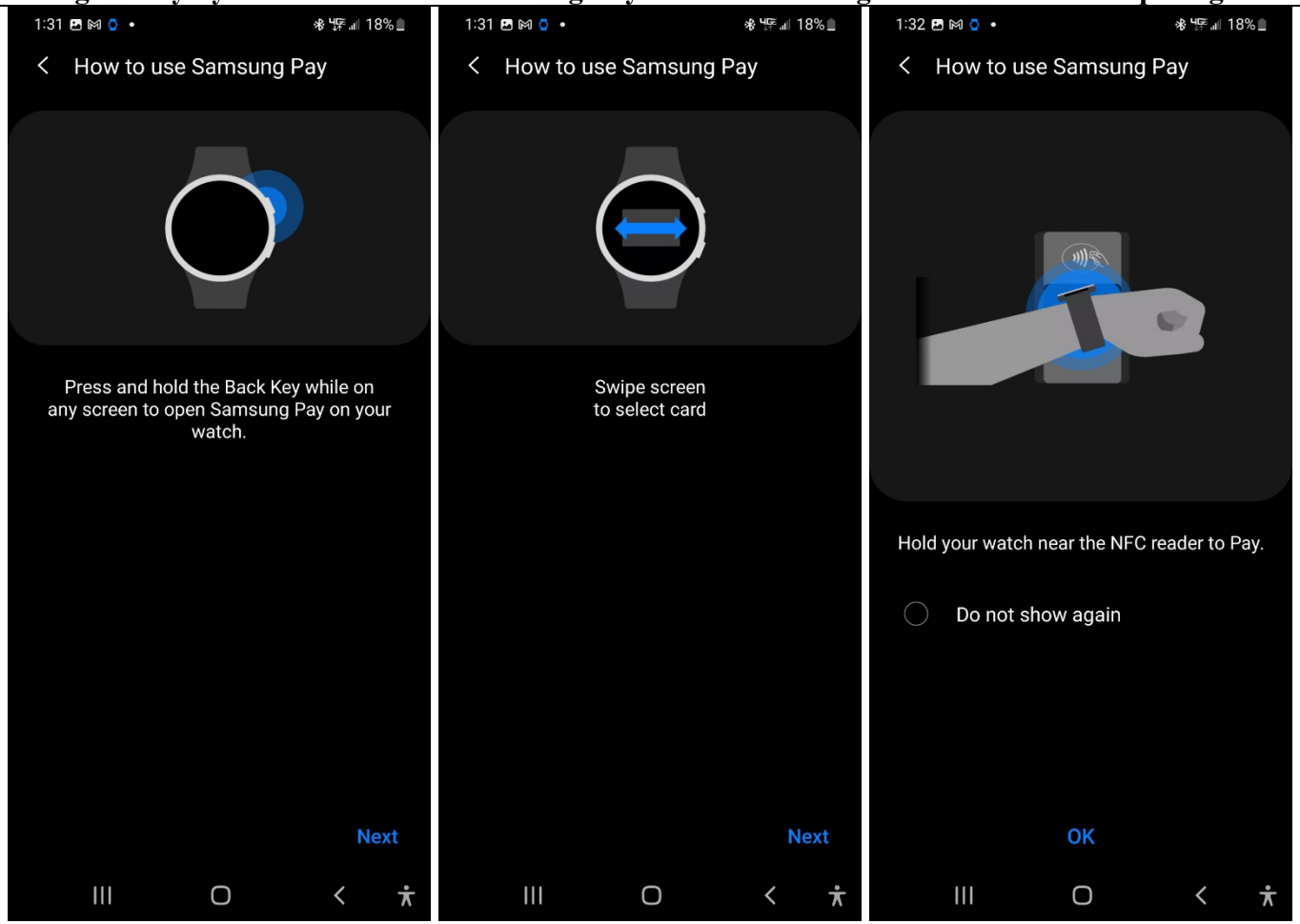
Claim Language	Samsung Money by SoFi Card with a Samsung Pay- and/or Samsung Wallet-enabled computing device
	 *Samsung Money by SoFi: 2 Weeks Later*, YouTube, https://youtu.be/xIXidlfVZbA?t=111. *See also* Claim 11[d].
15[g]: wherein card issuer provided payment card information is wirelessly downloaded into the computing device, and	*See* Claim 11[h].
15[h]: wherein at least one of the set comprising: the computing device; and the card-shaped payment device, is configured to dynamically generate a limited-use payment information, upon the	A Samsung Money by SoFi card with a Samsung Pay- and/or Samsung Wallet-enabled computing device, such as a phone or watch, meets this limitation based on at least the following information: A Samsung Pay- and/or Samsung Wallet-enabled computing device generates a cryptogram that is of limited use for a single transaction, as described in Claim 11[i].

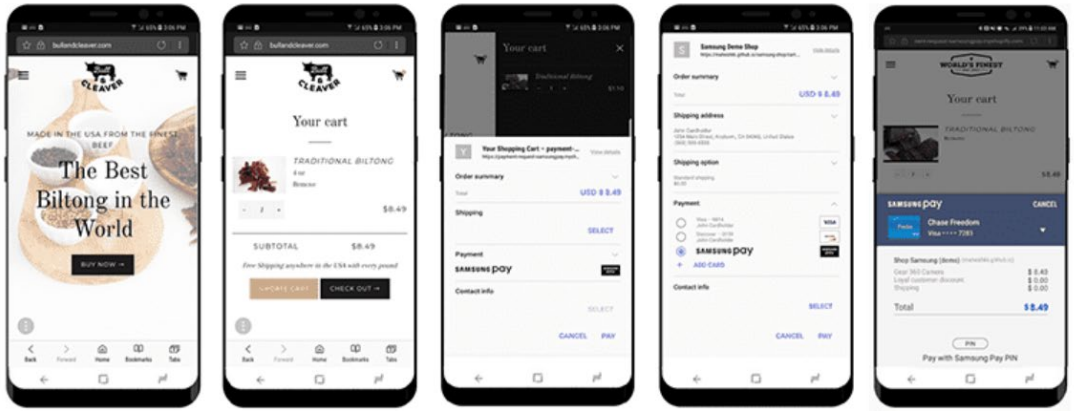
Claim Language	Samsung Money by SoFi Card with a Samsung Pay- and/or Samsung Wallet-enabled computing device
authorization of a valid computing device user, and	Moreover, the Samsung-Pay enabled computing device generates the cryptogram upon the authorization of a valid computing device user. The Samsung-Pay enabled computing device authorizes the user using a fingerprint, PIN, or facial recognition (also known as IRIS). User authentication Every transaction is authenticated by your fingerprint, PIN or facial recognition. If your phone is lost or stolen, you can remotely lock or erase your Samsung Pay account with Find My Mobile.* *It is necessary to activate Find My Mobile for this feature in advance *Samsung Pay*, Samsung, https://www.samsung.com/us/samsung-pay/ (last visited Aug. 29, 2022). "How do I make a payment with Samsung Pay? From the lock screen, swipe up from the small Samsung Pay bar. Select the card you want to pay with, then place your finger on the fingerprint scanner to verify, use the iris scan or enter your PIN. Tap the back of the phone against the payment terminal. You'll see a transaction notification pop up at the top of the screen. If you're using a debit card through Samsung Pay, you may still need to enter the card PIN on the terminal. Once the payment is made you'll get a notification that confirms the merchant name and the amount. It's also listed in the Samsung Pay app." *Samsung Pay: Everything you need to know (FAQ)*, CNET, https://www.cnet.com/how-to/samsung-pay-everything-you-need-to-know-faq-mobile-wallet/.

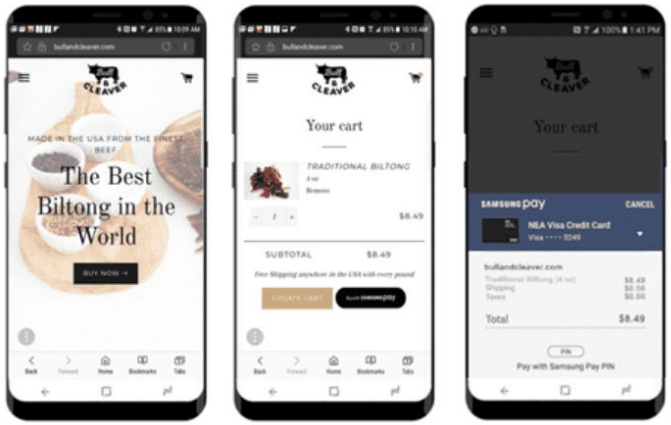
Claim Language	Samsung Money by SoFi Card with a Samsung Pay- and/or Samsung Wallet-enabled computing device
	The Samsung Pay-enabled computing device receives an approval authorization from a valid device user via the touch screen. As shown below, the user selects a payment card to use in the transaction using the touch screen.  *How to Setup and Use Samsung Pay*, YouTube, https://youtu.be/zR3xz6GYIzc?t=389. *See also How Samsung Pay works (pictures)*, CNET, https://www.cnet.com/pictures/how-samsung-pay-works-pictures/2/.
15[i]: wherein the payment information provided by the computing device is used in online transactions in place of a card issuers payment card information.	*See* Claim 11[j] and 11[k].
16: The system of claim 15 wherein the card device bears no fixed payment numbers, and bears only: the cardholders name; the brand logo; and the card payment network logo.	*See* Claim 2.
18[a]: The system of claim 15 wherein the limited-use payment information includes a static limited-use card account number, a limited-duration card expiration date, and a limited-use card security code and,	A Samsung Money by SoFi card with a Samsung Pay- and/or Samsung Wallet-enabled computing device, such as a phone or watch, meets this limitation based on at least the following information: As described in Claim 11[i], the device uses limited-use payment information that includes a static limited-use card account number (e.g., digital token) and a limited-use card security code (e.g., cryptogram). The digital token has a different expiration date than the card expiration date.

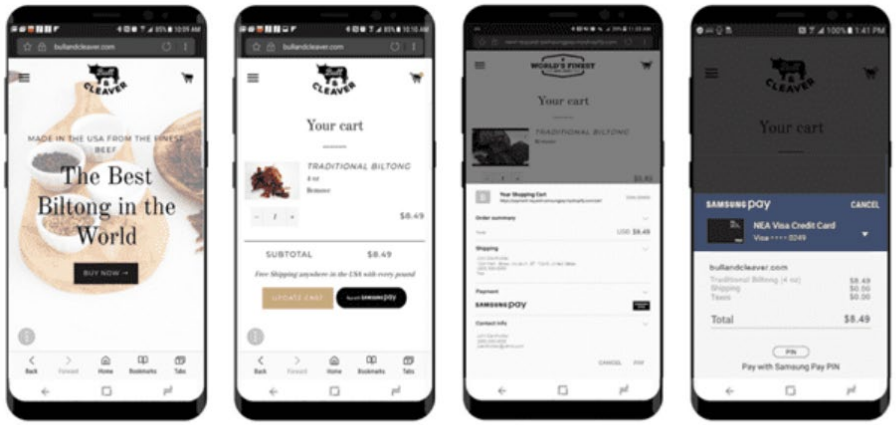
Claim Language	Samsung Money by SoFi Card with a Samsung Pay- and/or Samsung Wallet-enabled computing device
18[b]: wherein the dynamically generated limited-use payment information is conveyed by the computing device to complete an online transaction.	*See* Claim 11[j] and 11[k].
20[a]: The system of claim 15 wherein the computing device is further operable to obtain a user payment approval through at least one user-interface element of the computing device, from a set comprising: a display interface, a touch-screen interface, a touch ID button, input buttons, a touch key-pad, a key-pad, a key-board, an optical sensor array, a motion detection unit, an accelerometer, the swiping of a recognized user skin over a device sensor array, a biometric sensor, a wireless interface, an NFC interface, an RF interface, a device biometric sensing the device is continuously remaining in contact with a valid user; and,	A Samsung Money by SoFi card with a Samsung Pay- and/or Samsung Wallet-enabled computing device, such as a phone or watch, meets this limitation based on at least the following information: Iris scanner Fingerprint scanner User authentication Every transaction is authenticated by your fingerprint, PIN or facial recognition. If your phone is lost or stolen, you can remotely lock or erase your Samsung Pay account with Find My Mobile.* *Samsung Pay*, Samsung, https://www.samsung.com/us/samsung-pay/ (last visited Aug. 29, 2022).  *How to Setup and Use Samsung Pay*, YouTube, https://youtu.be/zR3xz6GYIzc?t=389. *See also How Samsung Pay works (pictures)*, CNET, https://www.cnet.com/pictures/how-samsung-pay-works-pictures/2/.

Claim Language	Samsung Money by SoFi Card with a Samsung Pay- and/or Samsung Wallet-enabled computing device
	Check out fast in our apps. No need to enter your credit card number for in-app or online purchases—simply select Samsung Pay at checkout and authenticate the purchase with your fingerprint, PIN or iris scan.  *Samsung Pay*, Samsung, https://www.samsung.com/us/samsung-pay/ (last visited Sept. 5, 2022).

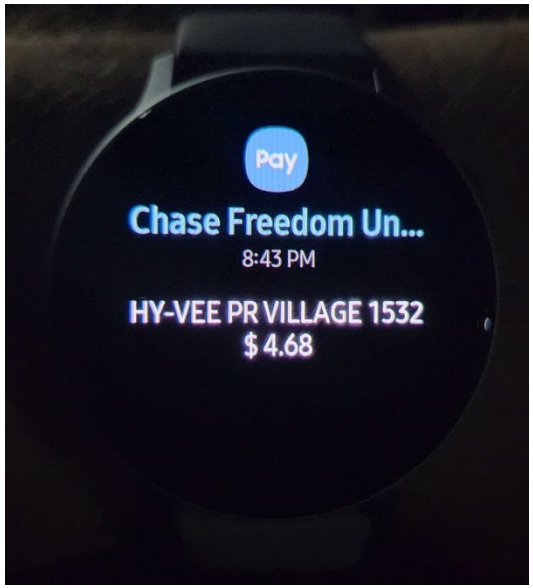
Claim Language	Samsung Money by SoFi Card with a Samsung Pay- and/or Samsung Wallet-enabled computing device
	 Source: screenshots of in-app instructions. "How do I make a payment with Samsung Pay? From the lock screen, swipe up from the small Samsung Pay bar. Select the card you want to pay with, then place your finger on the fingerprint scanner to verify, use the iris scan or enter your PIN. Tap the back of the phone against the payment terminal. You'll see a transaction notification pop up at the top of the screen.

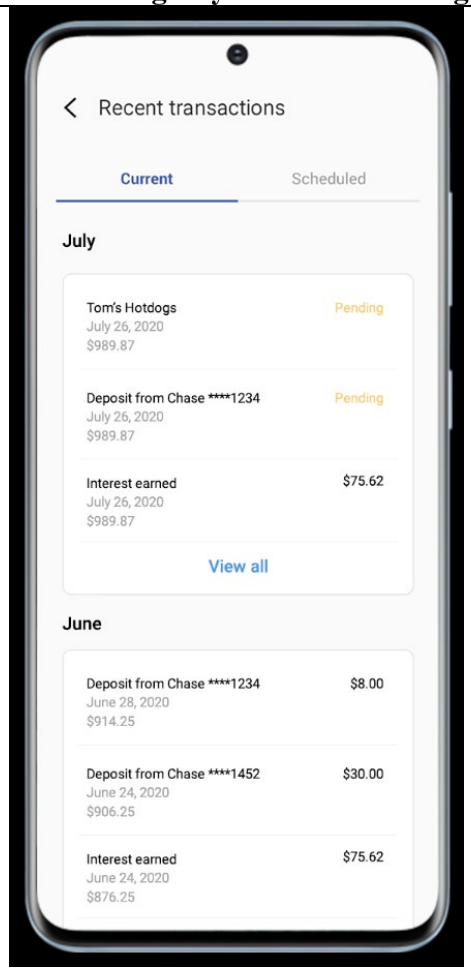
Claim Language	Samsung Money by SoFi Card with a Samsung Pay- and/or Samsung Wallet-enabled computing device
	If you're using a debit card through Samsung Pay, you may still need to enter the card PIN on the terminal. Once the payment is made you'll get a notification that confirms the merchant name and the amount. It's also listed in the Samsung Pay app." *Samsung Pay: Everything you need to know (FAQ)*, CNET, https://www.cnet.com/how-to/samsung-pay-everything-you-need-to-know-faq-mobile-wallet/. **Standard W3C implementation** A standard W3C implementation adds Samsung Pay to your standard **PaymentRequest** object as one of many **supportedMethods** available for user selection. Tapping **CHECKOUT** (or its equivalent) launches the standard browser payment sheet for user selection of the payment method and/or to add a debit/credit card to the list of options. Selecting **Samsung Pay** as the payment method and tapping **PAY** launches the Samsung Pay payment sheet. 

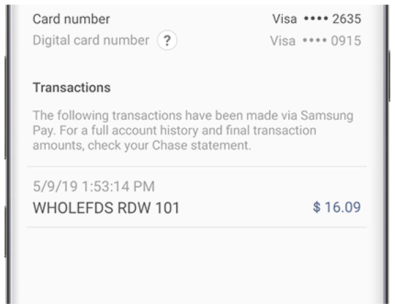
Claim Language	Samsung Money by SoFi Card with a Samsung Pay- and/or Samsung Wallet-enabled computing device
	Branded Samsung Pay implementation A branded implementation displays a "**Buy with Samsung Pay**" button in place of your standard **CHECKOUT** button. Tapping the button will skip directly to the Samsung Pay payment sheet for authentication unless you specify **paymentOptions**. If **paymentOptions** is not NULL, the browser payment sheet is launched. See paymentOptions in Step 7 for additional guidance.  Branded implementation without payment options (**paymentOptions** = NULL)

Claim Language	Samsung Money by SoFi Card with a Samsung Pay- and/or Samsung Wallet-enabled computing device
	 Branded implementation with payment options (one or more **paymentOptions** set) **PaymentOptions** is an optional parameter in the**PaymentRequest** constructor. Depending on your particular requirements, you may want additional information, such as the user's shipping address for physical goods purchased and contact details for guest users. **PaymentOptions** currently comprises the following: • **requestPayerName** : true if payer name is required; otherwise, false • **requestPayerEmail** : true if payer email address is required; otherwise, false • **requestPayerPhone** : true if payer telephone number is required; otherwise, false • **requestShipping** : true if shipping address is required; otherwise, false • **shippingType** : available label options "shipping/pickup/delivery" for indicating to user; solely for display purposes *Web Payments Integration Guide*, Samsung Developers, https://developer.samsung.com/internet/android/web-payments-integration-guide.html (last visited Sept. 3, 2022).

Claim Language	Samsung Money by SoFi Card with a Samsung Pay- and/or Samsung Wallet-enabled computing device
	Simplifying the transaction process The benefits of the new process, certainly from an end-user perspective, is that the previous tedium — request, authorization, payment, and result — can now be handled in a single step. For the web developer, it entails a single JavaScript API call. For Samsung Pay users, there's no change at all in the way a payment card is selected and authenticated. After selecting the desired merchandise from the merchant's web site, the user initiates checkout, selects Samsung Pay as the preferred payment method, authenticates with a fingerprint or PIN, and voila — payment complete. That's the user experience at its most basic. When properly implemented, the API also supports editing the billing/shipping address in Samsung Pay and selecting a different enrolled card before approving the transaction with a fingerprint scan or entering a PIN. *Web Payments Integration Guide*, Samsung Developers, https://developer.samsung.com/internet/android/web-payments-integration-guide.html (last visited Sept. 3, 2022). Based on testing, a user need not repeatedly unlock a wearable, such as a Samsung Galaxy Watch, while wearing it, i.e., while the device biometrically senses that it remains continuously in contact with the user, but must unlock the device again after it is taken off and put back on.
20[b]: wherein the computing device is operable to display at least one of a set comprising: the transaction information, the merchant information, the time, the location of the transaction, the payment bank logo, the card issuer icon, the payment card image, and the amount, on a display of the computing device, and,	A Samsung Money by SoFi card with a Samsung Pay- and/or Samsung Wallet-enabled computing device, such as a phone or watch, meets this limitation based on at least the following information: **Make a payment using the app** With Samsung Pay, you can purchase things without digging through your wallet. When you're ready to pay, open **Samsung Pay** on your phone. Tap **Pay**, and select your preferred card. Tap **PIN** or **IRIS**, and then enter the required security information. Or if you have fingerprint security set up, simply place your finger on your phone's fingerprint scanner. Next, hold the back of the phone up to the contactless reader and perform your desired actions to complete your purchase.

Claim Language	Samsung Money by SoFi Card with a Samsung Pay- and/or Samsung Wallet-enabled computing device
	Make a payment using a Galaxy watch Samsung Pay can also be used on your Galaxy watch when you'd like to make quick in-store payments. Just make sure you have the **Samsung Pay feature set up on your watch** before you start making in-store purchases. 1. On your watch, press and hold the **Back** button to launch Samsung Pay. 2. Then, either rotate the bezel or swipe on the screen to locate your desired card. 3. Next, hold your wrist that's wearing the watch near an NFC reader or payment terminal. If you're having trouble, make sure to place the watch one inch or less from the terminal. *Make an in-store payment with Samsung Pay*, Samsung, https://www.samsung.com/us/support/answer/ANS00045102/ (last visited Aug. 29, 2022).  Source: photo from operation of Samsung Galaxy Watch.

Claim Language	Samsung Money by SoFi Card with a Samsung Pay- and/or Samsung Wallet-enabled computing device
	 *Samsung Money by SoFi*, Samsung, https://www.samsung.com/us/samsung-pay/samsung-money-by-sofi/ (last visited Sept. 5, 2022).

Claim Language	Samsung Money by SoFi Card with a Samsung Pay- and/or Samsung Wallet-enabled computing device
	View recent transactions **Note:** You can only view transactions made with the Samsung Pay app. If you are looking for details about purchases made on Samsung.com or the Shop Samsung app, you can see them in **your account**. Did you pay the cable bill already? If you aren't sure, just take a look at your recent transactions. Open **Samsung Pay** on your phone. Tap **Menu** in the upper left corner, and then tap **Cards**. Select your desired payment card, and then swipe up to see up to a month's worth of recent transactions and purchases made with the Samsung Pay app.  *View recent transactions in Samsung Pay*, Samsung, https://www.samsung.com/us/support/answer/ANS00044981/ (last visited Sept. 5, 2022). *See also* Claim 20[a].
20[c]: a user input providing for at least one user action from a set comprising: an approving of a transaction, a denying of a transaction, and an adjusting of a transaction, via the user-interface.	A Samsung Money by SoFi card with a Samsung Pay- and/or Samsung Wallet-enabled computing device, such as a phone or watch, meets this limitation based on at least the following information: A user may approve a transaction as described in Claim 20[a]. A user may deny a transaction by closing out of the Samsung Pay or Samsung Wallet app, or by declining to open the Samsung Pay or Samsung Wallet app when prompted by an attempt to initiate a transaction (e.g., when the device is placed next to an NFC reader).