

NILSON REPORT

ARTICLES IN THIS ISSUE

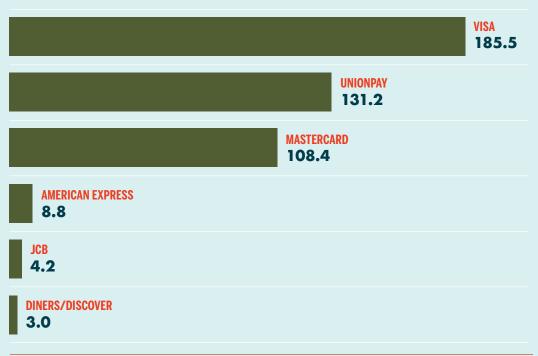
- p3 First Look
- p9 Middle East and Africa's Top Merchant Acquirers
- p11 Wirecard's Prepaid and Merchant Acquiring Assets
- p12 CPI and Visa Promote Plastic Card Sustainability
- p13 Priority Merchant Acquiring and B2B Processing
- p14 G+D Mobile Security Uses Payment Cards for SCA
- p15 American Express to Open Network Business in China
- **p15** Management Changes

PURCHASE TRANSACTIONS (BIL.) IN 2019

Global Network Cards in 2019

Purchase transactions on global general purpose card brands totaled 440.99 billion in 2019, up 19.4% over the previous year.

ightarrow Read full article on page 5



FOR 50 YEARS, THE LEADING PUBLICATION COVERING PAYMENT SYSTEMS WORLDWIDE



COVER STORY

Global Network Cards in 2019

At the end of 2019, global brand credit, debit, and prepaid cards in circulation reached 14.36 billion, up 8.6%. **p5**

Top acquirers from 14 countries in the MEA region processed \$188.16 billion from Visa and Mastercard transactions

Middle East and Africa's Top Acquirers

The 41 largest merchant acquirers in the Middle East and Africa region, including 7 acquirers in Iran, processed 25.76 billion card payments in 2019. p**9**

Wirecard's Prepaid and Merchant Acquiring Assets

Wirecard AG's recent filing for insolvency did not cover its subsidiaries. The sell-off of some of those assets has begun. p_{11}

Every year card manufacturers around the world produce

> billion new payment cards

CPI and Visa Promote Plastic Card Sustainability

Card manufacturers worldwide produce six billion payment cards annually, and almost all are made with first-use PVC plastic. However, this is starting to change. **p12**

Priority Merchant Acquiring and B2B Processing

The company's integrated accounts payable service includes virtual cards, ACH, checks, and instant payouts.

G+D Mobile Security Uses Payment Cards for SCA

Financial Institutions can add G+D's software to their mobile banking apps to access data in a card's chip and then use it as a second identification factor. p14

Amex to Open Network Business in China

A joint venture between Amex and LianLian DigiTech has received an operating license from regulators in China.

p**15**

REGULAR FEATURES

p3 First Look

p15 Management Changes

MORE FROM NILSON REPORT

The World's Top Card Issuers and Merchant Acquirers

126 pages listing 1,109 card issuers in 117 countries

Top 300 Issuers Worldwide by country ranked by purchase volume

Top Merchant Acquirers Worldwide ranked by purchase volume

ORDER HERE

First Look

News in brief on payment industry trends around the world.

INGENICO EPAYMENTS has integrated

its global platform with OroCommerce, provider of a B2B digital commerce platform. Sellers can accept online payments from customers in the OroCommerce storefront and manage all transactions in the OroCommerce back office.

Motti Danino is COO at OroCommerce, motti@ oroinc.com, www.oroinc.com. Andrew Monroe is General Manager, North America at Ingenico, andrew.monroe@ingenico.com, www.ingenico.com.

ECHO HEALTH'S platform processes more than 200 million claims and over \$40 billion in insurance claim-related payments annually. The company's payment processing integrates with claims adjudication systems serving healthcare, property and casualty, and specialty insurance.

Tom Davis is EVP Sales and Strategy at Echo Health, tdavis@echohealthinc.com, www.echohealthinc.com.

PAYSAFE has integrated with Eldermark to enable payments via ACH and credit cards for residents of senior living communities and their responsible parties.

Carla Erlick is SVP of the ISV Channel at Paysafe, carla.erlick@paysafe.com, www.paysafe.com.

SHIFT4 PAYMENTS has rolled out QR Pay, a QR code-based contactless payment service. Consumers scan a QR code on a receipt or payment terminal screen. QR codes are used in the U.S. in mobile apps from Walmart, Dunkin, and Starbucks.

Nate Hirshberg is VP Marketing at Shift4, nhirshberg@shift4.com, www.shift4.com.

VIZYPAY has launched its first Cash Discount app for Clover point-of-sale systems. The app is available on the Clover App Market.

Austin MacNab is CEO at VizyPay, austin@ vizypay.com, www.vizypay.com.

_

BITPAY, the largest global blockchain payment provider, offers BitPay Card, the first Mastercard prepaid card for crypto users in the U.S. The BitPay Card supports BTC, BCH, ETH, XRP, and stable coins USDC, GUSD, PAX, and BUSD. Customers instantly convert cryptocurrency into fiat currency, which is then loaded onto the card and can be spent anywhere Mastercard is accepted around the world. Metropolitan Commercial Bank in New York issues the card.

Stephen Pair is CEO at BitPay, stephen@bitpay.com, www.bitpay.com. Sherri Haymond is EVP, Digital Partnerships at Mastercard, sherri.haymond@ mastercard.com, www.mastercard.com.

HIGH PAYMENT SOLUTIONS (Hi-Pay) has used ACI's UP eCommerce Payments solution connected with ACI's UP Real-Time Payments solution to provide an internationally compatible payment system for the Mongolian market, which depends primarily on the domestic T-Card bank network. In addition to supporting Mongolia's T-Card network, Hi-Pay will enable alternative payment methods such as Alipay and WeChat Pay.

Battulga Naranbat is CEO at Hi-Pay, naranbat@ hipay.mn, www.hipay.mn. Leslie Choo is Managing Director-Asia at ACI, leslie.choo@aciworldwide.com, www.aciworldwide.com.

F1 PAYMENTS will use RS2 Software's global processing platform and Cross River Bank's sponsorship service to process payments for physical and virtual businesses. The company is also a registered ISO with Fifth Third Bank and Wells Fargo.

Chad Anselmo is President at F1 Payments, chad@ f1payments.com, www.f1payments.com. Daniela Mielke is CEO at RS2 Software North America, daniela.mielke@rs2.com, www.rs2.com. Gilles Gade is CEO at Cross River, ggade@ crossriverbank.com, www.crossriverbank.com. **SHELL** and loyalty program provider Fuel Rewards are offering a savings of 10 cents per gallon when food delivery platform DoorDash drivers fill up using a Fuel Rewards membership. DoorDash has also started delivering prescription drugs and convenience store goods.

Todd Gulbransen is Manager, North American Loyalty & CRM at Shell, todd.gulbransen@shell.com, www.shell.com.

ONDOT SYSTEMS, provider of a digital services platform for credit and debit issuers, uses the Visa Token Service to tokenize credential-on-file digital payments on behalf of its clients. The agreement lets cardholders add Visa cards instantly to digital wallets and authenticate the cards during the purchase of goods and services.

Joe Baker is VP Business Development at Ondot, joe.baker@ondotsystems.com, www.ondotsystems.com.

REDSTONE FEDERAL CREDIT UNION,

which has over 500,000 members, will use Fiserv's turnkey service for Zelle to offer person-to-person and account-to-account money transfers. Zelle is a business of Early Warning Services.

Terri Bentley is SVP at Redstone Federal Credit Union, tbentley@redfcu.org, www.redfcu.org. Tom Allanson is President of Electronic Payments at Fiserv, tom.allanson@fiserv.com, www.fiserv.com.

FREEDOMPAY, provider of a consumer-centric commerce platform, has integrated support for Google Pay in Android applications and in browsers for its customers in North America and Europe.

Chris Kronenthal is President at FreedomPay, chris.kronenthal@freedompay.com, www.freedompay.com. Steve Klebe is Head of GPay BD-PSP Partnerships at Google, sklebe@google.com, www.google.com. **KONNECT'S** Contactless Order & Pay system can be implemented without altering a restaurant's existing order process. A single Konnect Wireless Access Point integrates with a customer's POS system to enable businesses to connect with consumers via their mobile devices using Wi-Fi and Bluetooth Low Energy technology. There is no need to download an app, connect to the internet, or use a web browser. Customers' smartphones become instant order and pay devices.

Jim Schreitmueller is Co-Founder at Konnect, jim@ konnectsolutions.com, www.konnectsolutions.com.

PXP FINANCIAL, a global acquirer, will expand gateway services and payment processing it provides to Roar Digital, the joint venture between MGM Resorts International and GVC Holdings. PXP Financial currently provides payment processing for Roar Digital's sports betting app, BetMGM, in New Jersey, West Virginia, Colorado, Indiana, and Nevada. Another 11 U.S. states will be added this year.

Koen Vanpraet is CEO at PXP Financial, koen.vanpraet@pxpfinancial.com, www.pxpfinancial.com.

FINANCIAL DATA AND TECHNOLOGY ASSOCIATION (FData) of North

America has added Experian, Fiserv, Fintech Growth Syndicate, and Interac as members. FData exists to support the notion that consumers and small businesses should have control of their financial data.

Steve Boms is Executive Director at FData North America, sboms@allonadvocacy.com, https://fdata.global/north-america/.

SPLITIT, provider of a buy now, pay later platform that lets shoppers pay installments via their credit cards, reported purchase volume of \$25.8 million last month. The average order value reached \$939, as more shoppers purchased large ticket items such as homewares, furniture, sporting goods, and luxury retail.

Brad Paterson is CEO, brad.paterson@splitit.com, www.splitit.com.

FSS (Financial Software and Systems), a payment processor, has enhanced its ecommerce gateway with off-theshelf, low-cost digital payment acceptance tools for MSME retail merchants, including QR codes, link payments, pay buttons, support for Samsung Pay and Amex cards, as well as risk-based authentication tools compliant with EMVCo 2.1.0 guidelines.

Ram Chari is President & Global Head at FSS, ramchari@fsstech.com, www.fsstech.com.

MAGICCUBE'S Software Trusted Execution Environment platform to support contactless payments is available in the Middle East through areeba, an issuing and acquiring service provider to banks, institutions, and merchants. SoftPOS from MagicCube is an out-of-the-box software-only system that turns any Android-based smartphone or tablet into a contactless payment acceptance terminal with the ability to read Visa, American Express, Mastercard, and Discover cards as well as the ability to accept PIN and other verification methods, including biometrics.

Maher Mikati is CEO at areeba, mmikati@areeba.com, www.areeba.com. Sam Shawki is CEO at MagicCube, sam@magiccube.co, www.magiccube.co.

FEDERAL BANK OF INDIA is using ACI Worldwide's UP Payments Risk Management Solution to fight fraudulent card activity.

Kaushik Roy is VP and Country Leader–South Asia at ACI Worldwide, kaushik.roy@aciworldwide.com, www.aciworldwide.com. Shalini Warrier is Executive Director at Federal Bank, shaliniw@federalbank.co.in, https://www.federalbank.co.in/home.

SPS, a part of IN Groupe and a provider of contactless and dual-interface card manufacturing technologies, offers Premium S-Lam to extend the life span of PVC bank cards. Lobra, a Swiss-based expert in adhesives, collaborated with SPS to create a product that prevents card delamination and peeling.

Jean-Baptiste Leos is Banking Product Marketing Director at SPS, jean-baptiste.leos@s-p-s.com, www.s-p-s.com.

CREDIT AGRICOLE PAYMENT SERVICES

(CAPS) has achieved certification for its Acquirer Host with the latest nexo standard Acquirer Protocol v6.0. The protocol standardizes communication between the point-of-interaction device and the acquirer host.

Jacques Soussana is General Secretary at nexo standards, jacques.soussana@nexo-standards.org, www.nexo-standards.org. Olivier Julou is Strategy and Partnership Manager at CAPS, olivier.julou@ ca-ps.com, www.ca-payment-services.com.

KYCKGLOBAL, a company that delivers outbound B2C payments from a cloud-based platform, is working with Visa to expand the availability of push payments in the U.S. Push payments send money directly to a recipient, typically to a consumer or small business debit or prepaid card.

Ashish Bahl is CEO at KyckGlobal, abahl@ kyckglobal.com, www.kyckglobal.com.

TRANSACTION NETWORK SERVICES

(TNS) offers merchant acquirers, processors and other payment terminal owners the ability to connect their cloud services to the global payment ecosystem using the TNSConnect Cloud solution.

Bill Versen is Chief Product Officer, bversen@tnsi.com. www.tnsi.com.

OPENWAY'S Way4 platform lets acquirers provide a digital tipping service to restaurants, delivery services, taxis, hotels, and beauty salons. Way4 Tip Payments lets service workers receive tips directly to their card account.

Pavel Gubin is Head of Sales EMEA, pgubin@ openwaygroup.com, www.openwaygroup.com.

BANCO SAFRA, the world's largest privately owned bank, will use ACI's UP Retail Payments and UP Framework technology to launch a new acquiring business called SafraPay in the U.S. ACI's technology is deployed in the public cloud via Microsoft Azure.

Helio Sarfaty is CEO at SafraPay, helio.sarfaty@ safrapay.com, www.safrapay.com.br. Mandy Killam is EVP at ACI Worldwide, mandy.killam@ aciworldwide.com, www.aciworldwide.com.

Global Network Card Results in 2019

Cards carrying the brands of American Express, Diners Club/ Discover, JCB, Mastercard, UnionPay, and Visa combined generated 440.99 billion purchase transactions for goods and services in 2019, an increase of 19.4% over 2018. Purchase transactions included all consumer, small business, and commercial credit, debit, and prepaid products. (Prepaid cards are included with debit cards.)

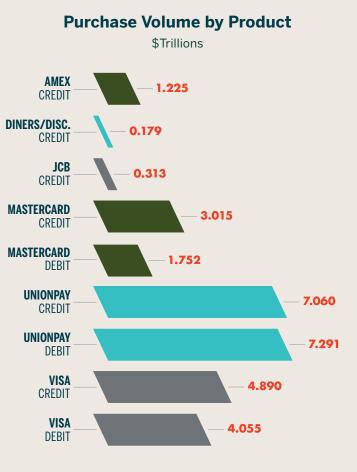
Visa cards accounted for 42.06% of all global brand general purpose card purchase transactions worldwide in 2019, down 289 basis points (bps) from 44.95% in 2018. Debit cards from Visa generated 26.42% of worldwide purchase transactions, down 148 bps from 27.89%. Credit cards with the Visa brand accounted for 15.65%, a decline of 141 bps from 17.06%.

UnionPay brand cards generated 29.75% of global brand general purpose card purchase transactions, up 314 bps from 26.61%. Credit cards with the UnionPay brand generated 14.03%, up 33 bps from 13.70%. UnionPay debit cards held a 15.72% share, up 281 bps from 12.91%.

Mastercard cards generated 24.57% of the global brand purchase transaction total, up 14 bps from 24.44% in 2018. Mastercard debit cards held a 13.43% market share, up 37 bps from 13.06%. Credit cards with the Mastercard brand held a 11.14% share, down 24 bps from 11.38%.

American Express held a 1.99% share, down 24 bps. JCB held a 0.94% share, down 9 bps. Diners Club/Discover held a 0.68% share, down 6 bps.

Debit and prepaid cards accounted for 55.57% of purchase transactions in 2019, up 171 bps from 53.86%. Visa purchase transactions were 62.80% debit, up 75 bps from 62.05%. Mastercard purchase transactions were 54.65% debit, up 122 bps from 53.43%. UnionPay purchase transactions were 52.84% debit, up 433 bps from 48.51%.



© 2020 Nilson Report

COVER STORY

Global Debit & Prepaid Cards

Figures are for 2019 with change vs. 2018

Category	Vi	sa	Maste	rcard	UnionPay		
	2019	CHANGE	2019	CHANGE	2019	CHANGE	
Purchase Transactions per Card	50.41	8.2%	48.06	12.7%	9.04	30.9%	
Purchase Transactions Share	85.01%	198 bps	81.78%	167 bps	97.85%	218 bps	
Cash Transactions per Card	8.89	-6.6%	10.71	1.1%	0.20	-36.5%	
Cash Transaction Share	14.99%	-198 bps	18.22%	-167 bps	2.15%	-218 bps	
TRANSACTIONS PER CARD	59.30	5.7%	58.77	10.4%	9.23	28.0%	
Average Purchase Amount	\$35	-2.0%	\$30	-3.7%	\$105	-30.2%	
Average Cash Amount	\$125	2.1%	\$114	3.0%	\$338	-4.0%	
AVERAGE AMOUNT PER TRANSACTION	\$48	-3.8%	\$45	-3.6%	\$110	-30.8%	
Purchase Volume per Card	\$1,755	6.1%	\$1,422	8.5%	\$950	-8.6%	
Purchase Volume Share	61.24%	255 bps	53.86%	102 bps	93.41%	298 bps	
Cash Volume per Card	\$1,111	-4.6%	\$1,218	4.1%	\$67	-39.1%	
Cash Volume Share	38.76%	-255 bps	46.14%	-102 bps	6.59%	-298 bps	
TOTAL VOLUME PER CARD	\$2,865	1.6%	\$2,639	6.4%	\$1,017	-11.5%	

© 2020 Nilson Report

Total volume, comprised of purchases for goods and services combined with cash advances and withdrawals, totaled \$34.880 trillion in 2019, up 6.7%. Visa and Mastercard combined accounted for 52.28% of total volume, up 88 bps from 51.39%.

Purchase volume for goods and services, which excludes cash advances on credit cards and cash withdrawals on debit cards, was \$29.780 trillion in 2019, an increase of 8.3%.

UnionPay debit cards generated the most purchase volume, followed by UnionPay credit cards, Visa credit cards, Visa debit cards, Mastercard credit cards, Mastercard debit cards, American Express cards, JCB cards, and Diners Club/Discover cards.

UnionPay cards accounted for \$48 of every \$100 in purchase volume in 2019 versus \$49 in 2018. Visa and Mastercard combined accounted for \$46 of every \$100 in purchase volume in 2019 versus \$45 in 2018. Visa accounted for \$30 of every \$100, unchanged from the prior year. Mastercard accounted for \$16 of every \$100, up from \$15.

Visa credit cards accounted for 54.67% of its purchase volume, down 95 bps from 55.62%. Mastercard credit cards accounted for 63.25% of its purchase volume versus 64.77% in 2018, down 153 bps. UnionPay credit cards accounted for 49.19% of its purchase volume, up 267 bps from 46.53% in 2018.

Global Credit Cards

Figures are for 2019 with change vs. 2018

Visa		Maste	Mastercard America		Express	Express UnionPa		Pay JCB		Diners/Discover	
2019	CHANGE	2019	CHANGE	2019	CHANGE	2019	CHANGE	2019	CHANGE	2019	CHANGE
60.79	7.2%	52.29	8.0%	76.61	6.2%	82.95	12.4%	29.83	-1.1%	45.49	4.5%
98.68%	13 bps	98.44%	20 bps	98.49%	17 bps	99.85%	14 bps	98.65%	12 bps	97.53%	11 bps
0.82	-2.5%	0.83	-4.3%	1.18	-4.7%	0.13	-41.2%	0.41	-9.1%	1.15	-0.2%
1.32%	-13 bps	1.56%	-20 bps	1.51%	–17 bps	0.15%	-14 bps	1.35%	-12 bps	2.47%	–11 bps
61.61	7.0%	53.12	7.8%	77.78	6.0%	83.08	12.2%	30.24	-1.2%	46.64	4.4%
\$71	-2.6%	\$61	-5.4%	\$140	-0.3%	\$114	-7.6%	\$75	0.2%	\$60	-4.6%
\$274	0.5%	\$257	3.0%	\$115	9.2%	\$265	-4.3%	\$133	-0.8%	\$208	-0.5%
\$74	-2.8%	\$64	-5.4%	\$139	-0.1%	\$114	-7.7%	\$76	0.1%	\$64	-4.5%
\$4,308	4.4%	\$3,208	2.2%	\$10,711	5.9%	\$9,464	3.9%	\$2,237	-0.8%	\$2,726	-0.3%
95.07%	31 bps	93.77%	21 bps	98.75%	2 bps	99.65%	30 bps	97.63%	23 bps	91.91%	4 bps
\$223	-2.1%	\$213	-1.3%	\$135	4.1%	\$33	-43.7%	\$54	-9.8%	\$240	-0.8%
4.93%	-31 bps	6.23%	-21 bps	1.25%	-2 bps	0.35%	-30 bps	2.37%	-23 bps	8.09%	-4 bps
\$4,532	4.0%	\$3,421	2.0%	\$10,846	5.9%	\$9,498	3.6%	\$2,291	-1.1%	\$2,966	-0.3%
	2019 60.79 98.68% 0.82 1.32% 61.61 \$71 \$274 \$4,308 95.07% \$223 4.93%	2019 CHANGE 60.79 7.2% 98.68% 13 bps 0.82 -2.5% 1.32% -13 bps 61.61 7.0% \$\$71 -2.6% \$\$274 0.5% \$\$4,308 4.4% 95.07% 31 bps \$\$223 -2.1% 4.93% -31 bps	2019 CHANGE 2019 60.79 7.2% 52.29 98.68% 13 bps 98.44% 0.82 -2.5% 0.83 1.32% -13 bps 1.56% 61.61 7.0% 53.12 \$71 -2.6% \$61 \$274 0.5% \$257 \$74 -2.8% \$64 \$4,308 4.4% \$3.208 95.07% 31 bps 93.77% \$223 -2.1% \$213 4.93% -31 bps 6.23%	2019 CHANGE 2019 CHANGE 60.79 7.2% 52.29 8.0% 98.68% 13 bps 98.44% 20 bps 0.82 -2.5% 0.83 -4.3% 1.32% -13 bps 1.56% -20 bps 61.61 7.0% 53.12 7.8% \$71 -2.6% \$61 -5.4% \$274 0.5% \$257 3.0% \$4,308 4.4% \$3,208 2.2% 95.07% 31 bps 93.77% 21 bps \$223 -2.1% \$213 -1.3% 4.93% -31 bps 6.23% -21 bps	2019 CHANGE 2019 CHANGE 2019 60.79 7.2% 52.29 8.0% 76.61 98.68% 13 bps 98.44% 20 bps 98.49% 0.82 -2.5% 0.83 -4.3% 1.18 1.32% -13 bps 1.56% -20 bps 1.51% 61.61 7.0% 53.12 7.8% 77.78 \$71 -2.6% \$61 -5.4% \$140 \$274 0.5% \$257 3.0% \$115 \$74 -2.8% \$64 -5.4% \$139 \$4,308 4.4% \$3.208 2.2% \$10.711 95.07% 31 bps 93.77% 21 bps 98.75% \$223 -2.1% \$213 -1.3% \$135 4.93% -31 bps 6.23% -21 bps 1.25%	2019 CHANGE 2019 CHANGE 2019 CHANGE 60.79 7.2% 52.29 8.0% 76.61 6.2% 98.68% 13 bps 98.44% 20 bps 98.49% 17 bps 0.82 -2.5% 0.83 -4.3% 1.18 -4.7% 1.32% -13 bps 1.56% -20 bps 1.51% -17 bps 61.61 7.0% 53.12 7.8% 77.78 6.0% \$71 -2.6% \$61 -5.4% \$140 -0.3% \$274 0.5% \$257 3.0% \$115 9.2% \$4,308 4.4% \$3,208 2.2% \$10,711 5.9% 95.07% 31 bps 93,77% 21 bps 98,75% 2 bps \$223 -2.1% \$213 -1.3% \$135 4.1% 4.93% -31 bps 6.23% -21 bps 1.25% -2 bps	2019 CHANGE 2019 CHANGE 2019 CHANGE 2019 60.79 7.2% 52.29 8.0% 76.61 6.2% 82.95 98.68% 13 bps 98.44% 20 bps 98.49% 17 bps 99.85% 0.82 -2.5% 0.83 -4.3% 1.18 -4.7% 0.13 1.32% -13 bps 1.56% -20 bps 1.51% -17 bps 0.15% 61.61 7.0% 53.12 7.8% 77.78 6.0% 83.08 \$71 -2.6% \$61 -5.4% \$140 -0.3% \$114 \$274 0.5% \$257 3.0% \$115 9.2% \$265 \$74 -2.8% \$64 -54% \$139 -0.1% \$114 \$4,308 4.4% \$3,208 2.2% \$10,711 5.9% \$94.64 95.07% 31 bps 93,77% 21 bps 98.75% 2 bps 99.65% \$223 -2.1% \$213 <th>2019 CHANGE 2019 CHANGE 2019 CHANGE 2019 CHANGE 60.79 7.2% 52.29 8.0% 76.61 6.2% 82.95 12.4% 98.68% 13 bps 98.44% 20 bps 98.49% 17 bps 99.85% 14 bps 0.82 -2.5% 0.83 -4.3% 1.18 -4.7% 0.13 -41.2% 1.32% -13 bps 1.56% -20 bps 1.51% -17 bps 0.15% -14 bps 61.61 7.0% 53.12 7.8% 77.78 6.0% 83.08 12.2% \$71 -2.6% \$61 -5.4% \$140 -0.3% \$114 -766 \$274 0.5% \$257 3.0% \$115 9.2% \$265 -4.3% \$4,308 4.4% \$3.208 2.2% \$10.711 5.9% \$9.464 3.9% 95.07% 31 bps 93.77% 21 bps 98.75% 2 bps 99.65% 30 bps</th> <th>2019 CHANGE 2019 2013 2013 24.3% 29.83 33 33 33 34 21.4% 29.83 33 34 21.4% 29.83 33 34 21.4% 29.83 33 34 34 29.85% 14 99.85% 14 0.13 -41.2% 0.41 1.32% -13 bps 1.56% -20 bps 1.51% -17 bps 0.15% 30.24 30.24 30.24</th> <th>2019 CHANGE 2019 CHANGE 2019 CHANGE 2019 CHANGE 2019 CHANGE 2019 CHANGE 60.79 7.2% 52.29 8.0% 76.61 6.2% 82.95 12.4% 29.83 -1.1% 98.68% 13 bps 98.44% 20 bps 98.49% 17 bps 99.85% 14 bps 98.65% 12 bps 0.82 -2.5% 0.83 -4.3% 1.18 -4.7% 0.13 -41.2% 0.41 -9.1% 1.32% -13 bps 1.56% -20 bps 1.51% -17 bps 0.15% -14 bps 1.35% -12 bps 61.61 7.0% 53.12 7.8% 77.78 6.0% 83.08 12.2% 30.24 -1.2% \$271 -2.6% \$61 -5.4% \$140 -0.3% \$114 -7.6% \$75 0.2% \$274 0.5% \$257 3.0% \$115 9.2% \$265 -4.3% \$133 -0.8%</th> <th>2019CHANGE2019CHANGE2019CHANGE2019CHANGE2019CHANGE2019CHANGE201960.797.2%52.298.0%76.616.2%82.9512.4%29.83-1.1%45.4998.68%13 bps98.44%20 bps98.49%17 bps99.85%14 bps98.65%12 bps97.53%0.82-2.5%0.83-4.3%1.18-4.7%0.13-41.2%0.41-9.1%1.151.32%-13 bps1.56%-20 bps1.51%-17 bps0.15%-14 bps1.35%-12 bps2.47%61.617.0%53.127.8%77.786.0%83.0812.2%30.24-1.2%46.64\$71-2.6%\$61-5.4%\$140-0.3%\$114-76%\$750.2%\$60\$2740.5%\$2573.0%\$1159.2%\$265-4.3%\$133-0.8%\$208\$74-2.8%\$64-5.4%\$139-0.1%\$114-7.7%\$760.1%\$64\$74-2.8%\$64-5.4%\$139-0.1%\$114-7.7%\$760.1%\$208\$744.3%\$6.4-5.4%\$139-0.1%\$114-7.7%\$760.1%\$64\$74-2.8%\$64-5.4%\$139-0.1%\$114-7.7%\$760.1%\$2726\$95.07%31 bps93.77%21 bps98.75%2 bps99.65%</th>	2019 CHANGE 2019 CHANGE 2019 CHANGE 2019 CHANGE 60.79 7.2% 52.29 8.0% 76.61 6.2% 82.95 12.4% 98.68% 13 bps 98.44% 20 bps 98.49% 17 bps 99.85% 14 bps 0.82 -2.5% 0.83 -4.3% 1.18 -4.7% 0.13 -41.2% 1.32% -13 bps 1.56% -20 bps 1.51% -17 bps 0.15% -14 bps 61.61 7.0% 53.12 7.8% 77.78 6.0% 83.08 12.2% \$71 -2.6% \$61 -5.4% \$140 -0.3% \$114 -766 \$274 0.5% \$257 3.0% \$115 9.2% \$265 -4.3% \$4,308 4.4% \$3.208 2.2% \$10.711 5.9% \$9.464 3.9% 95.07% 31 bps 93.77% 21 bps 98.75% 2 bps 99.65% 30 bps	2019 CHANGE 2019 2013 2013 24.3% 29.83 33 33 33 34 21.4% 29.83 33 34 21.4% 29.83 33 34 21.4% 29.83 33 34 34 29.85% 14 99.85% 14 0.13 -41.2% 0.41 1.32% -13 bps 1.56% -20 bps 1.51% -17 bps 0.15% 30.24 30.24 30.24	2019 CHANGE 2019 CHANGE 2019 CHANGE 2019 CHANGE 2019 CHANGE 2019 CHANGE 60.79 7.2% 52.29 8.0% 76.61 6.2% 82.95 12.4% 29.83 -1.1% 98.68% 13 bps 98.44% 20 bps 98.49% 17 bps 99.85% 14 bps 98.65% 12 bps 0.82 -2.5% 0.83 -4.3% 1.18 -4.7% 0.13 -41.2% 0.41 -9.1% 1.32% -13 bps 1.56% -20 bps 1.51% -17 bps 0.15% -14 bps 1.35% -12 bps 61.61 7.0% 53.12 7.8% 77.78 6.0% 83.08 12.2% 30.24 -1.2% \$271 -2.6% \$61 -5.4% \$140 -0.3% \$114 -7.6% \$75 0.2% \$274 0.5% \$257 3.0% \$115 9.2% \$265 -4.3% \$133 -0.8%	2019CHANGE2019CHANGE2019CHANGE2019CHANGE2019CHANGE2019CHANGE201960.797.2%52.298.0%76.616.2%82.9512.4%29.83-1.1%45.4998.68%13 bps98.44%20 bps98.49%17 bps99.85%14 bps98.65%12 bps97.53%0.82-2.5%0.83-4.3%1.18-4.7%0.13-41.2%0.41-9.1%1.151.32%-13 bps1.56%-20 bps1.51%-17 bps0.15%-14 bps1.35%-12 bps2.47%61.617.0%53.127.8%77.786.0%83.0812.2%30.24-1.2%46.64\$71-2.6%\$61-5.4%\$140-0.3%\$114-76%\$750.2%\$60\$2740.5%\$2573.0%\$1159.2%\$265-4.3%\$133-0.8%\$208\$74-2.8%\$64-5.4%\$139-0.1%\$114-7.7%\$760.1%\$64\$74-2.8%\$64-5.4%\$139-0.1%\$114-7.7%\$760.1%\$208\$744.3%\$6.4-5.4%\$139-0.1%\$114-7.7%\$760.1%\$64\$74-2.8%\$64-5.4%\$139-0.1%\$114-7.7%\$760.1%\$2726\$95.07%31 bps93.77%21 bps98.75%2 bps99.65%

© 2020 Nilson Report

When comparing credit card purchase volume only, UnionPay's share was up 112 bps to 42.32%. Visa's market share of 29.31% was down 91 bps. Mastercard's share was up 11 bps to 18.07%. American Express's share was down 25 bps to 7.35%. JCB's share was down 1 bps to 1.87%, and Diners Club/Discover's share was down 6 bps to 1.07%.

When comparing debit card purchase volume, UnionPay's share declined 262 bps to 55.67%. Visa's share was up 127 bps to 30.96%, and Mastercard's share rose 135 bps to 13.37%.

Cash advances on credit cards and cash withdrawals on debit cards combined totaled \$5.100 trillion. They declined as a percent of total volume to 14.62% from 15.85%. For Mastercard, cash accounted for 26.30% of its total volume, down 12 bps. For Visa, cash accounted for 23.97%, down 158 bps. For Diners Club/Discover, cash accounted for 8.09%, down 4 bps. For UnionPay, cash accounted for 3.62%, down 201 bps. For JCB, cash accounted for 2.37%, down 23 bps. For American Express, cash accounted for 1.25%, down 2 bps.

At the end of 2019, global brand credit, debit, and prepaid cards in circulation reached 14.36 billion, up 8.6% from the end

→ р8

Global Network Cards

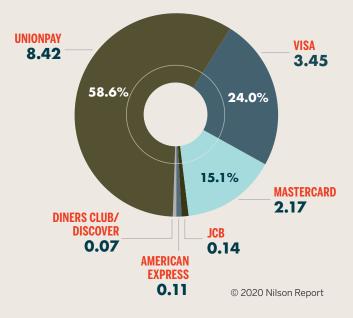
Figures are for 2019 with change vs. 2018

Brand/Card Type			Dollar Volum	ne (bil.)		Transactions (bil.)				Car	Cards	
	TOTAL	CHANGE	PURCHASES	CHANGE	CASH	CHANGE	TOTAL	CHANGE	PURCHASES	CHANGE	MIL.	CHANGE
UnionPay Credit	\$7,085.19	12.6%	\$7,060.28	13.0%	\$24.91	-38.8%	61.98	22.1%	61.88	22.2%	746.0	8.7%
Visa Credit	\$5,143.74	6.3%	\$4,890.08	6.6%	\$253.66	0.0%	69.92	9.3%	69.00	9.5%	1,135.0	2.2%
Mastercard Credit	\$3,215.48	10.4%	\$3,015.00	10.6%	\$200.48	6.8%	49.92	16.6%	49.14	16.9%	939.8	8.2%
American Express Credit	\$1,240.80	6.3%	\$1,225.32	6.3%	\$15.48	4.5%	8.90	6.4%	8.76	6.6%	114.4	0.4%
JCB Credit	\$320.11	9.1%	\$312.52	9.3%	\$7.59	-0.6%	4.22	9.0%	4.17	9.1%	139.7	10.3%
Diners Club/Discover Credit	\$194.25	4.0%	\$178.54	4.1%	\$15.71	3.6%	3.05	8.9%	2.98	9.1%	65.5	4.4%
CREDIT CARD TOTALS	\$17,199.57	9.6%	\$16,681.75	9.9%	\$517.82	-0.3%	198.00	14.7%	195.93	14.9%	3,140.4	5.8%
UnionPay Debit & Prepaid	\$7,806.03	-1.7%	\$7,291.43	1.5%	\$514.60	-32.3%	70.85	42.1%	69.33	45.3%	7,673.0	11.0%
Visa Debit & Prepaid	\$6,621.75	6.2%	\$4,055.11	10.8%	\$2,566.64	-0.4%	137.05	10.4%	116.50	13.0%	2,311.0	4.5%
Mastercard Debit & Prepaid	\$3,252.53	15.9%	\$1,751.81	18.2%	\$1,500.72	13.4%	72.43	20.3%	59.23	22.8%	1,232.3	9.0%
DEBIT CARD TOTALS	\$17,680.31	4.1%	\$13,098.35	6.3%	\$4,581.96	-1.7%	280.32	19.7%	245.06	23.1%	11,216.3	9.4%
Visa Totals	\$11,765.49	6.2%	\$8,945.19	8.5%	\$2,820.30	-0.3%	206.97	10.0%	185.50	11.7%	3,446.0	3.7%
Mastercard Totals	\$6,468.01	13.1%	\$4,766.81	13.3%	\$1,701.20	12.6%	122.35	18.8%	108.37	20.0%	2,172.1	8.6%
Visa & Mastercard Totals	\$18,233.50	8.6%	\$13,712.00	10.1%	\$4,521.50	4.2%	329.32	13.1%	293.87	14.6%	5,618.1	5.6%
UnionPay Totals	\$14,891.22	4.6%	\$14,351.71	6.8%	\$539.51	-32.7%	132.83	32.0%	131.21	33.4%	8,419.0	10.8%
CREDIT & DEBIT TOTALS	\$34,879.88	6.7%	\$29,780.10	8.3%	\$5,099.78	-1.5%	478.32	17.6%	440.99	19.4%	14,356.7	8.6%

Includes all consumer, small business, and commercial credit, debit, and prepaid cards. Some prior year figures have been restated. Currency figures are in U.S. dollars. Change figures for dollar volume reflect a year-over-year comparison in local currency. Visa includes Visa, Visa Electron, V Pay, Visa Direct, and Interlink brands. The Visa card figures exclude Plus-only cards (with no Visa logo). Mastercard excludes Maestro and Cirrus figures. American Express, Diners Club/Discover, and JCB include business from third-party issuers. JCB figures include other payment-related products and some figures are estimates. © 2020 Nilson Report

Global Network Cards in Circulation

in Billions with Market Shares



of 2018. UnionPay's market share of all global brand cards in circulation was 58.64%, up 119 bps. Visa's share was 24.00%, down 113 bps. Mastercard held a 15.13% market share, up 1 bps. JCB's share was 0.97%, up 1 bps. American Express accounted for 0.80%, down 7 bps. Diners Club/Discover's share was 0.46%, down 2 bps.

Credit cards issued in the U.S. with Visa, Mastercard, American Express, and Discover brands combined generated \$3.966 trillion in credit card purchase volume, or 23.77% of global credit card purchase volume, down 47 bps from 24.24%. U.S. credit card purchase volume in 2019 was up 7.8% compared to an increase of 10.6% for credit cards issued outside the U.S. Purchase volume from credit cards issued outside the U.S. was \$12.716 trillion in 2019.

For Mastercard, purchase volume from credit cards issued in the U.S. grew 12.2% to \$910.00 billion. From those issued outside the U.S., purchase volume increased 9.9% to \$2.105 trillion. For Visa, purchase volume from credit cards issued in the U.S. grew 6.8% to \$2.089 trillion, while purchase volume from those issued outside the U.S. grew 6.5% to \$2.801 trillion. For American Express, purchase volume from credit cards issued in the U.S. totaled \$820.59 billion, up 6.3%, the same as growth from cards issued outside the U.S., which totaled \$404.73 billion.

Mastercard and Visa debit cards issued in the U.S. generated \$2.733 trillion in purchase volume in 2019, up 9.6%. Debit cards with those brands issued outside the U.S. generated \$3.074 trillion, up 16.1%, with a market share increase of 144 bps to 52.94%.

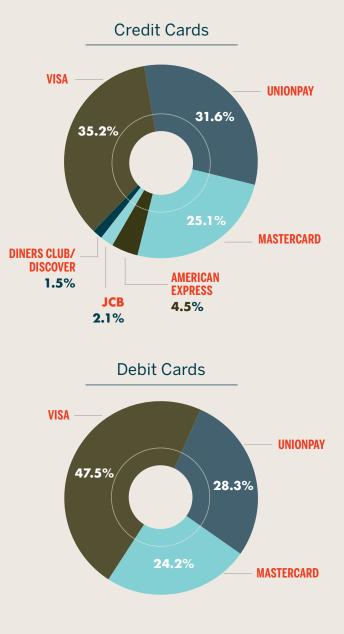
For Mastercard, purchase volume from debit cards issued in the U.S. grew 9.0% to \$790.51 billion. From those issued outside the U.S., purchase volume increased 27.0% to \$961.30 billion. For Visa, purchase volume from debit cards issued in the U.S. grew 9.8% to \$1.942 trillion, while purchase volume from those issued outside the U.S. grew 11.7% to \$2.113 trillion.

Mastercard purchase transactions from credit cards issued in the U.S. were up 13.5% to 10.29 billion, while those from credit cards issued outside the U.S. reached 38.85 billion, up 17.8%. Visa purchase transactions from credit cards issued in the U.S. reached 25.47 billion, up 6.7%. Visa credit cards issued outside the U.S. generated 43.52 billion, up 11.2%.

Visa purchase transactions from debit cards issued in the U.S. reached 47.90 billion, up 7.1%. Visa debit cards issued outside the U.S. generated 68.60 billion, up 17.6%. Mastercard purchase transactions from debit cards issued in the U.S. were up 8.1% to 19.80 billion. Mastercard purchase transactions from debit cards issued outside the U.S. reached 39.42 billion, up 31.8%.

Prior issues: 1169, 1154, 1130, 1109, 1085, 1060, 1037, 1014, 992

Market Shares of Purchase Transactions on Global Network Cards



© 2020 Nilson Report

Middle East and Africa's Top Merchant Acquirers

The 34 largest merchant acquirers in the Middle East–Africa region are shown in the chart on page 10 ranked by the number of Visa and Mastercard purchase transactions processed in 2019. Those acquirers, based in 14 countries, collectively processed \$188.16 billion in purchase volume from 3.65 billion Visa and Mastercard transactions at 638,951 merchants in the region last year. The group processed another 21.9 million American Express, Diners Club, JCB, and UnionPay transactions valued at \$2.74 billion.

New to the top acquirers ranking for 2019 were Abu Dhabi Commercial and Tiybr Payments (Noor Bank is the BIN sponsor) in the United Arab Emirates. The biggest gain in ranking was obtained by SABB (Saudi British Bank) which grew after purchasing local rival Alawwal's merchant business.

Largest Acquirers in Middle East and Africa

Ranked by Purchase Transactions in 2019

COMPANY	Transactions (BIL.)	Volume (BIL.)
Behpardakht Mellat	5.68	\$164.19
Saman e-Pay	4.82	\$109.15
Parsian e-Commerce	3.80	\$76.91
Asan Pardakht Persian	3.69	\$60.15
Iran Kish Credit Card	2.37	\$95.68
Sadad Informatics	1.29	\$57.72
Absa Bank/Barclays	1.06	\$26.82
Pasargad Electronic Payment	0.86	\$35.85
First National Bank	0.68	\$19.31
Standard Bank	0.40	\$12.66
	Behpardakht MellatSaman e-PayParsian e-CommerceAsan Pardakht PersianIran Kish Credit CardSadad InformaticsAbsa Bank/BarclaysPasargad Electronic PaymentFirst National Bank	COMPANY(BIL.)Behpardakht Mellat5.68Saman e-Pay4.82Parsian e-Commerce3.80Asan Pardakht Persian3.69Iran Kish Credit Card2.37Sadad Informatics1.29Absa Bank/Barclays1.06Pasargad Electronic Payment0.86First National Bank0.68

Rankings are based on consolidated volume and transactions. Figures include all Middle East and Africa business. Volume is net (gross minus chargebacks) for American Express, Diners Club, Discover, JCB, Mastercard, UnionPay, Visa, and domestic general purpose cards such as Shetab, RCS, eBucks, Petro, and Fleet.



Also included in the chart are 819.7 million domestic-only debit card purchase transactions valued at \$51.12 billion, as well as 47.8 million domestic-only credit card purchase transactions valued at \$2.30 billion.

The domestic-only brands included eBucks and Petro Card in South Africa, Al-Amil and KNet in Kuwait, eCash in Qatar, AutoBranch in Kenya, Mada in Saudi Arabia, MCB Fleetman in Mauritius, PayPak in Pakistan, and CMI in Morocco. Transactions for these brands combined increased 34.6% in 2019.

The largest merchant acquirers in the Middle East-Africa region operate in Iran, where Mastercard and Visa cards are not issued or acquired. The Iranian acquirers—Behpardakht Mellat, Saman e-Pay, Parsian E-Commerce, Asan Pardakht Persian, Iran Kish Credit Card, Sadad Informatics, and Pasargad Electronic Payment—process domestic-market cards. These companies combined processed 22.51 billion card payments last year valued at \$599.64 billion. Transactions increased 24.1% in 2019. All transactions handled were domestic-only Shaparak network card payments.

The six largest acquirers in Iran each handled more card payments than the largest Mastercard and Visa acquirer in the Middle East and Africa region.

Prior issues: 1155, 1134, 1112, 1090, 1068, 1043, 1020, 996, 983

→ p10

Merchant Acquirers in Middle East and Africa

Ranked by Visa and Mastercard Transactions in 2019

Ran	Rank		V	isa and Ma	stercard ¹		Other (Cards ²	Active	POS
			TRANSACTIONS		VOLUME		TRANSACTIONS	VOLUME	Merchant	Terminals
'19	'18	COMPANY, HEADQUARTERS	(MIL.)	CHANGE	(MIL.)	CHANGE	(MIL.)	(MIL.)	Outlets	
1	1	Absa Bank/Barclays, South Africa	1,049.5	14%	\$26,374.7	12%	7.5	\$443.8	61,573	243,690
2	2	First Natl Bank, South Africa ³	633.2	-2%	\$16,918.4	6%	44.2	\$2,388.1	66,390	126,528
3	3	Standard Bank, South Africa	398.5	-12%	\$12,338.3	-4%	3.2	\$321.7	48,966	86,578
4	4	Network Intl, United Arab Emirates 4	321.7	10%	\$36,227.1	2%	2.5	\$578.3	88,988	115,727
5	5	Nedbank, South Africa	229.0	-3%	\$10,997.8	-4%		-	50,691	50,566
6	6	Mashreq Bank, United Arab Emirates	213.3	31%	\$14,035.3	12%	1.3	\$411.2	21,000	45,000
7	7	First Abu Dhabi, United Arab Emirates	156.2	10%	\$16,668.0	14%	<0.1	\$5.5	22,108	52,463
8	8	CMI, Morocco ⁵	85.5	39%	\$4,732.1	25%	4.5	\$126.3	43,751	46,354
9	19	SABB, Saudi Arabia ^{6, 11}	68.4	374%	\$5,281.7	319%	229.4	\$9,084.4	10,254	42,969
10	9	Natl Bank of Kuwait, Kuwait 7	62.4	12%	\$5,714.6	8%	16.5	\$1,998.1	13,973	17,119
11	10	Kuwait Finance House, Kuwait	58.3	11%	\$5,215.1	9%	-	-	4,113	11,128
12	11	Qatar Natl Bank, Qatar ⁸	47.9	13%	\$7,321.2	16%	9.0	\$1,587.2	3,820	8,180
13	-	Abu Dhabi Comml, United Arab Emirates	39.5	_	\$2,467.0	_	0.4	\$52.2	6,532	14,531
14	12	Mercantile Bank, South Africa	38.1	5%	\$1,154.3	8%	31.3	\$983.2	33,679	21,153
15	13	Commercial Intl Bank, Egypt	35.4	17%	\$1,876.2	15%	<0.1	\$8.8	10,330	13,849
16	14	Mauritius Comml Bank, Mauritius 9	27.6	15%	\$1,287.8	12%	0.9	\$114.5	5,232	9,308
17	15	Commercial Bank, Kuwait	27.0	20%	\$5,176.0	10%			6,043	13,960
18	16	Areeba, Lebanon	17.8	9%	\$1,854.5	-1%	0.3	\$96.6	11,462	14,102
19	18	Gulf Bank, Kuwait	17.6	10%	\$3,009.7	8%	0.2	\$39.4	5,037	5,307
20	17	Arab African Intl Bank, Egypt	17.3	6%	\$648.7	11%		-	5,854	8,628
21	21	Bank Alfalah, Pakistan ¹⁰	15.2	17%	\$643.3	26%	1.3	\$34.2	4,721	6,246
22	22	Natl Commercial Bank, Saudi Arabia ¹¹	14.9	16%	\$1,306.3	6%	131.6	\$10,232.4	18,310	71,174
23	20	Banque Misr, Egypt	14.3	10%	\$643.4	10%		φ10,232.4 	5,080	7,987
24	23	Doha Bank, Qatar	13.8	12%	\$1,846.1	7%	<0.1	\$21.5	3,223	5,609
25	25	Equity Bank, Kenya ¹²	12.0	32%	\$668.4	37%	1.3	\$53.3	15,081	17,847
26	24	Al Rajhi Bank, Saudi Arabia ¹¹	12.0	10%	\$895.9	8%	237.5	\$13,610.4	40,906	115,324
20	24		8.5	10%	\$914.0	-3%	0.1	\$13,010.4	10,000	113,324
		Credit Libanais, Lebanon				-5%				
28	27	Riyad Bank, Saudi Arabia 11	6.8	11%	\$665.2		91.4	\$7,127.3	5,178	53,580
29	28	Arab National Bank, Saudi Arabia 11	4.8	7%	\$440.1	4%	50.7	\$4,621.3	3,536	19,299
	29	BankMed, Lebanon	2.9	20%	\$271.2	-5%		-	2,316	2,874
31	32	Co-Operative Bank, Kenya 12	1.9	12%	\$129.5	7%	0.6	\$22.8	2,117	1,644
32	31	SAIB, Saudi Arabia ¹¹	1.9	3%	\$287.1	1%	23.4	\$2,159.5	2,539	9,303
33	33	FirstBank, Nigeria	0.6	14%	\$68.3	11%	<0.1	\$0.2	6,147	13,789
34		Tiybr Payments/Noor Bank, U.A.E.	0.4	-	\$78.0			-		
35	34	Behpardakht Mellat, Iran ¹³		-	-		5,680.0	\$164,186.3	1,053,962	937,447
36	35	Saman e-Pay, Iran 13	-	-	-	-	4,823.2	\$109,149.5	11,286	973,674
37	37	Parsian E-Commerce, Iran 13		-	-	-	3,797.3	\$76,914.4	1,053,556	1,094,077
38	36	Asan Pardakht Persian, Iran 13		-	-		3,688.8	\$60,148.4	561,593	557,099
39	38	Iran Kish Credit Card Co., Iran 13	-	-	-	-	2,369.0	\$95,677.4	1,120,762	1,223,202
40	39	Sadad Informatics, Iran 13		-	-	-	1,290.7	\$57,715.5	707,483	795,937
41	40	Pasargad Electronic Payment, Iran ¹³	_	_	-	-	856.8	\$35,851.5	426,348	450,320

Figures are net (gross minus chargebacks). Change in volume is based on local currency. **1** Visa and Mastercard credit, debit, and prepaid cards including Electron and Maestro. **2** Includes American Express, Diners Club/Discover, JCB, UnionPay, and domestic debit and credit cards. **3** Other includes Petro Card, Fleet, eWallet, and eBucks domestic debit and credit cards. **4** Estimate. Includes Jordan. **5** Other includes CMI private label domestic debit cards. **6** Includes Alawwal Bank. **7** Other includes Al-Amil & KNet domestic debit cards. **8** Other includes eCash domestic debit cards. **9** Other includes Fleetman domestic debit and prepaid cards. **10** Other includes Pay Pak domestic debit cards. **11** Other includes Mada domestic debit cards. Visa/Mastercard estimated. **12** Other includes AutoBranch domestic debit cards. **13** All are Shetab domestic debit and credit cards.

Wirecard's Prepaid and Merchant Acquiring Assets

Germany-based Wirecard AG, provider of prepaid card issuing and account processing services as well as merchant acquiring and POS terminal processing services in more than 20 countries, filed for insolvency in Munich on June 25, 2020. The filing was made by the holding company and did not cover its subsidiaries. Wirecard had loans due on June 30 for \$896 million and on July 1 for \$560 million.

Wirecard is a principal member of Visa and Mastercard in Europe through Wirecard Bank in Germany as well as e-money licensed institutions in the U.K. and Turkey. The bank in Germany holds an estimated \$1.55 billion in deposits. It is under management of German banking regulator BaFin.

The company's founder, Marcus Braun, spent nearly two decades building a publicly traded company (Frankfurt Stock Exchange), mainly through acquisitions. Those purchased assets, prepaid and acquiring, were legitimate. However, none ever gave Wirecard significant market share in any country.

There were bogus assets too and wild claims as to their profitability. Those businesses ostensibly focused on merchant acquiring/processing in Asia-Pacific. Profits from those entities on Wirecard's balance sheet were either part of a fraudulent conspiracy by company higher-ups or the product of the fraudulent deception of those same higher-ups by conspirators with which the company thought it was doing legitimate business. Wirecard claimed to have \$2.10 billion in cash on its balance sheet that almost certainly never existed. That cash amounted to over 32% of the \$6.50 billion in total assets claimed by the company. Mr. Braun was arrested in Germany and charged with fraud on June 23.

EY, Wirecard's auditing firm, claims it was deceived. Investors in Wirecard are suing EY. Among other things, plaintiffs say EY never validated cash claimed to be in an account at OCBC Bank in Singapore in 2016, 2017, and 2018. SoftBank converted the convertible bond to a hedge transaction in September 2019, which limited its exposure in Wirecard.

In the Philippines, regulators are investigating Centurion Online Payment, PayEasy Solutions, ConePay, and two other companies that supposedly were significant Wirecard merchant acquiring/processing partners. The companies exist only on paper. When EY conducted its audits, it was shown documentation that Philippine banks BDO Unibank and Bank of the Philippine Islands held up to \$2.10 billion (€1.9 billion) in cash. The documents were likely forged by bank employees.

IN THIS ARTICLE

Wirecard's legitimate assets include issuing its own boon brand mobile wallet prepaid cards on the Mastercard network in France, Germany, Ireland, Italy, Spain, Switzerland, and the U.K.

Merchant acquiring assets in Europe include contracts to process online payments, mostly for airlines. Other processing contracts include those with Kyivstar (Ukraine), Getty Images, and Olympus. Wirecard is a certified Visa Token Service vendor. It operates POS terminals in Germany, Austria, the Czech Republic, and Romania as a third-party processor.

In Asia-Pacific, Wirecard bought merchant and cardholder account processing assets from New Zealand-based CFG in 2014. Two years later, it bought Visa Processing Service businesses in Singapore and India and gained 70 contracts to be a third-party debit card account processor. It has a merchant acquiring joint venture with Cuscal in Australia. In India, Wirecard manages a network of 5,000 retail outlets that process consumer bill payments and its GI Technology subsidiary works with DCB Bank to acquire merchant transactions. In 2017, Wirecard bought merchant card processing contracts from Citi covering 11 countries. Last year, Wirecard bought the assets of AllScore Payment Services in China. Ctrip, China's largest online travel agent, uses Wirecard to issue a prepaid Visa card. Wirecard also issues a Visa prepaid card in partnership with cryptocurrency payment platform Wirex. Shell is a fleet card customer in Indonesia.

In the U.S., Wirecard bought Citibank's prepaid card business in 2017. Currently, Wirecard North America processed cards are issued in the U.S. and Canada by Peoples Trust, Fifth Third Bank, and Sunrise Banks. The business is for sale.

In Mexico, Wirecard has a partnership with Banca Afirme to issue commercial prepaid cards.

Prior issues: 1174, 1173, 1172, 1170, 1165, 1163, 1162, 1159, 1153, 1146, 1144, 1140, 1138, 1136

CPI and Visa Promote Plastic Card Sustainability

There are more than 22 billion general purpose and private label payment cards in circulation worldwide. Every year another 6 billion are manufactured to replace expired cards and to serve new accounts. Nearly every card is produced with first-use PVC plastic. Payment cards are part of the plastic pollution problem plaguing humankind. Card manufacturers worldwide are competing to create new cards that are not ecologically harmful. The ultimate aim is to eliminate firstuse plastic.

Earthwise High Content Card is the name for a Visa-certified, EMV-compliant payment card available from CPI Card Group, the 7th largest payment card manufacturer in the world. Depending on the design, up to 98% of the content of an Earthwise card can be made from discarded, previously used plastic, with only the ink, adhesives, antenna, and chip not constructed from repurposed sources.

Visa has an initial exclusive right to promote Earthwise High Content Cards globally. The world's largest card network doesn't issue cards. However, its brand is on more than 3.45 billion cards worldwide and that figure will grow by another 500 million in five years.

Visa has corporate sustainability goals as many large companies do. CPI and Visa expect that corporate sustainability groups at large banks will embrace Earthwise cards, which will motivate their card center managers to accommodate a higher cost versus first-use PVC cards.

CPI gained expertise in the material science required to manufacture sustainable ISO and network-certified cards when it brought to market its Second Wave product in 2019. That EMV-compliant, dual-interface card was manufactured using reclaimed plastics diverted from entering an ocean or in proximity to waterways or shorelines that lead to an ocean.

Earthwise cards, which can be produced as dual-interface cards, are produced using rPETG upcycled plastic. They meet or exceed all requirements for durability and flexibility. IN THIS ARTICLE

@ cpi card group VISA

INTERVIEWED FOR THIS ARTICLE Jack Jania is VP, Product Management & Innovation at CPI Card Group in Littleton, Colorado, jjania@cpicardgroup.com, www.cpicardgroup.com. Douglas Sabo is VP and Global Head of Corporate Responsibility and Sustainability at Visa in Foster City, California, dsabo@visa.com, www.visa.com.



The Earthwise High Content Card is made entirely from previously used plastic excluding ink, adhesives, and the chip.

Priority Merchant Acquiring and B2B Processing

Priority Technology Holdings facilitated over \$86 billion in payments in 2019. The company started in 2005 as an independent sales organization processing card payments for small businesses. Today, its Priority Payment Systems division ranks as the 12th largest merchant acquirer in the U.S. and is 5th largest among nonbanks based on over \$51 billion in card payment volume from 210,000 merchants. Priority owns companies that specialize in hospitality, healthcare, property management, and consumer lending.

Priority Technology Holdings operates a commercial division that provides a businessto-business (B2B) accounts payable payment service (CPX) supporting 38 financial institutions and 6 marketplace partners that offer their business customers an integrated accounts payable service, including virtual cards, ACH, check, and instant payouts to card accounts as well as prepaid and commercial cards. Those combined products and services amounted to nearly \$35 billion in payment volume last year. Priority uses Sutton Bank as its bank sponsor into Visa when it issues cards and Atlantic Capital Bank and Fifth Third for ACH processing.

The CPX platform is bank, brand, and processor agnostic. It provides payment services to companies including MineralTree, Nexus Systems, Kontrol Payables, Restaurant365, and Paymerang. Partners include American Express, Mastercard, and Billtrust. The platform provides access to a full suite of card and cash management services through the CPX Gateway that integrates with ERP systems. Priority says that in five minutes it can map an entire accounts payable file from the ERP system through a single payment file integration. This process allows a business to route payments to their suppliers in the preferred method.

CPX provides an interactive portal that connects participating buyers and suppliers for the exchange of data and payment information. Priority Commercial Payments also handles targeted outreach programs to suppliers to expand card acceptance. Mastercard uses Priority to handle its supplier enablement program for 14 U.S. banks and marketplaces to expand acceptance of virtual commercial card payments. Priority can provide special interchange rates when leveraging its acquiring infrastructure assets. It recently announced Citibank will use its service to support a network of B2B suppliers. It can pivot from offering dynamic discounts via its ACH platform to promotion of virtual card acceptance by offering a discount on early payment.

Priority can deliver front-end capabilities on a white-label basis to financial institutions and integrate with their processors to generate one-time virtual card numbers in addition to other cash management payments. Integrations are in place with Tsys, Galileo, and DXC.

Priority went public in 2018 on the Nasdaq stock exchange, although the majority of the company's equity is still owned by its founder and CEO Tom Priore. Having completed its integrated accounts payable platform, Priority is doing the same on the accounts receivable side to offer an end-to-end B2B payment service. CPX competes with companies including AvidXchange, Comdata, Wex, CSI, and Paymode-X.

INTERVIEWED FOR THIS ARTICLE Cindy O'Neill is President at Priority Commercial Payments in Alpharetta, Georgia, cindy.oneill@ prioritycommercialpayments.com, www.prioritycommercialpayments.com.

Prior issues: 1171, 1140, 1127, 1105, 1082, 1059, 1054, 1036, 1013

IN THIS ARTICLE

PRIORITY COMMERCIAL PAYMENTS

\$51 billion in card payment volume ranked Priority Payments as the

12th largest

merchant acquirer in the U.S. and the 5th largest among nonbanks G+D's has designed an app called Convego tap that turns contactless chip cards into a second factor for strong customer authentication.

G+D Mobile Security Uses Payment Cards for SCA

The European Union requires multifactor authentication for all digital transactions

Software that financial institutions can add to their mobile banking apps to access data in a contactless chip card to deliver a second identification factor to secure online and mobile logins is available from G+D Mobile Security. Called Convego tap, the app can be used as a solution for strong customer authentication (SCA), a requirement in the European Union under banking regulations known as Payment Services Directive 2 (PSD2). To meet SCA requirements, financial institutions must support all digital transactions with multifactor authentication. For PSD2, two of three factors must be addressed—something the consumer knows, something they possess, something they can infer. With Convego tap, the contactless card is what the cardholder possesses and their PIN is what they know. The combination is SCA compliant.

IN THIS ARTICLE



A tap of a card against the consumer's mobile phone initiates a FIDO-compliant (fast ID online) authentication when requests reach a FIDO-compliant back-end server. The secure connection between the card and the server is based on PKI and EMV technologies. G+D also sells those servers. However, Convego tap will work with FIDO-compliant servers from any technology provider.

G+D provides an SDK to financial institutions for integration with Convego tap and their banking apps and digital wallets.

In some markets, Convego tap could be used to activate new cards, saving costs associated with phone calls to a center or sending one-time passwords. Cardholders would activate their new card by tapping their card against the phone and inputting their PIN in the phone. Other use cases include authentication of high-value online transactions or bank transfers and application onboarding.

Convego tap is available worldwide on a license basis or as a software-as-a-service (SaaS) model.

INTERVIEWED FOR THIS ARTICLE Jukka Yliuntinen is Head of Digital Solutions at G+D Mobile Security in Munich, Germany, jukka.yliuntinen@gi-de.com, www.gi-de.com.

American Express to Open Network Business in China

Earlier this month, Express Company, a joint venture between American Express and LianLian DigiTech Company, received an operating license from regulators in China to clear card transactions in mainland China denominated in renminbi. Express Company received approval from the People's Bank of China in November 2019 after spending most of last year building the needed infrastructure. American Express hasn't been given approval to issue cards or acquire transactions.

Later this year, Express Company is expected to announce partnerships with banks, payment service providers, and digital wallet providers to issue commercial and consumer card products and acquire transactions from merchants. There are American Express cards issued in mainland China by ICBC, China Merchants Bank, China CITIC Bank, Bank of China, Shanghai Pudong Development Bank, and China Minsheng Bank. Those cards are used exclusively outside China including on overseas websites.

Bank of China, ICBC, Bank of East Asia, Agricultural Bank, Ping An Bank, Bank of Communications, China Construction Bank, Alipay, and UnionPay acquire American Express card payments in China initiated by tourist and business cardholders from other countries.

INTERVIEWED FOR THIS ARTICLE Walter Liu is Chief Executive Officer at Express Company in Shanghai, China, walter.liu@aexpec.com, www.americanexpress.com.

Prior issues: 1169, 1148, 1143, 966, 950, 807

IN THIS ARTICLE

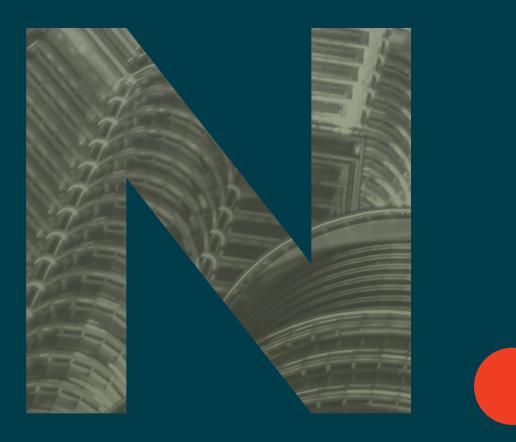


LianLian ieie

Management Changes

- Chris Newkirk has been appointed Chief Strategy Officer at Visa, cnewkirk@visa.com.
- Wendy Holliday has been appointed Chief Executive Officer at Wnet, wholliday@wnetonline.org.
- Cecilia Mao has been appointed Chief Product Officer at Equifax, cecilia.mao@equifax.com.
- Damian Tanenbaum has been appointed Head of Customer Delivery and Chief Operating Officer at Ingenico North America, damian.tanenbaum@ingenico.com.
- Kevin Fox, formerly at NovoPayment, has been appointed Executive Vice President of Americas Sales at i2c, kfox@i2cinc.com.

- Frank Bisignano has been appointed Chief Executive Officer at Fiserv, frank.bisignano@fiserv.com.
- Edoardo Baumgartner has been appointed Country Manager Germany at SIA, massimoedoardo.baumgartner@ p4cards.eu.
- Greg Quarles has been appointed Chief Executive Officer at Green Dot Bank, gquarles@greendotcorp.com.
- Lucy Hagues has been appointed Chief Executive Officer, U.K. at Capital One Financial, lucy-marie.hagues@ capitalone.com.
- Afshin Yazdian has been appointed Chief Executive Officer, US Acquiring Division at Paysafe, afshin.yazdian@ paysafe.com.





OUR PROMISE

No paid advertising. No sponsored content of any kind. No pay-to-play interviews.

We do not promote white papers, webinars, or seminars in return for financial compensation.

No company can pay to be featured in our newsletter.

Message from the Publisher,

In our next issue, we will publish a comparison of results for UnionPay, Visa, Mastercard, JCB, American Express, and Diners Club in Asia-Pacific in 2019. Issue #1179 will also feature buy now, pay later companies that operate in the U.S. as well as our monthly presentation of investments & acquisitions.

Al Ket. t.s.

David Robertson, Publisher June 30, 2020

© 2020 HSN Consultants, Inc. NILSON REPORT All Rights Reserved. Reproducing or allowing reproduction or dissemination of any portion of this newsletter in any manner for any purpose is strictly prohibited and may violate the intellectual property rights of HSN Consultants, Inc. dba Nilson Report.