



NILSON REPORT

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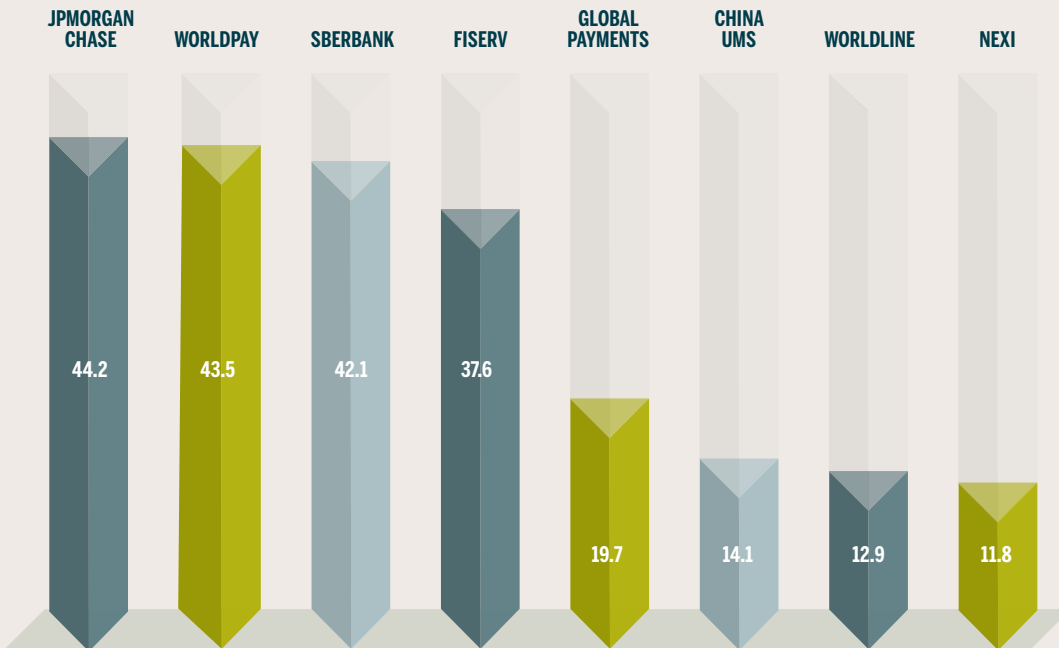
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TRANSACTIONS (BIL.) IN 2022

Largest Merchant Acquiring Portfolios Worldwide

The eight acquirers listed below processed 225.87 billion transactions in 2022. This represented 48.4% of transactions generated by the top 150 worldwide.

→ [Read full article on page 5](#)



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COVER STORY

The 150 Largest Merchant Acquirers Worldwide

Total transactions—global and domestic card brands combined—processed by this group reached 466.89 billion in 2022, up 12.1% from 2021.

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American Express is First Issuer to add Biometrics to 3-D Secure

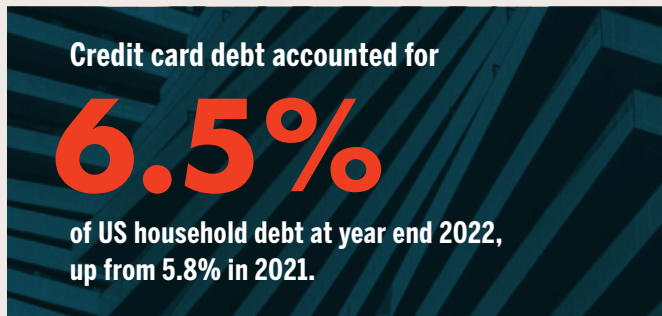
Because SMS messages are susceptible to social engineering fraud, all large issuers are looking for an alternative solution.

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POS Terminal Shipments Worldwide

Point-of-sale terminal shipments worldwide reached 148.3 million in 2022, an increase of 4.5% over 2021.

p8



Household Debt and Credit Cards in the US

Credit card debt per household of \$9,566 at the end of 2022 was up 15.4% from 2021.

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Experian Digital Debit Card

Users are promised that all payments for eligible bills will be added to their Experian credit report.

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PHOTO CREDITS: Cover and Back Page Albert Stoykov on Unsplash; p2 Bruno Fatori (left) and Yi Wei (right) on Unsplash; p5 Jutharat Suanprang on Unsplash; p12 Clark Van Der Beken on Unsplash

The top 10 processed **245.06 billion transactions, accounting for 52.5% of all transactions for the top 150**

U.S. Bank Integrates with Software Providers

The bank will provide an online marketplace of vetted software providers its customers can connect to via APIs.

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New Nilson Report Publication AVAILABLE NOW

Top Card Issuers and Merchant Acquirers Worldwide

15th edition

- ▶ **More than 150 pages** list 1,370 financial institutions in 120 countries
- ▶ **Now available** to read, search, print and download using our PDF viewer
- ▶ **65 downloadable datasets** in Excel format—our most requested feature

www.nilsonreport.com/research

REGULAR FEATURES

p15 **Investments & Acquisitions**

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FEATURED IN OUR UPCOMING ISSUE

Top 150 Credit Card Issuers Worldwide

Statistics include outstanding receivables for each issuer as of December 31, 2022, as well as the top 10 countries for credit card outstandings.

First Look

News in brief on payment industry trends around the world.

MASTERCARD has added two new rewards for eligible World Mastercard and World Elite Mastercard cardholders. Those who are new to Instacart will receive a two-month free trial and \$10 off their second eligible Instacart purchase each month. Those who are new to Peacock's streaming service will get either a \$3 credit (World Mastercard) or a \$5 credit (World Elite Mastercard) on their monthly statement.

Seema Chibber is EVP of Credit, North America at Mastercard, seema_chibber@mastercard.com, www.mastercard.com.

GALILEO FINANCIAL TECHNOLOGIES will use Mastercard Installments to make its buy now, pay later product available for lenders to offer to their small business clients. Galileo is owned and operated independently by SoFi Technologies.

Silvana Hernandez is EVP, Product & Engineering at Mastercard, silvana.hernandez@mastercard.com, www.mastercard.com. David Feuer is CPO at Galileo, dfeuer@galileo-ft.com, www.galileo-ft.com.

NUVEI, a Canadian fintech company, now lets its B2B clients offer card-not-present and account-to-account processing to their customers in Canada. B2B clients will also get Level 3 processing and accounts receivable services for proprietary accounts.

Laura Miller is CRO and Global Head of E-Commerce, laura.miller@nuvei.com, www.nuvei.com.

MODERN TREASURY, an operating system for payment processing, has joined J.P. Morgan's Payments Partner Network. Enterprises can leverage Modern Treasury's software to integrate directly with J.P. Morgan's treasury services and embedded payments. In 2019, J.P. Morgan was Modern Treasury's first partner in rolling out real-time payment capabilities.

Dimitri Dadiomov is CEO at Modern Treasury, dimitri@moderntreasury.com, www.moderntreasury.com.

PAYZEN, a fintech focused on making healthcare more affordable through the use of AI, has launched the PayZen Care Card in partnership with Geisinger and University of Texas Medical Branch. Providers can offer the Care Card to patients ahead of scheduled procedures, at point of care, or for longer care cycles such as dialysis or cancer treatments. The card provides patients with zero-interest options for payments made in multiple installments. PayZen funds the provider upfront.

Tobias Mezger is COO at PayZen, tobias@payzen.com, www.payzen.com.

AMERICAN EXPRESS has refreshed its US American Express Business Gold Card with the ability to earn 4X Membership Rewards points in more business spending categories including, but not limited to, transit, advertising, gas and dining. Cardholders can also earn up to \$395 in statement credits each year on eligible purchases at select merchants. They also have the option of choosing the company's new Rose Gold design, formerly available only to Consumer Gold Card customers.

Courtney Kelso is EVP, Global Commercial Cards at American Express, courtney.e.kelso@aexp.com, www.americanexpress.com.

THE FINANCIAL DATA EXCHANGE

reported that 65 million consumer accounts are now actively utilizing its FDX API for secure open finance data sharing. This includes 13 million accounts added since April 2023. The nonprofit organization's aim is to unify the financial industry around a common, interoperable, royalty-free standard for secure and convenient consumer and business access to their financial data. It operates in the US and Canada.

Don Cardinal is Managing Director, dcardinal@financialdataexchange.org, www.financialdataexchange.org.

TRUSTECH, November 28-30, 2023, Paris, France. Global Innovative Payments, Identification and Security Solutions. The annual meeting place of the card and trust technology industries. This event is a mix between trade show and conference with over 200 international exhibitors and around 150 international speakers covering the latest technologies and trends in the fields of payments & identification. For more information [click here](#).

DOCK, a Brazil-based B2B company and regulated payment institution, has added Tenpo as a customer in Chile. Tenpo, that country's largest digital bank, has just launched a credit card business. Chile is the ninth market for Dock, which currently handles more than 70 million active accounts and processes more than \$240 billion annually.

Fernando de Paula is Director of Acquiring at Dock, fernando.paula@dock.tech, www.dock.tech. Fernando Araya is CEO at Tenpo, fernando.araya@tenpo.cl, www.tenpo.cl.

HEPSIPAY, a Turkey-based ecommerce platform, has signed a five-year partnership with Visa for prepaid card acceptance. Platform users will be able to generate digital Hepsipay cards bearing a Visa logo, allowing them to use their cards worldwide for online and in-store purchases.

Erkin Aydin is CEO at Hepsiburada Financial Services, erkin.aydin@hepsiburada.com, www.hepsiburada.com. Samile Mumin is General Manager, Turkey at Visa, samile.mumin@visa.com, www.visa.com.

CORRECTION: In the First Look section of issue #1248 we provided only the partial name of the executive contact and an incorrect URL for Upgraded. The full name of the CEO at Upgraded is John Erik Metcalf and the correct URL is <https://getupgraded.com>.

GODADDY is the first website builder to integrate Paze into small businesses' customer checkout experience. Paze, an online payment solution developed by Early Warning Services, will include over 150 million eligible credit and debit cards at commercial launch.

James Anderson is Managing Director, Paze at EWS, james.anderson@earlywarning.com, www.earlywarning.com. Saurabh Mangal is Head of Payments Products at GoDaddy, smangal@godaddy.com, www.godaddy.com.

PASSPORT PARKING'S mobile payment application will be used by the City of Beverly, Massachusetts, to allow parking payments via smartphones. After downloading the free app, users enter the zone number, license plate number and the desired length of time for parking. They can receive notifications when their sessions are about to expire, extend their sessions remotely and view receipts and parking history.

Anthony Caddell is Sr. Account Executive at Passport, anthony.caddell@passportinc.com, www.passportinc.com.

FISERV and PLAID have agreed to create application programming interfaces that will give consumers who bank with Fiserv's clients secure, credential-less API-based connectivity to the more than 8,000 applications and services on the Plaid network. Fiserv serves nearly 3,000 bank and credit unions.

Matt Wilcox is President of Digital Payments at Fiserv, matthew.wilcox@fiserv.com, www.fiserv.com. Aly Yarris is Head of Financial Access Partnerships at Plaid, ayarris@plaid.com, www.plaid.com.

PIDGIN, a secure real-time payment platform, has partnered with Exchange Bank to offer instant payments to its retail and commercial account holders. Pidgin serves as a central connection point to the Federal Reserve's FedNow Service and other faster payment networks, including The Clearing House's RTP network.

Ricky Ray is CEO at Exchange Bank, ricky@exba.com, www.exba.com. Abhishek Veeraghanta is CEO of Pidgin, abhishek@pidgin.net, www.pidgin.net.

BLUEFIN will provide a customized version of its PCI-validated encryption and tokenization technologies to Invenco by GVR, a service provider to convenience retailers in North America. Bluefin's P2PE technology will integrate with Invenco's FlexPay IV and FlexPay 6 outdoor payment terminals. Bluefin says its technology reduces the work involved in PCI DSS compliance by 70+%.

David Schuster is Sr. Director, Portfolio Manager - Devices at Invenco by GVR, david.schuster@invenco.com, www.invenco.com. John Perry is CEO at Bluefin, john.perry@bluefin.com, www.bluefin.com.

VISA has announced a new \$100-million initiative to invest in the next generation of companies focused on developing generative AI technologies and applications for payments. Generative AI is an emerging subset of AI that is built on large language models to develop artificial general intelligence capable of generating text, images or other content from large sets of existing data when given prompts.

David Rolf is Head of Visa Ventures, droff@visa.com, www.visa.com.

INTERAC, a Canadian payment brand that facilitates financial transactions with federally regulated banks and provincially regulated credit unions, has broadened access to allow additional types of financial institutions to participate in the Interac e-Transfer service. First to gain provisional approval is Wealthsimple, a provider of digital financial services.

Isabel Lee is Director, Client Solutions at Interac, iylee@interac.ca, www.interac.ca.

SOLUTIONS BY TEXT has partnered with Nuvei to add embedded payments to its FinText platform. The technology handles bill pay, from initiation to payment, within the text channel. It delivers secure tokenized PCI-compliant payments that can be initiated through simple keywords like "pay now" for faster transactions.

David Baxter is CEO at Solutions by Text, dbaxter@solutionsbytext.com, www.solutionsbytext.com.

BLUESNAP, a global payment orchestration platform for B2B and B2C businesses, has partnered with Retail Realm, a multinational Microsoft ISV specializing in payments. For retailers using Microsoft Dynamics 365, the integration will improve their ability to give global customers local payment methods and currencies.

Ralph Dangelmaier is CEO at BlueSnap, ralphd@bluesnap.com, www.bluesnap.com.

NEXI, Europe's second largest merchant acquirer, has signed a 7-year extension of its partnership with Norway's BankID BankAxept. Nets has processed BankAxept transactions for 30 years.

Øyvind Westby Brekke is CEO at BankID BankAxept, oyvind.brekke@bidbax.no, www.bankaxept.no. Torsten Hagen Jørgensen is Global Head of Issuing Solutions at Nexi Group, torsten.hagen.jorgensen@nets.eu, www.nets.eu.

HIPFINITY, which offers a suite of payment and fintech services, has partnered with hardware, sales and service provider POS Nerds to access its distribution channels.

Lori Pagnozzi is CEO and Chief Disruptor at HipFinity, pagnozzi@hipfinity.co, www.hipfinity.co. Art Trapp is CEO at POS Nerds, art@pos4nerds.com, www.pos4nerds.com.

PARAM, Turkey's largest fintech, has acquired Czech BNPL provider Twisto to expand its footprint across Europe, beginning with the UK, Germany, the Netherlands, Czech Republic and Poland. Twisto has licenses that will allow Param to offer its embedded finance services across the European market.

Emin Can Yılmaz is CEO at Param, emincan@param.com.tr, www.param.com.tr.

QUISITIVE TECHNOLOGY SOLUTIONS has migrated its patented AgeChecker.Net, used for ecommerce age verification, to PayiQ's payment processing, allowing Quisitive to handle monthly payments for over 700 customers. PayiQ will provide Visa and Mastercard authorization, clearing and settlement services.

Mike Reinhart is CEO at Quisitive, mike.reinhart@quisitive.com, www.quisitive.com.

The Largest Merchant Acquirers Worldwide

The 150 largest acquirers of general purpose credit, debit and prepaid card payments from merchants worldwide are listed here based on transactions processed in 2022. Total transactions of 466.89 billion processed by this group increased 12.1% from 2021. All transaction figures shown here are a combination of global and domestic card brands.

Among the 150 largest, acquirers from two countries hit the 1 billion transaction mark for the first time: Akbank (Turkey) and Alfa Bank (Russia).

JPMorgan Chase's market share among the top 150 dipped to 9.5% from 9.7%. Russia-based Sberbank's share dropped to 9.0% from 9.1% and Fiserv increased to 8.1% from 6.6%. New to the top 150 were National Bank of Kuwait (Kuwait) and Bank Alfalah (Pakistan).

The 10 largest acquirers collectively processed 245.06 billion transactions. They accounted for 52.5% of all transactions handled by the 150 listed here. JPMorgan Chase moved into 1st place worldwide. One acquirer each from Russia, China and Italy are ranked among the top 10 alongside group acquirers with business across multiple countries.

Worldline Group moved up to 7th from 8th largest, Getnet (Santander Merchant Services) moved up to 17th from 19th, EVO Group moved up from 23rd to 22nd and PagSeguro moved up to 26th from 31st.

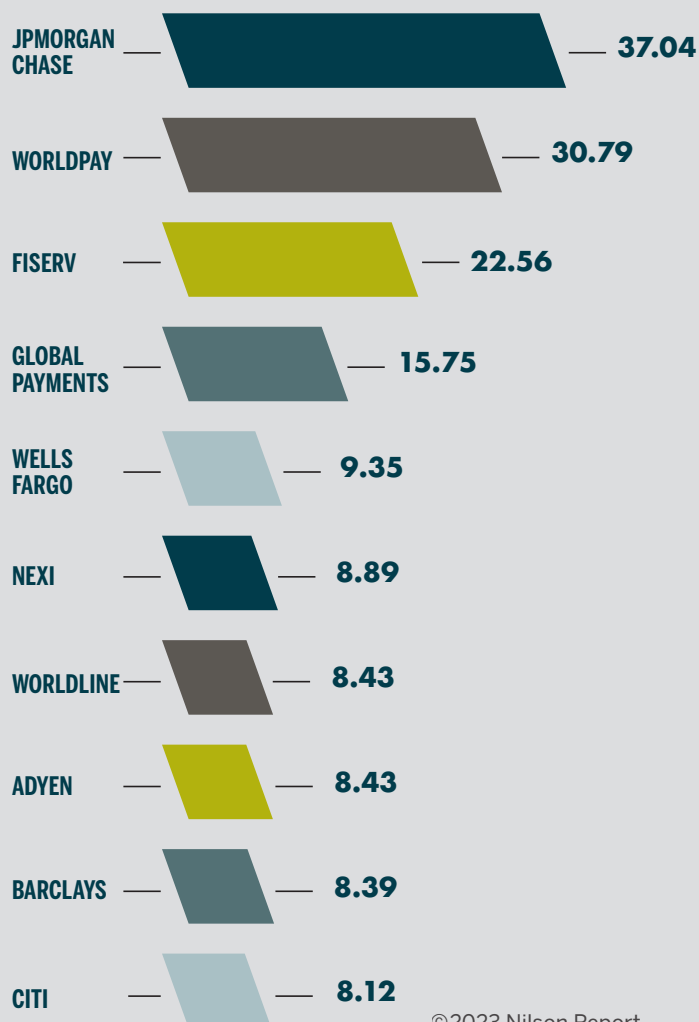
The 34 US-based acquirers collectively processed 145.50 billion transactions in the US in 2021. This accounted for 31.2% of the 466.89 billion total transactions processed collectively by the top 150. Those same acquirers handled 195.26 billion transactions worldwide or 41.8% of the total handled by the top 150. Transactions for this group increased 12.8% from 173.16 billion transactions in 2021.

Prior issues: 1229, 1206, 1183, 1161, 1139, 1117, 1095

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Top 10 Acquirers of Visa and Mastercard Payments

Transactions in Billions for 2022



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Largest 150 Merchant Acquirers Worldwide

Ranked by Global Brand and Domestic Purchase Transactions in 2022

RANK	ACQUIRER, COUNTRY	(MIL.)	RANK	ACQUIRER, COUNTRY	(MIL.)	RANK	ACQUIRER, COUNTRY	(MIL.)
1	JPMorgan Chase, Group	44,249.7	51	UniCredit, Italy	1,584.4	101	Al Rajhi Bank, Saudi Arabia	328.6
2	Worldpay from FIS, Group	43,474.3	52	Sadad Informatics, Iran	1,566.6	102	Saudi National Bank, Saudi Arabia	309.1
3	Sberbank, Russia	42,100.7	53	Rabobank, Netherlands	1,500.0	103	Banco Davivienda, Colombia	302.8
4	Fiserv (First Data), Group	37,601.3	54	Banco de Sabadell, Spain	1,430.7	104	First American Pymt. Sys., Group	301.4
5	Global Payments, Group ¹	19,674.0	55	Absa Bank, South Africa	1,428.7	105	Denizbank, Turkey	294.6
6	China UMS, China ²	14,066.9	56	National Australia Bank, Australia	1,391.5	106	Card Complete, Austria	291.9
7	Worldline, Group	12,947.4	57	Shift4 Payments, Group	1,378.9	107	Xplor Technologies, US	289.7
8	Nexi Payments, Italy ³	11,753.8	58	Banorte, Mexico	1,326.2	108	T.C. Ziraat Bankasi, Turkey	285.0
9	Wells Fargo, US	9,805.8	59	Aeon Financial Service, Japan	1,236.2	109	QNB Finansbank, Turkey	258.6
10	Adyen, Group ⁴	9,386.5	60	Raiffeisen Bank, Austria	1,222.8	110	Sicredi, Brazil	257.1
11	Bank of America, Group	9,330.2	61	Cardnet Merchant Services, UK	1,127.3	111	Magnati (FAB), UAE	256.2
12	Saman e-Pay, Iran	8,792.1	62	Gazprombank, Russia	1,090.8	112	TabaPay, US	242.9
13	Behpardakht Mellat, Iran	8,415.1	63	Akbank, Turkey	1,087.1	113	Nuvei Technologies, US	234.4
14	Barclays, UK	8,394.3	64	Paysafe Group, US	1,069.9	114	Promsvyazbank, Russia	230.0
15	Cielo, Group	8,260.0	65	Alfa Bank, Russia	1,017.6	115	Kasikornbank, Thailand	215.9
16	Citi Merchant Serv., US	8,120.9	66	SBI Payment Services, India	973.9	116	Izipay, Peru	212.8
17	Getnet (Santander MS), Group	8,062.7	67	CSOB, Czech Republic	937.0	117	Titanium Payments, US	203.5
18	Elavon, Group	7,720.9	68	ANZ Bank, New Zealand	929.2	118	KeyBank, US	202.9
19	Parsian e-Commerce, Iran	6,978.4	69	Nedbank, South Africa	911.5	119	i3 Verticals, US	201.8
20	Rede, Brazil	6,176.5	70	Merrick Bank, US	876.9	120	Valitor, Iceland	199.8
21	BC Card, South Korea	6,026.4	71	BAC Credomatic Network, Group	872.8	121	Bank Mandiri, Indonesia	196.5
22	EVO, Group	5,305.9	72	First National Bank, South Africa	819.7	122	NCR Payments, US	195.3
23	Credit Agricole, France	4,837.9	73	Credit Saison, Japan	818.3	123	Orient Corp., Japan	193.0
24	Credit Mutuel, France	4,271.9	74	Unicre, Portugal	797.8	124	VisaNet, Guatemala	189.4
25	Moneris, Canada	4,265.2	75	Vakifbank, Turkey	797.3	125	NCCC, Taiwan	187.6
26	PagSeguro, Brazil	4,197.0	76	No. American Bancard, US	776.7	126	Turk Ekonomi Bankasi, Turkey	186.1
27	Pasargad Elec. Payment, Iran	3,769.4	77	Network International, UAE	776.7	127	CardNet, Dominican Republic	175.7
28	BBVA, Group	3,741.2	78	La Banque Postale, France	741.1	128	SaltPay, Iceland	171.4
29	Asan Pardakht Persian, Iran	3,643.6	79	Priority Technology Holdings, US	733.2	129	SEB Group, Estonia	171.1
30	KB Kookmin, South Korea	3,614.8	80	SAB, Saudi Arabia	669.0	130	Intuit, US	164.1
31	Swedbank, Sweden	3,602.3	81	Russian Standard Bank, Russia	594.4	131	Kuwait Finance House, Kuwait	157.0
32	JCB, Japan	3,539.5	82	CTBC, Taiwan	560.4	132	CMI, Morocco	148.9
33	Iran Kish Credit Card Co., Iran	3,513.8	83	Standard Bank, South Africa	542.8	133	Celero Commerce, US	148.6
34	Transbank, Chile	3,082.9	84	PNC Merchant Services, US	536.6	134	Hang Seng, Hong Kong	143.1
35	BNP Paribas, France	3,003.8	85	Esquire Bank, US	536.0	135	Epicor Software, US	140.9
36	BPCE, France	2,958.0	86	Evertec Group, Puerto Rico	508.7	136	Market Pay, France	137.8
37	StoneCo, Brazil	2,595.1	87	Payroc WorldAccess, Group	489.3	137	Paya, US	136.6
38	VTB Bank, Russia	2,242.5	88	T. Halk Bankasi, Turkey	482.4	138	Westamerica/Redwood, US	135.6
39	Commonwealth Bank, Australia	2,180.5	89	Niubiz, Peru	459.7	139	Abu Dhabi Commercial, UAE	125.7
40	PrivatBank, Ukraine	2,152.6	90	Tyro, Australia	454.4	140	Servicios Digitales Popular, DR	122.6
41	Samsung Card, South Korea	2,108.0	91	Bancolumbia, Colombia	441.4	141	Millennium BCP, Portugal	122.5
42	Yapi Kredi Bank, Turkey	2,049.3	92	Vero, Brazil	440.5	142	Bank Alfalah, Pakistan	116.2
43	Garanti Bank, Turkey	2,022.1	93	Tinkoff Bank, Russia	433.2	143	Scotiabank, Group	116.0
44	TD Merchant Solutions, Group	1,972.5	94	Riyad Bank, Saudi Arabia	396.4	144	JCC Payment Systems, Cyprus	114.8
45	Societe Generale, France	1,937.4	95	Mashreq Bank, UAE	388.8	145	Bancard, Paraguay	109.1
46	Westpac, Australia	1,909.5	96	Truist Financial, US	373.9	146	Capitec, South Africa	108.5
47	Payway (Prisma Med.), Argentina	1,727.3	97	Electronic Payments, US	363.8	147	Aurora Payments, US	107.0
48	Hyundai Card, South Korea	1,715.0	98	HDFC, India	354.7	148	BankCard Services, US	99.2
49	T. Isbank, Turkey	1,652.9	99	PostFinance, Switzerland	330.0	149	Banco Nacional, Costa Rica	91.4
50	Mitsubishi UFJ Nicos, Japan	1,611.5	100	Axis Bank, India	329.3	150	Natl. Bank of Kuwait, Kuwait	89.3

Ranked by all purchase transactions (Visa, Mastercard, UnionPay, American Express, Discover, JCB, Diners Club and domestic market only) by country. Group includes transactions from all countries in which the company is an acquirer. ¹ Estimate. ² Includes Hong Kong and Macau. ³ Includes Denmark. ⁴ Includes business in Europe and US only.

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American Express is First Issuer to Add Biometrics to 3-D Secure

The 3-D Secure protocols used to authenticate cardholders in online transactions has grown steadily since the introduction of the 2.0 version in 2019. Growth was spurred by consumer protection regulations in Europe and elsewhere as well as the steady increase in the number of online transactions initiated by smartphones capable of authenticating their users with fingerprint or facial biometrics.

American Express, which ranks second largest among credit card issuers in the US, has become the first card issuer in the world to supplement 3-D Secure protocols with facial and fingerprint biometrics. It will use open standard specifications and APIs available from industry groups the FIDO Alliance and W3C to facilitate biometric authentications when its cardholders initiate transactions from eligible browsers and devices.

The name Amex has given to the 3-D Secure checkout experience it presents to cardholders is SafeKey. American Express's access control server (ACS) handles three categories of payment authorization requests related to SafeKey transactions.

A green transaction flow is one in which merchants provide enough information about the cardholder and what is being purchased for American Express to authorize the purchase without needing to contact the cardholder. A red transaction flow is one in which American Express identifies enough risk that it denies the authorization request without taking any further action.

Transactions flagged as yellow require communication with the cardholder before an authorization is granted.

Currently, cardholders are challenged to provide proof of their identity via a one-time code (OTC) sent in an SMS text message to the device they have registered with American Express, or they receive a push notification to the Amex app. When cardholders receive the notification, they use their preferred method of login to the app to confirm their identity.

However, because SMS messages are susceptible to social engineering fraud, all large issuers are looking

IN THIS ARTICLE



SafeKey

for an alternative. American Express believes biometric authentication can be that security tool.

Once the new SafeKey service with biometrics is available, cardholders using eligible browsers and devices will be invited to enroll during a yellow flow SafeKey transaction. Once enrolled, they will be given the option of using biometric authentication every time they make a purchase from a merchant that uses 3-D Secure.

Online transaction security supplemented by 3-D Secure protocols gained acceptance first in Europe when version 1.0 was launched in 2001. However, 1.0 was clunky and neither merchants nor cardholders widely embraced it.

The much improved 2.0 version has gained ground with merchants in various world regions, including by a growing number of US-based multinationals. Following their lead, other US merchants are beginning to adopt it too.

American Express has started a SafeKey with biometrics pilot test with select US cardholders. It will examine the cardholder experience, particularly as it relates to the successful completion of purchases.

SafeKey with biometrics will also be examined to make certain that fraud detection has not diminished. Once it is satisfied with the results of the pilot test, American Express will roll out the service in the US. Biometrics will subsequently be added to 3-D Secure transactions that originate in other world regions.

INTERVIEWED FOR THIS ARTICLE

J.J. Kieley is VP of Digital Identity & Commerce Experiences at American Express in Phoenix, Arizona, john.j.kieley@aexp.com, www.americanexpress.com.

POS Terminals Shipped Worldwide

Point-of-sale terminal shipments worldwide reached 148.3 million in 2022, up 4.5% over 2021. POS terminals counted include countertop, multilane, tablet and handheld devices with integrated chip and/or magnetic stripe card readers, unattended devices, terminals that can read QR codes and also accept cards and those that can read a biometric identifier and then facilitate a payment. Also included are PCI DSS approved mPOS chip & PIN devices and mPOS chip & signature devices as well as mPOS devices not connected to a smart mobile device.

Shipments of POS terminals to the Asia-Pacific (APAC) region increased 1.5% last year to 89.5 million devices. APAC's market share of shipments was 60.37% in 2022, down 178 basis points (bps) from 62.15% in 2021.

POS terminals shipped to Latin America and the Caribbean totaled 25.2 million in 2022, up 0.5%. Latin America's share of the global total was 17.01%, a drop of 67 bps from 17.68%.

Shipments into Europe reached 14.3 million, up 14.2%. Europe's market share grew to 9.65% from 8.83%.

The Middle East-Africa (MEA) region received 7.26 million POS terminals last year, up 24.9%. The MEA market share grew 119 bps to 7.26% of global shipments, up from 6.07%.

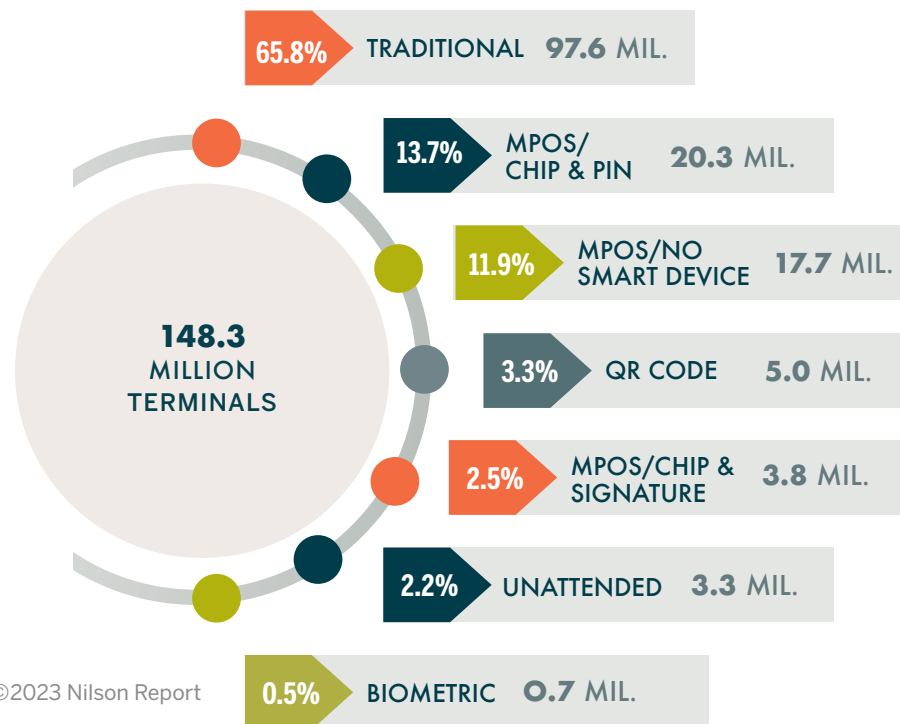
Shipments into the US of 7.8 million terminals were up 11.7%. The US share of all terminals shipped worldwide grew 34 bps to 5.28% from 4.94%.

Canada received 0.6 million units, up 35.0% from 2021. Its market share increased 10 bps to 0.43% from 0.33%.

The Asia-Pacific region received 1.3 million more devices in 2022 than in 2021. Wuhan Tianyu Information Industry Co. again shipped the most units to APAC. New POS Technology remained the second largest, with China and India among its largest markets. Fujian Landi entered the listing as third largest. When Worldline sold its terminal business to Apollo Funds and again was named Ingenico, Fujian Landi became an independent company. Ingenico had acquired 55% of Fujian Landi in 2008. Centerm was fourth largest in APAC. MoreFun was fifth largest and shipped the majority of its terminals to China. The manufacturer with the most Android handheld smart POS terminals shipped in the region was Vanstone (Aisino) with 4.0 million terminals, followed by Landi with 2.0 million and Pax Technology with 1.4 million.

Pax Technology was the top supplier to Latin America. It has held that position since 2017. Pax shipped 1.6 fewer units to the region in 2022 than in 2021. Of its 5.5 million units, 1.2 million were Android handheld smart POS terminals. Newland Payment Technology had the second largest number of shipments to Latin America. It shipped 2.8 million units to Brazil and also counted Mexico and Argentina among its top five countries.

Ingenico, which last year was called Worldline before the sale of the Terminals, Solutions & Services (TSS) business to Apollo Funds, is now named Ingenico once again. The company was Europe's largest provider. Datecs was the region's second largest, moving up from fourth largest.



Datecs increased its number of shipments by 0.6 million units, up 64.0%. Pax Technology (fourth largest in the region), also increased its shipments by 0.6 million units (up 61.8%). Newland Payment Technology shipments were up 0.4 million units, an increase of 152.5%. Stripe (including BBPOS) increased its shipments by 0.3 million (up 211.3%).

Pax Technology continued as the largest POS terminal manufacturer to the MEA region. It had a 27.6% increase in shipments. Newland was second largest and had a 31.5% increase in shipments. Sunmi Technology moved up to third from ninth with a 67.0% increase in number of units shipped. Nexgo moved up to fourth from seventh due to a 51.4% increase in shipments.

The largest suppliers to the United States were Verifone and Ingenico. Stripe (including BBPOS) was third largest.

For Canada, Stripe (including BBPOS) was the largest supplier. It increased its number of units shipped there by 0.1 million, a 924.6% increase.

Of all PCI DSS approved POS terminals shipped worldwide last year, 41.7 million (28.15%) were mobile (mPOS) devices. They communicate with tablets and other terminals via Bluetooth or USB, although 42.31% do not need to be connected to another smart device. Newland, Dspread, Landi, Anfu and Pax were the top manufacturers of mPOS devices in 2022. The top manufacturers of Android handled smart POS devices were Sunmi with 5.0 million, Vanstone with 4.7 million, Pax with 4.2 million, Landi with 2.0 million and Newland with 1.7 million.

Not included in this issue are smartphones used as POS terminals, peripheral PIN pads, island card readers, terminals that read QR codes but do not accept cards, card reader dongles inserted in smartphones or tablets, magnetic-stripe card readers connected to electronic cash registers (ECRs) or PC-based systems, other card readers, or ECRs or PC-based systems themselves. Some of the POS terminal manufacturers featured here also produced some of these devices. Those figures will be included in an upcoming issue.

→ p10

POS Terminal Manufacturers' Market Shares

Total Shipments and Shares in 2022 vs. 2021

RANK	MANUFACTURER	2022		2021	
		SHIPMENTS	SHARE	SHIPMENTS	SHARE
1	Newland Payment Tech.	12,305,000	8.30%	11,235,000	7.91%
2	Tianyu	11,216,664	7.56%	10,540,384	7.42%
3	Pax Technology	10,921,583	7.36%	12,018,101	8.47%
4	Centerm	9,570,300	6.45%	8,779,324	6.18%
5	New POS	8,965,372	6.05%	8,522,814	6.00%
6	Landi¹	8,223,000	5.55%	–	–
7	MoreFun	8,113,200	5.47%	8,173,239	5.76%
8	Verifone	8,052,700	5.43%	8,328,500	5.87%
9	Ingenico²	7,876,200	5.31%	–	–
10	Vanstone (Aisino)	7,791,400	5.25%	6,475,800	4.56%
11	Sunmi	6,605,092	4.45%	4,547,608	3.20%
12	Anfu	5,413,996	3.65%	3,661,556	2.58%
13	Nexgo (Xinguodu)	5,125,591	3.46%	5,261,076	3.71%
14	Dspread	4,443,000	3.00%	4,627,000	3.26%
15	Castles	4,240,600	2.86%	3,863,000	2.72%
16	Dynamicode	3,828,272	2.58%	3,592,846	2.53%
17	YZ Intelligence Tech.	2,886,600	1.95%	413,600	0.29%
18	Sunyard	2,157,290	1.45%	1,955,651	1.38%
19	Datecs	2,129,853	1.44%	1,672,019	1.18%
20	Stripe (including BBPOS)	1,825,022	1.23%	508,229	0.36%
21	Trendit	1,817,000	1.23%	2,424,000	1.71%
22	SZZT	1,779,500	1.20%	1,792,800	1.26%
23	TopWise	1,471,472	0.99%	2,818,836	1.99%
24	Smartpeak	1,455,000	0.98%	1,319,000	0.93%
25	Telepower	1,372,553	0.93%	1,456,485	1.03%
26	Wiseasy	1,013,771	0.68%	1,239,126	0.87%

Shipments include countertop, multiline, tablet and handheld terminals with integrated readers for chips and/or magnetic stripes as well as unattended payment devices, terminals that can read QR codes and accept cards, biometric payment terminals, plus PCI DSS approved POS chip & PIN

RANK	MANUFACTURER	2022		2021	
		SHIPMENTS	SHARE	SHIPMENTS	SHARE
27	Gertec	1,004,974	0.68%	752,564	0.53%
28	Spectra	963,850	0.65%	963,165	0.68%
29	WizarPOS	870,050	0.59%	743,900	0.52%
30	Fiserv/Clover	781,200	0.53%	713,772	0.50%
31	Urovo	763,408	0.51%	548,387	0.39%
32	JTact	504,210	0.34%	4,780,268	3.37%
33	ID Tech	446,900	0.30%	449,437	0.32%
34	Justtide	416,000	0.28%	490,000	0.35%
35	Equinox	291,900	0.20%	283,200	0.20%
36	Nayax+OTI	248,250	0.17%	254,574	0.18%
37	Square	218,100	0.15%	191,500	0.13%
38	Feitian	195,231	0.13%	868,000	0.61%
39	Cantaloupe	166,268	0.11%	87,246	0.06%
40	Ciontek	160,700	0.11%	181,500	0.13%
41	SCSPro	152,873	0.10%	58,460	0.04%
42	UIC	149,703	0.10%	172,485	0.12%
43	Panasonic Connect	144,200	0.10%	150,300	0.11%
44	Linkwell	60,403	0.04%	50,633	0.04%
45	Feig Electronic	59,100	0.04%	55,200	0.04%
46	HP	34,100	0.02%	31,500	0.02%
47	CCV	31,500	0.02%	27,500	0.02%
48	Toshiba Tec	28,000	0.02%	48,000	0.03%
–	Worldline/Ingenico³	–	–	14,132,702	9.96%
–	YouTransactor	–	–	697,300	0.49%
–	Thumbzup	–	–	3,150	<0.01%
TOTAL		148,290,951	100.00%	141,960,737	100.00%

devices, approved mPOS chip & signature devices and mPOS devices not connected via a small mobile device. **1** No longer part of Ingenico. **2** Spun off from Worldline and sold to Apollo. **3** Prior entity that included Worldline, Ingenico and Landi.

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Manufacturers of POS Terminals Shipped in 2022

Canada

RANK	MANUFACTURER	TOTAL	ANDROID*
1	Stripe (BBPOS)	145,059	17,200
2	Ingenico	90,200	42,000
3	SZZT	65,100	29,100
4	Newland Payment	59,000	–
5	Sunmi	53,120	12,970
6	Pax Technology	44,406	38,391
7	Centerm	40,383	–
8	Verifone	33,700	7,010
9	ID Tech	30,300	29,700
10	New POS	14,970	6,528
11	Castles	14,600	–
12	Smartpeak	10,000	–
13	WizarPOS	9,850	9,850
14	Fiserv/Clover	9,000	–
15	Nayax+OTI	5,950	–
16	Vanstone (Aisino)	3,500	3,500
17	Square	3,100	–
18	Dspread	3,000	–
19	Equinox	1,900	500
20	Sunyard	1,000	500
21	Nexgo (Xinguodu)	938	620
22	Cantaloupe	720	–
23	Spectra	705	–
24	Urovo	655	655
25	Telepower	350	–
TOTAL	641,506	198,524	

United States

RANK	MANUFACTURER	TOTAL	ANDROID*
1	Verifone	1,400,000	570,000
2	Ingenico	1,240,000	330,000
3	Stripe (BBPOS)	1,031,663	148,257
4	Castles	782,000	–
5	Fiserv/Clover	697,000	72,000
6	Sunmi	478,069	116,734
7	Pax Technology	468,614	226,230
8	Equinox	290,000	6,000
9	ID Tech	197,000	43,000
10	Square	192,000	–

United States (continued)

RANK	MANUFACTURER	TOTAL	ANDROID*
11	Cantaloupe	165,548	–
12	UIC	130,849	–
13	Smartpeak	125,000	–
14	SZZT	117,900	22,000
15	WizarPOS	103,200	103,200
16	Newland Payment	101,000	73,000
17	Nayax+OTI	81,500	–
18	Datecs	75,525	–
19	Centerm	41,015	–
20	Dspread	26,000	–
21	Wiseasy	25,000	25,000
22	Nexgo (Xinguodu)	21,239	16,049
23	Feitian	14,515	–
24	Feig Electronic	8,600	–
25	HP	8,600	–
26	Vanstone (Aisino)	5,500	5,500
27	Telepower	5,382	–
28	Urovo	888	888
29	Tianyu	814	–
30	Sunyard	800	200
31	Spectra	45	–
TOTAL	7,835,266	1,758,058	

Latin America

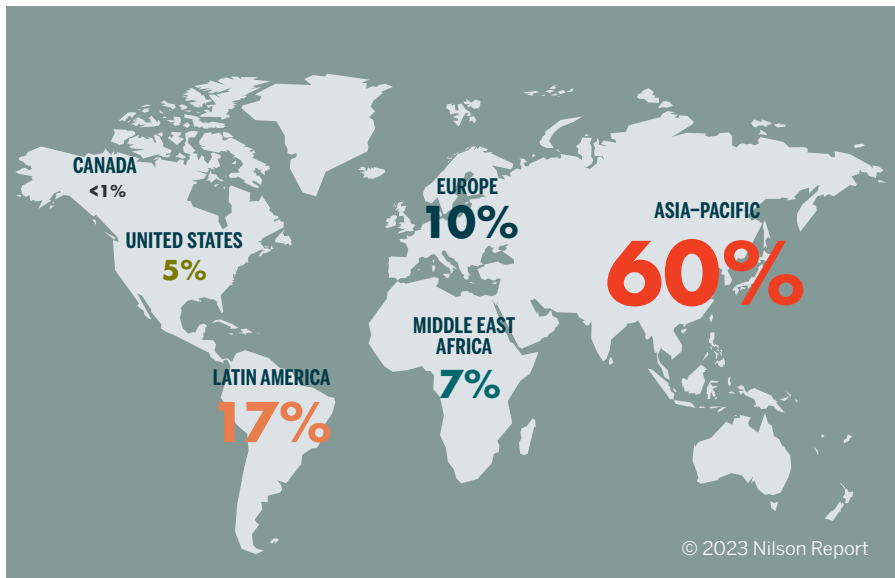
RANK	MANUFACTURER	TOTAL	ANDROID*
1	Pax Technology	5,527,271	1,195,772
2	Newland Payment	3,348,000	434,000
3	Ingenico	2,750,000	677,000
4	Sunmi	2,662,884	2,326,598
5	Dspread	2,050,000	110,000
6	Verifone	2,010,000	510,000
7	Gertec	1,004,974	–
8	Castles	826,000	–
9	TopWise	781,480	51,058
10	Centerm	660,795	–
11	SZZT	611,000	245,000
12	Nexgo (Xinguodu)	446,059	294,816
13	Vanstone (Aisino)	394,600	202,000
14	Wiseasy	376,531	361,531
15	Telepower	277,084	–

Latin America (continued)

RANK	MANUFACTURER	TOTAL	ANDROID*
16	Stripe (BBPOS)	268,403	32
17	MoreFun	260,800	30,000
18	Spectra	198,500	93,000
19	Urovo	152,922	152,922
20	New POS	130,964	54,567
21	WizarPOS	112,400	112,400
22	Smartpeak	100,000	–
23	Datecs	90,955	–
24	Justtide	85,000	35,000
25	Sunyard	66,000	10,000
26	Nayax+OTI	8,000	–
27	Feitian	6,307	–
28	Fiserv/Clover	5,700	–
29	Feig Electronic	3,300	–
30	ID Tech	2,300	–
31	Ciontek	2,200	1,200
TOTAL	25,220,429	6,896,896	

Middle East and Africa

RANK	MANUFACTURER	TOTAL	ANDROID*
1	Pax Technology	967,563	549,725
2	Newland Payment	905,000	465,000
3	Sunmi	754,390	687,965
4	Nexgo (Xinguodu)	709,906	285,078
5	Vanstone (Aisino)	683,200	230,000
6	Verifone	679,000	45,000
7	Centerm	612,736	–
8	Castles	580,000	–
9	TopWise	517,913	517,913
10	MoreFun	504,700	250,000
11	SZZT	495,000	315,000
12	New POS	468,602	166,020
13	Dspread	435,000	13,000
14	Telepower	431,915	–
15	Ingenico	351,000	39,000
16	Sunyard	347,529	30,000
17	Urovo	297,513	297,513
18	Smartpeak	280,000	–
19	Anfu	210,889	200
20	Wiseasy	99,800	99,800



Asia-Pacific

RANK	MANUFACTURER	TOTAL	ANDROID*
1	Tianyu	11,192,270	3,387
2	New POS	8,335,512	119,136
3	Landi	8,223,000	1,980,000
4	Centerm	8,062,751	–
5	MoreFun	7,336,700	135,000
6	Newland Payment	7,286,000	549,000
7	Vanstone (Aisino)	6,259,400	4,000,000
8	Anfu	5,203,107	–
9	Dynamicode	3,826,232	87,650
10	Nexgo (Xinguodu)	3,344,163	372,665
11	YZ Intelligence Tech.	2,885,100	–
12	Pax Technology	2,349,020	1,366,634
13	Verifone	2,320,000	695,000
14	Trendit	1,812,000	–
15	Sunyard	1,693,523	32,580
16	Dspread	1,681,000	44,000
17	Sunmi	1,392,875	720,853
18	Castles	1,240,000	–
19	Smartpeak	800,000	–
20	JTact	503,361	36
21	Wiseasy	494,560	494,560
22	WizarPOS	472,100	–
23	SZZT	457,000	215,000
24	Telepower	386,442	–
25	Spectra	345,300	15,000
26	Urovo	281,960	281,960
27	Justtide	235,000	5,000
28	Ingenico	195,000	39,000
29	TopWise	170,917	8,478
30	SCSPro	152,873	–
31	Panasonic Connect	144,200	2,400
32	Feitian	123,075	–
33	ID Tech	67,300	–
34	Datecs	66,655	–
35	Linkwell	60,403	14,997
36	Ciontek	46,000	–
37	Toshiba Tec	28,000	–
38	Square	15,000	–
39	Nayax+OTI	8,200	–
40	UIC	7,788	–
41	HP	6,500	–
42	Feig Electronic	6,200	–
43	Fiserv/Clover	4,400	2,400
TOTAL		89,520,887	11,184,736

*Android handheld smart POS terminals.
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Middle East and Africa (cont.)

RANK	MANUFACTURER	TOTAL	ANDROID*
21	WizarPOS	98,700	98,700
22	Justtide	90,000	50,000
23	Spectra	71,800	21,000
24	Datecs	46,070	–
25	Feitian	45,285	–
26	Nayax+OTI	27,000	8,000
27	Tianyu	20,500	110
28	Ciontek	17,500	–
29	Trendit	5,000	–
30	Fiserv/Clover	3,100	–
31	Dynamicode	2,040	1,000
32	Stripe (BBPOS)	850	–
33	JTact	827	12
34	UIC	200	–
TOTAL		10,760,528	4,170,036

Europe

RANK	MANUFACTURER	TOTAL	ANDROID*
1	Ingenico	3,250,000	449,000
2	Datecs	1,850,648	–
3	Verifone	1,610,000	401,000
4	Pax Technology	1,564,709	828,107
5	Sunmi	1,263,754	1,108,778
6	Castles	798,000	–
7	Newland Payment	606,000	178,000
8	Nexgo (Xinguodu)	603,286	352,902
9	Vanstone (Aisino)	445,200	240,000
10	Stripe (BBPOS)	379,047	71,026

Europe (continued)

RANK	MANUFACTURER	TOTAL	ANDROID*
11	Spectra	347,500	92,000
12	Telepower	271,380	–
13	Dspread	248,000	8,000
14	Centerm	152,620	–
15	ID Tech	150,000	–
16	Smartpeak	140,000	–
17	Nayax+OTI	117,600	–
18	Ciontek	95,000	40,000
19	WizarPOS	73,800	73,800
20	Fiserv/Clover	62,000	–
21	Sunyard	48,438	3,000
22	Feig Electronic	41,000	–
23	SZZT	33,500	24,000
24	CCV	31,500	–
25	Urovo	29,470	29,470
26	HP	19,000	–
27	Wiseasy	17,880	17,880
28	New POS	15,324	10,114
29	MoreFun	11,000	3,000
30	UIC	10,866	–
31	Square	8,000	–
32	Feitian	6,049	–
33	Justtide	6,000	3,000
34	Tianyu	3,080	–
35	YZ Intelligence Tech.	1,500	–
36	TopWise	1,162	1,162
37	JTact	22	–
TOTAL		14,312,335	3,934,239

Household Debt and Credit Cards in the US

Outstandings on general purpose credit cards—Visa, Mastercard, American Express and Discover—combined with outstanding receivables tied to all private label (store, gasoline, medical, etc.) card products reached \$1.255 trillion at year-end 2022, up 17.2%.

This credit card debt figure (also called outstandings), which includes commercial and consumer card products, was compiled by the Nilson Report from its surveys of financial institutions and private label lenders.

US household debt totaled \$19.393 trillion at year-end 2022, up 5.8% over 2021. That figure was compiled by the Federal Reserve.

The US Census Bureau reported that the number of households in the United States was 131.2 million at year-end 2022, up 1.5% from 2021.



Credit card debt accounted for 25.7% of total consumer credit at year-end 2022, up from 23.6% in 2021

Credit card debt per household of \$9,566 at the end of 2022 was up 15.4% from 2021. At the end of 2012, there were 121.1 million US households, credit card debt was \$818.05 billion and credit card debt per household was \$6,756.

Card debt accounted for 6.47% of household debt in 2022, up from 5.85% in 2021. The ratio of credit card debt to total household debt was highest in 1996 at 9.80%.

At year-end 2022, debt per US household averaged \$147,809, up 4.2% from \$141,810 in 2021. Debt per US household does not include state, local or federal government debt.

Closed and open-ended installment and noninstallment unsecured personal loans—which comprise total consumer credit published by the Federal Reserve—was \$4.893 trillion at year-end 2022, up 7.6% from 2021.

Consumer credit per household was \$37,297, up 6.0% from 2021.

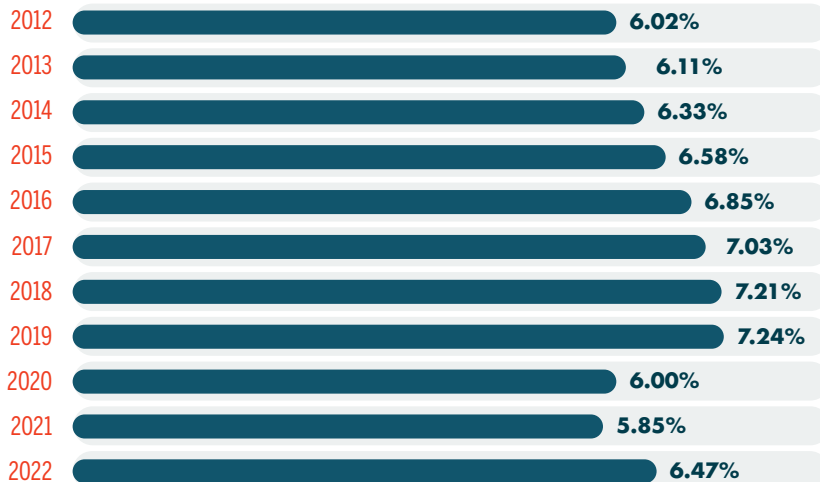
Credit card debt accounted for 25.65% of total consumer credit at year-end 2022, up from 23.55% in 2021.

The ratio of credit card debt to total consumer credit was highest in 1997 at 40.95%.

Total consumer credit equaled 25.23% of household debt at year-end 2022, up from 24.82% in 2021.

Total household debt includes consumer credit as well as one- to four-family residential mortgage debt and low-value bank loans.

Card Debt as a Percentage of Total Household Debt



US Credit Card Debt and Consumer Credit

Total household debt, total consumer credit and home mortgage debt are available in the Federal Reserve Statistical Release, Z.1, Financial Accounts of the United States, Flow of Funds, Balance Sheets and Integrated Macroeconomic Accounts, Table D.3, Debt Outstanding by Sector. The release date was September 8, 2023.

Automobile leases, mortgage debt, rent payments and low-value bank loans are not counted as consumer credit in the Federal Reserve Statistical Release.

Mortgage debt and select other loans increased by 5.2% to \$14.499 trillion at year-end 2022.

Prior issues: 1227, 1203, 1180, 1153, 1132, 1112, 1088, 1065, 1043

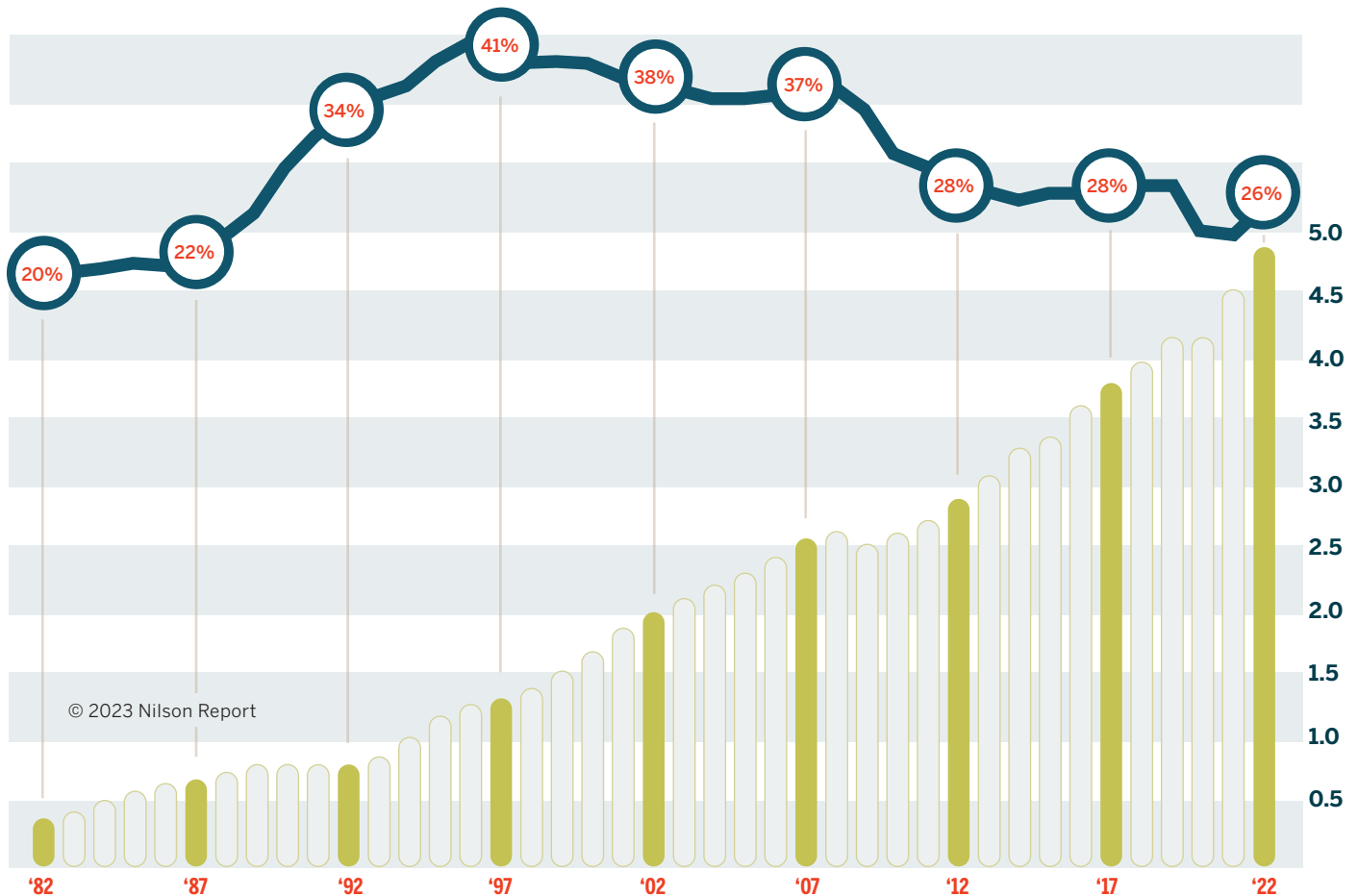
Totals in Billions

YEAR	CREDIT CARD DEBT	5-YEAR CHANGE	CONSUMER CREDIT	5-YEAR CHANGE
1982	\$79.50	–	\$396.72	–
1987	\$152.50	91.8%	\$698.64	76.1%
1992	\$283.17	85.7%	\$824.77	85.7%
1997	\$550.44	94.4%	\$1,344.17	63.0%
2002	\$762.80	38.6%	\$1,997.01	48.6%
2007	\$961.86	26.1%	\$2,609.48	26.1%
2012	\$818.05	-15.0%	\$2,912.90	11.6%
2017	\$1,062.09	29.8%	\$3,830.80	31.5%
2022	\$1,255.13	18.2%	\$4,893.40	27.7%

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Credit Card Debt as a Percentage of Consumer Credit

● CREDIT CARD DEBT (PERCENT) ● CONSUMER CREDIT (\$TRILLIONS)

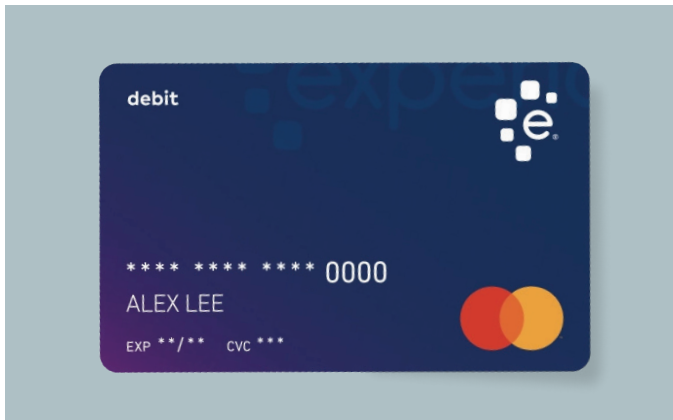


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Experian Digital Debit Card

There are 261 million Americans aged 18 and over, of which 100 million, more than 38%, either have no files at credit bureaus or are challenged by subprime credit scores owing to previous inability to satisfactorily pay back what they had borrowed. Experian, one of the big three credit bureaus in the US, has created the Experian Smart Money Digital Checking Account & Debit Card for this cohort as a tool to help build or rebuild their credit score.

Customers are offered a \$50 signing bonus as an incentive if they open an account with ongoing direct deposit of their paychecks. Once they are onboard, they can download an app that provides virtual Mastercard debit card functionality. A physical debit card is an option. The debit cards are issued by



IN THIS ARTICLE



New York-based Community Federal Savings Bank (CFSB), which also holds all funds in the Experian Smart Money accounts. Experian is the program manager.

Users of the transaction account are promised that all eligible payments for utilities, rent, insurance, streaming services and other bills will be added to their Experian credit report. This occurs automatically because the Smart Money Digital Checking accounts are integrated with Experian Boost.

That membership program, which was launched last year, has 65 million members. Experian Boost can be free or fee-based depending on the services a consumer wants to use.

Experian Boost can help users generate up to a 13-point gain to their FICO Score 8 through the regular reporting of positive payments for eligible recurring bills.

INTERVIEWED FOR THIS ARTICLE

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U.S. Bank Integrates with Software Providers

The ability to seamlessly embed financial services between a customer's front-end software systems used for enterprise resource planning, treasury management, invoicing, accounts payable, accounts receivable, etc. and their back-end reconciliation system is the goal of all top banks. The process of integrating bank

IN THIS ARTICLE



payment services with the hundreds of third-party providers of front-end automated software services has been going on for years on a bidirectional basis—one connection at a time. Vetting, creating budgets, finding IT resources and more can take up to nine months to complete.

Last month, U.S. Bank launched the Connected Partnership Network (CPN), which provides commercial payment and treasury management customers with connections to automated software providers via prebuilt APIs. The bank plans to provide an extensive online marketplace of vetted software providers its customers can connect to easily.

Almost no new coding will be required by a bank customer once a software provider has been added to the Connected Partnership Network. Five providers are part of the first group. That number is expected to more than double by year-end. The bank provides customers with a search directory.

U.S. Bank ranks fifth largest in the United States based on asset size. It has been an early adopter in corporate payments.

The bank participated in the first payment on the RTP (Real-Time Payments) processing network in the US and was one of the early bank adopters of the FedNow Service that went live this summer.

The CPN announcement follows the November 2022 launch of WorksWith Elavon, a similar embedded financial services initiative for merchants that use Elavon to acquire card payments. Elavon, a wholly owned subsidiary of U.S. Bank, operates in the US, the UK and continental Europe.

More than 200 vetted companies that provide services to merchants are available via APIs on WorksWith Elavon.

The J.P. Morgan Payments Partner Network also provides access to software providers through prebuilt APIs.

INTERVIEWED FOR THIS ARTICLE
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Prior issue: 1244

SEPTEMBER 2023

Investments & Acquisitions

COMPANY	COUNTRY	BUYER/INVESTOR	AMOUNT (MIL)
ATMs			
Vortex Engineering	India	Vakrangee ¹	*
B2B Payments			
Apron	UK	Series A ²	\$15.0
FinZeo	US	AppTech Payments ³	*
PagBem	Brazil	Edenred Repom ⁴	*
Wamo	UK	seed round ext. ⁵	\$1.5
Waddle	Australia	CBA ³	*
Bill Payments			
FlexPag	Brazil	Serasa Experian ³	*
BNPL, Alternative Lending			
Treyd	Sweden	Series A ⁶	\$12.0
Credit Cards			
Curve	UK	Series C ext. ⁷	\$79.0
Firstcard	US	seed round ⁸	\$4.7
Flex	US	Series A ⁹	\$120.0
Fraud Fighting, Security			
Cleafy	Italy	Series A ¹⁰	\$10.6
Hardware			
Evolis	France	HID ¹¹	*
iMin Technology	Singapore	pre-Series A ¹²	\$20.0
Merchant Processing, Acquiring			
EMS	Netherlands	Fiserv ¹³	*
Form3	UK	strategic round ¹⁴	*
GCS	Dominican Republic	Grupo Popular ³	*

COMPANY	COUNTRY	BUYER/INVESTOR	AMOUNT (MIL)
Merchant Processing, Acquiring (Continued)			
IPSI Pay	US	equity round ¹⁵	\$0.5
Netstars	Japan	IPO ¹⁶	\$31.5
Rabbit Line Pay	Thailand	Line Man ¹⁷	*
USTRansact	US	Beyond Bancard ³	*
Mobile Payments			
HyperJar	UK	Series A ¹⁸	\$2.0
TangGapp	US	seed round ¹⁹	\$2.5
Money Transfers			
BayaniPay	Philippines	seed round ext. ²⁰	\$2.1
Parallax Labs	US	seed round ²¹	\$4.5
Software			
Clip Money	Canada	private placement ²²	\$4.9
Paypad	Turkey	HotelRunner ³	*
Quickcharge	US	Transact Campus ³	*
Swan	France	Series B ²³	\$40.0

*Terms not disclosed. **1** Purchased an additional 8.8% of equity to add to the 48.5% it already owns. **2** Including Index Ventures. **3** Acquisition. **4** Purchased 70% of the equity. **5** Including RePie Asset Management. **6** Led by Nineyards Equity. **7** Including IDC Ventures. **8** Including CyberAgent Capital. **9** Debt and equity round. **10** Including United Ventures. **11** Purchased 98.5% of the equity. **12** Led by Younghua Capital. **13** Purchased remaining 49% equity from ABN Amro. **14** From Visa. **15** Innovative Payment Solutions. **16** On the Tokyo Stock Exchange. **17** Purchased majority stake. **18** Led by Susquehanna Private Equity. **19** Including Manila Angel Investors. **20** Led by Talino Ventures Studios. **21** Led by Dragonfly Capital. **22** From Cardtronics and NCR. **23** Led by Lakestar.

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Publicly Traded Companies in Payments

Market Data as of October 10, 2023

Company	Market Cap.	Stock Exch.	Stock Price	52 Week Low/High
HEADQUARTERS	USD (MIL.)		USD	USD
PAYMENT PROCESSORS				
Fiserv, US	69,898	NYSE	114.52	91.55–130.74
PayPal, US	63,379	Nasdaq	57.96	55.86–92.62
FIS, US	31,454	NYSE	52.29	48.57–85.18
Global Payments, US	29,957	NYSE	114.17	92.27–129.70
Block, US	26,063	NYSE	44.30	40.77–89.97
Adyen, Netherlands	24,106	Euronext	752.81	659.16–1,804.19
Jack Henry, US	10,834	Nasdaq	148.23	139.28–202.66
Nexi, Italy	8,306	Euronext	5.87	5.57–10.67
Worldline, France	7,807	Euronext	25.33	25.28–50.92
PayTM, India	7,245	NSE	10.94	5.27–11.48
dLocal, Uruguay	5,600	Nasdaq	18.51	9.03–24.65
Shift4 Payments, US	4,380	NYSE	53.00	36.33–76.40
GMO Pymt. Gateway, Japan	4,046	Tokyo	52.89	52.06–89.62
Kakao Pay, South Korea	3,932	KRX	29.07	24.15–54.11
Euronet, US	3,848	Nasdaq	75.45	71.60–121.55
Stone, Brazil	3,290	Nasdaq	9.97	8.09–14.83
Marqeta, US	3,115	Nasdaq	5.74	3.46–8.23
PagSeguro, Brazil	2,824	NYSE	8.29	7.51–14.97
Network Intl., UK	2,558	LSE	480.16	285.30–493.68
Evertec, Puerto Rico	2,435	NYSE	37.93	30.17–42.03
Nuvei, Canada	2,185	Nasdaq	16.08	14.29–43.81
Payoneer, US	2,184	Nasdaq	6.05	4.02–8.04
Cielo, Brazil	1,909	São Paulo	0.69	0.64–1.20
Global Blue, Switzerland	1,054	NYSE	5.80	3.49–7.60
Deluxe, US	824	NYSE	18.72	13.61–21.59
Paysafe, Isle of Man	693	NYSE	11.04	9.34–24.25
i3 Verticals, US	670	Nasdaq	19.89	18.59–30.84
Repay, US	634	Nasdaq	6.47	4.36–10.43
Boku, US	531	LSE	177.54	147.44–192.90
Tyro Payments, Australia	408	ASX	0.83	0.60–1.16
NewtekOne, US	349	Nasdaq	13.93	10.75–20.83
Lesaka Tech., South Africa	269	Nasdaq	4.32	3.02–4.89
Jumia, Nigeria	266	NYSE	2.73	2.23–5.77
Priority Technology, US	255	Nasdaq	3.35	2.62–6.16
Transaction Media, Japan	206	Tokyo	5.50	5.36–13.31
GHL Systems, Malaysia	193	BM	0.17	0.14–0.21
Bango, UK	184	LSE	223.62	192.50–331.50
CoreCard, US	179	NYSE	20.99	19.21–35.48
Netstars, Japan	111	Tokyo	6.57	6.23–9.05
Qisitive Tech., Canada	95	TSXV	0.26	0.18–0.60
Novatti, Australia	19	ASX	0.05	0.05–0.23
Ryvyl Inc., US	18	Nasdaq	3.20	2.63–17.50
OLB, US	10	Nasdaq	0.64	0.56–1.30

Company	Market Cap.	Stock Exch.	Stock Price	52 Week Low/High
HEADQUARTERS	USD (MIL.)		USD	USD
CREDIT, DEBIT AND PREPAID CARD ISSUERS				
FleetCor, US	19,336	NYSE	260.25	161.69–278.35
Edenred, France	15,903	Euronext	56.17	48.77–66.26
Synchrony Financial, US	12,479	NYSE	29.64	26.59–40.88
SBI Cards & Pay Serv., India	9,011	NSE	9.39	8.36–11.22
Wex, US	8,244	NYSE	188.27	129.47–204.06
SoFi Technologies, US	7,943	Nasdaq	8.25	4.24–11.70
The Bancorp, US	1,894	Nasdaq	34.83	22.11–41.52
Bread Financial, US	1,590	NYSE	31.21	23.19–44.52
Pathward Financial, US	1,269	Nasdaq	48.52	34.02–60.49
Eurovag, Czech Republic	796	LSE	117.95	84.78–133.31
Green Dot, US	688	NYSE	13.07	12.80–21.37
Zaggle, India	325	NSE	2.57	1.87–2.72
EML Payments, Australia	267	ASX	0.70	0.25–0.81
Blue Label, South Africa	148	JSE	16.07	12.34–30.47
PaySign, US	97	Nasdaq	1.86	1.74–3.99
Change Financial, Australia	28	ASX	0.05	0.03–0.05
LOYALTY/REWARDS				
Cardlytics, US	516	Nasdaq	13.52	2.57–19.57
Groupon, US	309	Nasdaq	15.18	2.89–16.25
Aimia, Canada	213	Toronto	2.58	2.04–3.17
PAYMENT CARD NETWORKS				
Visa, US	492,081	NYSE	234.90	174.60–250.06
Mastercard, US	377,233	NYSE	395.54	276.87–418.60
American Express, US	111,154	NYSE	149.50	130.65–182.15
Discover, US	22,830	NYSE	91.00	84.43–122.50
BILL PAYMENT COMPANIES				
Bill Holdings, US	11,510	NYSE	112.69	68.30–139.50
EngageSmart, US	3,401	NYSE	20.83	15.01–21.84
Paymentus, US	1,947	NYSE	15.68	6.75–17.24
AvidXchange, US	1,880	Nasdaq	9.11	7.02–12.75
PayPoint, UK	487	LSE	631.54	457.68–737.20
Fawry, Egypt	473	EGX	0.14	0.10–0.22
Payfare, Canada	182	Toronto	3.87	2.94–5.48
CARD MANUFACTURERS				
Thales, France	29,972	Euronext	142.97	115.73–153.06
Chutian Dragon, China	1,005	Shenzhen	2.13	2.11–3.44
Eastcompeace, China	893	Shenzhen	1.52	1.18–2.26
Wuhan Tianyu, China	725	Shenzhen	1.66	1.26–2.14
CompoSecure, US	494	Nasdaq	6.25	4.26–7.90
Valid, Brazil	267	São Paulo	3.31	1.55–3.83
Kona I, South Korea	206	Kosdaq	14.48	10.72–17.08
CPI Card, US	191	Nasdaq	17.13	15.54–45.95
Goldpac, Hong Kong	147	HKSE	0.18	0.16–0.23

Market Data as of October 10, 2023

Company	Market Cap.	Stock Exch.	Stock Price	52 Week Low/High
HEADQUARTERS	USD (MIL.)		USD	USD
ECOMMERCE/MARKETPLACES WITH PAYMENTS				
Shopify, Canada	70,655	NYSE	53.73	23.63–71.43
Mercado Libre, Argentina	63,032	Nasdaq	1,245.20	754.76–1,451.56
Ebay, US	23,159	NYSE	43.48	35.92–52.23
BigCommerce, US	749	Nasdaq	9.81	6.81–15.68
FRAUD FIGHTING/IDENTITY/SECURITY				
Relx, UK	67,222	NYSE	35.60	23.77–35.74
Verisk Analytics, US	35,452	Nasdaq	244.33	162.94–249.26
Equifax, US	22,981	NYSE	185.42	145.98–240.35
FICO, US	22,102	NYSE	895.54	389.84–916.41
Okta, US	13,948	Nasdaq	83.50	44.12–91.50
TransUnion, US	13,920	NYSE	70.70	50.32–82.75
Dun & Bradstreet, US	4,309	NYSE	9.67	9.45–15.45
Crisil Limited, India	3,581	NSE	46.90	32.77–49.83
GB, UK	1,120	NYSE	5.80	3.49–7.60
Riskified, Israel	720	NYSE	4.10	3.81–6.73
Mitek Systems, US	506	Nasdaq	11.14	8.60–13.98
OneSpan, US	413	Nasdaq	10.47	8.15–19.25
ClearSale, Brazil	170	São Paulo	0.86	0.82–1.51
De La Rue, UK	154	LSE	76.18	35.75–130.82
Idex Biometrics, Norway	50	Oslo	0.04	0.04–0.13
Fingerprint Cards, Sweden	48	OMX	0.08	0.08–0.62
Intellecheck, US	41	Nasdaq	2.16	1.85–3.00
HARDWARE/SOFTWARE COMPANIES				
Toast, US	9,668	NYSE	17.29	15.77–27.00
GRG Banking, China	4,197	Shenzhen	1.69	1.10–1.83
NCR, US	3,762	NYSE	26.35	18.06–30.99
ACI Worldwide, US	2,295	Nasdaq	21.26	19.68–29.14
Lightspeed, Canada	2,228	NYSE	14.24	12.45–20.12
XGD, China	1,832	Shenzhen	3.46	1.51–4.30
Everi, US	1,151	NYSE	12.88	12.36–19.85
Zuora, US	1,121	NYSE	7.92	5.45–12.12
Par Technology, US	1,080	NYSE	38.98	20.37–46.63
Olo, US	973	NYSE	5.71	5.62–9.55
Pax Global, China	751	HKSE	0.71	0.69–0.99
Nayax, Israel	729	Nasdaq	21.00	16.38–29.14
Feitian Technologies, China	628	Shenzhen	1.47	1.24–2.04
Cantaloupe, US	517	Nasdaq	6.95	2.77–8.29
Castles Technology, Taiwan	386	TWSE	3.94	1.56–4.59
RS2 Software, Malta	328	MSE	1.50	1.11–1.66
Eckoh, UK	140	LSE	45.78	36.86–56.52
Presto Automation, US	98	Nasdaq	1.70	1.23–5.74
AGS Transact, India	88	NSE	0.73	0.53–1.07
AppTech, US	55	Nasdaq	3.10	0.40–5.37
HPS, Morocco	48	CSE	64.20	52.59–65.37

Company	Market Cap.	Stock Exch.	Stock Price	52 Week Low/High
HEADQUARTERS	USD (MIL.)		USD	USD
BUY NOW, PAY LATER COMPANIES				
Affirm, US	5,896	Nasdaq	18.95	8.62–25.63
Zip, Australia	152	ASX	0.17	0.17–0.60
Humm, Australia	138	ASX	0.28	0.24–0.45
Sezzle, US	71	ASX	11.56	0.26–15.97
Splitit, US	12	ASX	0.02	0.02–0.16
MONEY TRANSFER COMPANIES				
Wise, UK	8,964	LSE	855.89	599.59–956.89
Global-e, Israel	5,953	Nasdaq	37.44	18.14–45.72
Western Union, US	4,899	NYSE	13.16	10.07–14.84
Remitly, US	4,684	Nasdaq	26.50	8.94–27.12
Flywire, US	3,752	Nasdaq	29.27	17.16–35.80
Cab Payments, UK	742	LSE	253.11	240.07–414.06
Intl. Money Express, US	612	Nasdaq	17.17	16.35–28.24

All figures are shown in US dollars with exchange rates as of October 10, 2023. **ASX** is the Australia Securities Exchange based in Sydney. **BM** is Bursa Malaysia based in Kuala Lumpur. **CSE** is the Casablanca Stock Exchange in Morocco. **EGX** is the Egyptian Exchange based in Cairo. **Euronext** is a pan-European stock exchange connecting seven European economies based in Amsterdam. **HKSE** is the Hong Kong Stock Exchange. **JSE** is the Johannesburg Stock Exchange in South Africa. **Kosdaq** is the Korean Securities Dealers Automated Quotations Exchange based in Seoul. **KRX** is the Korea Exchange based in Busan. **LSE** is the London Stock Exchange based in the UK. **MSE** is the Malta Stock Exchange based in Valletta. **Nasdaq** and **NYSE** (New York Stock Exchange) are based in New York. **NSE** is the National Stock Exchange of India based in Mumbai. **NZX** is the New Zealand Stock Exchange based in Wellington. **OMX** is the Nasdaq Nordic exchange in Stockholm, Sweden. **São Paulo** is the B3 Exchange based in São Paulo. **TSXV** is the TSX Venture Exchange based in Calgary. **TWSE** is the Taiwan Stock Exchange. © 2023 Nilson Report

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