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REDACTED VERSION OF  
DOCUMENT(S) SOUGHT TO  
BE SEALED

7 *Class Counsel*

8  
9 **UNITED STATES DISTRICT COURT**  
10 **NORTHERN DISTRICT OF CALIFORNIA**

11  
12 BYRON MCKNIGHT, JULIAN MENA, TODD  
SCHREIBER, NATE COOLIDGE, and ERNESTO  
13 MEJIA, individually and on behalf of all others  
similarly situated,

14  
15 Plaintiffs,

16 v.

17 UBER TECHNOLOGIES, INC., a Delaware  
Corporation, and RASIER, LLC, a Delaware  
18 Limited Liability Company,

19 Defendants.

Case No.: 4:14-cv-05615-JST

**DECLARATION OF JANE E. CLONINGER  
IN SUPPORT OF PLAINTIFFS' RENEWED  
MOTION FOR ATTORNEYS' FEES AND  
EXPENSES AND FOR CONSIDERATION  
OF EXPERT TESTIMONY IN SUPPORT  
THEREOF UNDER 28 U.S.C § 1712(d)**

Hon. Jon S. Tigar, Presiding

Date: May 6, 2020

Time: 2:00 P.M.

Location: Oakland Courthouse, Courtroom 6 –  
2nd Floor, 1301 Clay Street, Oakland, CA  
94612

1 I, Jane E. Cloninger, declare under penalty of perjury, pursuant to 28 U.S.C. § 1746 and based  
2 on my own personal knowledge, that the following statements are true:

3 **I. EXPERIENCE AND QUALIFICATIONS**

4 1. I have over 30 years of experience as a consultant advising clients in the merchant  
5 payments industry.

6 2. I was a Partner at Edgar, Dunn & Company, a boutique payments consulting firm, and a  
7 Managing Director at Accenture in their payments practice.

8 3. I have experience in both economics and operational aspects of the payments industry. I  
9 have assisted clients in preparing business cases for new products and technology investments. I have  
10 completed numerous client projects involving multiple payment methods including credit and charge  
11 cards, debit, prepaid, person to person. My consulting experience includes mobile payments, contactless  
12 cards, conversion to chip cards.

13 4. I have an MBA from UCLA's Anderson School of Management in Los Angeles and a  
14 BS in Economics from University of Tennessee in Knoxville.

15 5. A true and correct summary of my training, experience, and prior testimony is set forth  
16 in **Exhibit 1** attached hereto.

17 **II. SCOPE OF WORK**

18 6. I was retained by Ahdoot & Wolfson, PC, to provide an expert opinion with respect to  
19 certain issues addressed herein and concerning a Settlement in the above-captioned matter. In particular,  
20 I was asked to determine the following: out of the 22,068,985 open Uber Rider Accounts in the  
21 Settlement Class, what percentage of Uber Rider Accounts will continue to be open and of those that  
22 are open, what percentage will include information regarding a valid form of payment as of May 31,  
23 2021?

24 7. In making this determination, I reviewed and analyzed the following documents: (i)  
25 Stipulation and Protective Order (ECF No. 51), (ii) Amended Stipulation of Settlement ("Settlement  
26 Agreement") (ECF No. 125), (iii) the Court's Order Granting Final Approval and Granting In Part and  
27 Denying In Part Plaintiffs' Motion For Attorneys' Fees, Costs, And Incentive Awards (ECF No. 189),  
28 and (iv) the referenced documents, reports and surveys described below.

1 8. I have executed the document entitled “Exhibit A – Certification Re Confidential  
2 Discovery Materials” to the Stipulation and Protective Order entered by this Court on August 3, 2015  
3 (ECF No. 51).

4 9. I have been informed and believe that this declaration and opinion will be filed in support  
5 of a renewed motion for an award of \$8.125 million in Attorneys’ Fees and Expenses in this case.

6 10. For the purposes of this Declaration, capitalized words and phrases that are not otherwise  
7 defined herein, have the same meaning as defined in the Settlement Agreement.

8 **III. OPINION**

9 **QUESTION 1**

10 **Out of the 22,068,985 Uber Rider Accounts in the Settlement Class, what percentage will continue**  
11 **to be open as of May 31, 2021?**

12  
13 11. I estimate that [REDACTED REDACTED REDACTED REDACTED] of the Uber Rider Accounts, or [REDACTED REDACTED REDACTED REDACTED], will continue to be  
14 open as of May 31, 2021. The methodology for calculating this estimate is based on Uber’s historical  
15 performance and is described below:

16 a. I have been informed and believe that [REDACTED REDACTED REDACTED REDACTED] Uber Rider Accounts, that were  
17 part of this Settlement Class, have been closed (or deleted from Uber’s platform) over the 28-month  
18 period between August 7, 2017 and November 30, 2019 [assumes a full month for August 2017].  
19 Employing a straight-line average per month, indicates that [REDACTED REDACTED REDACTED REDACTED] accounts were closed on average  
20 each month (the calculation is: [REDACTED REDACTED REDACTED REDACTED] closed accounts / 28 months = [REDACTED REDACTED REDACTED REDACTED] closed accounts per  
21 month).

22 b. In my opinion it is appropriate to rely on Uber’s actual historical performance to  
23 estimate future account closures because Uber’s actual experience will be more reflective of Uber’s  
24 future experience than the experience of other non-related parties. Thus, I apply this rate (*i.e.* [REDACTED REDACTED REDACTED REDACTED]  
25 per month) to estimate the number of Uber Rider Accounts that will be likely closed for the 18-month  
26 period between November 30, 2019 and May 31, 2021. For the purposes of this opinion, I estimate an  
27 additional [REDACTED REDACTED REDACTED REDACTED] Uber Rider Accounts will be closed by May 31, 2021 (the calculation is: [REDACTED REDACTED REDACTED REDACTED]  
28 accounts closed per month \* 18 months = [REDACTED REDACTED REDACTED REDACTED] additional Uber Rider Accounts will be closed).

1 c. This would reduce the 22,068,985 open Uber Rider Accounts as of November 30,  
2 2019, to [REDACTED REDACTED] Uber Rider Accounts that would be open as of May 31, 2021 (the calculation is:  
3 [REDACTED REDACTED] accounts as of 11/30/2019 – [REDACTED REDACTED] additional closed accounts = [REDACTED REDACTED] Uber Rider  
4 Accounts that remain open as of 5/31/2021).

5 12. Thus, [REDACTED RE] % of the 22,068,985 Uber Rider accounts would remain open (the calculation  
6 is: [REDACTED REDACTED] / 22,068,985 = [REDACTED REDAC], or [REDACTED RE] %).

7  
8 **QUESTION 2**

9 **Assuming [REDACTED RE] % of the Settlement Class does not use the Settlement Share in their Uber Rider**  
10 **Account during the year that the Settlement Share is available in that fashion (“Payment Rider**  
11 **Accounts”), then what percentage of this group will continue to have a valid form of payment on**  
12 **their Uber Rider Account as of May 31, 2021?**

13 13. I estimate that 85.9% (or [REDACTED REDACTED]) of the Payment Rider Accounts will have a valid  
14 form of payment as of May 31, 2021. The methodology for calculating this estimate is described below  
15 in Paragraphs 14 to 28.

16 14. *First*, I note that the Settlement Agreement provides for an email to be sent to all Payment  
17 Rider Accounts prior to any attempt at payment, reminding each Uber Rider Account holder to ensure  
18 that their form of payment on the Uber platform is current. The estimate herein only *partially* accounts  
19 for the effects of this reminder email, which is a common practice, but typically does not include a cash  
20 refund type payment as an incentive, which would likely increase the 85.9% estimated percentage of  
21 Payment Rider Accounts that will have a valid form of payment as of May 31, 2021.

22 15. Credit and charge cards typically have an expiration date of 2 to 4 years – note it is the  
23 card, not the underlying account, that expires. As a result, cards on file at e-commerce merchants and  
24 recurring billers expire every three years on average, which historically resulted in approximately one  
25 third of cards on file becoming out of date every year. However, recently the card brands have developed  
26 tools for merchants to better manage their cards on file including: merchants can subscribe to services  
27 offered by the payment brands to automatically update the expiration dates as they expire and are  
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1 renewed. Additionally, merchants can add a Recurring Indicator to the record to let the issuer know that  
2 this is a recurring charge; the issuer can chose to approve or decline the transaction based on its own  
3 risk appetite., Also, merchants can proactively contact customers by emailing customers to request that  
4 the customer update their account information. In this analysis I have assumed that Uber is taking  
5 advantage of one or more of these tools and have not included any card attrition<sup>1</sup> due to expiration dates.

6 16. *Second*, the starting point of the estimate is the [REDACTED REDACTED] Uber Rider Accounts that  
7 would remain open (as noted in response to “Question 1” above). I have been informed by Counsel that,  
8 as of January 31, 2020 [REDACTED REDACTED] % of the Class had used an Uber Rideshare Service within the preceeding  
9 year and that, accordingly, I should assume for purposes of this Declaration that [REDACTED RE] % of the open  
10 [REDACTED REDACTED] Uber Rider Accounts will not utilize the Settlement Share by using an Uber Rideshare  
11 Service within a year after the Settlement Share is available on the Uber Rider Account. Under this  
12 assumption, there will be approximately [REDACTED REDACTED] Payment Rider Accounts.

13 17. Of these [REDACTED REDACTED] million Payment Rider Accounts, a portion will no longer have a  
14 valid payment type associated with the account due to attrition.

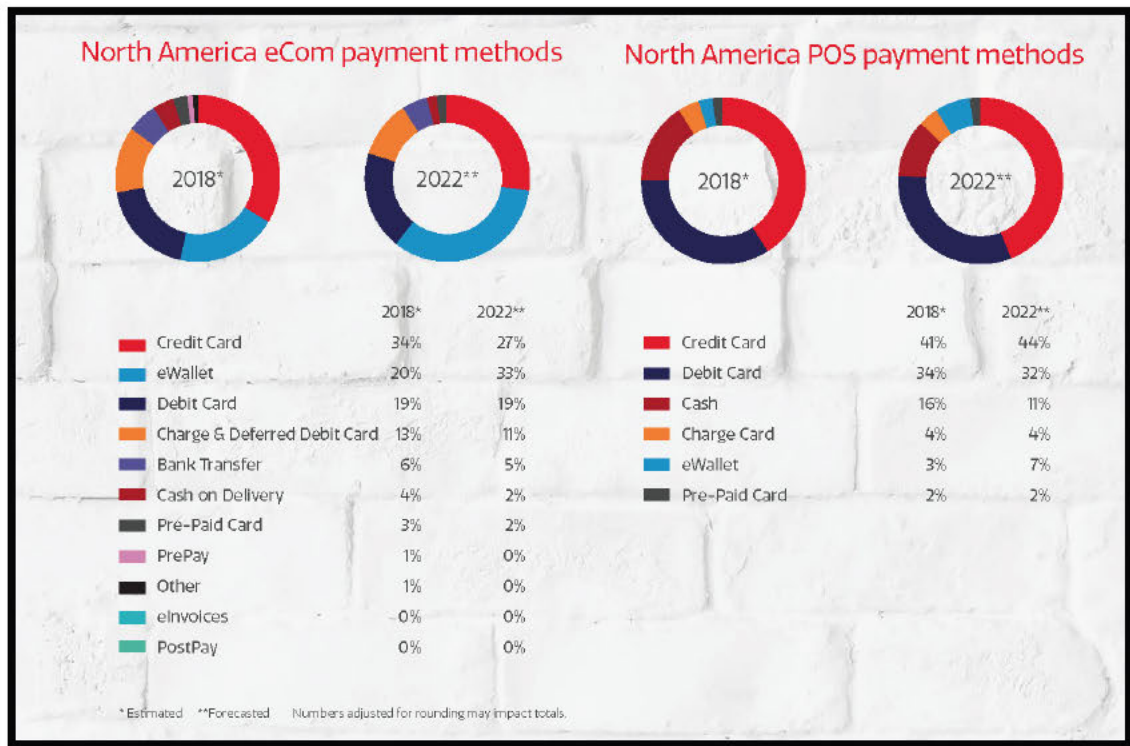
15 18. Because attrition rates vary by payment type, it is important to estimate the distribution  
16 of payment methods used by Uber Riders.

17 19. I am informed and believe that we do not have the actual distribution of payment types  
18 received by Uber. Instead, I rely on industry wide data regarding this issue provided by WorldPay<sup>2</sup>. A  
19 true and correct copy of WorldPay’s estimates for the North American market for 2018 and 2022 are  
20 shown below in Chart 1:

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22  
23 <sup>1</sup> Attrition in the context of payment methods, refers to the number of closed accounts as a  
24 percent of the number of total accounts over a specified period. Attrition is defined as the percentage  
25 of issuers’ total number of accounts who voluntarily (customer request the account to be closed) or  
involuntarily (issuer closes due typically to delinquency or inability to pay) have their card accounts  
closed.

26 <sup>2</sup> WorldPay is the largest US acquirer and a leading global payments technology firm that  
27 processes “over 40 billion transactions annually through more than 300 payment types across 146  
28 countries and 126 currencies”. [Global Payments Report, WorldPay, p. 108] As the largest US  
acquirer, WorldPay has unique insight into the payment mix with US ecommerce and face to face  
transactions.

CHART 1:



[Source: 2018 and 2022 Payment Mix: Global Payments Report, WorldPay, November 2018, p. 11; a true and correct copy of the Worldpay Global Payments Report, November 2018, is attached hereto as **Exhibit 2**]<sup>3</sup>

<sup>3</sup> Definitions of the payment types included in WorldPay’s North America ecom payment mix are: (i) Credit card: Credit cards backed by major card brands; (ii) eWallet: An electronic card used for transactions made online through a computer or a smartphone, like a credit card or debit card. When used with a smartphone, consumers store the credentials of their preferred card for payments and use biometrics to authorize the transaction. Examples: Alipay, Tenpay, PayPal, Qiwi, Yandex, Money. (iii) Debit Card: Debit cards are backed by major card brands and draw funds directly from a consumer’s bank account; (iv) Charge Card/Deferred Debit Card: A pay-later card that charges no interest but requires the cardholder to pay the outstanding balance in full upon receipt of the statement, typically on a monthly basis. This includes deferred debit cards. Examples: American Express; (v) Bank Transfer: Consumers pay for goods using their online banking facility. They are either redirected to their bank or select their bank from a provider’s page. Examples: iDEAL, SOFORT banking, eNETS, Przelewy24, SafetyPay; (vi) Cash on Delivery: A transaction in which a payment for goods is made at the time of delivery. Examples: Merchant and bespoke delivery company services; (vii) PrePaid Card: These are cards that run on scheme networks such as Visa and Mastercard, and can be used to make purchases or withdraw cash in the same way as a debit or credit card; (viii) Prepaid: Allows consumers to fund a card and make purchases without a credit card or bank account. Examples: paysafecard, Neosurf; (ix) Other: These include mobile carrier billing, crypto-currencies and other emerging technologies. Examples: Bitcoin, Zong, BOKU. [Source: Global Payments Report, WorldPay, November 2018, p. 107]

1 20. I am informed and believe that Uber does not accept all the payment types included in  
2 WorldPay's North American Payment Mix.

3 21. I am informed and believe that Uber does accept credit cards including MasterCard, Visa,  
4 American Express, Discover, US debit cards, and selected eWallets including ApplePay and PayPal.

5 22. Thus, I have made certain adjustments to reflect the differences between the forms of  
6 payment listed by Worldpay and those forms of payment accepted by Uber. Chart 2 below shows the  
7 adjustment made to the market share to reflect only the payment types known to be accepted by Uber:

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9 **CHART 2<sup>4</sup>**

Payment Type	Original		Adjusted	
	2018	2022	2018	2022
Credit Card	34%	27%	38%	29%
eWallet	20%	33%	22%	36%
Debit Card	19%	19%	21%	21%
Charge/Deferred Debit	13%	11%	15%	12%
Prepaid Card	3%	2%	3%	2%
Subtotal Accepted by Uber	89%	92%	100%	100%
Bank Transfer	6%	5%		
Cash on Delivery	4%	2%		
Prepay	1%	0%		
Other	1%	0%		
Subtotal Not Accepted by Uber	12%	7%		
Total	101%	99%		

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19 23. I used the following formulas to determine the Adjustment in the table above (Chart 2):

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- Adjusted 2018 Portfolio Mix = [Original 2018 Mix] / [2018 Subtotal Accepted by Uber]
  - Adjusted 2022 Portfolio Mix = [Original 2022 Mix] / [2022 Subtotal Accepted by Uber]

24 24. *Third*, in order to estimate the market share for 2021, I calculated the annual change for  
25 each of Uber's accepted payment types and then adjusted the 2022 market share data to reflect only 4  
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27  
28 <sup>4</sup> Note: totals may not add to 100% due to rounding within original dataset provided by WorldPay.

1 years of growth, rather than the 5 years reflected in the WorldPay data. Chart 3, below shows these  
2 adjustments:

3  
4 **CHART 3:**

Payment Type	Adjusted		Change/Yr	Payment
	2018	2022		Mix 2021
Credit Card	38%	29%	-1.8%	31.1%
eWallet	22%	36%	2.7%	33.2%
Debit Card	21%	21%	-0.1%	20.8%
Charge/Deferred Debit	15%	12%	-0.5%	12.5%
Prepaid Card	3%	2%	-0.2%	2.4%
Subtotal Accepted by Uber	100%	100%		100%

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10 25. The following formulas were used to estimate the 2021 mix:

- 11 ○ Change Per Year = [2022 Mix – 2018 Mix] / 5 years
- 12 ○ Estimated 2021 = 2022 Adjusted – Change per year

13 26. *Fourth*, I applied these attrition rates for each payment type and calculated the weighted  
14 average<sup>5</sup> attrition rate for the Uber portfolio. The following formula was used to calculate the weighted  
15 average attrition rates:

- 16 ○ Weighted Attrition Rate by Type of Payment = [Estimated 2021 portfolio mix] \*  
17 [annual attrition rate by type of payment]
- 18 ○ These are then summed to get the total attrition rate for the portfolio.

19 27. As demonstrated in Chart 4 below, I thus estimate the attrition rate for valid payment  
20 methods to be 14.1%.

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26 <sup>5</sup> A weighted average is the “[m]ean in which each item being averaged is multiplied by a  
27 number (weight) based on the item's relative importance. The result is summed and the total is divided  
28 by the sum of the weights. Weighted averages are used extensively in descriptive statistical analysis  
such as index numbers. Also called weighted mean.”  
<http://www.businessdictionary.com/definition/weighted-average.html> (last visited February 10, 2020).



CHART 4<sup>6</sup>

Payment Type	Payment Mix 2021	Annual Attrition	Weighted Attrition
Credit Card	31.1%	15%	4.7%
eWallet	33.2%	14%	4.6%
Debit Card	20.8%	12%	2.5%
Charge/Deferred Debit	12.5%	15%	1.9%
Prepaid Card	2.4%	19%	0.5%
Subtotal Accepted by Uber	100%		14.1%

28. Thus, of the [REDACTED REDACTED] Payment Rider Accounts, 85.9% will have valid payment methods associated with those accounts in May 2021.

- Accounts with valid methods of payment = 100% - 14.1%, or 85.9%, of the inactive Uber Rider accounts
- Number of Inactive Accounts with valid methods of payment = [REDACTED REDACTED] \* 85.9%, or [REDACTED REDACTED]

29. Thus, in my opinion [REDACTED REDACTED] of the Uber Rider Accounts, or [REDACTED REDACTED], will continue to be open as of May 31, 2021. The attrition rate among the Payment Rider Accounts is estimated to be

<sup>6</sup> Sources for Attrition Rates for each payment type:

Credit Card: Annual Attrition Rate credit card: Credit Card Acquisitions: Maximizing Results amid Change, Mercator Advisors, January 30, 2018 reported in Payments Journal: <https://www.paymentsjournal.com/new-credit-card-accounts-volumes-remain-flat/> (last visited Feb. 11, 2020). Current attrition rates confirmed by interview with Auriemma RoundTables, who provide on-going benchmarking for the leading card issuers.

eWallet: Calculated weighted average of other payment types accepted by Uber which would be included in the wallet.

Debit Card: Average consumer banking attrition rate from three sources ranging between 10% to 15%: Accenture survey (11%) as reported in The Financial Brand, October 31, 2017, <https://thefinancialbrand.com/59779/digital-banking-branch-channel-switching/> (last visited Feb. 11, 2020); Alpine Jennings, StratAgree (10%) as reported in The Financial Brand, December 8, 2015, <https://thefinancialbrand.com/55772/banking-customer-attrition-analysis/> (last visited Feb. 11, 2020); FIworks (15%) <https://www.fiworks.com/resources/statistics> (last visited Feb. 11, 2020).

Charge Card/Deferred Debit: American Express is included in the credit card attrition rates, so the same rate is applied.

Prepaid Cards: <https://www.prepaidcards123.com/prepaid-debit-card-statistics/> (last visited Feb. 10, 2020)

1 14.1%. The remaining 85.9% (or REDACTED REDACTED  
REDACTED REDACTED  
REDACTED REDACTED) Payment Rider Accounts would likely have a valid form  
2 of payment as of May 31, 2021 and therefore Uber's attempts to pay them is likely to be successful.

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4 I declare under penalty of perjury under the laws of California and of the United States that the  
5 foregoing is true and correct. Executed this 4th day of March, 2020 in San Francisco, California.

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7 Jane E. Cloninger  
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**EXHIBIT 1**

## JANE E. CLONINGER

San Francisco, CA | jane.cloninger@gmail.com | 415.218.7417 | linkedin.com/in/janecloninger

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A senior leader with broad consulting experience in competitive strategy, new product development, business case development and implementation execution. Primary focus is electronic payments systems, particularly emerging products and technologies including mobile, contactless and EMV for both face to face and online payments and real time payments. Worked in many parts of the card industry including working with card brands, issuers, merchants, co-brand partners, third party processors, and major merchant acquirers. Global experience includes Canada, Latin America, UK, and Australia.

### 1. EDUCATION

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University of California at Los Angeles, Anderson Graduate School of Management, Los Angeles, CA; Master of Business Administration, Strategy and Finance, 1982

University of Tennessee, Knoxville, TN; Bachelor of Science, Economics, 1978 (with honors)

### 2. EMPLOYMENT HISTORY

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Accenture, Managing Director, Accenture Payment Services San Francisco, CA	3/2017 – 2/2019
Edgar, Dunn & Company, Director/Partner San Francisco	1985- 2017
First Interstate Bancorp, Assistant Vice President Los Angeles, CA	1982- 1985
Wilshire Associates Los Angeles, CA	1979-1980

### 3. LITIGATION SUPPORT EXPERIENCE

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Bankruptcy Dispute – Provided expert opinion and testified in deposition in a case involving the bankruptcy of a charter airline. Provided testimony regarding industry risk management practices and the role and responsibility of the acquirer in underwriting and monitoring their merchant clients

Putative Class Action – Provided expert opinion related to industry practices related to the practice of charging interest after an account is charged off and the custom, practice and standard in the industry of an original creditor card issuer's intent to forever relinquish the right to charge a charged-off account contract interest

Bankruptcy – Contract Dispute. Provided expert opinion in a matter between a merchant and its Acquirer related to inappropriate withholding of funds for credit card transactions occurring after bankruptcy had been filed

Contract Dispute – Provided Expert Report in a matter between an online gaming merchant and its Acquirer regarding fees charged for chargebacks and credits

Contract Dispute – Valuation of Co-Brand Credit Card Portfolio. Prepared the damage assessment related to litigation resulting from the co-brand partner’s refusal to honor an established co-brand agreement. Assessed the competitive environment and management practices during the interim period to identify any changes in value related to other factors. Provided expert witness testimony in deposition and in a jury trial that concluded in favor of damages for our client

Contract Dispute – Airline Industry. Provided expert opinion related to responsibility for outstanding chargebacks related to a failed charter airline. Provided expert opinion on industry practices regarding the roles and responsibilities of the Acquirer. Testified in deposition

Securities Litigation – Class Action. In support of a class action lawsuit alleging inappropriate public disclosure of credit card portfolio performance to investors, prepared expert report analyzing portfolio performance during each quarter of the class period to determine what actual performance was compared to reported performance. Evaluated loan loss reserves and calculated appropriate reserve levels based on risk exhibited by the portfolio performance indicators. Testified for mediation and prepared Expert Report for settlement purposes. Case settled in favor of our client

Contract Dispute – Credit Card Program Valuation. In support of litigation between a major regional bank and its co-branded partner, projected the earnings potential of a planned co-brand program that was never launched. Projected the potential earnings and losses based on industry averages and target customer profiles, including comparison of risk between “store” cards and “bank” cards and evaluation of the relative risk of direct marketing to low credit score customers and the likely losses associated with such techniques. Provided expert witness testimony in arbitration

Contract Dispute – Credit Card Program Valuation. In a case between the bank and a co-branded partner, provided expert witness testimony related to both liability and damages for a co-branded credit card program that had been launched. Developed forecasted losses and future earning potential to estimate probable profitability if the program had continued. Testified in deposition

Patent Infringement – Prepared an Expert Report and was deposed in a patent infringement case related to whether the patents in question describe a system for screening potential borrowers based on lender criteria so that the lender can market a loan to these pre-screened borrowers

Patent Infringement – Prepared an Expert Report in a patent infringement case related to whether offers presented by an online service for home equity line of credit (HELOC) products are “financial card offers” within the meaning of the Court’s claim construction in this case.

#### 4. OTHER SELECTED PROJECT EXPERIENCE

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End-to End Process Review. Led a review how risk was introduced into a global payment services’ core services and how the client identified and responded to incidents. Scope included working with Treasury and Settlement to develop an end to end view of the process. Areas addressed including client on-boarding, transaction authorization processing and backend monitoring and settlement . Documented key workflows and made recommendations to address areas of risk including upstream Treasury dependencies

Merchant Processor Selection. Assisted a leading entertainment company to decide to change acquirer/processors and led the RFP effort.

Digital Banking. Served as Client Account Lead for engagements with a digital native banking start up. Assistance included implementation of the bank’s core banking system, implementation of Anti-Money Laundering tools, risk and compliance issues and data architecture

Collection Agency Management. Benchmarked the practices of six large US card issuers' collections agency management practices and recommended changes to client's agency audit process to ensure they were at least equivalent to industry best practices

Credit Process Review. For a large US Issuer, reviewed the document and information flow for a large US Card Issuer. Recommended changes in flow and automation of manual tasks to improve efficiency, control, and availability of information

Bank Card Acquisition Model Development. For a large issuer, developed an acquisition model to value potential portfolio acquisitions. Model included expected loss curves, balance curves, payment curves and other key expense and revenue drivers

Business Case Development for Chip. Developed the business case for the migration of a national PIN debit scheme from magnetic stripe technology to chip. Worked with all industry participants – issuers, acquirers, automated banking machine operators, association and merchants – to develop an industry wide perspective on the costs and benefits of migrating to chip. Presented recommendation to association board

Business Case for US Migration to EMV. Developed the business case for the US migration from mag stripe to chip technology for major card brands. Additionally, built the business case for a leading card issuer of credit, debit and prepaid cards to convert to EMV

Acquirer/Issuer Processor Pricing. Developed the activity-based pricing for a large national credit card processor's issuing and acquiring businesses

Large US Card Issuer. Credit Review Process. Reviewed the document and information flow for a large US card issuer. Recommended changes in flow and automation of manual tasks to improve efficiency, control, and availability of information

## 5. SELECTED SPEAKING ENGAGEMENTS

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- Card Not Present Expo, Moderator, "Remote Control: Focusing on mobile Web and in-app capability vs. mPOS", May, 2016
- Money 20/20, Moderator "Payment Card Innovation – and the Evolving Role of Issuers, Processors and Networks", October 27, 2015
- ARC Travel Connect, 2015 (Airlines Reporting Company), Speaker and Panel Moderator, "How Do New Developments in Payments Impact the Travel Industry", Washington DC, October 22, 2015
- Mobile World Congress, Barcelona. Moderator "Mobile Retail: Delivering Contextual Experiences to Drive Loyalty and Spend", March 16, 2015
- Money 20/20, Moderator "Payment Security Evolution: EMV, Mobile, CNP & Beyond", November 3, 2014
- Cartes America, "Mobile Payment Ecosystem Views", May 13, 2014
- Payments Summit, Smart Card Alliance, Mobile Payments, the Battle of the Approaches, February 3, 2014
- Law Seminars International, Palo Alto, CA, "Mobile Payments, Players, and The Customer Experience – and the Issues They Raise, November 21, 2013
- Money 20/20, Panel Moderator "The Future of the Secure Element and Trusted Execution Environment", October 7, 2013
- Merchant Risk Council, Webinar, May 23, 2013. Results of survey conducted by EDC and MRC: "Mobile Commerce and the Merchant Experience"
- Law Seminars International, Seattle WA, May 13, 2013. "Mobile Payments: Players and Their Technologies"
- Cartes America, Las Vegas, April 23, 2013. "EMV, NFC and Mobile Implementations Based on the US Business Case"
- Merchant Risk Council, Las Vegas, March 28, 2013. Mobile Super Session. "Mobile Commerce"

- Smart Card Alliance, Las Vegas, February 4, 2013. Moderator: “Keynote Plenary Panel Session: The Pressing Issues on EMV Migrations”
- Law Seminars International, San Francisco, CA, November 15, 2013. “Mobile Payments Ecosystem” Card Not Present Expo, Moderator, “Remote Control: Focusing on mobile Web and in-app capability vs. mPOS”, May 2016
- Money 20/20, Moderator “Payment Card Innovation – and the Evolving Role of Issuers, Processors and Networks”, October 27, 2015
- ARC Travel Connect, 2015 (Airlines Reporting Company), Speaker and Panel Moderator, “How Do New Developments in Payments Impact the Travel Industry”, Washington DC, October 22, 2015
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- Merchant Risk Council, Webinar, May 23, 2013. Results of survey conducted by EDC and MRC: “Mobile Commerce and the Merchant Experience”
- Law Seminars International, Seattle WA, May 13, 2013. “Mobile Payments: Players and Their Technologies”
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**EXHIBIT 2**

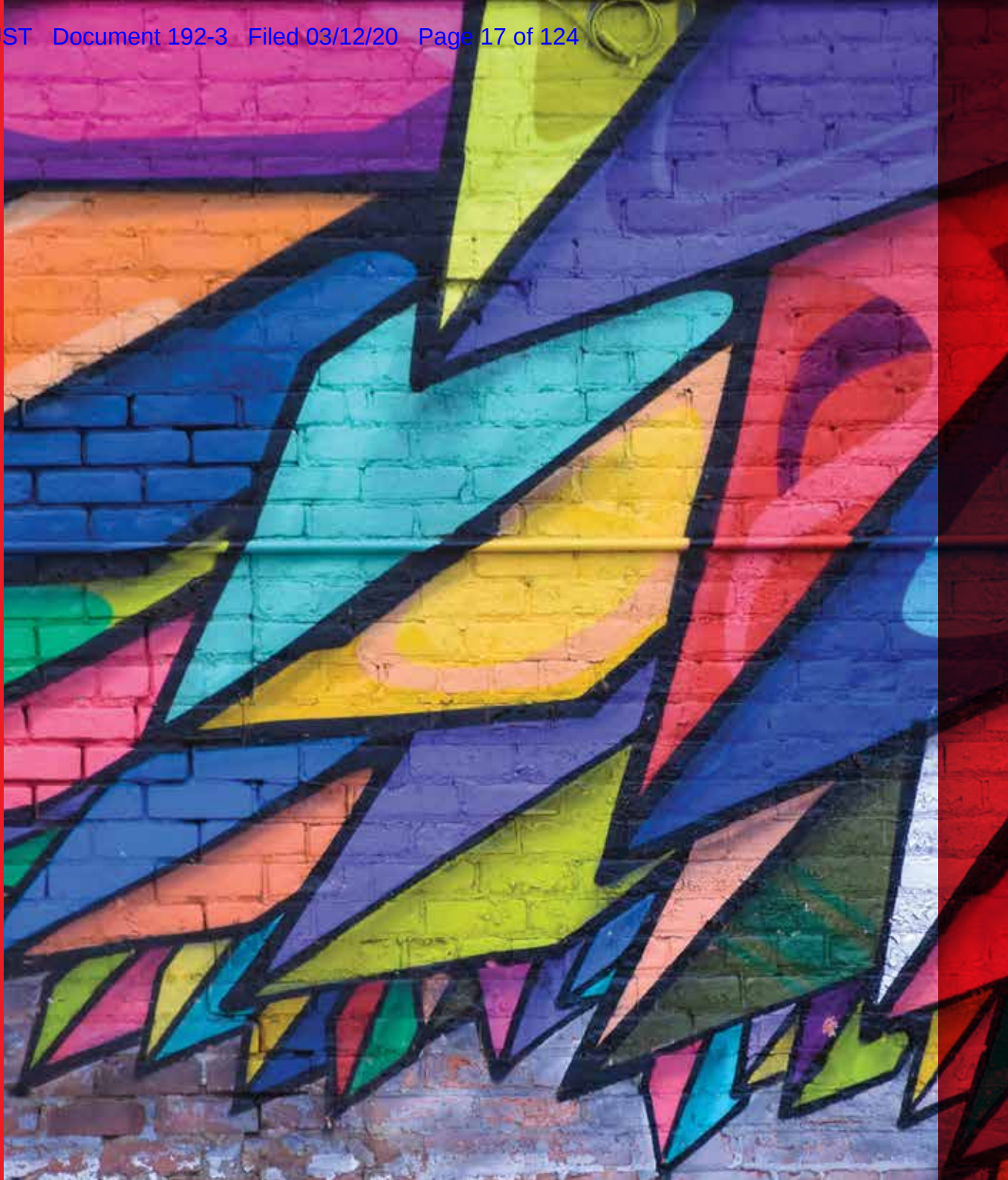


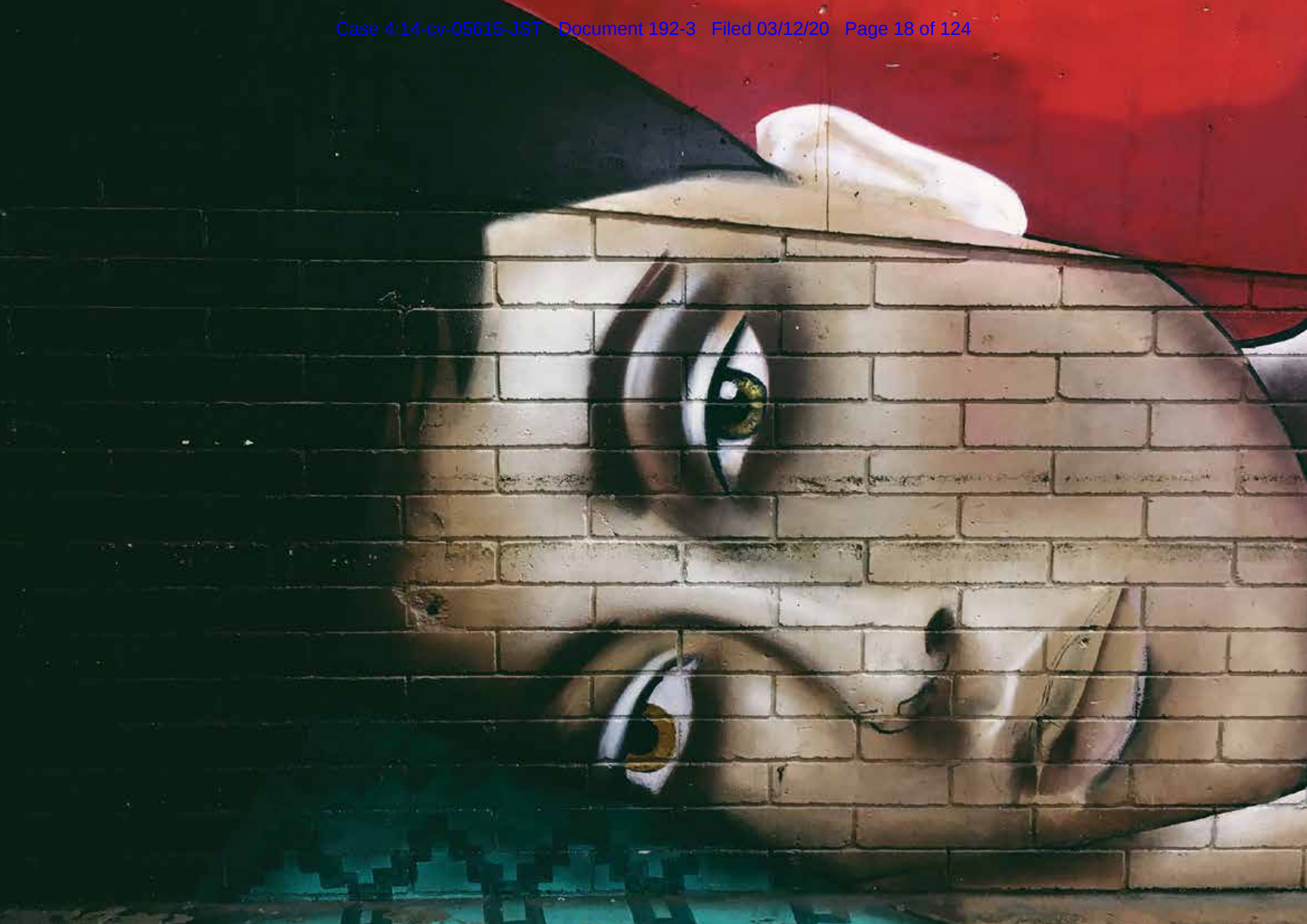
**worldpay**

# Global Payments Report

The art and science of global payments  
A definitive report from Worldpay

NOVEMBER 2018





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# Introduction

The art and science of global payments



An individual payment is a simple act. Timeless and enduring, payments serve the same ends today as they did thousands of years ago. Our methods of recording and exchanging value evolve with technology: from livestock to gold coins, paper money to digital wallets. Yet the essence of a payment remains unchanged: Goods and services are exchanged for a payment of a value mutually agreed to between buyer and seller.

Payments represent the sum of our experiences. Payments document our needs, our desires, and our ever-shifting values. Payments tell the story of human history through economics, recording those needs, desires, and values. The diversity of our payment landscape arises naturally from our respective cultural, political, and economic differences.

This deceptive complexity means making sense of global payments requires both art and science.

The science of global payments starts with the importance of commerce and mobile revolutions, and the role of machine learning and artificial intelligence in optimizing conversion rates and fighting fraud. The science involves understanding the forces driving the creation of hundreds of alternative payment methods. It also underscores the importance of payments in creating positive user experiences with brands. Science is necessary to appreciate the complexity of global payments. But it's not sufficient.

The art of payments is every bit as essential to understanding commerce. Consumer behaviors and preferences are as diverse as the cultures of the world—they defy easy answers or cookie-cutter solutions. Payments are far too complex to be understood by algorithm alone. Navigating the changing world of payments requires something beyond spreadsheets and charts. Today's payment landscape also requires the tools of an artist: inspiration, persistence, and creativity.

This report offers insight into the art and science of payments. We'll start with science by offering a high-level data analysis of the ways we pay globally, both online and at the point of sale. We'll then turn to the art of payments: the opportunities posed by China's growth; the unique needs of Millennials and their emerging spending power; the dissolution of channels and the unification of commerce; how deferred payments enable the immediacy of The Now Economy; and the future of invisible payments (spoiler alert: the future is now). Finally, we'll take a deeper dive and detail the payment landscape for 36 individual country markets from around the world.

Whether you're looking to expand your business internationally, optimize your payments mix in existing markets, or simply gain a deeper understanding of the current state of the art (and science) of payments, this report is for you.





# Global Payment Trends

Global payment methods breakdown

## Global payment trends

Worldpay's 2018 snapshot of global payment methods reveals a complex landscape brimming with diversity. Alternative payment methods are rising to meet the needs of consumers online, led by eWallets and bank transfers. Though its long reign of supremacy is nearing its end, cash remains the leading payment method at the point of sale. This complex landscape opens doors to increase consumer satisfaction by offering the right mix of payment options.

The meteoric rise of eCommerce is expected to surpass \$4.6 trillion globally by 2022. How we transact is changing too: alternatives to credit and debit cards now account for more than half of eCommerce transaction volume. Our survey of 36 countries found at least 140 online payment methods in use today.

eWallets have vaulted to the forefront of payments change by offering seamless convenience. Online shopping demands equal measures of convenience and security. Digital wallets deliver on both counts. Mobile applications integrate the act of payment into daily lifestyles and routines, while preloaded credentials speeds online checkout. eWallets do all of this safely with encryption, tokenization, and device authentication providing extra layers of security. We expect continued growth in China and a surge of adoption in North America will propel eWallets to become the leading eCommerce payment method globally within five years.

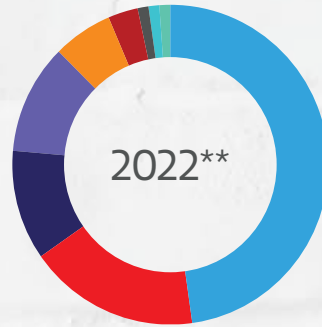
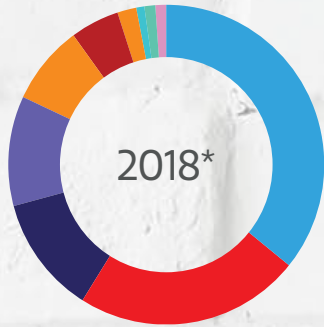
Bank transfers are also growing in popularity as an online payment method. Factors contributing to the growth of bank transfers include convenience for consumers, lower costs of acceptance and fewer chargebacks for merchants, a regulatory push from PSD2/Open Banking mandates in Europe, and a rise of banked populations in emerging markets.

The point of sale continues to witness radical transformations as spend shifts dramatically from cash to eWallets. Predictions of a cashless future won't be realized anytime soon; indeed, cash remains the most popular payment method at the point of sale globally today. However, the use of cash is on the decline in every global region with even more dramatic shifts forecasted. We project that cash will be supplanted by debit cards as the leading point of sale payment method in 2019, falling to fourth place in 2022 trailing debit cards, credit cards, and eWallets. Though shifting share within regions, we expect traditional credit card and debit card use to hold steady at the point of sale through 2022.



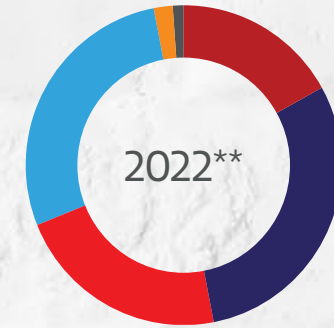
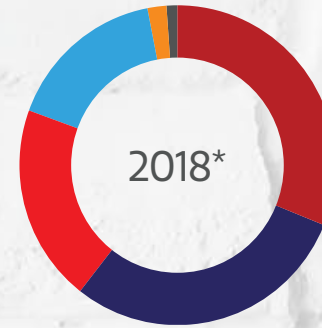


## Global eCom payment methods



	2018*	2022**
eWallet	36%	47%
Credit Card	23%	17%
Debit Card	12%	11%
Bank Transfer	11%	11%
Charge & Deferred Debit Card	8%	6%
Cash on Delivery	5%	3%
Pre-Paid Card	2%	1%
PostPay	1%	1%
elnvoices	1%	1%
PrePay	1%	0%
Other	0%	0%

## Global POS payment methods



	2018*	2022**
Cash	31%	17%
Debit Card	29%	30%
Credit Card	20%	22%
eWallet	16%	28%
Charge Card	2%	2%
Pre-Paid Card	1%	1%

\* Estimated \*\*Forecasted Numbers adjusted for rounding may impact totals.

# North America payment trends

The developed economies of North America offer a study in contrast when it comes to payment preferences. North America is corporate home to global innovators in payment technology, retail, and financial services. Comparably affluent and savvy US and Canadian consumers demand the latest in secure and convenient payment methods. Yet the pace of progress toward contemporary technologies like eWallets is tempered by mature technology infrastructures, habits, and preferences established over generations. Entrenched payment habits are proving resilient in this mature market both in-store and online.



Credit cards remain the undisputed champion of consumer payments in North America. Credit cards dominate as the method of choice both online and at the point of sale. The North American consumer is heavily banked—the US Federal Reserve estimated

the unbanked share of Americans fell to just 5% in 2017<sup>1</sup>—so unsurprisingly, debit cards remain a strong preference with 34% of spend at the point of sale and 19% share online. Taken together, card-based\* payments represent almost three-fourths of point of sale spend and over half of eCommerce volume.

Despite the proliferation of many new payment options globally, POS spend in North America remains overwhelmingly dominated by cash, credit, and debit. The near-universal acceptance of card payments and the ingrained habits of generations have proven difficult to break. Cash remains formidable at the POS, yet its use continues to drop. The ease and convenience of contactless payments is driving the decline of cash, as are alternative options such as eWallets.

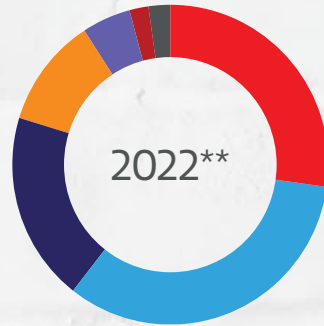
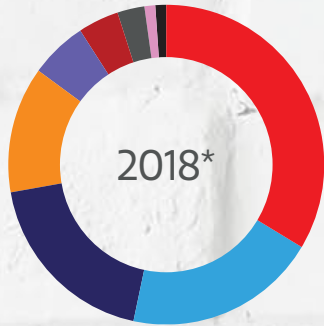
Consensus projections see the North American eCommerce market growing at a healthy sustained rate of between 9% and 10% annually through 2022. Challenging headwinds remain, however, notably concerns about fraud and the overall convenience. Fear of fraud and inconvenience are among the top reasons that consumers avoid online shopping. Payment methods of the present and future that can thread that needle to offer both greater security and greater convenience will be well positioned for success.

North America is coveted for its consumer spending power and will continue to present a highly competitive and lucrative market. Looking to the next five years for the North American market, we expect the use of cash to drop by about 5% at the point of sale. The majority of that spend will migrate to eWallets, which we project will more than double in POS share by 2022. On the eCommerce side, our research suggests that eWallet adoption will surge in North America and move towards the global average in the next five years.

1. <https://bankingjournal.aba.com/2018/05/fed-survey-unbanked-share-of-americans-falls-to-5-percent/>

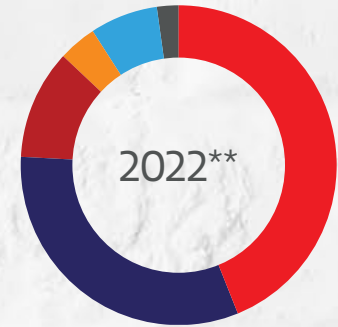
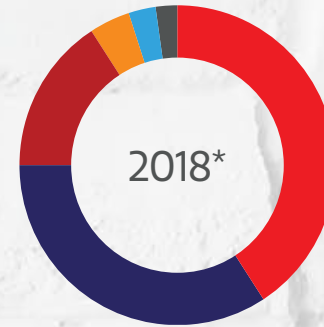
\*Credit cards and debit cards

## North America eCom payment methods



	2018*	2022**
Credit Card	34%	27%
eWallet	20%	33%
Debit Card	19%	19%
Charge & Deferred Debit Card	13%	11%
Bank Transfer	6%	5%
Cash on Delivery	4%	2%
Pre-Paid Card	3%	2%
PrePay	1%	0%
Other	1%	0%
eInvoices	0%	0%
PostPay	0%	0%

## North America POS payment methods



	2018*	2022**
Credit Card	41%	44%
Debit Card	34%	32%
Cash	16%	11%
Charge Card	4%	4%
eWallet	3%	7%
Pre-Paid Card	2%	2%

\* Estimated \*\*Forecasted Numbers adjusted for rounding may impact totals.

# Latin America payment trends

Latin America is a dynamic market offering a landscape of change and opportunity in payments. Macroeconomic headwinds and political instability that have constrained growth in recent years are both easing, reviving hopes that the economic fertility of the region can be more fully realized. Overall retail sales and especially eCommerce growth will far exceed the 2% growth estimates for the region's economy as a whole. Our research points to strong eCommerce growth in Latin America—we project over \$61 billion in transactional value in 2018 rising to over \$94 billion in 2022.

Cash dominates at the point of sale throughout Latin America, reflecting the region's comparably low rate of banked consumers. Following close behind cash are credit cards that continue to lead electronic payments at the point of sale. The payments landscape for eCommerce is significantly more complex and dynamic. Credit cards are the overwhelming choice for purchases online. Credit accounts for 44.6% of eCommerce spend overall and even higher rates in certain verticals such as travel. Beyond that, online spend is fragmented with debit cards, charge cards, eWallets, and bank transfers all making a stand for market share.

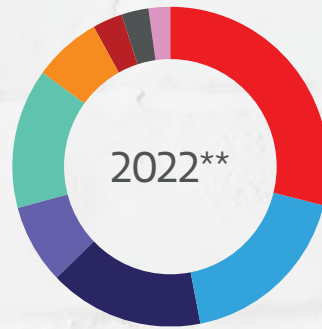
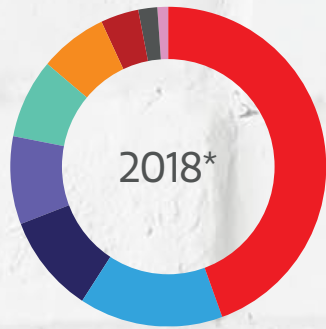
Installment based purchasing continues to be a defining characteristic of the payment market in Latin America. Installment agreements offer a structured loan over the card's credit line. Lower interest rates and repayment flexibility make this an attractive and regionally appropriate option. Installment payment agreements are especially popular for higher priced consumer goods such as appliances. Payment industry leaders join with local issuers to make this option practical by authorizing the full transaction but settling it in installments.

Latin America is home to a wealth of financial technology and eCommerce innovation including Argentina based MercadoLibre, Latin America's most popular digital platform. Argentina was home to pioneering eCommerce efforts and continues to offer inviting opportunity online. Boasting a growing base of young, educated, and internet-savvy consumers, the highest ratio of mobile users in the region all help explain Argentina's enviable 16% annual eCommerce growth rate.



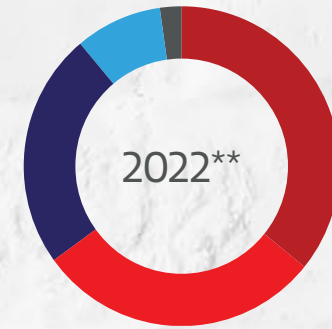
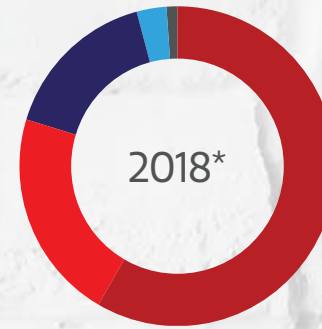
Looking forward, we expect that the overwhelming dominance of cash will begin to wane. Cash will remain the most popular point of sale payment method, though we project a significant drop in cash share through 2022. That spend will shift to credit cards, debit cards, and eWallets, each of which will see a large increase in payment share. Within eCommerce, we project that credit cards will continue to be strong, but will lose share to debit cards, eWallets, and bank transfers.

## Latin America eCom payment methods



	2018*	2022**
Credit Card	45%	29%
eWallet	15%	18%
Debit Card	10%	16%
Bank Transfer	9%	8%
PostPay	8%	14%
Charge & Deferred Debit Card	7%	7%
Cash on Delivery	4%	3%
Pre-Paid Card	2%	3%
PrePay	1%	2%
eInvoices	0%	0%
Other	0%	0%

## Latin America POS payment methods



	2018*	2022**
Cash	58%	36%
Credit Card	21%	29%
Debit Card	16%	24%
eWallet	3%	9%
Pre-Paid Card	1%	2%
Charge Card	0%	0%

\* Estimated \*\*Forecasted Numbers adjusted for rounding may impact totals.

## EMEA payment trends

EMEA offers a study in stark contrasts, with vast differences in the economies, cultures, and politics within each country. Each local payment landscape reflects unique circumstances and defies broad brushstrokes. Instead, these differences demand focused attention on their merits and expert guidance to navigate properly.

Payments at the point of sale in EMEA are split relatively equally among cash and card-based payments, with debit cards the far and away leader over credit cards. Those averages, however, mask distinct differences within the region. Debit cards are strongly preferred at the point of sale by consumers in Denmark, the Netherlands, and Norway. Cash is king in the UAE and dominates in Nigeria, but is receding from its once dominant position in the majority of Western European countries. eCommerce in EMEA paints an evenly distributed picture with debit cards, credit cards, eWallets, and bank transfers all making their case. Bank transfers

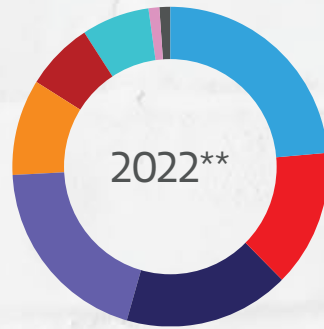
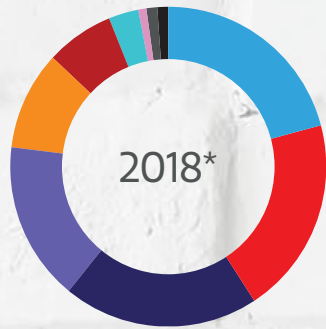
show remarkable strength and lead eCommerce payment share in countries as diverse as Germany and Nigeria, while eWallets have become the leading payment option among Danish consumers.

Future payment innovation in EMEA is poised to flourish under the European Union's Second Payment Services Directive (PSD2). PSD2 updates the EU's regulatory framework in an effort to boost competition and innovation in payment services, affecting merchants, consumers, and payment institutions. Informed consent of data sharing combined with improved security and customer authentication aims to increase privacy, reduce fraud, and provide more personalized consumer services. PSD2 went into effect in January 2018. The EU offers a test case for the rest of the world, with regulatory bodies and payment industry leaders from other regions watching developments closely.

Looking to the next five years within eCommerce, we project eWallets will maintain their top position and bank transfers will move into second place displacing credit and debit cards. European consumers have a strong history of preference to bank-based payments as opposed to credit utilities. We expect that trend to not only continue but to accelerate. We project this disposition to non-cash payments will continue at the point of sale, with debit cards surpassing cash as the most prevalent payment method at the POS by 2020. Further, PSD2 is likely to generate innovations at the point of sale such as increased use of bank transfers. We also estimate the use of cash at the point of sale will decline from 47% to 30% over the next five years, with debit cards and eWallets capturing the majority of that spend.

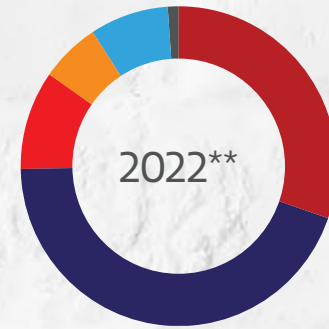
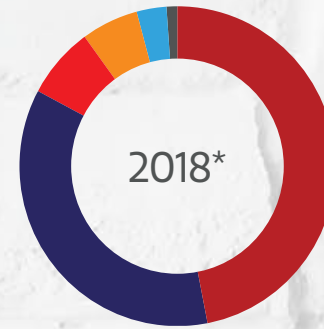


### EMEA eCom payment methods



	2018*	2022**
eWallet	21%	24%
Credit Card	20%	14%
Debit Card	20%	17%
Bank Transfer	16%	20%
Charge & Deferred Debit Card	10%	10%
Cash on Delivery	7%	7%
eInvoices	3%	7%
PrePay	1%	1%
Pre-Paid Card	1%	1%
Other	1%	0%
PostPay	0%	0%

### EMEA POS payment methods



	2018*	2022**
Cash	47%	30%
Debit Card	36%	44%
Credit Card	7%	10%
Charge Card	6%	6%
eWallet	3%	8%
Pre-Paid Card	1%	1%

\* Estimated \*\*Forecasted Numbers adjusted for rounding may impact totals.

## Asia Pacific payment trends

Asia stands at the forefront of payment innovation particularly in mobile commerce. Asian consumers demand and expect equal measures of seamless ease and security in all aspects of their digital lives, most of all when it comes to shopping and payments. Payment methods vary widely across the region, both between and within countries and across the spectrums of development from urban to rural. Companies operating in Asia thus face a complicated and demanding payment landscape.

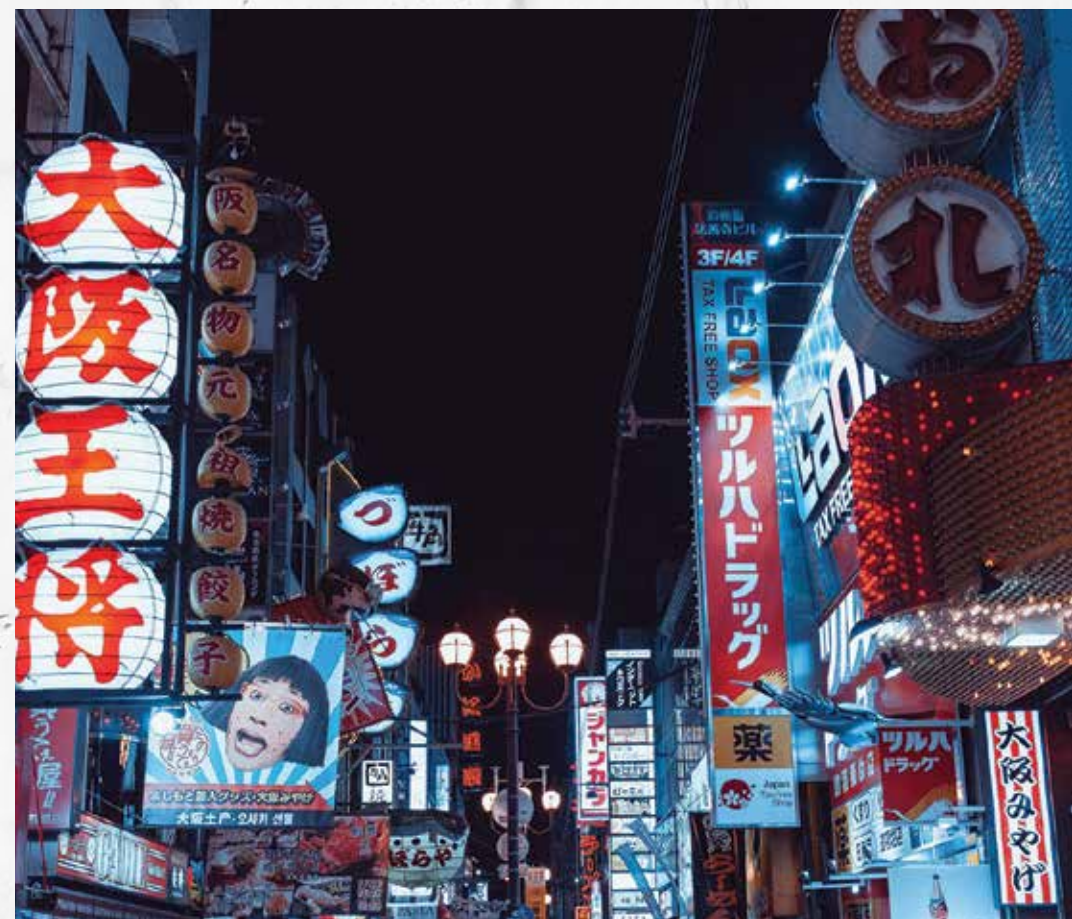
The outlook for eCommerce across Asia continues to be defined by extraordinary rates of growth, with five year compound annual growth rates projected at 21.3% in Malaysia, 20.2% in Vietnam, 18.6% in the Philippines and Indonesia. Though eCommerce growth captures headlines, growth at the point of sale is helping to redefine the contours of regional commerce. Taiwan's point of sale is set to grow at 10%, for example, trailing close behind China's expected 11% point of sale growth.

In China, the headline payments story remains the widespread adoption of digital wallets. Led decisively by Alipay and WeChat Pay, app-based payments via mobile devices redefine the scope of the possible. Chinese consumers are categorically choosing the seamless integration and trusted environment offered by these all-inclusive apps. eWallet use is ubiquitous in China online, accounting for nearly two-thirds of eCommerce transactions. eWallets are so popular among Chinese consumers that they also lead payments at the point of sale, representing more than a third of card-present market share.

Elsewhere in the region, we forecast growth and dramatic shifts in payments in India. Home to the world's second largest population that remains far from saturation in either internet access or mobile phone penetration, we project eCommerce growth in India at 21.2% CAGR for the next five years. Unique and challenging eCommerce payment pictures are present throughout the region. Bank

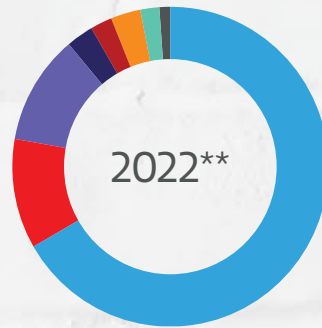
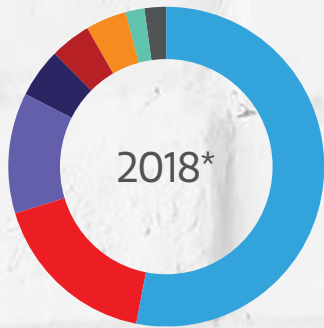
transfers lead the way online in Indonesia, Thailand, and Malaysia. Though cash on delivery only accounts for just over 4.5% of eCommerce spend regionally, it's the leading payment method in the Philippines.

Looking forward, Asia offers seemingly infinite promise for commerce and payments. Though local economic development conditions are determinative, some regional trends are apparent. At the point of sale, we project dramatic shifts from cash to eWallets over the next five years with debit and credit cards maintaining current share. On the eCommerce side, we project continued global leadership in the adoption of eWallets; led by China, we expect eWallets to account for two-thirds of regional payment volume by 2022.



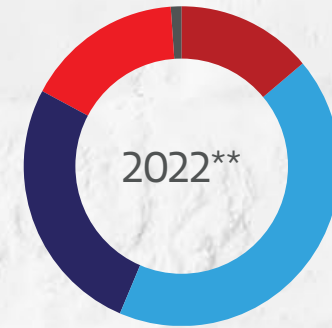
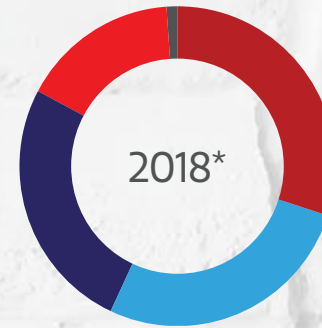


## Asia Pacific eCom payment methods



	2018*	2022**
eWallet	52%	66%
Credit Card	17%	11%
Bank Transfer	12%	11%
Debit Card	5%	3%
Cash on Delivery	4%	2%
Charge & Deferred Debit Card	4%	3%
PostPay	2%	2%
Pre-Paid Card	2%	1%
PrePay	0%	0%
elInvoices	0%	0%
Other	0%	0%

## Asia Pacific POS payment methods



	2018*	2022**
Cash	30%	14%
eWallet	27%	42%
Debit Card	26%	26%
Credit Card	16%	16%
Pre-Paid Card	1%	1%
Charge Card	0%	0%

\* Estimated \*\*Forecasted Numbers adjusted for rounding may impact totals.



# Key Insights



# China's growth, boundless opportunity



■ The context of commerce can be reinvented in a single generation. Take the case of China. Commercial opportunities stem from technology just as much as shifts in geo-political norms.

Free-market reforms and the opening of the economy to foreign trade and investment unleashed China's latent economic fertility. Special economic zones (SEZs) and the age of the internet further fueled China's rise. The World Bank cited China's growth as the fastest sustained expansion by a major economy in history, with GDP growth hovering at 9.5% through 2017.<sup>1</sup>

Free of the legacy infrastructure of the West, China didn't have to reimagine retail transformation the way developed economies did in the late 90s. China's leapfrog to the forefront of the global economy leveraged the rise of affordable and widely available technology, including mobile phones. China boasts the world's largest online population (~772 million in 2017) with a remarkable 97.5% of Chinese consumers accessing the internet via their mobile devices.<sup>2</sup>



Our research shows clear signs of these mileposts. China's eCommerce spend per capita sits just above average globally. Yet the percentage of payments made via eWallets is staggering—35.7% at the point of sale, 64.8% in eCommerce. Even the most mature online economies pale in comparison.

Online retail, social communication, gaming, and payments all grew up together in China. Chinese consumer services never needed to shift toward creating “seamless experiences”—they were seamlessly integrated from the ground up.

Chinese internet giant Tencent typifies this convergence. Tencent's WeChat app has over one billion active monthly users, 900 million of whom use WeChat Pay, its integrated mobile payments platform.<sup>3</sup> Chinese consumers shop, chat, split bills among one another, share discounts and codes based on purchases, and securely purchase a seemingly infinite selection of items, all within the same trusted application.

The power of the “leapfrog” analogy comes into focus when considering some of the innovations offered by JD.com, a leading Chinese eCommerce company. Much of rural China is far removed from conventional supply chains. Yet a lack of extensive infrastructure doesn't mean a lack of consumers looking to tap into eCommerce. To the contrary, millions of rural Chinese yearn to engage in eCommerce.

JD.com has sought to solve this problem with new technologies such as robots and drone delivery. Deliveries are also made conventionally to even the most remote regions, providing deliveries beyond the reach (or regularity) of the Chinese postal service. Innovation has a human element as well. JD.com's delivery unit, JD Logistics, sends uniformed representatives, often from the local areas they serve, to make deliveries and represent the company in a more personal manner.<sup>4</sup> This combination of technological innovation and personal touch may prove to be a decisive competitive advantage in the battle for the world's largest market.

Businesses seeking to serve Chinese consumers need to recognize and conform to an entirely different set of expectations. This is certainly true of eCommerce and increasingly the case for serving Chinese tourists as they travel abroad in larger numbers. Serving the Chinese consumer means, at a minimum, accepting Alipay and WeChat Pay, as well as UnionPay, the dominant Chinese card brand scheme.

In the end, knowledge of how a Chinese consumer behaves online and at the point of sale makes the big world small.

1. The World Bank, China overview: <https://www.worldbank.org/en/country/china/overview>

2. China Internet Network Information Center, The 41st Statistical Report on Internet Development in China, January 2018: <https://cnnic.com.cn/IDR/ReportDownloads/>

3. Business Insider, “Alipay, WeChat Pay so common Chinese street vendors, musicians use it,” May 29, 2018.

4. Fan, Jiayang, “How e-Commerce is transforming rural China,” *The New Yorker*, July 23, 2018.

# Millennials – Don't judge a consumer cohort by its cover



■ We're living among the largest youth population in global history. In 2017, more than half of the world's 7.6 billion people were under aged 30.<sup>1</sup> At the center of this youth boom are the Millennials, those born between 1980 and 2000.

Born and raised in the digital era, this celebrated generation is far from uniform. The cultural, economic, political, and social experiences of Millennials are as diverse as their home nations. Their shared experiences, however, are profound. Global media has forever changed this generation's relationship with the world. Previously unimagined levels of immediate connection are experienced by Millennials as natural and inevitable. Social media's ability to convey reality in real-time reflects and shapes their worldview. What's new for most is native for Millennials.

Millennials are generally considered more progressive than previous generations, seeking work that incorporates social good. What motivates their behaviors is often local. Those local drivers also influence attitudes around consumption and money. They shape Millennial behaviors both as consumers and as payers.

Our research finds US and UK Millennials (80% for each) mostly on par with citizens across age segments when it comes to having shopped online in the last month (71% and 79% for the US and UK, respectively). That's no surprise where retail delivery and payments habits are ingrained. However, the examples of Mexico (46% of Millennials versus 13% of all respondents) and China (86% of Millennials versus 54% of all respondents) paint very different pictures locally.

These behaviors may also foretell very different approaches to payments. We find that 28% of Millennials globally have used a mobile wallet at the point of sale, versus 20% of all respondents globally. China and India have the two largest global youth populations. We found 74% of Chinese Millennials and 75% of India's Millennials have used a mobile wallet at the point of sale. Mobile wallet adoption by US and UK youth is less than half of their Chinese and Indian peers.

So how should businesses view their ongoing relationships with the largest generational cohort? It starts with a localized understanding of extreme diversity. For instance, the burden of student debt and high housing costs among American and European Millennials influence consumption and payment behaviors. Elsewhere, Millennials' comfort with technology, relative digital freedom, and burgeoning consumerism

fuels both purchase and payment behaviors—as suggested by the large differences in payment behaviors our research notes in China and India.

While Millennials typically expect more from businesses and are often willing to pay more for experiences, they're also demanding more as a group from businesses societally. What motivates them culturally, politically, and socially also motivates their attitudes about business.

These attitudes are apparent in their beliefs as employees. The 2018 Deloitte Millennial Survey suggests where businesses are “out of step” with Millennial priorities.<sup>2</sup> There are big gaps between what Millennials believe employers should try to achieve versus their perceptions of organizational priorities. Those gaps include job generation, improving society, and enhancing the livelihood of employees.



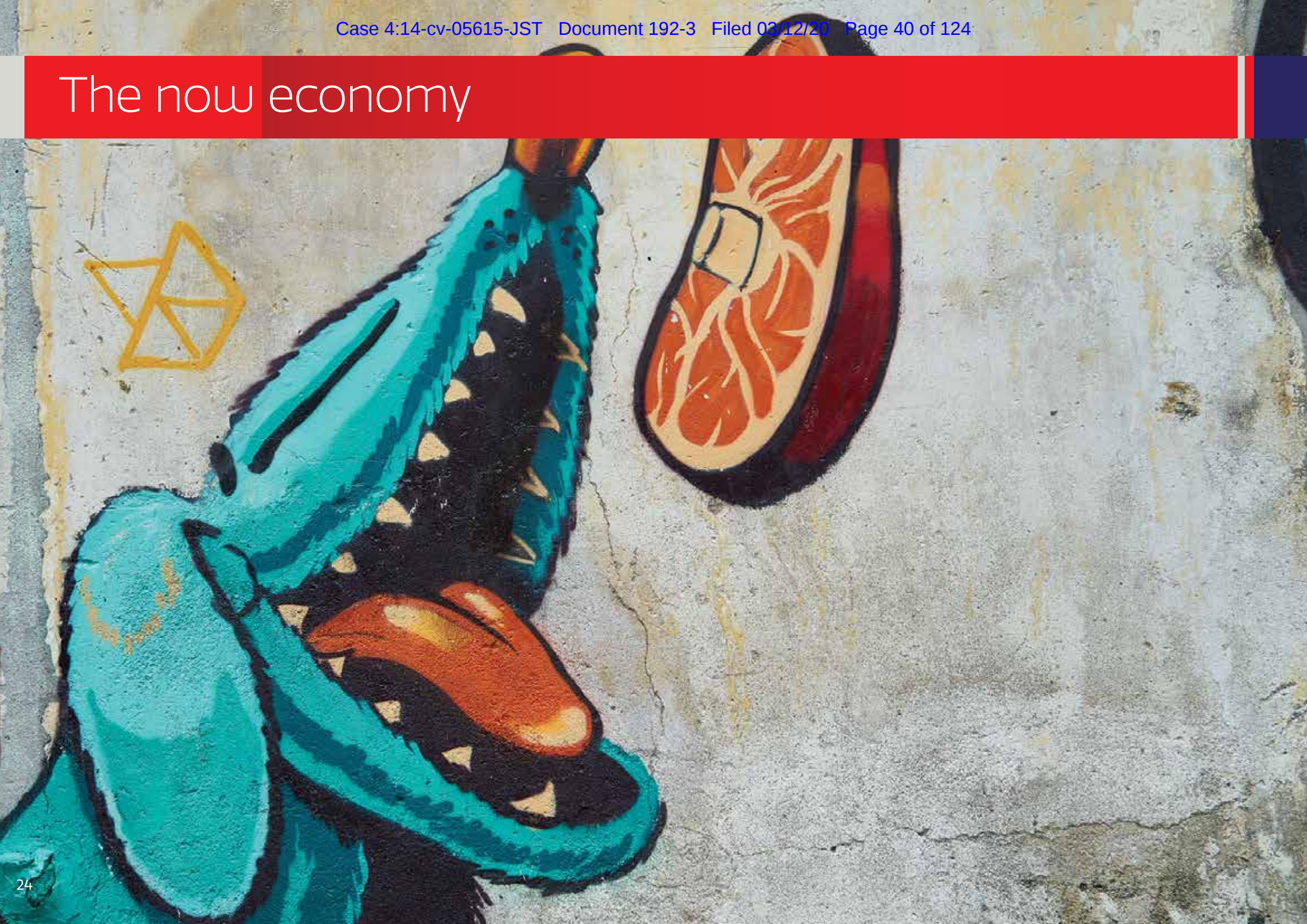
Millennials are loyal to big businesses and big brands, but they're also quietly exacting in their expectations of businesses—both in terms of creating the best experiences and influencing social norms. Their native digital reality means Millennials don't follow in the footsteps of their parents in many ways, including payment preferences.

Understanding the socio-demographic diversity of your customers and reconciling localized attitudes and behaviors to your own commercial and payments strategies will be critical to success, however and wherever you sell.

1. The World Economic Forum, “Global Shapers Survey 2017.” [http://www.shaperssurvey2017.org/static/data/WEF\\_GSC\\_Annual\\_Survey\\_2017.pdf](http://www.shaperssurvey2017.org/static/data/WEF_GSC_Annual_Survey_2017.pdf)

2. 2018 Deloitte Millennial Survey, © 2018, Deloitte Touche Tohmatsu Limited, <https://www2.deloitte.com/global/en/pages/about-deloitte/articles/millennialsurvey.html>

# The now economy





■ Whatever we buy, whenever we buy, however we buy, the global consumer economy has become a Now Economy. Satisfying consumer needs instantly, at scale, was once only a dream. Customers expect to be gratified instantly. That changes the equation of how we order, receive, and pay for goods, services, and content. In the Now Economy, providing service with a sense of immediacy is no longer a preference—it's essential.

The ability to order virtually anything, anywhere, at any time completely resets expectations for immediacy. The Now Economy reflects those expectations rippling throughout the consumer experience, with more weight than ever on faster access to goods and content. An example is fast couture fashion—major fashion houses blanket social media during their shows and make their collections available online for immediate purchase.

The rising delivery expectations of The Now Economy are likely to be served by emerging technologies like robots and drones. For consumers, drones promise to deliver on the immediate gratification for more products faster, and even to remote locations. For merchants, drones promise to increase efficiency and reduce costs for the 'last mile.' Small scale drone delivery is now a reality in China, with eCommerce giant JD.com among the first to market.



The concept of “buy now, pay later” has been part of commerce for generations, from IOUs to credit cards. The Now Economy extends that concept to be more flexible and accessible than ever. “Buy now, pay later” services such as Affirm, AfterPay, and Klarna are gaining widespread popularity for removing common barriers at the critical moment of purchase decision. Retailers seek to reduce shopping cart abandonment rates by eliminating friction. Friction at checkout arises from many factors including security concerns, unexpected shipping charges, and cost. “Buy now, pay later” options help reduce price friction and increase conversion rates.

A June 2018 survey found that 74% of US internet users believed the ability to try items before they purchased them would remove a barrier to online shopping.<sup>1</sup> New payment options seek to address that concern head-on by allowing shopping risk-free. Emerging technologies that allow consumers to try before they buy—such as virtual and augmented reality—are expensive to adopt, so these new credit options offer quicker and more effective ways for companies to deliver that option to customers. Instead of buy now, pay later, it's try before you buy. The buyer gets her item straight away. If she likes it, she pays for it within a specified time. If not, she returns it at no cost.

In The Now Economy, consumers are in control. For merchants, The Now Economy demands crafting a more sophisticated understanding of—and response to—evolving expectations. Intelligently collecting and analyzing data to better understand how consumers interact with businesses is—and will continue to be—central to successful merchant strategizing. An effective eCommerce strategy might include offering alternative payment options, or flexible financing services that allow consumers to receive their goods as quickly as they wish, or a no-quibbles returns policy that offers all the same immediacy and instant resolution.

The Now Economy poses daunting challenges and profound opportunities. Consumer demands for instant gratification reflect a natural evolution: the immediacy we've grown accustomed to shapes our expectations for service wherever it takes place. That's a challenging but very achievable bar of engagement and service. The opportunity is simply immense as merchants that can embrace the insights of The Now Economy will connect with consumers on a personalized basis—at scale.

1. eMarketer, “US Internet Users Who Believe the Ability to Try Items Before Paying Would Remove a Barrier to Digital Shopping,” May 2018.

# The invisible touch of payments



■ Throughout human history, payment methods have evolved ever smaller. From livestock to gold coins, cash to checks, plastic credit cards to digital wallets, the march of payment history evolves from the concrete to the abstract.

Recurring payments set the stage for the revolution in subscription services. From music to movies and beauty services to groceries, subscription services allow consumers to focus on experiences, with the friction of payments fading away. That's the essence of invisible payments: convenience so seamless that the very act of payment is effortless.

Connected cars, automatic replenishment via IoT devices, and increasingly friction-free checkout experiences at the physical point of sale are just a few of the practical applications of invisible payments. Imagine needing nothing more than your car and your consent to seamlessly pay for parking, gas, tolls, or purchases at drive-through restaurants. Those realities are well within sight, with a flurry of exciting developments in connected cars and payment integrations on the horizon.<sup>1</sup>

Invisible payments are finding practical application today with automatic replenishments that allow consumers to pre-arrange payment to replenish balances for ongoing services. Commuters use automatic replenishment to pay for tolls via devices affixed to their vehicles. Looking forward, IoT solutions promise to link measurement devices to ordering and payment for everything from coffee to dishwashing detergent.<sup>2</sup>

Given increasing consumer expectation that payments “just happen,” retailers will want to create seamless payment flows to reduce “bad” friction. But some friction—like authentication—is not only good, it's essential. A 2018 comScore survey showed that concerns over data security and providing payment information are leading points of friction against more widespread adoption of purchases using smart speakers.<sup>3</sup> Consumer expectations for safe payments demand that merchants make secure user authentication as seamless as the act of payment.

A logical destination for invisible payments points to checkout-free, in-store shopping experiences. Some of the world's largest retailers and technology companies are developing systems that aim to make the friction of checkout a thing of the past.<sup>4</sup> Juniper Research projects that retail spend using “just walk out” smart checkout technology will grow from \$253 million in 2018 to more than \$45 billion in transactions by 2023.<sup>5</sup>

Still, as invisible payments take complete hold of more “carts,” there's an imperative for merchants to not only secure them fully, but to approve or not approve the right payments at the right times. This includes more use of payments enabled by biometrics, facial recognition, voice recognition, fingerprints and irises, and proximity based technologies like beacons.<sup>6</sup> It also includes richer use of processing technologies and tools rooted in machine-learning that scour the universe of fraud to determine which payments do and do not get approved, in real time.

Invisible payments are emerging as practical applications among businesses large and small, across verticals and geographies, every day. Retailers should look to their payment partners for advice on how to use invisible payments to produce better user experiences, predictable revenue, and loyal customers. More than just delivering “invisible,” look for opportunities to deliver value-added services alongside the invisible act of payment—such as automatic adds to loyalty schemes.



1. Visa, “Road ahead: Connected cars coming to a lot near you” [usa.visa.com/visa-everywhere/innovation/connected-car.html](https://usa.visa.com/visa-everywhere/innovation/connected-car.html)
2. CB Insights, “Walmart’s IoT Patent Application Takes Aim At Amazon Dash,” May 4 2017. <https://www.cbinsights.com/research/walmart-iot-patent/>
3. comScore via eMarketer, “Reasons that US Smart Speaker Users Do Not Make Purchases via Smart Speaker, March 2018.”
4. Reuters, “Exclusive: Microsoft takes aim at Amazon with push for checkout-free retail,” June 13 2018.
5. Juniper Research, “‘Just Walk Out’ Shopping & Other Smart Checkout Tech To Reach Over \$45 Billion Transactions By 2023, As Retailers Strive to Eliminate Lines,” Sep 25, 2018, <https://www.juniperresearch.com/press/press-releases/just-walk-out-shopping-other-smart-checkout>
6. Alizila, “Take a Tour of Hema Supermarket and Experience ‘New Retail,’” <https://www.alizila.com/video/take-tour-hema-supermarket-experience-new-retail/>

It's all commerce



Generations ago, commerce was simple. Businesses organized simply too. Later, advances in technology led to new modes of selling. Channels formed as a natural response and commerce became more complex. Poor coordination among channels often produced inconsistent experiences for customers. Multichannel efforts promised greater coordination, while omnichannel approaches emphasized a consistent customer experience at every touchpoint.

Today, it's not just that channels are blending—the very notion of channel now seems antiquated. So perhaps it's time to change the channel paradigm altogether. Because today, it's *all* commerce.

The gravity-defying rise of mobile commerce continues to reshape our societies. Mobile commerce accounted for well over half (58.9%) of the more than \$2.3 trillion in global eCommerce sales in 2017, a stunning 40.3% increase over 2016.<sup>1</sup> Our research projects that global mCommerce will surpass desktop sales as early as 2023. The mobile phone is the central disruptive figure in many industries. Yet “mobile” is often thought of as simply another channel. Even more profound, the mobile phone serves as a revolutionary catalyst, freeing all commerce from any conception of channel. What the mobile phone started is now spilling over virtually everywhere.



Meanwhile, predictions of the physical store's demise are premature at best, with nearly 90% of global retail still taking place at the point of sale. PwC's Global Consumer Insights Survey suggests that shopping in-store is more popular than ever with 44% of global consumers surveyed shopping at the point of sale every week.<sup>2</sup> The in-person shopping experience is fixed firmly in place.

What happens when the irresistible force of eCommerce meets the immovable object of the physical store? Like water, commerce fills every available space. Voice-activated personal assistants now occupy our phones, car, and homes, making commerce as simple as announcing our desires. Infinitely versatile apps virtualize checkout, making once friction-filled experiences easy. Contextual commerce links social media directly to shopping. Conversational commerce enables personalized shopping through live chat and automated chat bots. The Internet of Things integrates commerce into seemingly everything, from our cars as we pass through tolls to sensors in our appliances. It's all commerce.

What's to be learned from the confluence of channels? For merchants, it's all commerce means considering how physical store, online, and app-driven device experiences best integrate into holistic experiences that require no stitching. It's all commerce means changing how businesses think about serving their customers.

Payments are essential to that mission. Payments are foundational to providing safe, frictionless experiences to consumers, however they shop. It's all commerce means providing payment options that serve ever-increasing convenience, without sacrificing essential security that customers demand. For retailers, it's all commerce means working with their payment partners to manage the complexity arising from an explosion of use cases.

For merchants, the fact that it's all commerce means more complexity than ever. Complexity doesn't require opening a virtual storefront at every consumer touchpoint. Managing complexity starts with the customer. It's all commerce isn't about trying to be everything to everyone. It's about transcending channel, clearing the clutter, and delighting your customers.

Commerce is as ubiquitous as the air we breathe, with channels leading to a confluence that is now a global flood. It's an exciting time for retailers, for consumers, and for the payments that connect us. It's all commerce means commerce that is simple once again.

1. eMarketer, "Worldwide Retail and Ecommerce Sales: eMarketer's Updated Forecast and New Mcommerce Estimates for 2016–2021," Jan 29, 2018.

2. PwC's Global Consumer Insights Survey 2018: "From mall to mobile: Adjusting to new consumer habits," [pwc.com/gx/en/industries/consumer-markets/consumer-insights-survey.html](https://www.pwc.com/gx/en/industries/consumer-markets/consumer-insights-survey.html).



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# Market Guides



# ARGENTINA



The gap between credit card and eWallet is closing when it comes to how Argentine consumers pay online. Credit cards meet consumers' preference to pay by installment and eWallets provide convenience. There's been no change in preferences among other payment methods such as bank transfer and debit card.

## FAST STATS

2017 eCom SPEND  
PER CAPITA

**US \$177**

2017 POS SPEND  
PER CAPITA

**US \$3,819**

2017 % eCom  
SPEND USING  
MOBILE WALLET

**22%**

2017 % POS  
SPEND USING  
MOBILE WALLET

**4%**

2018\* - 2022\*\*  
eCom CAGR

**16%**

2018\* - 2022\*\*  
POS CAGR

**16%**

2018\* INTERNET PENETRATION

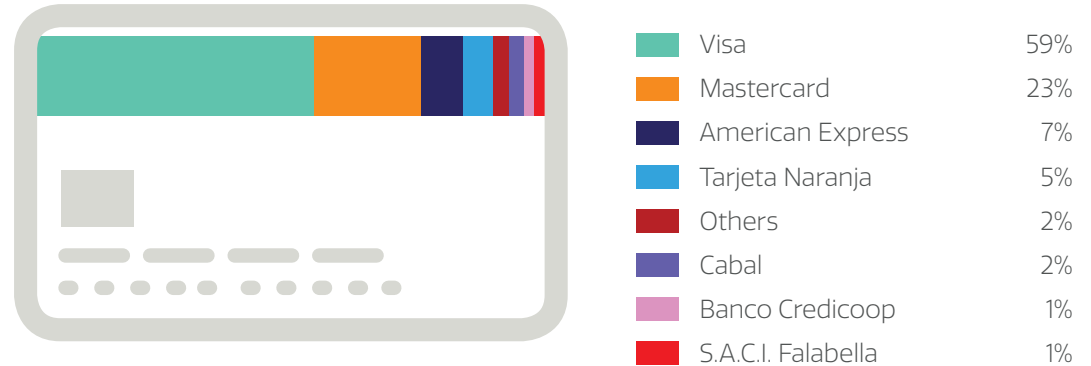
**81%**



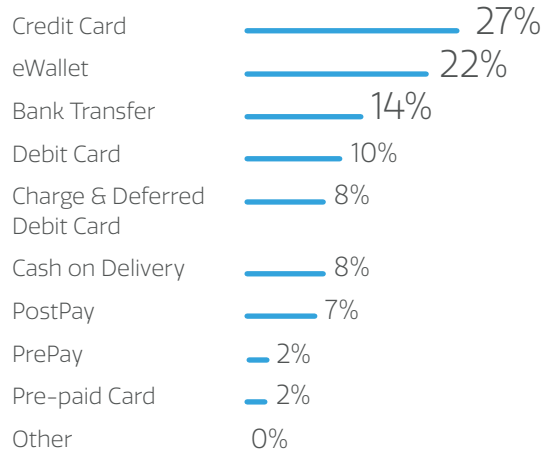
# TOP TIP

eWallets are coming into their own in Argentina. You should look to broaden your payment method offerings. Consider local eWallets such as MercadoPago to help boost conversion rates, online and at the point of sale.

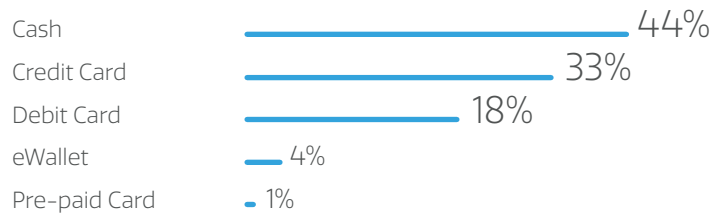
## 2017 CARD BRAND BREAKDOWNS (eCom and POS)



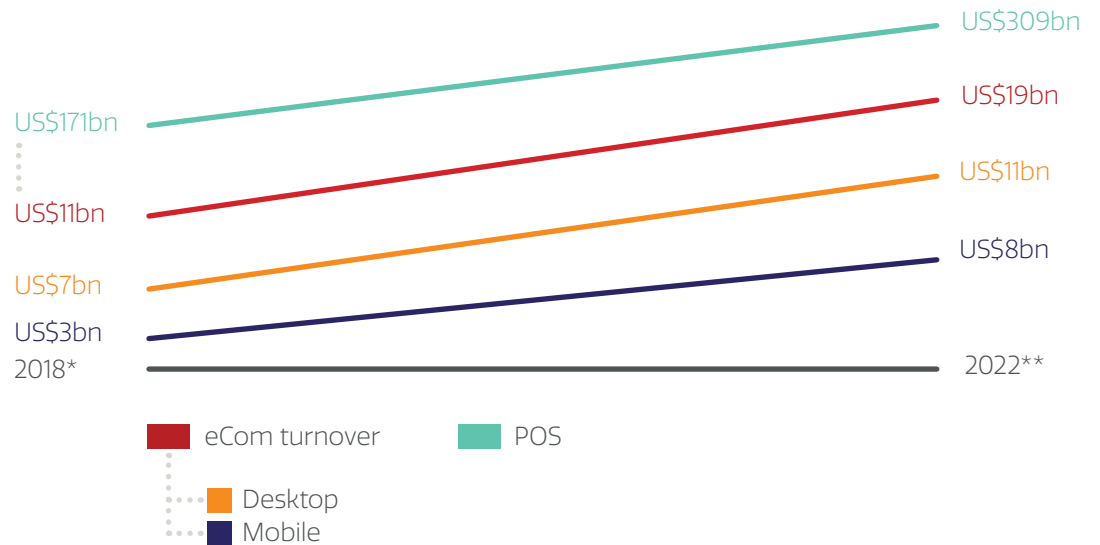
## 2017 CARD NOT PRESENT MIX BY PAYMENT METHOD



## 2017 CARD PRESENT MIX BY PAYMENT METHOD



## POS and eCom PROJECTED GROWTH



\* Estimated \*\*Forecasted

Numbers adjusted for rounding may impact totals.

POPULAR ALTERNATIVE PAYMENT METHODS



# AUSTRALIA

Credit cards remain the top payment preference for online shopping but Australians have also embraced other methods over the last year. Bank transfer and debit cards have been used more while cash on delivery is slowing down. And while eWallets remain one of the popular payment types for online shopping, they have some catching up to do at the point of sale.

## FAST STATS

2017 eCom SPEND  
PER CAPITA

US \$1,169

2017 POS SPEND  
PER CAPITA

US \$24,535

2017 % eCom  
SPEND USING  
MOBILE WALLET

18%

2017 % POS  
SPEND USING  
MOBILE WALLET

2%

2018\* - 2022\*\*  
eCom CAGR

8%

2018\* - 2022\*\*  
POS CAGR

3%

2018\* INTERNET PENETRATION

92%

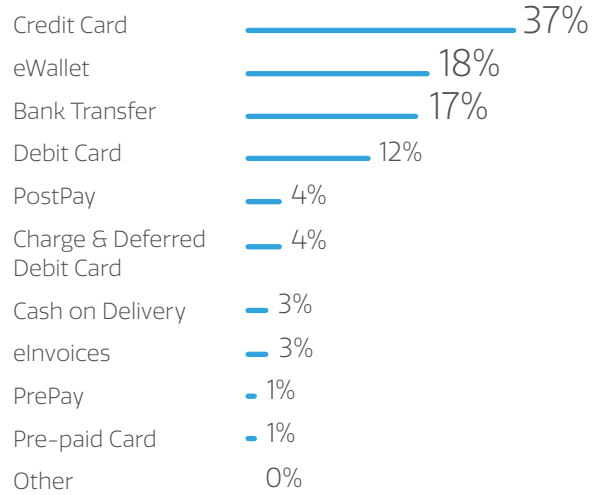
# TOP TIP

Australian consumers lean towards convenience. Offering the easiest ways to pay could increase sales. That means simplifying your checkout experiences and offering eWallets like PayPal and Visa Checkout, as well as the most popular card brands in market, to capture your share. Also consider adding AfterPay to serve consumers who prefer invoicing and PostPay.

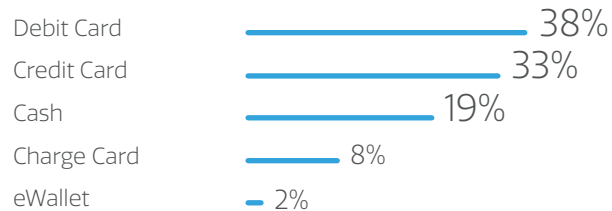
2017 CARD BRAND BREAKDOWNS (eCom and POS)



2017 CARD NOT PRESENT MIX BY PAYMENT METHOD



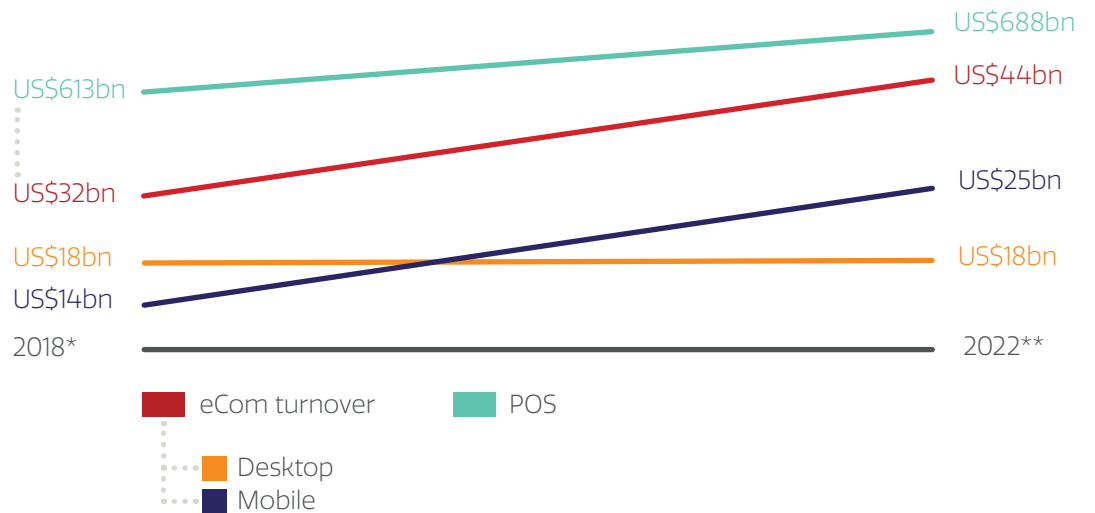
2017 CARD PRESENT MIX BY PAYMENT METHOD



\* Estimated \*\*Forecasted

Numbers adjusted for rounding may impact totals.

POS and eCom PROJECTED GROWTH



POPULAR ALTERNATIVE PAYMENT METHODS



# BELGIUM

Belgians stay with the traditional when it comes to payment methods. Credit cards lead the way online and debits card lead at the point of sale. While online eWallet use was 17% in 2016, traction has slowed in the last year, and hasn't yet been adopted when it comes to point of sale shopping, leaving room for growth all around when it comes to digital payments.

## FAST STATS

2017 eCom SPEND  
PER CAPITA

**US \$1,057**

2017 POS SPEND  
PER CAPITA

**US \$14,508**

2017 % eCom  
SPEND USING  
MOBILE WALLET

**13%**

2017 % POS  
SPEND USING  
MOBILE WALLET

**2%**

2018\* - 2022\*\*  
eCom CAGR

**8%**

2018\* - 2022\*\*  
POS CAGR

**1%**

2018\* INTERNET PENETRATION

**89%**

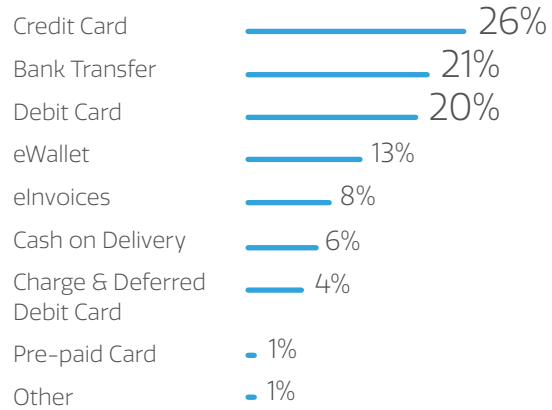
# TOP TIP

Slowing eWallet growth leaves us suggesting that you only offer those that have made a market in Belgium before doubling-down on card brands. Offer all major local brands to bring in Belgian consumers.

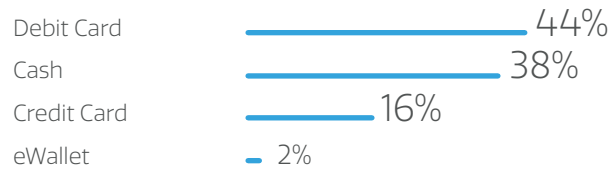
2017 CARD BRAND BREAKDOWNS (eCom and POS)



2017 CARD NOT PRESENT MIX BY PAYMENT METHOD



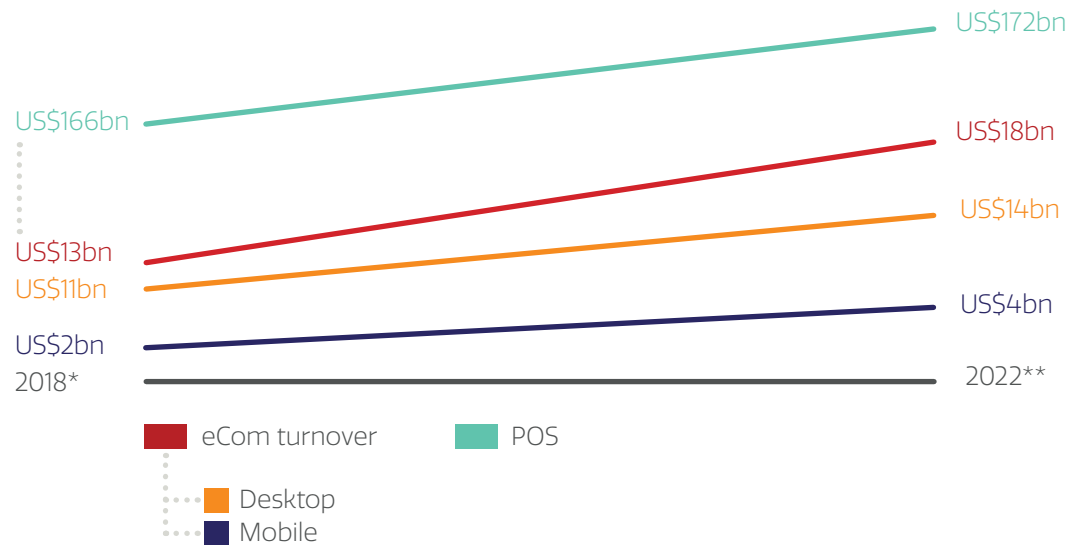
2017 CARD PRESENT MIX BY PAYMENT METHOD



\* Estimated \*\*Forecasted

Numbers adjusted for rounding may impact totals.

POS and eCom PROJECTED GROWTH



POPULAR ALTERNATIVE PAYMENT METHODS



# BRAZIL

Installment payments are common practice for Brazilians helping to keep credit cards at the top of the list of preferred payment types in online shopping. Point of sale shopping is dominated by only three payment types: cash, credit cards, and debit cards. eWallet use at the point of sale doesn't yet match online adoption.

## FAST STATS

2017 eCom SPEND  
PER CAPITA

US \$116

2017 POS SPEND  
PER CAPITA

US \$3,746

2017 % eCom  
SPEND USING  
MOBILE WALLET

13%

2017 % POS  
SPEND USING  
MOBILE WALLET

3%

2018\* - 2022\*\*  
eCom CAGR

6%

2018\* - 2022\*\*  
POS CAGR

5%

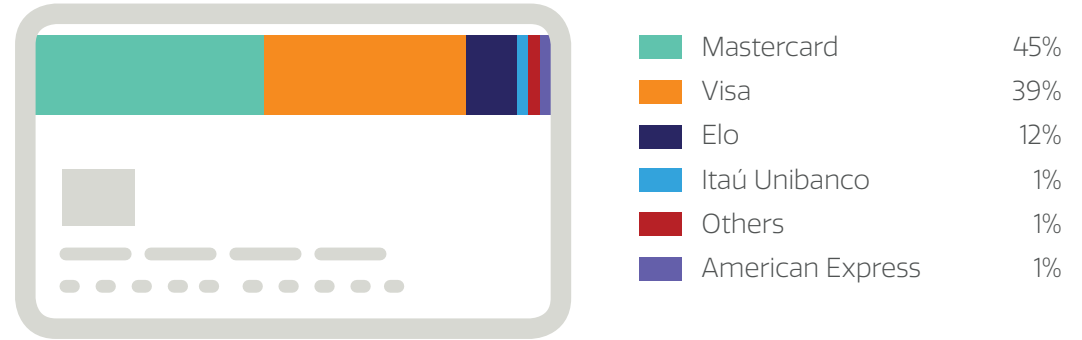
2018\* INTERNET PENETRATION

68%

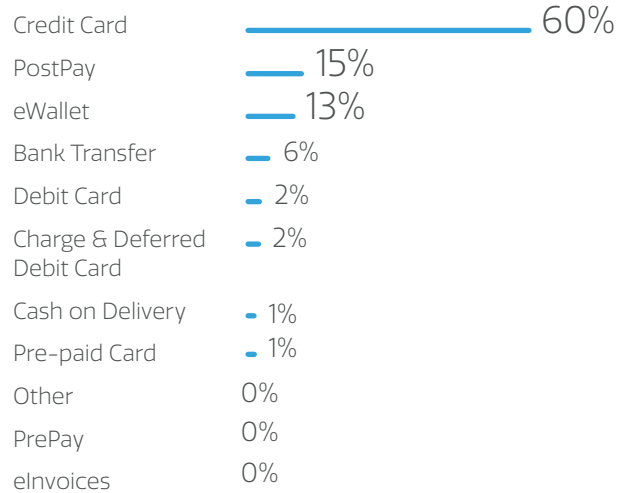
# TOP TIP

Installment payments aren't going anywhere in Brazil, so make sure you're offering options such as Boleto Bancário in addition to traditional credit cards to make the most of this still-growing eCommerce opportunity. Cash is the first preference for point of sale but credit and debit cards are also popular. Implement the most popular local card brands such as Elo.

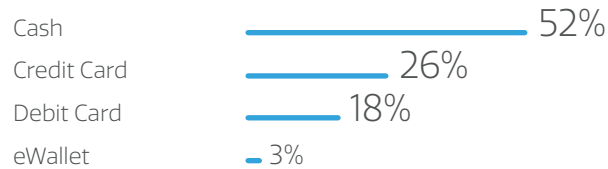
## 2017 CARD BRAND BREAKDOWNS (eCom and POS)



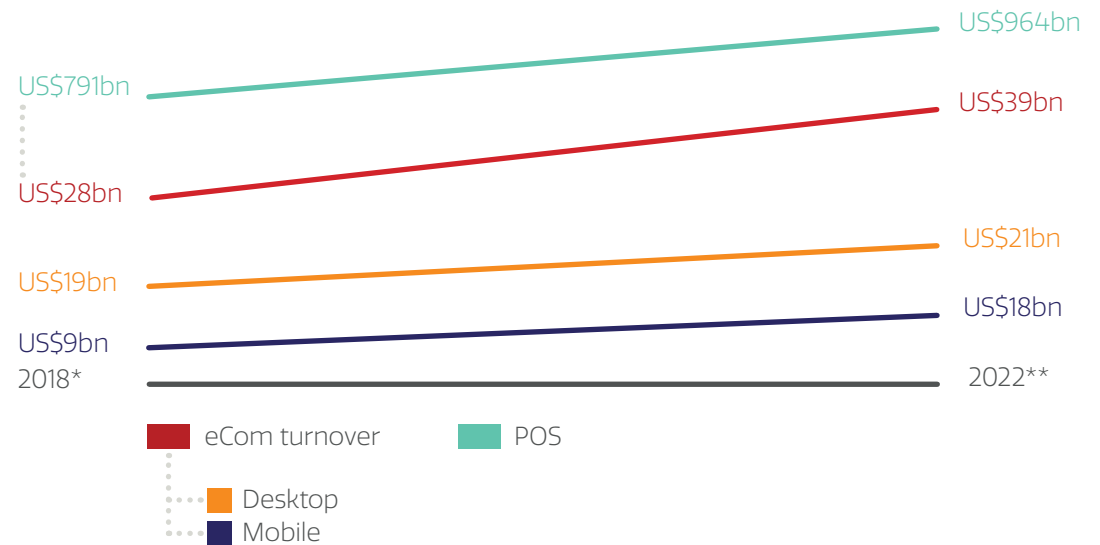
## 2017 CARD NOT PRESENT MIX BY PAYMENT METHOD



## 2017 CARD PRESENT MIX BY PAYMENT METHOD



## POS and eCom PROJECTED GROWTH



\* Estimated \*\*Forecasted

Numbers adjusted for rounding may impact totals.

POPULAR ALTERNATIVE PAYMENT METHODS



# CANADA

Among Canadians, credit cards remain the overwhelming choice for all purchases online and off. Other payment types such as eWallets and bank transfers have gained some traction over the last year. eWallets are the second most popular payment type for online shopping, but have opportunity to scale at the point of sale – only 1% of Canadian consumers use an eWallet for card present purchases.

## FAST STATS

2017 eCom SPEND  
PER CAPITA

**US \$1,334**

2017 POS SPEND  
PER CAPITA

**US \$18,727**

2017 % eCom  
SPEND USING  
MOBILE WALLET

**16%**

2017 % POS  
SPEND USING  
MOBILE WALLET

**1%**

2018\* - 2022\*\*  
eCom CAGR

**10%**

2018\* - 2022\*\*  
POS CAGR

**5%**

2018\* INTERNET PENETRATION

**93%**



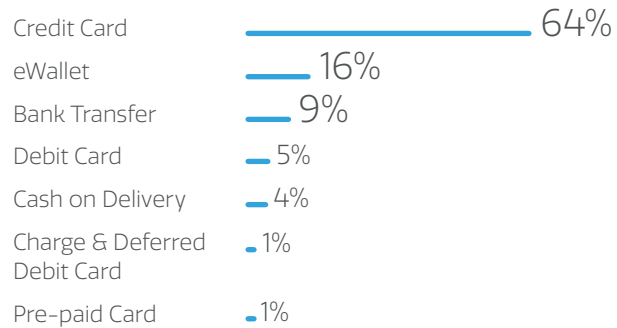
# TOP TIP

Though a relatively mature payments market, there has been some growth in eWallets in Canada. Enterprising companies wanting to get ahead of the curve should offer PayPal and eWallets like Visa Checkout and Mastercard. Point of sale shopping is dominated by credit and debit card use so accepting the most popular brands is important: Visa, Interac, and Mastercard.

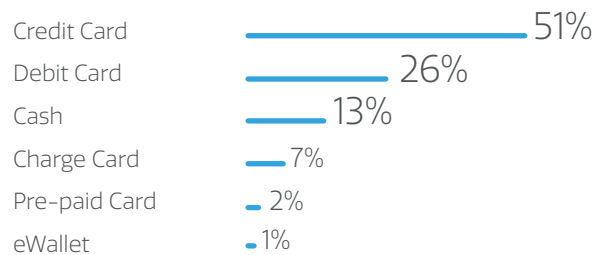
2017 CARD BRAND BREAKDOWNS (eCom and POS)



## 2017 CARD NOT PRESENT MIX BY PAYMENT METHOD



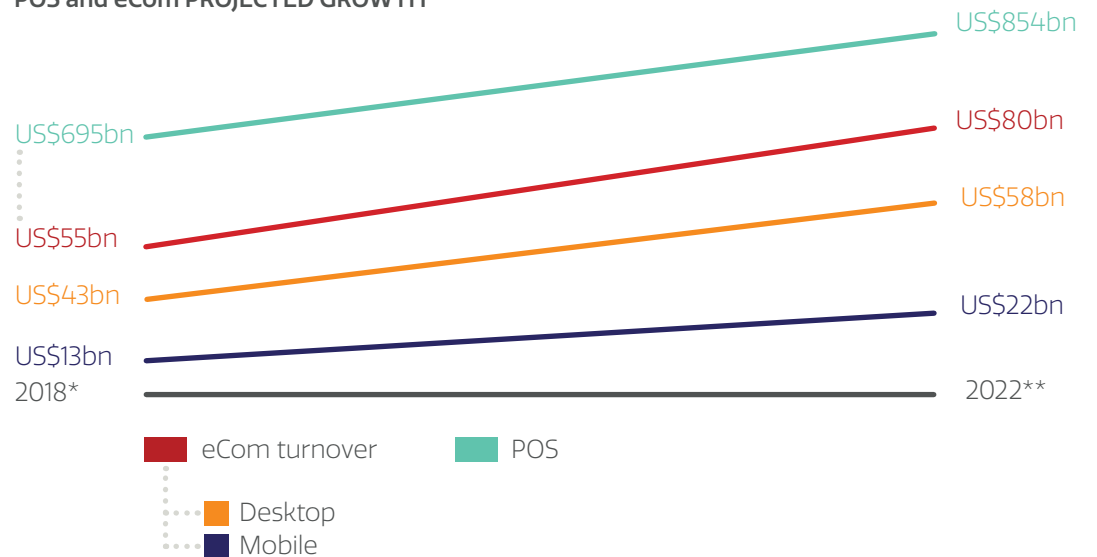
## 2017 CARD PRESENT MIX BY PAYMENT METHOD



\* Estimated \*\*Forecasted

Numbers adjusted for rounding may impact totals.

## POS and eCom PROJECTED GROWTH



POPULAR ALTERNATIVE PAYMENT METHODS



# CHINA

Chinese consumers have adopted eWallets like no other nation in the world. That trend isn't slowing, as eWallets are the top payment method online and at the point of sale. Online retail sales increased 32% in 2017 solidifying this market as a world leader in eCommerce. More traditional forms of payment have yet to challenge that mobile adoption.

## FAST STATS

2017 eCom SPEND  
PER CAPITA

**US \$787**

2017 POS SPEND  
PER CAPITA

**US \$10,911**

2017 % eCom  
SPEND USING  
MOBILE WALLET

**65%**

2017 % POS  
SPEND USING  
MOBILE WALLET

**36%**

2018\* - 2022\*\*  
eCom CAGR

**9%**

2018\* - 2022\*\*  
POS CAGR

**11%**

2018\* INTERNET PENETRATION

**61%**

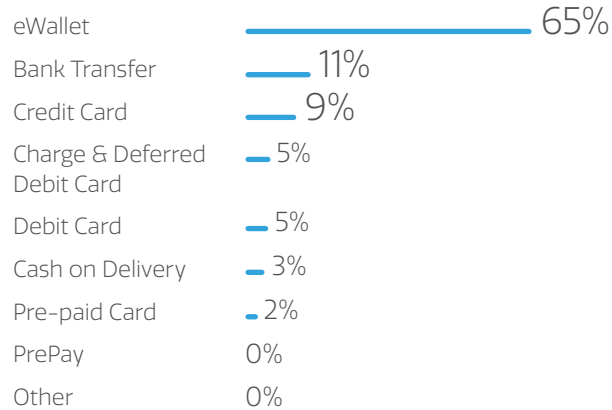
# TOP TIP

mCommerce is far outstripping traditional desktop purchasing in China so you will want to offer local eWallet leaders Alipay and WeChat Pay. These eWallets and others are also a must at the point of sale, more so than in any major global market.

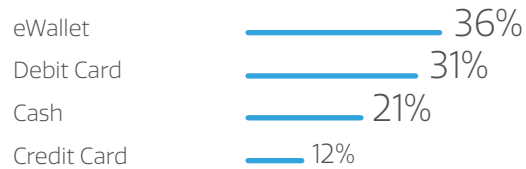
2017 CARD BRAND BREAKDOWNS (eCom and POS)



2017 CARD NOT PRESENT MIX BY PAYMENT METHOD



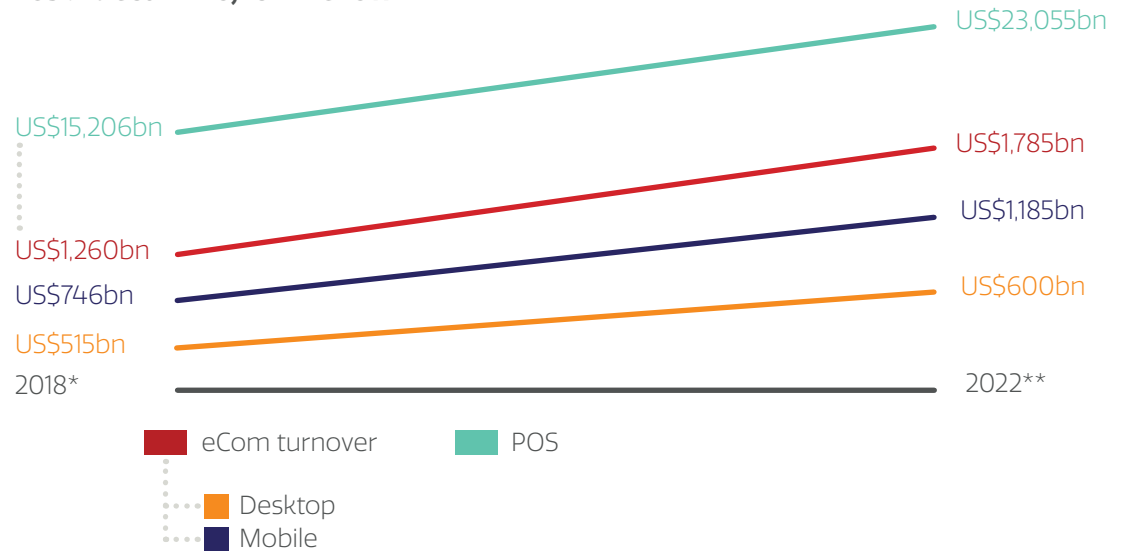
2017 CARD PRESENT MIX BY PAYMENT METHOD



\* Estimated \*\*Forecasted

Numbers adjusted for rounding may impact totals.

POS and eCom PROJECTED GROWTH



POPULAR ALTERNATIVE PAYMENT METHODS



# COLOMBIA

Credit cards have gained significant ground in the last year for Colombians shopping online, overtaking bank transfer as the dominant payment method of choice. Bank transfers maintain their fair share of the online market. When it comes to point of sale shopping, cash is still king. However, it is unclear if credit or debit cards will prevail as consumers rely equally on both. There's significant growth opportunity for digital payments, with negligible adoption of eWallets to date, online and off.

## FAST STATS

2017 eCom SPEND  
PER CAPITA

**US \$99**

2017 POS SPEND  
PER CAPITA

**US \$1,397**

2017 % eCom  
SPEND USING  
MOBILE WALLET

**0%**

2017 % POS  
SPEND USING  
MOBILE WALLET

**1%**

2018\* - 2022\*\*  
eCom CAGR

**23%**

2018\* - 2022\*\*  
POS CAGR

**4%**

2018\* INTERNET PENETRATION

**67%**

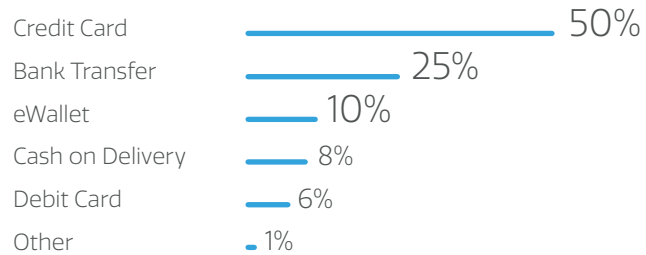
# TOP TIP

The boost in credit card usage suggests that you accept all major card brands to make the most of the Colombian market online and at the point of sale.

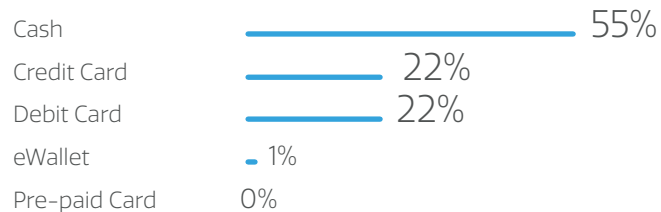
2017 CARD BRAND BREAKDOWNS (eCom and POS)



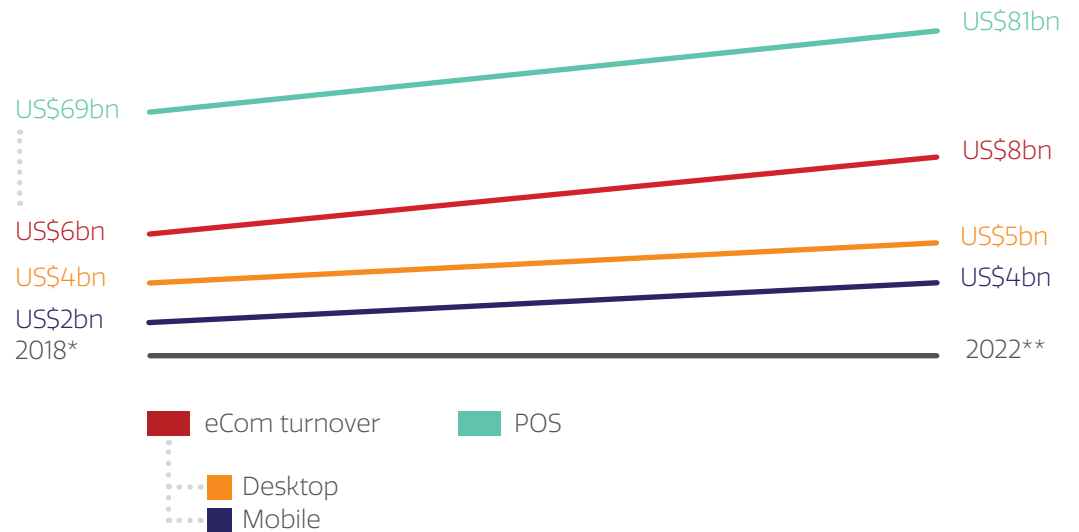
2017 CARD NOT PRESENT MIX BY PAYMENT METHOD



2017 CARD PRESENT MIX BY PAYMENT METHOD



POS and eCom PROJECTED GROWTH



\* Estimated \*\*Forecasted

Numbers adjusted for rounding may impact totals.

POPULAR ALTERNATIVE PAYMENT METHODS



# DENMARK

Danish consumers have shown no change in their top online payment preferences. eWallets continue to be the most popular online payment method although their use at physical points of sale has yet to take hold. eWallets and debit cards continue to compete in the eCommerce race for top preference with consumers. With a merchant focus on accepting the Dankort card, debit cards are the overwhelming choice of Danish consumers when it comes to shopping at the point of sale.

## FAST STATS

2017 eCom SPEND  
PER CAPITA

**US \$3,188**

2017 POS SPEND  
PER CAPITA

**US \$19,916**

2017 % eCom  
SPEND USING  
MOBILE WALLET

**26%**

2017 % POS  
SPEND USING  
MOBILE WALLET

**2%**

2018\* - 2022\*\*  
eCom CAGR

**9%**

2018\* - 2022\*\*  
POS CAGR

**-1%**

2018\* INTERNET PENETRATION

**100%**

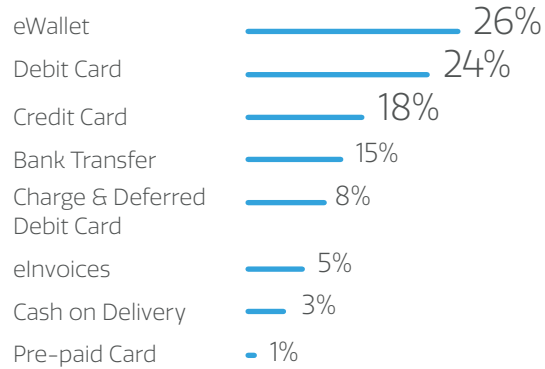
# TOP TIP

Denmark trends towards local card brands and eWallets. Ensure your payment offerings here are updated with customer preferences including local eWallets like MobilePay, as well local card brands like the Dankort card.

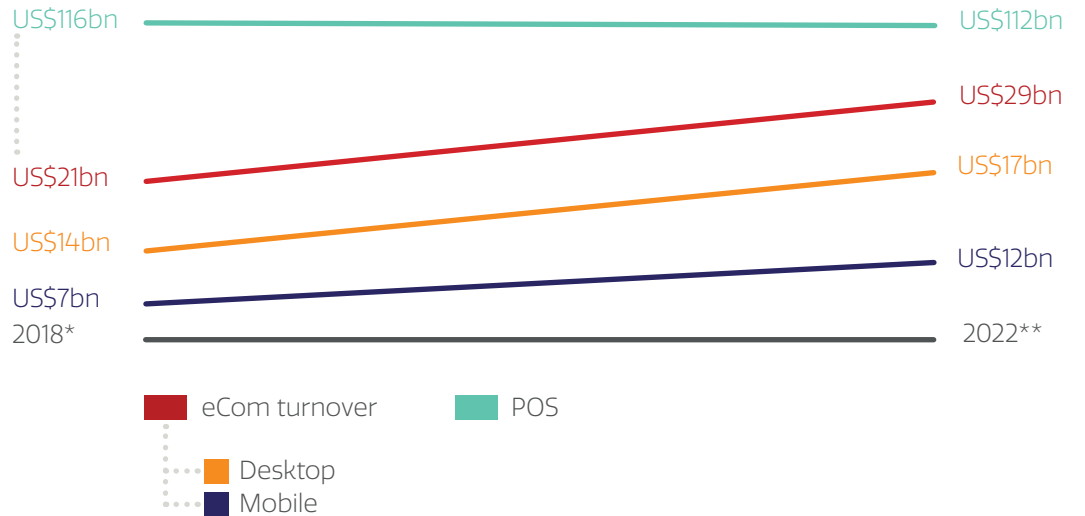
2017 CARD BRAND BREAKDOWNS (eCom and POS)



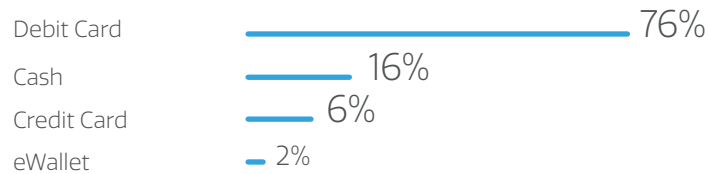
2017 CARD NOT PRESENT MIX BY PAYMENT METHOD



POS and eCom PROJECTED GROWTH



2017 CARD PRESENT MIX BY PAYMENT METHOD



\* Estimated \*\*Forecasted

Numbers adjusted for rounding may impact totals.

POPULAR ALTERNATIVE PAYMENT METHODS



# FRANCE

No single payment method emerges as the clear leader in the online space. That's likely due, in part, to French consumer aversion to debt. That makes forms of non-credit payment popular, offline and online. Digital payments such as eWallets are competing for online use but have yet to become popular for point of sale shopping.

## FAST STATS

2017 eCom SPEND  
PER CAPITA

**US \$1,463**

2017 POS SPEND  
PER CAPITA

**US \$14,339**

2017 % eCom  
SPEND USING  
MOBILE WALLET

**21%**

2017 % POS  
SPEND USING  
MOBILE WALLET

**1%**

2018\* - 2022\*\*  
eCom CAGR

**8%**

2018\* - 2022\*\*  
POS CAGR

**1%**

2018\* INTERNET PENETRATION

**89%**



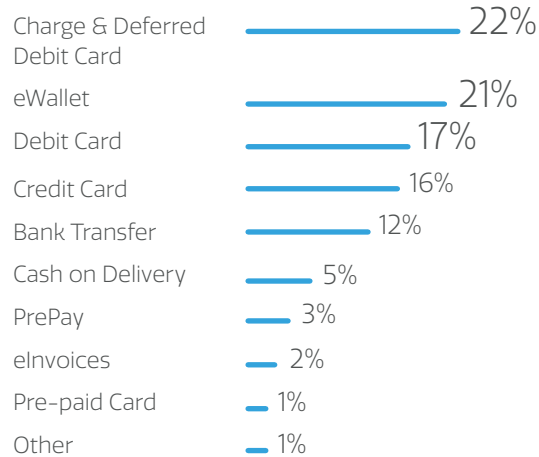
# TOP TIP

Local card brands are imperative at the point of sale so offer Cartes Bancaires for quick and easy checkout experiences. Forward thinking companies may want to start accepting eWallets at the point of sale as digital payment popularity potentially increases. Expected growth in mobile commerce over the next few years may create a tipping point for the use of mobile-driven payments at the point of sale.

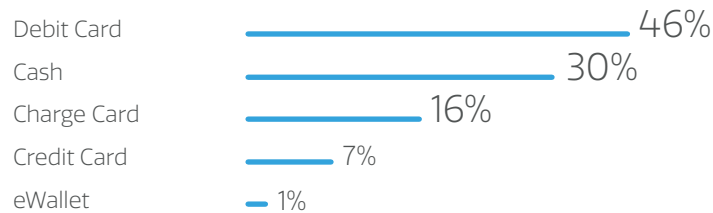
## 2017 CARD BRAND BREAKDOWNS (eCom and POS)



## 2017 CARD NOT PRESENT MIX BY PAYMENT METHOD



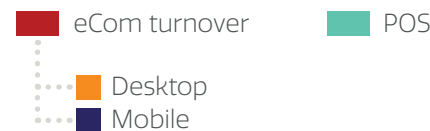
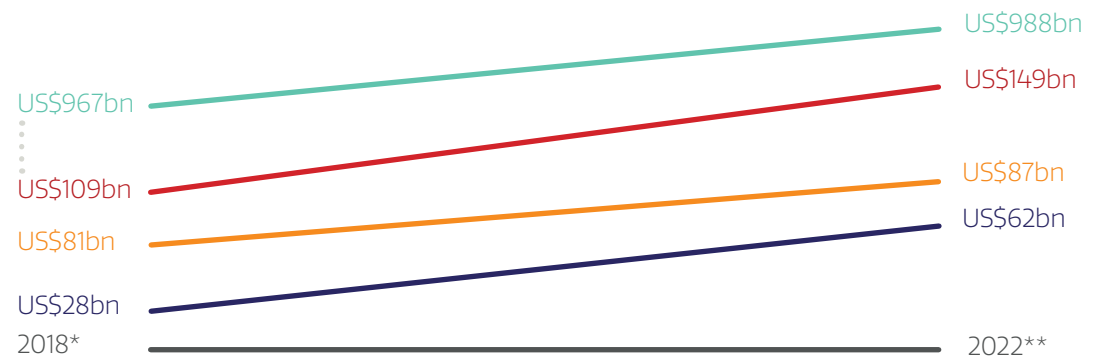
## 2017 CARD PRESENT MIX BY PAYMENT METHOD



\* Estimated \*\*Forecasted

Numbers adjusted for rounding may impact totals.

## POS and eCom PROJECTED GROWTH



POPULAR ALTERNATIVE PAYMENT METHODS



# GERMANY

From Berlin to Bonn, and points between, German consumers prefer bank transfer for online payments. Use of credit cards online has shown some uptick. And growth of invoicing and charge cards suggest a change in how cash is being used online. Cash still dominates at the point of sale with 55% of share.

## FAST STATS

2017 eCom SPEND  
PER CAPITA

US \$1,074

2017 POS SPEND  
PER CAPITA

US \$12,241

2017 % eCom  
SPEND USING  
MOBILE WALLET

20%

2017 % POS  
SPEND USING  
MOBILE WALLET

5%

2018\* - 2022\*\*  
eCom CAGR

10%

2018\* - 2022\*\*  
POS CAGR

2%

2018\* INTERNET PENETRATION

93%

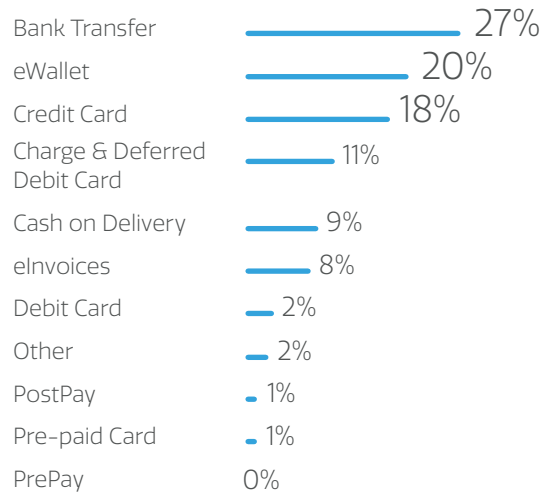
# TOP TIP

German consumers look for simplicity in commerce. Optimize the mix of payment methods, online and off, to create a seamless payment experience and make sure popular local payment methods, like Girocard, are accepted. eWallets are getting some use at the point of sale, so promoting employee awareness and training will help consumers speed through checkout.

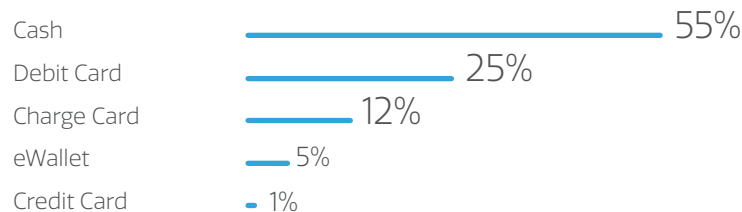
2017 CARD BRAND BREAKDOWNS (eCom and POS)



2017 CARD NOT PRESENT MIX BY PAYMENT METHOD



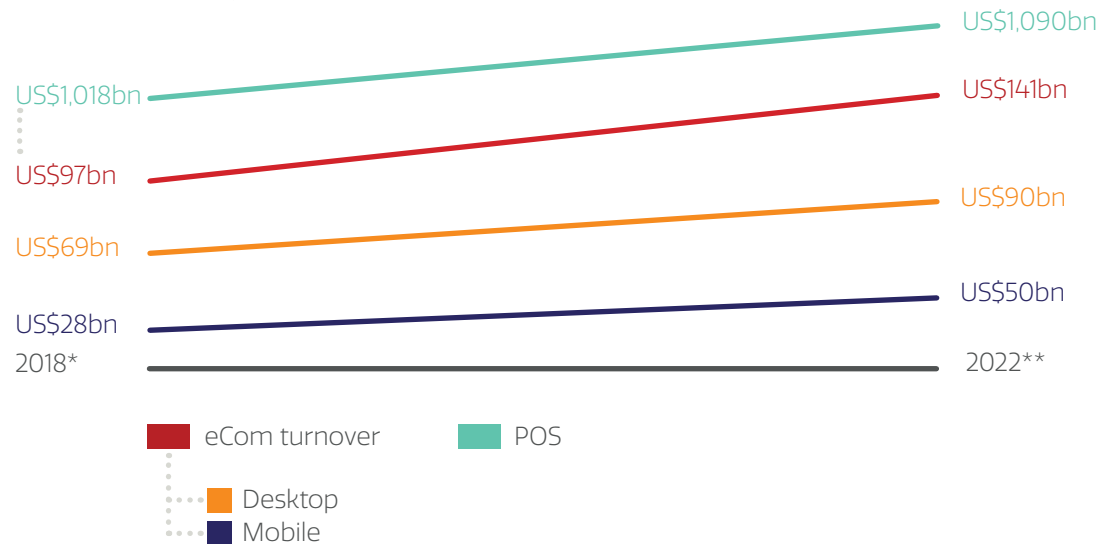
2017 CARD PRESENT MIX BY PAYMENT METHOD



\* Estimated \*\*Forecasted

Numbers adjusted for rounding may impact totals.

POS and eCom PROJECTED GROWTH



POPULAR ALTERNATIVE PAYMENT METHODS



# HONG KONG



The usage gap between credit cards and eWallets in eCommerce is slowly closing—perhaps as some cards move into eWallets. Meantime, use of bank transfer and deferred debit card have increased compared to last year. While cards still dominate point of sale shopping, consumers in Hong Kong have a slightly higher level of comfort using eWallets than consumers in some other countries.

## FAST STATS

2017 eCom SPEND  
PER CAPITA

**US \$1,945**

2017 POS SPEND  
PER CAPITA

**US \$20,891**

2017 % eCom  
SPEND USING  
MOBILE WALLET

**25%**

2017 % POS  
SPEND USING  
MOBILE WALLET

**4%**

2018\* - 2022\*\*  
eCom CAGR

**8%**

2018\* - 2022\*\*  
POS CAGR

**6%**

2018\* INTERNET PENETRATION

**95%**

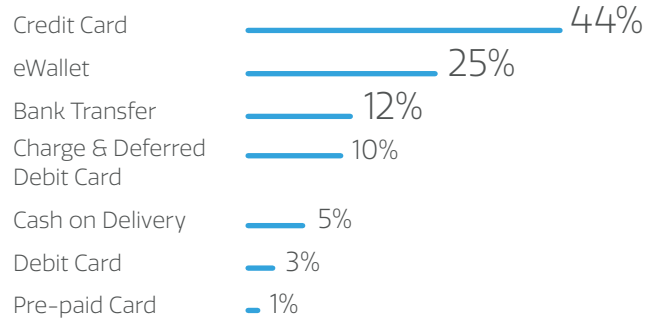
# TOP TIP

With the recent increase in eWallet use both online and at point of sale, keep an eye out over the coming year for those that are attracting heaviest adoption, especially Alipay. Getting in early and on-boarding these eWallets could place you ahead of the competition over the long term.

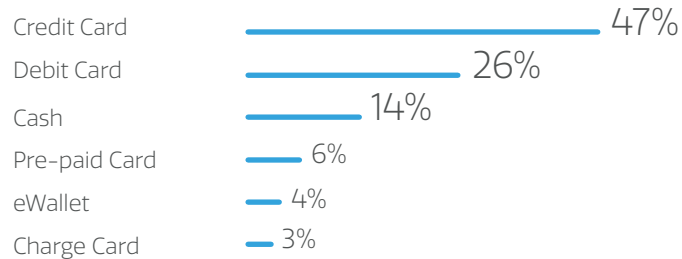
2017 CARD BRAND BREAKDOWNS (eCom and POS)



2017 CARD NOT PRESENT MIX BY PAYMENT METHOD



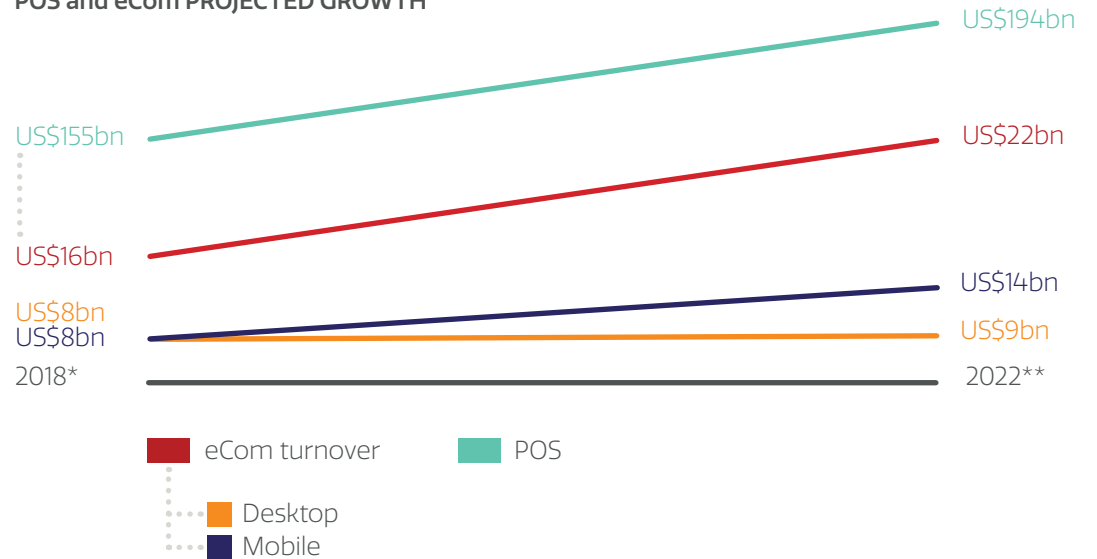
2017 CARD PRESENT MIX BY PAYMENT METHOD



\* Estimated \*\*Forecasted

Numbers adjusted for rounding may impact totals.

POS and eCom PROJECTED GROWTH



POPULAR ALTERNATIVE PAYMENT METHODS



# INDIA



Cash continues to be the primary payment method for point of sale purchases and eWallets dominate for online payments. Cash on delivery and bank transfers are equally used as the second most preferred methods of payment online. eWallet use at the point of sale remains healthy, although not to the degree of use online. As internet penetration and the digital economy continues to grow, there will be room for ongoing shift of payment forms.

## FAST STATS

2017 eCom SPEND  
PER CAPITA

US \$27

2017 POS SPEND  
PER CAPITA

US \$659

2017 % eCom  
SPEND USING  
MOBILE WALLET

26%

2017 % POS  
SPEND USING  
MOBILE WALLET

6%

2018\* - 2022\*\*  
eCom CAGR

21%

2018\* - 2022\*\*  
POS CAGR

11%

2018\* INTERNET PENETRATION

45%

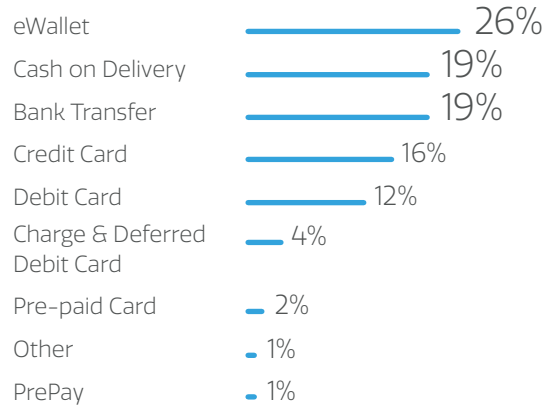
# TOP TIP

Consumers in India have typically found eCommerce to be inconvenient but that is starting to change with mCommerce adoption and simpler payment methods taking hold in eCommerce. Keep an eye on the market and be ready to expand your selection of payment methods to keep up with local customers. Enabling eWallets, such as Paytm, at the point of sale could also help differentiate your business.

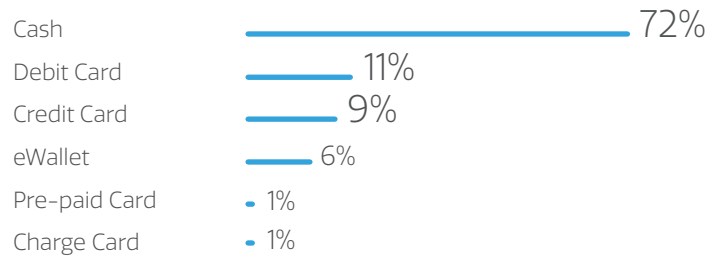
2017 CARD BRAND BREAKDOWNS (eCom and POS)



2017 CARD NOT PRESENT MIX BY PAYMENT METHOD



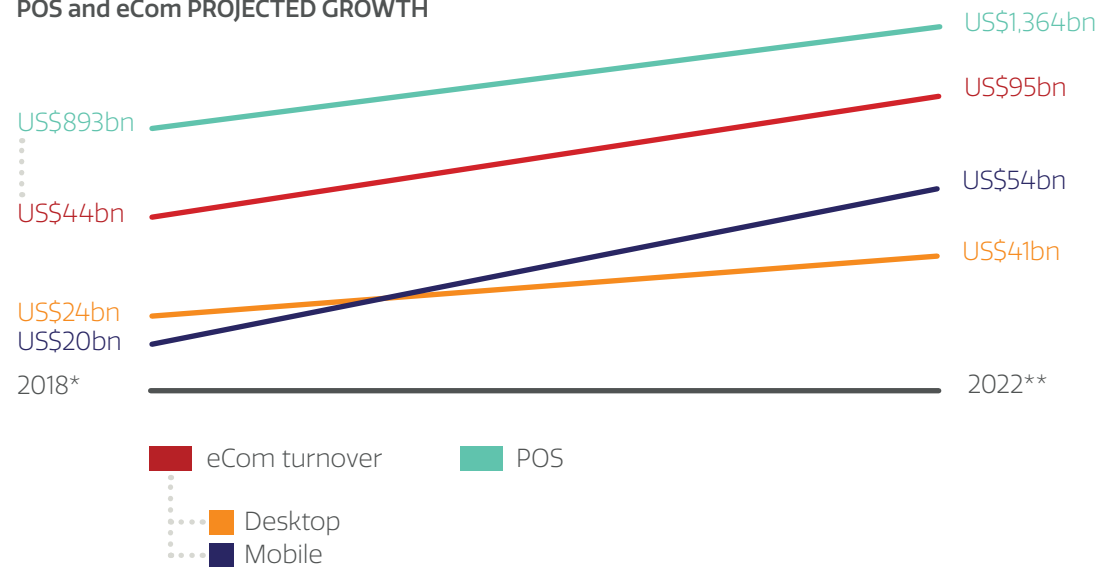
2017 CARD PRESENT MIX BY PAYMENT METHOD



\* Estimated \*\*Forecasted

Numbers adjusted for rounding may impact totals.

POS and eCom PROJECTED GROWTH



POPULAR ALTERNATIVE PAYMENT METHODS



# INDONESIA

A mix of the traditional and digital lead the way for Indonesian eCommerce purchases. Bank transfer and eWallets have solidified their positions as preferred options with both experiencing an increase in use over last year. Cash on delivery has overtaken credit cards as the third choice for online payments. However, cash continues to dominate for point of sale purchases, although eWallets remain a contender for preference compared to credit and debit cards.

## FAST STATS

2017 eCom SPEND  
PER CAPITA

US \$41

2017 POS SPEND  
PER CAPITA

US \$1,173

2017 % eCom  
SPEND USING  
MOBILE WALLET

24%

2017 % POS  
SPEND USING  
MOBILE WALLET

5%

2018\* - 2022\*\*  
eCom CAGR

19%

2018\* - 2022\*\*  
POS CAGR

5%

2018\* INTERNET PENETRATION

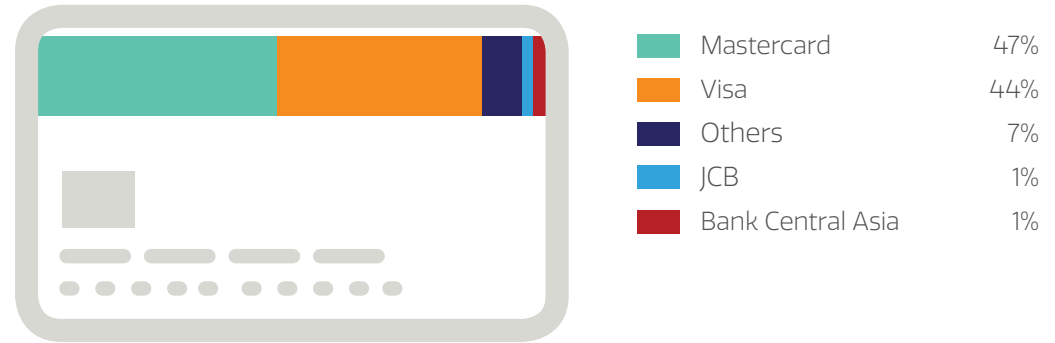
34%



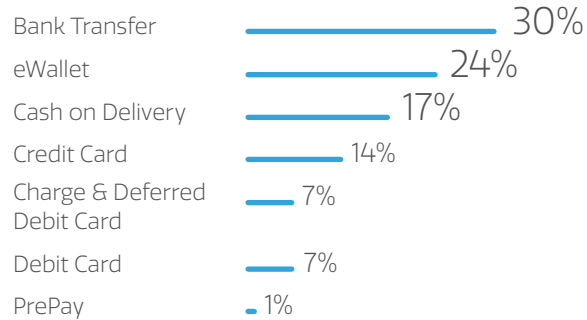
# TOP TIP

What keeps most Indonesians from shopping online is fraud. Make sure you offer locally trusted payment methods, like INDOMOG and KasPay, within a secure payment experience. Examine your global approach to fraud management, especially where fraud is a major concern among consumers. Consider implementing eWallet acceptance at the point of sale to stay competitive.

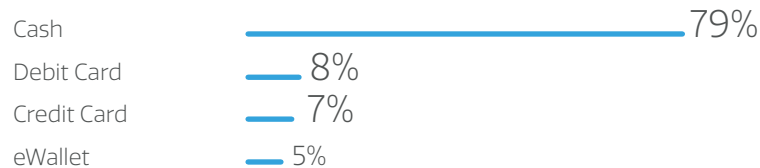
## 2017 CARD BRAND BREAKDOWNS (eCom and POS)



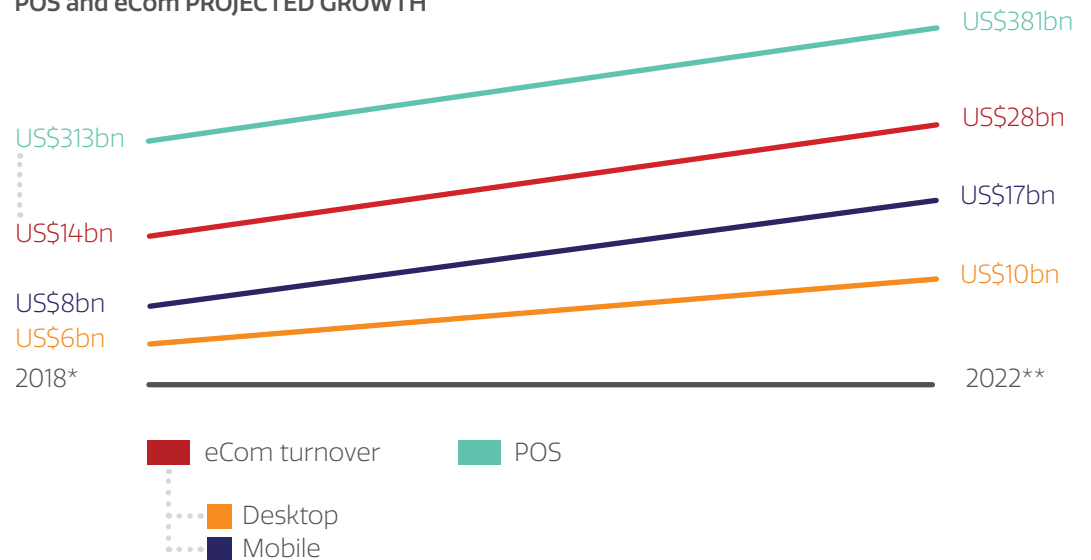
## 2017 CARD NOT PRESENT MIX BY PAYMENT METHOD



## 2017 CARD PRESENT MIX BY PAYMENT METHOD



## POS and eCom PROJECTED GROWTH



\* Estimated \*\*Forecasted

Numbers adjusted for rounding may impact totals.

POPULAR ALTERNATIVE PAYMENT METHODS



# ITALY

Italians prefer their Euro when it comes to shopping at the point of sale as cash and debit card payments make up 83% of the market. On the eCommerce front, the Italian preference for credit cards continues to grow with eWallet as a preference pacing right behind.

## FAST STATS

2017 eCom SPEND  
PER CAPITA

**US \$469**

2017 POS SPEND  
PER CAPITA

**US \$11,958**

2017 % eCom  
SPEND USING  
MOBILE WALLET

**31%**

2017 % POS  
SPEND USING  
MOBILE WALLET

**2%**

2018\* - 2022\*\*  
eCom CAGR

**12%**

2018\* - 2022\*\*  
POS CAGR

**3%**

2018\* INTERNET PENETRATION

**64%**

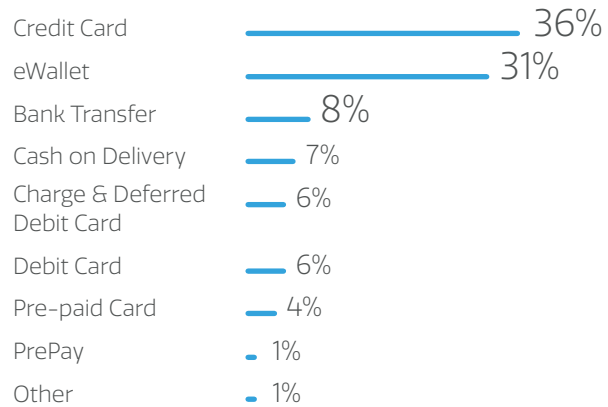
# TOP TIP

With credit cards being the number one choice for eCommerce, ensure you are offering local card brands like Bancomat. Offer consumers the ability to checkout in their preferred currency to create seamless payment experiences. Point of sale purchases are split among multiple card types so enable the top card brands to meet consumer demands.

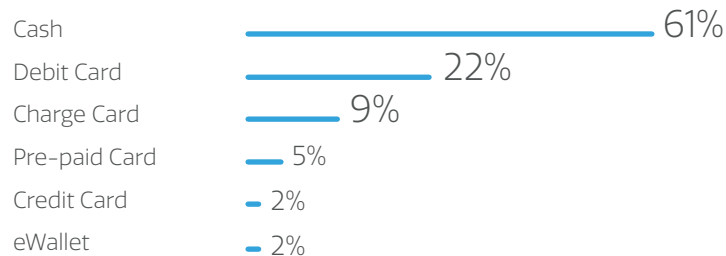
2017 CARD BRAND BREAKDOWNS (eCom and POS)



2017 CARD NOT PRESENT MIX BY PAYMENT METHOD



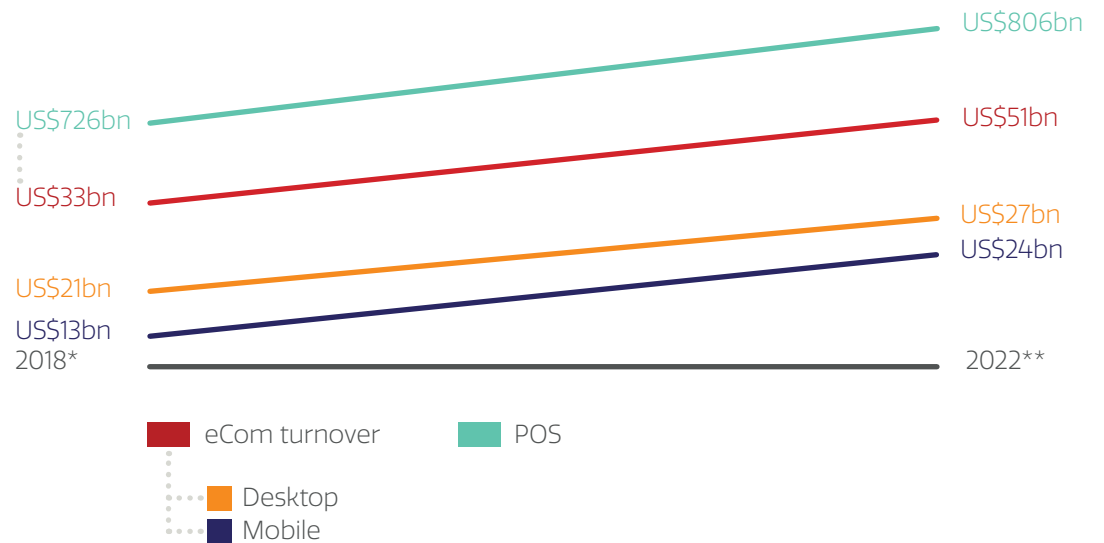
2017 CARD PRESENT MIX BY PAYMENT METHOD



\* Estimated \*\*Forecasted

Numbers adjusted for rounding may impact totals.

POS and eCom PROJECTED GROWTH



POPULAR ALTERNATIVE PAYMENT METHODS



# JAPAN

Japanese consumers are steady in their payment preferences with no fundamental change from last year. Cash is first at the physical counter, and credit cards remain the second most popular card-present payment type. Use of eWallets trails other mature commerce markets, both online and at point of sale.

## FAST STATS

2017 eCom SPEND  
PER CAPITA

**US \$1,158**

2017 POS SPEND  
PER CAPITA

**US \$14,530**

2017 % eCom  
SPEND USING  
MOBILE WALLET

**3%**

2017 % POS  
SPEND USING  
MOBILE WALLET

**3%**

2018\* - 2022\*\*  
eCom CAGR

**6%**

2018\* - 2022\*\*  
POS CAGR

**-1%**

2018\* INTERNET PENETRATION

**100%**

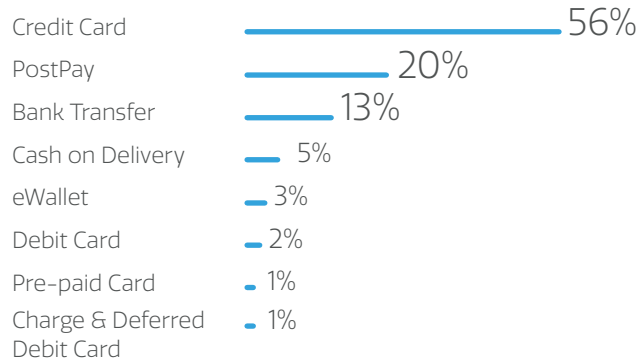
# TOP TIP

With little change in the payment landscape we suggest focusing on improving the payment experience and creating new ways for customers to make payments quickly. Expand point of sale payment options and streamline online payment pages to ensure acceptance of Konbini and JCB. Make sure customers can purchase in their preferred currency as cross-border eCommerce sales rise in popularity.

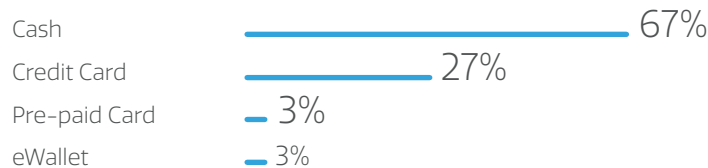
## 2017 CARD BRAND BREAKDOWNS (eCom and POS)



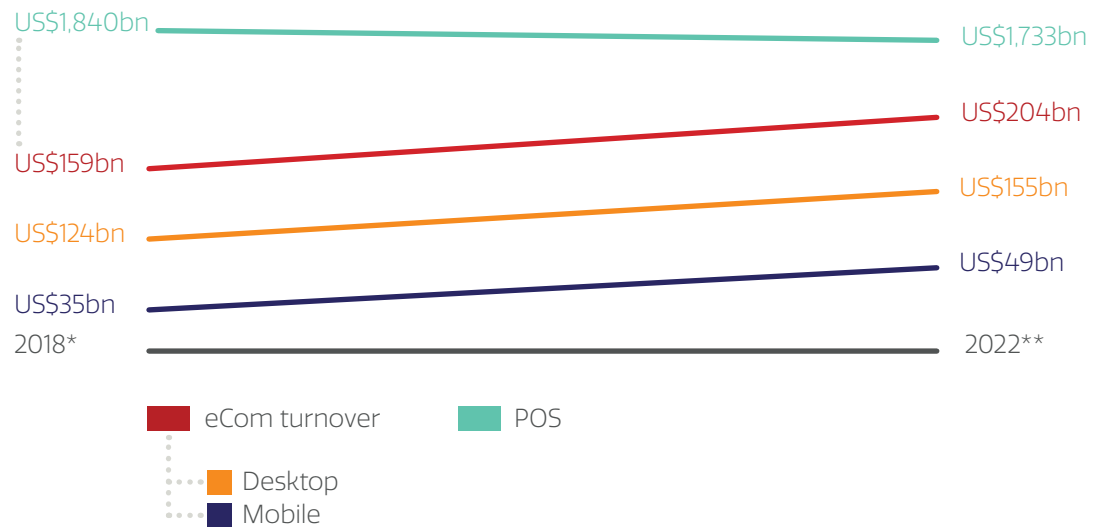
## 2017 CARD NOT PRESENT MIX BY PAYMENT METHOD



## 2017 CARD PRESENT MIX BY PAYMENT METHOD



## POS and eCom PROJECTED GROWTH



\* Estimated \*\*Forecasted

Numbers adjusted for rounding may impact totals.

POPULAR ALTERNATIVE PAYMENT METHODS



# MALAYSIA

When it comes to commerce online, bank transfer tops consumer preference, outpacing both credit and debit cards. In the last year, however, credit cards have lost some preferential luster, while debit cards and cash on delivery are gaining ground. While cash continues to lead for point of sale purchase, there's an uptick in consumers handing over credit cards to pay.

## FAST STATS

2017 eCom SPEND  
PER CAPITA

**US \$110**

2017 POS SPEND  
PER CAPITA

**US \$4,493**

2017 % eCom  
SPEND USING  
MOBILE WALLET

**7%**

2017 % POS  
SPEND USING  
MOBILE WALLET

**1%**

2018\* - 2022\*\*  
eCom CAGR

**21%**

2018\* - 2022\*\*  
POS CAGR

**6%**

2018\* INTERNET PENETRATION

**87%**

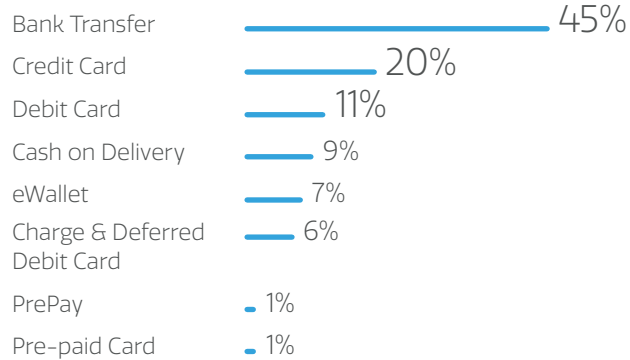
# TOP TIP

Malaysian shoppers are concerned about fraud while shopping online. Offering a secure online experience with trusted local payment methods will help convince local customers. With credit card growth at the point of sale, ensure you can accept the most popular cards.

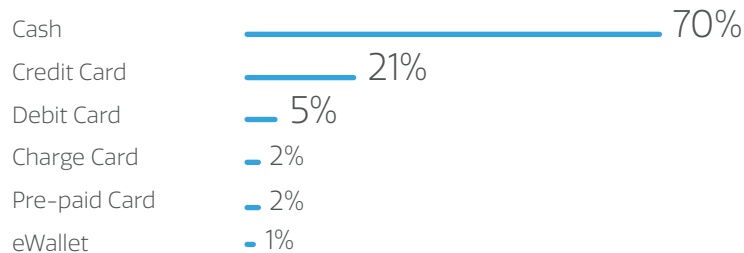
2017 CARD BRAND BREAKDOWNS (eCom and POS)



2017 CARD NOT PRESENT MIX BY PAYMENT METHOD



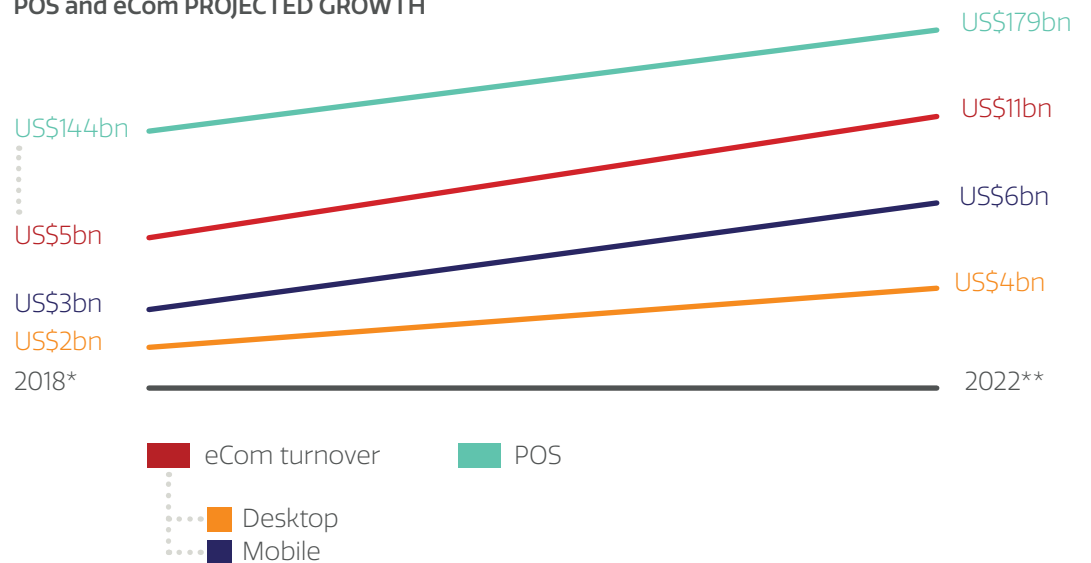
2017 CARD PRESENT MIX BY PAYMENT METHOD



\* Estimated \*\*Forecasted

Numbers adjusted for rounding may impact totals.

POS and eCom PROJECTED GROWTH



POPULAR ALTERNATIVE PAYMENT METHODS



CIMB Clicks

# MEXICO



Cash has a firm grip on Mexican consumers at the point of sale, leaving huge growth potential for other payment methods. The eWallet as the preferred method of payment online is rising with the growth of eCommerce, but still has some ground to fully catch up with credit and debit card preferences.

## FAST STATS

2017 eCom SPEND  
PER CAPITA  
**US \$125**

2017 POS SPEND  
PER CAPITA  
**US \$3,283**

2017 % eCom  
SPEND USING  
MOBILE WALLET  
**14%**

2017 % POS  
SPEND USING  
MOBILE WALLET  
**3%**

2018\* - 2022\*\*  
eCom CAGR  
**13%**

2018\* - 2022\*\*  
POS CAGR  
**4%**

2018\* INTERNET PENETRATION  
**72%**



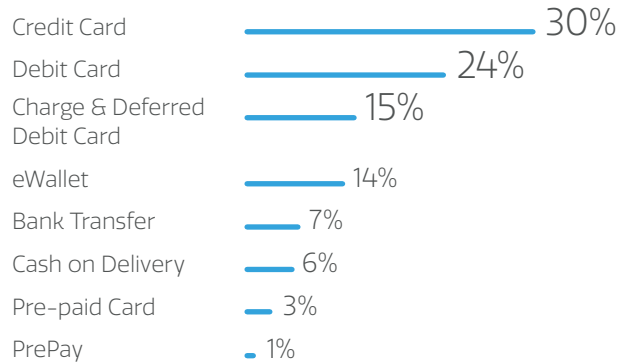
# TOP TIP

Though still in its early stages, eWallets are starting to take off in Mexico. Explore accepting popular eWallets, such as MercadoPago and PayPal, which are trusted and viewed as secure locally. Consider point of sale security measures when cards are preferred.

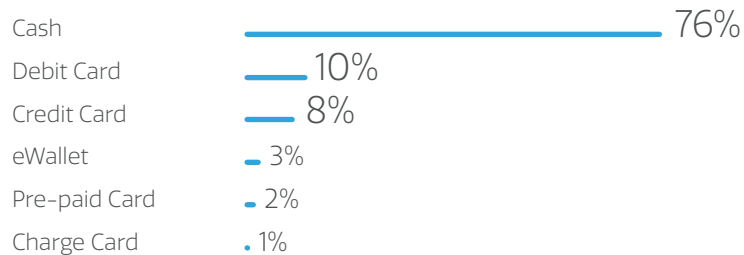
2017 CARD BRAND BREAKDOWNS (eCom and POS)



2017 CARD NOT PRESENT MIX BY PAYMENT METHOD



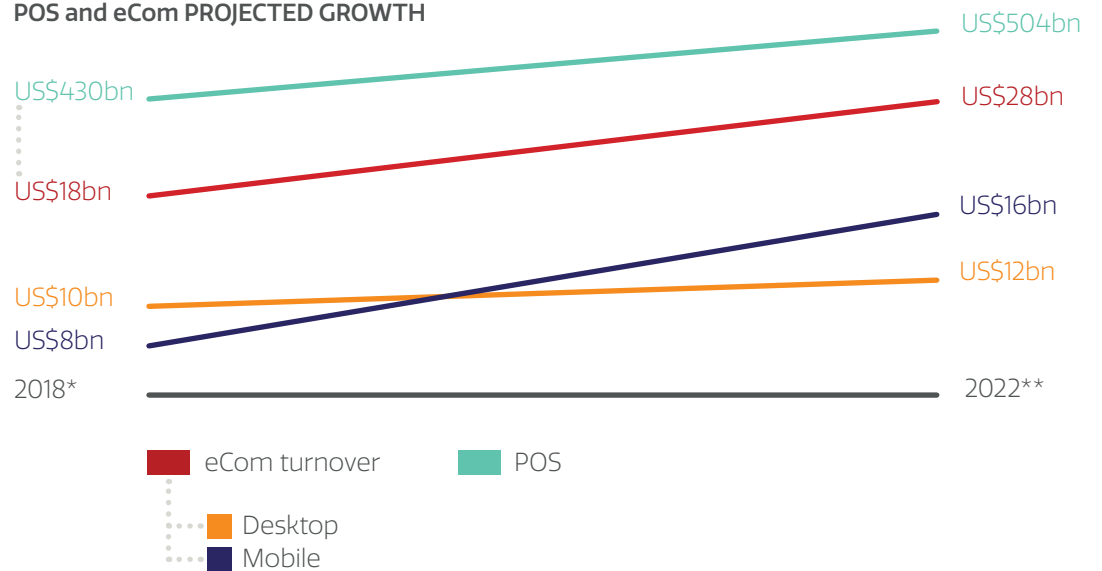
2017 CARD PRESENT MIX BY PAYMENT METHOD



\* Estimated \*\*Forecasted

Numbers adjusted for rounding may impact totals.

POS and eCom PROJECTED GROWTH



POPULAR ALTERNATIVE PAYMENT METHODS



# NETHERLANDS

The Dutch lean heavily on forms of cash over credit for purchases, online and off. While there's been an increase in credit card use in the last year for online purchases, bank transfer continues to be the dominant payment choice in eCommerce, with eWallets also gaining traction. Debit and cash make up the majority of point of sale purchases perhaps due to a strong aversion to carrying debt.

## FAST STATS

2017 eCom SPEND  
PER CAPITA

**US \$1,578**

2017 POS SPEND  
PER CAPITA

**US \$11,989**

2017 % eCom  
SPEND USING  
MOBILE WALLET

**10%**

2017 % POS  
SPEND USING  
MOBILE WALLET

**3%**

2018\* - 2022\*\*  
eCom CAGR

**14%**

2018\* - 2022\*\*  
POS CAGR

**1%**

2018\* INTERNET PENETRATION

**90%**

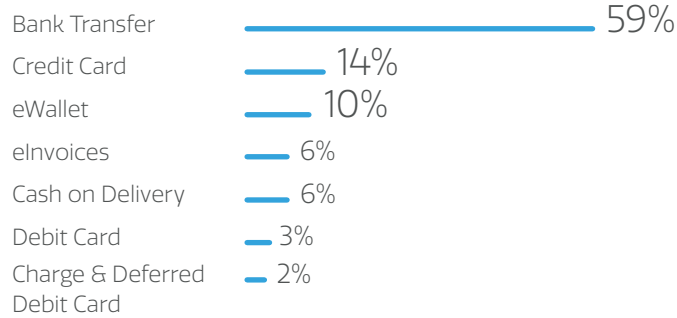
# TOP TIP

iDEAL continues to lead payment preferences in the Netherlands. However, eWallet use, such as Payconiq, is gaining some traction in this convenience-driven market. Consider expanding your payment method offerings to include eWallets for both online and point of sale purchases.

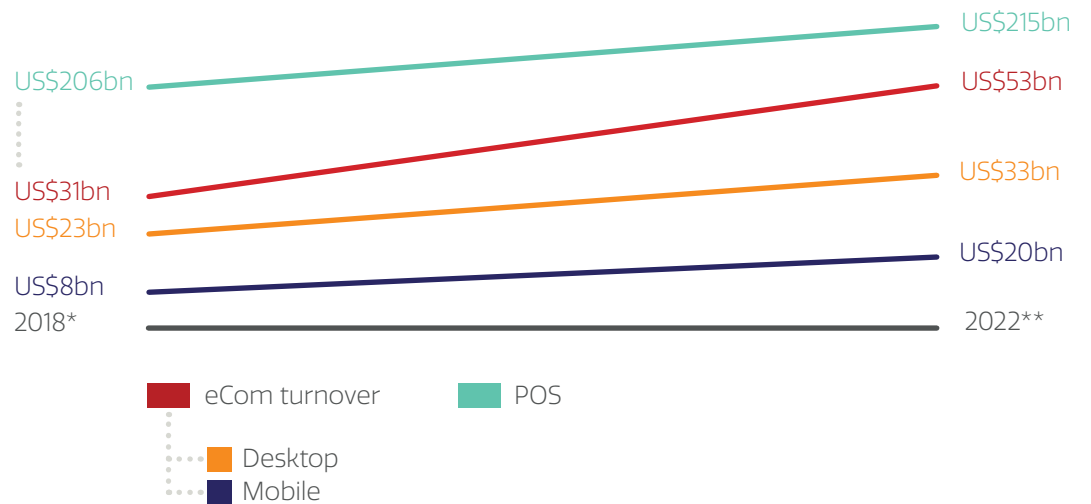
## 2017 CARD BRAND BREAKDOWNS (eCom and POS)



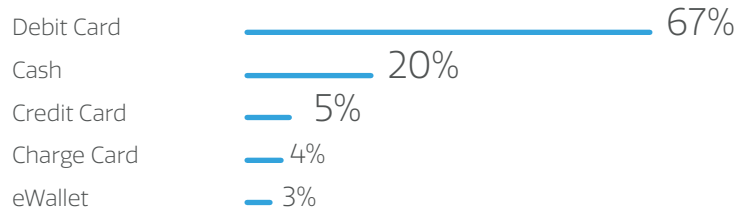
## 2017 CARD NOT PRESENT MIX BY PAYMENT METHOD



## POS and eCom PROJECTED GROWTH



## 2017 CARD PRESENT MIX BY PAYMENT METHOD



\* Estimated \*\*Forecasted

Numbers adjusted for rounding may impact totals.

POPULAR ALTERNATIVE PAYMENT METHODS



# NEW ZEALAND

Cards are by far the most popular payment method, online and at point of sale, for New Zealanders. Consumers continue to reach for credit cards first when it comes to purchasing online. However, eWallets, bank transfer, and debit cards compete equally for share. Consumers here rely very little on cash at the physical point of sale making way for this market to solidify digital payments as the norm.

## FAST STATS

2017 eCom SPEND  
PER CAPITA

**US \$855**

2017 POS SPEND  
PER CAPITA

**US \$12,793**

2017 % eCom  
SPEND USING  
MOBILE WALLET

**19%**

2017 % POS  
SPEND USING  
MOBILE WALLET

**2%**

2018\* - 2022\*\*  
eCom CAGR

**8%**

2018\* - 2022\*\*  
POS CAGR

**5%**

2018\* INTERNET PENETRATION

**92%**

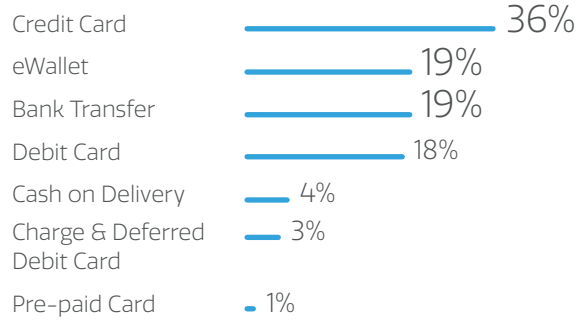
# TOP TIP

With eWallets, bank transfers, and debit cards gaining ground online in New Zealand, consider adding top payment methods such as PayPal and Visa Checkout to match local consumer preferences. The majority of purchases are made with debit or credit cards so offering all card brands for point of sale purchases is essential.

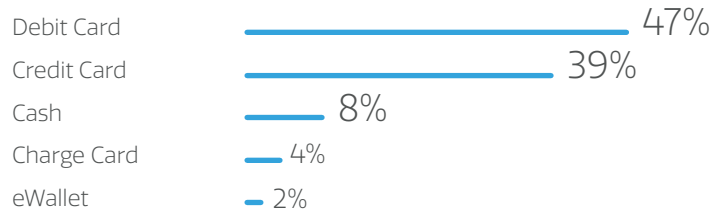
2017 CARD BRAND BREAKDOWNS (eCom and POS)



2017 CARD NOT PRESENT MIX BY PAYMENT METHOD



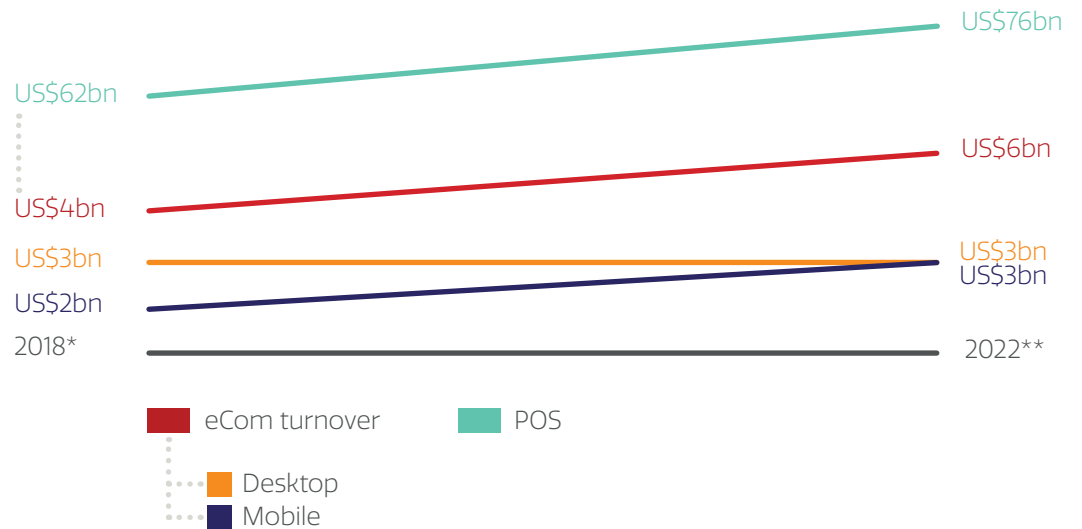
2017 CARD PRESENT MIX BY PAYMENT METHOD



\* Estimated \*\*Forecasted

Numbers adjusted for rounding may impact totals.

POS and eCom PROJECTED GROWTH



POPULAR ALTERNATIVE PAYMENT METHODS



# NIGERIA

Cash forms of payment are most preferred over cards both online and off in this African market. Bank transfer and cash on delivery make up nearly half of payments in eCommerce. While credit cards are not generally part of the spend culture, debit cards do get some use, online and off. Digital payments are still in growth mode as smartphone adoption and internet penetration continue to increase.

## FAST STATS

2017 eCom SPEND  
PER CAPITA

**US \$5**

2017 POS SPEND  
PER CAPITA

**US \$964**

2017 % eCom  
SPEND USING  
MOBILE WALLET

**10%**

2017 % POS  
SPEND USING  
MOBILE WALLET

**1%**

2018\* - 2022\*\*  
eCom CAGR

**27%**

2018\* - 2022\*\*  
POS CAGR

**5%**

2018\* INTERNET PENETRATION

**25%**

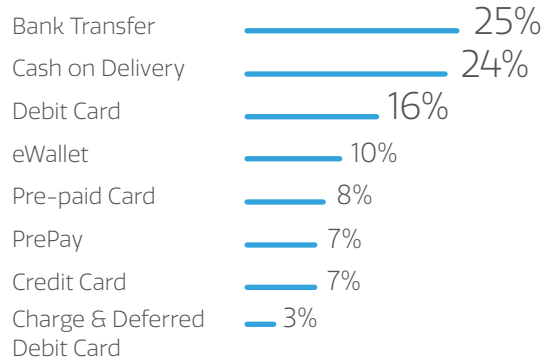
# TOP TIP

Cash on delivery is by far the preferred eCommerce payment method in Nigeria. Work to secure a cash on delivery partner to serve local demand. Cash is still heavily relied on at the point of sale. As digital payment popularity increases, watch for trends and payment methods that consumers adopt to give your business an edge.

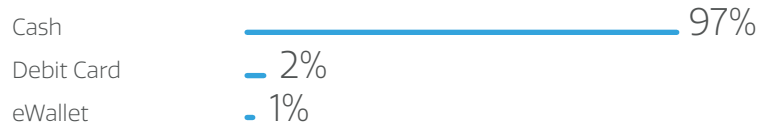
## 2017 CARD BRAND BREAKDOWNS (eCom and POS)



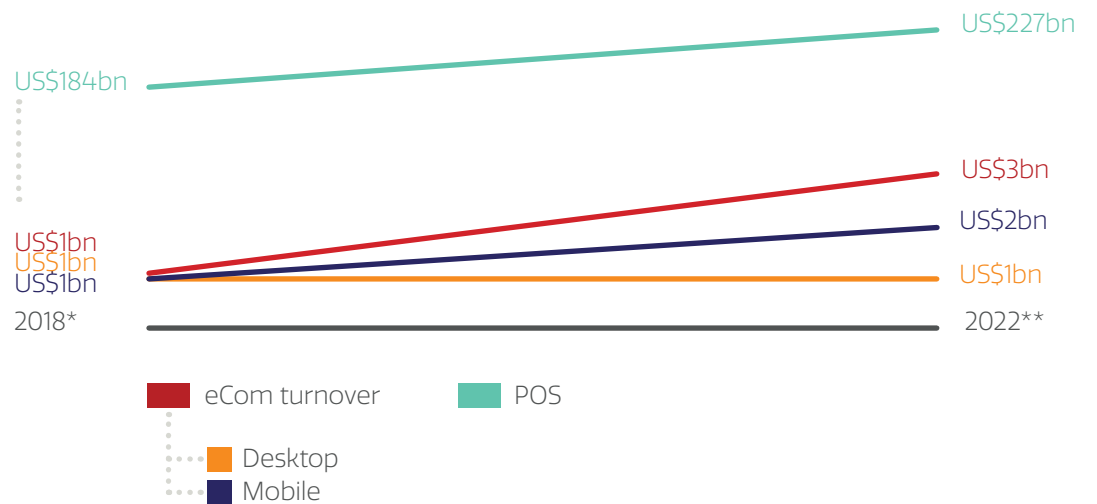
## 2017 CARD NOT PRESENT MIX BY PAYMENT METHOD



## 2017 CARD PRESENT MIX BY PAYMENT METHOD



## POS and eCom PROJECTED GROWTH



\* Estimated \*\*Forecasted

Numbers adjusted for rounding may impact totals.

POPULAR ALTERNATIVE PAYMENT METHODS



# NORWAY

Credit cards and bank transfer are the payment methods of choice online for Norwegians. eInvoices have gained in popularity online with their share of purchase now on par with eWallets. Non-cash payments command both point of sale and online experiences, pushing Norway closer to becoming a cashless society. eWallets for point of sale purchases are now equal to those made with cash.

## FAST STATS

2017 eCom SPEND  
PER CAPITA

**US \$2,347**

2017 POS SPEND  
PER CAPITA

**US \$20,844**

2017 % eCom  
SPEND USING  
MOBILE WALLET

**12%**

2017 % POS  
SPEND USING  
MOBILE WALLET

**4%**

2018\* - 2022\*\*  
eCom CAGR

**12%**

2018\* - 2022\*\*  
POS CAGR

**3%**

2018\* INTERNET PENETRATION

**99%**



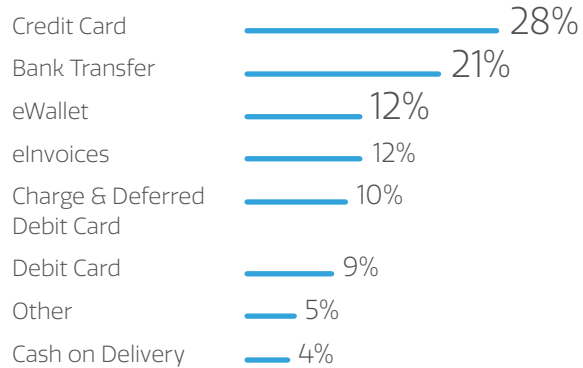
# TOP TIP

Consumer payment preferences vary in Norway, reflecting Norwegians hunger for convenience. Accepting local methods and card brands is essential to a high online conversion rate. Debit cards are heavily used at the point of sale with eWallets gaining in popularity.

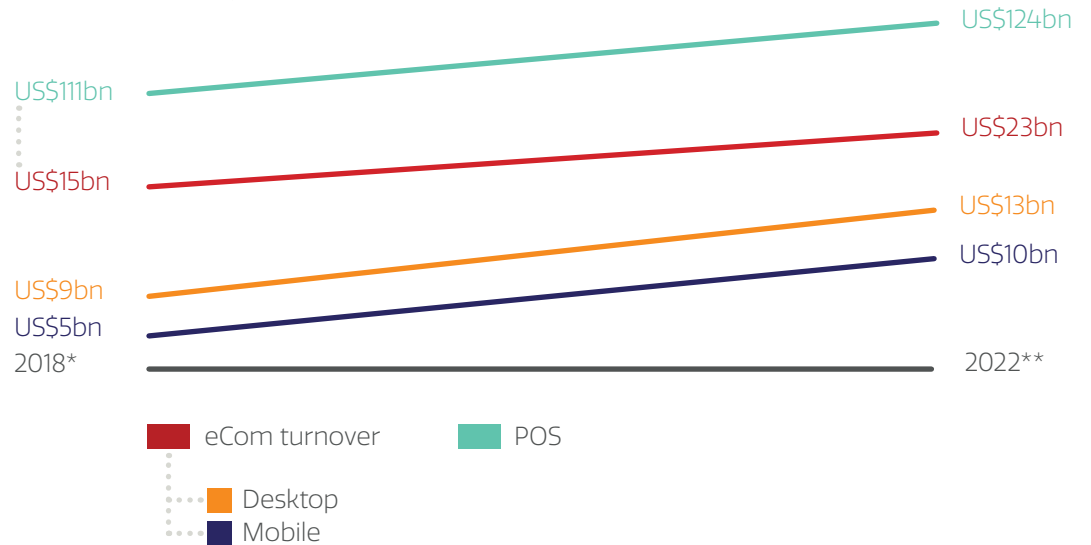
2017 CARD BRAND BREAKDOWNS (eCom and POS)



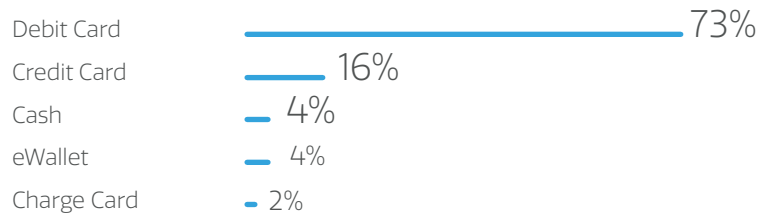
2017 CARD NOT PRESENT MIX BY PAYMENT METHOD



POS and eCom PROJECTED GROWTH



2017 CARD PRESENT MIX BY PAYMENT METHOD



\* Estimated \*\*Forecasted

Numbers adjusted for rounding may impact totals.

POPULAR ALTERNATIVE PAYMENT METHODS



# PHILIPPINES

Online payment preferences haven't changed in the last year with cash on delivery topping the list. eCommerce continues to grow rapidly, despite a shipping infrastructure that's still developing. Cash retains control over point of sale payments with no other payment preferences competing for market share.

## FAST STATS

2017 eCom SPEND  
PER CAPITA  
**US \$25**

2017 POS SPEND  
PER CAPITA  
**US \$2,131**

2017 % eCom  
SPEND USING  
MOBILE WALLET  
**15%**

2017 % POS  
SPEND USING  
MOBILE WALLET  
**1%**

2018\* - 2022\*\*  
eCom CAGR  
**19%**

2018\* - 2022\*\*  
POS CAGR  
**4%**

2018\* INTERNET PENETRATION  
**72%**

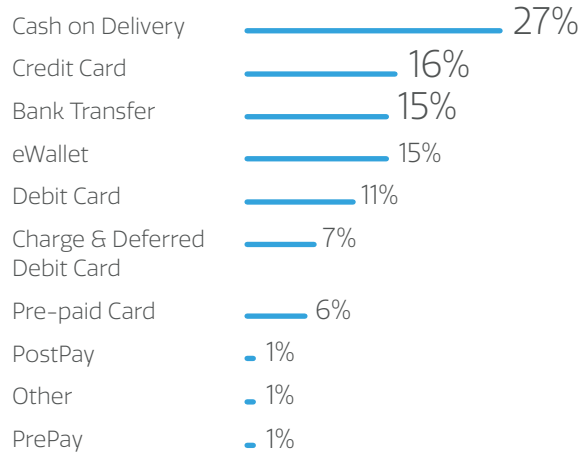
# TOP TIP

Consumers in the Philippines express a strong preference for cash on delivery for online purchases. Provide this option to capture customers who don't use cards. Accept a variety of card brands at the point of sale for instances where card payments are preferred.

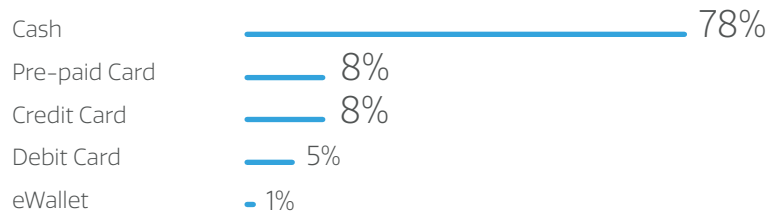
## 2017 CARD BRAND BREAKDOWNS (eCom and POS)



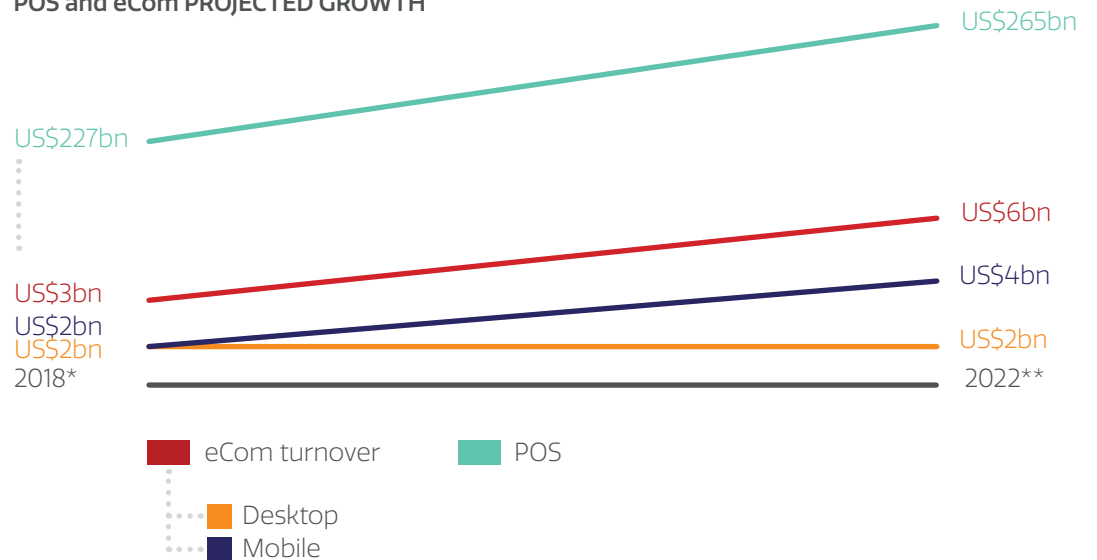
## 2017 CARD NOT PRESENT MIX BY PAYMENT METHOD



## 2017 CARD PRESENT MIX BY PAYMENT METHOD



## POS and eCom PROJECTED GROWTH



\* Estimated \*\*Forecasted

Numbers adjusted for rounding may impact totals.

POPULAR ALTERNATIVE PAYMENT METHODS



# POLAND

Polish consumers still strongly favor using bank transfer for online purchases. eWallet use has grown slightly over the last year, pushing debit cards down to the third most popular eCommerce payment method. While cash leads at the point of sale, digital payments via debit card command a fair amount of use among consumers. Many businesses are activating contactless card acceptance at the point of sale, setting Poland up for greater shifts to digital payments in the future.

## FAST STATS

2017 eCom SPEND  
PER CAPITA

**US \$303**

2017 POS SPEND  
PER CAPITA

**US \$6,238**

2017 % eCom  
SPEND USING  
MOBILE WALLET

**17%**

2017 % POS  
SPEND USING  
MOBILE WALLET

**1%**

2018\* - 2022\*\*  
eCom CAGR

**7%**

2018\* - 2022\*\*  
POS CAGR

**5%**

2018\* INTERNET PENETRATION

**78%**

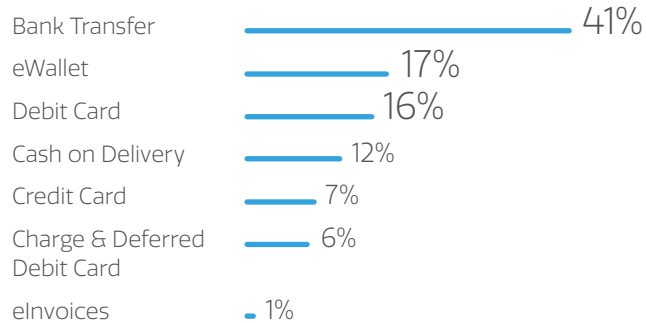
# TOP TIP

Though bank transfers, including PayU and Przelewy24, still lead online in Poland, keep an eye on eWallets that are gaining traction. Consider adding the most popular eWallets to keep pace with local customers' online payment preferences. Activate contactless card technology at the point of sale to keep up with emerging trends in digital payments.

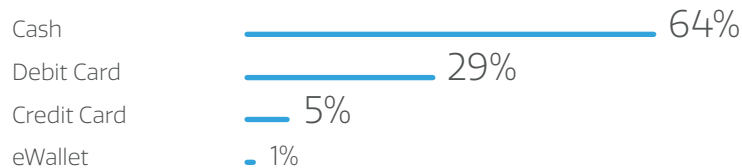
2017 CARD BRAND BREAKDOWNS (eCom and POS)



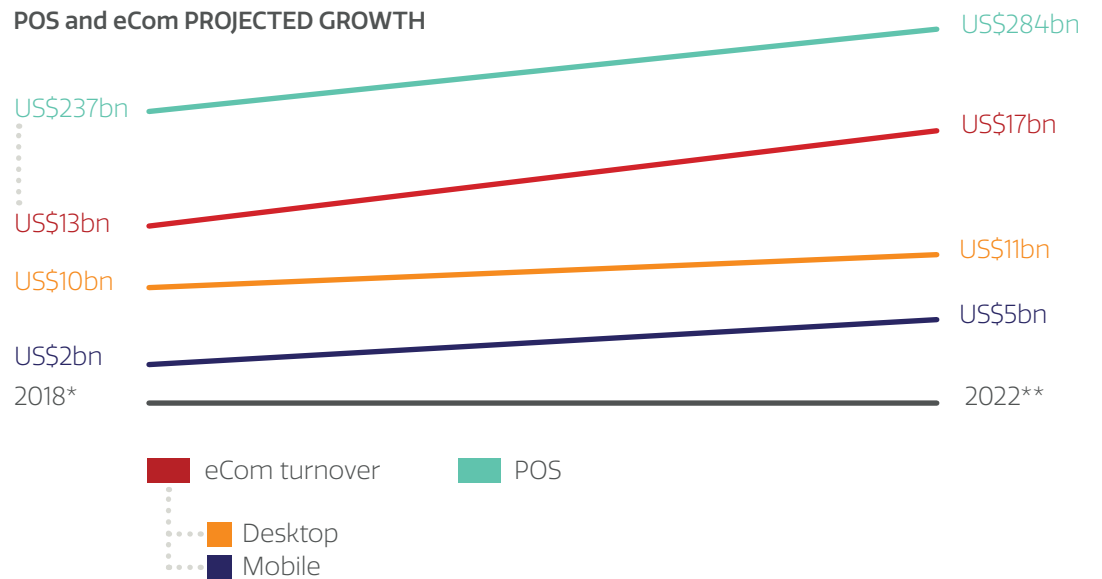
2017 CARD NOT PRESENT MIX BY PAYMENT METHOD



2017 CARD PRESENT MIX BY PAYMENT METHOD



POS and eCom PROJECTED GROWTH



\* Estimated \*\*Forecasted

Numbers adjusted for rounding may impact totals.

POPULAR ALTERNATIVE PAYMENT METHODS



# RUSSIA

Online credit card use has doubled since last year pushing this payment method into the top three for eCommerce purchases, replacing cash on delivery. Although still preferred, debit card use is down while eWallet use has increased. This suggests that some consumers have moved debit cards into their eWallets for increased simplicity when shopping online. Russian consumers rely on funds available in their bank accounts with cash and debit cards almost exclusively preferred for point of sale purchases. In fact, eWallets and credit cards get minimal use at the point of sale.

## FAST STATS

2017 eCom SPEND  
PER CAPITA

**US \$231**

2017 POS SPEND  
PER CAPITA

**US \$8,612**

2017 % eCom  
SPEND USING  
MOBILE WALLET

**24%**

2017 % POS  
SPEND USING  
MOBILE WALLET

**2%**

2018\* - 2022\*\*  
eCom CAGR

**9%**

2018\* - 2022\*\*  
POS CAGR

**4%**

2018\* INTERNET PENETRATION

**86%**

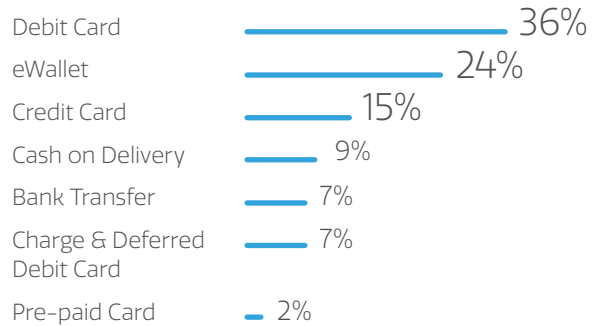
# TOP TIP

Local eWallets in Russia have a large enough share that now is the time to implement eWallet acceptance. eWallets like Yandex.Money, WebMoney, and Qiwi offer a simple way to checkout. The size and growth of mCommerce indicates consumers are ready for this payment method. eWallets also provide convenience at the point of sale including quicker checkout and stronger security.

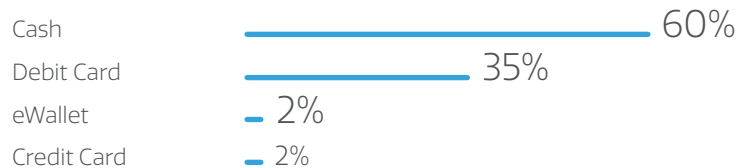
## 2017 CARD BRAND BREAKDOWNS (eCom and POS)



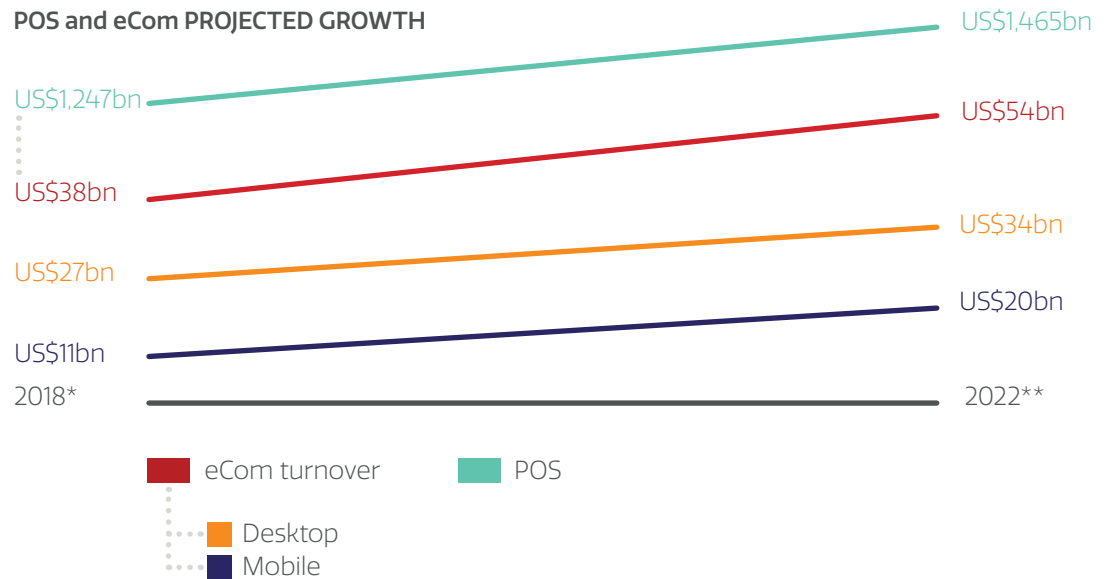
## 2017 CARD NOT PRESENT MIX BY PAYMENT METHOD



## 2017 CARD PRESENT MIX BY PAYMENT METHOD



## POS and eCom PROJECTED GROWTH



\* Estimated \*\*Forecasted

Numbers adjusted for rounding may impact totals.

POPULAR ALTERNATIVE PAYMENT METHODS



# SINGAPORE

Cards continue as the most preferred way to pay online and off. There's been no change in online checkout preferences in the last year with credit cards leading the way and eWallets contending for second place. While cash is the top payment preference at the point of sale, cards are preferred by more consumers with credit and debit card purchases making up 53% of point of sale purchases. Despite the country's tech-savvy culture and high smartphone adoption rate, eWallets haven't changed payment habits yet, although they do contend with bank transfer for second-place share online.

## FAST STATS

2017 eCom SPEND  
PER CAPITA

**US \$889**

2017 POS SPEND  
PER CAPITA

**US \$21,481**

2017 % eCom  
SPEND USING  
MOBILE WALLET

**10%**

2017 % POS  
SPEND USING  
MOBILE WALLET

**4%**

2018\* - 2022\*\*  
eCom CAGR

**7%**

2018\* - 2022\*\*  
POS CAGR

**5%**

2018\* INTERNET PENETRATION

**85%**



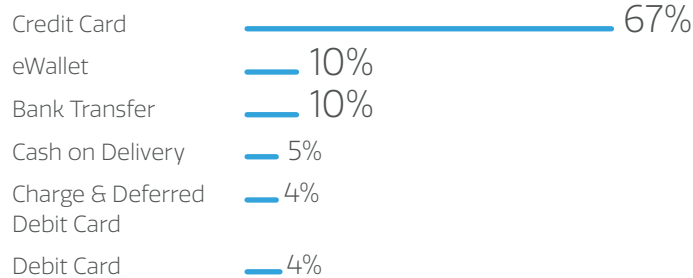
# TOP TIP

In addition to local and global card brands, look at popular eWallets like Apple Pay and PayPal that are slowly gaining trust and acceptance. eWallets provide convenience online and at the point of sale by facilitating quick checkout. The use of biometrics at the point of sale also adds a layer of security protecting your business from potential fraud.

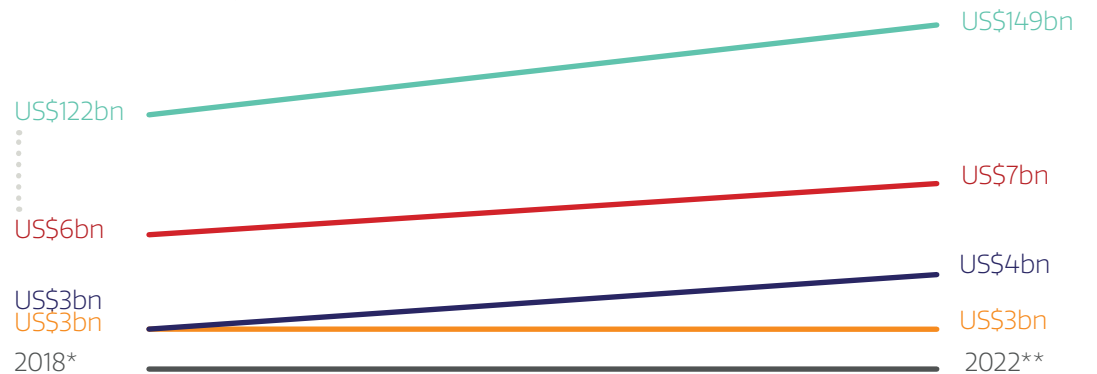
2017 CARD BRAND BREAKDOWNS (eCom and POS)



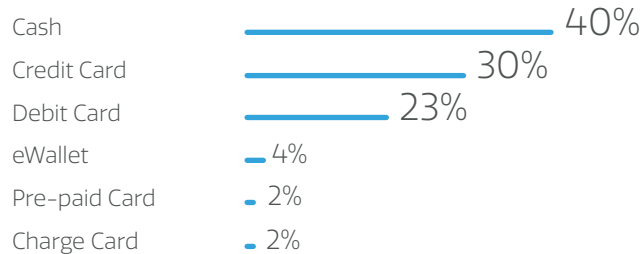
2017 CARD NOT PRESENT MIX BY PAYMENT METHOD



POS and eCom PROJECTED GROWTH



2017 CARD PRESENT MIX BY PAYMENT METHOD



\* Estimated \*\*Forecasted

Numbers adjusted for rounding may impact totals.

POPULAR ALTERNATIVE PAYMENT METHODS



# SOUTH AFRICA

South African consumers rely on relatively traditional payment methods for purchases, online and at point of sale—through a mixture of cash, debit, credit, and bank transfer. Credit cards and bank transfer continue to drive the eCommerce market. While consumers put their trust in cash at the physical store counter, cards are also used a fair amount. Smartphone adoption is high in South Africa and eWallet use at the point of sale has gained some traction as contactless technology becomes more widespread.

## FAST STATS

2017 eCom SPEND  
PER CAPITA

**US \$38**

2017 POS SPEND  
PER CAPITA

**US \$3,698**

2017 % eCom  
SPEND USING  
MOBILE WALLET

**17%**

2017 % POS  
SPEND USING  
MOBILE WALLET

**5%**

2018\* - 2022\*\*  
eCom CAGR

**10%**

2018\* - 2022\*\*  
POS CAGR

**3%**

2018\* INTERNET PENETRATION

**65%**

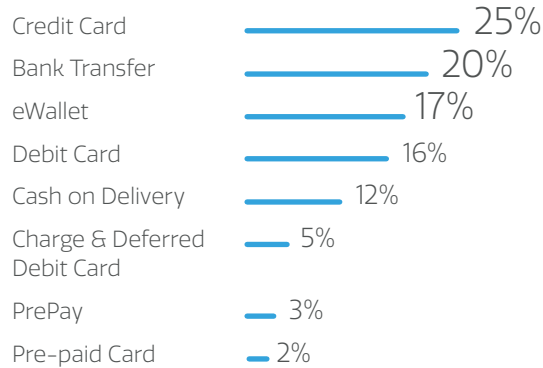
# TOP TIP

To make South African consumers feel secure when shopping online, offer trusted payment methods in a secure payment experience. Educate staff and consumers about the security used for eWallets at the point of sale, including biometrics.

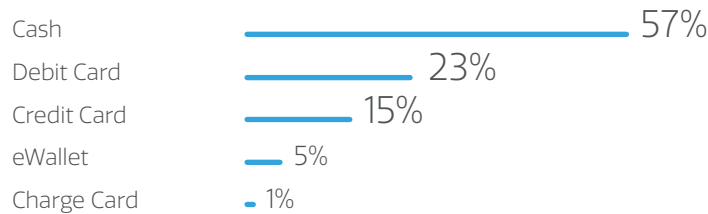
## 2017 CARD BRAND BREAKDOWNS (eCom and POS)



## 2017 CARD NOT PRESENT MIX BY PAYMENT METHOD



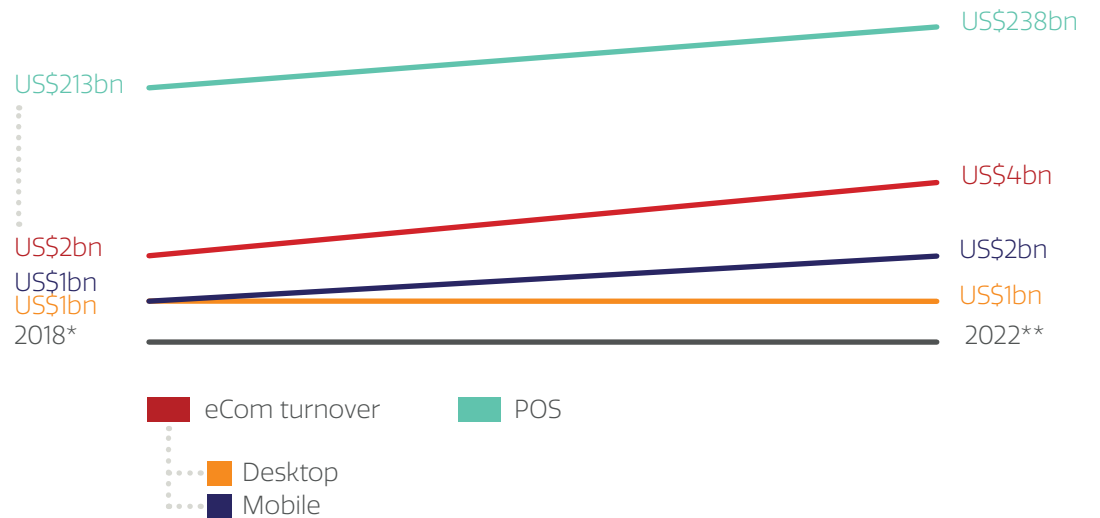
## 2017 CARD PRESENT MIX BY PAYMENT METHOD



\* Estimated \*\*Forecasted

Numbers adjusted for rounding may impact totals.

## POS and eCom PROJECTED GROWTH



POPULAR ALTERNATIVE PAYMENT METHODS



# SOUTH KOREA

South Korea remains one of the largest eCommerce markets in Asia and payment by credit card is still the most preferred method online. Bank transfer payments have risen in the last year, now on par with eWallets. It's cards, and not cash, that are king in the Korean store. While smartphone adoption is high, consumers are still wary of contactless payments for point of sale shopping.

## FAST STATS

2017 eCom SPEND  
PER CAPITA  
**US \$876**

2017 POS SPEND  
PER CAPITA  
**US \$14,197**

2017 % eCom  
SPEND USING  
MOBILE WALLET  
**10%**

2017 % POS  
SPEND USING  
MOBILE WALLET  
**3%**

2018\* - 2022\*\*  
eCom CAGR  
**11%**

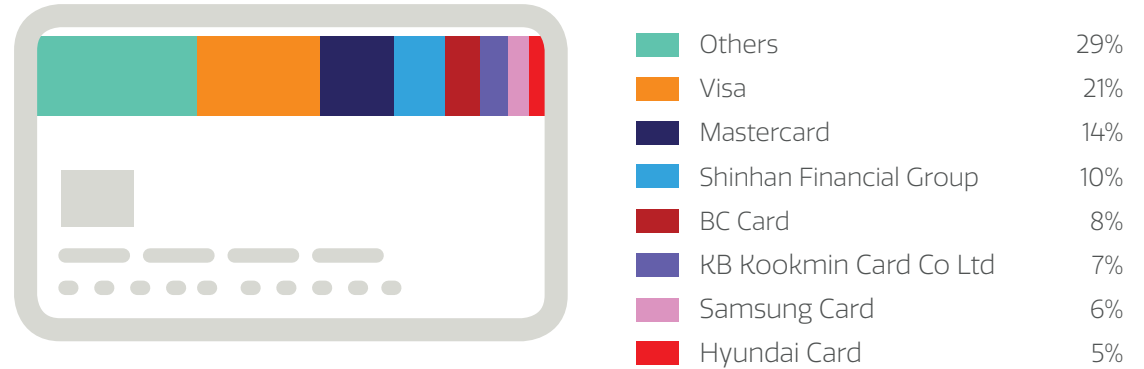
2018\* - 2022\*\*  
POS CAGR  
**6%**

2018\* INTERNET PENETRATION  
**97%**

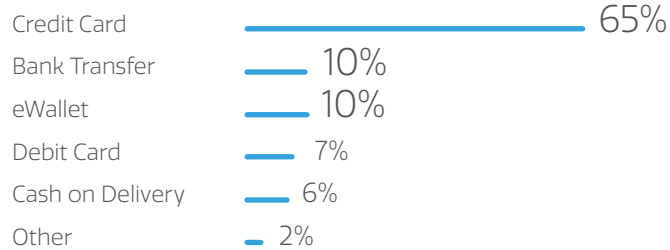
# TOP TIP

Tap into the potential of South Korean consumers by offering local card brands and payment methods. Consider adding bank transfers as an eCommerce payment option given their popularity among South Korean consumers. Explore popular eWallet options for point of sale acceptance.

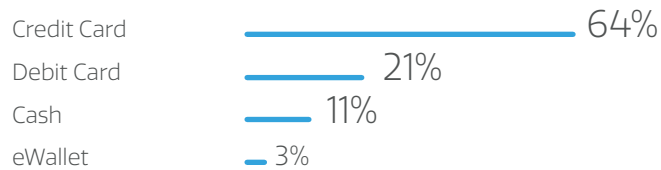
2017 CARD BRAND BREAKDOWNS (eCom and POS)



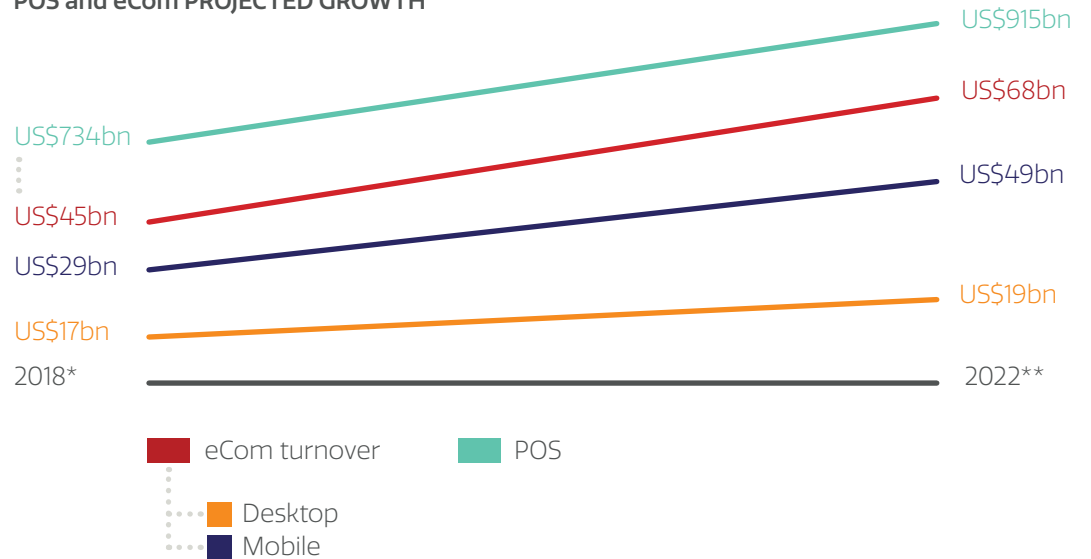
2017 CARD NOT PRESENT MIX BY PAYMENT METHOD



2017 CARD PRESENT MIX BY PAYMENT METHOD



POS and eCom PROJECTED GROWTH



\* Estimated \*\*Forecasted

Numbers adjusted for rounding may impact totals.

POPULAR ALTERNATIVE PAYMENT METHODS



# SPAIN



The eCommerce race is on as the top three payment methods of choice compete for primary market share among Spanish consumers. While eWallets compete for use online, they have some catching up to do when it comes to shopping at the point of sale. Spaniards continue to rely heavily on paying with cash in some form as debit, bank transfer, cash, and cash on delivery make up the majority of the payment market, online and off.

## FAST STATS

2017 eCom SPEND  
PER CAPITA  
**US \$761**

2017 POS SPEND  
PER CAPITA  
**US \$12,383**

2017 % eCom  
SPEND USING  
MOBILE WALLET  
**19%**

2017 % POS  
SPEND USING  
MOBILE WALLET  
**3%**

2018\* - 2022\*\*  
eCom CAGR  
**10%**

2018\* - 2022\*\*  
POS CAGR  
**2%**

2018\* INTERNET PENETRATION  
**87%**

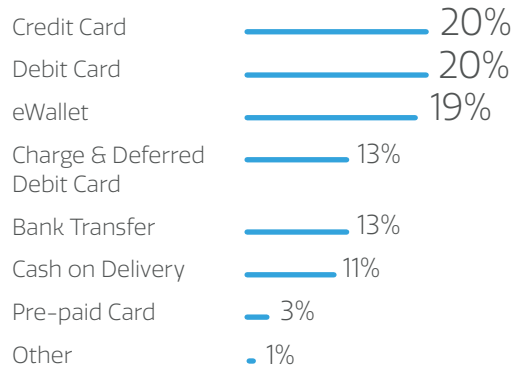
# TOP TIP

With most payment methods having some market share in Spain, online and off, you'd be well advised to offer a broad selection of payment methods to capture all potential customers. Along with seamless payment experiences, this should set you up for success.

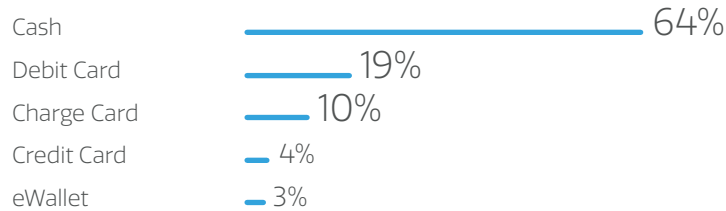
2017 CARD BRAND BREAKDOWNS (eCom and POS)



2017 CARD NOT PRESENT MIX BY PAYMENT METHOD



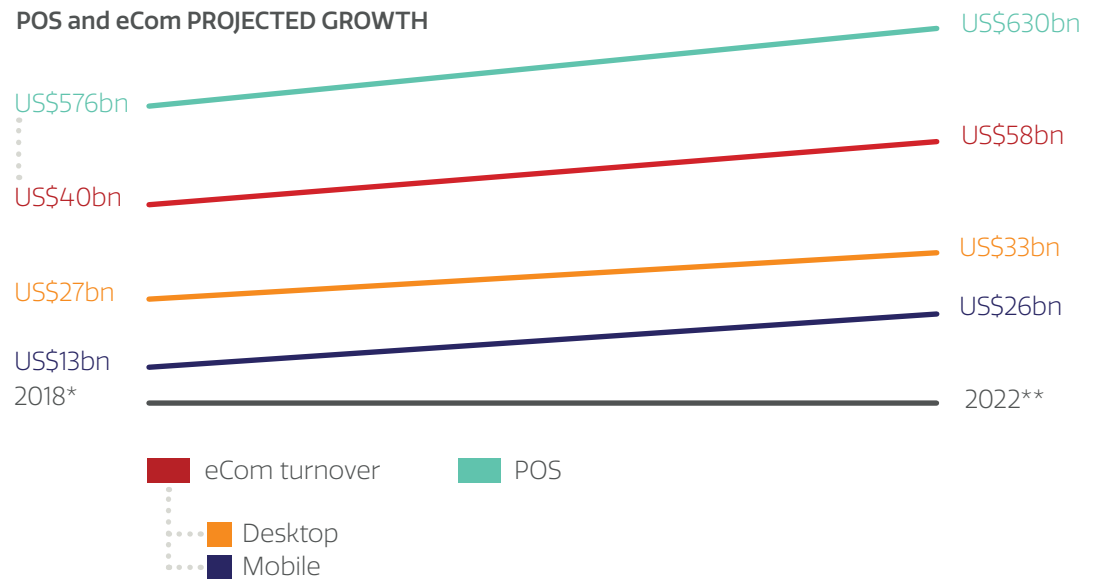
2017 CARD PRESENT MIX BY PAYMENT METHOD



\* Estimated \*\*Forecasted

Numbers adjusted for rounding may impact totals.

POS and eCom PROJECTED GROWTH



POPULAR ALTERNATIVE PAYMENT METHODS



# SWEDEN

With high internet penetration, smartphone use, and a thriving eCommerce market, Sweden is a leader in the global race toward a cashless society. The Swedes' enthusiasm for digital payment methods is apparent as debit cards, bank transfer, and invoices continue to dominate the online market, while cards at the point of sale also capture the largest market share. While not as popular, eWallets continue to capture the attention of some consumers, especially online.

## FAST STATS

2017 eCom SPEND  
PER CAPITA

**US \$1,340**

2017 POS SPEND  
PER CAPITA

**US \$16,814**

2017 % eCom  
SPEND USING  
MOBILE WALLET

**7%**

2017 % POS  
SPEND USING  
MOBILE WALLET

**2%**

2018\* - 2022\*\*  
eCom CAGR

**9%**

2018\* - 2022\*\*  
POS CAGR

**-1%**

2018\* INTERNET PENETRATION

**88%**



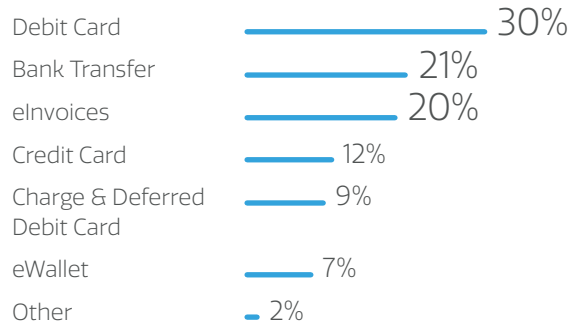
# TOP TIP

Sweden's financial technology sector is a global leader in the movement toward eInvoices. To make an impact in Sweden, offer preferred local payment methods such as Klarna, in addition to local eWallets.

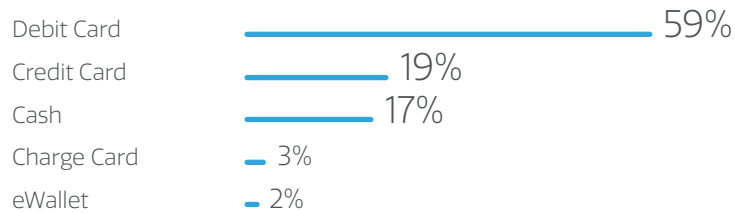
## 2017 CARD BRAND BREAKDOWNS (eCom and POS)



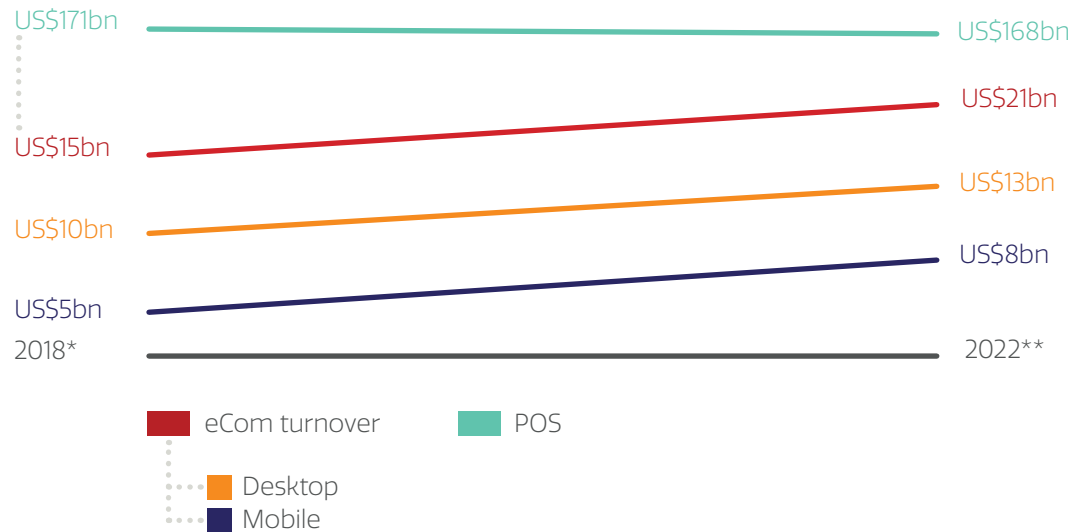
## 2017 CARD NOT PRESENT MIX BY PAYMENT METHOD



## 2017 CARD PRESENT MIX BY PAYMENT METHOD



## POS and eCom PROJECTED GROWTH



\* Estimated \*\*Forecasted

Numbers adjusted for rounding may impact totals.

POPULAR ALTERNATIVE PAYMENT METHODS



Klarna.



# TAIWAN

Compared to last year, credit cards are losing ground to other payment methods such as bank transfer, PostPay, and charge/deferred debit cards when it comes to Taiwanese payment preference in online payments. Credit cards remain the most preferred payment method online but still lag behind cash when it comes to shopping at the point of sale.

## FAST STATS

2017 eCom SPEND  
PER CAPITA  
**US \$1,126**

2017 POS SPEND  
PER CAPITA  
**US \$12,514**

2017 % eCom  
SPEND USING  
MOBILE WALLET  
**14%**

2017 % POS  
SPEND USING  
MOBILE WALLET  
**3%**

2018\* - 2022\*\*  
eCom CAGR  
**8%**

2018\* - 2022\*\*  
POS CAGR  
**10%**

2018\* INTERNET PENETRATION  
**88%**

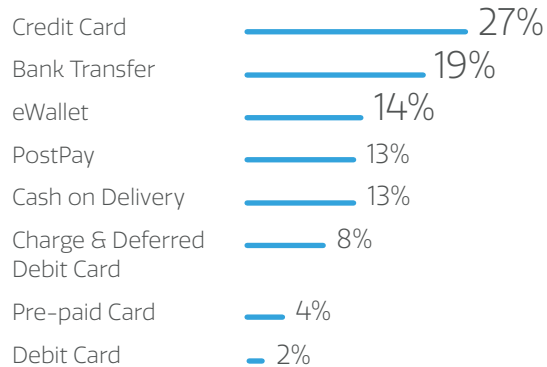
# TOP TIP

With recent shifts in payment preferences, explore adding payment methods such as PostPay and other local options to keep up with your customers. Locals also value security so it would be wise to optimize secure online payment experiences. Accept a variety of card brands at the point of sale to satisfy card-carrying consumers.

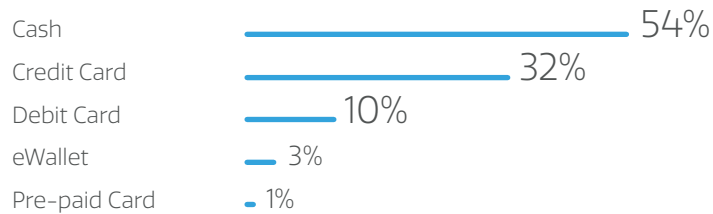
2017 CARD BRAND BREAKDOWNS (eCom and POS)



2017 CARD NOT PRESENT MIX BY PAYMENT METHOD



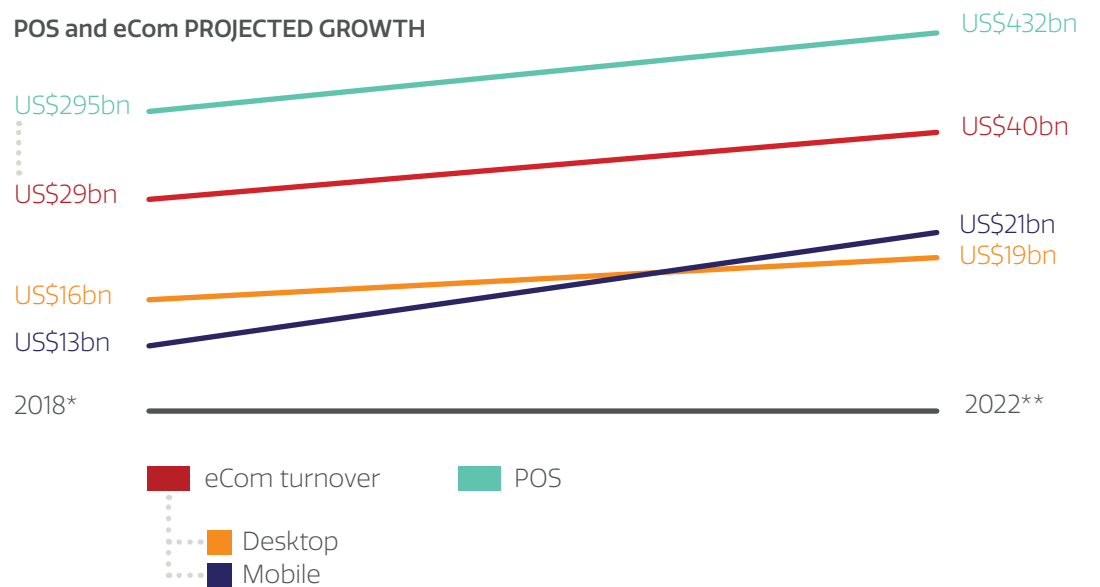
2017 CARD PRESENT MIX BY PAYMENT METHOD



\* Estimated \*\*Forecasted

Numbers adjusted for rounding may impact totals.

POS and eCom PROJECTED GROWTH



POPULAR ALTERNATIVE PAYMENT METHODS



# THAILAND

Bank transfer rises to the top of eCommerce payment preferences in Southeast Asia's second largest economy. However, online eWallet use is on par with cash on delivery. Point of sale shoppers still prefer cash, but don't discount credit cards which also get a fair amount of use.

## FAST STATS

2017 eCom SPEND  
PER CAPITA

**US \$358**

2017 POS SPEND  
PER CAPITA

**US \$2,608**

2017 % eCom  
SPEND USING  
MOBILE WALLET

**20%**

2017 % POS  
SPEND USING  
MOBILE WALLET

**2%**

2018\* - 2022\*\*  
eCom CAGR

**12%**

2018\* - 2022\*\*  
POS CAGR

**2%**

2018\* INTERNET PENETRATION

**63%**

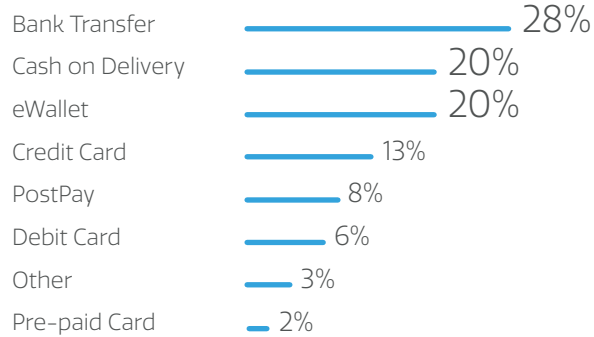
# TOP TIP

Thai consumers prefer cash on delivery and bank transfers for online purchasing so offer local payment options with a built-in user base to make the most of this large eCommerce market. Accept all card brands to capture point of sale shoppers.

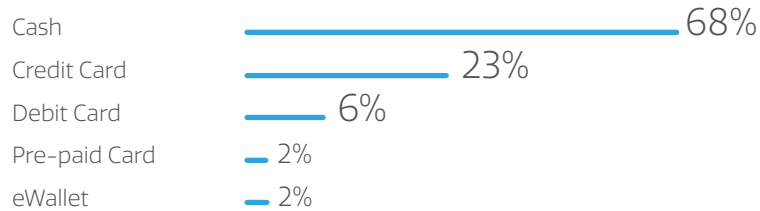
2017 CARD BRAND BREAKDOWNS (eCom and POS)



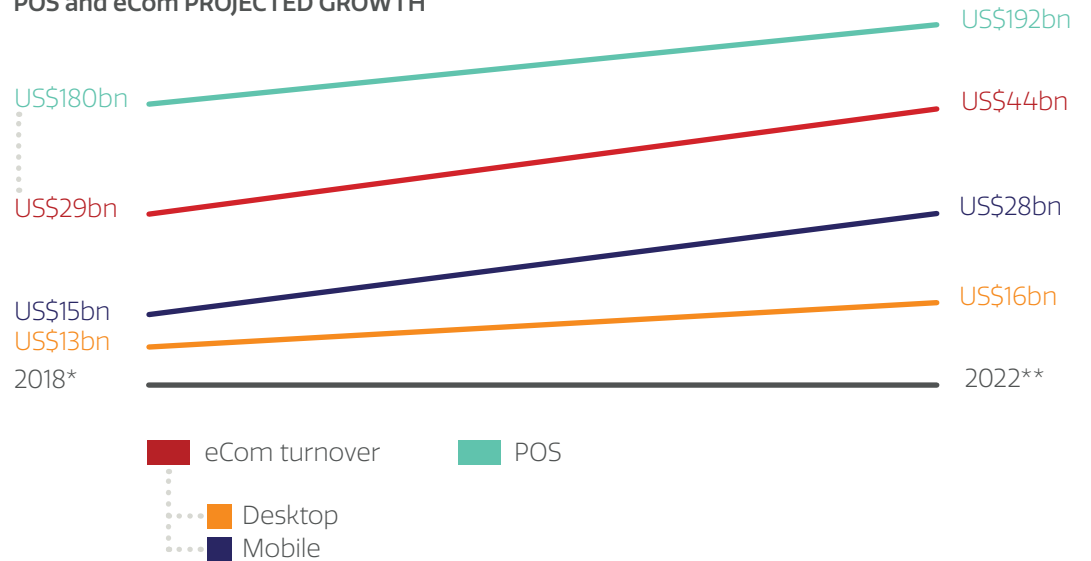
2017 CARD NOT PRESENT MIX BY PAYMENT METHOD



2017 CARD PRESENT MIX BY PAYMENT METHOD



POS and eCom PROJECTED GROWTH



\* Estimated \*\*Forecasted

Numbers adjusted for rounding may impact totals.

POPULAR ALTERNATIVE PAYMENT METHODS



# TURKEY



It's cash for point of sale and credit cards for eCommerce that are the preferences of Turkish consumers. However, bank transfers have displaced eWallets as the second most preferred form of payment online. As internet penetration continues to expand here, and with ongoing support behind a move to cashless payments, digital payments have strong growth opportunity across channels.

## FAST STATS

2017 eCom SPEND  
PER CAPITA

**US \$141**

2017 POS SPEND  
PER CAPITA

**US \$2,494**

2017 % eCom  
SPEND USING  
MOBILE WALLET

**4%**

2017 % POS  
SPEND USING  
MOBILE WALLET

**2%**

2018\* - 2022\*\*  
eCom CAGR

**19%**

2018\* - 2022\*\*  
POS CAGR

**2%**

2018\* INTERNET PENETRATION

**66%**

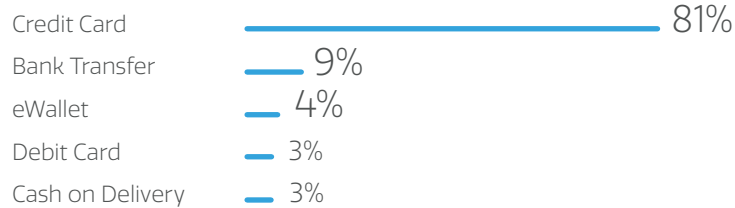
# TOP TIP

Consumers here are concerned about fraud but are driven by convenience. That means developing a payment process, online and off, with the right balance between convenience and security is the key to serving Turkish consumers.

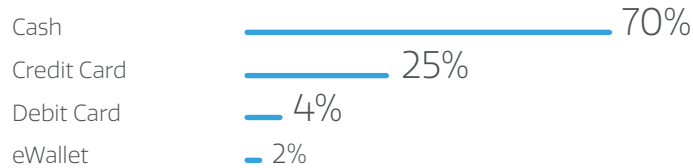
2017 CARD BRAND BREAKDOWNS (eCom and POS)



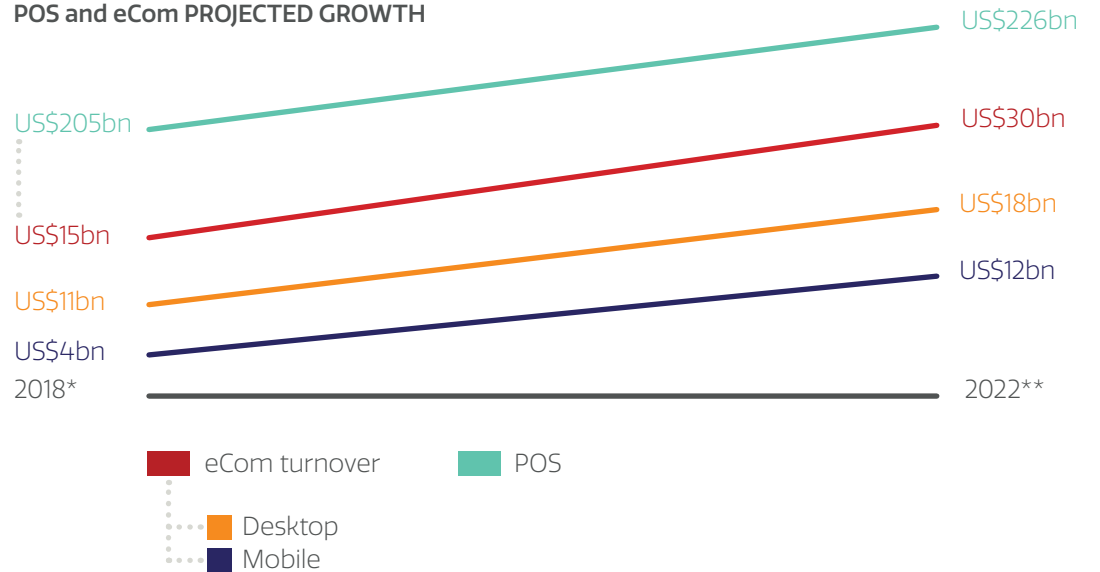
2017 CARD NOT PRESENT MIX BY PAYMENT METHOD



2017 CARD PRESENT MIX BY PAYMENT METHOD



POS and eCom PROJECTED GROWTH



\* Estimated \*\*Forecasted

Numbers adjusted for rounding may impact totals.

POPULAR ALTERNATIVE PAYMENT METHODS



# UAE

Cash remains king among United Arab Emirates consumers, where even cash on delivery is the second most preferred payment method online. Credit card fraud and security are a concern among consumers, but it hasn't deterred consumers from using them online. And, in the universe of non-cash, non-card forms of payment, mobile wallets capture a higher than average share of point of sale spend, suggesting the potential growing trust in biometrics as a form of security.

## FAST STATS

2017 eCom SPEND  
PER CAPITA

**US \$791**

2017 POS SPEND  
PER CAPITA

**US \$25,697**

2017 % eCom  
SPEND USING  
MOBILE WALLET

**18%**

2017 % POS  
SPEND USING  
MOBILE WALLET

**6%**

2018\* - 2022\*\*  
eCom CAGR

**10%**

2018\* - 2022\*\*  
POS CAGR

**4%**

2018\* INTERNET PENETRATION

**96%**



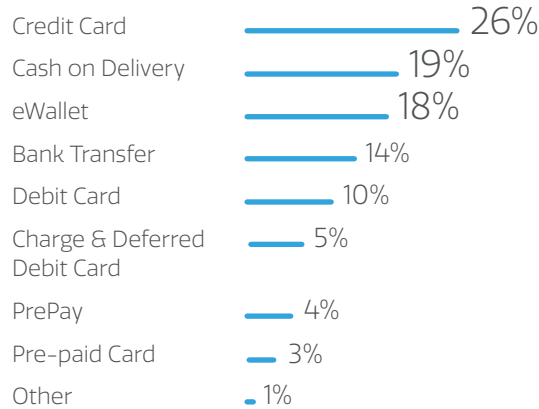
# TOP TIP

Consumers in the UAE are concerned about fraud and often find online shopping inconvenient. Building secure and seamless payment experiences as well as offering their top payment preferences like PayPal will help convert more sales online. eWallet use is gaining traction at the point of sale so implement the most popular options to meet consumer demand.

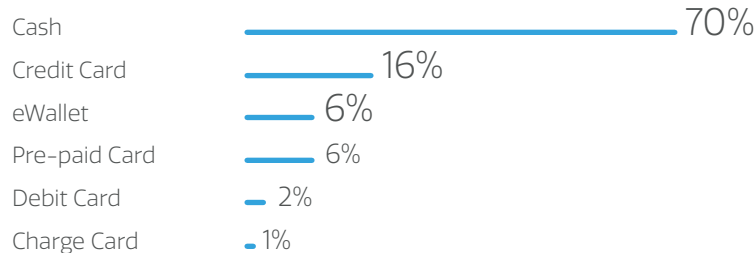
2017 CARD BRAND BREAKDOWNS (eCom and POS)



2017 CARD NOT PRESENT MIX BY PAYMENT METHOD



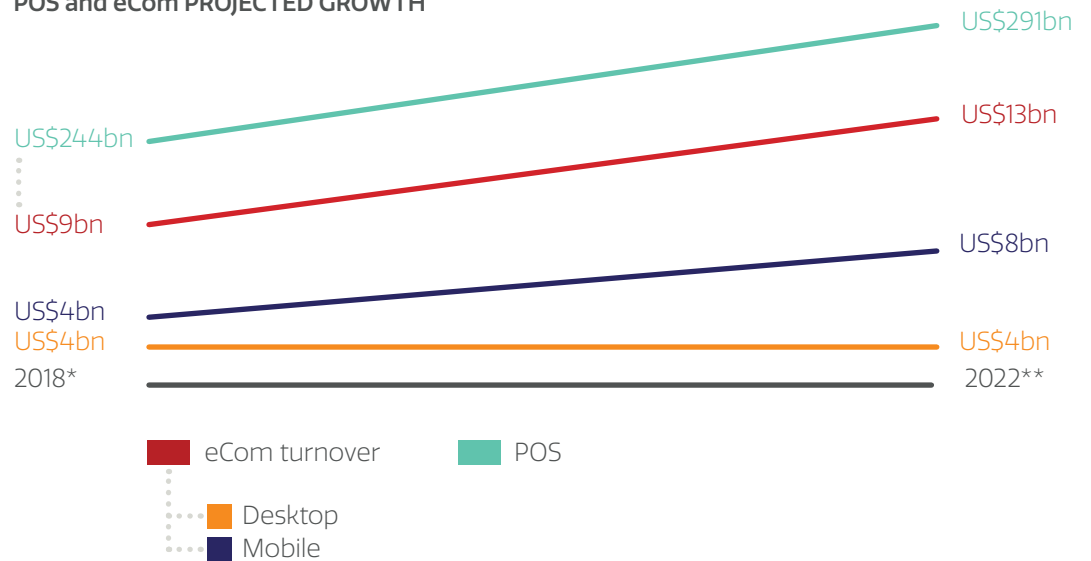
2017 CARD PRESENT MIX BY PAYMENT METHOD



\* Estimated \*\*Forecasted

Numbers adjusted for rounding may impact totals.

POS and eCom PROJECTED GROWTH



POPULAR ALTERNATIVE PAYMENT METHODS



# UK

UK consumers stayed steady with their payment preferences at the point of sale and online with no fundamental change year-over-year. The commanding preference of cards among UK consumers, online and off, continues to show comfort that's lacking among other global consumers. Cards and eWallets continue to rule as the primary payment methods.

## FAST STATS

2017 eCom SPEND  
PER CAPITA

**US \$3,063**

2017 POS SPEND  
PER CAPITA

**US \$20,403**

2017 % eCom  
SPEND USING  
MOBILE WALLET

**23%**

2017 % POS  
SPEND USING  
MOBILE WALLET

**5%**

2018\* - 2022\*\*  
eCom CAGR

**9%**

2018\* - 2022\*\*  
POS CAGR

**5%**

2018\* INTERNET PENETRATION

**99%**

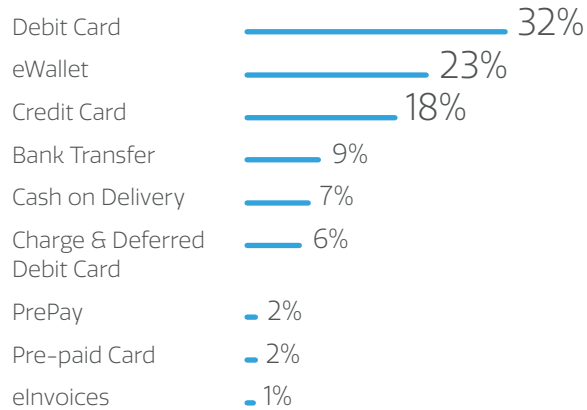
# TOP TIP

UK customers have come to trust eCommerce payments. Simplifying your online payment experience and making it as quick as possible will best serve this convenience-focused market. Consider implementing popular eWallet options at the point of sale like PayPal and Visa Checkout.

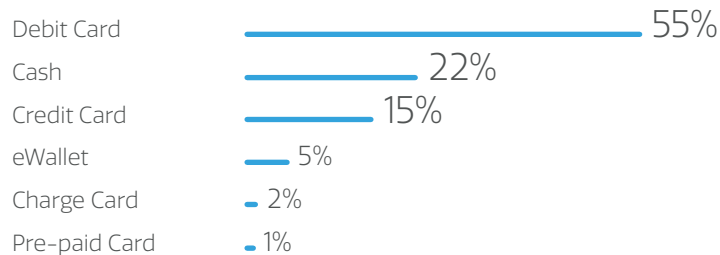
2017 CARD BRAND BREAKDOWNS (eCom and POS)



2017 CARD NOT PRESENT MIX BY PAYMENT METHOD



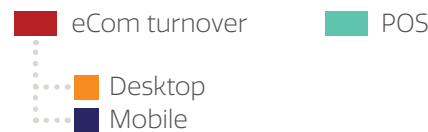
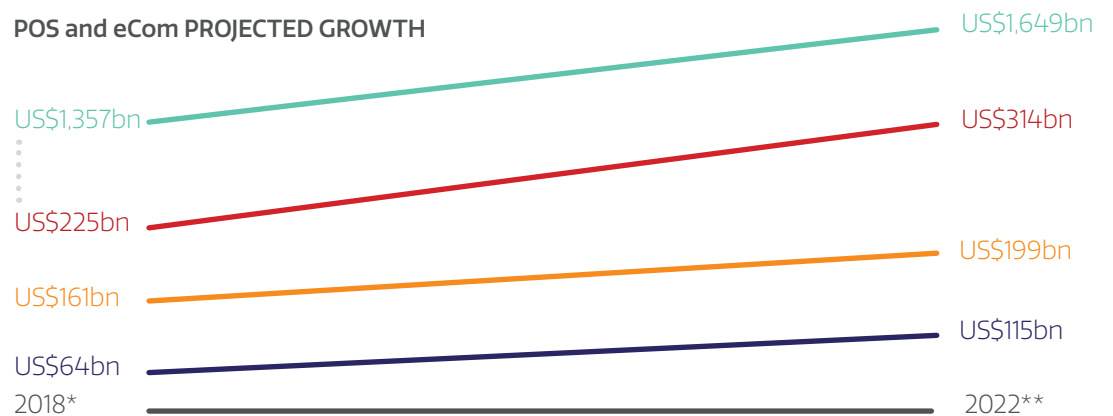
2017 CARD PRESENT MIX BY PAYMENT METHOD



\* Estimated \*\*Forecasted

Numbers adjusted for rounding may impact totals.

POS and eCom PROJECTED GROWTH



POPULAR ALTERNATIVE PAYMENT METHODS





# US

While payment options are plentiful in the US, American consumers are firmly rooted in their preference of paying by credit card. Credit and debit cards continue to dominate the market as preferred payment types with eWallets competing for share of online purchase. Established alternative payment methods continue to command share, while other options such as bank transfer, cash on delivery, and pre-pay show little growth over last year.

## FAST STATS

2017 eCom SPEND  
PER CAPITA

**US \$2,271**

2017 POS SPEND  
PER CAPITA

**US \$24,248**

2017 % eCom  
SPEND USING  
MOBILE WALLET

**20%**

2017 % POS  
SPEND USING  
MOBILE WALLET

**3%**

2018\* - 2022\*\*  
eCom CAGR

**9%**

2018\* - 2022\*\*  
POS CAGR

**7%**

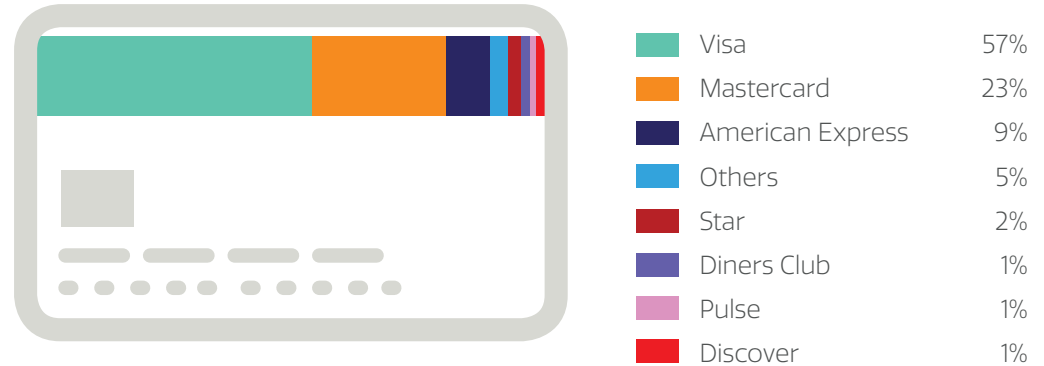
2018\* INTERNET PENETRATION

**79%**

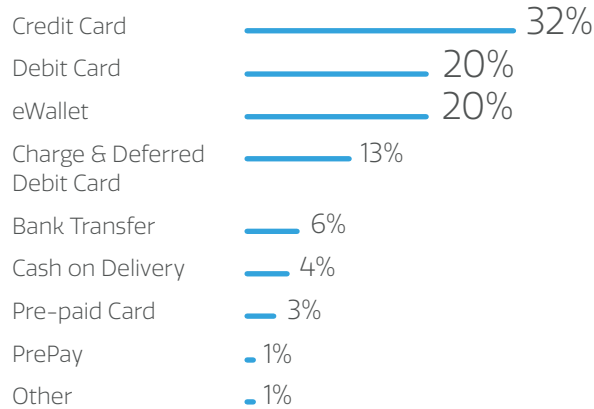
# TOP TIP

If you've yet to implement chip card technology at the point of sale, now's the time. Chip cards help protect your business and your customers from potential fraud. Chip card infrastructure generally aligns with enabling NFC to take advantage of growing interest in mobile eWallets.

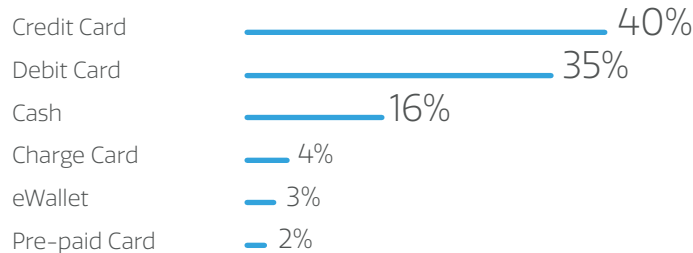
2017 CARD BRAND BREAKDOWNS (eCom and POS)



2017 CARD NOT PRESENT MIX BY PAYMENT METHOD



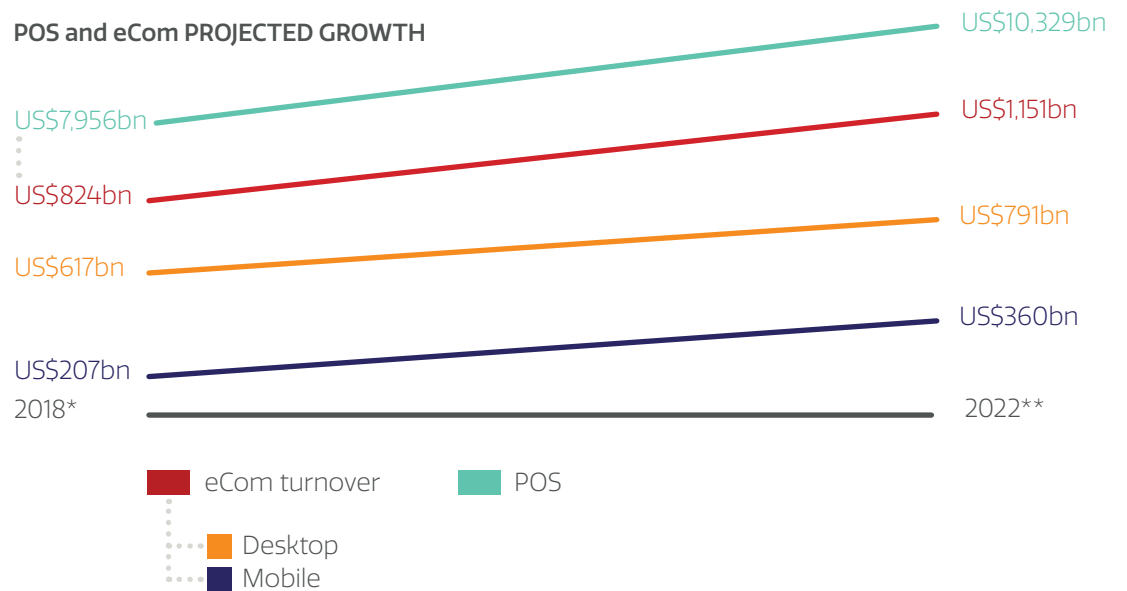
2017 CARD PRESENT MIX BY PAYMENT METHOD



\* Estimated \*\*Forecasted

Numbers adjusted for rounding may impact totals.

POS and eCom PROJECTED GROWTH



POPULAR ALTERNATIVE PAYMENT METHODS



# VIETNAM

Vietnamese consumer preference remains steeped in cash payments. Cash on delivery and bank transfer still lead for card not present payments. However, the preference for eWallets online is up, nudging out credit cards for third place among preferred payment methods. Preference for cash usage at the physical point of sale dominates while eWallets have reached near parity with credit cards at point of sale.

## FAST STATS

2017 eCom SPEND  
PER CAPITA

**US \$65**

2017 POS SPEND  
PER CAPITA

**US \$1,391**

2017 % eCom  
SPEND USING  
MOBILE WALLET

**17%**

2017 % POS  
SPEND USING  
MOBILE WALLET

**2%**

2018\* - 2022\*\*  
eCom CAGR

**20%**

2018\* - 2022\*\*  
POS CAGR

**3%**

2018\* INTERNET PENETRATION

**52%**

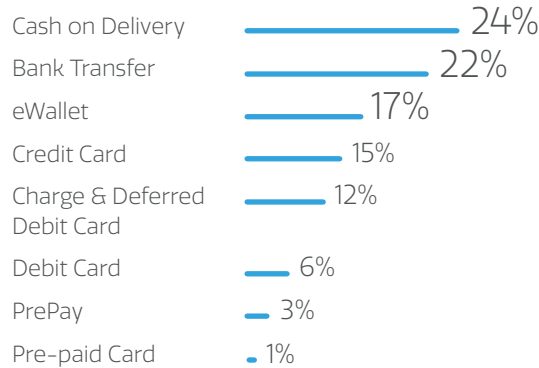
# TOP TIP

Vietnam leans towards non-traditional eCommerce payment methods so offer all local options including cash on delivery, bank transfers, and eWallets. Providing a full selection including accepting cards at the point of sale will support your goals in this diverse payment market.

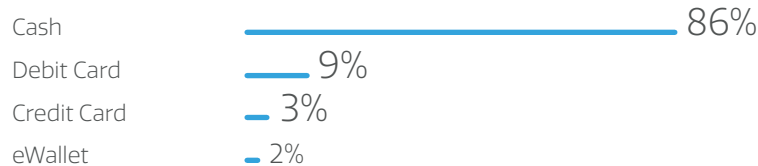
2017 CARD BRAND BREAKDOWNS (eCom and POS)



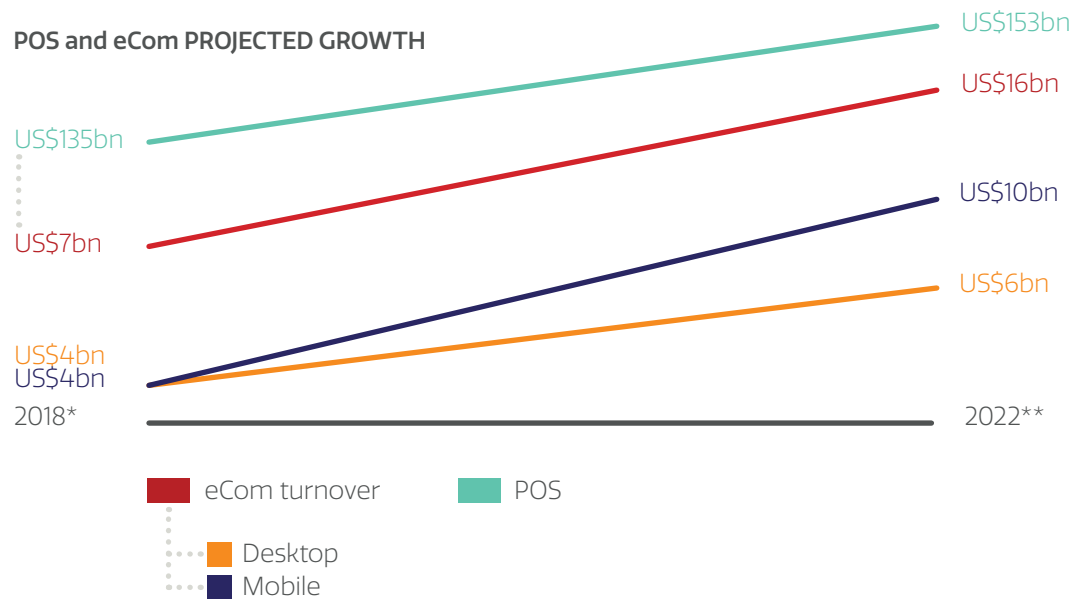
2017 CARD NOT PRESENT MIX BY PAYMENT METHOD



2017 CARD PRESENT MIX BY PAYMENT METHOD



POS and eCom PROJECTED GROWTH



\* Estimated \*\*Forecasted

Numbers adjusted for rounding may impact totals.

POPULAR ALTERNATIVE PAYMENT METHODS



# 2018 Global Payments Report – Methodology





The Global Payments Report offers a snapshot of the current payment landscape: globally, by region, and in 36 select countries. The report includes projected scenarios and trends over the next five years. In addition we offer a series of essays with Worldpay's perspectives on key issues in the payments world.

The report draws upon Worldpay's decades of experience in providing payment solutions. The nature and scope of that experience broadened greatly in January 2018 when payment leaders Worldpay and Vantiv combined forces to form Worldpay, Inc. Worldpay's expanded resources provide a view of global spend informed by our processing of more than 40 billion transactions annually via more than 300 payment types, across 146 countries and over 126 currencies. This report also benefits from the strength of our growing team of payments experts and market intelligence analysts based in the US, the UK, and around the globe.

The online and offline payment worlds continue to converge. Serving the channel-agnostic needs of merchants and consumers starts with a holistic understanding of payments. Accordingly, this report has evolved in 2018 to include analysis of payment methods used at the physical point of sale (POS). Previous Global Payments Reports focused exclusively on eCommerce payment methods. This expanded report offers a broader and more complete view of today's global payment landscape.

This report asserts Worldpay's own view of the market, based on internal expertise, our own research, and third-party vendor data. Worldpay's Market Intelligence team compiles the Global Payments Report using a mixture of third party vendors and other publicly available data. This data is analyzed using Worldpay's proprietary data model and categorization scheme, with support from McKinsey, the leading management consultancy. The resulting data is rigorously tested and validated by experts from McKinsey as well as Worldpay's product and regional commercial teams.

eCommerce market size and growth data were sourced from GlobalData's *E-Commerce Analytics* database. GlobalData collected

this information using consumer surveys, B2B surveys, and desk research. Point of sale market size data was sourced from GlobalData and McKinsey. Projected POS growth figures were sourced from McKinsey's *Global Payments Map* database. McKinsey has been continuously maintaining its payments database from more than 200 sources globally, including public sources, consumer surveys, and local research team inputs. All market size data relate to the industry as a whole, not Worldpay's business.

Payment methods breakdown and forecast by country and region is calculated using a data model developed by Worldpay. Worldpay's model includes eCommerce and point of sale data from GlobalData's *2018 Consumer Payments Insights* survey of 45,000 consumers in 31 countries, as well as data from McKinsey, historical trends of individual payments methods, and macroeconomic variables including GDP and nominal household consumption.

Additional secondary sources for this report include eMarketer, Euromonitor, Statista, and yStats; data from local card banking and payments associations; card scheme and payment providers; eCommerce industry reports and studies; news articles; and international organizations including the World Bank and International Monetary Fund. Card scheme figures were sourced from Euromonitor and GlobalData with further analysis from Worldpay and are representative of all payments including eCommerce and point of sale.

Any indicative predictions based on the data we have used should be treated as such. All projections are subject to changes in world events, market dynamics and other forces over the period concerned (to 2022).



# Payment Terms



**Alternative Payment methods**

Methods of payment that are not linked to the global card brand networks such as Visa, Mastercard, or American Express.

**Internet penetration**

Internet users are individuals who have used the internet (from any location) in the last three months. The internet can be used via a computer, mobile phone, personal digital assistant, games machine, digital TV, etc.

**Point of sale (POS)**

All transactions where the card is present.

**In-store**

Often used interchangeably with "point of sale". All transactions that occur at the physical point of sale.

**Bank Transfers**

Consumers pay for goods using their online banking facility. They are either redirected to their bank or select their bank from a provider's page.

**Examples:** iDEAL, SOFORT banking, eNETS, Przelewy24, SafetyPay

**Cash on Delivery**

A transaction in which a payment for goods is made at the time of delivery.

**Examples:** Merchant and bespoke delivery company services

**eInvoices**

When using eInvoices, consumers can pay for goods after delivery, without sharing credit card or bank details.

**Examples:** Klarna, AfterPay

**eWallets**

An electronic card used for transactions made online through a computer or a smartphone, like a credit card or debit card. When used with a smartphone, consumers store the credentials of their preferred card for payments and use biometrics to authorize the transaction.

**Examples:** Alipay, Tenpay, PayPal, Qiwi, Yandex.Money

**PrePay**

Allows consumers to fund a card and make purchases without a credit card or bank account.

**Examples:** paysafecard, Neosurf

**PostPay**

When a consumer selects a product online, they pay for it later at an affiliated outlet or store.

**Examples:** Konbini, Boleto Bancario

**Pre-Paid Cards**

These are cards that run on scheme networks such as Visa and Mastercard. These cards can be used to make purchases or withdraw cash in the same way as a debit or credit card.

**Examples:** Virgin Money

**Debit Cards**

Debit cards are backed by major card brands and draw funds directly from a consumer's bank account.

**Charge & Deferred Debit Cards**

A pay-later card that charges no interest but requires the cardholder to pay the outstanding balance in full upon receipt of the statement, typically on a monthly basis. This includes deferred debit cards.

**Examples:** American Express

**Credit Cards**

Credit cards are backed by major card brands and allow consumers to make purchases on credit.

**Others**

These include mobile carrier billing, crypto-currencies and other emerging technologies.

**Examples:** Bitcoin, Zong, BOKU



## About Worldpay

Worldpay, Inc. (NYSE: WP; LSE: WPY) is a leading payments technology company with unique capability to power global integrated omni-commerce. With industry-leading scale and an unmatched integrated technology platform, Worldpay offers clients a comprehensive suite of products and services globally, delivered through a single provider.

Worldpay processes over 40 billion transactions annually through more than 300 payment types across 146 countries and 126 currencies. The company's growth strategy includes expanding into high-growth markets, verticals and customer segments, including global eCommerce, Integrated Payments and B2B.

Worldpay, Inc. was formed in 2018 through the combination of the No. 1 merchant acquirers in the U.S. and the U.K. Worldpay, Inc. trades on the New York Stock Exchange as "WP" and the London Stock Exchange as "WPY."

## worldpay.com

For further inquiries, please contact  
[MarketIntel@worldpay.com](mailto:MarketIntel@worldpay.com)

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