

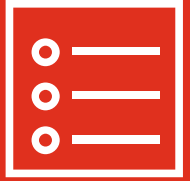


Challenges in transitioning to a cashless economy in Moldova

Impact study summary, Final version

October 2022

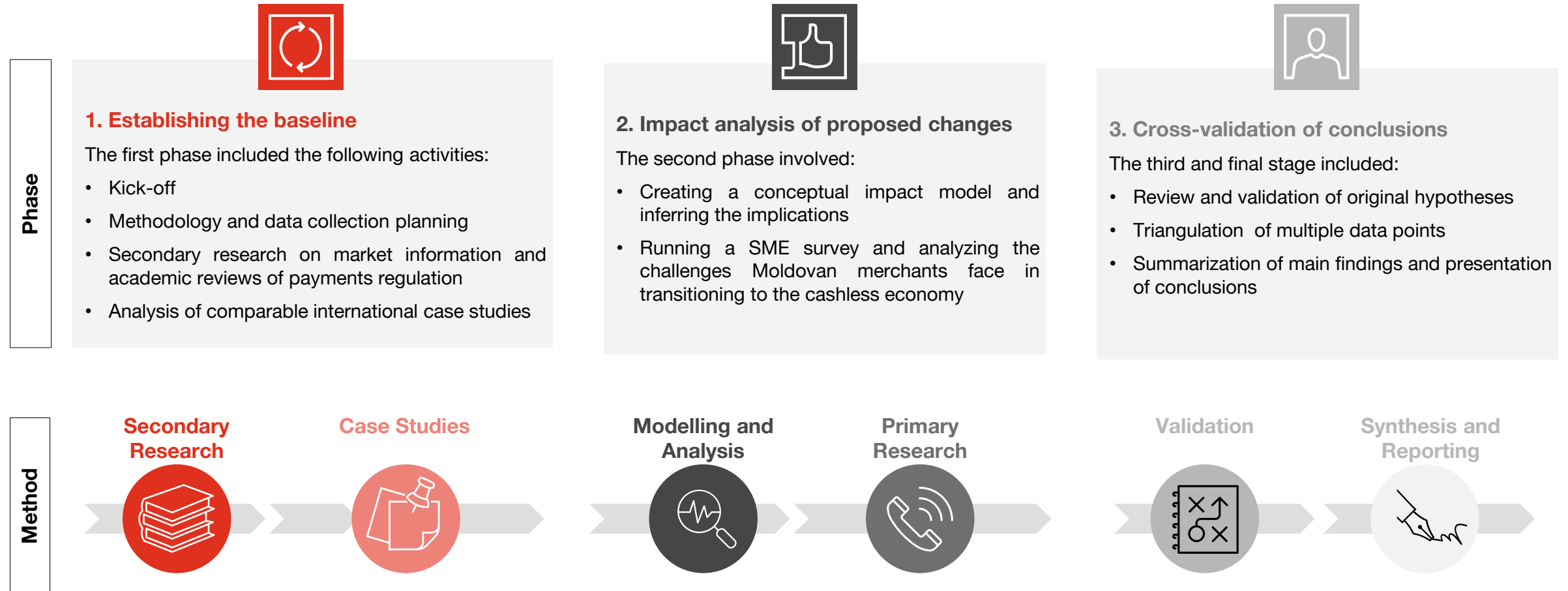


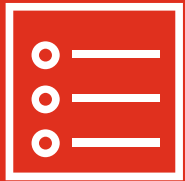


1. Approach

1 Our approach was structured around three phases

In order to be able to rigourously assess the impact of any proposals, we sought to employ a balanced methodology – that includes a mix of secondary and primary research, along with triangulation of multiple sources of information.





2. Payment context and dynamics in Moldova



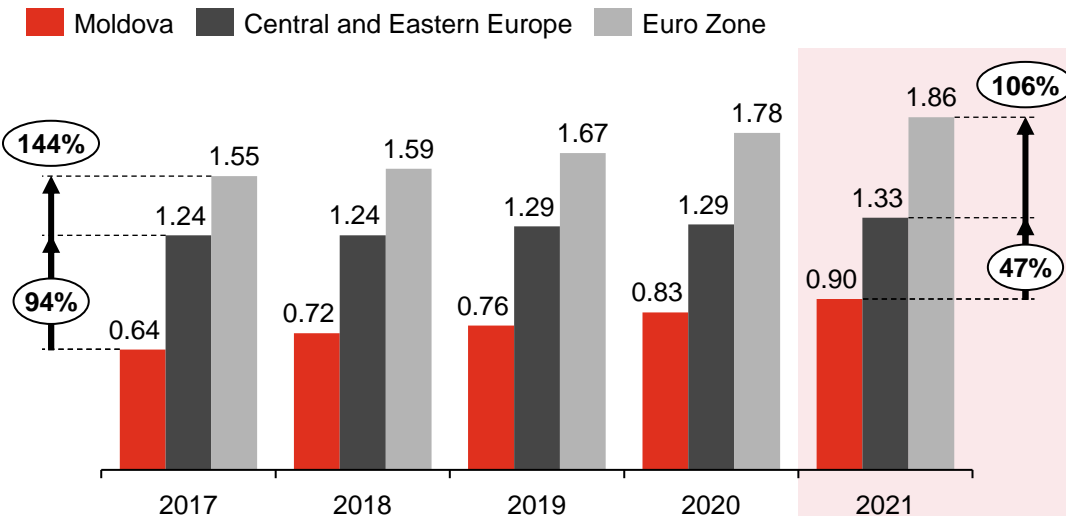
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Moldova has made substantial progress in terms of payments infrastructure

Number of cards per inhabitants



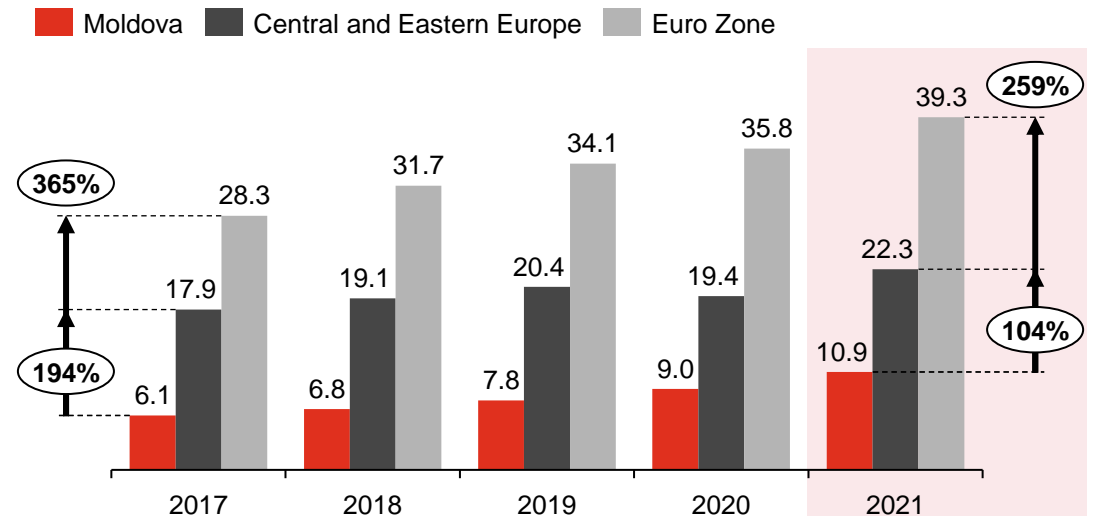
Total Cards per capita, 2017-2021



POS density



POS terminals per thousand inhabitants, 2017-2021



Commentary

- **In terms of cards per capita, Moldova made substantial progress to reduce the gap.** Moldova had 0.90 cards per capita at the end of 2021 – versus 1.33 cards per capita in Central and Eastern Europe and 1.86 cards per capita in the Euro zone. Though a difference still remains, this was notably reduced – especially versus CEE countries over the course of five years.
- **Relating to POS density, Moldova also made progress in reducing the gap, though a difference still remains.** Moldova ended 2021 with 10,9 terminals per thousand inhabitants, a value which halved the gap versus CEE versus 2017.

Notes: CEE includes the arithmetic average of: Bulgaria, Czech Republic, Estonia, Croatia, Hungary, Latvia, Poland, Romania, Slovenia, Slovakia. Lithuania is excluded due to distorting effect of fintechs influx post-Brexit.

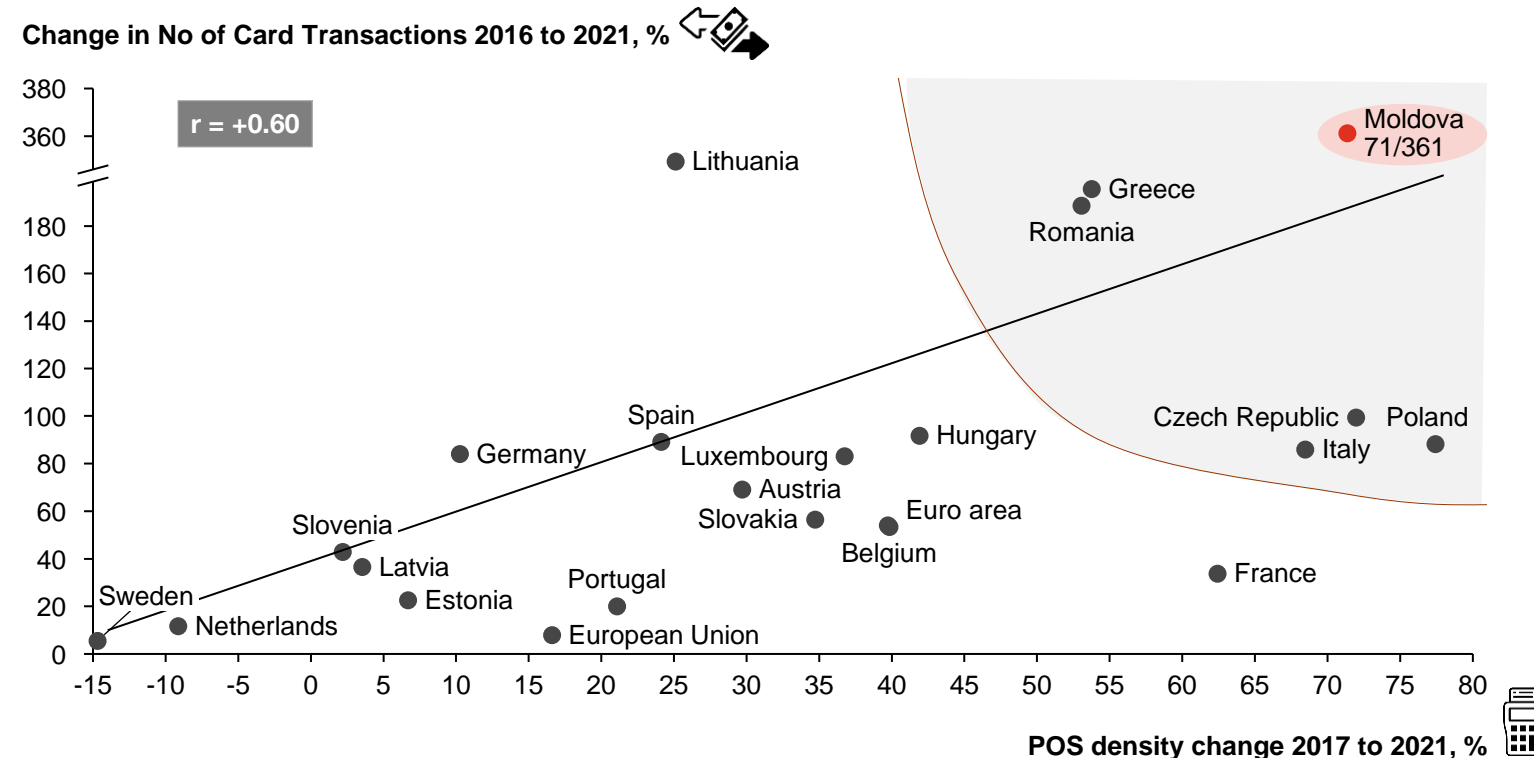
Source: ECB, BNM, PwC Analysis 1) The correlation coefficient is computed by excluding the effect of Revolut incorporating as a bank in Lithuania

2

Growth in card acceptance is positively correlated with growth in card payment volumes

Increases in POS density was accompanied by a proportional increase in card transactions in most countries

Correlation of POS terminal density and card payments development



Notes: 1) The correlation coefficient is computed by excluding the effect of Revolut incorporating as a bank in Lithuania

Source: ECB, BNM, PwC Analysis

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Commentary

- During the period 2017-2021, the number of POS terminals in Moldova increased +71% while the number of card transactions increased +361%
- Across the sample of European countries investigated, there is a **positive correlation coefficient¹⁾ of $r = +0.60$** . This indicates a moderate-to-high **positive correlation between investments in physical infrastructure and the number of transactions**. This is further confirmed by the fact that the growth in payments was greater than the growth in POS infrastructure, for all the countries, suggesting the multiplicative effect.
- Among the **drivers of increase in adoption** are lower cost of POS terminals, rise of e-commerce during the pandemic, and adoption of mobile wallets
- Lithuania appears an outlier, as the number of transactions has quadrupled following the granting of a banking license to Revolut Bank in 2021. Two countries registered decreases in POS terminals (Sweden and Netherlands), they are however advanced card markets that are migrating towards P2P instant payments



2

Hence Moldova has yet to close a substantial gap versus peers in terms of cashless adoption

Number of transactions and average values



EUR and # mil, 2021

	Card Payments 		Cash Withdrawal 	
	Avg. Value	Number	Avg. Value	Number
Moldova	EUR 15.2	101.6 mil	EUR 113.6	28.0 mil
CEE*	EUR 18.5	9,070 mil	EUR 181.1	819 mil
Euro zone	EUR 38.0	40,518 mil	EUR 187.3	5,233 mil

Average Value of Transaction for CEE and Eurozone based solely on payments made with cards issued by resident PSPs at physical terminals provided by resident PSPs. Virtual cards are excluded. Including non-resident transactions the average values rise higher (i.e Euro zone EUR 40, CEE EUR 24).

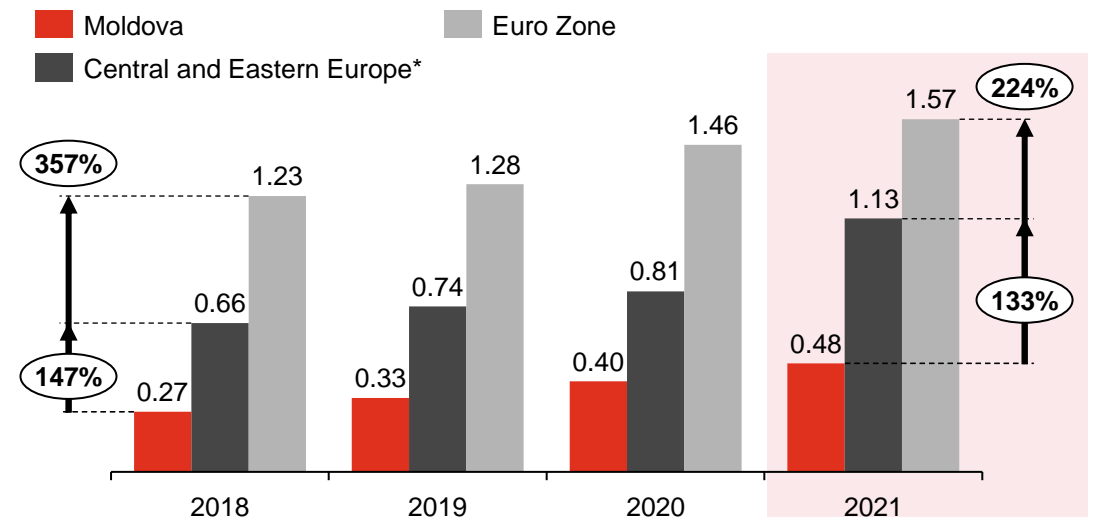
Commentary

- **For every 1 MDL spent in cash there is only 0.48 MDL spent via card payments** ($[15.2 \times 101.6] \div [113.6 \times 28.0]$). This is less than half the value of CEE countries (excluding Romania and Bulgaria for which no data is available in 2021) – and less than one third of the value of the Eurozone. Thus, there is a substantial gap of cashless value versus cash withdrawals.
- Despite the fact that in Moldova only 21.6% of transactions are in made in cash – they account for 67% of the value. **This reveals a consistent preference of consumers for cash payments**, a fact which is further illustrated by the relatively high values of the average cash withdrawal at ATM.

Value of cards payments relative to value of cash withdrawal



Multiple, 2017-2021



Notes: * CEE includes the weighted arithmetic average of Czech Republic, Estonia, Croatia, Hungary, Latvia, Poland, Slovenia, Slovakia. Lithuania is excluded due to distorting effect of fintechs influx post-Brexit; Romania and Bulgaria value data not available for 2021. Source: ECB, BNM, PwC Analysis

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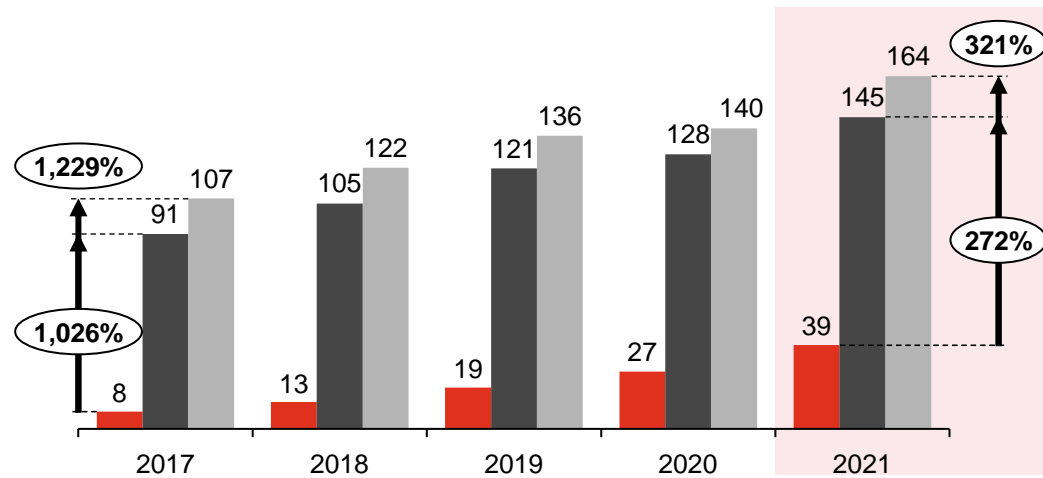
Despite recent increases, card usage and transactional intensity appears to be lagging behind other countries

Number of card transactions per capita



per capita, 2017-2021

■ Moldova ■ Central and Eastern Europe ■ Euro Zone

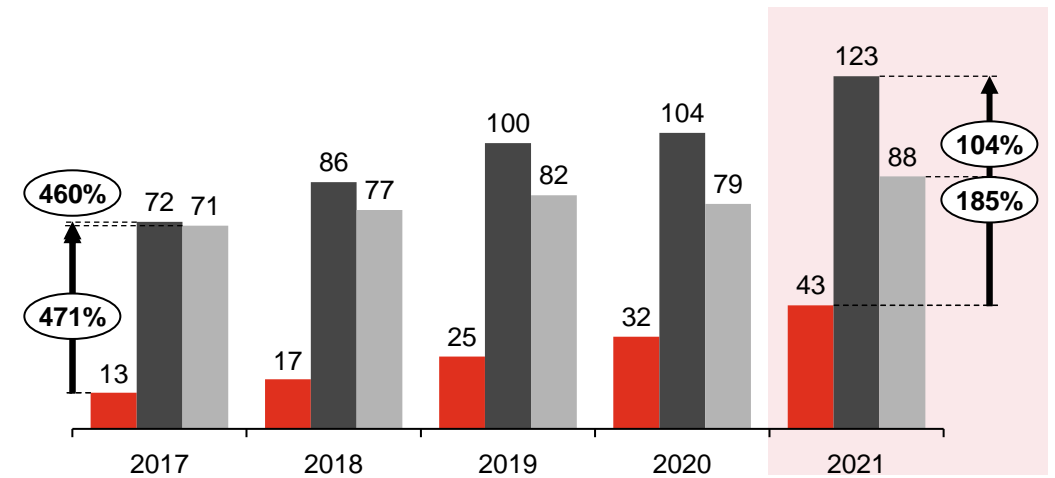


Number of transactions per card



per card, 2017-2021

■ Moldova ■ Central and Eastern Europe ■ Euro Zone



Commentary

- **A citizen in Moldova has made on average 39 card transactions in 2021 – versus a CEE citizen 145 and a Eurozone citizen 164.** While the Eurozone is more homogenous, there are considerable differences among different clusters of CEE countries, with the Baltics being clear leaders (Estonia-288; Latvia-197), followed by Central Europe in the middle (Czech Republic-166; Hungary-132), and the Eastern countries lagging behind (Romania-70; Bulgaria-41).
- **The number of transactions per card is also lower in Moldova – on average 43 transactions per card for one year.** This is about half of Eurozone levels and a quarter in CEE. The fact that the CEE countries have a higher number suggests that citizens in CEE have fewer cards – but they use them more intensely – than Eurozone citizens which use multiple cards extensively

Notes: CEE includes the arithmetic average of: Bulgaria, Czech Republic, Estonia, Croatia, Hungary, Latvia, Poland, Romania, Slovenia, Slovakia. Lithuania is excluded due to distorting effect of Revolut incorporation as bank in 2021.

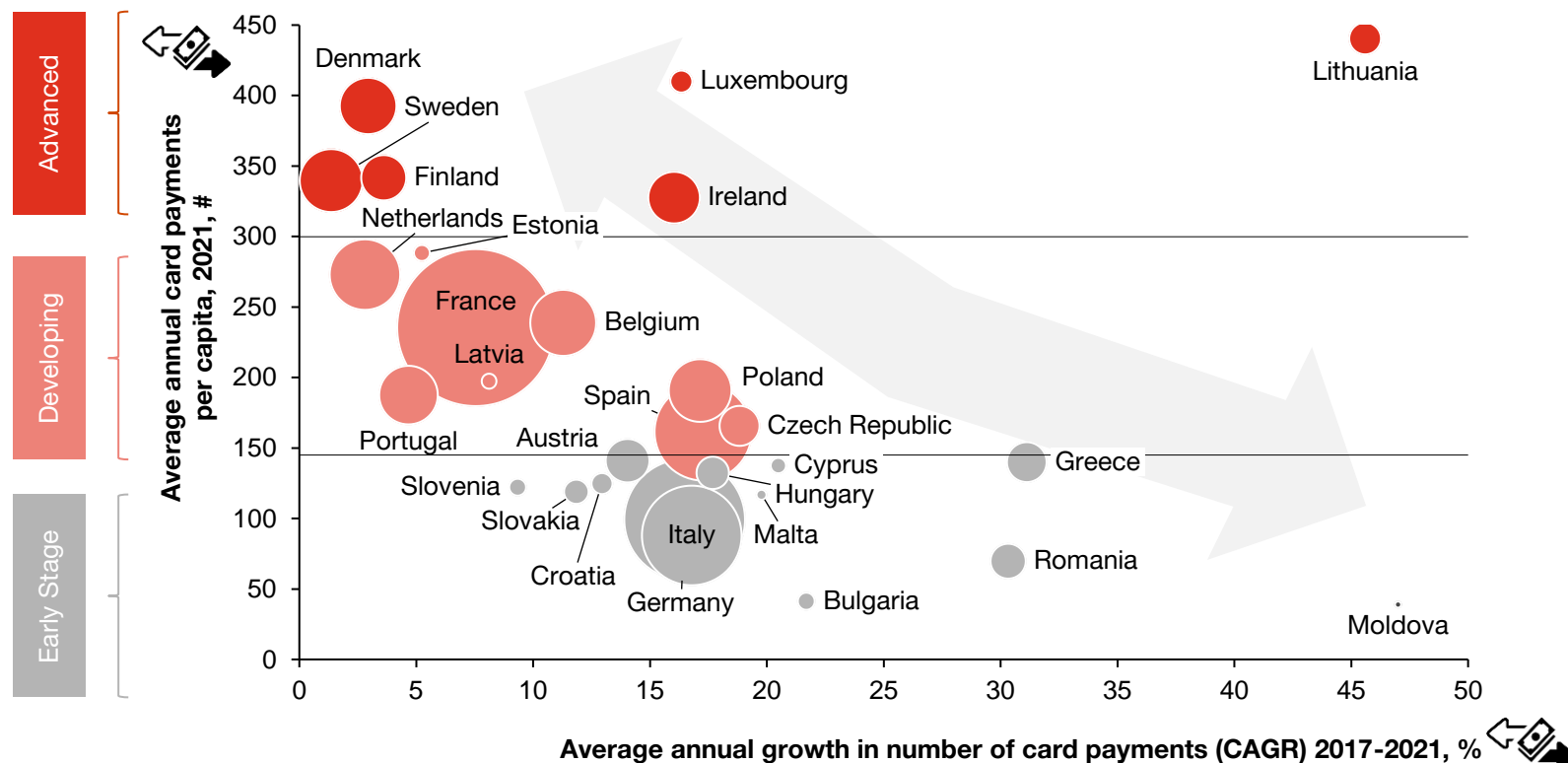
Source: ECB, BNM, PwC Analysis

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And despite sustained growth in recent years, Moldova remains a relatively small market by value of payments

Market size is an important factor moderating the attractiveness of Early Stage markets

Dynamics of each market in relation to its maturity and its size



Commentary

- During the period 2017-2021, the number of card payments in Moldova grew at an annual compound rate (CAGR) of +47%, the highest rate when compared to EU countries, effectively doubling every two years. In 2021, Moldova registered a level of 39 card transactions per capita. Moldova remains a small market by value of transactions, reaching 1.54 bil EUR in 2021.

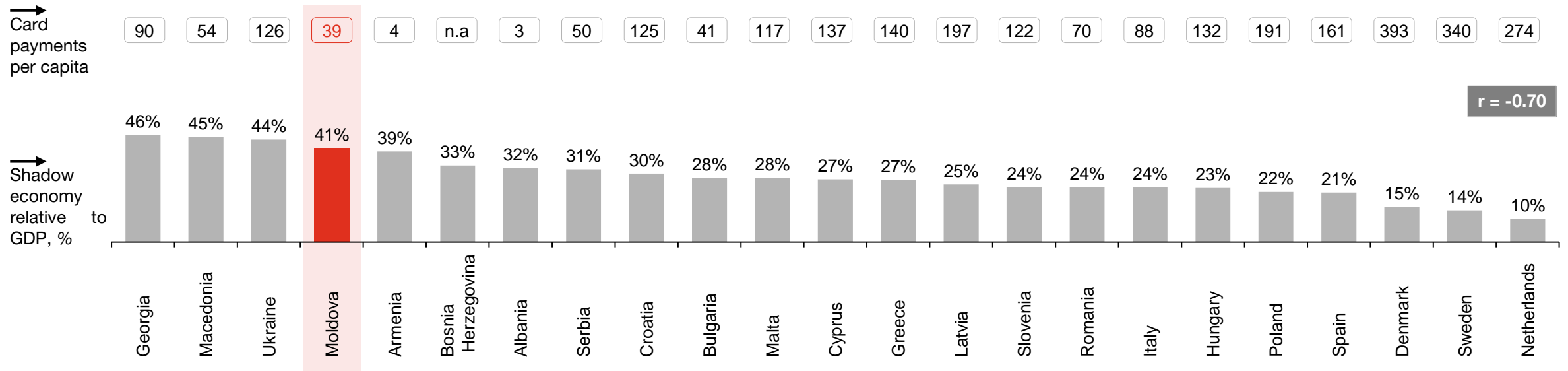
Based on the penetration of card payments per capita, we can categorize countries in three groups:

- Advanced** (over 300 card payments per capita) – generally mature Nordic markets, that have a slower rate of growth. Lithuania appears an outlier, as the number of transactions has quadrupled following the granting of a banking license to Revolut Bank in 2021
- Developing** (150-300 card payments per capita) – various countries, with a differential pace of growth: Eastern European countries growing quicker than larger Western countries
- Early Stage** (below 150 card payments per capita) – including countries that have low card penetration for historical reasons (Germany), as well as countries with a large cash tradition (Greece, Romania)

2 In transitioning to cashless, Moldova starts with one of the highest grey sectors in Europe

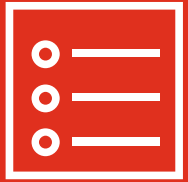
There is a negative correlation between card penetration and the informal sector

Usage of Card Payments versus Share of Informal economy (based on 2021 GDP error estimation data)



Commentary

- According to World Economics, **Moldova currently has an informal sector worth 40.6% of GDP**, currently ranking the 28th largest informal sector in the world. **A negative correlation of -0.70 has been observed** between the variables presented, meaning that countries with higher volume of card payments per capita experience a smaller informal sector.
- Thus, cash payments represent a factor contributing to the shadow economy, as they are impossible to track in terms of reported sales, as well as labour compensation.** Of course, besides the choice of payment instrument, there are other macro factors influencing the shadow sector: tax rates, customary business practice, carousel fraud, etc

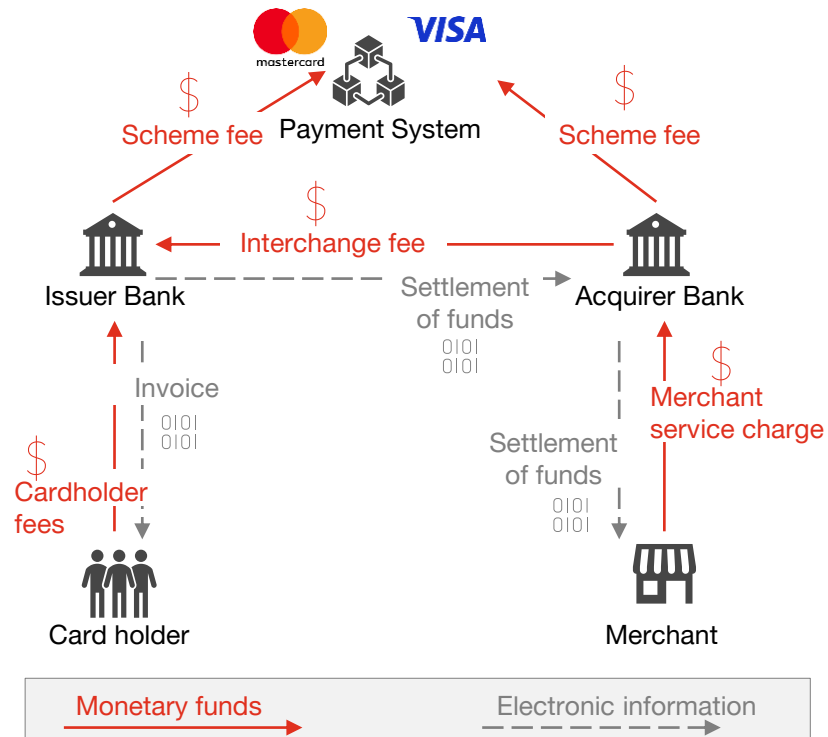


3. Fee and cost development

3 The cost structure of the payments industry is complex due to the multiplicity of actors involved

In the four party scheme, the benefits and costs of the actors are symmetrical

Interactions between actors in the four party scheme model, monetary and informational flows



Benefits and costs of a card network (with interchange fees)²⁾

Participant	Benefit	Cost
Cardholder	Private and Network	Fees and Charges
Merchant	Private and Network	Merchant Service Charge
Issuer	Fees and Charges <i>plus</i> interchange fees	Card Production, Credit Losses, Funding Costs, Fraud, etc
Acquirer	Merchant Service Charge	Processing, provision of funds, etc <i>plus</i> interchange fees

Commentary

- **The defining feature of the four-party scheme is the separation between issuers and acquirers**—which can be different entities (unlike a three-party scheme, where the same entity performs both roles). The main participants in a four-party scheme are as follows:
- **The card holder** is the consumer (individual or legal entity) that owns the right to use the card issued by their bank. The card holder pays administration and usage fees to the card issuer.
- **The card issuer** is the financial entity that has issued the card on behalf of the card holder, subsequent to screening and fraud checks. The card issuer pays to the bank of the merchant the transaction amount, after deducting the interchange fee.
- **The card acquirer** is the financial entity that provides administration consent to the merchant and validates the transactions. The acquirer transfers the amount to the merchant less an acquiring fee.
- **The merchant** receives the payment and provides the goods/services
- **The benefits and costs in a four-party scheme are symmetrical between the parties.** Thus, for example, the fees charged for issuing and administering the card are a cost to the card holder and a benefit to the card issuer.

Note: 1) Debit and Credit Card Schemes in Australia – A study of Interchange and Access
Source: World Bank, Global Times, PwC research

Understanding Merchant Service Charge and its limitations

Commercial aspects of Merchant Service Charge

thousands , 2017-2021



Merchant service fees are payments made by a merchant (a business) to an acquirer (the merchant's bank) each time certain payment systems are used. The fee may be fixed or as a percentage of the sales transaction's value.



A merchant service fee is comprised of an array of fees charged by the business' bank in return for processing a payment transaction. One of the main components of this is the interchange fee paid by the business' bank to the customer's bank.



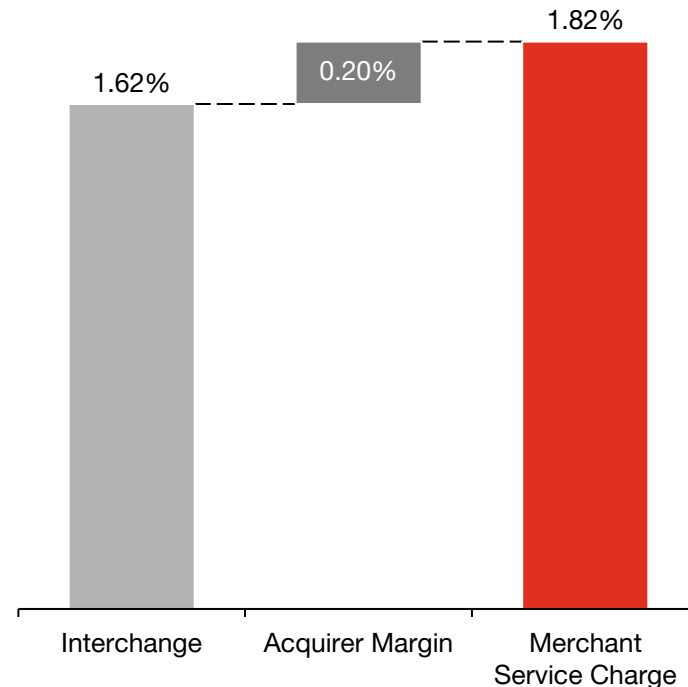
Depending on how a payment is made, merchant service fees can vary for some merchants. These fees are generally pass through rates to all consumers through higher prices or absorbed as a cost by merchants.



There are two main pricing models for MSC: i) Interchange++ (that shows a detailed breakdown of the components for each transaction category) and ii) Blended pricing (based on an average processing cost plus a fixed mark-up)

Build-up of average Moldova MSC by main components¹⁾

% , weighted average, 2021

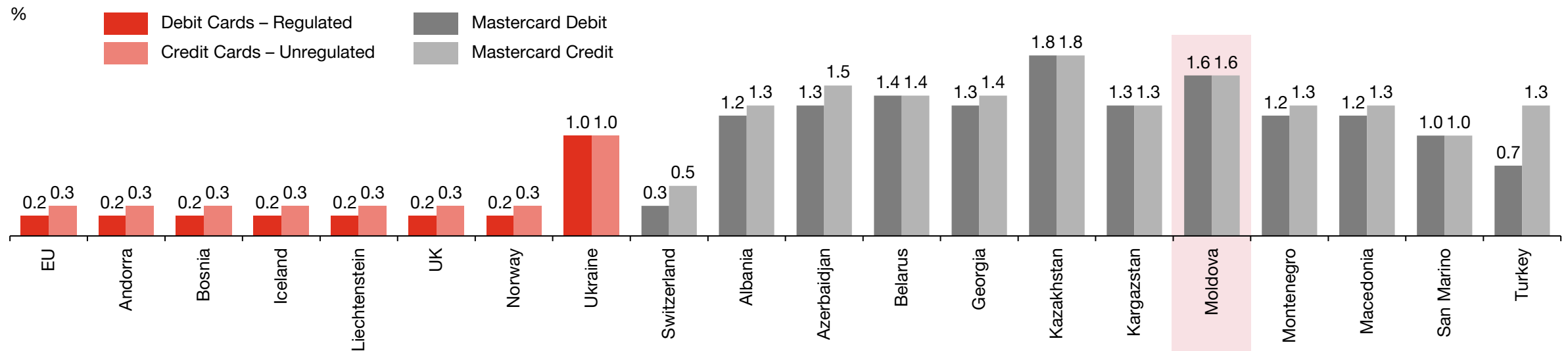


Commentary

- For payment acceptance services, merchants typically pay a variable Merchant Service Charge, and a fixed fee for the cost of renting the POS terminals. **The Merchant Service Charge is negotiated between the merchant and the bank.**
- Among the factors driving the fee are: **the level of interchange fees, the value of the transactions, the number of the transactions, the type of transaction** (POS vs internet, with card-not-present transactions being more expensive due to higher fraud risk), **merchant industry** (higher fees for gambling, etc)
- In Moldova, the average MSC was 1.82%, out of which the interchange fee was 1.62% and the acquiring margin 0.20% (based on 2018-2021 weighted quarterly data).

3 Interchange Fees in Moldova are relatively higher than in other countries, but national context matters

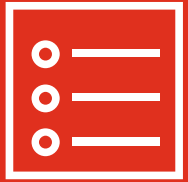
Domestic Interchange Fees Rates for Debit/Credit card transactions in selected countries



Commentary

- Benchmarking the average interchange fee of 1.6% in Moldova (both debit and credit) **appears relatively higher than in other countries, however national context is important (Moldova being a smaller market)**. The levels of interchange fees can be either: a) regulated by the authorities or b) set-up and adjusted by the payment systems upon consultations with banks. In the latter case, the level are based on the factors reflecting the underlying the type of transactions (physical vs card not present), the type of card, as well as the overall size of the local market. **The purpose of interchange fees are to cover issuer expenses** in relation to accepting, processing, and authorizing card transactions (including fraud risk and physical/software costs).
- It is to be noted that in some countries with a regulated interchange fee – the level of merchant service charges are lower, but not the same extent. And acquirers still evaluate the risk of each merchant individually. Hence, a calibration of the interchange only shifts the costs between the parties.

Source: Expert Grup, Mastercard Europe Interchange Hub, Visa Europe Interchange Fees, PwC analysis



4. Fee regulation in the world

4 Intervention in IFR/MSC is just one of the measures to support electronic payments and reduce informal economy

In practice, there is a broad range of measures, with different focus point, that can be employed to stimulate the move to the cashless economy

Inventory of measures by nature of main actor implementing the measure and sub-category
























Public sector		Mixed	Private Sector	
1 Fiscal incentives	2 Regulatory	3 Ecosystem Development	4 Value-Added Services	5 Technology Innovations
Merchant fiscal incentives	Encourage merchant formalization	Awareness campaigns	Credit	New products and services
Subsidized POS terminals	Disincentives for cash transactions	Acceptance development funds	Productivity solutions	Improving the product experience
Consumer fiscal incentives	IFR/MSC regulation	Interoperability/Standardization	Revenue generating service	Non-traditional partnerships
Tax Lotteries	Mandated card acceptance	Consumer protection/Fin. literacy	CRM	Payment aggregators
	Mandated cash registers	Telco infrastructure		
	Mandated wage payment via card	Supply chain digitalization		
	Government adoption of elc.pay.			

Commentary

- The literature suggests that **there is no single best incentives, but rather countries implement a mix of incentives**. Also, **the effectiveness of which depends on context, the level of development in the market, and the strength of the implementation process**. Public measures are geared towards discouraging cash use, whereas private sector initiatives revolve mainly around innovation and product development, to facilitate easier and more inclusive transactions.

4

Fiscal measures can serve as a compelling incentive, but they require sufficient fiscal space

Incentive Type	Incentive Category	Country of implementation	Description of measure	Measure addressed to
1 Fiscal and financial incentives	Merchant fiscal incentives	 	South Korea introduced VAT deductions for merchant that accept electronic payments. The tax credit was initially set at 0.5% of credit card sale value – increased up to 2% with 5million WON ceiling. In Italy, SMEs with revenues not exceeding 400k EUR can enjoy a tax credit of 30% of fees charged by payment services providers for the acceptance of electronic payment transactions made by private customer	
	Subsidized terminals or transactions	   	In 2018, India announced that the Government will subsidize the MSC for transactions made via debit cards and other cashless enabled payments up to 2000 Rupee (~ 30 USD) Japan introduced reward program, involving cashless payment terminal subsidies for SMEs. One month after introduction 39% of eligible companies had already installed a cashless terminal. Uruguay offered tax incentives for POS deployment: up to 80% of POS value deductible for income tax purposes. Mexico set up a private trust in 2004 to promote POS installation. It was funded through acquirer contributions, returned as tax exemptions. In 2015 a mPOS tablet was offered to micro-enterprises.	 
	Consumer financial incentives	 	In 2006, Uruguay offered up to 9% reduction in VAT for card payments in restaurants and tourist locations. The scheme was expanded in 2014 for financial inclusion purposes to include all card transactions. A similar scheme as in effect in 2001 in Argentina, with a 5 % VAT refund on debit card purchases under ARS 1,000 (~51 USD) to promote electronic payment use. The incentive was extended to credit cards in 2003, with a 3 % VAT refund that was later eliminated in 2009. The debit card transaction tax refund was eliminated in 2017 when the administration deemed it as a subsidy to the most affluent population (those who have debit cards) and expected savings from eliminating the incentive.	 
	Tax lotteries	       	Since 2017 Greece ran tax lotteries. Every VAT receipt stamped with a unique number which was automatically entered into a cash-prize draw organised by the government. Each month, 1,000 winners would be granted 1,000 EUR each – which will be exempted from income tax. The scheme is meant to encourage consumers to demand VAT receipts, produced by secure e-registers, provided by shops, restaurants etc. Netherlands, Portugal, Poland, Slovakia and Malta have a similar VAT lotteries in operation. India ran two weekly lotteries – one for merchants and one for consumers.	 

Source: World Bank, Avalara, PwC research

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Measure aimed primarily at Merchants



Measure aimed primarily at End Consumers



Measure aimed primarily at the Government

2

Regulatory interventions
















8

2

Regulatory interventions

4

Partnerships with the private sector can serve the basis for coordinated and consistent ecosystem development

Incentive Type	Incentive Category	Country of implementation	Description of measure	Measure addressed to
3 Ecosystem development	Education and protection		Countries around the world have run campaigns to improve financial literacy and build consumer protection	
	Telco Development		China has invested heavily in mobile and internet infrastructure that is price accessible to consumers. As a result in 2020 internet penetration stood at 70% of the population. Similarly, India has invested in telecommunication infrastructure.	
	Digitize Supply Chain		The US is a pioneer in B2B cashless payments. A large part of the development has been driven by new business models in Logistics and Supply Chain (i.e. Amazon) that have digitized all aspects of sourcing and procurement.	
	Acceptance dev funds		Indonesia launched an acceptance development fund ¹⁾ which helped double the acceptance of payments in the country (but from a low base). The fund was financed by the Government along with the payment systems, focusing on geographic expansion and new channels. The model was replicated by India.	
4 Value-added services	Credit based		Kopo Kopo in Kenya started as a mobile payment merchant solution, yet in the face of competition attempted to differentiate itself by offering a cash advance product, which was based on predictive analytics for the loan extension decision. This offered a mini working capital solution for merchants.	
	CRM		Square, a US-based company, disrupted the electronic payment acceptance market by introducing its mPOS (mobile point of sale) in 2010. The device came in the form of a dongle attached to a mobile phone, that was configurable paperless via software. Face with competition, Square provided value added services like business analytics, inventory management, payroll management, and other CRM suite-functions.	
5 Technology innovations	Product improvement		Kopo Kopo in Kenya has partnered with Mastercard to offer QR payments. Across Africa start-ups have begun to offer mPOS solutions to pay via phone (South Africa, Nigeria, Ivory Coast, etc). In China, operators are offering mPOS instead of traditional terminals and loans to SMEs that are not based on classical financial analysis, but rather on electronic payment data (mostly transactions) as input to machine learning models.	

Note: 1) Various campaigns were executed including training and promotions as well as merchant activation for payment methods such as low cost mPOS devices.

Source: World Bank, PwC research



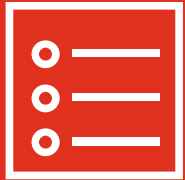
Measure aimed primarily at Merchants



Measure aimed primarily at End Consumers



Measure aimed primarily at the Government



5. MSME survey on merchant's perception of cashless

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A business survey was instrumented in order to gain direct insight into MSMEs perception of cashless payments

MSME survey demographics

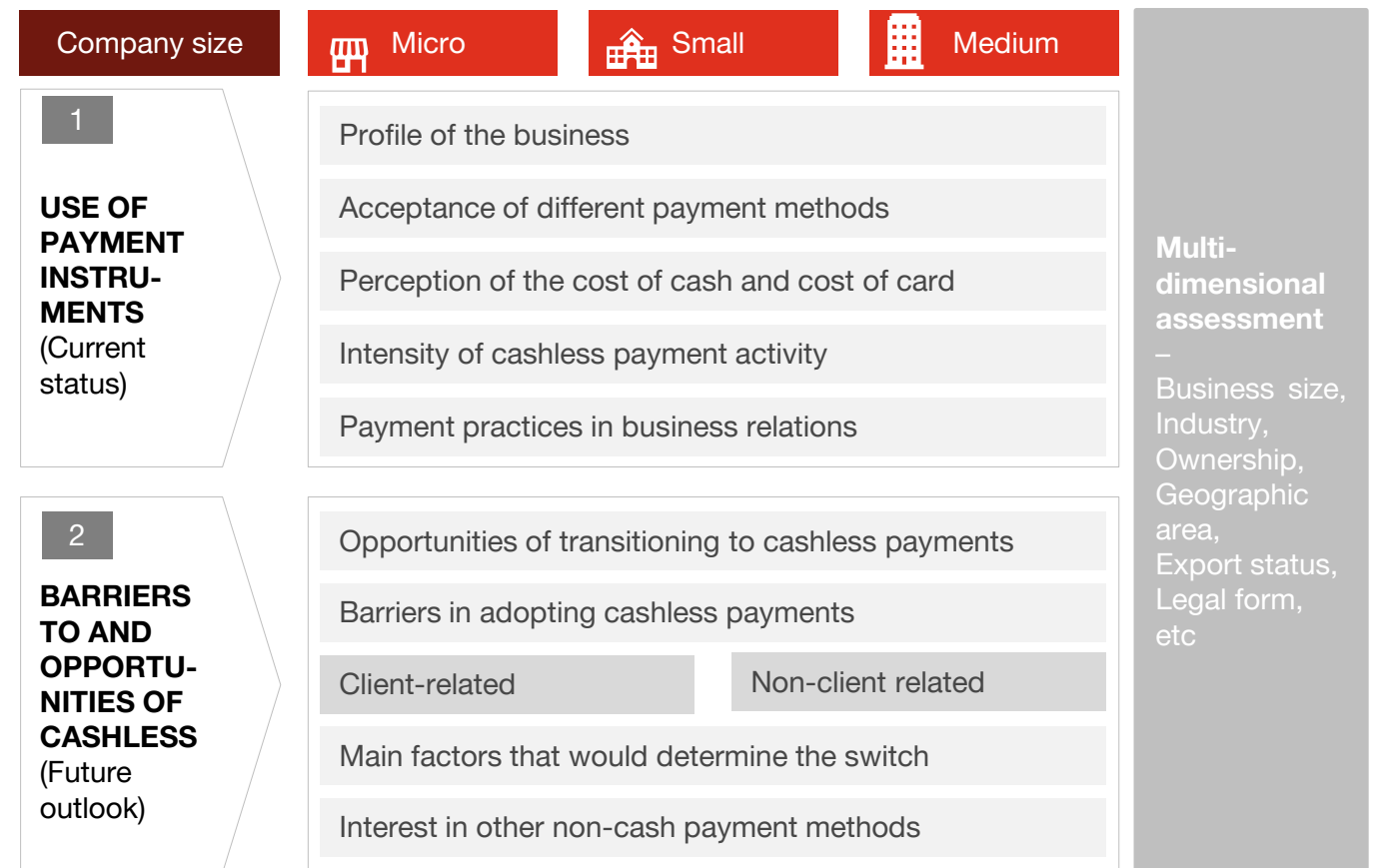


Primary Research

- In order to acquire first-hand knowledge on the merchant's perception of cashless payments, a business survey¹⁾ was ran with a sample of **419 MSMEs** companies, representative in terms of general distribution in the Moldovan economy.
- Thus, the respondents were distributed as follows:
 - Micro 83%, Small 14%, Medium 3%
 - 81% operating in urban areas and 19% in rural
 - Chisinau 62%, North 12%, South 9%, Centre 17% (covering most rayons)
 - Broad range of industries covering both cash-intensive (retail 39% of sample) and non-cash-intensive, ranging from coffee shops and to hair dressers and transportation)
 - Young companies (less than 5 years old) 39% and older companies 61%
 - 67% profit making companies, 30% declaring loss-making status

Note: 1) The survey took place during September 2022, via CATI data collection.
Source: PwC Merchant Survey

Survey analytical framework



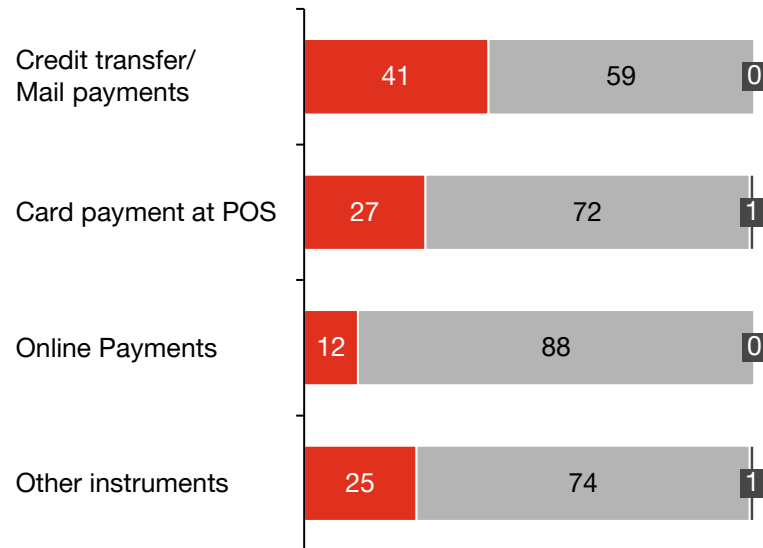
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Card acceptance lags behind cash, with pricing models for card services currently edging towards blended rates

Q: What payment methods do you accept for your clients?

%, n=419

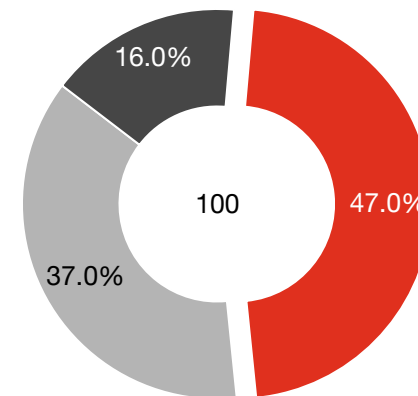
Accepting Not accepting Don't know



Q: If you accept card payments, what pricing model have you contracted with your payment provider?

%, Respondents that offer card payments n=134

Blended pricing
Differentiated pricing
Don't Know



Commentary

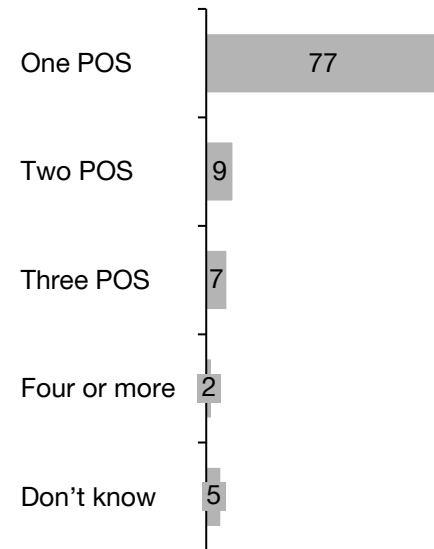
- In the MSMEs sample, **the rate of card acceptance was 27%, highlighting a consistent gap** between the two options. A statistical significant difference at 5% level was found between Micro companies (27%) acceptance and Medium ones (54%).
- Online payments were accepted by 12% of the companies**, mostly driven by size (Medium 38% acceptance versus Micro 10%) and industry (Agriculture particularly low, where the most popular non-cash alternative was bank transfer).
- In terms of pricing, the larger part of merchants (47%) recorded a blended model, where they are quoted a single rate.** A rather substantial part of merchants (37%) however recorded being on the differentiated model, where they are quoted different rates based on the type of card and transaction. Blended pricing was less common in HoReCa and companies offering Financial Services.

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The majority of merchants that accept cards have only one POS terminal, usually from solely one provider

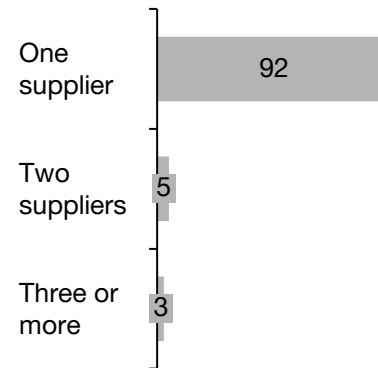
Q: If you offer card payments, how many POS terminals do you have?

%, n=115



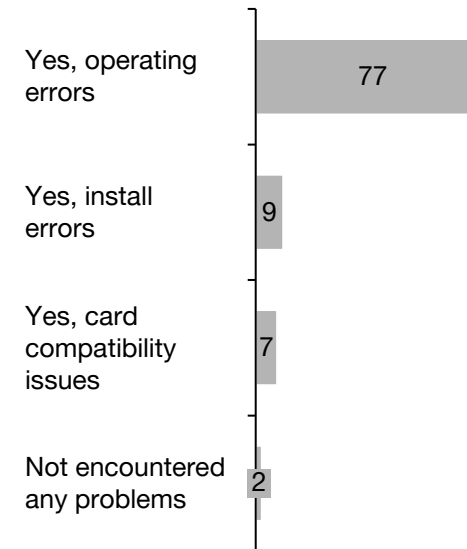
Q: If you offer card payments, how many suppliers do you have?

%, n=115



Q: Did you even encounter any errors with POS terminals?

%, n=115



Commentary

- **The majority of the respondents (77%) had only one POS terminal.** This is most likely explained by the fact that merchants usually buy bundled payment services, that include current accounts as well, and have little incentive to diversify in the absence of a compelling business case.
- Interestingly, **from the companies that had two POS or more – more than half of them (53%) had two POS terminals with the same supplier**, with the remaining having more terminals while also having contractual relations with multiple suppliers. Multiple suppliers were more common in more formalized areas like financial activities and manufacturing (especially textile industry) than in retail.
- The respondents indicated that **most commonly they have experienced operating errors with the POS (77%)**, mostly by micro-companies. A smaller share had install errors (9%) and card compatibility issues (7%).

5

Cash is perceived positively – as not having any costs, only until the merchant scales up the levels of activity

Q: What is your perception related to the cost of cash? Also the processing speed?

%, n=419



Source: PwC Merchant Survey

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Commentary

- The overwhelming majority of companies (87% of total sample) do not consider counting, sorting, packaging and transporting cash to be a cost for the company. **This drives the perception that the average monthly cost is zero for 58% of the sample.**
- Across the evaluation of the cost of cash, **there is a observable difference in changing perceptions on the cost of cash as companies grow in size.** Thus, for example 61% of micro-companies declare their monthly cost of cash is zero – while for small companies only 45% do so, and for medium companies even lower of 40%. This is reflected also in the share of companies that implicitly recognize the cost of cash versus cards.
- The perception of convenience also changes with size**, with 29% of companies believe cash transactions are faster than card ones, but only 8% of medium companies doing so.

5

Cost may not be the only issue for cashless adoption, given residual practices like undeclared work and business

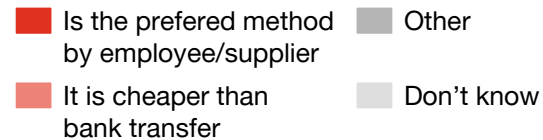
Q: Most commonly you pay your employees and suppliers via

%, n=419



Q: If you most commonly pay via cash, what is the main reason?

%, n=103



Cash paying merchants

Q: Do you offer clients any discounts for paying cash?

%, n=115



Commentary

- **Up to 1 in 4 merchants declared that they most commonly pay the employees and suppliers via cash.** The answers were strongly driven by size, with 28% of Micro companies versus 12% for Small companies and 0% for Medium companies. Companies operating in the Rural area had a higher share of 32% versus Urban 23%. Companies in Retail trade had a share of 34% doing so, and HoReCa 36%, indicating that the practice is more common in sectors with a higher rate of informal activity.
- **When asked to explain the reason for this, 65% of respondents argued that cash was the preferred method by the employee/supplier and only 25% mentioned the cost.**
- In addition, 23% of the merchants declared that they offer discounts to clients for paying cash (Retail trade 30%, mostly Micro), a further indication of the temptations that belie the affordability argument.

5

Merchant's view on the barriers to cashless suggest a confluence of complex factors, spanning from cost to client

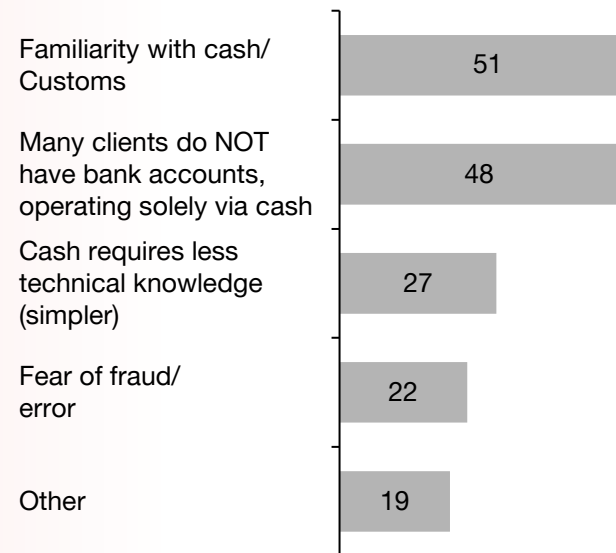
Q: What do you see as being the main barriers towards the adoption of cashless payments

%, n=419



Q: What do you think are the main reasons why your clients prefer to pay cash?

%, n=285



Commentary

- **Cost of services and payment technologies was the top barrier – but it was mentioned only by 31% – roughly one 1 in 3 merchants.** Lack of client interest was mentioned by 24% of companies. The practice of cash-paid wages was believed to be a barrier by 11% of respondents. Overall, the answers seem to suggest that the barriers are more complex and multi-sided, involving economic, but also social factors.
- **Among the reasons for why clients prefer paying in cash, merchants put at the top of the list the familiarity with cash and the customs prevalent in society (51%), along with the fear or fraud or error among clients (22%).**
- **A second theme of knowledge gaps and financial inclusion** was conjured by the reasons that many clients do not have bank accounts (48%) and that cash is simpler to use (27%).

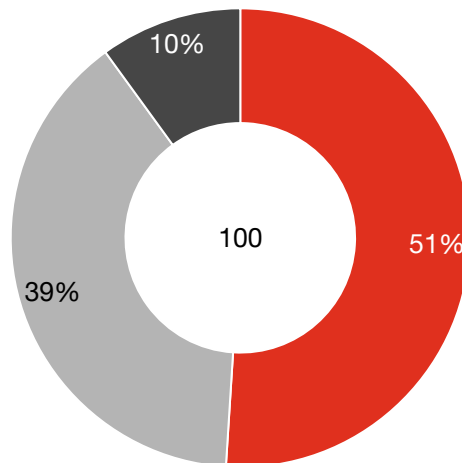
5

Merchant future outlook diverges based on whether they already use cashless payments or not

Q: In the near future, do you intend to increase the share of card payments accepted relative to cash payments?

%, Respondents that currently DO offer card payments, n=115

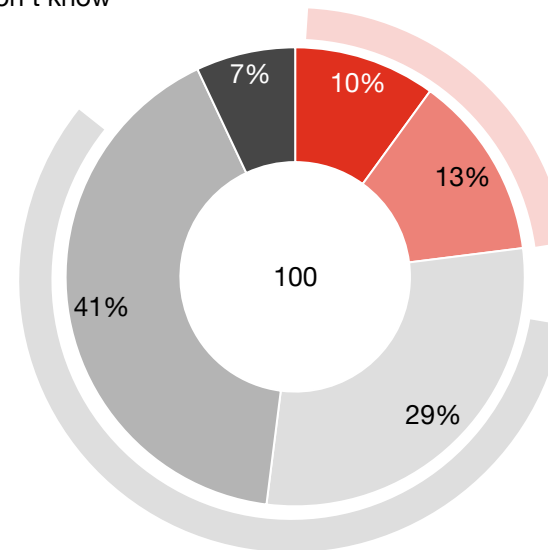
- Yes, I intend to increase card/online payments RELATIVE to cash
- No, I will NOT increase card/online payments RELATIVE to cash
- Don't know



Q: To what extent would you be willing to offer card payments at POS in the next 12 months?

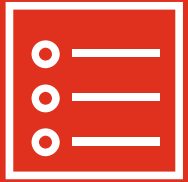
%, Respondents that currently do NOT offer card payments n=285

- Will surely offer
- Will likely offer
- Will likely NOT offer
- Will surely NOT offer
- Don't know



Commentary

- From the merchants already offering card payments – roughly half of them (51%) mentioned their intention to increase the volume of card and online payments *relative to* cash payments. This suggests that **companies that have understood the benefits of cashless payments – and have positioned so as to capture the benefits – are positive about further opportunities.** Medium companies are the most keen.
- On the other side, from the merchants that currently do not accept card payments, only 10% said they will surely transition to cashless, with a further 13% hinting they may. **Overall, 70% are negative about transitioning to cashless**, showing substantial resistance among the segment.
- A diverging outlook between merchants may also be a sign of a structural practices that permeates outside of the formal economy

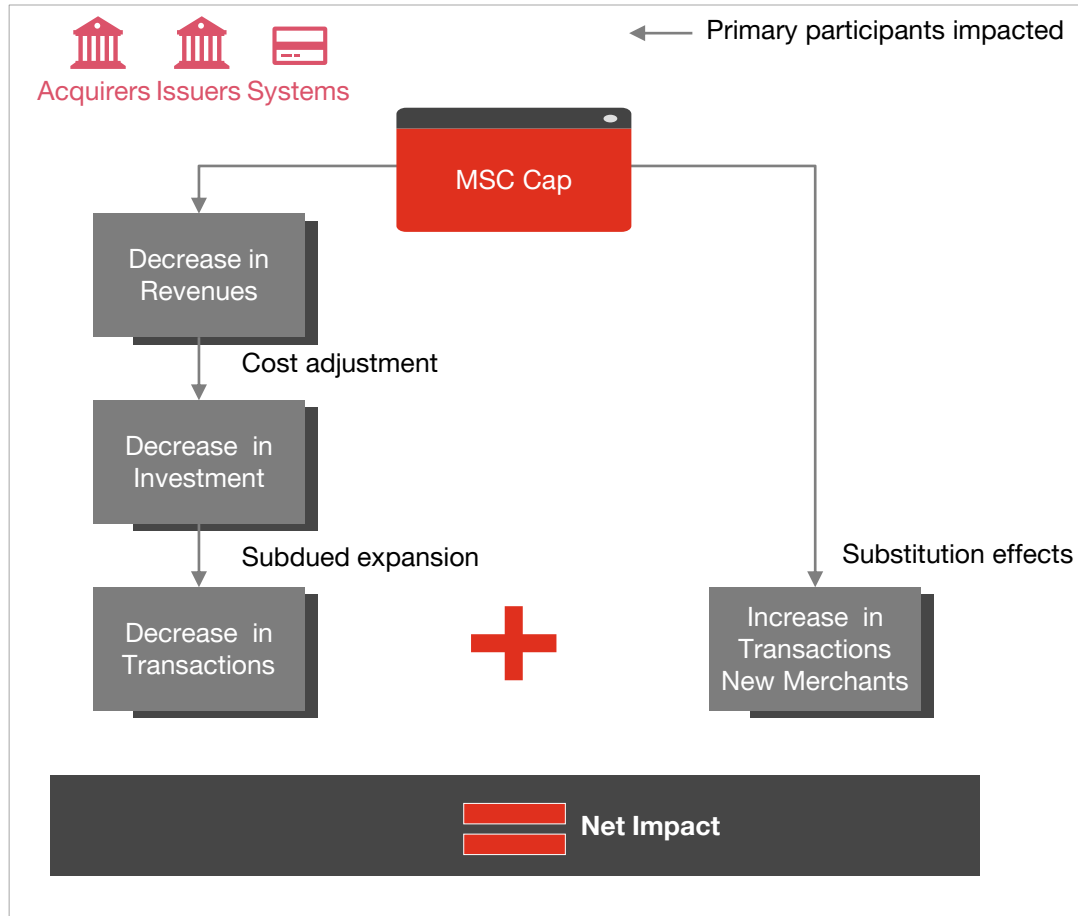


6. Impact assessment



6

A bottom-up model was estimated, to gain a sense of the scale of the impact that the proposed intervention may have



Notes: 1) No revenue recovery measures are assumed

Source: PwC Analysis

PwC | Private and Confidential

Hypotheses of impact model¹⁾

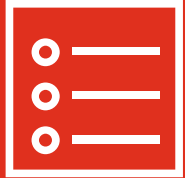
- A direct intervention to cap the Merchant Service Charge is hypothesized to reduce the revenue for all market participants (issuers, acquirers, systems). As a result of facing lower investment budgets, this will lead to a lower number of POS brought to the market.
- The decrease in infrastructure investments in the market leads to two opposing effects: on one hand, the decrease in transactions (induced by restricted incentives to bring infrastructure to the market) - on the other hand the growth coming from new merchants, which would be stimulated by the new level of fees to switch to cashless. The first effect is estimated via a statistical model based on ECB national data, while the incremental number of merchants is based on the MSME survey.

Assumptions regarding parameters

- MSC is capped at 0.50%, as per legislative proposal
- The full year 2022 number and value of transactions are estimated using annualized half-year data provided by market participants.
- A negative additional growth (-7%) is applied for cash transactions and values on top of CAGR-based growth, in order to reflect migration towards cashless payments.
- The share of interchange-payable transactions is held constant for future years, based on 2022 estimated values

Results

- The proposed MSC cap would significantly impact participant's ability to further invest in infrastructure. The results vs base case are **-17,000 POS and -390,000 cards by 2025**



7. Potential solutions to expands SMEs use of cashless

7 A comprehensive mix of policies is required to address the multi-dimensional aspects of transitioning to cashless

Phased Interchange Reduction

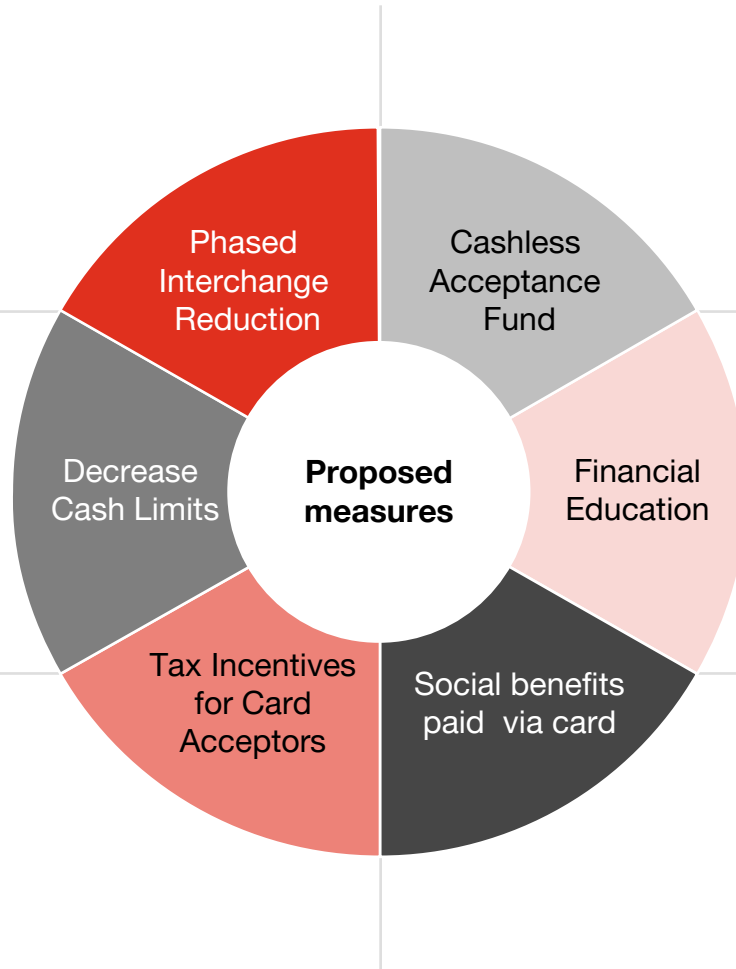
- **Rationale:** decrease merchant cost
- **Status:** currently not implemented
- **Description:** a phased decrease could be considered, upon consultation with the banks and payment processors

Decrease Cash Limits

- **Rationale:** discourage large cash transactions
- **Status:** fully Implemented
- **Description:** revise downwards the current cash limit to max 6,000 MDL per transaction and 60,000 MDL per month

Tax Incentives

- **Rationale:** reward card accepting merchants
- **Status:** currently not implemented
- **Description:** offer tax credits for card payments



Cashless Acceptance Fund

- **Rationale:** provide subsidized infrastructure
- **Status:** currently not implemented
- **Description:** create a pooled resource fund in order to provide subsidized POS terminals to certain categories of merchants

Increase Financial Literacy and Consumer Protection

- **Rationale:** provide education on the benefits of cashless payments and strengthen consumer protection
- **Status:** partially implemented
- **Description:** draft educational campaigns to inform the public on the opportunities of cashless

Payment of Social Aid by using debit cards

- **Rationale:** reduce dependence on cash
- **Status:** not implemented
- **Description:** state payments of social security benefits by using debit cards instead of cash

Thank you!

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