

NATIONAL PAYMENTS USAGE STUDY

KINGDOM OF SAUDI ARABIA

YEAR OF 2021



البنك المركزي السعودي
SAMA
Saudi Central Bank



Table of Contents

1. EXECUTIVE SUMMARY	3
2. INTRODUCTION	9
3. METHODOLOGY	12
3.1 Consumer survey	
3.2 Business survey	
3.3 Government survey	
4. KEY FINDINGS	18
4.1 OVERALL SPENDING PATTERNS	
4.2 CONSUMER SPENDING	
4.2.1 Consumer trends	
4.2.2 Payments by instrument	
4.2.3 One-Off and Recurring Payments	
4.2.4 Growth in Non-Cash Payment Use	
4.2.5 Demographic characteristics	
4.2.6 Consumer Payment Behavior by sector	
4.2.7 Cash Holdings and Withdrawals.	
4.3 BUSINESS SPENDING PATTERNS	
4.3.1 Business trends	
4.4 Efficiency through Cashless Payments	
5. CONCLUDING COMMENTS	35



1

Executive Summary

National payment usage study 2021

During 2021, Saudi Central Bank (SAMA) undertook a cross-country Study covering government, business and consumers to assess the share of cashless payment transactions of the total number of payment transactions in the Kingdom of Saudi Arabia. The study was undertaken among over 1,500 consumers and 218 businesses, and findings revealed that for the first time, cash has ceased to be the most common method of payment across all economic sectors.

Results indicate that, in August 2021, only 38% of total payment transactions in the Kingdom were made in cash, compared to 56% in July 2019. The share of overall value of these cash transactions decreased from 12% to 6% over the same period.

11.3 Billion Payments in 2021

The study estimated that, excluding ATM cash withdrawals, approximately 11.3 billion payments were executed in Saudi Arabia in 2021, which represents a substantial increase compared to 2019. Of these, 7 billion (62%) across all sectors of the economy were undertaken using non-cash payment means¹. In 2021, the total value of payment transactions in the Kingdom is estimated to be SAR 15.6 Trillion, with 80%

of that value attributable to payments by Businesses².

Overall Saudi Payments Market

Of these 11.3 billion transactions in the Kingdom in 2021, consumers account for 85% of total number of transactions, compared to 76% of the total in 2019. Businesses generate 14% of payment volume and the government sector accounting for just over 1%.

On average it is estimated that Saudi residents (aged 16 and above) made over 277 payment transactions each during 2021 (compared to an estimated 140 transactions each during 2019). Globally, this compares to around 550 transactions per annum per adult in UK and over 760 transactions per adult per year in the US.

The rise of cashless among consumers and Covid-19 Impact

The use of card and electronic payments in Saudi Arabia has surged in recent years, with unprecedented growth of card payments over last 2 years following on from a rapid rise since 2016.

Cash is no longer the dominant means of consumer payment in the Kingdom, now ranking second with 43% of all household payments being paid in cash. The largest

¹ Card payments, credit transfers, direct debits, bill-payments, e-Wallet transfers and an increasing new portfolio of instant payments on the newly launched SARIE (IPS) platform

² Business account for only 14% of all payment transactions by volume, but with a much higher average transaction value (ATV) than consumers, account for 80% of the value

gainer has been card related payments – especially payments using NFC* technology at PoS, now representing just over half of all consumer payments.

Covid-19 is believed to have had a substantial impact on accelerating the growth in non-cash payments, especially in the consumer retail space. Measured in March 2020 (at the point of Covid-19 lockdown) and again in March 2021, the Point of Sale transaction volume grew by 127%. For the full year 2021, PoS transaction volume grew by 83% - substituting for cash and prompting the premiere positioning of Card payments.

However, while championed by Card transaction growth, the rise of non-cash payments in Saudi Arabia in recent years has witnessed an ever-increasing number of consumers opting for a variety of

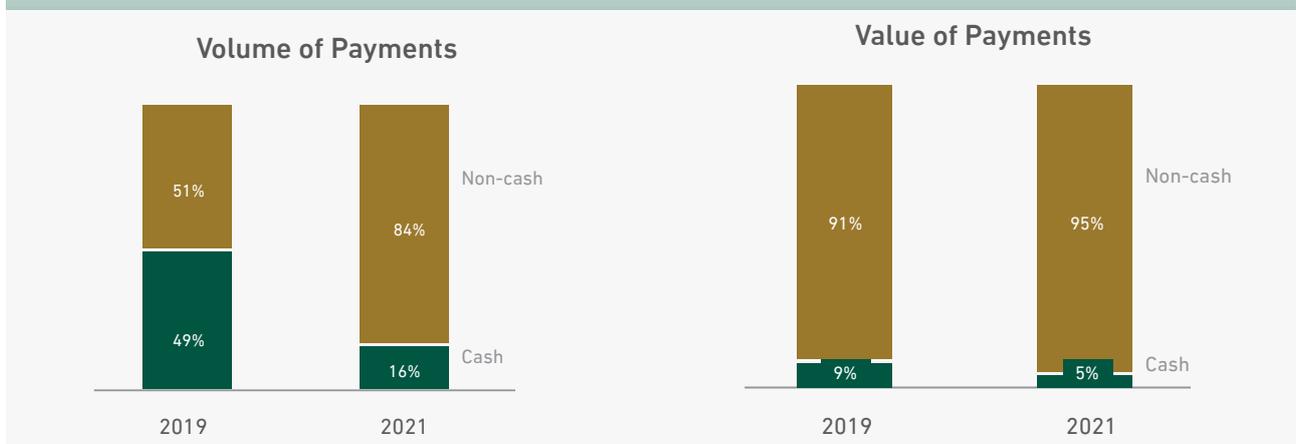
alternatives to cash when making payments. These ‘alternatives’ include electronic bill-payments via online banking, e-wallets, the newly launched instant payments scheme - sarie - as well as cards.

Card payments on steep rise

Measured in August 2021, approximately 57% of all consumer payments were cashless³. The majority of these transactions were made at shops and retail outlets using payment cards (52.5% of consumer payments and 80% of all non-cash payments were made by cards in 2021). The rise of non-cash payments has been extra-ordinary in recent years and looks set to continue.

Between 2019 and 2021, the ratio of cashless consumer payments⁴ has grown from just 36% to 57%, driven primarily by the growing popularity of card usage.

Chart 1. Business payments by payment means



* Near Field Communications / Contactless Technology

³ The estimate of cash payment ratio is based on a periodic survey of consumer and business payment activity across the Kingdom, undertaken by Saudi Central Bank. This key metric is an assessment of payments by volume or number of payment occasions.

⁴ 'Cashless' refers to all non-cash payments and includes all cards (debit and credit), e-Wallets, Direct Debits, Credit Transfers, SADAD EBPP and SARIE instant payments. These ratios relate to 'Consumer' payments only.

In 2021, over 5.5 billion card payments were executed in Saudi Arabia. This represents 243% growth on 2019 card payment volumes. In the last two years, this increase has been fueled by the convenience of the 'mada Atheer' contactless card payment capability, with over 95% of all PoS (card) payments in 2021 being contactless, compared to 69% in 2019.

Business has undergone substantial transition to non-cash payments

When viewed overall, business users in the Kingdom have continued their move to a 'less cash' payments community. The Saudi Central Banks analysis shows that 84% of all business payments in 2021 were processed using electronic payment means - compared to just 51% in 2019.

This increase is largely due to a substantial shift in salary payments by Micro-businesses to direct credit (from 17% non-cash in 2019 to 59% in 2021) and a substantial movement in payments to vendors (from 28% to 76%) for both Micro and SME segments.

On closer analysis, we can observe a notable increase in the use of non-cash payments, as businesses get bigger. This migration is encouraged by the security, convenience, and traceability of such payments when compared to cash.

Noticeably for large businesses and Corporates, non-cash payments represents 99% of Business-to-Business (B2B) payments. Smaller (micro businesses) tend to be slower to move away from cash – but there is an inevitable and progressive trend towards less cash usage even among these smaller businesses.

Government already geared up for non-cash payments

The Government sector in Saudi Arabia had already converted almost fully to non-cash payments in 2019. Over 99% of all outgoing payments from government to consumers, businesses and other government entities were mainly delivered through credit transfers.

'One-Off' payments

Looking at the consumer payment transactions in 2021, the majority (95%) are deemed to be 'one-off' (discretionary) payments, 56% of which are non-cash or electronic payments.

'One-Off' payments are dominated by grocery purchases (32% of all consumer payment transactions in the Kingdom), eating out and restaurant payments account for 17% of the consumer payment universe, followed by Petrol Stations (12%) and Pharmacy purchases (11%). Clothes purchases account for approximately 7% of the number of one-off payments in the Kingdom in 2021.

These latest results show that, while significant progress has been made in recent years in providing Consumer Payment Choice - especially in supermarkets, pharmacies and petrol stations - there remains a significant opportunity to support further change in consumer behavior away from (less efficient) cash transactions and towards non-cash payments.

In the grocery sector – already the largest single payments sector - 51% of grocery purchases still use cash, which is mainly driven by the many smaller shops and bakkalas who comprise a significant share of the grocery sector alongside Hypermarkets, Supermarkets and Mini-markets. Traditionally, bakkalas had a high rate of cash payment transactions. However, progress in deployment of Point of Sale terminals (growing in volume by 64% in 2021) including adoption by smaller grocery outlets, had triggered behavioral change. Continued focus on this sector

through 2022 and beyond is likely to see increased adoption of cashless payments in this sector.

Recurring Payments

Only 5% of consumer payment transactions in Saudi Arabia in 2021 are classified as ‘recurring payments’.

Recurring Payments tend to be periodically ‘billed’ transactions, and typically, will include telecom and utility bills, rent and mortgage payments, home fuel and car loan repayments as well as other regular bills such as home and medical insurance premiums.

The SADAD payments system has supported the migration of recurring payments to non-cash since its introduction in 2004, but with an increasing significance in the last five years.

This migration of recurring payments from

Chart 2. Share of ‘One-Off’ Consumer Payments

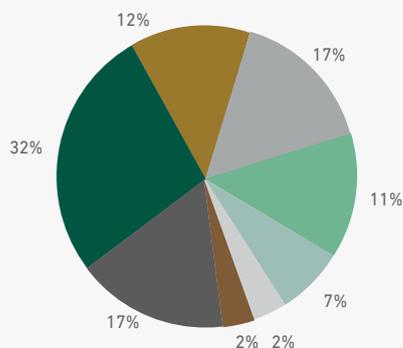
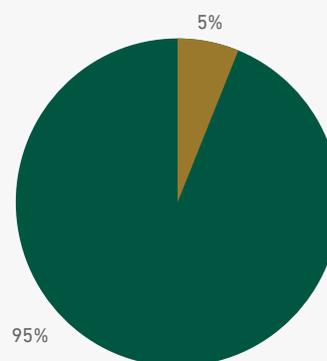


Chart 3. Share of All Payments



Restaurant Pharmacy Gas Stations Grocery
Other Entertainment Transportation Clothes

Recurring One Off

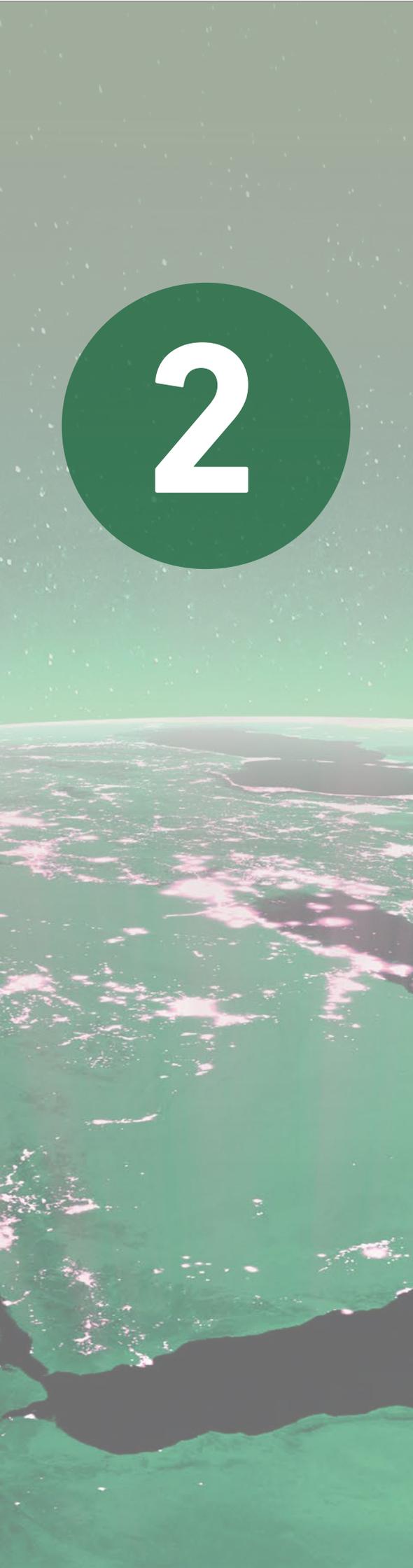
5 'Recurring Payments' are typically subject to a form of contract or ongoing commitment, and feature a periodic (monthly, quarterly or seasonal) invoice or bill.

cash to non-cash is likely to continue to see considerable growth as new billers move onto the platform on the one hand, and access to web-services and 'Apps' makes accessing bank accounts (and therefore the SADAD service) even easier for consumers and other payers on the other.

Continued growth in Payment Choice

Overall, the progressive growth of non-cash payments in the Kingdom – prompting a change in consumer behavior and a reduction in the share of cash payments – supports the drive towards a more efficient commercial ecosystem with a lower dependence on the relatively expensive logistics infrastructure required to support cash.

However, while innovation and development in the broad digital payments space continues to support (consumer and business) customers' choice in payment means – including regulatory and technical systems reform to support new payment service providers and new payment solutions - cash will remain a significant and important feature in the overall payments ecosystem in the Kingdom. To this end, cash will continue to be supported by the Saudi Central Bank in its strategic payments program.



2

Introduction

A key objective of the Financial Sector Development Program (FSDP) under the umbrella of Vision 2030 is to provide choice in payment options for consumers and businesses with a view to increasing the share of (more efficient) digital payment transaction for consumers to 70% of all consumer payment transactions by 2025.

SAMA, as one of the FSDP stakeholders, has led the development and promotion of payment options and choice and has encouraged the delivery of faster, more efficient digital payment as one of its key strategic objectives. To achieve this, the Saudi Central Bank has 'built-out' the broad payments ecosystem within the kingdom from a regulatory, technical and operational viewpoint, delivering on multiple programs, initiatives, and investments with key stakeholders in the financial sector.

These initiatives have witnessed the

development of an early phase Real Time Gross Settlement (RTGS) system in 1997, a world-leading Electronic Bill Presentment and Payment (EBPP) system in SADAD, a resurgent card payments infrastructure through mada and most recently an instant payments system launched in 2021.

In the regulatory sphere, the Saudi Central Bank has fostered innovation through the launch of the Regulatory Sandbox in 2018, the implementation of a revised payment law and implementation of non-bank payment regulation in 2020.

Meanwhile operationally, Saudi Payments has facilitated broader capacity and greater efficiency to accommodate the near exponential growth that these programs have fostered within the payments sector in the Kingdom.

To measure progress and to facilitate a greater insight into national payment habits, the Saudi Central Bank (SAMA), has undertaken the National Payments

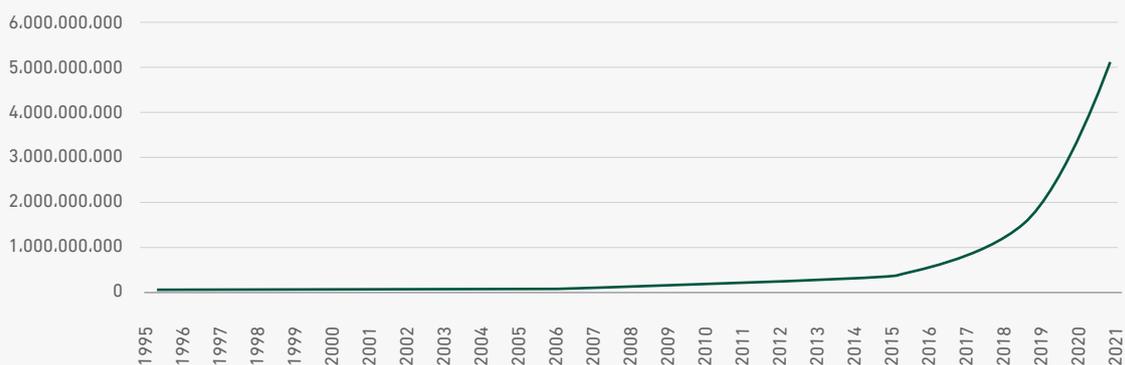
Usage Study - an assessment of payment activity among consumers, business and government actors within KSA. This study employs global best practice in terms of data collection and processing and uses similar methodologies to those employed in the equivalent 2019 Study, thereby allowing for direct comparison of results and a quantification of change(s) over time.

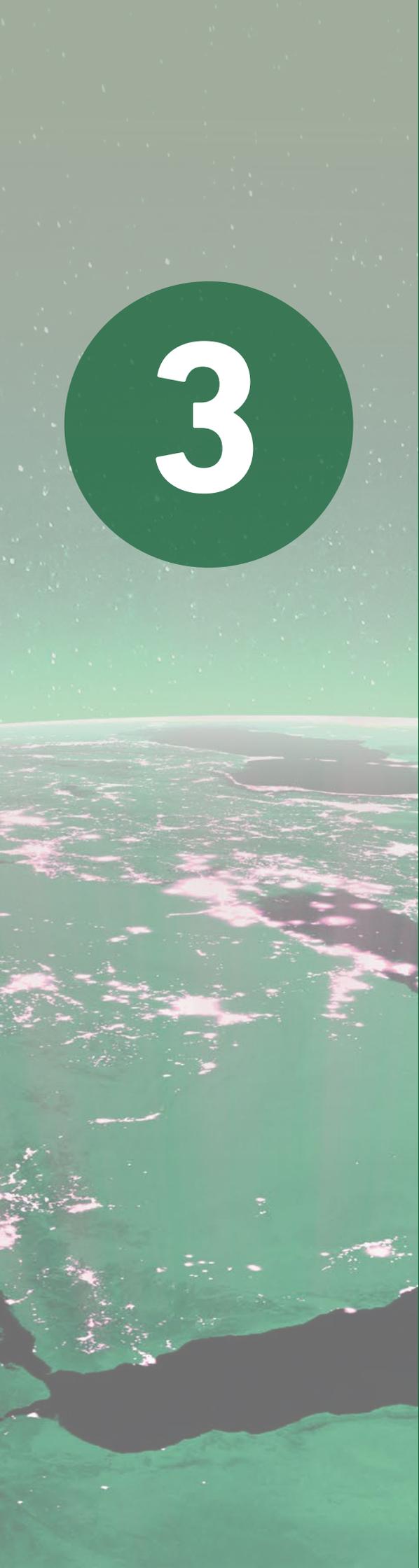
The study provides a detailed view into respondents' payment patterns, differences between payment use and various demographic and regional

characteristics, their payment preferences and attitudes to payment instruments, as well as a detailed analysis of payers' payment history over the last day and across a typical calendar month.

This study considers payments of any type, through any recognized payment or transfer medium, initiated by a payer. Using this 'payment initiator protocol', the study avoids the potential for double counting, recognizing that every 'outward' payment generates an equivalent 'inward' payment. Only 'Outward Initiated Payments' are considered and quantified here.

Chart 4. Card Payment transaction Growth in Saudi Arabia : 1995 to 2021





3

Methodology

The study used a mixed method (quantitative and qualitative) approach. Overall payments data is collected through consumer and business sector surveys - conducted by SAMA and supported by the consulting company Accenture. Primary fieldwork was conducted between July and September 2021.

3.1 Consumer survey

The survey was performed using Computer Assisted Personal Interviews (CAPI). Responses were captured directly on an electronic device, addressing a predefined set of questions and collated to facilitate both aggregate (national) analysis, and sub-sector analysis, breaking responses out by demographic, geographic and socio-economic characteristics.

Field researchers used a Face-to-Face interview method, which ensured the quality

of responses and completeness of the data collected, as well as improving the overall response rate.

The Overall Response Rate was strong, delivering a final usable respondent sample of 1,505 from a total interview base of 1,889. The Personal Sector questionnaire was designed to address three main categories of payments:

- Person to Person payments (P2P/ personal payments)
- Person to Business payments (P2B/ merchant payments)
- Person to Government payments (P2G)

Target quotas were applied to the consumer questionnaire in order to appropriately represent the Saudi resident population. To ensure the survey sample was broadly representative, recruitment targets covering

Table 1: Sample distribution

	Sample distribution	Sample population (percentage)
Nationality	Saudi Nationals	65
	Non-Saudi Nationals	35
Geography	Urban	84
	Rural	16
Gender	Male	55
	Female	45
Age	16-24	20
	25-29	13
	30-39	28
	40-49	23
	50-59	11
	60+	5

age, gender, location (region of residence and urban vs. rural), nationality and household income were applied.

Survey respondents were asked to record details of any payments that occurred during the previous day for all ‘one-off payments’⁶. To address possible cyclical payments, the survey was conducted over the course of a calendar month, including ‘pay-day’ and ‘pay-week’ peaks in consumer payment behavior.

In order to provide insight into the recurring (regular) payments⁷ portfolio, the survey asked respondents to indicate details of any regular monthly payments to which they were committed.

Within the survey, respondents recorded a total of 110,520 ‘one-off’ daily payments, distributed proportionally across days of the week throughout the month.

In parallel, respondents recorded 5,996 regular monthly transactions as (recurring payments).

3.2 Business survey

The business survey fieldwork was completed using personal (face-to-face) interviews for Micro, small and medium enterprises (SMEs) and through self-completion data requests for large business and corporate respondents.

Table 2. Business segments coverage

	Share of total expenditure (Percentage)	Large	SME	Micro
Retail and wholesale trade	30.10	1	49	41
Manufacturing	24.00	4	7	9
Construction	10.40	2	4	13
Oil and gas	7.60	2	-	-
Communications	6.00	Sector not covered		
Finance	5.50	2	6	3
Travel, tourism, and hospitality	4.50	-	2	3
Business services	3.80	1	17	6
Agriculture	3.80	2	2	8
Utilities	3.20	Sector not covered		
Healthcare	1.70	-	3	7
Personal services	1.50	1	8	14
Education	1.10	Sector not covered		
Mining & Metals	0.30	1	-	-
Total	100	16	98	104

⁶ ‘One-Off Payments’ are defined as discretionary or ‘non-contractual’ payments made by consumers or business, which form part of their daily commercial activity. ‘One-Off’ payments can be both frequent and part of a regular activity – such as weekly or periodic grocery shopping, eating at restaurants or buying fuel at a service station. But they are NOT generally subject to a cyclical bill or ongoing contract such as a water or electricity bill.

⁷ ‘Recurring Payments’ tend to be subject to a service or delivery contract and typically include energy, communications and water utilities.

In addition to payment types and frequency of payments, the business questionnaire was designed to collect data from the larger business to address the (social) cost of payments to allow relative assessment of the cost to Saudi Society of different payment routines.

The questionnaire was issued with an official data request email, followed by follow-up telephone calls.

A shorter version of the questionnaire was designed for micro and SMEs. In these cases, the questionnaire was used to support Paper Assisted Personal Interviews (PAPI), targeted at the owners of Micro and SMEs or their nominee.

In total, 218 business responses were collected. Respondent companies were selected to ensure adequate representation across the different business segments in Saudi Arabia, as defined by the General Authority for Statistics.

Last day payments

Payment mean:

- 1 - Cash
- 2 - Debit card
- 3 - Prepaid card
- 4 - Credit card
- 5 - Credit transfer
- 6 - Cheques
- 7 - Gift / Pre-paid card
- 8 - SADAD
- 9 - E-wallet

Payment purpose:

- 1- Groceries and day-to day items
- 2 - Restaurants
- 3 - Petrol station
- 4 - Pharmacy
- 5 - Clothes
- 6 - Transportation
- 7 - Entertainment
- 8 - Other

Regular bill payments

Payment purpose:

- 1 - Communications
- 2 - Water
- 3 - Electricity
- 4 - Gas utility
- 5 - House rent
- 6 - Car rent
- 7 - Mortgage
- 8 - Car loan
- 9 - Medical Bills
- 10 - Gym and Spa
- 11 - Insurance
- 12 - Donations and person to person

The questionnaire was designed to address three main categories of payments:

- Business to Person payments (B2P/ Salaries payments)
- Business to Business payments (B2B/ vendor payments)
- Business to Government payments (B2G)

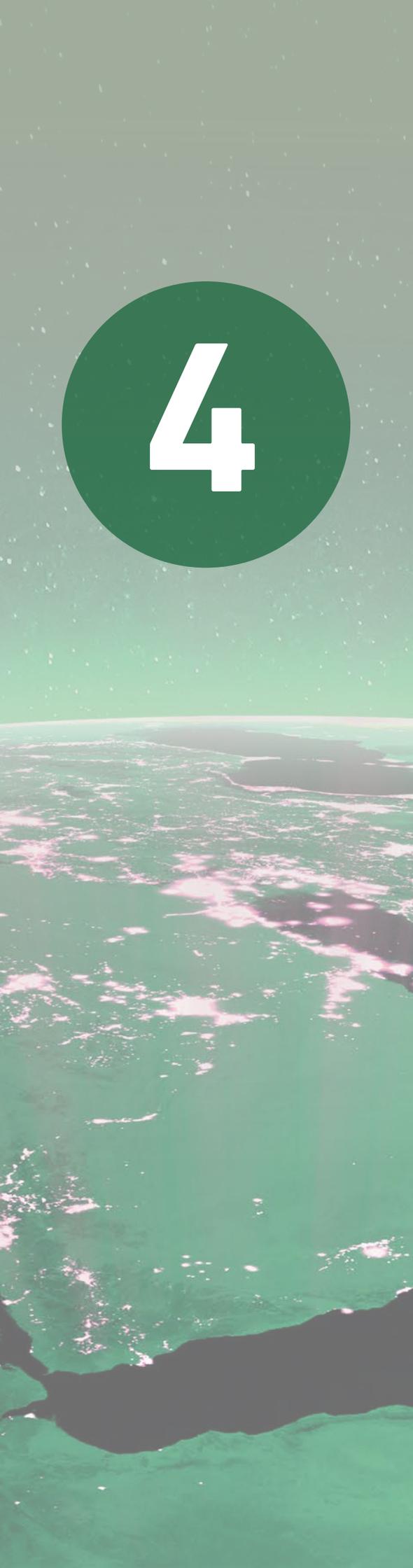
Aggregate data was collected on payment transactions initiated by businesses and these were profiled by volume (number of transactions) and value (amount in Saudi Riyal). All data related to transactions in a typical month, across different payment instruments and reconciled to declared business turnover.

Once consolidated, overall respondent results were extrapolated to reflect the Saudi business economy, based on the share of expenditure within each economic sector, as reported by General Authority of Statistics, adjusted for forecast 2021 changes.

3.3 Government survey

The detailed assessment of payment activity and behavior in the government sector undertaken in 2019 revealed 99.9% of all payments (by volume) initiated in the (public) government sector were non-cash. As a result of this almost total adoption of digital or non-cash payment mechanisms, no additional deep-dive into government initiated payments was undertaken for this (2021) Edition.

However, the study does take account of declared overall state spending, using this to calibrate the national payments universe in the Kingdom, from both a payment volume and payment value perspective, aligning the overall findings of the Study with the monetary metrics in 2021.



4

Key Findings

4.1 OVERALL SPENDING PATTERNS

Comparable studies undertaken around the world usually examine only consumer or 'private sector' payments. However, this study undertaken by the Saudi Central Bank reflects a more comprehensive and holistic approach, which examined payment habits across all economic agents.

This comprehensive study provides an exhaustive view of payment practices across the entire national ecosystem and identifies spending habits, preferences and attitudes towards the full spectrum of payment methods, from cash through to instant (digital) payments.

In 2021, for the first time in the Kingdom, cash ceased to be the most frequently used payment method across the Saudi economy. When measured across all payer categories, cash accounts for 38% of all payments by volume, and represented just 6% of the value of all payments made.

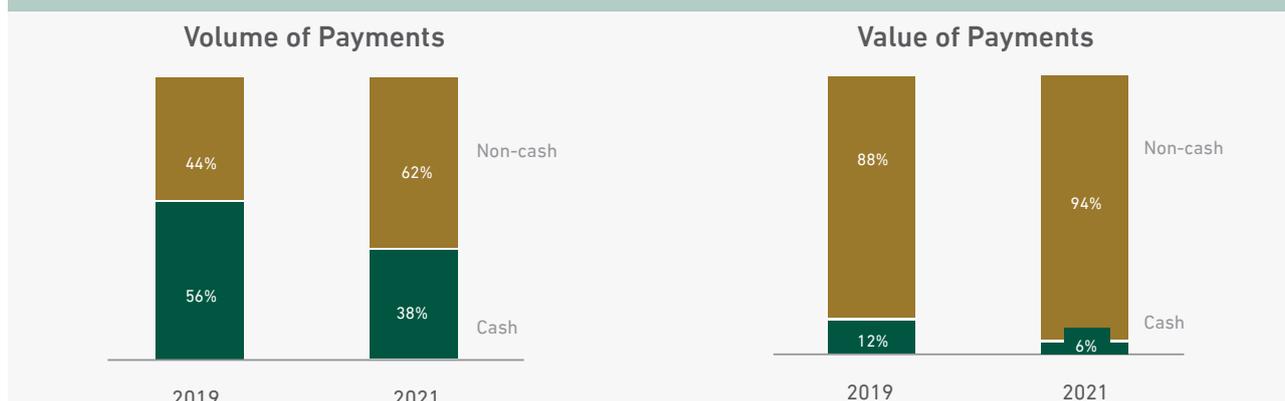
Cash still remains popular however among personal consumers - both by volume (43%) and by value (25%), but for the first time in the Kingdom - "Cash is no longer King" and is not now the 'preferred' method of payment by consumers.

When viewed overall, business also appear to have changed their payment habits in Saudi Arabia. In 2019, almost half of all business payment transactions were being undertaken in cash (49%), however this volume has been reduced to 16% in the course of last 2 years.

However, this wholesale reduction in cash usage is not a uniform pattern among all businesses.

SAMA's survey results show that smaller businesses (SME's) and especially the Micro-business sector still have a higher propensity to use cash, in particular for transfer of salaries and payments to suppliers/vendors.

Chart 5. Use of payments means (percentage)



When it comes to the state sector, survey results confirm that Government agencies have almost all completely shifted to cashless payments methods, across all spending categories.

Throughout the Kingdom, it is estimated that personal consumers account for 85% of all payment transactions (by volume) occurring in the KSA economy (compared to 76% in 2019). This tells us that personal consumers accounted for 9.7 billion of the approximately 11.3 billion payments in 2021.

While accounting for the lions-share of payments by volume, consumer payments tend to be of relatively lower value. In 2021, consumer payments accounted for just for 11% of the total value of payment spend in the Kingdom.

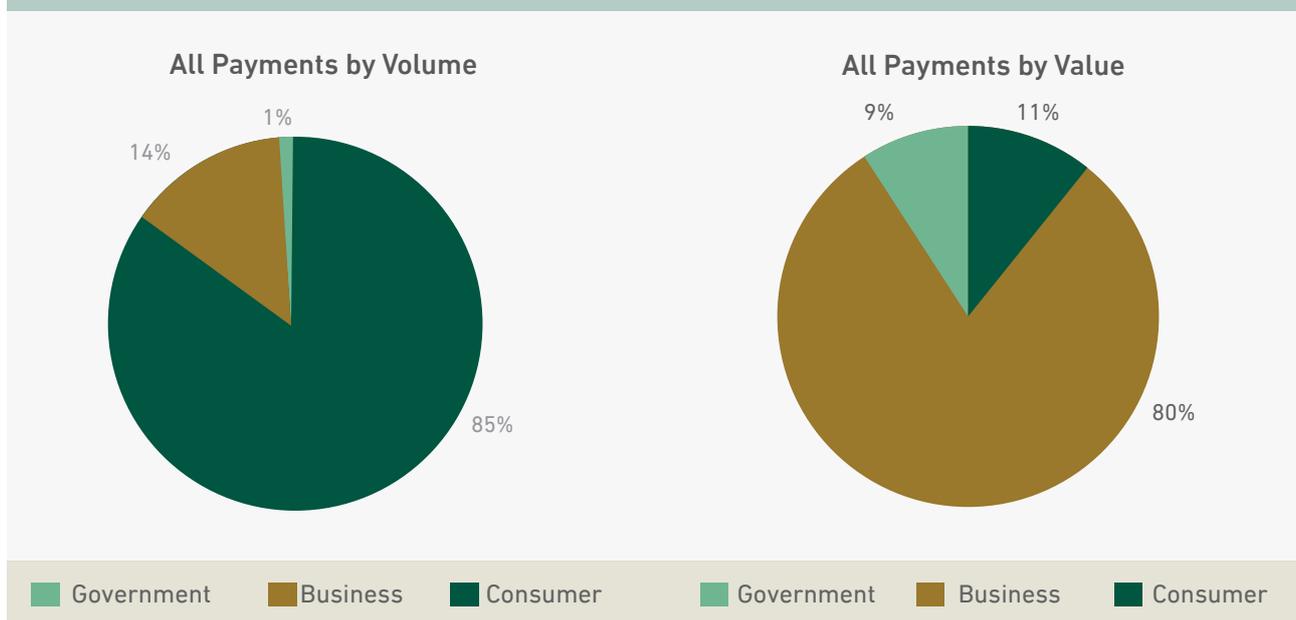
4.2 CONSUMER SPENDING

4.2.1 Consumer trends

The number of transactions per capita in KSA has more than doubled over the last 2 years, from 11 transactions per month in July 2019 to over 25 transactions per month in August 2021. Consumer payments are estimated at 277 transactions per capita for the full year 2021.

Consumer spending patterns have been substantially affected by developments and improvements in the consumer payment experience – notably the near universal deployment of contactless payment capability across the Kingdom, and more recently by the impact of Covid-19, which accelerated the transition from cash to electronic payment means by virtue of Merchant preference.

Chart 6. Share of payments by economic agents



The key growth element in non-cash payments in 2021 was payment cards. Card related payments at Point of Sale grew by 2.6 times between August 2019 and August 2021 while e-commerce payment volumes increased by 4.8 times over the same period.

This assessment illustrated that for the first time in the Kingdoms history, consumers used cash less frequently than non-cash payment mechanisms. In mid-2021, the share of non-cash consumer payments (by volume) had increased to 57% (from 36% in 2019) and to 75% by value (from 48% in 2019).

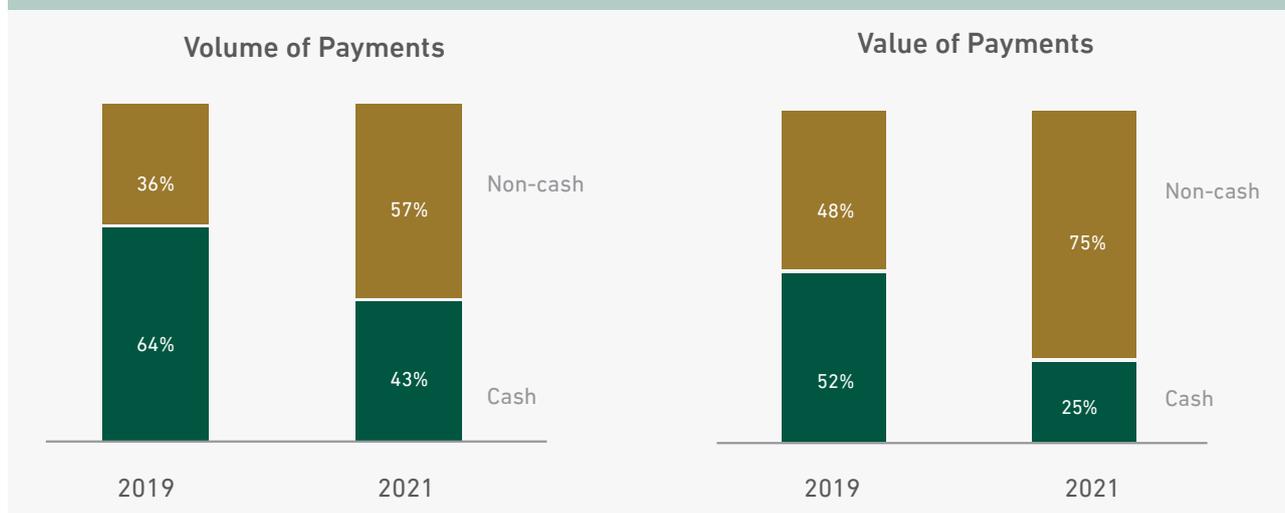
Despite this ongoing move towards cashless payments, cash remains in common use by consumers and is still the second largest individual payment preference (after cards). When examined in the study, 92% of respondents indicated that they continue

to use cash regularly, albeit at a lower rate than previously. 88% of respondents say that they regularly use debit cards, and this card usage rate continues to grow.

Payment patterns also differ between different population groups. Non-Saudi residents tend to use cash more than local households⁸. Among age groups, the highest non-cash payment ratio is observed in 30 to 39 year olds, where cashless payment use represented 60% of payments. Younger people tend to prefer electronic payments over cash, suggesting an inevitable demographic trip-switch that will further change the national payment preference away from cash in the future.

Interestingly and perhaps prompted by merchant preferences or their capacity to accept non-cash payments, the use of cash is somewhat greater in rural areas than in urban strongholds, with a more prevalent

Chart 7. Use of payments means by consumers (percentage)



⁸ Saudi respondents indicated that cash was used on 39% of payment occasions compared with Non-Saudi respondents using cash on 49% of occasions.

use of cash in the countryside than in the Kingdom as a whole (46% of payments by Rural residents are in cash compared with 42% for Urban dwellers).

Many other countries have also reported substantial growth in non-cash transactions in recent years.

Although some differences in the survey methodology used and the extent of the coverage could mean that the survey results are not fully comparable, international comparisons indicate similar global trends of consumers' payment habits shifting away from cash payments and towards electronic payment means...and in most cases, this movement is to card payments.

However, in terms of overall adoption of electronic payment means, there are still major differences between these countries in terms of Cashless payment rates. Sweden leads the ratings with over 9 out of 10

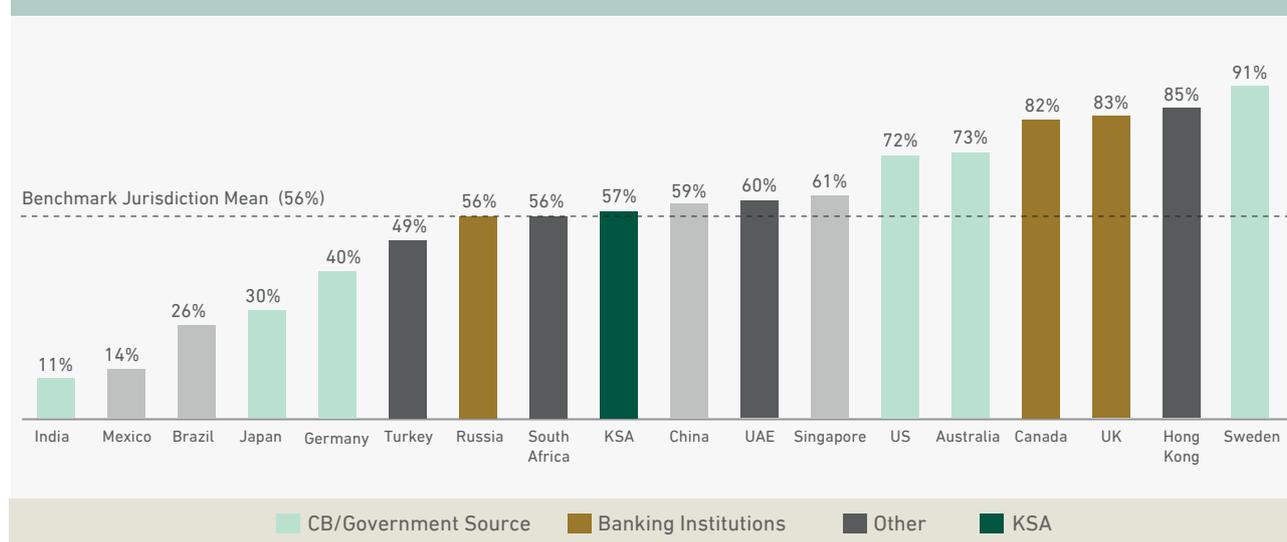
transactions being non-cash, while Germany continues to use cash more actively than any other G7 economy profiled. With a 40% cashless payment ratio measured in 2020, Germany illustrates an even higher cash usage rate than many less developed economies.

Saudi Arabia's non-cash consumer payment ratio (by volume) at 57% is slightly higher than the average of benchmark countries in the study (56%).

4.2.2 Payments by instrument

For the first time, cards are now the most frequently used payment means in Saudi Arabia, accounting for around 52.5% of all payment transactions by volume. Cash is the second most frequently used means of payment and accounts for 43% of all consumer transactions by volume and for 25% by value.

Chart 8. Non-cash payments share in selected countries



Survey results show that cash dominates for low-value payments (under SAR 100), while non-cash means used for larger-value payments.

billed utilities, telecom bills, rent, insurance and other regular bills, which may be subject to a service contract or regular subscription.

4.2.3 One-Off and Recurring Payments

Consumer payments are divided into two broad types:

- **One-off payments:** including all day-to-day payments to merchants, P2P transfers, transportation related payments
- **Recurring payments:** including mostly

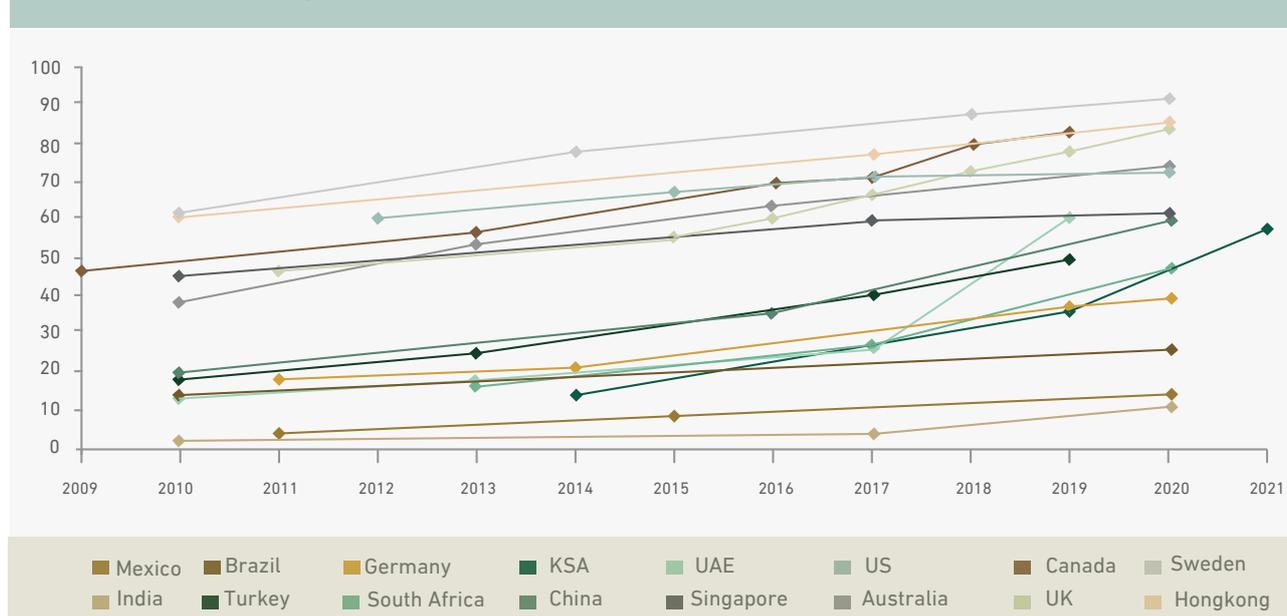
95% of all consumer payments are categorized as one-off payments, with just 5% being designated as recurring or regular payments.

Overall results show that cash remains a significant payment method for one-off payments with a 44% share. In particular, Petrol Station payments, tobacco

Table 3. Use of payment means in 2021 (percentage)

	By volume	By value
Cash	42.5	25.0
Cards	52.5	29.5
Credit transfers and other	1.9	21.6
Direct debit	0.1	0.1
Cheques	0.0	0.2
SADAD	2.7	23
E-wallets	0.3	0.5

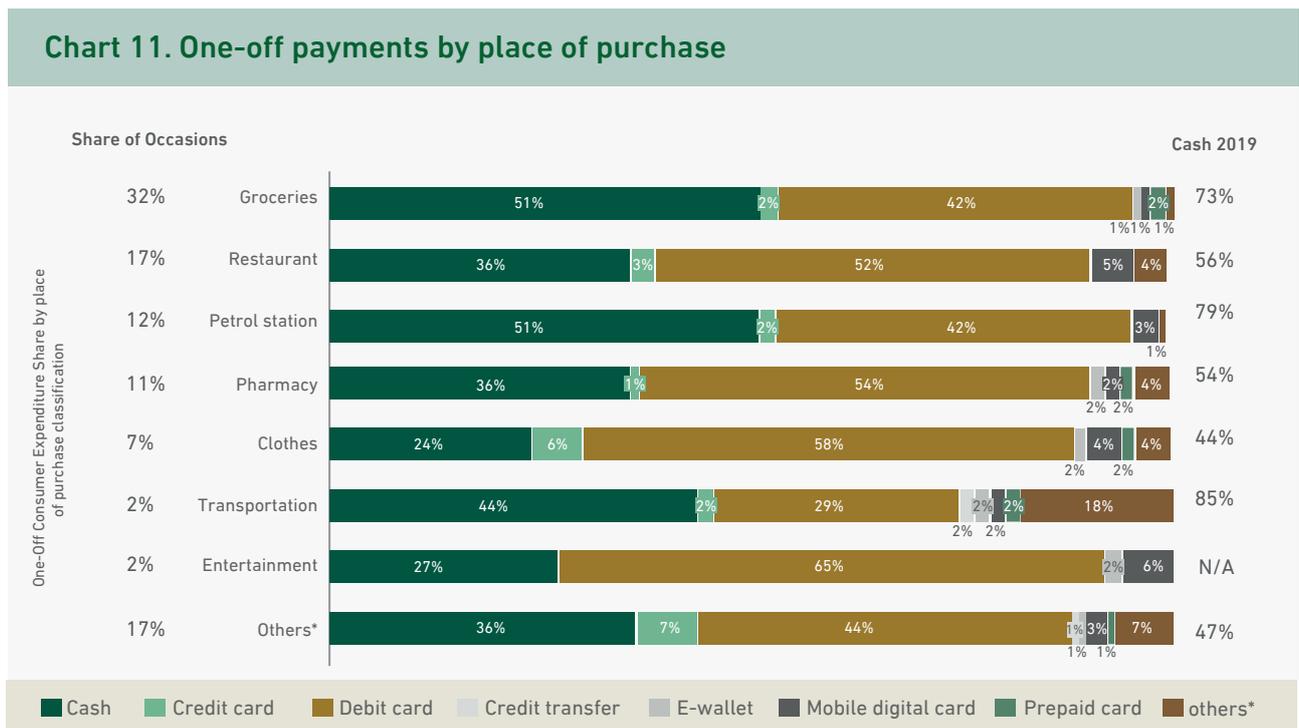
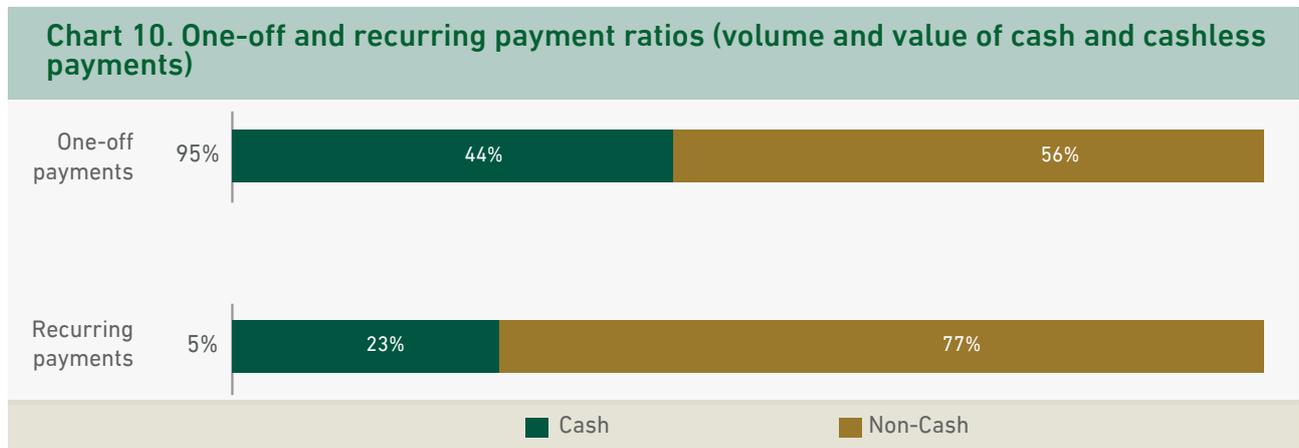
Chart 9. Non-cash payments share in selected countries



purchases, transportation costs⁹ and even a large proportion of Grocery sales retain a significant proportion of sales in cash.

The survey results show that, while cards and cash account for the vast majority of payments in the retail sector (typically accounting for 90% of consumer payments), the relative importance of a particular payment mechanism changes between Merchant categories:

- Overall, there has been a **substantial reduction in cash usage across all Merchant categories**
- We can observe **substantial variation in payment** means usage across various Merchant types
- While payments for **groceries, in petrol stations and for transportation are still cash heavy**, other sectors such as clothes, entertainment and pharmacies are dominated by cards.



⁹ Transportation excludes Gas sales but includes Taxi's, Trains and public transport.

- Spending on **entertainment and clothing** have the highest propensity for card payments

4.2.4 Growth in Non-Cash Payment Use

In 2019, when the previous assessment of Non-cash payments was undertaken, the total number of non-cash transactions was calculated at 2.6 billion. In 2021, non-cash payments are estimated at 7 billion transaction, which shows a 2.7 times increase over 2 years. Card initiated payments accounts for over 70% of cashless payments at 5.5 billion payment transactions in 2021¹⁰.

This contrasting rate of growth in non-cash payment volumes (270%) compared with modest growth in the underlying universe (195%) suggest significant substitution of

previously ‘cash payments’ with ‘non-cash payments’.

4.2.4.1 Cards

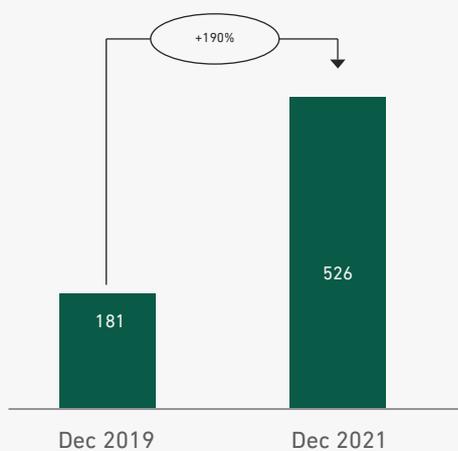
For the first time in the kingdom, Cards became majority payment means in 2021 and remains the primary source of cashless transactions growth. The overall transaction volume through PoS card transactions¹¹ was 5.2 billion in 2021 compared to 1.6 billion in 2019, which represents a growth of over 3.1 times.

Local mada cards account for over 90% of cards issued in the country and over 95% of the total transactions made.

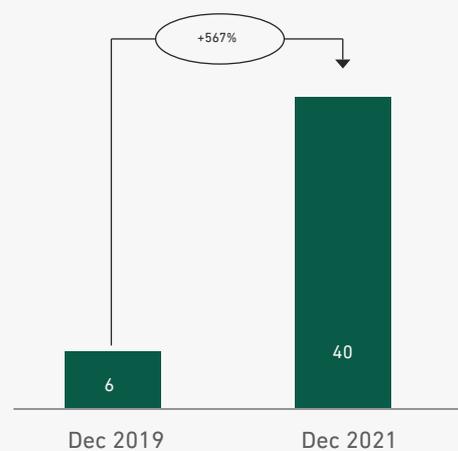
The share of Point of Sale non-cash payments using NFC¹² technology reached 95% in August 2021 compared to 51% in July 2019, while mobile payments accounted for

Chart 12. Non-cash payments per month, millions

Monthly Card POS transactions (millions)



Monthly E-commerce transactions (millions)



¹⁰ 5.5 billion payments includes Point of Sale transactions and e-Commerce payments by card.

¹¹ PoS transaction estimates for the full year 2021 include Debit (mada) Card, Credit Cards and Prepaid payment cards.

¹² NFC – Near Field Communications is a commonly used proximity based communications protocol used in card and mobile wallet payments – generally referred to as ‘Contactless’.

37% of these NFC payments at Point of Sale. Survey results show that 88% of respondents have indicated that they use debit cards on a regular basis.

Credit card penetration rates in Saudi Arabia remain quite low however, with 17% of respondents indicating that they have credit card. Looking at card payments in the Kingdom, credit cards accounted for just 1.5% of all consumer payments by volume and 4% by value during the first 8 months of 2021 – confirming that the average payment made using a Credit Card is up to 3 times larger than the average transaction size.

At the same time, we observe a substantial decrease in the overall average transaction value for card payments – reducing from approximately SAR 177 in 2019 to SAR 96 in 2021, as consumers take advantage of the convenience of ‘tap-and-go’ payments to displace traditionally low value cash payments.

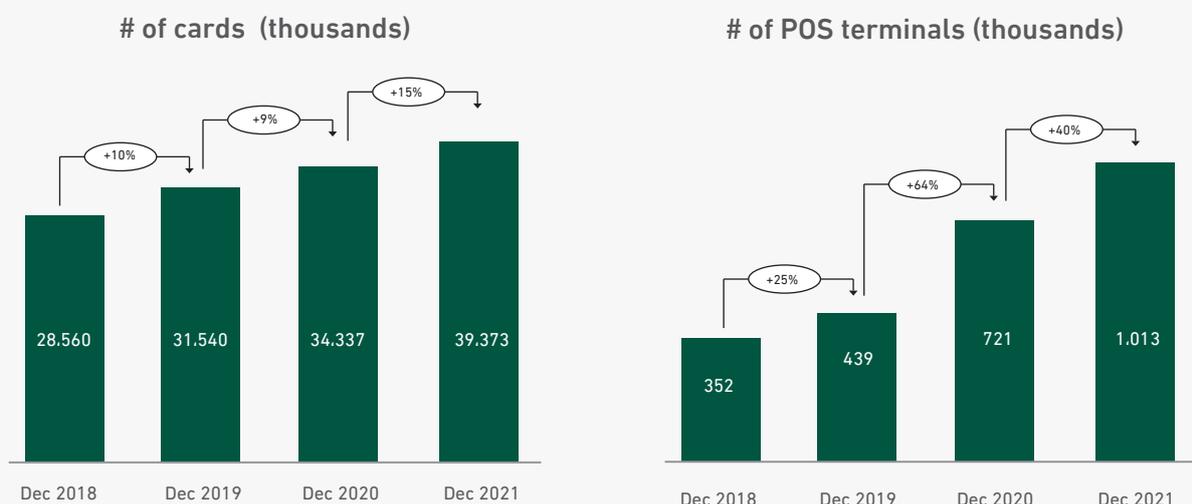
The retail market in the Kingdom has experienced rapid expansion in the number of POS terminals installed. This growth has been largely driven by a requirement for all retail outlets to facilitate customer preference for non-cash payments. By the end of 2021, installed POS exceeded 1 million terminals.

4.2.4.2 Instant payments system

In February 2021, the Kingdom introduced an Instant Payments capability under the ‘SARIE’ (IPS) scheme title. The system provides real-time account-to-account transfers with an average cost of SAR 0.50 per payment up to SAR 500, increasing to SAR 1 per payment for transfers between SAR 500 and SAR 20,000 (this compared to a cost of typically SAR 7 for same-day interbank transfers previously charged by RTGS).

SARIE IPS system use the advanced ISO 20022 financial messaging system, offering

Chart 13. Card infrastructure



a broad range of beneficiary identification options for transfers, including Mobile number, National ID and others, in addition to IBAN.

The IPS has reached over 20 million transactions per month in its first year with an average transaction value (ATV) of around SAR 1,500 per transaction.

Going forward, instant payments are expected to contribute substantially to the digitization of payments, especially in the space of personal transfers.

4.2.4.3 SADAD

Launched in 2004, SADAD is an integrated billing and payment system serving over 100 of the largest billers in the Kingdom. These include telecommunication, utility companies, insurance providers, banks, e-commerce enterprises, government services and others.

Around 94% of the bills issued by the government sector and utility companies were settled through the SADAD system in 2021 and it is expected to grow further as the household population in the Kingdom continues to grow.

Looking at payments made across the Kingdom, SADAD platform accounts for around 2.4% of all payments by volume, with over 293.1 million bills paid through SADAD

in 2021. 90% of these payments made by consumers.

4.2.4.4 E-wallets

While still a relatively modest share of overall payments in the kingdom, Digital Wallets have increased their relative share substantially in recent years and already accounted for approximately 0.3% of all consumer transactions¹³.

At the same time, 7% of respondents reported that they had some experience of using e-wallets for a payment in the recent past, reflecting its strong potential for future growth.

By way of sector concentration, unlike the card payments sector where there are over a dozen significant payment card Issuers, the top-three e-wallet companies in Saudi Arabia currently account for over 90% of the e-wallet transactions (wallet-to-wallet).

4.2.5 Demographic characteristics

The study reveals differences in cashless payment use across different demographic groups, with some significant differences in payment behavior based on geography and age, manifest in explosive growth in mainly card payments.

The ratio of non-cash payments by female respondents exceeds that of male respondents, with 60% of payments by

¹³ Sources: As recorded in the Consumer survey (July to September 2021) and reports from e-Wallet companies

females being non-cash. This significant increase in female use of digital payments appears to reflect increased financial inclusion and greater participation by females in the labor force, as well as a subsequently higher share of female income being received by non-cash means (i.e. direct salary credits and other value transfers).

when compared to Saudi nationals, with 51% on non-Saudi's paying by card or other non-cash means, while Saudi nationals record 61% of all payments being non-cash. However, even though this gap remains material, the difference (10 percentage points) has narrowed over the last 2 years (previously 12 percentage points).

And when viewed by nationality, the non-Saudi population in the Kingdom has a substantially higher 'cash payments' profile

This persistent use of cash - at 49% and 39% respectively - occurs even though both Saudi and Non-Saudi respondent groups report a

Chart 14. Use of payment means (by volume)

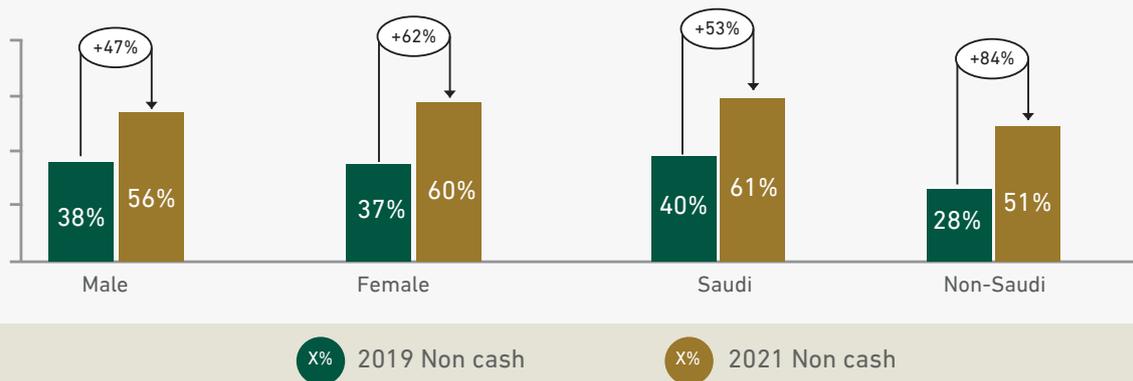
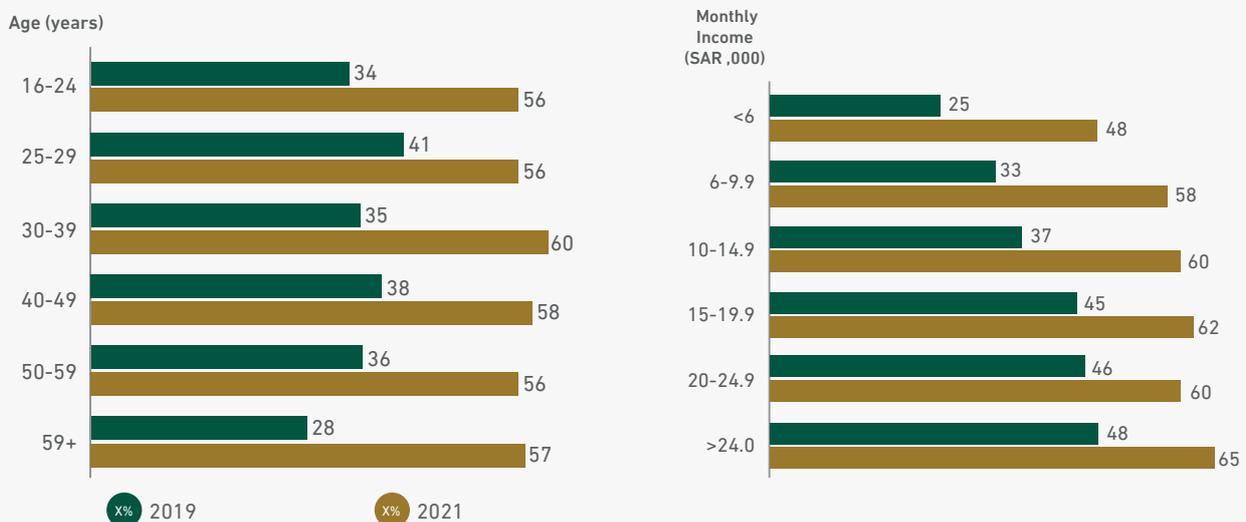


Chart 15. Non-cash payment volume by age and income level



relatively high proportion of bank account ownership (92% of surveyed Saudi nationals and 86% of surveyed Non-Saudis).

Looking at income as a catalyst for payment behavior, Saudi nationals are more likely to have their salary paid to their Bank account (97%) compared to expatriates (91%), supporting the higher propensity to use non-cash payments. (This follows the general trend of Non-Cash credits inward prompting Non-Cash payments outward).

Viewed by age, respondents aged from 30 to 39 show the highest propensity to use cashless payments (60% non-cash share), however the difference in non-cash usage by different age groups is not particularly significant.

There is evidence of a clear positive correlation between non-cash share of payments and household income level [Chart 15], with use of non-cash payments growing with income level.

4.2.6 Consumer Payment Behavior by sector

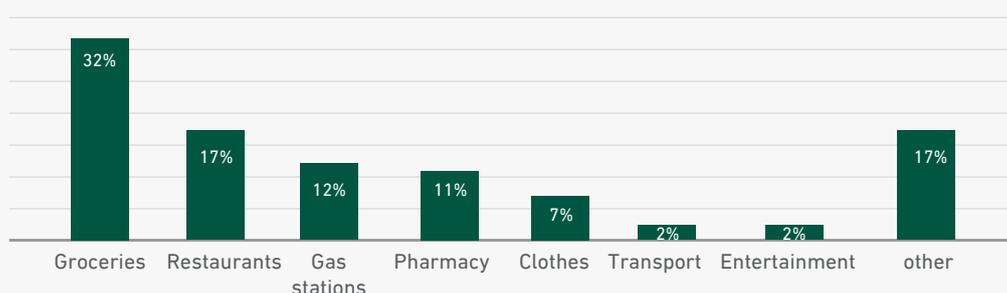
On closer examination of consumer spending (by frequency), we see that almost 1 in 3 (32%) of all consumer purchases, or spending occasions, are made to buy groceries – and these are typically distributed across supermarkets and bakala's.

Just under one in five or 17% of payments are made at restaurants, including traditional restaurants, fast food outlets and coffee-shops. Gas stations account for 1 in 8 payment transactions, closely followed by Pharmacy purchases at 11%. Overall, only 7% of declared consumer purchases are made on clothing.

Reducing Cash Usage over time

Across all of these merchant sectors, the share of cash being used to make these purchases has declined between 2019 and 2021 – reflecting the overall reduction in cash purchase share from 64% in 2019 to 43% in 2021.

Chart 16. Consumer Payment Behavior by sector - Share of All Payments



For grocery purchases, cash (as a payment medium) declined from 73% of occasions in 2019 to 51% of occasions in 2021 – with this downward trend in cash usage set to continue.

At restaurants, whereas over half of all payments in 2019 were in cash (56%) this had reduced to just 1-in-3 in the most recent survey. Gas Stations were one of the highest users of Cash payment in 2019, accounting for 79% of all gas station purchases by volume. This has reduced to just over 1 in 2 in 2021 (51%), with the vast majority of gas stations now accepting at least the national debit card scheme (mada), with an increasing trend in less cash usage among this merchant sector.

Spending by Consumer type:

On closer examination, Saudi nationals make 27% of all of their payments at supermarkets compared with only 12% of payments at Bakala's.

Expats living in the Kingdom, show a slightly higher concentration of payments at supermarkets, with 30% of their purchases

taking place at Supermarket outlets, compared with 13% at Bakala's.

Restaurants (including coffee shops) account for 25% of payments by Saudi nationals – considerably more than the 15% of payments made at these 'prepared food' outlets made by expatriates.

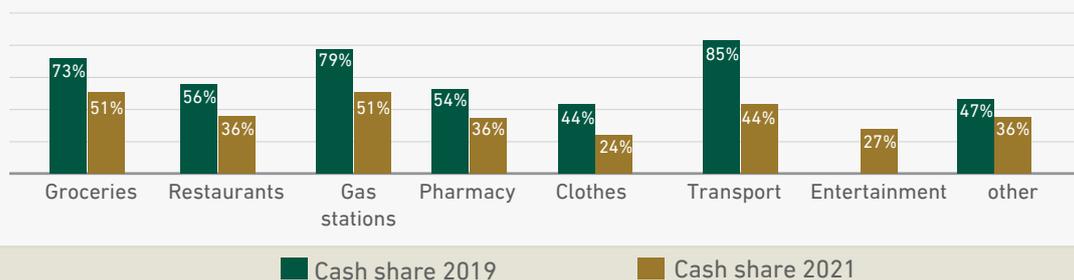
It is perhaps surprising that women appear more likely to have a higher proportion of their spending activity in restaurants, accounting for one-in-four of all spend by women, compared with just 16% by men.

Gas stations account for approximately 1 in 8 payments (12% overall by frequency). While there is little difference between the share of gas station payments made by Saudi and Non-Saudi nationals, it is apparent that men are more likely to be driving than women, with gas stations accounting for 15% of all payments made by men compared with 11% of payments made by women.

4.2.7 Cash Holdings and Withdrawals

Over 80% of respondents always keep some

Chart 17. Share of Payments made in cash – 2019 & 2021



amount of cash at home in addition to that kept in their wallets, although this may be reducing. On average, respondents kept around SAR 600 at home (compared to SAR 870 in 2019). There is no significant difference between the cash holding habits of male and female respondents, although Saudi nationals tend to keep up-to 20% more cash than non-Saudis (although this is probably more a reflection of relative wealth than any relative affinity for cash payments).

On average, people withdraw cash 6 times per month from an ATM, amounting to a total of SAR 2,814 per month. But it is important to note that the average ATM withdrawal amount is skewed by a relatively small number of higher value withdrawals. While the average (mean) monthly withdrawal value is SAR 2,814, the most common (or modal) withdrawal value per month is SAR 600.

Male respondents indicated a propensity to withdraw cash more often than female respondents (6.3 vs. 5.8 times per month

respectively), while local Saudi Citizens also tend to withdraw cash slightly more often than expatriates (6.1 vs. 5.9 times).

4.3 BUSINESS SPENDING PATTERNS

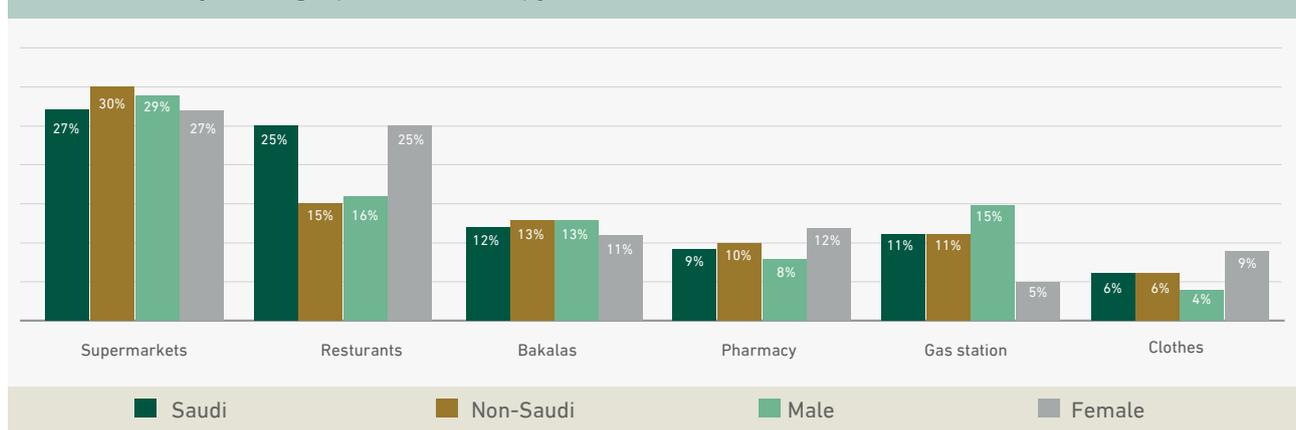
4.3.1 Business trends

Cash payments in Businesses witnessed a rapid decrease over the last 2 years, with the share of cash payments initiated by businesses decreasing from 49% (by volume) in 2019 to just 16% in 2021. This significant change has been caused primarily by SME and Micro companies changing their payment habits.

Larger payments for all businesses, and the overwhelming majority of payments made by larger companies, are mostly made as non-cash payments. This has resulted in cash payments accounting for only 5% of all business payments when measured by value (compared to 9% in 2019).

The remaining cash transfers are largely represented by SME and Micro Businesses

Chart 18. Spending by Consumer type



affecting B2P (salary and related staff payments) and B2B (supplier) payments.

Larger business and corporates tend to automate these payment types and have a correspondingly lower use of cash, with B2P reported at 100% cashless and B2B at 99% for these bigger businesses.

Payments by all types of businesses to government entities have been reported to be 100% cashless.

Looking at payments behavior across the 14 distinct economic/business sectors, cash and credit transfers are common payment instruments for all. It is not surprising that those business sectors with lower penetration of e-payment channels have a heavier dependence on cash - such as Retail, Agriculture and Business services.

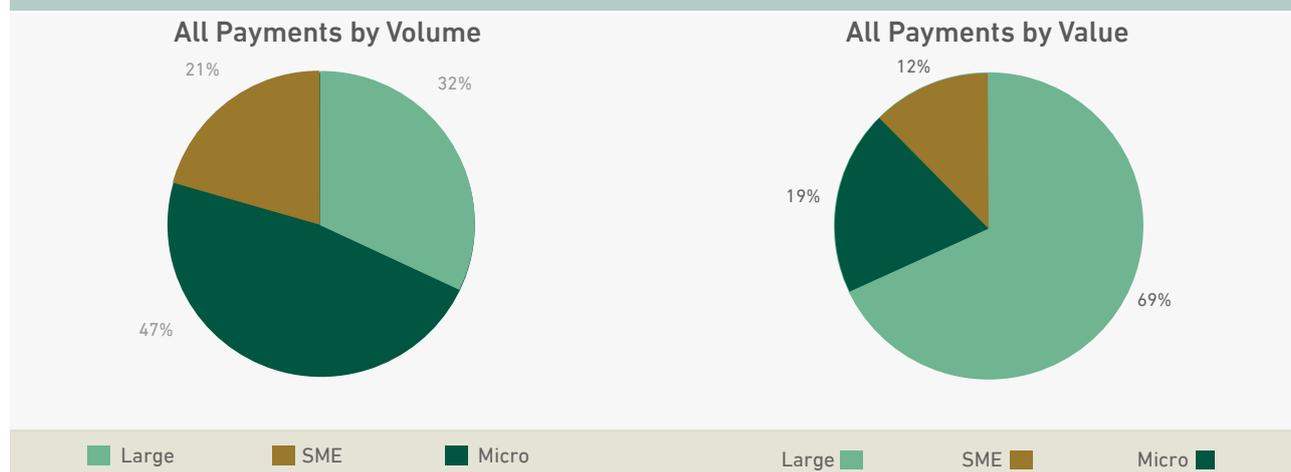
Business sectors comprising larger businesses (e.g. the Financial Services sector) tend to conform to 'large businesses behavior' and favor cashless payments that provide confirmation of transactions, reconciliation reports and a record of payments made, whereas business sectors constituting a high proportion of SME and Micro-business establishments, tend to report higher share of cash payments.

In volume terms, Micro enterprises are responsible for almost half of all business transactions (47%). Given their larger cash-usage footprint, this drags the overall ratio of non-cash payment use among all businesses down, contributing to the somewhat higher overall business payment 'cash ratio' at 16%. However, the micro business share of overall business payment value is estimated at just 19% - reflecting the relatively lower average

Table 4. Share of the payments by business type (percentage)

Share of Non-cash payments by volume	2019	2021
MICRO	32	76
SME	62	78
LARGE	97.9	99.6

Chart 19. Share of the payments by business type



transaction value (ATV) for Micro business payments. Large companies are almost completely cashless in their payment habits.

Overall for businesses, salaries represent one in every three (36%) of all B2P payments. Results indicate that one in five of these payments are made in Cash (21%). This relatively high share of Business payments in cash is once again driven by SME and Micro businesses practices and nominal (but declining) preference for cash.

At the same time, travel expenses/ compensation and Social Benefits are generally only paid by 'Larger Enterprises', using electronic transfer or prepaid cards. When coupled with the fact that larger companies (are obliged to) pay salaries electronically, this results in lower cash payments for bigger companies.

Payment to suppliers (B2B) account for 50% of total payments by volume and 76%

of total payments by value. Around 17% of those payments are paid in cash, with SMEs and Micro Businesses reporting 24% and 25% of cash payments to suppliers in total respectively.

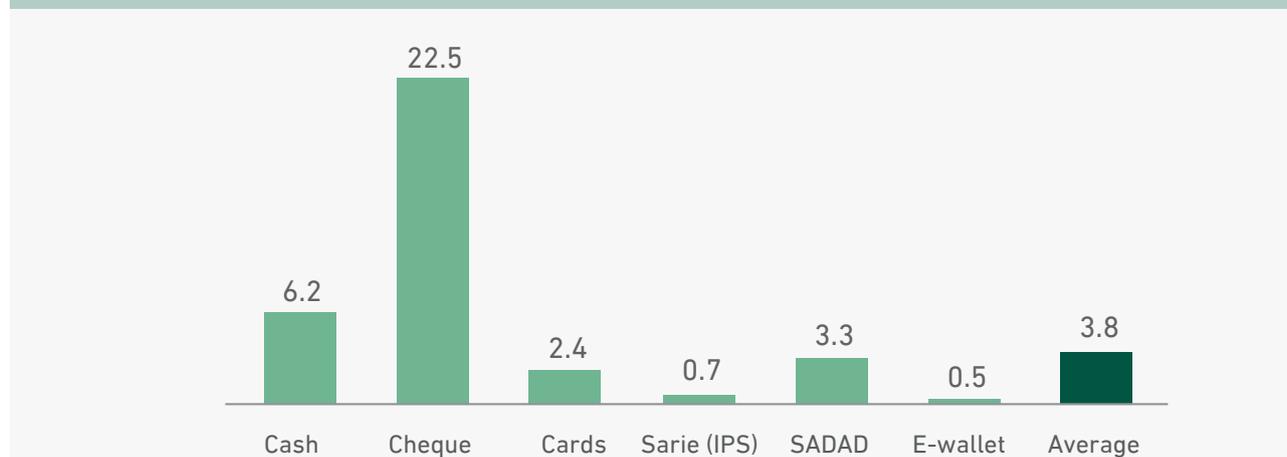
From the viewpoint of businesses, all government services (including trading licenses and permits) must be bought and paid for using cashless payment mechanisms. Acceptable payment options include cards, credit-transfers and the SADAD payment platform.

4.4 Efficiency through Cashless Payments

The change in the payments mix in the economy has impacted the typical cost of a payment, taking into account the 'social cost' of effecting a typical transaction.

In 2019, with 64% of consumer payments still effected using cash, the typical or average cost of a payment was estimated at

Chart 20. Typical Cost of Payments by Instrument – 2021 (SAR)



13 Sources: As recorded in the Consumer survey (July to September 2021) and reports from e-Wallet companies

SAR 5.63. The significantly larger proportion of payments effected using cards, direct transfers and contactless payments in 2021 has reduced the overall average cost to SAR 3.83, making our commercial economy more efficient...and more attractive for investment.

Cards and SADAD payments remain very efficient and below the average or 'typical' cost, but these are edged out by the emerging 'Instant Payment' through SARIE, which can be effected using existing consumer technology sets (mobile handset/smart phone, tablet or PC) to a proxy beneficiary, significantly reducing the time invested and subsequent social cost.



5

Concluding Comments

Overall, the progressive growth of non-cash payments in the kingdom – prompting a change in consumer behavior and a reduction in the share of cash payments – supports the drive towards a more efficient commercial ecosystem with a lower dependence on the relatively expensive logistics infrastructure required to support cash.

The Saudi Central Bank program of Universal Access for cashless payments continues to support rapid growth in card payments at Point of Sale. The particular growth in e-Commerce activity and the progressive reduction in ‘Cash on Delivery’ for e-Commerce delivery, also shows evidence of promoting growth in the non-cash payments share.

Regulatory initiatives by the Central Bank have broadened the supply side for payments service provision (through Payments law and associated Regulatory instruments) facilitating easier access to payment services and promoting innovation in the sector. In particular, the Central bank is facilitating new solutions through the Fintech Regulatory Sandbox and has implemented a separate Payment Services Provider Regulation in 2020. Introduction of the Open Banking regulations planned for 2022 will drive further innovation in both consumer and corporate payment segments.

Finally, innovation in payment solutions and the associated technologies, including ease

of use through contactless payments as well as low-cost, real-time payments through SARIE, seems set to continue to support consumer and business choice and a further migration towards less-cash payments.

The ratio of 70% of all consumer payments to be non-cash by 2025 appears credible, given the mid-year 2021 ratio of 57% non-cash. However, while innovation and development in the broad digital payments space continues to support (consumer and business) customer choice in payment means – including regulatory and technical systems reform to support new payment service providers and new payment solutions - cash will remain a significant and important feature in the overall payments ecosystem in country. To this end, cash will continue to be supported by the Saudi Central Bank in its strategic payments program.

