

# RETAIL PAYMENT COSTS AND SAVINGS IN KOSOVO

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# FINANCE, COMPETITIVENESS & INNOVATION GLOBAL PRACTICE

PAYMENT SYSTEMS DEVELOPMENT GROUP



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# EXECUTIVE SUMMARY

This report is based on a study of the costs of retail payments in Kosovo, using a methodology (A Practical Guide for Measuring Retail Payment Costs) developed by the World Bank's Payment System Development Group (PSDG), part of the Finance, Competitiveness, and Innovation Global Practice. The study is based on survey data, with questionnaires administered to a sample of households and businesses on the demand side, as well as to 9 commercial banks operating in Kosovo; the Central Bank of Kosovo (in its role as currency issuer and as the operator of the Automated Clearing House); 4 money transfer operators; and the Post Office on the supply side<sup>1</sup>. The study aims to establish a sound economic baseline for

the national retail payments system regarding the costs of different payment instruments to better guide system development and enable high-impact changes. Efficiency gains resulting from migration to lower-cost retail payment instruments and more efficient use of those instruments could have significant benefits for economic development and growth as the transaction costs of exchanging goods and services are reduced. Lower costs of retail payments can also fundamentally extend the access of electronic payment services to lower-income households and further improve the efficiency of the national payments system as access to modern payment instruments is broadened.

## The key findings of the analysis of the data collected via surveys for individuals are as follows:

- Bank account access by Kosovar adults is around 61.0 percent, with 47.0 percent and 14.0 percent of those having access to accounts also owning a debit and a credit card, respectively.
- There is a gender gap (male to female) of 15 percentage points in bank account access, 13 percentage points in debit card ownership, and nine percentage points in credit card ownership.
- There is an urban-rural divide in bank account access: the urban population is 9, 11, and 7 percentage points more likely than the rural population to have access to a bank account, own a debit card, or a credit card, respectively.
- Of all annual payments initiated by adults, 97.7 percent are in cash and are concentrated at the point of interaction<sup>2</sup> to purchase groceries and essential goods<sup>3</sup>.
- In terms of annual payments received, 71.8 percent of those are received in cash. The other reported payment instrument used to receive payments is credit transfer.

<sup>1</sup> The demand side surveys were done in January-February 2020 and the supply side surveys were done in 2018.

<sup>2</sup> The point where the payer and the payee converge (typically the point of sale).

<sup>3</sup> This includes groceries and food supplies, bread and baked goods, gas and transportation, newspapers and magazines, and alcohol and tobacco.

- The total annual retail payment costs incurred by individuals amount to 2.43 percent of Kosovo's 2019 GDP.
- Cash cost accounts for 1.49 percent of GDP, while electronic payment instruments costs (collectively) account for less than 0.65 percent of GDP
- Service channels more strongly associated with the use of cash and other paper-based payment instruments (e.g., pay office, agent outlet, bank branch) are the costliest for users compared to other service channels such as the Internet due to the time spent to arrive at the service location, wait in line, and undertake the transaction.

**The key findings of the analysis of the data collected via surveys for businesses are as follows:**

- Among businesses, about 96.2 percent have access to a bank account, and of those, 54.3 percent have used online banking over the past three months.
- Of all payment volumes initiated by businesses, exactly half of those are in cash. In terms of business size, most transactions initiated by micro and small businesses are in cash, accounting for 63 percent and 43 percent, respectively.
- On the receiving side for businesses, 55 percent of payments are conducted in cash, and the remaining are divided among debit or credit cards, credit transfers, and direct debits.
- In total, businesses in Kosovo incur annual costs equal to 1.65 percent of GDP (2019) in the context of receiving and initiating payments across all payment instruments, with cash alone accounting for 1.03 percent of GDP.
- The top three most important cost components of cash are related to reconciliation and fees for services outsourced<sup>4</sup>.

**The key findings of the analysis of the data collected via surveys for the supply side are as follows:**

- Overall total supply-side costs associated with all payment instruments are estimated at approximately 0.37 percent of Kosovo's 2019 GDP.
- Cash costs make up approximately half of all supply-side costs. Consistent with the increase in debit card issuance and debit card transactions, debit cards costs account for about 30 percent of overall costs.
- The key cost components of cash are time use and logistics<sup>5</sup>. For debit and credit cards, it is data processing fees and interchange fees. The main cost components for direct debits and credit transfers are associated with over-the-counter manual activities and archiving.

**The key findings of the analysis of the data collected via surveys for the entire economy are as follows:**

- From an aggregated economy perspective, the Kosovar economy bears annual costs of about 4.4 percent of GDP across all retail payment instruments, actors, access channels, and use cases, with cash accounting for about 2.7 percent of GDP, or 60 percent of all costs.
- Electronic payment instruments are jointly associated with costs accounting for about 1.4 percent of GDP (or 32 percent of all costs). Significant savings can be achieved for the Kosovar residents in the transition process from paper-based to digital payments, reaching up to 1 percent of GDP. For example, a 50 percent substitution of remittance cash payments with electronic credit transfers would generate annual savings of €30.7 million.

<sup>4</sup> Specifically, they include the costs of managing and reconciling cash funds; emptying and balancing cash registers/cash accounts and back-office cash management; and paying professional money transporters for transporting cash.

<sup>5</sup> This includes over-the-counter deposits/cash-in and withdrawals/cash-out (in bank branches and agents) and back-office cash handling, as well as ATM maintenance and transportation costs.





# I. METHODOLOGY

Strengthening the security and reliability of the national payments system and fostering the use of efficient payment instruments are important public policy goals. Greater use of electronic payments rather than cash and other paper-based instruments has significant economic and social benefits, including lowering costs and thus raising economic efficiency and broadening access to financial services for those currently excluded.

The methodology applied in this study for Kosovo is based on the World Bank's A Practical Guide for Measuring Retail Payment Costs<sup>6</sup>. It aims to examine payment transactions in the overall context of their use by including key factors likely to affect retail payment costs, i.e., payment type, transmission method, and use case. The two main transmission methods/access channels are in-person payments (for example, point of interaction, ATM, bank branch, pay office, agent) and remote payments (the Internet, telephone/mobile phone network). Different use cases are also considered in the context of consumers (remittances, payments for goods/services, recurring bills, salaries, pensions, and so forth). Furthermore, the following are considered in terms of payment instruments: cash, debit card, credit card, credit transfer, and direct debit (paper-based and electronic for the latter two).

Specifically, on the demand side of retail payment actors, consumer analysis provides insights into potential savings that may arise when migrating from paper-based to electronic processing of payments. Savings in each scenario are shown by using the annual cost figures and considering specific reduction projections resulting from the migration of one payment instrument (e.g., paper-based credit transfer) to another (e.g., electronic credit transfer) for the various use-cases like retail payments, remittances, salary and pension payments.

For the supply side, deposits and withdrawals (own account and third-party accounts) are also examined, separately from actual payments/transfers, both by the payment instrument used (i.e., debit card, credit card) and the access channel (i.e., bank branch, ATM). Regardless of the intermediate instrument used during the withdrawal, all withdrawal costs are linked to cash in the analysis.

Consumer and business surveys (demand side) were conducted in January/February of 2020, while the payment service and infrastructure provider surveys (supply side) in the spring of 2018. However, given that no substantial changes have occurred in the retail payments market of Kosovo from the supply side over those two years, it is safely assumed that volumes and costs reported by payment service and infrastructure providers are also valid for 2019 (before COVID-19). As such, 2019 is used as a reference year for analyzing the demand and supply sides<sup>7</sup>.

<sup>6</sup> For an in-depth read of the methodology, please see World Bank (2016).

<http://documents1.worldbank.org/curated/en/255851482286959215/pdf/111216-WP-P155382-PUBLIC-ABSTRACT-SENT.pdf>

<sup>7</sup> All data collection for this exercise was conducted pre-COVID and therefore, there are no implications in terms of the data being treated to represent an extraordinary period. Moreover, the time gap between demand and supply side data collection has also been observed in other similar exercises but does not have any implications for analysis or inferences.

**Consumers:** In terms of data collection, a survey firm (UBO Consulting) administered the survey through face-to-face interviews using computer-assisted personal interviewing (CAPI) between February 18 and March 18, 2020, in all thirty-eight municipalities across Kosovo. The sample population units were chosen using a stratified multi-stage process of identification and selection to ensure minimal variance and costs for all estimates while also preserving the ability to obtain valid point and variance estimates for population parameters of interest. Weights were implemented to reflect the structure of the population, in terms of ethnicity and age group. The analysis included a total of 1,001 respondents with a representative sample of randomly selected adults (ages 18 and above) of different genders and ethnicities, and across settlement areas (i.e., urban and rural).

**Businesses:** UBO Consulting administered the business survey through field research between January 20 and February 28, 2020, covering businesses from both urban and rural areas in all seven administrative districts of Kosovo. The list of the registered businesses provided by the Kosovo Agency of Statistics (ASK) to the Central Bank of the Republic of Kosovo (CBK) was used as a basis for the sampling frame of the business survey. A stratified sampling technique was used to select the sample, with a final sample size of 395 businesses. Strata were based on five economic sectors (construction, manufacturing, services, trade, and transportation) and four business sizes (micro, small, medium, and large). Considering the importance of Pristina, the capital city, as the country's main economic center, around 30 percent of the companies in the sample were located there. Of the 395 businesses selected to be interviewed, 192 completed the interview, 139 refused to participate, while 64 businesses were shut down, idle, or no contact could be established. The responding businesses came from all five economic sectors; the largest sector was trade. In terms of the geographic spread, the responding businesses were allocated across rural and urban areas, covering twenty-seven municipalities of all seven administrative districts of Kosovo. The limited number of businesses interviewed also limited the granularity in the analysis and of business data, including the nuances on the costs in the different payment instruments and use cases on a transaction basis.

**PSPs/PIPs:** For the supply side of the payments market in Kosovo, no sampling technique was used given the small number of supply side actors in the market. Data was gathered from: nine commercial banks (out of eleven operating in Kosovo); the Central Bank of Kosovo (in its PSP role as and in its PIP role as the operator of the Automated Clearing House); four money transfer operators (MTOs); the Postal Office. Customized questionnaires were sent electronically to each participating institution. Respondents were given two months' time to fill out the questionnaires (given that data from the different departments had to be put together) and return them to the CBK and the World Bank. CBK and World Bank experts addressed the issues/questions that came up during that period. Data quality control followed, where in some cases additional information and clarification was requested from the responding institutions, particularly where inconsistencies and errors were detected. It should be emphasized that the data is analyzed and presented by payment instrument, aggregating all different types of institutions, so that anonymity and confidentiality are preserved.

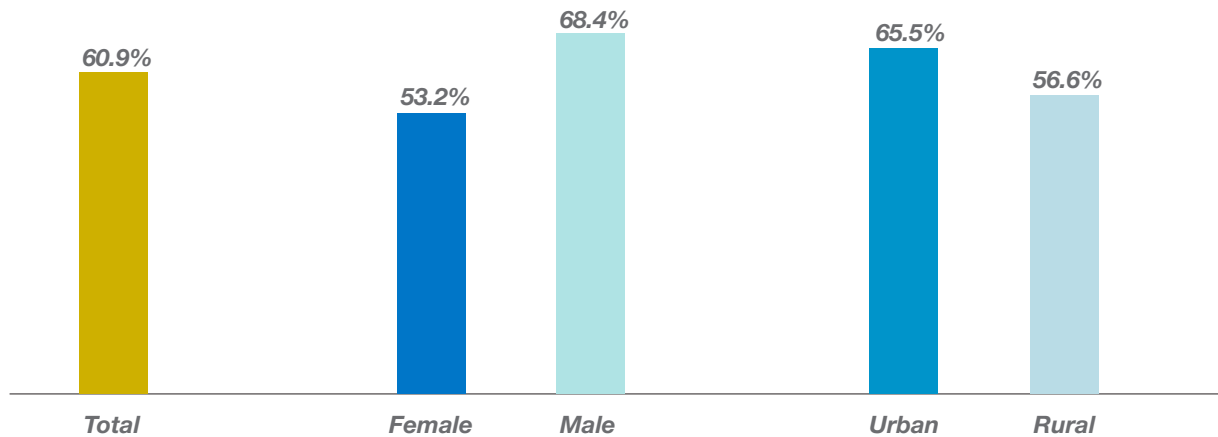


## II. ELECTRONIC PAYMENTS ACCESS

### II.1 CONSUMERS

According to the survey findings, 60.9 percent of Kosovar adults have access to a bank account<sup>8</sup>. The gender gap in account ownership is 15.2 percentage points, with 53.2 percent females vs. 68.4 percent males reporting having access to a bank account. Moreover, bank account ownership falls to 56.6 percent of the adult population in rural areas compared to 65.5 percent in urban areas.

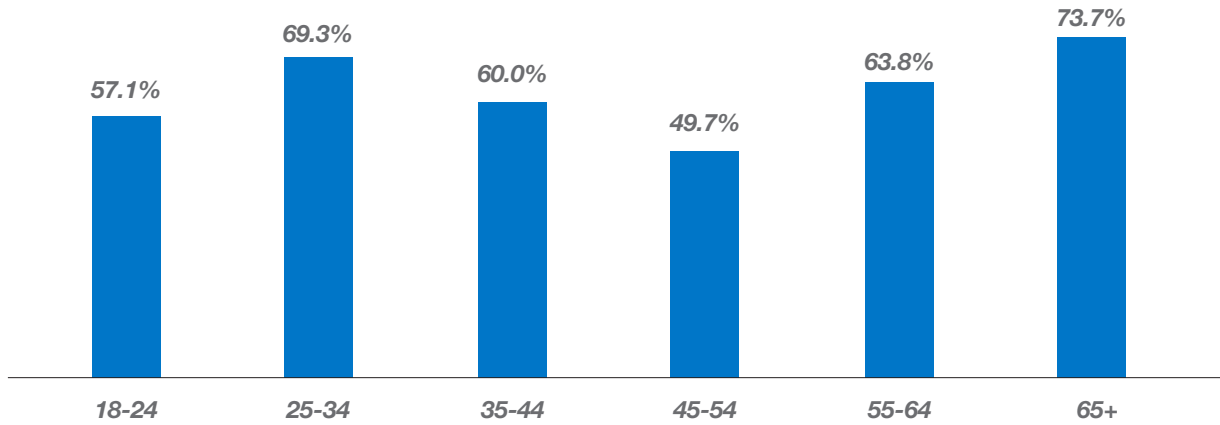
Figure 1: Bank account access across gender and settlement categories



Across age categories, adults aged 65 years and above present the highest ratio for bank account access at 74 percent, followed by those in the age group of 25 to 34 (69 percent) and 55 to 64 years (64 percent). The findings for the senior group (65+) could be explained by the fact that all retired seniors receive their pensions directly to bank accounts and, as such, need to have access to a bank account by default.

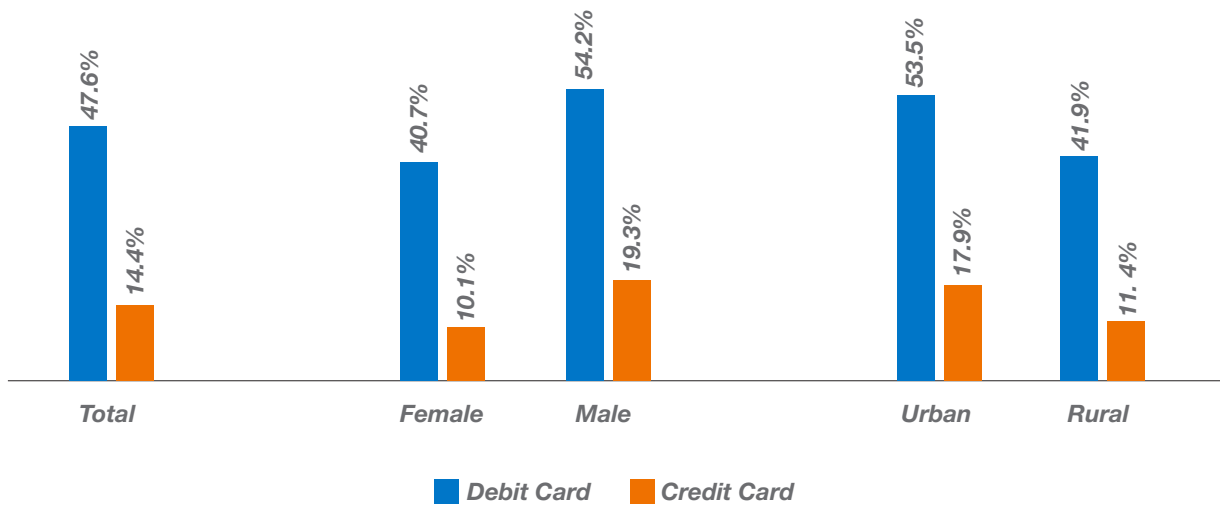
<sup>8</sup> Defined as an account held at private commercial banks which enable the user to make deposits and initiate/receive payments.

Figure 2: Bank account access by age group



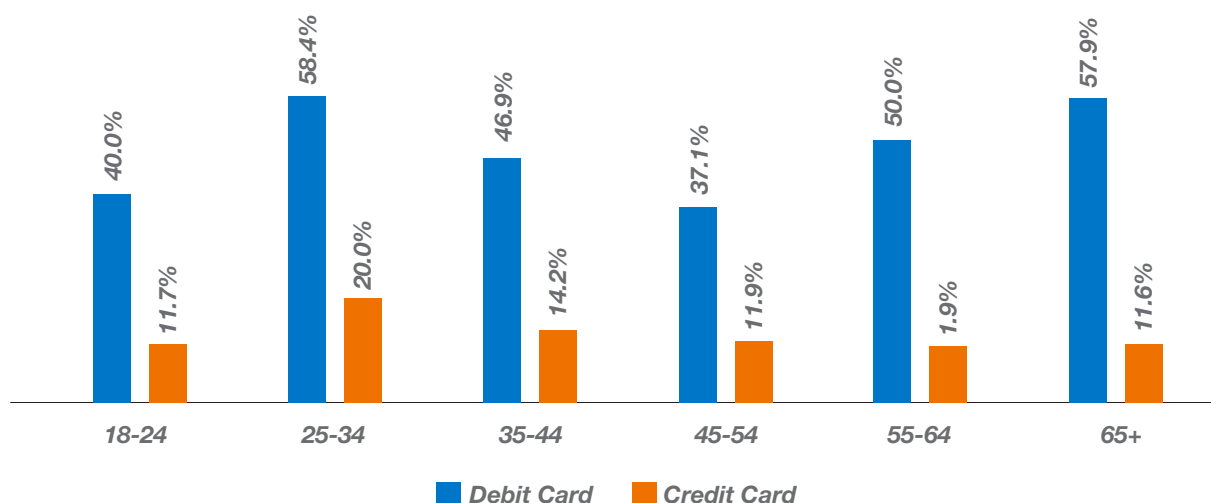
Furthermore, 47.6 percent of those with access to a bank account reported owning a debit card, while 14.4 percent reported owning a credit card. The gender gap in debit card ownership is 13.6 percentage points (40.7 percent among females vs. 54.2 percent among males). Adults living in urban areas are 11.6 percentage points more likely to own a debit card than those living in rural areas (53.5 percent vs. 41.9 percent). The gender gap in credit card ownership is lesser at 9.2 percentage points. Rural respondents are about 7.5 percentage points less likely to own a credit card than their urban counterparts (11.4 percent vs. 17.9 percent).

Figure 3: Debit and credit card ownership across gender and settlement categories (for adults with access to a bank account)



Across age categories, for those adults with access to a bank account, the highest debit card ownership ratio was observed for ages 25 to 34 years (58.4 percent).

Figure 4: Debit and credit card ownership by age group (for those adults with access to a bank account)



Kosovars formally employed in the public sector are most likely to have access to a bank account at 88.0 percent, followed by the self-employed at 77.8 percent. Adults who were unemployed or studying were much less likely to own a bank account at just 34.5 percent and 50.6 percent, respectively. Debit card ownership is also higher among those employed in the formal sector - 69.0 percent among public-sector employees and 67.0 percent for those employed in the non-public sector. The self-employed respondents followed at 58.0 percent. Credit card ownership is highest among those employed in the public sector at 48.0 percent, followed by the self-employed and those employed in the non-public sector (32.0 and 30.0 percent, respectively).

Education levels also play a role in bank account ownership. Those with completed university or post-university education are most likely to have access to a bank account at 92.1 percent and 80.3 percent, respectively. Those with secondary education or vocational training are less likely to own a bank account (57.0 and 58.0 percent). Credit card ownership also increases with higher education levels – adults with a university (36.0 percent) or post-university (51.0 percent) are much more likely to own a credit card compared to those with just a primary (11.0 percent) or secondary level (20.0 percent) education<sup>9</sup>.

## II.2 BUSINESSES

According to the survey findings, an overwhelming majority of surveyed businesses in Kosovo (96.2 percent) have access to a bank account. The account access gap, based on the size of the company, is not significant. Small, medium and large enterprises have universal access to a bank account, while only 5.5 percent of micro-businesses report not having access to a bank account. However, the ownership varies based on the type of industry. All businesses in the construction & manufacturing sector have access to a bank account, compared to 96.3 percent and 91.1 percent of those in the trade and services industry, respectively.

<sup>9</sup> Income data was not asked in individual surveys given the sensitivity of the information. Such information, however, is not critical to the core analysis of this exercise.

Table 1: Bank account access distribution (%) overall and by industry and business size

		Account Access (%)
<b>All businesses</b>		<b>96.0%</b>
<b>By sector</b>	Construction & Manufacturing	100.0%
	Services	91.1%
	Trade	96.3%
<b>By Firm Size</b>	Micro	94.5%
	Small	100.0%
	Medium	100.0%
	Large	100.0%

In terms of the overall online banking use, over half (54.3 percent) of those with an account use online banking<sup>10</sup>. When segmented by industry type, approximately half of businesses in services and trade sectors use online banking, and this number increases to 57.6 percent for firms in the construction & manufacturing industry. It is worth noting that usage of online banking varies relative to business size. According to the sample analysis, all large businesses in Kosovo use online banking, compared to approximately 90.9 percent, 73.7 percent, and 39.1 percent for medium, small, and micro-businesses.

Table 2: Online banking usage distribution (%) overall and by industry and business size

		Account Access (%)
<b>All businesses</b>		<b>54.3%</b>
<b>By sector</b>	Construction & Manufacturing	57.6%
	Services	53.3%
	Trade	52.4%
<b>By Firm Size</b>	Micro	39.1%
	Small	73.7%
	Medium	90.9%
	Large	100.0%

<sup>10</sup> Online banking usage is defined as a business having used online banking services at least once over the past three months.





# III. FLOWS OF RETAIL PAYMENTS

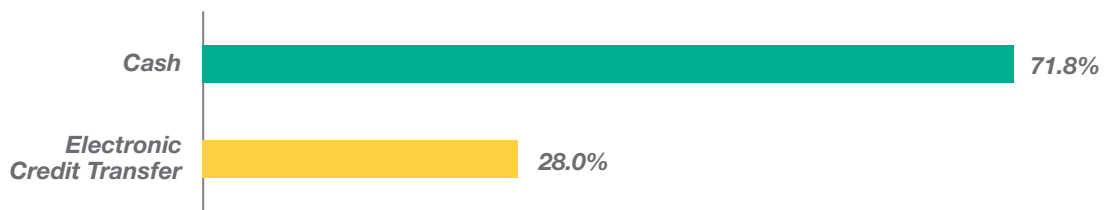
## III.1. CONSUMERS

Costs are a function of the volume of transactions, among other variables. Hence, the consumer section is analyzed by the volume of payments (both received and initiated) across the different payment instruments, use cases, and access channels. Consumers/individuals in Kosovo initiate and receive around 233.8 million payments annually (across various payment instruments, use cases, and access channels). That is 176.9 payments/adult annually, of which 87.4 percent are in cash<sup>11</sup>.

### III.1.1 Payments Received

Consumers in Kosovo receive around 23.4 million payments annually, or 17.7 payments/adult, of which 72.0 percent are in cash while the remaining 28.0 percent are received via electronic credit transfer.

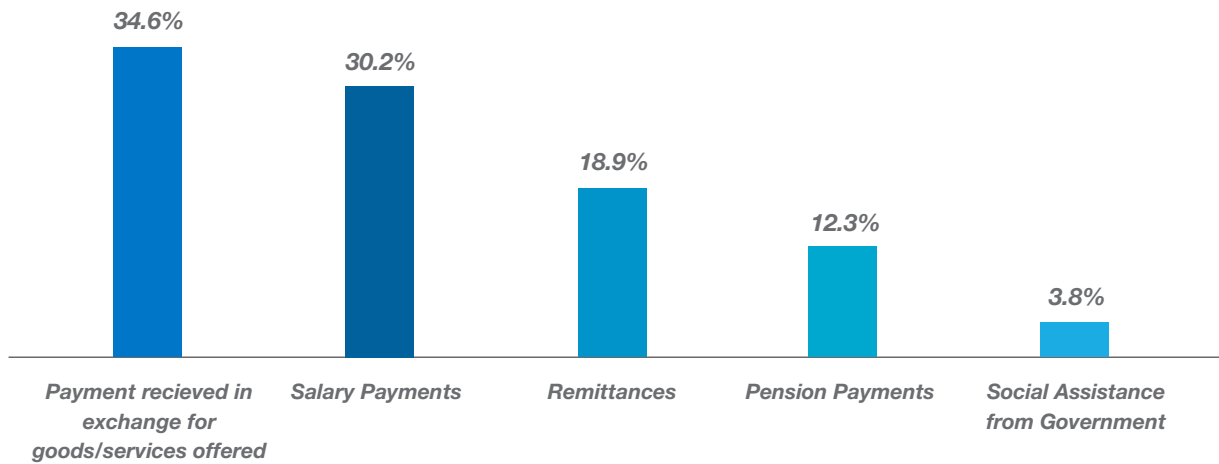
Figure 5: Distribution of annual payments received (by instrument (%))



In terms of use case distribution, most payments are received in exchange for goods and services provided to individual consumers account for 34.6 percent. Salary payments follow with 30.2 percent, while remittances and pension transfers account for 18.9 and 12.3 percent respectively, and social assistance benefits for 3.8 percent.

<sup>11</sup> Population information drawn from the World Bank database: <https://data.worldbank.org/indicator/SP.POP.GROW?locations=XK>

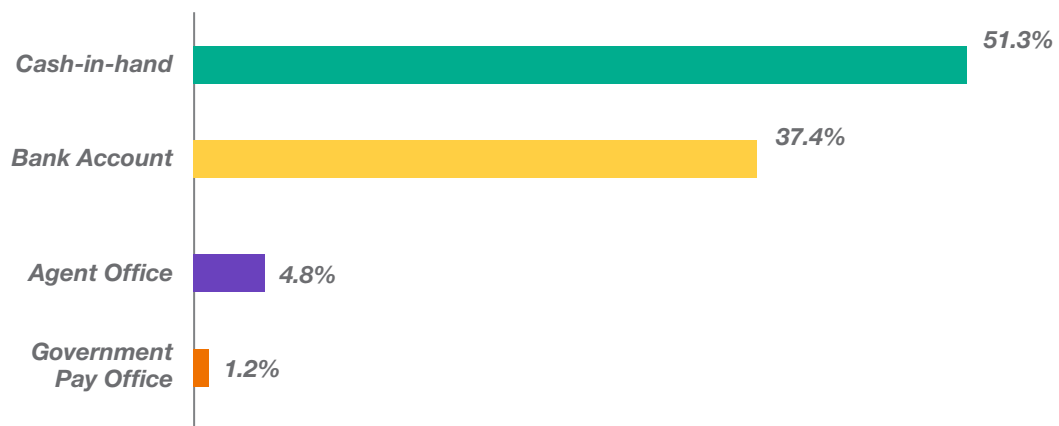
Figure 6: Distribution of annual payments received (by use case (%))



Of the payments received for goods and services, 93.0 percent are made in cash. Cash is also the principal instrument used for remittances (72.0 percent). Pension payments, on the other hand, are done via credit transfers.

When analyzing the flow of the received payments according to access channel, a sizable portion is received at the point of interaction – among individuals (51.3 percent), followed by bank accounts at 37.4 percent. The remaining payments are received via agent offices (4.8 percent) and government offices (1.2 percent).

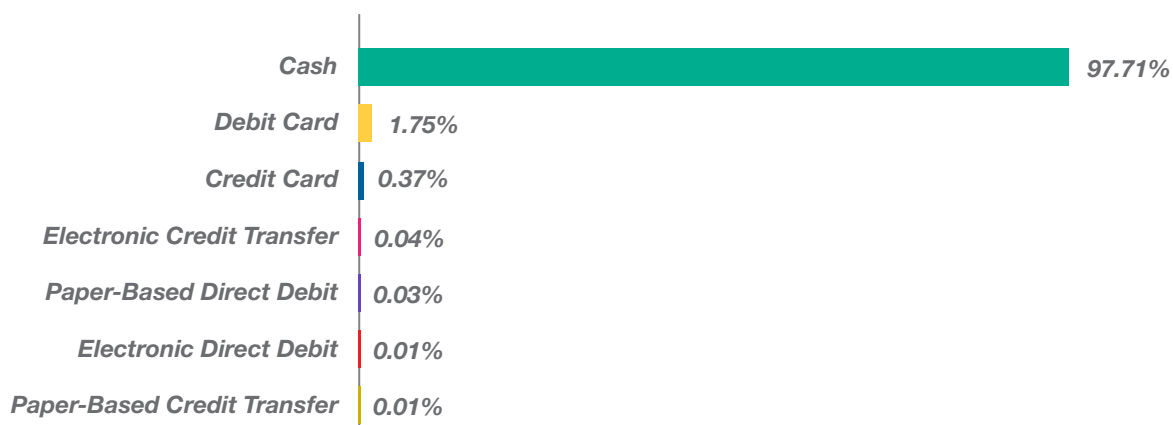
Figure 7: Distribution of annual payments received (by access channel (%))



### III.1.2. Payments Initiated

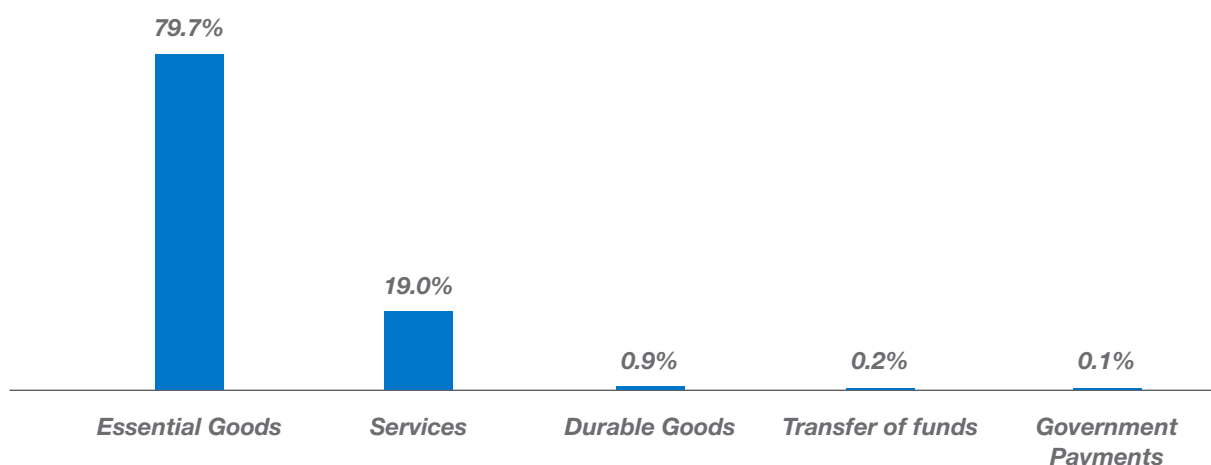
Adults in Kosovo initiate around 210.4 million payments annually, or 159.2 payments/adult, of which 97.7 percent are in cash. Debit card transactions follow at 1.7 percent of the total payments initiated, and credit card transactions at 0.4 percent. Credit transfers and direct debit payments account for negligible proportions of the overall transactions at 0.05 and 0.04 percent, respectively.

Figure 8: Distribution of annual payments initiated (by instrument (%))



When the data is analyzed by use case, most of the payments are triggered for purchasing essential goods<sup>12</sup> at 78.1 percent, followed by services<sup>13</sup> at 20.3 percent. Payments initiated towards durable goods<sup>14</sup>, fund transfers<sup>15</sup>, and government payments<sup>16</sup> are at a lower volume at 1.0, 0.2, and 0.1 percent, respectively.

Figure 9: Distribution of annual payments initiated (by use case (%))



<sup>12</sup> Essential goods: This includes groceries and food supplies, bread and baked goods, gas and transportation, newspapers and magazines, and alcohol and tobacco.

<sup>13</sup> Services: This includes payments towards pharmaceutical products, restaurants, hairdressers, household services (plumbers, electricians etc.), house-helpers, health and dental visits, entertainment, long distance travel, vehicle maintenance, utilities (water, electricity, phone, school fees, and mortgage), and insurance (health and other insurance).

<sup>14</sup> Durable goods: This includes goods like clothes, footwear, school supplies, electronic appliances, furniture, livestock, and equipment (agricultural and non-agricultural).

<sup>15</sup> Fund transfer/ remittances: This includes transfer of funds between friends and relatives (within and outside the country) without the exchange of goods and services.

<sup>16</sup> Government payments: This can include, among other things, tax and loan repayments for payments initiated by consumers; and social and welfare assistance, financial aid, and government subsidies for payments received by consumers.

Furthermore, most payments made to purchase essential goods or services are initiated in cash at 98.0 percent each. Eighty-seven percent of remittances or money transfers between friends and relatives are cash, while 13.0 percent are credit transfers. Two percent of the payments towards durable goods are made with credit cards. Debit and credit cards account for the remaining payments across various use cases.

Regarding distribution across access channels, payments initiated at the point of interaction account for 94 percent and those via the Internet for 3.0 percent. The remaining 3.0 percent of payments/transfers are initiated at agent outlets (1.0 percent), bank branches (1.0 percent), or government pay offices (1.0 percent).

Among all internet payments, 79.7 percent are initiated with debit cards, 16.7 percent with credit cards, 2.0 percent via credit transfers, and 1 percent via direct debit.

Figure 10: Distribution of annual payments initiated (by access channel (%))



## III.2. BUSINESSES

On average, businesses in Kosovo initiate and receive around 131.8 million payments/transfers annually (across different payment instruments, use cases, and access channels), of which 52.9 percent are in cash.

### III.2.2 Payments Received

Kosovo businesses receive approximately 88.8 million payments annually, over half<sup>17</sup> (55.0 percent) of which are conducted in cash, 18.6 percent via credit transfers, 12.6 percent with debit cards, 8.4 percent through direct debits, and 5.4 percent with credit cards.

When disaggregated by industry, businesses in the trade sector receive the largest volume of payments compared to construction & manufacturing or services, accounting for 56.0 percent of the total transactions. According to business size, large and micro-enterprises together contribute to the overwhelming majority (approximately 99.0 percent) of the payments received.

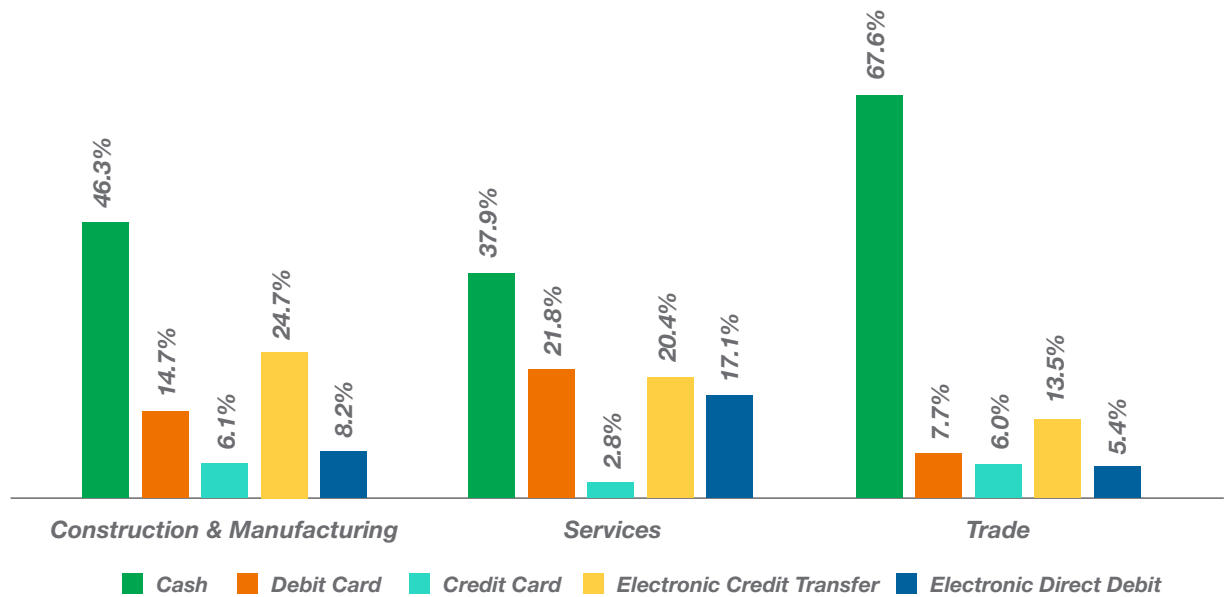
*Table 3: Percentage distribution of annual payments received (by industry, business size, and payment instrument)*

		Account Access (%)
<b>By sector</b>	Construction & Manufacturing	20.0%
	Services	24.0%
	Trade	56.0%
	<b>Total</b>	<b>100.0%</b>
<b>By Firm Size</b>	Micro	31.2%
	Small	0.2%
	Medium	0.7%
	Large	67.9%
	<b>Total</b>	<b>100.0%</b>
<b>By payment instrument</b>	Cash	55.0%
	Debit Card	12.6%
	Credit Card	5.4%
	Credit Transfer	18.6%
	Direct Debit	8.4%
	<b>Total</b>	<b>100%</b>

The share of received cash transactions in the construction & manufacturing and services sectors is estimated at 46.3 percent and 37.9 percent respectively.

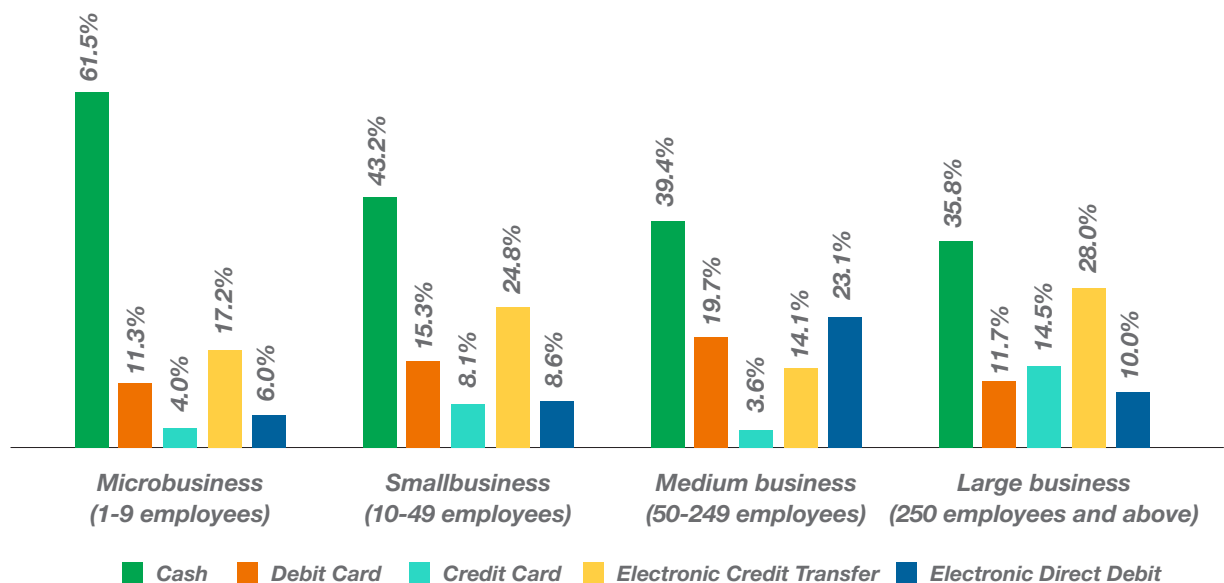
<sup>17</sup> This figure may be affected by the small number of micro and small businesses surveyed, given that more than 50% of the sample could not be interviewed (were not found/did not answer).

Figure 11: Percentage distribution of annual payments received (by instrument for each business industry)



Furthermore, cash contributes to the largest shares of transactions received from businesses regardless of their size. In micro-businesses, 61.5 percent of the transactions received are cash, while this percentage falls to 35.8 percent for large enterprises.

Figure 12: Percentage distribution of annual payments received (by instrument for each business size)





### III.2.2. Payments Initiated

Kosovo businesses initiate approximately 43 million payments annually, of which half are in cash, 32.0 percent via credit transfers, 11.0 percent through direct debits, 5.0 percent with debit cards, and 2.0 percent with credit cards.

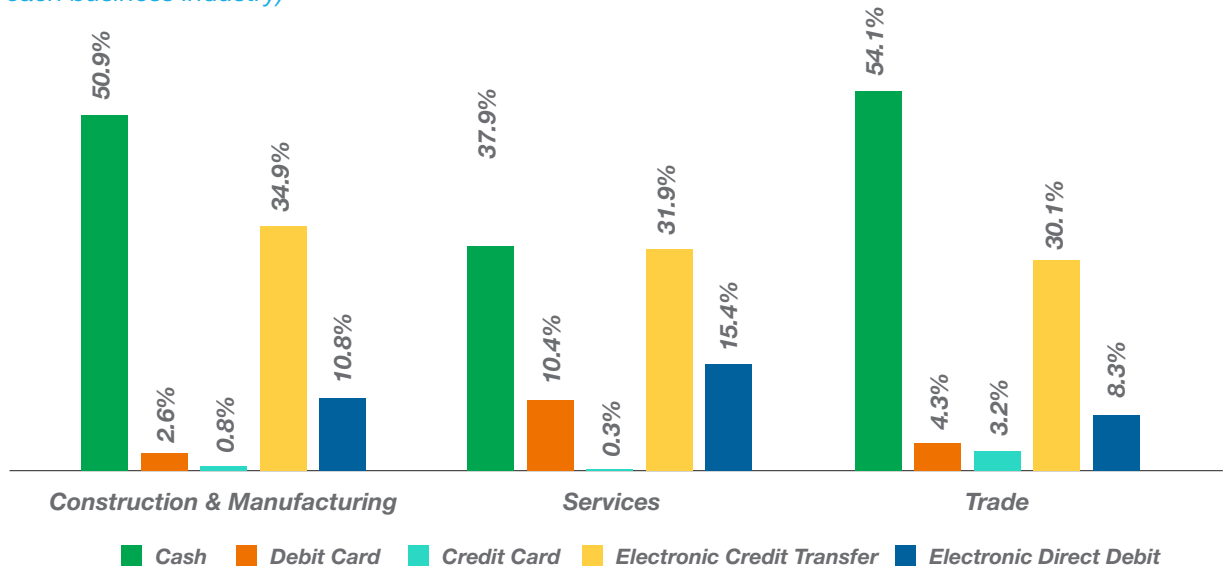
When breaking down initiated payments by industry, it emerges that businesses in the service industry conduct the largest share of payments, accounting for 61.0 percent of the total transactions. And when broken down by business size, micro-businesses initiate most payments (67.0 percent).

Table 4: Percentage distribution of annual payments initiated (by industry, business size, and payment instrument)

		Account Access (%)
<b>By sector</b>	Construction & Manufacturing	7.0%
	Services	60.0%
	Trade	33.0%
	<b>Total</b>	<b>100.0%</b>
<b>By Firm Size</b>	Micro	67.0%
	Small	1.0%
	Medium	11.0%
	Large	21.0%
	<b>Total</b>	<b>100.0%</b>
<b>By payment instrument</b>	Cash	50.0%
	Debit Card	5.0%
	Credit Card	2.0%
	Credit Transfer	32.0%
	Direct Debit	11.0%
	<b>Total</b>	<b>100.0%</b>

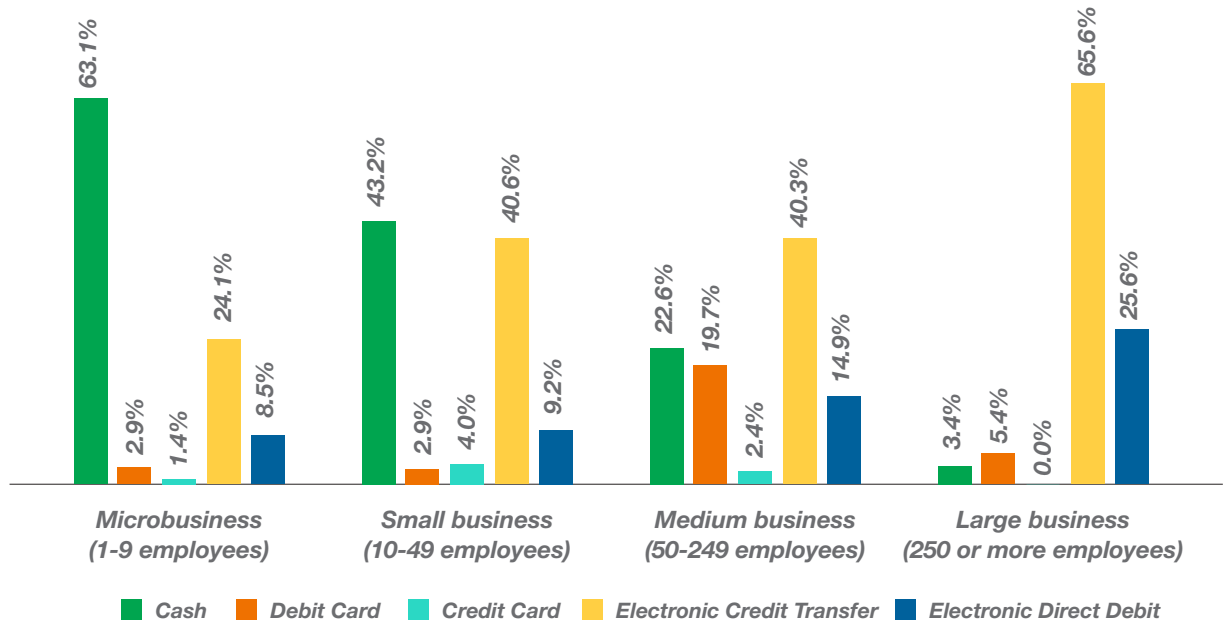
As the study shows, half the payments initiated by businesses are cash regardless of the industry, with electronic credit transfer following in the second place. Based on the analysis, construction & manufacturing and trade companies initiate over half their transactions in cash, compared to approximately 42.0 percent by the services industry. Furthermore, around 30.0 percent of the payments are initiated via electronic credit transfers by businesses in all three types of industries.

Figure 13: Percentage distribution of annual payments initiated (by instrument for each business industry)



Instrument usage varies among different types of businesses. The largest number of transactions initiated by micro and small enterprises are estimated to be cash, accounting for 63.1 percent and 43.3 percent, respectively. Electronic credit transfer is the most used payment instrument for medium and large enterprises, contributing to 40.3 percent and 65.6 percent of their transactions, respectively.

Figure 14: Percentage distribution of annual payments initiated (by instrument for each business size)





# IV. COSTS OF RETAIL PAYMENTS

## IV.1. CONSUMERS

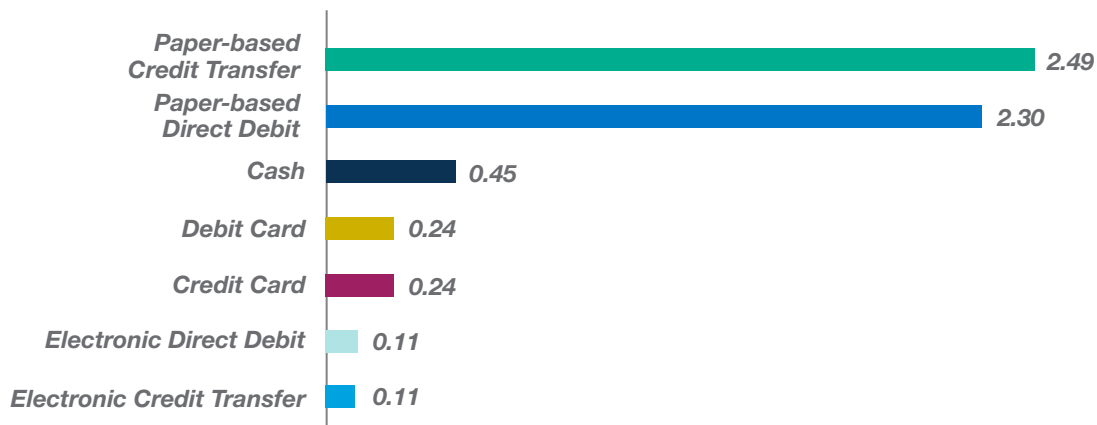
Costs are a function of the volume of transactions, among other variables. Hence, the consumer section is analyzed by the volume of payments (both received and initiated) across the different payment instruments, use cases, and access channels.

Costs per transaction for all payment instruments include:

- fees to initiate a payment (where relevant), in-person or remotely
- fees associated with a given access channel
- time-based costs - the time invested in getting to the access channel, waiting in line, and performing the transaction (converted into monetary terms).

The highest per-transaction costs are associated with paper-based credit transfers and paper-based direct debits at €2.49 and €2.30, respectively. Cash follows with a per-transaction cost of €0.45. In contrast, electronic credit transfers and direct debits have the same and the lowest per-transaction cost, equivalent to €0.11.

Figure 15: Per transaction costs by payment instrument (in Euro)



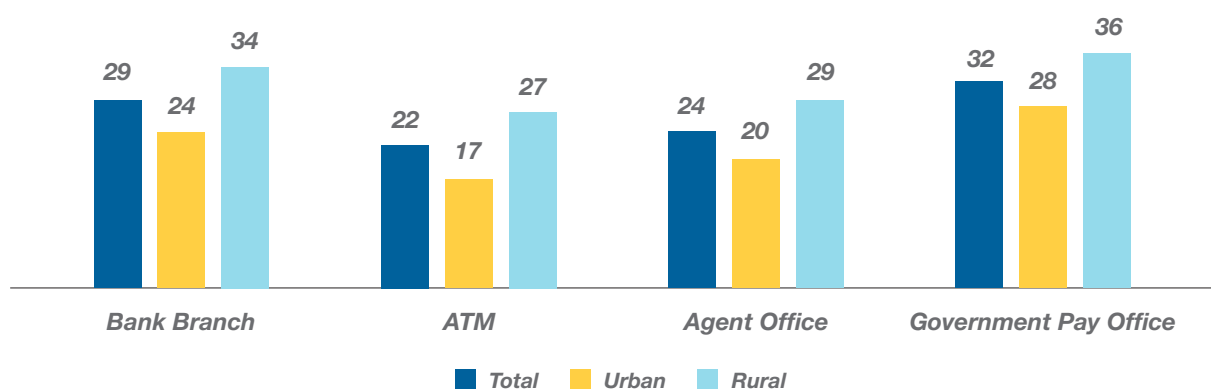
The fixed costs associated with the different payment instruments include annual fees for maintaining a bank account and the payment instrument itself and the costs incurred from the time invested in examining bank and credit card statements.

As the analysis reveals, Kosovar consumers face the highest aggregate costs when traveling to, waiting in line, and undertaking a transaction at a government pay office at 32 minutes<sup>18</sup>, followed by a bank branch at 29 minutes. Agent offices and **Automated Teller Machines (ATMs) follow at 24 and 22 minutes, respectively.** It is worth mentioning that

<sup>18</sup> Government pay offices demonstrate the highest cost associated with a cash collection procedure. Agent offices are also largely employed for cash payment purposes. Bank branches were primarily used for credit transfers and direct debits.

the long distances that individuals need to travel in rural and semi-rural areas to get to a physical access channel also drive these averages. Kosovo has the second-lowest number of ATMs per one million inhabitants (after Albania) in the Balkans, at 279, with North Macedonia having the highest at 500.<sup>19</sup>

Figure 16: Time (in minutes) to get to an access channel, wait in-line, and perform a transaction



Based on the time spent getting to the various access channels, the time spent waiting in line, and the time taken to perform the transaction, the average cost per transaction via each access channel is calculated using the minimum wage as a proxy.<sup>20</sup>

By combining payment instruments with access channels, the analysis reveals that paper-based instruments (i.e., paper-based credit transfers, paper-based direct debits, and cash) are more costly than electronic payment instruments (1.8 percent of GDP vs. 0.6 percent of GDP). For initiated payments, the costliest combination appears to be cash payments at the government pay office. In contrast, the least expensive are electronic credit transfers and direct debits, or debit/credit card payments made via the Internet.

Overall, Kosovar consumers incur annual economic costs of 2.43 percent of the country's GDP<sup>21</sup> across all payment instruments, access channels, and use cases, considering variable and fixed costs. Cash alone accounts for 1.49 percent of the annual GDP.<sup>22</sup> Debit card and paper-based credit transfers follow at 0.39 and 0.26 percent of the country's GDP. It is worth pointing out that some of these overall costs are driven by a high per-transaction cost while others by a high volume (e.g., debit cards), but for cash, both hold true. It is not surprising that most costs associated with paper-based instruments are time-based opportunity costs because they require the physical presence and traveling of the payer/payee in nearly all instances. Similarly, most costs for electronic payment instruments are direct monetary costs stemming from the different fees charged.

<sup>19</sup> Annual Report on Payment Instruments. CBK, 2020.

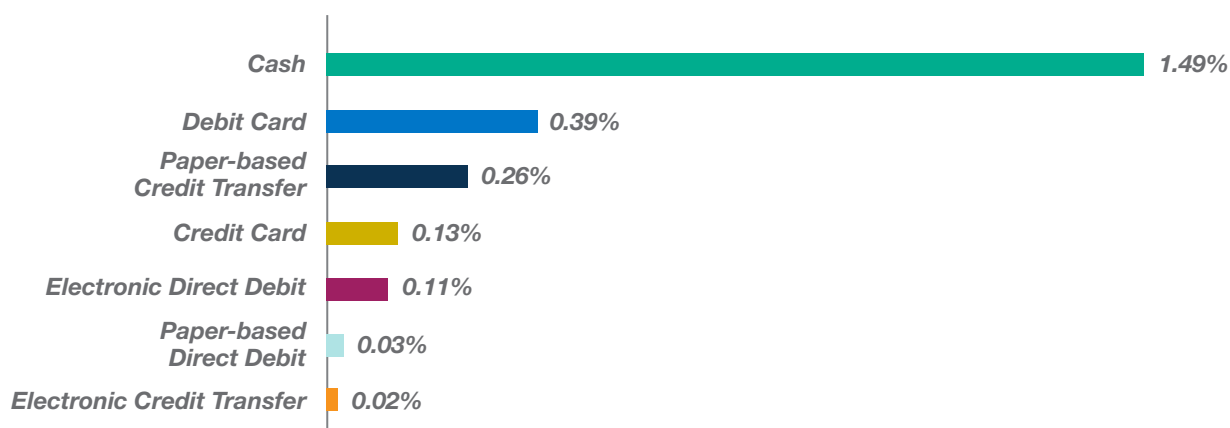
<https://www.bqk-kos.org/repository/docs/SistemilPagesave/Annual%20comparative%20report%20on%20electronic%20instruments.pdf>

<sup>20</sup> The average monthly minimum wage was taken as €150 (<https://www.tiranatimes.com/?p=144135>), and assuming 40-hour work weeks, the monetary cost of a minute was calculated to be €0.02

<sup>21</sup> Kosovo 2019 GDP.

<sup>22</sup> The 2019 GDP for Kosovo is estimated at: € 6.9 billion.

Figure 17: Total annual consumer costs as % of 2019 GDP (by payment instrument)

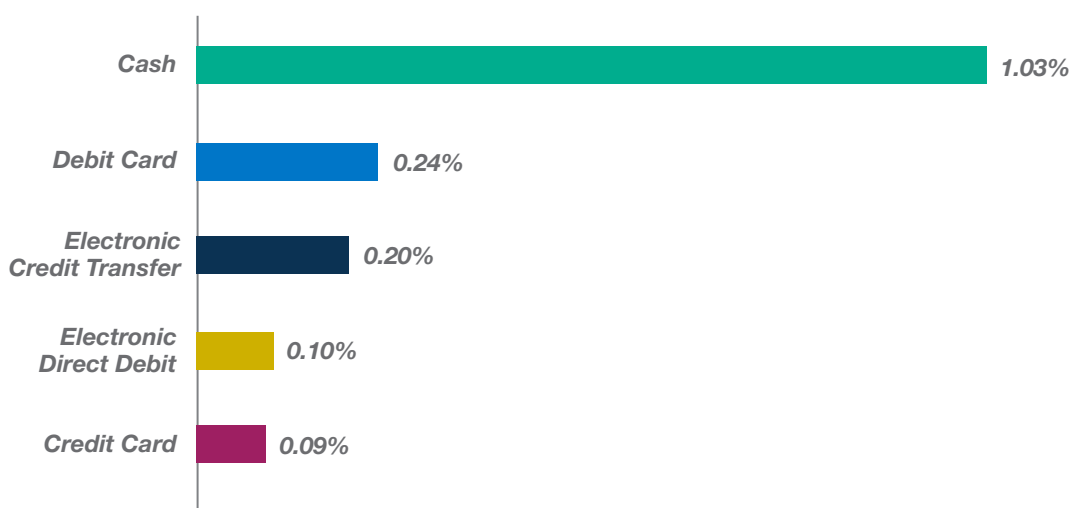


## IV.2. BUSINESSES

When aggregating the costs (by payment instrument) irrespective of the size of a business, the costliest payment instrument is cash. The annual cost of cash for all businesses in Kosovo amounts to approximately €72.5 million, followed by the cost of debit cards at €16.6 million, credit transfers at €13.9 million, electronic direct debits at €7 million, and credit cards at €6.3 million. In terms of weight of each instrument relative to total costs, cash accounts for 62.3 percent, debit card at 14.3 percent, electronic credit transfer at 11.9 percent, electronic direct debit at 6 percent, and credit card at 5.4 percent.

In total, businesses in Kosovo incur annual costs of €116.3 million, equal to 1.6 percent of GDP in the context of receiving and initiating payments across all payment instruments, with cash alone representing 1.0 percent of GDP or over half of the total costs. In comparison, the cost of debit cards is estimated at 0.2 percent of GDP, electronic credit transfers at 0.2 percent, electronic direct debits at 0.1 percent, and credit cards at 0.09 percent.

Figure 18: Total annual business costs as % of 2019 GDP (by payment instrument)



When breaking down the cost components of each instrument for businesses, the study first indicates that reconciliation costs and fees for services outsourced constitute a sizable portion of the total cost, accounting for 70.4 percent combined. Specifically, they include the costs of managing and reconciling cash funds, emptying and balancing cash registers/cash accounts and back-office cash management, paying professional money

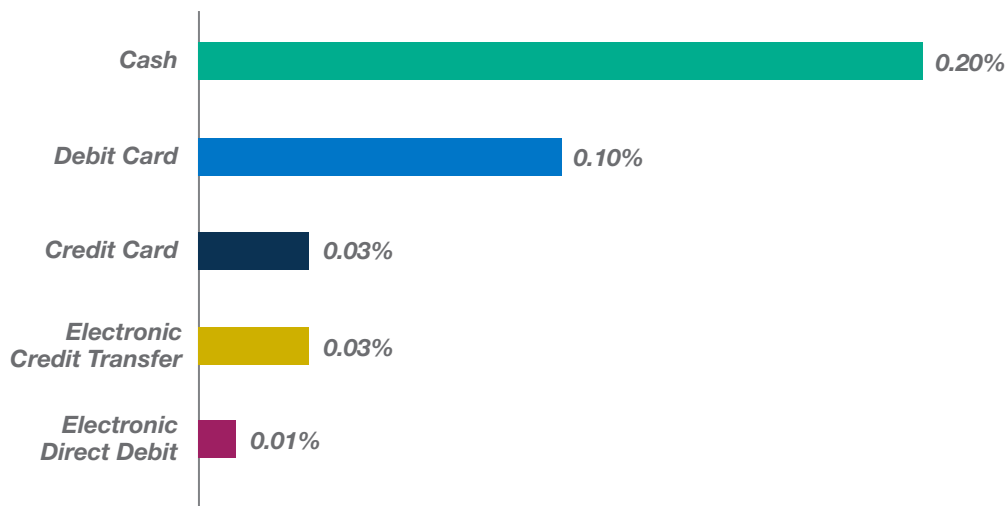
transporter for transporting cash, and paying payment service providers for collecting payments.

### IV.3. PAYMENT SERVICE PROVIDERS AND PAYMENT INFRASTRUCTURE PROVIDERS

The main actors in the retail payments market of Kosovo comprise the Central Bank of Kosovo (CBK) as the licensing, regulatory, supervisory, and oversight authority of financial institutions and the owner and operator of the Real-Time Gross Settlement (RTGS) system and the Automated Clearinghouse (ACH), commercial banks, and the non-banking financial institutions (including money transfer operators). As for access channels, there were 497 ATMs and 13,769 POS terminals in the country, according to the latest (2020) report of CBK.

Overall annual supply-side costs associated with retail payment instruments are estimated to be €24.9 million, approximately 0.4 percent of Kosovo's GDP for 2020. Cash costs make up half of all supply-side costs, accounting for 49.3 percent.

Figure 19: Total annual supply-side cost as % of 2019 GDP (by payment instrument)



Cash costs approximately 0.37 percent of the GDP across all institutions – commercial banks, non-bank financial institutions (NBFIs), and the Central Bank. Approximately 20.0 percent of the processes generating cash costs at these institutions are outsourced.

The logistics of making cash available to customers around the country accounts for a large share of cash costs: ATM management represents over a quarter of all cash costs, while transportation costs account for 15.0 percent of cash costs. Back-office and over-the-counter costs account for about 11.0 percent combined.

Regarding the cost components associated with cash, about 50.0 percent of all cash costs, on average, are associated with logistics (i.e., ATM, transportation, safety). A sizable portion of the cost is related to other activities related to the central bank, alongside statement costs and fees. Over-the-counter and back-office costs, that is, time-based staff costs, are also considerable since they account for about 11.0 percent of the total.

Different cost components account for divergent shares of the total cost of each instrument. For example, over-the-counter costs are highest among debit cards, while safety costs (mainly insurance) account for over three-fourths of direct debit costs. At 54.0 percent of the total, IT costs were the highest for credit transfers. Compared to credit cards, debit cards

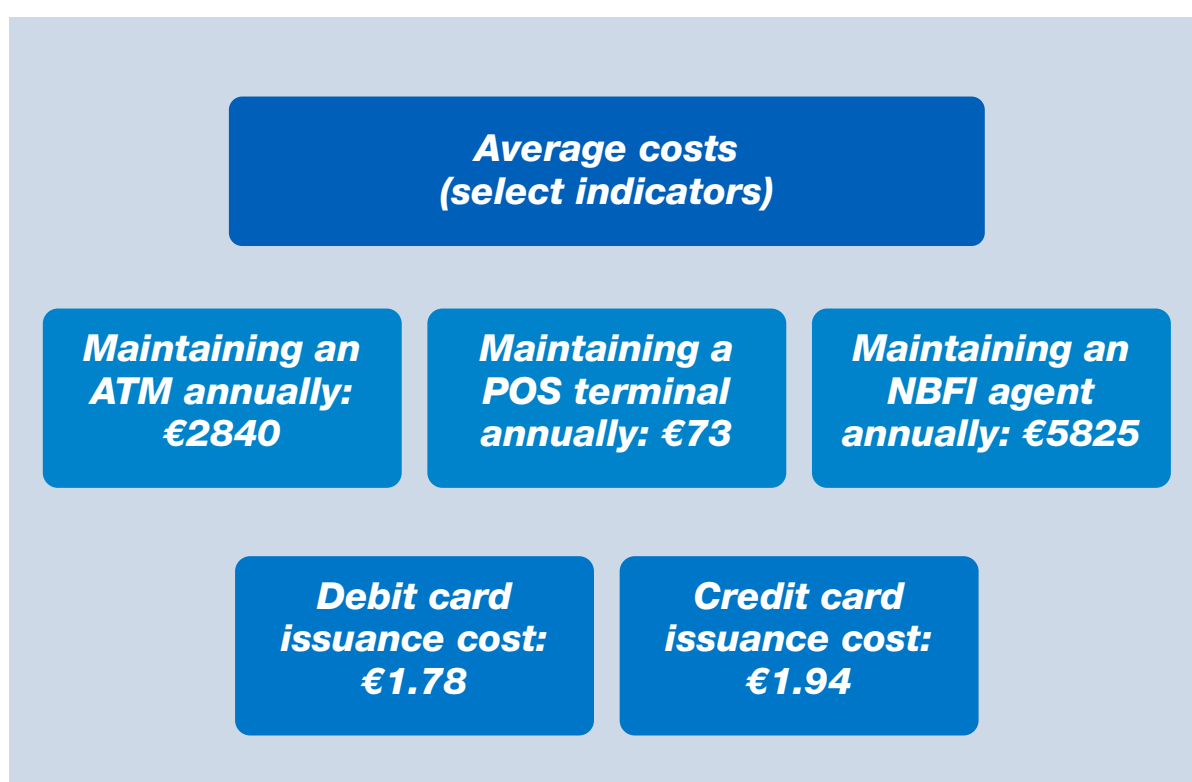


had higher shares of costs attributed to IT, data processing, and settlement charges, while licensing and interchange fees are higher for credit card costs.

Most costs associated with debit cards stem from data processing/clearing (30.0 percent). Interchange fees and settlement costs jointly also account for a substantial portion of costs (29.0 percent). Over-the-counter and IT-related costs are also significant since, jointly, they account for 34.0 percent of costs. Other costs such as loyalty programs and licensing are at much lower levels of about 2.0 percent (for detailed cost component breakdown by instrument for the supply side, see Annex A).

The analysis also presents cost indicators related to various important activities and infrastructures of Kosovo's retail payments supply side.

Figure 20: Supply-side select industry cost indicators<sup>23</sup>



<sup>23</sup> Debit and credit card issuance costs are comprised of production and issuance costs

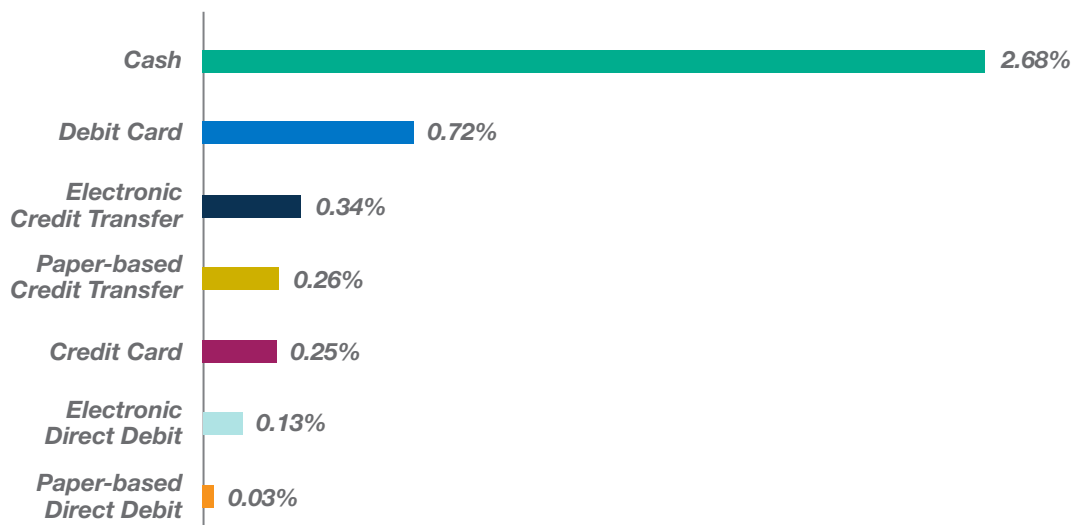


## V. ECONOMIC COSTS AND SAVINGS

The analysis allows for the derivation of economic costs by amassing the costs borne by individual actors but accounting for the transfer costs (typically associated with outsourced activities; for some, these represent costs, for others, benefits, so they offset each other).

The aggregated economic cost derivation shows that the Kosovar economy annually bears costs equivalent to 4.4 percent of GDP across all retail payment instruments, actors, use cases, and access channels. More specifically, cash accounts for the largest portion of all costs (60.0 percent) at approximately 2.7 percent of GDP. All other instruments account for smaller portions of overall costs and the GDP. Moreover, paper-based instrument costs account for close to 3.0 percent of GDP (or 68.0 percent of all costs), while electronic instrument costs account for about 1.4 percent of GDP (or 32.0 percent of all costs).

Figure 21: Total annual economic cost as % of 2019 GDP (by payment instrument)



The analysis also allows for projected savings for particular use cases. Specifically, a 50.0 and 100.0 percent conversion rate (based on the methodology) is used to derive potential savings. The substitution scenarios are constructed to consider the most plausible electronic payment instruments for the particular use cases. The most frequent types of payments and use cases are considered: remittances, payments for durable goods, services and utility bills and salaries.

The savings shown are derived by multiplying per transaction average savings with the annual number of payments for the four different use cases across relevant access channels, using 50.0 and 100 percent conversion rates. The most significant annual savings are associated with shifting cash-based services and utility bill payments to electronic credit transfers, leading to savings of €34.4 million and €68.7 million per year when

considering 50.0 percent and 100 percent conversion rates, respectively. Interestingly, remittance recipients in Kosovo could save up to €61.4 million per year if they were to use electronic credit transfers instead of cash (i.e., at a 100 percent conversion rate). Other observations include:

- If half of the current sent and received cash remittances were instead channeled through electronic credit transfers, consumers would save about €30 million annually. In addition to the transaction fee, this estimate factors in time-based costs (about 60 percent, as lost productivity) for getting to the physical access points to send and collect the cash.

Table 5: Substitution scenarios and savings (at 50 percent and 100 percent conversion rate for different use cases)

Substitution Scenario/Savings Domain	Savings: 50% Conversion Rate		Savings: 100% Conversion Rate	
	Euro	% of 2019 GDP	Euro	% of 2019 GDP
<b>Remittances/Transfer of Funds</b>				
<b>Cash &gt; Electronic Credit Transfer</b>	30,717,233	0.44%	61,434,465	0.89%
<b>Durable goods</b>				
<b>Cash &gt; Credit/Debit Card</b>	20,437,039	0.29%	40,874,079	0.59%
<b>Cash &gt; Electronic Credit Transfer</b>	33,024,883	0.48%	66,049,765	0.95%
<b>Services/Utilities</b>				
<b>Cash &gt; Credit/Debit Card</b>	21,271,243	0.31%	42,542,486	0.61%
<b>Cash &gt; Electronic Credit Transfer</b>	34,372,899	0.50%	68,745,799	0.99%



## VI. CONCLUSION

The analysis of the cost of retail payments suggests substantial efficiency improvements can be achieved in Kosovo if cash and other paper-based payments were migrated to lower-cost electronic retail payment instruments, in part or full. The current cost of paper-based payments at the economy level amounts to about 3.0 percent of the country's GDP, while electronic payment instrument costs are about 1.4 percent of GDP. Overall, the savings could reach up to around 1.0 percent of GDP under a combination of scenarios (e.g., one of them being where 50.0 percent of current paper-based remittances and services are paid electronically).

Limited bank account access among individuals (about 40.0 percent of Kosovar adults still do not have access to a bank account) inevitably limits the payment options. The lack of e-money accounts, now operationalized since the introduction of an E-Money Regulation by CBK in 2020, also hampers efficiency. Even among account owners/cardholders, cash continues to prevail; only about 48.0 percent of the banked own a debit card.

As the transaction costs of exchanging goods and services are reduced, more efficient use of electronic payments could significantly benefit the country's economic development and growth. Lower costs of these services might potentially boost the reach of non-cash and electronic payment services to

lower-income households and small retailers, thereby improving the efficiency of the national payment system, as access to and usage of modern payment instruments is broadened.

It is important to note that certain early developments signify advancements in the Kosovo payments market. To efficiently increase the execution of electronic transactions, the Central Bank of Kosovo (CBK) has envisaged to incentivize and support the implementation of an instant payment system by the private sector. The overall use of electronic credit transfers, direct debits, and payment cards has demonstrated substantial improvements; however, the volume of these transactions is still fairly low compared to the total volume of cash and other paper-based transactions. The industry, government authorities, and CBK can use the hard evidence of cost efficiency presented in this analysis, coupled with incentives for materializing the necessary changes on the ground that will sustain the shift to electronic payments. Specifically, CBK can use their oversight tools to regularly collect and monitor costs associated with electronic payment infrastructures, services, and instruments. Monitoring is important because the cost aspects will be significant to advance the adoption and usage of electronic payment instruments.

The current momentum for electronic transactions should be maintained and further increased. It is certainly promising

that debit card payments have had the largest growth rate among all retail payment instruments. However, the widespread use of cash is still an obstacle to the overall electronic payment momentum, given that the supply side in Kosovo continues to bear cash costs associated with 0.2 percent of the country's 2019 GDP (almost half of all retail payment supply-side costs).

From a market perspective, banks and non-bank payment service providers must effectively meet the target population's broad range of transaction needs at a reasonable cost. The current account and payment product offerings might need to be reviewed in the light of improving overall design and affordability. Public and private-sector strategies should align with the needs of the unbanked and the underserved (individuals and businesses alike). Technological and business model innovation that leverages ubiquity should be encouraged. For a significant substitution of cash with electronic payments to take place, existing electronic payment products must be offered for more use cases, such as e-commerce, public transportation, domestic and international remittances, to mention a few.

Moreover, encouraging the use of POS terminals by merchants will be necessary. At the same time, though, the first step is to equip businesses with enough POS terminals around the country. Indeed, while the growth rate of POS terminals at the national level has been significant, the pace needs to be maintained and further

increased. Ensuring interoperability of POS terminals will also encourage more merchants to install POS terminals. Furthermore, acquirers should promote the usage of light electronic acceptance infrastructures such as QR codes or NFC-based light POS to expand adoption.

The introduction of new electronic payment methods, such as transaction accounts, instant payments, and e-money transfers channeled through innovative solutions, could also be of importance to the retail payments market of Kosovo in shifting retail payments from the more costly cash to the less costly electronic payment instruments.

Furthermore, the automation of cash management, particularly for businesses and payment service providers, will be essential to reduce some of the current inefficiencies given the high cost of cash handling. That would imply deploying new technological solutions, among others, for counting, sorting, and dispensing physical cash.

Overall, even though cash still dominates and is quite costly for Kosovo, there are promising signs of innovation and transition away from cash. The industry and relevant authorities should use the hard evidence of cost efficiency presented in this analysis, coupled with incentives, in order to materialize the necessary changes on the ground that will sustain the shift to electronic payments.

# ANNEX

Figure 22: Gender (proportion of survey respondents)

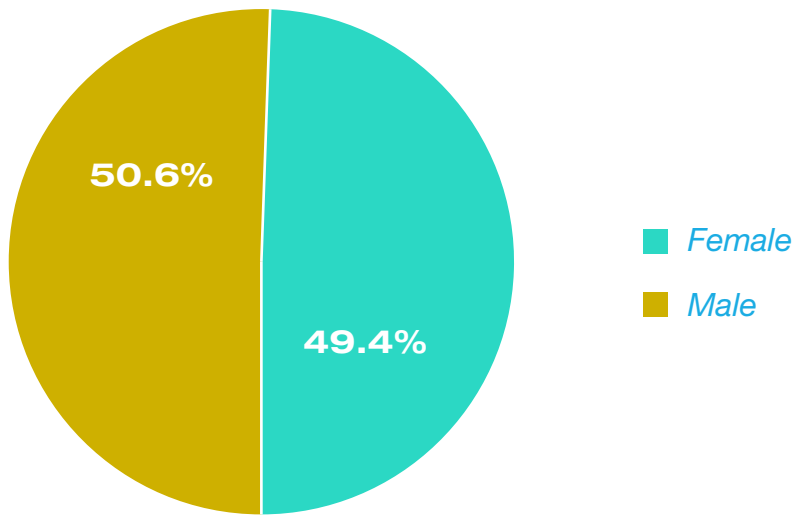


Figure 23: Settlement (proportion of survey respondents)

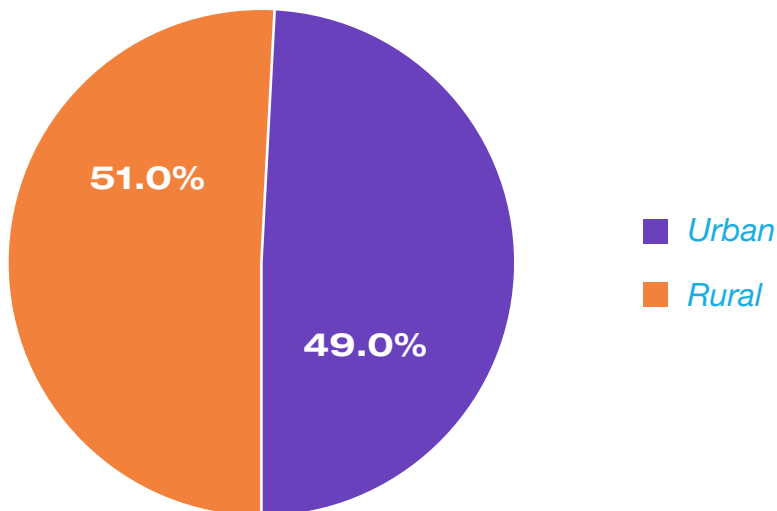


Figure 24: Education levels of survey respondents

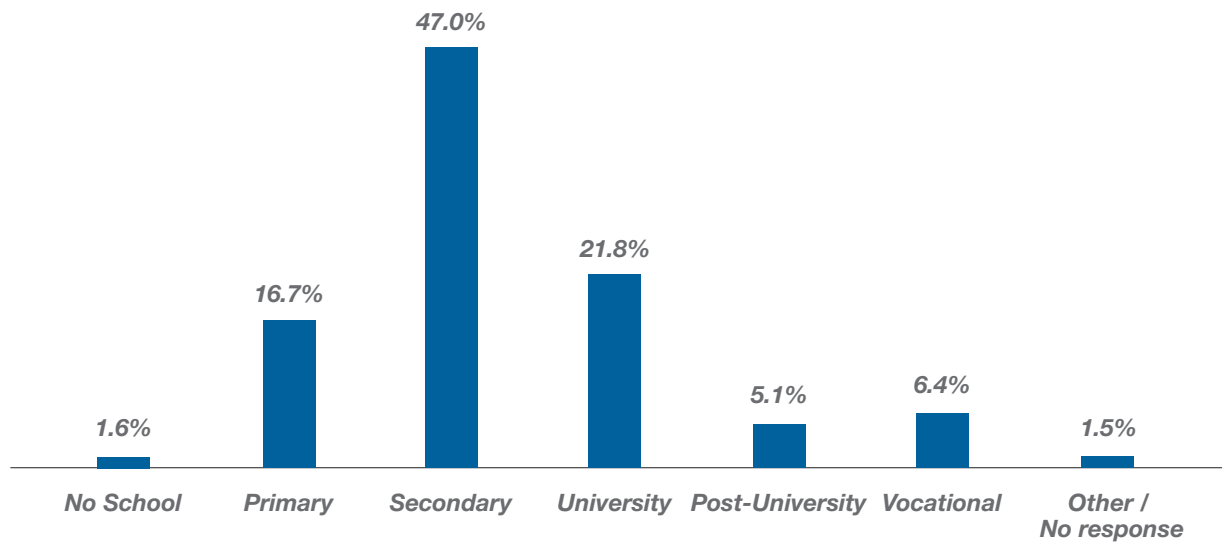


Figure 25: Employment type of survey respondents

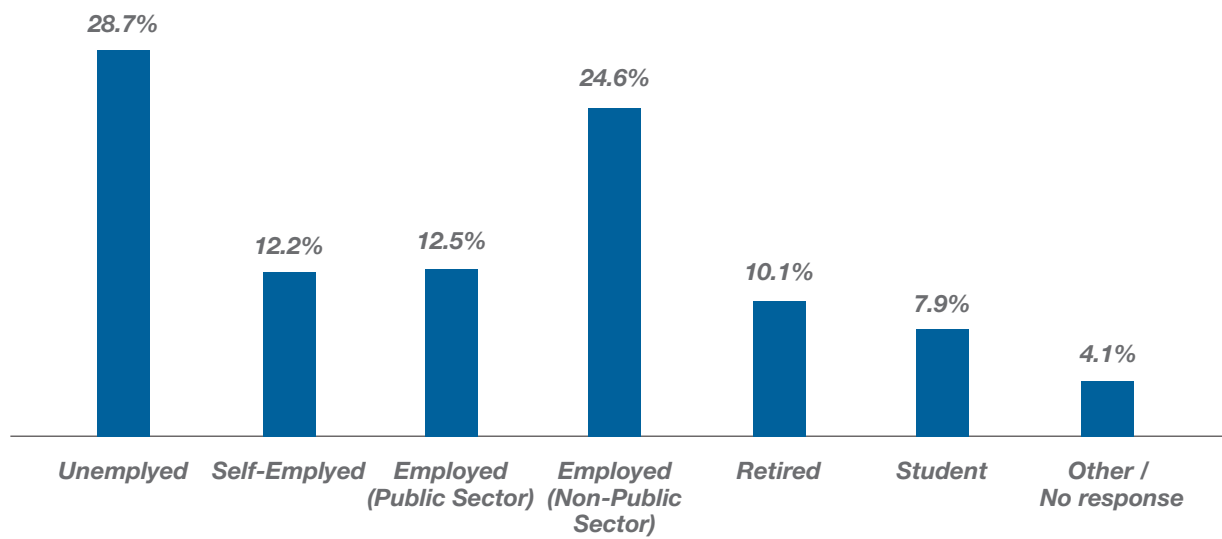
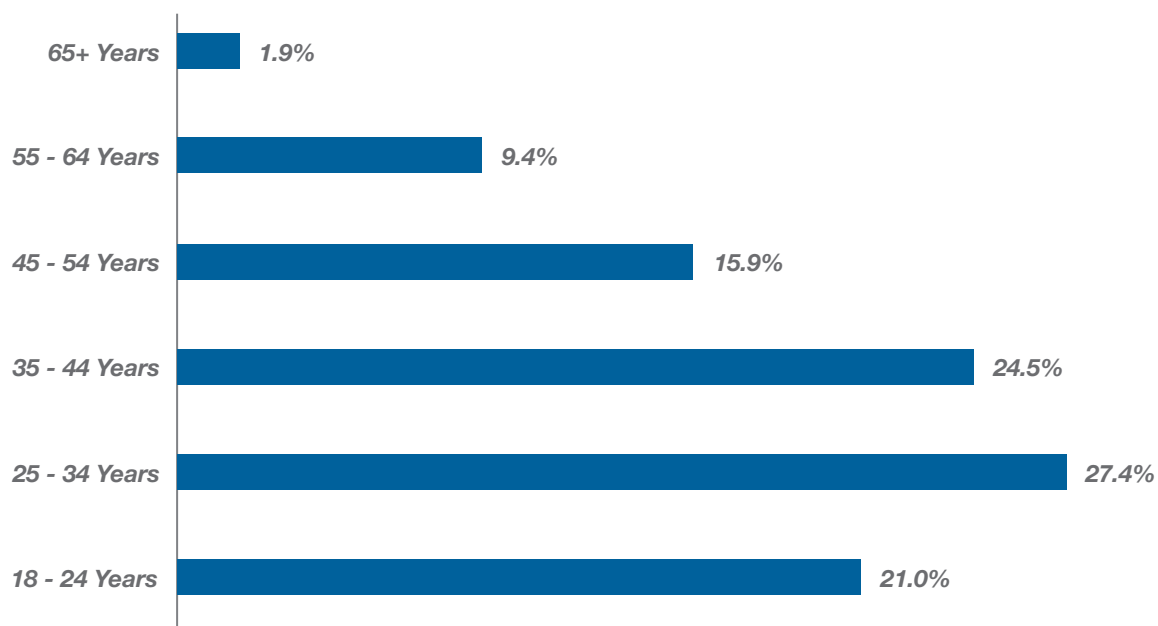


Figure 26: Age categories of survey respondents





## Business sample distribution<sup>24</sup>

Table 6: Business sample distribution by industry, business size, and administrative district

Industry	Sample Distribution	Business Size	Sample Distribution	Administrative District	Sample Distribution
Construction & Manufacturing	32%	Microbusiness (1-9 employees)	69%	Pristina	30%
		Small business (10-49 employees)	10%	Prizren	19%
				Ferizaj	18%
				Gjilan	10%
Services	24%	Medium business (50 – 249 employees)	12%	Mitrovica	9%
Trade	44%	Large business (250 or more employees)	9%	Gjakova	8%
				Peja	6%
<b>Total</b>	<b>100%</b>	<b>Total</b>	<b>100%</b>	<b>Total</b>	<b>100%</b>

Table 7: Business sample distribution by municipalities

Municipalities	Sample Distribution	Municipalities	Sample Distribution
Prishtinë/Priština	21%	Rahovec/Orahovac	1%
Prizren	15%	Gračanica/Gračanica	1%
Ferizaj/Uroševac	15%	Skenderaj/Srbica	1%
Gjilan/Gnjilane	9%	Obiliq/Obilić	1%
Gjakove/Đakovica	6%	Istog/Istok	1%
Vushtrri/Vučitrn	4%	Hani i Elezit/General Janković	1%
Peje/Peć	4%	Dragash/Dragaš	1%
Podujeve/Podujevo	4%	Shtime/Štimlje	1%
Suharekë/Suva Reka	3%	Viti/Vitina	1%
Fushë Kosovë/Kosovo Polje	2%	Malishevë/Mališevo	1%
Lipjan/Lipljan	2%	Leposaviq/Leposavić	1%
Kaçanik/Kaçanik	2%	Klinë/Klina	1%
Deçan/Dečani	2%	Kamenicë/Kamenica	1%
Mitrovicë/Mitrovica	2%	<b>TOTAL</b>	<b>100%</b>

<sup>24</sup> Of the 192 responding businesses, six of them were transportation businesses. They were excluded from the final sample analysis as nearly all their key variables relevant for this study were coded as nonresponses or other field problems. Moreover, considering the small number of businesses from the construction and manufacturing industries, construction and manufacturing are merged as “Construction & Manufacturing.”

## Breakdown of costs for businesses by payment instrument

Table 8: Cash cost components

<b>Cash Costs</b>	
<b>Component Breakdown</b>	<b>Percent</b>
Managing and reconciling cash funds	20.60%
Pay to the professional money transporter for transporting cash and security	18.70%
Pay to payment service providers for collecting payments on your behalf	16.80%
Emptying and balancing cash registers/cash accounts and back-office cash management	14.30%
Charges/fees to banks for depositing the cash	7.60%
Transportation <sup>25</sup>	5.10%
Maintaining a bank account	3.80%
Maintaining a safe	3.20%
Maintaining cash registers, banknote authentication machines, and/or tills	2.70%
Examine bank account statements	2.30%
Business losses due to fraud or theft <sup>26</sup> and insurance costs	2.20%
Preparing the cash registers/card terminals before opening the shop	1.60%
Verifying banknote validity and authentication	0.70%
Changing rolls of paper in cash registers	0.40%
<b>Total</b>	<b>100%</b>

Table 9: Debit card cost components

<b>Debit Card Costs</b>	
<b>Component Breakdown</b>	<b>Percent</b>
Pay to payment service providers (banks) for accepting debit cards	63.90%
Telecommunication costs charged for the online connection of card or e-money terminals	11.00%
Printing, reconciling, checking, filing the daily overviews of receipts, and reconciling associated accounts	8.90%
Business costs (e.g., transaction costs, additional fees) charged for purchases using debit cards	8.00%
Using online banking	3.80%
Maintaining a bank account	1.90%
Examine bank account statements	1.20%
Business losses due to fraud and insurance costs	1.00%
Changing rolls of paper in card terminals	0.30%
<b>Total</b>	<b>100%</b>

<sup>25</sup> Annual average cost for employees to go and come from the nearest bank or ATM to withdraw money, deposit sales, make payments, etc. The monetary cost is calculated using the average cashier's salary as a proxy. Based on the sample analysis, the average salary of cashier per minute is 0.03 euro (1.77 euro/hour), with a typical assumption of five working days a week and 8 hours a day.

<sup>26</sup> Business losses due to counterfeit cash, cash theft, and/or errors/mismatches between cash register balances and cash account.

Table 10: Credit card cost components

<b>Credit Card Costs</b>	
<b>Component Breakdown</b>	<b>Percent</b>
Pay to payment service providers (banks) for accepting credit cards	47.20%
Business costs (e.g., transaction costs, additional fees) charged for purchases using credit card	21.80%
Telecommunication costs charged for the online connection of card or e-money terminals	12.30%
Printing, reconciling, checking, filing the daily overviews of receipts, and reconciling associated accounts	10.00%
Using online banking	4.40%
Maintaining a bank account	2.20%
Examine bank account statements	1.40%
Changing rolls of paper in card terminals	0.40%
Business losses due to fraud and insurance costs	0.30%
<b>Total</b>	<b>100%</b>

Table 11: Credit transfer cost components

<b>Credit Transfer Costs</b>	
<b>Component Breakdown</b>	<b>Percent</b>
Pay to payment service providers (banks) for accepting credit transfers	51.60%
Using online banking	19.90%
Maintaining a bank account	10.00%
Business losses due to fraud and insurance costs	9.10%
Examine bank account statements	6.10%
Business costs (e.g., transaction costs, additional fees) charged for purchases using credit transfer	3.20%
<b>Total</b>	<b>100%</b>

Table 12: Direct debit cost components

<b>Direct Debit Costs</b>	
<b>Component Breakdown</b>	<b>Percent</b>
Pay to payment service providers (banks) for accepting direct debit	68.50%
Using online banking	14.10%
Maintaining a bank account	7.10%
Examine bank account statements	4.30%
Business costs (e.g., transaction costs, additional fees) charged for purchases using direct debit	3.80%
Business losses due to fraud and insurance costs	2.20%
<b>Total</b>	<b>100%</b>

## Breakdown of costs for the supply side by payment instrument

Table 13: Cash cost components

<b>Cash Costs</b>	
Percent Outsourced	21%
<b>Component Breakdown<sup>27</sup></b>	<b>Percent</b>
Administrative	34.00%
ATM	29.00%
Transportation	15.00%
Safety	11.00%
Over the Counter	7.00%
Back Office	4.00%
IT	2.00%
<b>Total</b>	<b>100%</b>

Table 14: Debit card cost components

<b>Debit Card Costs</b>	
Percent Outsourced	14%
<b>Component Breakdown<sup>28</sup></b>	<b>Percent</b>
Data Processing	30.00%
Settlement	18.00%
Over the Counter	17.00%
IT	17.00%
Interchange	11.00%
Safety	4.00%
Licensing	2.00%
Other Administrative	2.00%
Loyalty Programs	1.00%
<b>Total</b>	<b>100%</b>

<sup>27</sup> Component breakdowns for cash are comprised of the following costs: ATM – maintenance and interchange fees. Back Office – commercial back-office cash processing costs; central bank vault staff costs. Over the Counter – commercial bank staff costs to process transactions, open and close accounts; NBFIs staff costs for dispersing and collecting cash. Safety costs – vault maintenance, insurance, loss, and fraud prevention costs for commercial banks, NBFIs, and the central bank. IT – network connectivity, hardware and software maintenance, and central bank banking system costs. Transportation – all transportation costs for commercial banks, NBFIs, and the central bank. Other - commercial bank inquiry and statement costs; and NBFIs printing, advertising, and fees.

<sup>28</sup> Component breakdowns for debit cards are comprised of the following costs: Over the counter – production, issuance, and transportation. IT – card IT systems and POS costs. Safety – insurance, loss, and fraud prevention costs. Other - inquiry costs, statements, and fees.

Table 15: Credit card cost components

<b>Credit Card Costs</b>	
Percent Outsourced	16%
<b>Component Breakdown<sup>29</sup></b>	<b>Percent</b>
Interchange	20.00%
Over the Counter	18.00%
Data Processing	17.00%
Settlement	13.00%
Licensing	12.00%
IT	10.00%
Other Administrative	5.00%
Safety	4.00%
Loyalty Programs	1.00%
<b>Total</b>	<b>100%</b>

Table 16: Credit transfer cost components

<b>Electronic Credit Transfer Costs</b>	
Percent Outsourced	8%
<b>Component Breakdown<sup>30</sup></b>	<b>Percent</b>
IT	54.00%
Other Administrative	30.00%
Over the Counter	8.00%
Processing	5.00%
Safety	3.00%
<b>Total</b>	<b>100%</b>

Table 17: Direct debit cost components

<b>Electronic Direct Debit Costs</b>	
Percent Outsourced	1%
<b>Component Breakdown<sup>31</sup></b>	<b>Percent</b>
Administrative	30.00%
IT	28.00%
Safety	20.00%
Processing	15.00%
Over the Counter	7.00%
<b>Total</b>	<b>100%</b>

<sup>29</sup> Component breakdowns for credit cards are comprised of the following costs: Over the counter – production, issuance, and transportation. IT – card IT systems and POS costs. Safety – insurance, loss, and fraud prevention costs. Other - inquiry costs, statements, and fees.

<sup>30</sup> Component breakdowns for credit transfers are comprised of the following costs: Over the counter – collection and inquiries related to credit transfers. Safety – insurance, loss, and fraud prevention costs. Processing – commercial bank fees paid for authorization, clearing, network access, and interchange; central bank processing costs. Other - central bank software costs; commercial bank archiving and remote channel inquiry costs.

<sup>31</sup> Component breakdowns for direct debits are comprised of the following costs: Over the counter – collection and inquiries related to direct debits. Safety – insurance, loss, and fraud prevention costs. Processing – commercial bank fees paid for authorization, clearing, network access, and interchange; central bank processing costs. Other - central bank software costs; commercial bank archiving and remote channel inquiry costs.

