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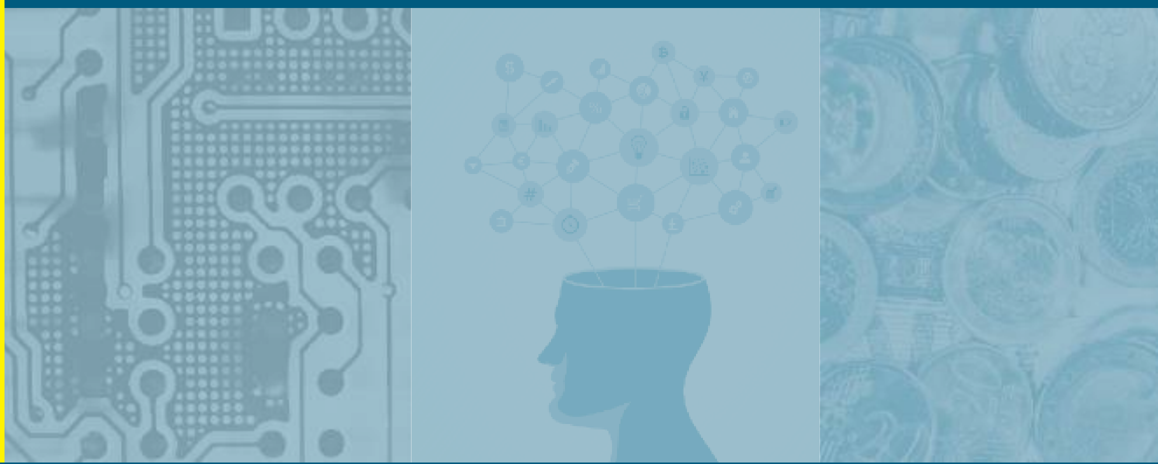

THE SOCIAL COSTS OF PAYMENT INSTRUMENTS IN ITALY

The results of the third survey

June 2025

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Executive summary

This report presents the results of the third Survey on the Costs of Payment Instruments in Italy. Launched in the second half of 2023, the survey used data from 2022 to update the analysis of an industry facing increasing competitive and regulatory pressures. The survey was conducted in cooperation with Italian Payments Committee. It looks at the overall costs of providing payment instruments and their acceptance by merchants and businesses, incorporating input from the various stakeholders (payment service providers and commercial enterprises).

In 2022, the total costs incurred by society (so-called 'total net costs' or 'social cost') for providing and accepting the payment instruments studied (cash, cheques, credit transfers, direct debits and payment cards) in Italy were estimated to be around €12 billion (0.61 per cent of GDP). This represents a savings of over 0.1 percentage points of GDP compared to previous surveys in 2016 (0.73 per cent) and 2009 (0.75 per cent).

The total cost incurred by payment service providers was almost €7 billion, up 26 per cent from the previous survey in 2016 against a doubling of the number[1] of transactions (+106 per cent) between the two surveys, driven primarily by card payments. The cost per transaction decreased significantly, from €1.01 to €0.62 (€1.39 in 2009). These trends reflect significant economies of scale, as well as digital innovation and rationalization processes affecting the provision of payment instruments. The decline in unit costs was observed for all instruments considered, except for cheques, which appear to be affected by diseconomies of scale due to reduced usage.

Also contributing to the overall savings generated by the decline in unit costs was the ongoing replacement of traditional transactions (e.g. at the physical counter) with those carried out through telematic or digital channels (e.g. home/mobile banking), whose share of the total transactions rose to more than 93 per cent (from 83 and 74 per cent, in 2016 and 2009, respectively). The share of the cost of paper instruments (cash and cheques) decreased to 31 per cent, from 41 per cent in 2016, reflecting their lower share of total transactions.

[1] Operations are measured in terms of the number of transactions handled by payment service providers for the different payment instruments; for cash, in terms of withdrawal and deposit transactions at the same intermediaries.

A comparison of the indicators shows that the unit costs of cash withdrawals/deposits and processed cheques are particularly high, amounting to €2.44 and €5.28, respectively. Direct debit was confirmed as the least expensive instrument (€0.19), followed by payment cards (€0.46) and credit transfers (€0.70). The cost of the latter differs according to the type of service (instant or traditional) and the channel used (remote or physical): for payment service providers, instant credit transfers (€0.66) are more expensive than remote credit transfers (€0.45), but both are much less expensive than paper-based credit transfers (€2.11). The cost incurred by payment service providers for credit transfers to countries outside the Single Euro Payments Area – SEPA – is almost nine times higher than SEPA credit transfers.

The economic sustainability of the entire payment industry continues to rely on the profitability of electronic instruments (especially cards), compared with the insufficient cost coverage of traditional instruments (cash and cheques).

Savings obtained through economies of scale and supply-side substitution of payment services are also reflected in the reduction in private acceptance costs for businesses and merchants, especially for direct debits and payment cards; the unit costs of these instruments fell significantly compared to previous surveys and in comparison with cash acceptance costs.

The report was written by Guerino Ardizzi, Serena Palazzo and Emanuele Pimpini of the Retail Payment Instruments and Services Directorate. Interviews with businesses and merchants were conducted in cooperation with Italian Payment Committee participants and trade associations. Massimiliano Cologgi, Alberto Di Iorio and Giorgia Rocco, also from the Retail Payment Instruments and Services Directorate, contributed to the implementation of the survey design.

1. Introduction

The retail payment services market has long been under increasing competitive and regulatory pressures, primarily due to European financial integration and digitization processes. In addition, the pandemic has greatly influenced payment habits in recent years, accelerating the shift towards digital payment methods in particular.

In this context, it is important to analyse the conditions for providing and accepting payment instruments. In the absence of periodic and sufficiently granular reporting, a useful information tool is the updated survey on the costs of payment instruments and services. This survey was conducted on a sample of banks (and other payment service providers) and businesses. The results of previous editions of the survey were published by Banca d'Italia in 2012 (2009 data) and 2020 (2016 data),[2] based on the survey methodology developed within the Eurosystem.[3] During this period, the Single Euro Payments Area (SEPA) was established and the European regulatory framework was harmonized in order to enable the provision of efficient and secure services and to promote the expansion of the payments industry. Payment service providers have had to bear (and will continue to bear) economic, technical and compliance burdens in order to adapt to the new security and efficiency standards. However, the growth in the market for increasingly digital instruments and processes has led to higher payment service revenue, going from 10 per cent to more than 20 per cent of total banking fee revenue between 2009 and 2022 in Italy.[4]

The third survey coincides with the beginning of a new regulatory phase aimed at making European payment instruments more competitive, safer and efficient, in line with the European Retail Payments Strategy. The recent European legislative package includes the revision of the second Payment Services Directive (PSD2), the Instant Payments Regulation (also intended to reinforce SEPA), and the proposed Digital Euro Regulation.

[2] See 'The social costs of payment instruments', Banca d'Italia, Institutional Issues, 2012 and 2020.

[3] The first survey conducted within the Eurosystem provided for the possibility for individual NCBs to update the survey to take into account changes in the scenario, such as those associated with the new regulatory framework for payment services in Europe. See Schmiedel H., et al., 'The Social and Private Costs of Retail Payment Instruments. A European Perspective'. Occasional Paper Series, ECB, Frankfurt am Main, 137, September 2012; Junius K., et al., 'Costs of retail payments - an overview of recent national studies in Europe', Occasional Paper Series, 294, ECB, Frankfurt am Main, May 2022. No up-to-date European studies are available for comparison with this survey.

[4] Based on income statement data from bank balance sheets.

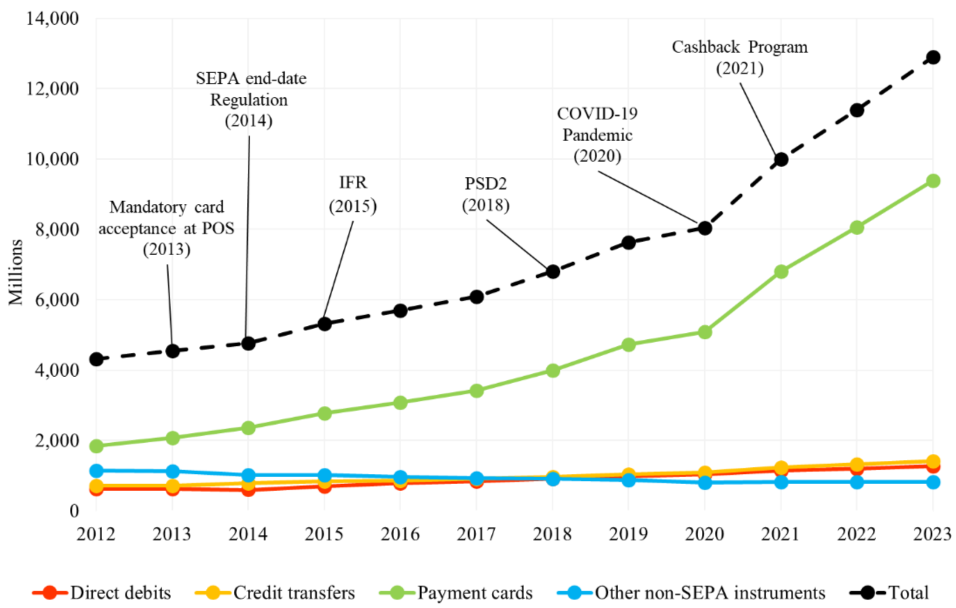
The first chapter of this report analyses the retail payments market in recent years, while the second chapter analyses the results of the new survey and compares them with the previous ones. Reference is made to the cost of instruments to society, as well as the private costs of acceptance (by merchants and businesses) and production (by banks and other providers). Details on the survey methodology are provided in the Appendix.

2. The retail payments market in Italy

The trends for the main electronic payment instruments (cards, credit transfers and direct debits), and the most innovative segments (e-commerce, contactless products and instant payments) are described below.[5]

In 2023, Italy saw a 13.2 per cent increase in the number of transactions using cashless payment instruments compared with the same period of the previous year (see Figure 1). Although still significant, growth in digital payments is slowing down, given the fading stimulus of the Covid-19 pandemic (in 2021, the number of transactions increased by 24 per cent).[6] Prior to the pandemic, however, there had been a gradual increase in the use of cashless payment instruments – credit transfers, direct debits and, in particular, payment cards – due to the rapid technological developments and regulatory interventions that supported their growth (see Box 1).

Fig. 1: Total cashless payment transactions in Italy from 2012 to 2023



Source: Banca d'Italia, supervisory data.
Notes: Other non-SEPA instruments include, for example, cheques, collection orders, etc.; payment cards include debit, credit and prepaid cards.

[5] The market data reported in this section take into account the most up-to-date information available up to 2023, taken from Banca d'Italia's supervisory data. Instead, the Survey on the Costs of Retail Payments, which is referred to in the following sections and was conducted in 2023, considers data taken from intermediaries' financial statements for 2022.

[6] See Ardizzi G., et al., 'The Impact of the Pandemic on the Use of Payment Instruments in Italy', Banca d'Italia, Mercati, infrastrutture, sistemi di Pagamento (Markets, Infrastructures, Payment Systems), 8, 2021.

In 2023, the number of transactions remained strong in the areas of payment cards (+16.5 per cent compared to 2022), credit transfers (+7 per cent) and direct debits (+6.3 per cent); conversely, cheque transactions declined further (-12.1 per cent). Card transactions (credit, debit and prepaid) now account for over 70 per cent of all electronic retail payments.

Box 1: Regulatory interventions that have promoted the use of digital payments in Italy

Over the past decade, several regulatory interventions at both the national and EU levels have encouraged the use of digital payments in Italy.

The first domestic provisions limiting the use of cash date back to Decree Law 201/2011 (known as the 'Cure Italy' decree), which was converted into law with amendments by Decree Law 214/2011. Subsequently, Decree Law 179/2012 (known as the 'Development-*bis*' decree), which was converted into law with amendments by Decree Law 221/2012, introduced the obligation for merchants and professionals to accept debit card payments as of 1 January 2014.

At the EU level, Regulation (EU) No 260/2012, also known as the SEPA 'end-date' Regulation, played a key role in creating a Single Euro Payments Area (SEPA) for electronic payments. This legislation ensured that consumers and businesses could conduct electronic transactions within the SEPA area under the same conditions as domestic payments thanks to uniform interbank rules, procedures and standards. The Regulation introduced common standards for credit transfers (SEPA Credit Transfer – SCT) and direct debits (SEPA Direct Debit – SDD). It set the migration deadline for euro-area countries as 1 February 2014 and for other Member States as 31 October 2016.[1]

In July 2013, the European Commission presented a legislative package aimed at strengthening competition and promoting the integration of the payments market. The package focused on two main areas: regulating interchange fees in payment card networks and reviewing the payment services framework. The aim was to foster innovation and security in the sector.

[1]Banca d'Italia, as the supervisory authority for the payments system, has excluded some domestic payment services from migration to the SEPA area. These include bills, because they are paper-based; pre-filled payment slips, because they involve a notification system; and bank receipts, because they include a financing component. Also excluded were checks and other bills of exchange, such as promissory notes, which require the physical transfer of the instrument between payer and payee.

Against this backdrop, Regulation (EU) 2015/751 (‘Interchange Fee Regulation’, or IFR) came into force on 8 June 2015. It introduced limits on interchange fees – the fees that the PSP acquirer (the payment service provider with which the merchant has a contract) has to pay to the PSP issuer (the institution that issues the card) – to reduce acceptance costs for merchants.[2] These limits, which vary by card type, were set at 0.20 per cent of the transaction value for debit and prepaid cards, and at 0.30 per cent for credit cards. Studies on the impact of this measure have shown that the reduction in interchange fees has been accompanied by a greater prevalence of card payments in Italy and Europe.[3]

Meanwhile, Directive (EU) 2015/2366 (‘revised Payment Services Directive’, or PSD2), transposed into Italian law by Legislative Decree 218/2017, came into force on 13 January 2018 and introduced the ‘open banking’ business model. This allows non-bank third-party operators (‘Third Party Providers’, or TTPs) to access customers’ accounts with their authorization in order to offer new electronic payment services.[4] At the same time, PSD2 has strengthened measures to prevent fraud in electronic payments, thereby improving consumer protection.[5]

There was further regulatory intervention at the national level through Decree Law 156/2020, which established the ‘State Cashback’ programme,[6] designed to encourage the use of digital payments and to prevent tax evasion by making transactions traceable. The State Cashback programme operated for approximately seven months, from 8 December 2020 to 30 June 2021, before being suspended by Decree Law 99/2021.

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[2] Namely, the acquiring PSP receives a commission (merchant fee) from the merchant, consisting of four components: i) industrial costs, ii) the interchange fee, iii) any costs for POS terminal rental and maintenance, and iv) a mark-up. In turn, the acquiring PSP pays the issuing PSP an interchange fee, calculated as a percentage of the transaction amount.

[3] See Ardizzi G., et al, ‘The impact of the interchange fee regulation on merchants: evidence from Italy’, Banca d’Italia, Questioni di Economia e Finanza (Occasional Papers), 434, 2018; G. Ardizzi, et al., ‘Interchange Fee Regulation and card payments: a cross-country analysis’, Banca d’Italia, Questioni di Economia e Finanza (Occasional Papers), 628, 2021.

[4] Specifically, PSD2 regulated two new payment services: Payment Initiation Services (PIS) and Account Initiation Services (AIS). See Pellitteri R., et al., ‘Open Banking in the payments system: infrastructural evolution, innovation and security, supervisory and oversight practices’, Banca d’Italia, Mercati, infrastrutture, sistemi di Pagamento (Markets, Infrastructures, Payment Systems), 31, 2023.

[5] Among the security measures introduced by PSD2 is strong customer authentication (SCA), which requires users of electronic payment services to use two distinct and independent authentication factors, chosen from the following three categories: i) possession (something the user has), ii) knowledge (something the user knows), and iii) inherence (something that characterizes the user, such as biometric data). SCA applies when accessing a payment account, making a payment or changing authentication credentials. However, it should be noted that there are specific exemptions to the application of SCA that are governed by Delegated Regulation (EU) 2018/389.

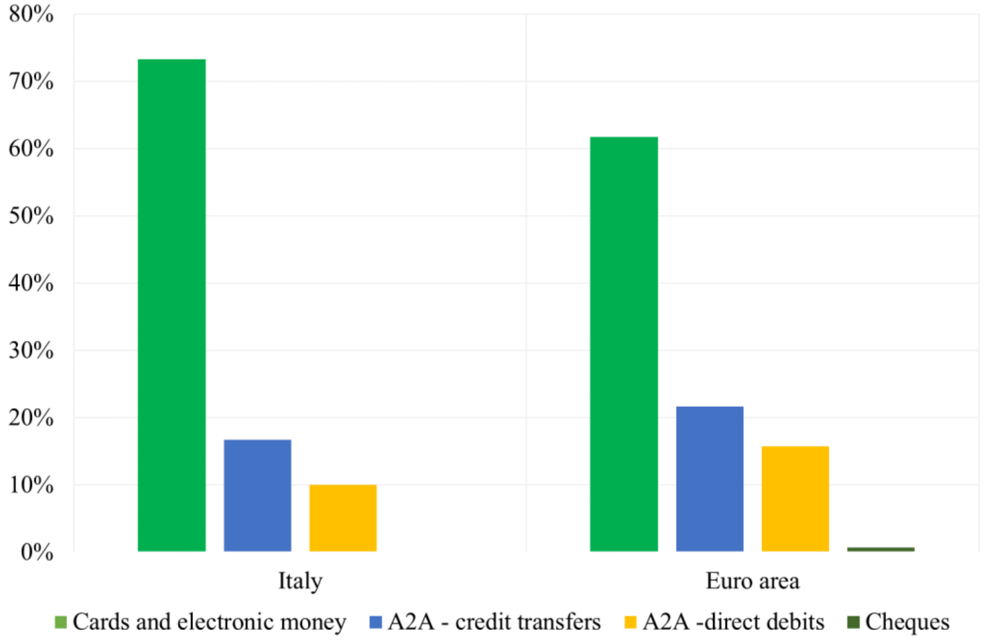
[6] The programme offered a 10 per cent reimbursement of costs incurred by using electronic payment methods at physical points of sale, up to a maximum of €150 per half-year, provided that the user made a minimum of 50 transactions. Online transactions through e-commerce did not count towards the minimum and reimbursements were paid by credit transfer to the IBAN provided during registration.

Compared to other European countries, the Italian digital instruments market appears to be one of the most dynamic. However, the gap in terms of per capita use remains significant. In 2023, Italy saw 223 cashless transactions per person compared to nearly 400 on average in the euro area.[7]

Italy stands out for its higher proportion of card-based payments,[8] compared to credit transfers or direct debits (so-called account-to-account, or A2A, payments) settled under SEPA schemes (see Figure 2)

Fig. 2: Breakdown of cashless payment instruments in Italy and the Euro area

(per cent of total transactions; 2023)



Source: Based on ECB statistics.

Available indicators show that some of the most innovative segments of the payment supply chain are booming.

In the card segment, technological development has fostered product and channel innovation, as well as an enhanced user experience, through the use of mobile phones and the adoption of contactless payments. In 2023, 78 per cent of card transactions performed at physical points of sale were contactless (compared to 25 per cent at the end of 2019, before the pandemic). Around one in ten of these transactions are now carried out via mobile devices (smartphones or wearable devices) on which a payment card has been stored and that can communicate with POS terminals.

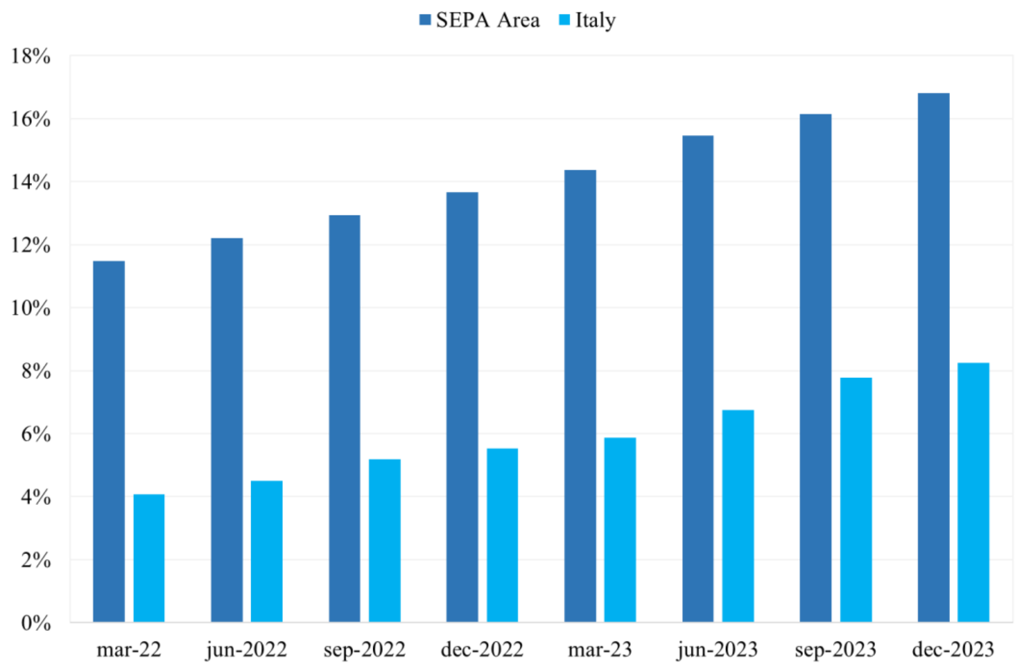
[7] See ECB Payment Statistics, Payments transactions (Key indicators) - PAY.

[8] In Italy, the use of payment cards has grown at a faster rate than in the euro area (in 2023, +17.8 per cent versus +9.8 per cent), although the number of card transactions per capita still remains below the European average: there were 159 in Italy, 242 in the euro area.

In e-commerce, the use of payment cards has also continued to grow rapidly, with a 16.4 per cent increase in 2023. The share of the number of e-commerce or remote transactions out of the total number of card transactions issued in Italy is 23.5 per cent, but stands at over 40 per cent if only credit and prepaid cards, for which online payments have long been possible, are considered.

With regard to the other innovative instruments, the number of instant credit transfers is growing robustly (+63.1 per cent in 2023 compared with the previous year), with more than 90 per cent of transactions taking place online.[9] However, the share of instant credit transfers out of total SEPA transfers in Italy is still low compared to other European countries (8.3 per cent on average in 2023, which is less than half the figure recorded in the euro area; see Figure 3).[10]

Fig. 3: Share of instant credit transfers in the SEPA area and in Italy
(quarterly data; 2022–2023)



Sources: Banca d'Italia, supervisory data; European Payment Council.

[9] Unlike traditional credit transfers, instant credit transfers allow real-time settlement of transactions, with a maximum time of 10 seconds, and 24/7/365 continuous operation.

[10] To encourage its spread, Regulation (EU) 2024/886 ('Instant Payments Regulation' – IPR) came into force in January 2025, establishing uniform rules for instant payments through the SEPA scheme, making them more accessible and beneficial for consumers and businesses.

3. The results of the third survey

The survey measures the cost in terms of resources used by payment service providers (‘banks and other providers’) to provide payment instruments and for their acceptance by ‘merchants and businesses’. The instruments considered are cash and alternative instruments: cheques, credit transfers, direct debits and payment cards. The purpose of the survey is to analyse the cost structure for different payment instruments and the trends observed over the period of the three surveys.

The costs considered (see the box in the Appendix, para. 1) are:[11]

a) the ‘total net costs’ (or ‘social cost’), given by the sum of the private ‘internal’ costs incurred by the various stakeholders (PSPs, merchants and businesses) to purchase goods and services and the use of human and technological resources involved in the payment process, net of the so-called ‘external’ costs incurred vis-à-vis another stakeholder (e.g. bank fees paid by merchants that also represent revenue for banks); they reflect the costs actually incurred by society as a whole to carry out transactions.

b) the ‘private costs’ of individual stakeholders (PSPs, merchants and businesses), which include, in addition to internal costs (e.g. device management, costs of theft or shortages), commission charges paid to another stakeholder in the chain (e.g. the merchant who pays the commission to the PSP).

Section 3.1 presents the results in terms of the total net costs incurred by society to make payments; Section 3.2 analyses the private costs of acceptance by businesses and merchants; and Section 3.3 discusses the private production costs of PSPs.

[11] As with previous surveys, neither the social costs of externalities associated with the use of various payment instruments – for example, negative ones resulting from the lack of cash traceability (e.g. tax evasion or illicit uses) – nor the implicit costs borne by the consumer that are not normally perceived/monetized (e.g. those related to loss or theft, the opportunity cost on non-interest-bearing balances, the time it takes to go to a bank counter or search for an ATM) are included.

3.1. The cost of payment instruments to society

In 2022, the ‘total net costs’ (net of transfers between stakeholders) incurred in the production and acceptance of the payment instruments studied (cash, cheques, credit transfers, direct debits and payment cards) in Italy amounted to €11.6 billion, or 0.61 per cent of GDP, a savings of more than 0.1 percentage points of GDP compared to the previous surveys for 2016 (0.73 per cent) and 2009 (0.75 per cent).[12]

This saving of societal resources consumed to carry out payment transactions reflects the effects of economies of scale and substitution on the growth of electronic payments, whose share of total payment transactions (about 26 billion transactions) increased from 10.1 per cent to 38.4 per cent in the period between the first (2009) and the third survey, accelerating especially in comparison to the second survey (18 per cent in 2016) due in part to the recent pandemic.

The share of total net costs attributed to payment service providers comes to 57.9 per cent (compared to 43.9 per cent in 2016 and 37 per cent in 2009), while the share borne by businesses and merchants (internal costs) has decreased, significantly reducing over time the variable costs and the weight of in-house activities (internal resources) in the management of collection and payment processes, thanks in part to the digitization of bank-business communication channels and the development of new corporate banking services.

In comparing instruments, cash is confirmed as the cheapest for society in terms of cost per transaction (€0.33), but is the most expensive in relation to transaction amount (since the average ticket is €21) and, although decreasing, accounts for more than 45 per cent of the total net costs for society. The cost of electronic instruments (payment cards and credit transfer or direct debit transactions), at €0.50-€0.59, is down sharply from previous surveys (also as a percentage of transaction amounts). Cheque use is increasingly inefficient for society and still accounts for 5.6 per cent of total net costs.

Overall, the resources employed for cash use are estimated to have totaled €5.2 billion per year in 2022, down sharply from €7.4 billion in 2016, due to substitution in favour of electronic payment instruments, the total cost of which reached €5.7 billion, compared to €7.4 billion in 2016. Similar results emerge when comparing the per capita costs of the different instruments: in 2022, using cash cost each Italian an average of €89 per year, compared to €75 for payment cards, which are the most effective substitute for cash (see Table 3.1.1).

[12] To make the comparison consistent, data from the two previous surveys (2009 and 2016) also include costs related to prepaid cards, which were not initially considered.

Table 3.1.1: The social cost (or total net costs) of payment instruments

Social cost 2022	Cash	Payment cards	Cheques	Credit transfers/ Direct debits	Total payment instruments
€ per transaction	€ 0.33	€ 0.59	€ 8.20	€ 0.50	€ 0.44
As % of transaction value	1.53%	1.20%	0.22%	0.01%	1.29%
€ per capita	€ 89	€ 75	€ 11	€ 21	€ 196
As % of GDP	0.27%	0.23%	0.03%	0.07%	0.61%
Total € bln	5.2	4.4	0.6	1.3	11.6
No. of transactions (mln)	16,038	7,521	79	2,534	26,172

Social cost 2016	Cash	Payment cards	Cheques	Credit transfers/ Direct debits	Total payment instruments
€ per transaction	€ 0.35	€ 0.74	€ 3.80	€ 1.09	€ 0.47
As % of transaction value	1.84%	1.25%	0.15%	0.07%	1.65%
€ per capita	€ 123	€ 37	€ 12	€ 30	€ 201
As % of GDP	0.44%	0.06%	0.04%	0.05%	0.73%
Total € bln	7.4	2.24	0.7	1.8	12.2
No. of transactions (mln)	21,053	3,022	186	1,656	25,917

Social cost 2009	Cash	Payment cards	Cheques	Credit transfers/ Direct debits	Total payment instruments
€ per transaction	€ 0.33	€ 1.22	€ 3.54	€ 1.65	€ 0.47
As % of transaction value	2.00%	1.43%	0.16%	0.10%	1.86%
€ per capita	€ 133	€ 30	€ 17	€ 34	€ 215
As % of GDP	0.47%	0.11%	0.06%	0.12%	0.75%
Total € bln	7.9	1.79	1.01	2.04	12.70
No. of transactions (mln)	23,812	1,469	285	1,234	26,800

Source: Banca d’Italia, Survey on the Costs of Payment Instruments, data for 2016, 2019 and 2022.

3.2. Costs (private) incurred by businesses and merchants

Cost levels. The private costs of payment instrument acceptance by merchants and businesses include explicit costs associated with bank charges (e.g. account crediting fees, merchant fees, POS fees, etc.)[13] and for the purchase of other goods or services for payment collection (e.g. transport of valuables, purchase or rental of acceptance devices, safe deposit boxes, insurance charges, maintenance fees, etc.); to these are added other (implicit) charges related to payment services (e.g. losses due to shortages, theft and fraud, expenses of dedicated personnel, etc.).

[13] For more details on the types of costs considered in the survey, see Appendix, para. 2 (businesses and merchants).

Table 3.2.1 shows the average cost indicators for businesses and merchants of different payment instruments, including bank fees, in terms of unit values and as a percentage of the average transaction amount,[14] for 2022 and in comparison with previous surveys.

Table 3.2.1: Comparison of (private) acceptance costs for merchants and businesses

Private cost for merchant/business (incl. bank fees)	Cash	Debit cards	Credit cards	Cheques	Credit transfers	Direct debits
			2022			
per transaction	€ 0.23	0.28 €		€ 2.91	€ 0.15	
as percentage	1.05%	0.57%		0.08%	0.02%	
Average transaction amount (P2B-P2G)	€ 21.35	€ 48.75		€ 3,644.12	€ 865.26	
			2016			
per transaction	€ 0.19	€ 0.46		€ 1.03	€ 0.56	
as percentage	1.00%	0.65%		0.05%	0.07%	
Average transaction amount (P2B-P2G)	€ 19.23	€ 70.77		€ 2,060.00	€ 783.33	
			2009			
per transaction	€ 0.18	€ 0.96		€ 1.88	€ 0.82	
as percentage	1.07%	1.07%		0.09%	0.08%	
Average transaction amount (P2B-P2G)	€ 16.73	€ 80.43		€ 2,212.69	€ 973.92	

Source: Banca d'Italia, Survey on the Costs of Payment Instruments, data for 2016, 2019 and 2022.

Cash and cards

For merchants and businesses, the unit cost of a cash transaction (€0.23) remains lower than that of payment cards (€0.28), taking into account that some banking services (e.g. withdrawals and deposits) are not explicitly charged.[15] However, this survey shows a sharp reduction in the competitive advantage of cash, in comparison with previous surveys and compared to other payment instruments. Indeed, both the cost of cash per unit (per transaction) and the cost of cash as a percentage (of value) of the payment have increased, compared with a reduction in the cost of cards (and other electronic instruments), not to mention that as a percentage of value, cash is the most expensive means by far (1.05 per cent; see Box 2). The average value of a cash purchase transaction has also risen (€21) compared with previous surveys (€17-€19); this is consistent with the growth in digital payments (especially contactless and mobile), even for small amounts, as a substitute for cash.[16] For

[14] They were compiled from information provided by the sampled merchants and businesses and related to scale variables - such as enterprise turnover by number of employees, based on ISTAT sources.

[15] There may be implicit merchant fees attributable to the so-called 'value date' game, which, however, do not apply in the case of cash transactions. Much of the banking costs of cash would be 'implicitly' remunerated instead through other payment service or current account revenues.

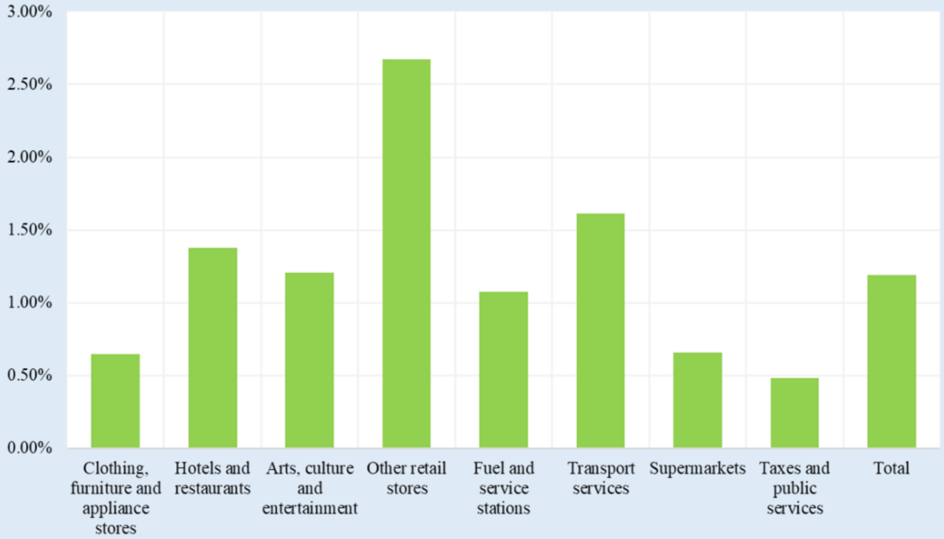
[16] Similar considerations emerge from a survey conducted at the European level. See Junius K., et al., 'Costs of retail payments - an overview of recent national studies in Europe', Occasional Paper Series, 294, ECB, Frankfurt am Main, May 2022.

this survey, information is also available by merchant size class, showing that cash costs for businesses or merchants with fewer than 10 employees are 33 per cent higher than the system average figure, which includes large retail chains (which have lower operating costs than the aggregate average figure).

Box 2: The cost of cash for merchants in retail transactions

Figure A shows the estimated cost of accepting cash by merchandise category of merchants. The incidence of the cost is low where the average transaction amount is higher, such as for taxes and public utilities and retail chains (e.g. supermarkets and clothing, furniture and household appliance stores). In other sectors (arts, culture and entertainment, transportation and food services), however, the cost of using cash is particularly high.

Fig. A - The cost of cash for merchants in retail transactions
(*per cent of transaction value*)



Source: Survey on the Costs of Payment Instruments for merchants, private costs, 2022 data.

Note: Other retail stores include vehicle repair, personal care and financial activities.

With reference to cards, the unit cost (and as a percentage of the transaction value) is around €0.28 per transaction (0.57 per cent of the value), much lower than in previous surveys; the gap between cash and card costs is thus narrowing. Payment cards (debit, credit and prepaid) are used for payments with average amounts of €49 (compared with over €70 and €80 in 2016 and 2009, respectively).[17] Compared to cash, the cost for cards is less affected by the size class of the merchant: firms with fewer than 10 employees bear about 3.8 per cent higher private unit costs than the system average figure.

[17] The average amount varies based on the instrument used and the different product categories of spending: the average value is usually higher for credit cards.

Checks, transfers and debits

In general, payment collections through credit transfers, direct debits and cheques are also important for businesses, especially if they operate in the areas of public utilities or wholesale and international trade.

In line with previous surveys, there is an increase in the efficient handling of credit transfer and direct debit payments by businesses. The use of both instruments has been propelled in recent years by the integration and digitization of the business and monetary cycles of companies, stimulated both by legislation (e.g. obligations to use electronic invoicing) and by the pandemic, which intensified the use of digital sales channels integrated with corporate banking services. Credit transfers and direct debits have thus seen a significant reduction in unit costs (from €0.56 per transaction in 2016 to €0.15 in 2022) and in relation to transaction value (from 0.07 per cent to 0.02 per cent over the same period).[18]

For both credit transfers and direct debits, costs vary with respect to firm size class; smaller firms (with fewer than 10 employees) have values 55.2 per cent higher than the system average figure.

Cheques are by far the most expensive payment instrument for businesses. Their cost has risen sharply over time – to €2.91 in 2022, from €1.03 in 2016 and €1.88 in 2009 – because of the persistently high share of costs going towards their manual processing and physical security, such as handling forged and unpaid cheques.

3.3 The (private) production costs of payment instruments

In 2022, the total production costs borne by payment service providers[19] was estimated at €6.7 billion, up 26 per cent from the 2016 survey against a doubling of the number[20] of payments (+106 per cent) over the same period, driven in particular by card payments (Table 3.3.1). The cost per single payment, therefore, has fallen sharply, from €1.01 to €0.62 (€1.39 in 2009), reflecting economies of scale and the innovation and rationalization of the provision of electronic instruments.

[18] The cost of the two tools for merchants in 2022 refers only to business-to-consumer (B2C) online transactions. It excludes those performed at physical counters or via paper media (such as postal slips), which were included in previous surveys.

[19] The sample of payment service providers surveyed consisted of 15 banking and financial groups that collectively cover about 80 per cent of the market with a volume of more than 10 billion transactions per year.

[20] Operations are measured in terms of the number of transactions handled by intermediaries for the various payment instruments; for cash, this refers withdrawals and deposits with the same intermediaries.

Table 3.3.1: Unit costs (per transaction) of provision by payment instrument

Payment instrument	Year	€ Unit cost	Number of transactions (mln)
Cash transactions	2009	3.56	540
	2016	2.45	690
	2022	2.44	672
Cheques	2009	1.90	335
	2016	2.77	183
	2022	5.28	79
Credit transfers	2009	1.14	618
	2016	0.89	854
	2022	0.70	1,332
Direct debits	2009	0.35	419
	2016	0.28	498
	2022	0.19	1,202
Payment cards	2009	0.88	1,469
	2016	0.73	3,022
	2022	0.46	7,521

Source: Banca d'Italia, Survey on the Costs of Payment Instruments, data for 2016, 2019 and 2022.

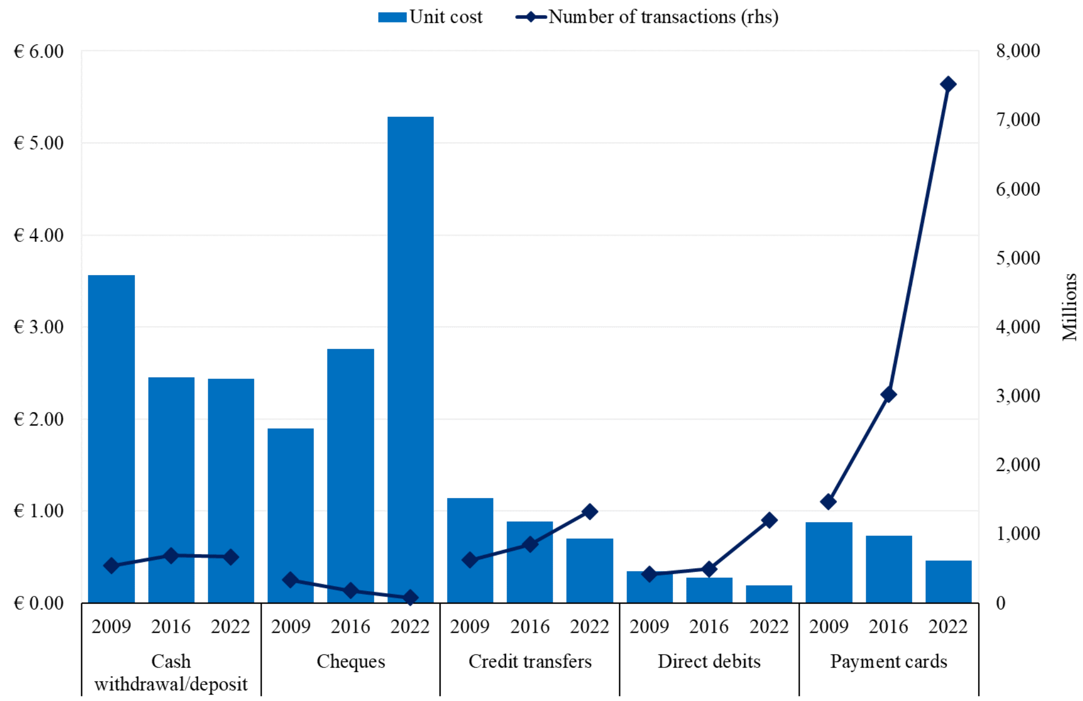
Unit costs have declined for all instruments considered, except for cheques (Figure 3.3.1), which seems to suffer from diseconomies of scale as a result of reduced usage. The process of replacing traditional transactions (e.g. at the physical counter) with those carried out through telematic channels (e.g. home/mobile banking) has also contributed to the overall savings generated by declining unit costs: in 2022, the share of the latter out of the total was more than 93 per cent (up from 83 and 74 per cent in 2016 and 2009, respectively). The incidence of the cost of non-electronic instruments (cash and checks) on the total cost was reduced to 31 per cent, from 41 per cent in 2016, also related to the lower weight on total operations.

A comparison of the unit costs of the different instruments (Figure 3.3.1) shows those of cash withdrawals/deposits[21] and cheques as particularly high, amounting to €2.44 and €5.28 per transaction, respectively. The least expensive instrument is confirmed to be direct debits (€0.19), followed by cards (€0.46)[22] and credit transfers (€0.70).

[21] As for cash, traditional counter transactions (15 per cent of the total) absorb 69.4 per cent of total costs. In contrast, ATM transactions (the remaining 85 per cent of the total) absorb only 30.6 per cent of costs.

[22] On average, for a generic payment card transaction, the PSP that issues the card (issuer) bears more than 63 per cent of the total cost, while the remaining 37 per cent is borne by the PSP that contracts with the merchant (acquirer).

Figure 3.3.1: Unit costs (per transaction) of provision by payment instrument



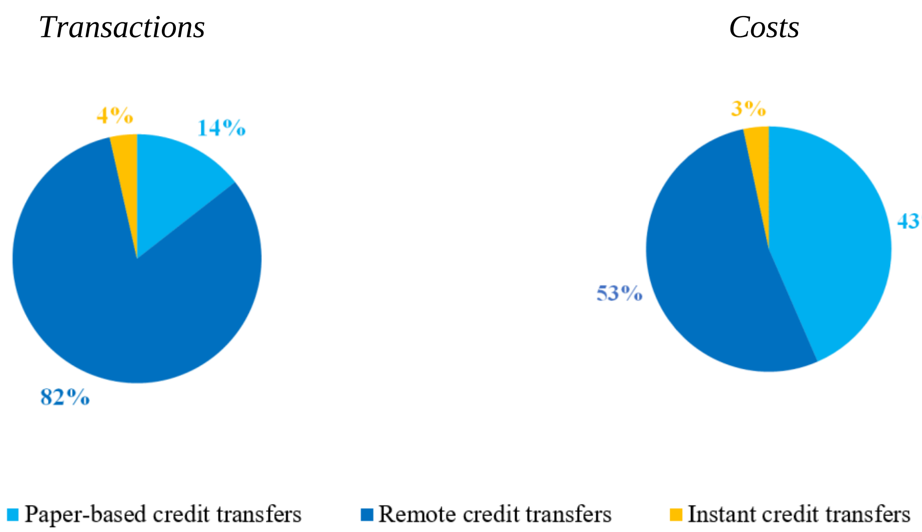
Source: Banca d’Italia, Survey on the Costs of Payment Instruments, data for 2016, 2019 and 2022.

The cost of credit transfers differs according to the type of service (instant or traditional) and the channel used (remote or physical): for intermediaries, instant credit transfers (€0.66) are more expensive than traditional remote credit transfers (€0.45), but both are much less expensive than paper-based credit transfers (€2.11). The cost incurred by intermediaries for transfers to countries outside the SEPA is almost nine times higher than SEPA credit transfers.

In addition, paper-based credit transfers, while accounting for only 14 per cent of transactions, account for about 43 per cent of total costs (Figure 3.3.2).

As for payment cards, debit and prepaid cards continue to be significantly cheaper (€0.32) than credit cards (€1.07; Table 3.3.2).

Fig. 3.3.2: Breakdown of transactions and costs by credit transfer type



Source: Banca d’Italia, Survey on the Cost of Payment Instruments, 2022 data.

Table 3.3.2: Unit costs (per transaction) and as a percentage of value per instrument (PSP side)

Payment instrument	€ Unit cost	Cost as % of transaction value
Cash	2.44	0.48%
Cheques	5.28	0.14%
Credit transfers	0.70	0.01%
Paper-based credit transfers	*2.11*	*0.01%*
Remote credit transfers	*0.45*	*0.01%*
Instant credit transfers	0.66	0.08%
Direct debits	0.19	0.04%
Payment cards	0.46	0.95%
Debit and prepaid cards	*0.32*	*0.74%*
Credit cards	*1.07*	*1.54%*
Total	**0.62**	**0.06%**

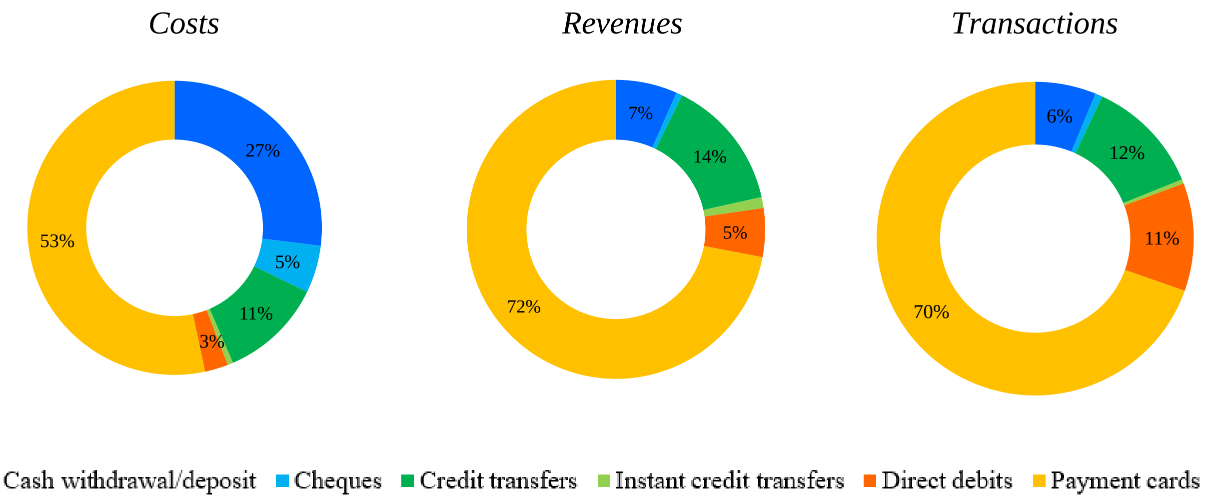
Source: Banca d’Italia, Survey on the Costs of Payment Instruments, 2022 data.

Although the survey focuses on the analysis of provisioning costs, it also collects aggregate information on fee income charged to end users (households and businesses) that offers an indication of the sustainability of the segment for banks (Figure 3.3.3). A comparison of instruments shows that the operating costs continue to be insufficiently covered for cash and checks, even in the face of the prevailing practice of not charging users explicit fees for them (except in special cases).

The card payments sector (credit, debit and prepaid cards), mainly serviced by specialized non-banking operators, contributes 72 per cent to total revenues from payment services. Credit transfers contribute 14 per cent of the segment's revenues.

Overall, a comparison of the percentage compositions of costs, revenues and volumes of transactions shows how electronic instruments contribute to the sustainability of the entire industry, even covering the costs of cash and checks.

Figure 3.3.3: Breakdown of costs, revenues, and transactions by payment instrument (PSP side)



Source: Banca d'Italia, Survey on the Cost of Payment Instruments, 2022 data.

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Appendix

1. Methodology and sample

The survey on the social costs of payment instruments in Italy for the year 2022 updates the results of those conducted for 2009 and 2016, keeping the methodology and scope of the survey substantially unchanged.

The methodology is the one developed at European level.[23] The payment cycle includes several stages necessary to transfer money, each of which absorbs resources; the overall efficiency of the system therefore depends on the behaviour of the stakeholders involved in the individual stages of the process. For this reason, the survey captures the economic resources actually consumed in the production (by banks and other payment service providers) and use (by merchants and businesses) of the instruments. Like the previous one, this survey excludes the costs to the central bank of producing and circulating banknotes, and the nonmonetary costs incurred by consumers in making payments (e.g. execution time or searching for physical counters/ATMs to obtain cash) or associated with losses or theft (instead, those at businesses and merchants are included).

The scope of payment instruments continues to include cash transactions, for which no official statistics are available, and alternative instruments (cheques, credit transfers, direct debits, payment cards). The analysis remains focused on the private costs incurred by each stakeholder in the payment chain and the total resource costs (total net or social costs) for the entire system.

Private costs are those incurred in offering and using payment instruments and include (see the box):

i) ‘internal costs’, referring to the consumption of resources (human and financial) to purchase goods and services from other suppliers (e.g. ICT expenses, processing, materials, terminals, etc.) and human resources/time devoted to carrying out activities related to payment processing (e.g. for handling, reconciliation, physical security, etc.);

ii) ‘external costs’, relating to fees paid to other participants, such as fees paid by firms//businesses to banks or interbank fees).

Total net or social costs are given by the sum of private costs net of external costs incurred by each actor.

[23] See Schmiedel H., et al., ‘The Social and Private Costs of Retail Payment Instruments. A European Perspective’, Occasional Paper Series, 137, ECB, Frankfurt am Main, September 2012.

Private costs are important for analysing the efficiency of operators' behaviour. Social costs reflect the charges actually incurred by society as a whole to execute transactions; they represent all 'internal' costs incurred by the various stakeholders in the payment chain (banks, merchants, other businesses) net of 'external costs' (e.g. fees), i.e., monetary transfers that constitute, respectively, revenues for producers and costs for users. The stakeholders considered are, again in this edition, 'banks and other providers' and 'businesses and merchants'.

As with the previous survey, neither the costs to society of externalities associated with the use of different payment instruments – e.g. the negative ones resulting from the lack of cash tracking (due to tax evasion or other illicit uses) – nor the implicit costs to the consumer that are not normally perceived/monetized (e.g. related to loss or theft, the opportunity cost of non-interest bearing balances, the time it takes to go to a bank counter or search for an ATM) are considered.

The data were collected via ad hoc questionnaires and refer to the year 2022.

Box: The scope of the third survey on the social cost of payment instruments in Italy

PSP of the payer / Issuer

- External Costs
  - Fees paid to other PSPs
- Internal costs
  - Instrument issuance and distribution
  - Cash withdrawal management
  - Payment initiation, processing and clearing
  - Reporting, administration and control

Interchange fees (PSP revenue)

PSP of the payee / Acquirer

- External Costs
  - Interbank fees or interchange fees
- Internal costs
  - Customer acquisition
  - Terminal management and processing
  - Cash deposit management
  - Reporting, administration and control

Bank fees from households
(PSP revenues to remunerate some costs and thus are eliminated in the calculation)

Bank fees from enterprises
(PSP revenues to remunerate some costs and thus are eliminated in the calculation)

Households
(not involved in the Survey)

- External Costs
  - Bank fees
- Internal costs (excluded from the Survey)
  - Time spent
  - Personal security
  - Losses from fraud and theft

Businesses/merchants

- External Costs
  - Bank fees (e.g. merchant fees)
- Internal costs
  - Customer acquisition
  - Terminal management and processing
  - Cash deposit management
  - Reporting, administration and control

Calculation method

1) **Private cost of PSP** = $\sum$ ***PSP internal costs*** + $\sum$ ***PSP external costs***

   (PSP commission revenue eliminated in the overall calculation of costs)

2) **Private cost of business/merchant** = $\sum$ ***Enterprise internal costs*** + $\sum$ ***Enterprise external costs***

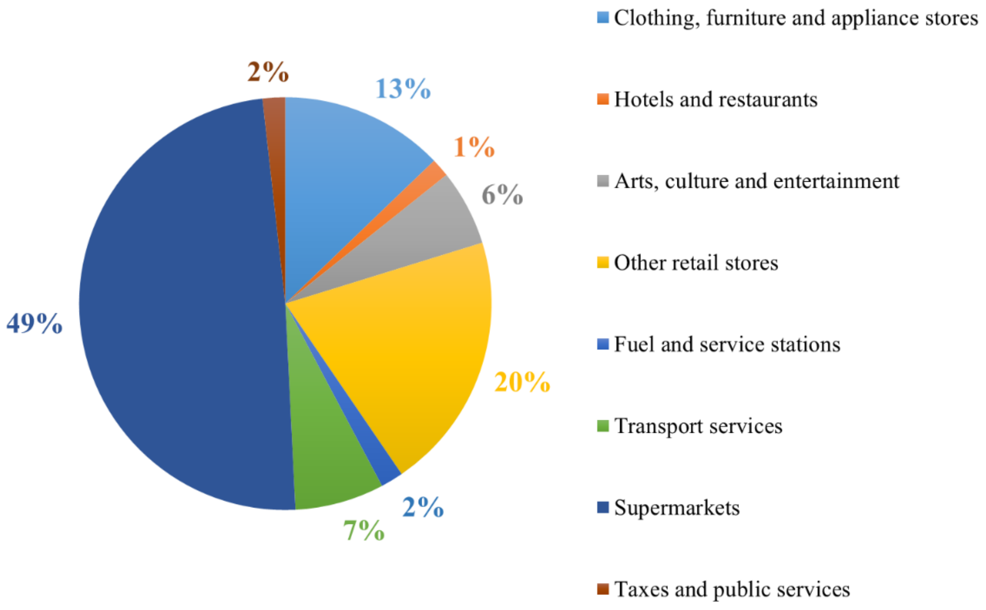
3) **Total net system costs** = $\sum$ ***PSP internal costs*** + $\sum$ ***Enterprise internal costs***

2. The 'businesses and merchants' sample

The acceptance cost survey was carried out through more than 480 interviews conducted with small merchants and large retail businesses. The interviews were conducted both with the support of a company specializing in market research, using computer-assisted personal interviewing (CAPI) and computer-assisted web interviewing (CAWI) methodologies, and through the trade associations (Confesercenti and Confcommercio) participating in the Italian Payments Committee.

The sample used includes more than 900 points of sale, and is predominantly made up of large-scale retail operators (49 per cent), other retail operators (performing vehicle repair, personal care and financial activities; 20 per cent), and the clothing, furniture and household appliances sector (13 per cent; Figure 2.1).

Fig. 2.1: Businesses and merchants sample – points of sale by sector



More than 90 per cent of the turnover produced by the sample is concentrated in large businesses (with more than 50 employees); only a small percentage (8 per cent) is attributable to small merchants (up to 9 employees; Table 2.1).[24]

[24] Business turnover by employee class from ISTAT was used to relate the sample used in the survey to the overall population of Italian businesses and was used in estimating unit costs by payment instrument.

Table 2.1: Businesses and merchants sample - turnover by size (number of employees)

Number of employees	ISTAT turnover	Survey turnover	Survey turnover (€ mln)
0-9 employees	33.2%	8.4%	268
of which: 1 employee	*n.a.*	*2.2%*	*70*
10-19 employees	9.3%	0.1%	3
20-49 employees	8.4%	0.5%	14
> 50 employees	49.2%	91.0%	2,890
Total	**100.0%**	**100.0%**	**3,175**

About 60 per cent of the companies generate a turnover of less than €250,000, while only 4 per cent generate a turnover of more than €2.5 million, accounting for 37 per cent of the outlets (Table 2.2).

Table 2.2: Businesses and merchants sample - number of companies/points of sale by turnover class

Turnover Classes	Companies		Points of sale	
	Number	*%*	*Number*	*%*
Up to €100,000	187	38%	218	23%
Over €100,000 to €250,000	123	25%	169	18%
Over €250,000 to €500,000	85	17%	118	12%
Over €500,000 to €1 million	48	10%	59	6%
Over €1 million to €2.5 million	23	5%	38	4%
Over €2.5 million	20	4%	357	37%

Given the nature of the sample, the most widely accepted instruments are cash and payment cards, particularly debit and prepaid cards, credit transfers and direct debits. The latter are mainly used for remote or larger payments. In addition, although still uncommon, the most innovative instruments accepted include apps and 'Buy Now, Pay Later' (BNPL), the latter used mainly for online purchases (Table 2.3 and Figure 2.2).

A description of the types of costs found for each payment instrument is given in Table 2.4.

Table 2.3: Businesses and merchants sample - acceptance of instruments

Acceptance of payment instruments by merchants		
	Yes	No
Cash	80.9%	19.1%
Cheques	27.4%	72.6%
Direct debits/credit transfers	59.7%	40.3%
Debit and prepaid cards	71.0%	29.0%
Credit cards	53.9%	46.1%
App	38.7%	61.3%
Buy Now Pay Later	8.2%	91.8%

Fig. 2.2: Businesses and merchants sample - acceptance of instruments

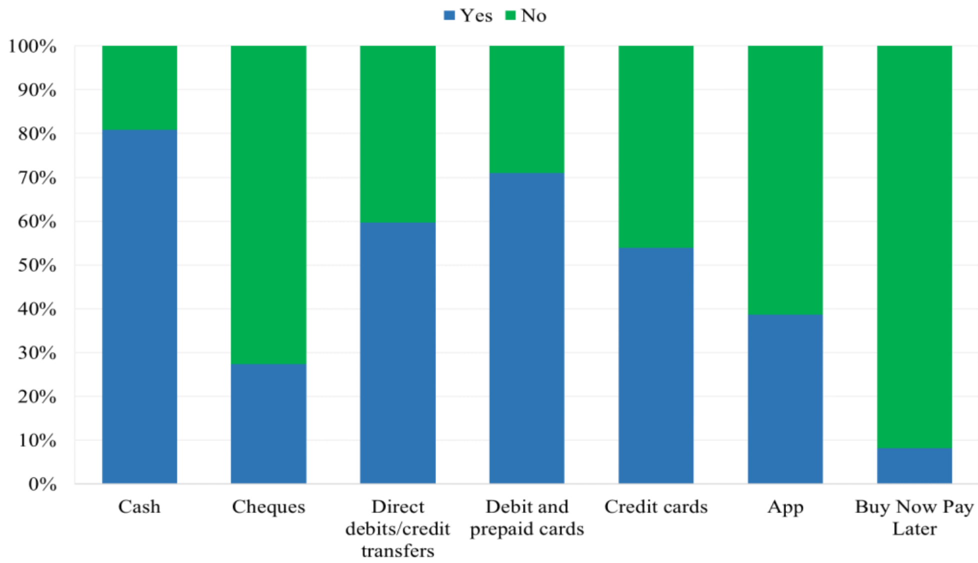


Table 2.4: Businesses and merchants sample - types of costs identified by instrument

	CASH	CHEQUES	PAYMENT CARDS	CREDIT TRANSFER AND DIRECT DEBIT
Estimated total annual value of fees paid to the service provider for payments (Euro)	-	-	X	X
Estimated total annual value of other operating costs (Euro)[25]	X	X	X	X
Estimated total annual value of the amount of losses resulting from fraud, theft, forgery etc. (Euro)	X	X	X	X
For shortages and losses reported in the previous question, indicate the share covered by insurance if insured (Per cent)	X	X	X	X
Cost of the insurance referred to in the previous points (Euro)	X	X	X	X

[25] CASH includes:
- Commissions and fees paid during the year to the bank for cash withdrawals/deposits and cash procurement, including payments to service companies;
- Annual cost (e.g. rent and/or depreciation, maintenance and other operating costs) of cash registers;
- Annual cost of holding secure cash handling devices (e.g. banknote authentication devices, safe deposit boxes or safes, etc.);
- Annual charges incurred for cash transportation and security services provided by outside companies or professional agencies;
- Annual cost for compensation of payment service agents.

CHEQUES include:
- Commissions and fees paid during the year to the bank for depositing checks;
- Annual cost of keeping safe deposit boxes or safes for storing cheques;
- Annual charges incurred for cash transportation and security services provided by outside companies or professional agencies;
- Annual cost for compensation of payment service agents.

PAYMENT CARDS include:
- Annual cost (e.g. lease and/or depreciation, maintenance fees, telephone line cost, and other operating costs) for possessing POS devices;
- Annual cost for remuneration of payment service agents.

CREDIT TRANSFER and DIRECT DEBIT include:
- Annual cost for payment processing (e.g. to send the invoice to the customer, to cancel a payment etc.);
- Annual cost for remuneration of payment service agents.

3. The ‘banks and other payment service providers’ sample

The survey covered a representative sample of about 80 per cent of the payment services market (calculated on the basis of the number of transactions), consisting of 15 major banking institutions, Poste Italiane and some card issuing and processing companies.

The data in Table 3.1 show the average sample numbers and amounts compared to the total system.

Table 3.1: Banks and other payment service providers sample - volume and average amounts

Instruments	Volumes (mln op.)	Average amount	Average amount - system	Volumes as % of total system
Cash	672	386	503	85%
Cheques	79	3,946	3,644	64%
Credit transfers	1,332	5,987	6,816	66%
Credit transfers	1,285	6,282	7,035	65%
Instant credit transfers	47	719	824	100%
Direct debits	1,202	395	474	58%
Payment cards	7,521	51	49	79%
Debit and prepaid cards	6,116	46	44	78%
Total	10,806	769	985	76%

The most frequently offered services are cards and, to a lesser extent, wire transfers and direct debits. This is followed by cash-related services and checks. Information on average amounts per instrument offered confirms the different types of underlying transactions: cards for low-amount payments, instant transfers and direct debits for medium-amount ones, and checks and ordinary transfers for high-amount ones.

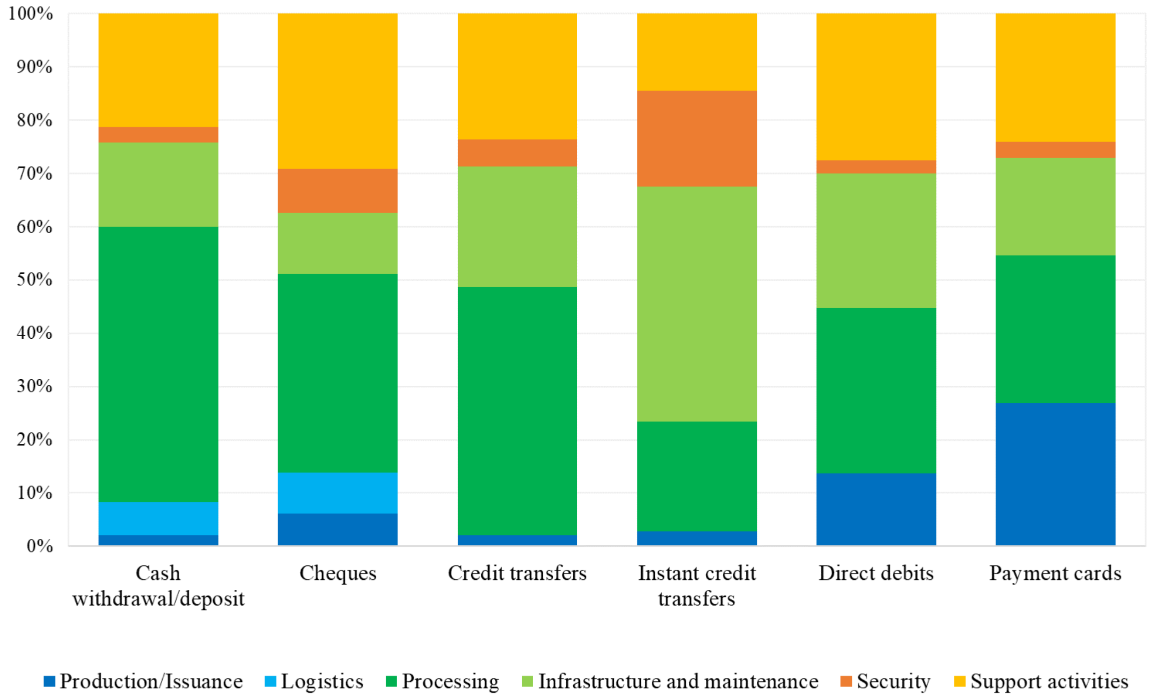
As part of the survey, the following types of costs were identified:

- **production, issuing, procurement**: includes costs for producing or issuing the instrument, for acquiring new customers or maintaining existing relationships including with merchants, costs for implementing new ‘requirements’, costs associated with activating mandates;
- **logistics**: includes, but is not limited to, transportation costs;
- **processing**: includes costs for deposit and withdrawal processing//handling staff, costs for payment authorization and funds transfer, costs for reversing a payment, costs related to any cheque cashing;
- **infrastructure and maintenance**: especially costs for IT, ATM management, POS, card scheme costs, software;

- **security and fraud prevention**: fraud losses and fraud prevention costs, costs associated with underwriting and paying insurance premiums, losses from events not covered by policies;
- **support activities**: include costs for back office, sending statements, costs related to marketing, costs for customer service, archiving.

The composition of costs varies according to the type of instrument. A summary representation is given in Figure 3.1; detailed tables and charts are given later (see Section 3.1).

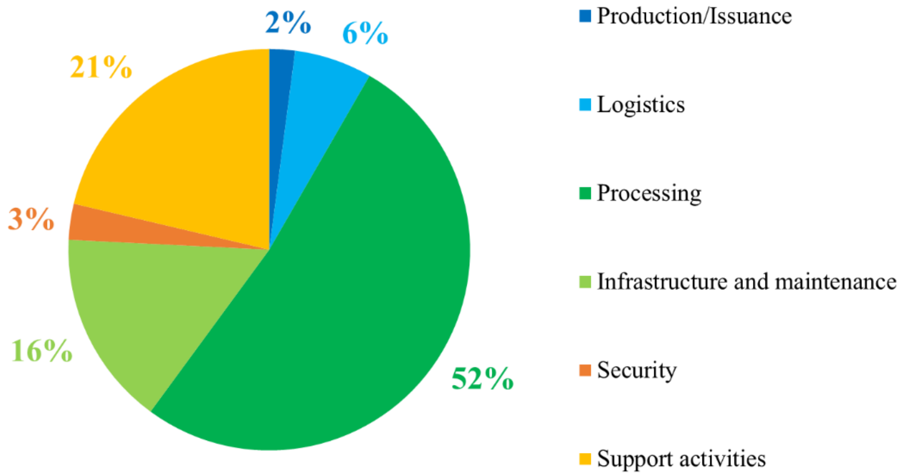
Fig. 3.1: Banks and other payment service providers sample – Cost breakdown by instrument



3.1 Banks and other payment service providers: share of costs by instrument - tables and charts

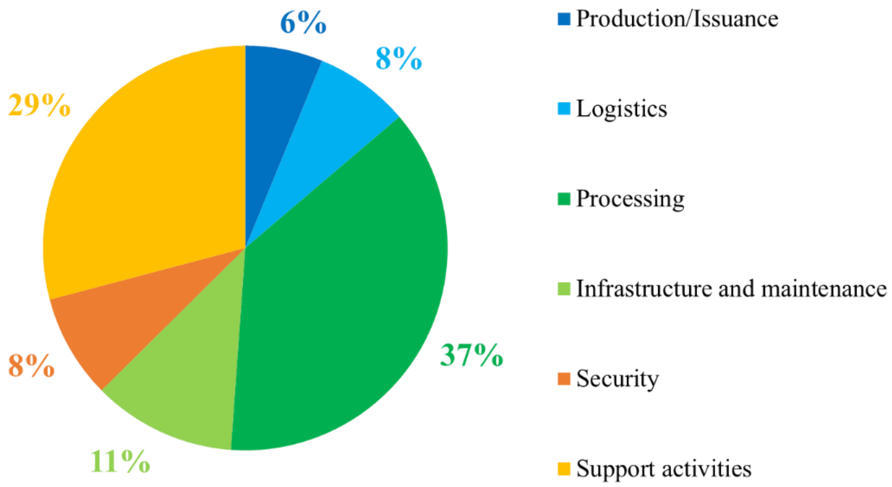
Cash

CASH	
Production/Issuance	2%
Logistics	6%
Processing	52%
Infrastructure and maintenance	16%
Security	3%
Support activities	21%
Total	100%



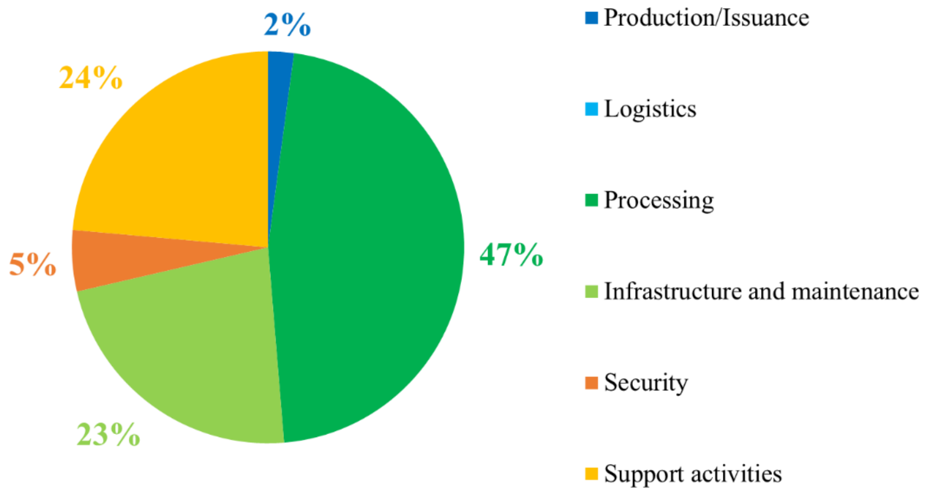
Cheques

CHEQUES	
Production/Issuance	6%
Logistics	8%
Processing	37%
Infrastructure and maintenance	11%
Security	8%
Support activities	29%
Total	100%



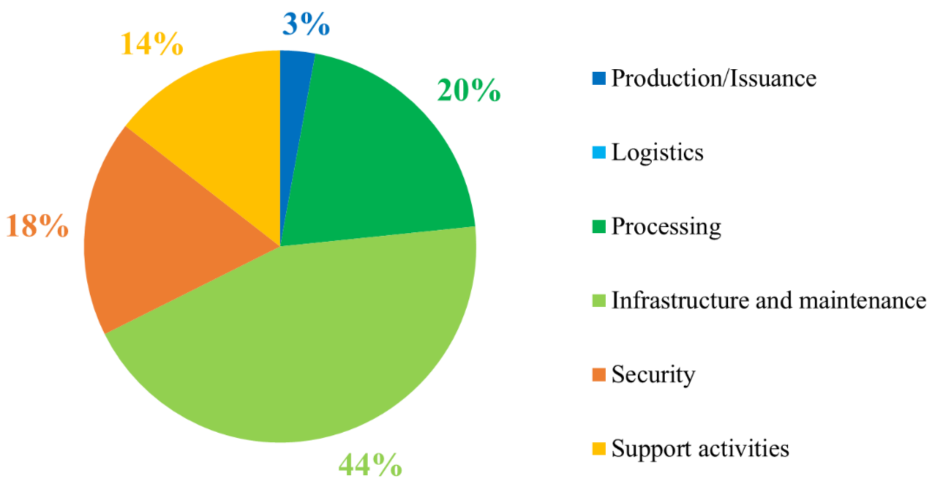
Credit transfers

CREDIT TRANSFERS	
Production/Issuance	2%
Logistics	0%
Processing	47%
Infrastructure and maintenance	23%
Security	5%
Support activities	24%
Total	100%



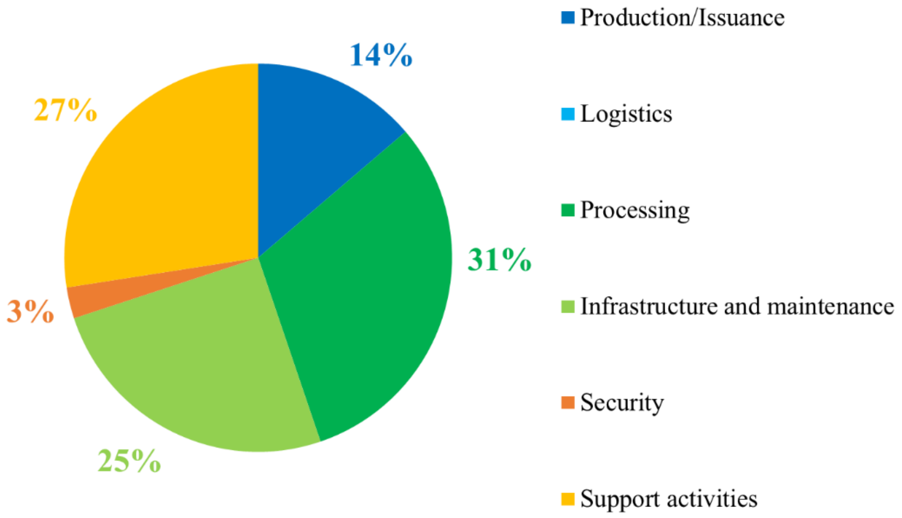
Instant credit transfers

INSTANT CREDIT TRANSFERS	
Production/Issuance	3%
Logistics	0%
Processing	20%
Infrastructure and maintenance	44%
Security	18%
Support activities	14%
Total	100%



Direct debits

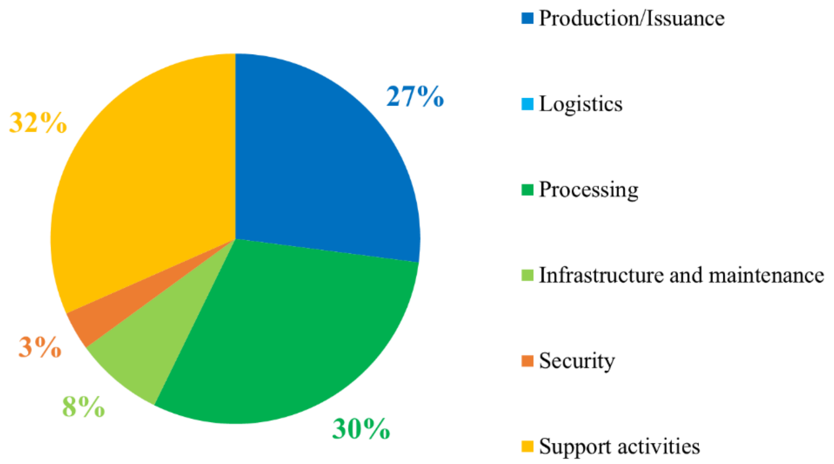
DIRECT DEBITS	
Production/Issuance	14%
Logistics	0%
Processing	31%
Infrastructure and maintenance	25%
Security	3%
Support activities	27%
Total	100%



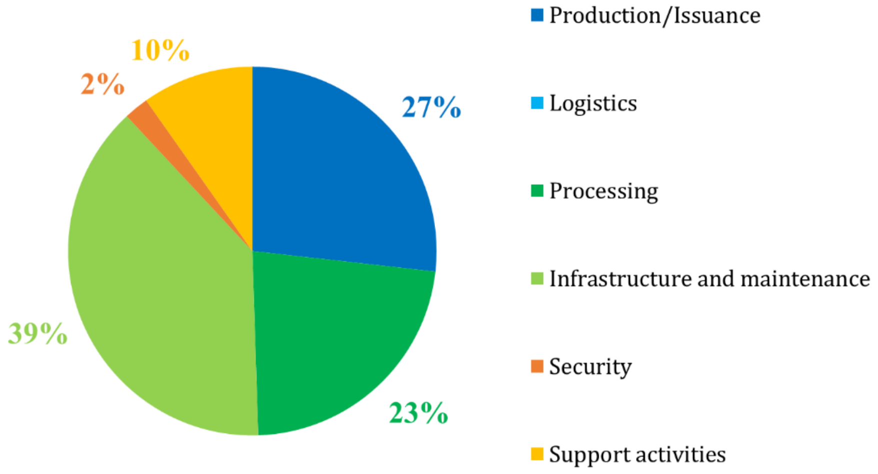
Payment cards

PAYMENT CARDS			
	Issuing	*Acquiring*	**Total**
Production/Issuance	27.0%	26.8%	27%
Logistics	0.0%	0.0%	0%
Processing	30.2%	22.7%	28%
Infrastructure and maintenance	7.7%	38.6%	18%
Security	3.4%	2.2%	3%
Support activities	31.6%	9.8%	24%
Total	100.0%	100.0%	100%

Issuing



Acquiring



10%
2%
27%
39%
23%
Production/Issuance
Logistics
Processing
Infrastructure and maintenance
Security
Support activities