



## Use of Checks in Selected Countries

2023 • No. 23-1

Antar Diallo and Oz Shy

### Abstract

This report presents a snapshot of check use as a means of payment in 20 countries from 2012 to 2021. Using charts and tables, we analyze the share of checks as a fraction of cashless payments, both in terms of volume and value and the average value of a check in US dollars based on purchase power parity (PPP) exchange rates. Then we examine and compare the rates of decline in the use of checks during the period 2012 to 2021 and the correlations between the use of checks and other cashless payments, both in terms of volume and value.

**JEL Classifications:** E42

**Keywords:** use of checks, international comparison of check use, payment methods

<https://doi.org/10.29338/rdr2023-01>

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Antar Diallo is an economic research analyst and Oz Shy is a senior policy adviser and economist in the Research Department of the Federal Reserve Bank of Atlanta. Please address questions regarding content to Antar Diallo or Oz Shy at [antar.diallo@atl.frb.org](mailto:antar.diallo@atl.frb.org) or [oz.shy@atl.frb.org](mailto:oz.shy@atl.frb.org).

The authors thank Nancy Condon and Tom Heintjes for comments and suggestions on an earlier draft. The views expressed here are those of the authors and not necessarily those of the Federal Reserve Bank of Atlanta or the Federal Reserve System.



## 1. Introduction

This research data report presents a snapshot of the use of checks as a means of payment in 20 countries from 2012 to 2021. Using charts and tables, we analyze the share of check payments as a fraction of cashless payments, both in terms of volume (total number of checks), total check value (total amount), and the average value of a check. For the latter, we convert the average value of a check to US dollars based on purchase power parity (PPP) exchange rates. Then we examine and compare the rates of decline in the use of checks from 2012 to 2021 and the correlation between the use of checks and other cashless payments, both in terms of volume and value.

It is important to note that, using the data available, we can compare only aggregate check use, both in terms of volume (number of checks) and value (total amount). That is, we cannot separate check use according to user or spending categories such as personal checks (person to person, person to business, or person to government), business checks (business to person or business to business), and government (government to person or government to business). Readers interested in learning about US check use by user category should be able to obtain this information from publications such as RPRF (2023) and Greene et al. (2020).

The inability to compare the use of checks by user and use categories among different countries is a shortcoming of our analysis because the use and purpose of checks might vary from one country to another. For example, personal checks are rare in Germany but are still common in the United States, which may have implications for the average value of a check as personal checks generally have lower value than business checks. However, we believe that the country comparison we provide in this report and the changes in check use over time still provide useful information even if we resort to aggregating use across users and use categories. In particular, the rates of decline in check use in different countries may provide some useful information on the future of checks and related policy implications.

Checks are considered a noncash payment instrument. Therefore, in addition to total check volume and value, the comparative analyses and data compare check use among countries based on the share of checks in total cashless payments. Collecting data on cashless payments that are consistent across countries is relatively easy to do because checks and other cashless payments are recorded electronically. In contrast, collecting data on cash payments is challenging, as those payments are collected via small-sample consumer surveys that may differ from country to country, thus making international comparisons inaccurate.



This report is organized as follows. Section 2 describes the data. Section 3 provides an overview of check use as a fraction of total noncash payments in 20 countries. Section 4 compares the rates of decline in the use of checks in these countries. Section 5 compares the correlations between the use of checks and total noncash payments. Section 6 offers our conclusion.

## 2. Data sources

We use data provided by 26 central banks that participate in the [Committee on Payments and Market Infrastructure \(CPMI\)](#), which is managed by the Bank for International Settlements (BIS). The data are posted to the public on the BIS web page titled [Payments and Financial Market Infrastructures](#), also known as the Red Book. Because some countries did not provide data on the use of checks, we selected only 20 countries to make these comparisons.

From the data on each of the 20 countries, we selected tables T5 Volume of cashless payments and withdrawal/deposit transactions and T6 Value of cashless payments and withdrawal/deposit transactions. These tables provide information on check use and all other cashless payments.

It is important to note that the CPMI data do not provide information on the use of cash. For this reason, we compute the share of check payments in total cashless payments in each country. Note that data on cash payments are not available from bank data and must be acquired by direct consumer surveys.<sup>1</sup>

Finally, to compare the average dollar value of checks across countries, we used purchasing power parity (PPP) exchange rates, which are rates of currency conversion that try to equalize the purchasing power of different currencies in different countries by eliminating the differences in price levels among countries. More precisely, we used publicly available data [on PPP exchange rates](#) from the Organization for Economic Cooperation and Development (OECD).

## 3. Overview of check use in selected counties in 2012 and 2021

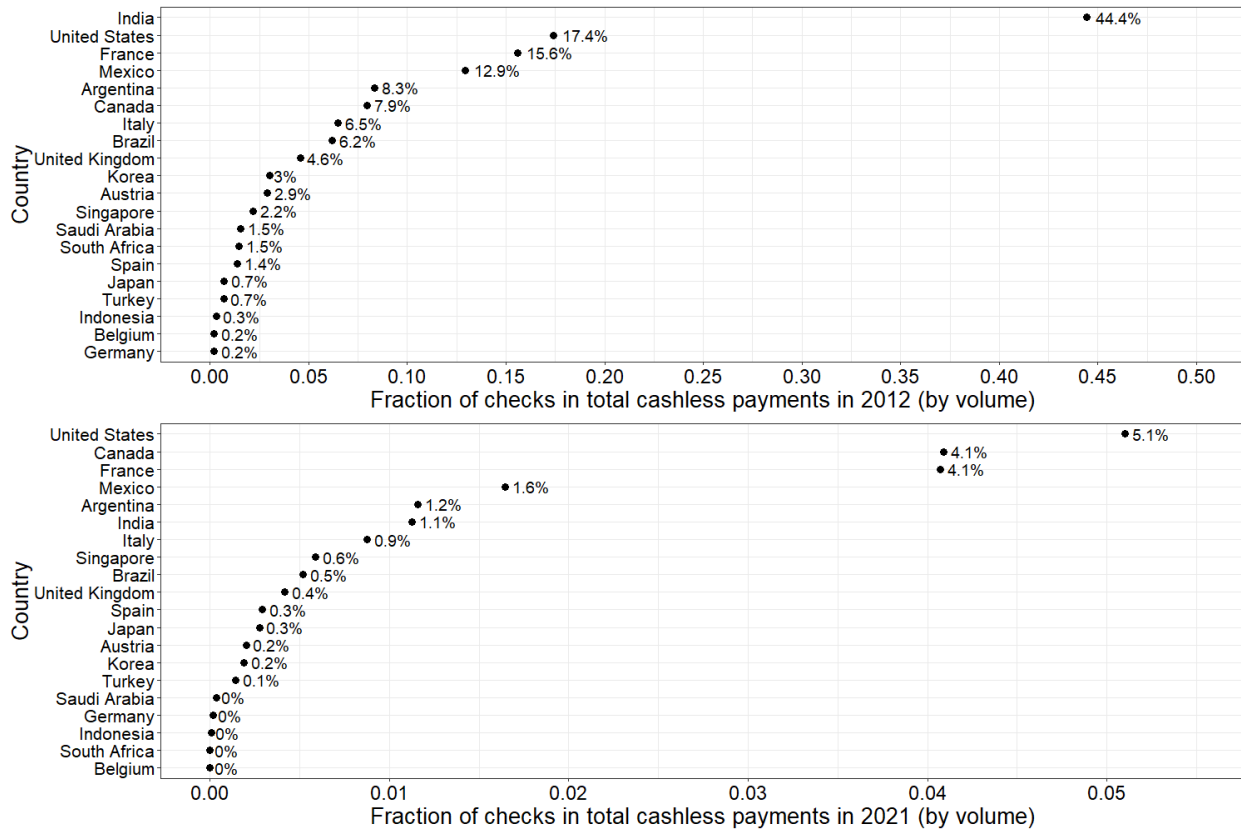
Figure 1 depicts the share of number of check payments in the total number of cashless payments in 20 countries and compares those shares in 2012 and 2021.

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<sup>1</sup> Data and summary reports on the use of cash in the United States can be downloaded from the [Survey and Diary of Consumer Payment Choice webpage](#). See also Cubides and O'Brien (2022).



**Figure 1: Percentage of the Number of Checks in the Total Number of Cashless Payments in 2012 and 2021**



Note: Check volumes for Spain in 2012 and 2013 are interpolated.

Source: BIS Redbook <[stats.bis.org/statx/toc/CPMI.html](https://stats.bis.org/statx/toc/CPMI.html)>

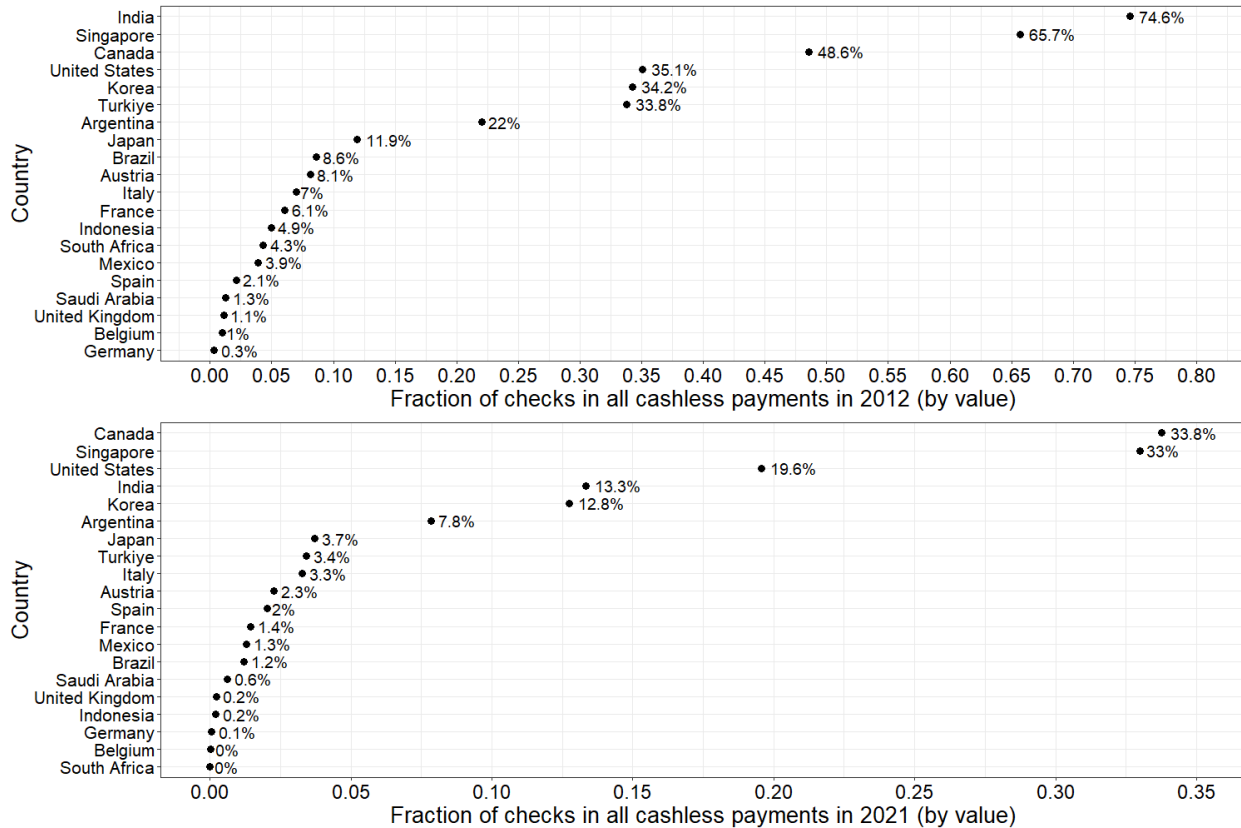
Focusing on 2021, figure 1 shows that the United States has the highest share of check volume in total volume of cashless payments (5.1 percent), followed by France and Canada’s 4.1 percent share. Some countries in the bottom part of figure 1 have a negligible share of cash volume in the volume of all cashless payments. The share of check volume to all cashless payments’ volume in Mexico, India, Italy, and Argentina is between 0.9 and 1.6 percent.

Comparing the share of checks in total cashless payment in 2012 to 2021, we see that most of the countries have experienced a drop in this ratio. For example, compared to 10 years earlier, this ratio dropped by more than a third in the United States and by more than 40 percent in India. This radical change can be attributed to the sharp rise in the use of other cashless methods in India during these 10 years.



Figure 2 shows the share of total value of check payments in the total value of all cashless payment for 20 countries.

**Figure 2: Percentage of the Total Value of Checks in the Total Value of Cashless Payments in 2012 and 2021**



Note: Check values for Spain in 2012 and 2013 are interpolated.

Source: BIS Redbook <[stats.bis.org/statx/toc/CPMI.html](https://stats.bis.org/statx/toc/CPMI.html)>

Unlike figure 1, which exhibits share of check volume, figure 2 shows that in 2021 Canada had the highest share of total check dollar value in total value of all cashless payments (33.8 percent). Singapore had a 33 percent and the United States a 19.6 percent share of the fraction of checks value in total cashless payments value. In both countries, checks are used for large payment amounts. All other countries listed on the bottom of figure 2 had negligible shares in terms of value. Note that the shares of values for these countries are higher than the shares of volume displayed in figure 1, suggesting that checks are used for high-value transactions.

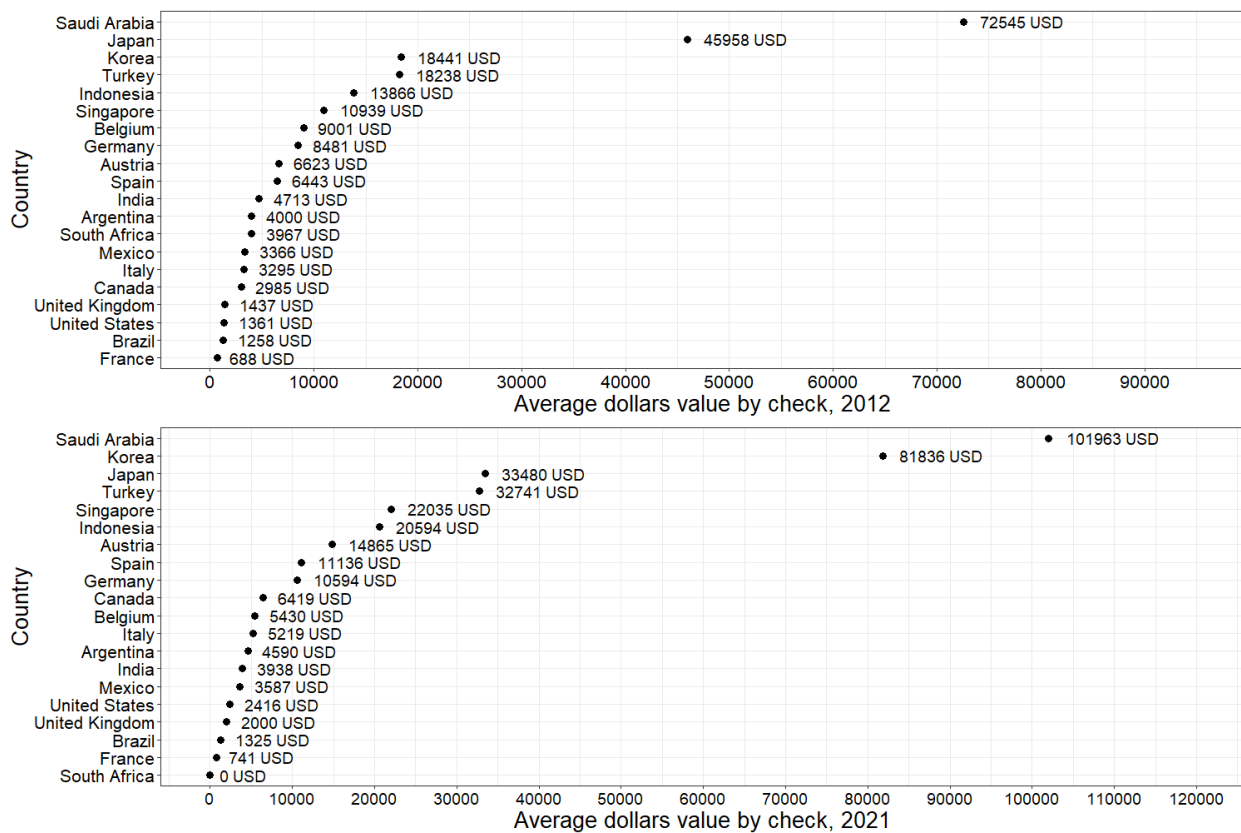
We can compare checks' values among the countries between 2012 and 2021. As the chart shows, in 2012, India was leading the group of countries that we analyze in terms of the share of total check value



among total cashless payment value with 74.6 percent of its cashless payments. India was followed by Singapore, Canada, and the United States with respectively 65.7, 48.6 and 35.1 percent. These shares declined sharply between 2021 and 2021.

Figure 3 exhibits the ratio of check values and check volumes converted to US dollars, using the PPP exchange rate, for 20 countries.

**Figure 3: Ratio of Check Value to Check Volume Converted to US Dollars Using PPP Exchange Rates**



Note: Check values for Spain in 2012 and 2013 are interpolated.  
Source: OECD ([Conversion rates—PPP](#)) and BIS Redbook <[stats.bis.org/statx/toc/CPMI.html](https://stats.bis.org/statx/toc/CPMI.html)>

The ratios of check value to check volume in figure 3 can be interpreted as the average value of a check converted to US dollars using PPP exchange rates. These numbers seem to be extremely high because they represent average check value across all users and use categories and because the average statistic is biased towards high-value transactions by businesses as well as consumer bill payments. To see why this is the case, figure 1 in RPRF (2023) shows that, in the United States, the average check value of a business payer in 2021 was \$3,340 while that of a consumer payer was \$1,098. The median check values were \$426 and \$135, respectively. The large differences between average and median values reflect a



common observation in research on payments, which finds that median values generally provide better information than average values. Unfortunately, because the CPMI data provide only aggregate amounts, we are not able to compute median values that require individual check observations.

Figure 3 shows that Saudi Arabia led in terms of the average check dollar amount, followed by Japan, Korea, and Türkiye. In 2012, the average US dollar (USD) amount in Saudi Arabia was USD 2,546 using PPP. Ten years later, the value increased by almost USD 30,000, to USD 101,963. Except for some countries—such as South Africa, which went from USD 3,967 to almost 0, and Belgium, which went from USD 9,001 to USD 5,430—most countries showed an increase in average check value. Part of this increase should be attributed to inflation, and part of it is the result of the decline in the use of checks for low-value transactions. In 2021, the United States and Canada had an average check value of USD 2,416 and USD 6,419, respectively. (The United States and Canada are not the top countries in terms of average check value partly because of personal check use.)

## 4. Analysis of check use decline in selected countries (2012–20)

**Table 1: Total Yearly Volumes of Checks Processed Annually**

Country	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	Population	CAGR	Checks per capita
Argentina	94	94	91	89	86	85	83	77	56	57	45.8	-4.90%	1.24
Austria	224	194	167	140	112	90	70	55	42	33	8.9	-17.40%	3.71
Belgium	5	4	3	2	2	1	1	1	1	0	11.6	-100%	0.00
Brazil	1431	1297	1165	1040	864	731	633	550	381	313	214.3	-14.10%	1.46
Canada	805	761	709	648	503	551	501	444	383	322	38.2	-8.80%	8.43
France	2806	2621	2483	2311	2137	1927	1747	1587	1175	1106	67.8	-8.90%	16.31
Germany	34	31	30	21	18	13	10	8	6	5	83.2	-17.40%	0.06
India	1313	1257	1197	1096	1207	1171	1124	1070	708	722	1407.6	-5.80%	0.51
Indonesia	4	4	3	3	3	3	3	2	2	1	273.8	-12.90%	0.00
Italy	276	252	232	209	186	168	152	134	97	87	59.1	-10.90%	1.47
Japan	77	73	69	64	59	55	51	48	41	36	125.7	-7.30%	0.29
Korea	460	364	310	252	199	158	121	92	76	67	51.7	-17.50%	1.30
Mexico	378	348	331	311	275	256	248	209	150	134	126.7	-9.90%	1.06
Saudi Arabia	7	7	7	7	5	5	4	3	2	2	36.0	-11.80%	0.06
Singapore	75	72	69	66	62	57	52	46	31	24	5.5	-10.80%	4.36
South Africa	42	31	23	17	12	9	6	7	3	0	59.4	-100%	0.00
Spain	90	86	83	79	75	71	57	53	37	34	47.4	-9.30%	0.72
Türkiye	20	21	23	22	20	19	21	17	14	15	84.8	-2.80%	0.18
United Kingdom	848	718	644	558	477	401	342	272	185	150	67.3	-15.90%	2.23
United States	20000	19000	19000	18000	17000	15000	14000	13000	11000	10000	331.9	-6.70%	30.13

Note: Except for the column CAGR (compound annualized growth rate), all numbers are in millions (total for the year).

Population and checks per capita are for 2021. Checks per capita reflects the per-capita number of checks in 2021. The 2012 and 2013 volumes for Spain have been interpolated.

Source: BIS Redbook <[stats.bis.org/statx/toc/CPMI.html](https://stats.bis.org/statx/toc/CPMI.html)> and the World Bank <[data.worldbank.org/indicator/SP.POP.TOTL](https://data.worldbank.org/indicator/SP.POP.TOTL)>

The column CAGR in table 1 is the compound annualized growth rate, which is negative in all countries. Brazil, Canada, France, Indonesia, Mexico, Spain, and the United States had similar annual check volume rates of decline in the range of 6 to 14.1 percent. Austria, United Kingdom, Korea, and Germany experienced around a 15 to 18 percent annual rate of decline. Belgium and South Africa experienced a 100 percent rate of decline from 2012 to 2021.

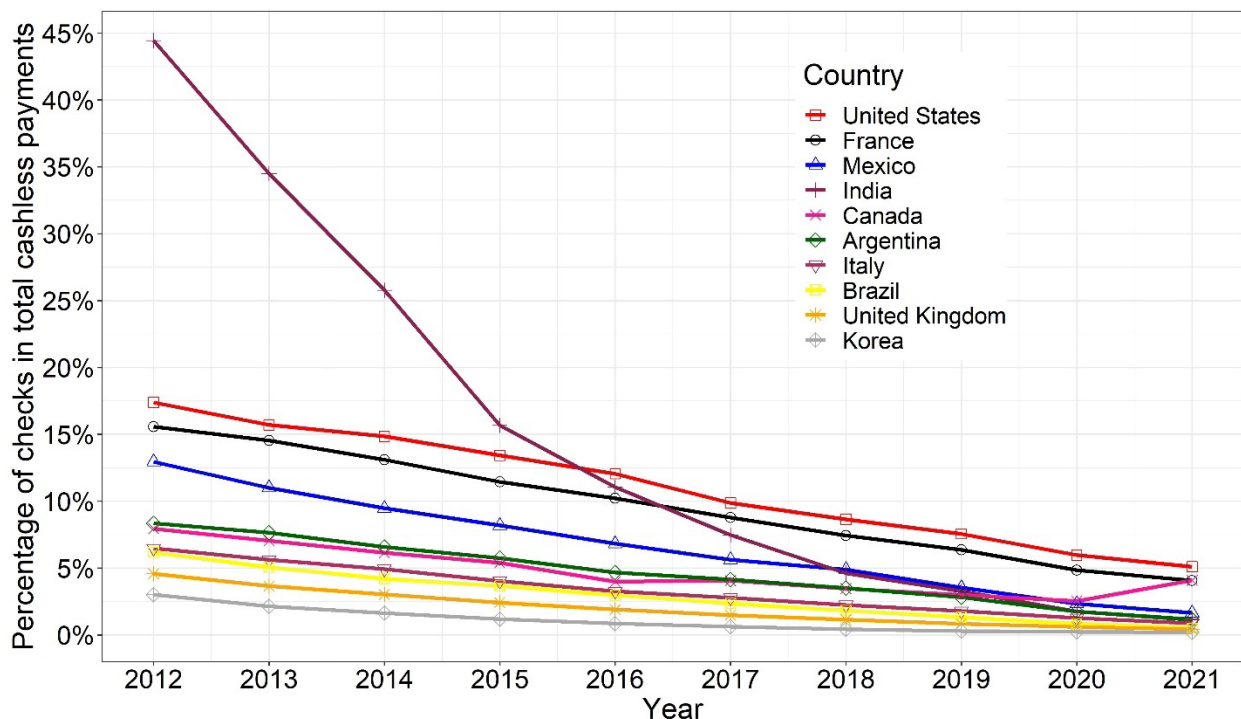




Focusing on the annual number of checks per capita, the United States is leading all the countries with, on average, 30.1 checks per person in 2021, followed by France and Canada with, respectively, 16.31 and 8.43. Countries such as Indonesia and South Africa have a negligible number of checks per capita.

Figure 4 displays a time series of the fraction of volume of checks in the volume of all cashless payments for 10 countries with relatively high check use.

**Figure 4: Decline in the Fraction of Check Volume in Total Cashless Payments, 2012–21**



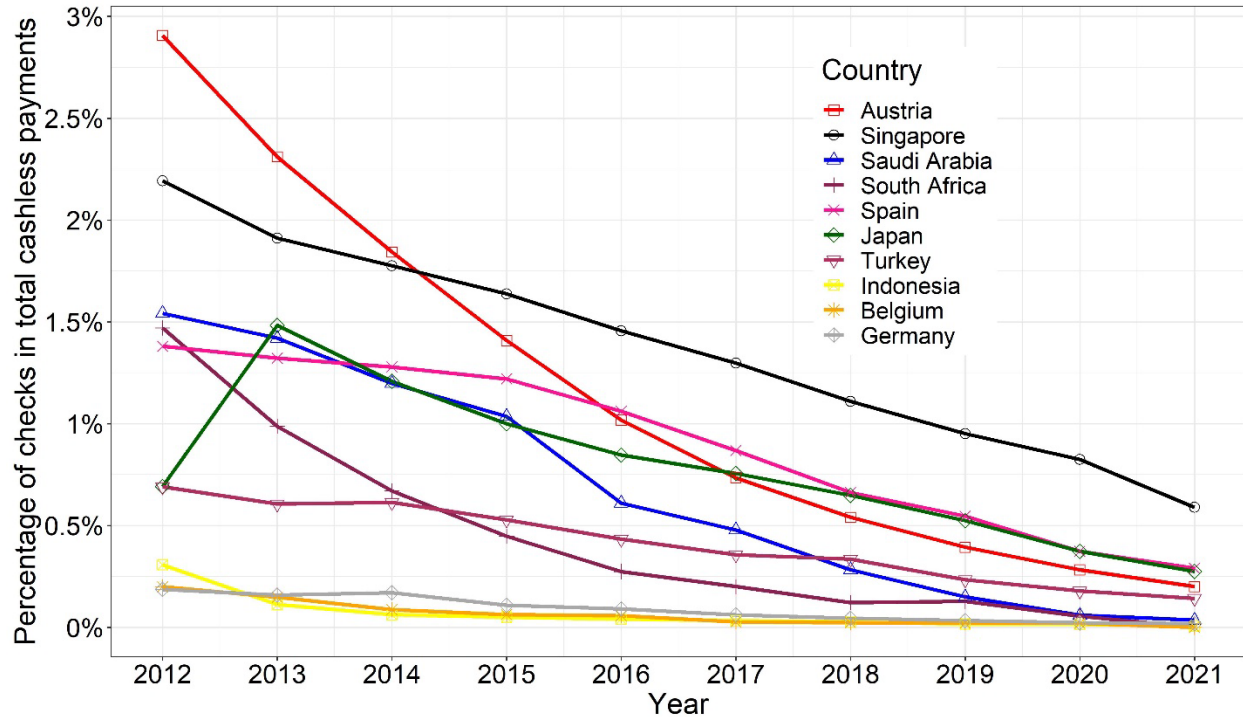
Note: Data for Spain in 2012 and 2013 are interpolated.  
Source: BIS Redbook <[stats.bis.org/statx/toc/CPMI.html](https://stats.bis.org/statx/toc/CPMI.html)>

As figure 4 shows, India exhibited the steepest decline in the fraction of check volume in all cashless payments, a decline stemming mainly from an increase in the use of digital payments rather than a decline in the volume of checks, which was down only 5.8 percent per year, as table 1 illustrates. All other countries also exhibited declines in this share, which stems from a decline in the volume of checks as well as an increase in the use of other (digital) cashless means of payment.

Figure 5 displays a time series of the fraction of check volume in the total volume of all cashless payments for 10 countries with relatively low check use.



**Figure 5: Decline in the Fraction of Check Volume in Total Cashless Payments, 2012–21**



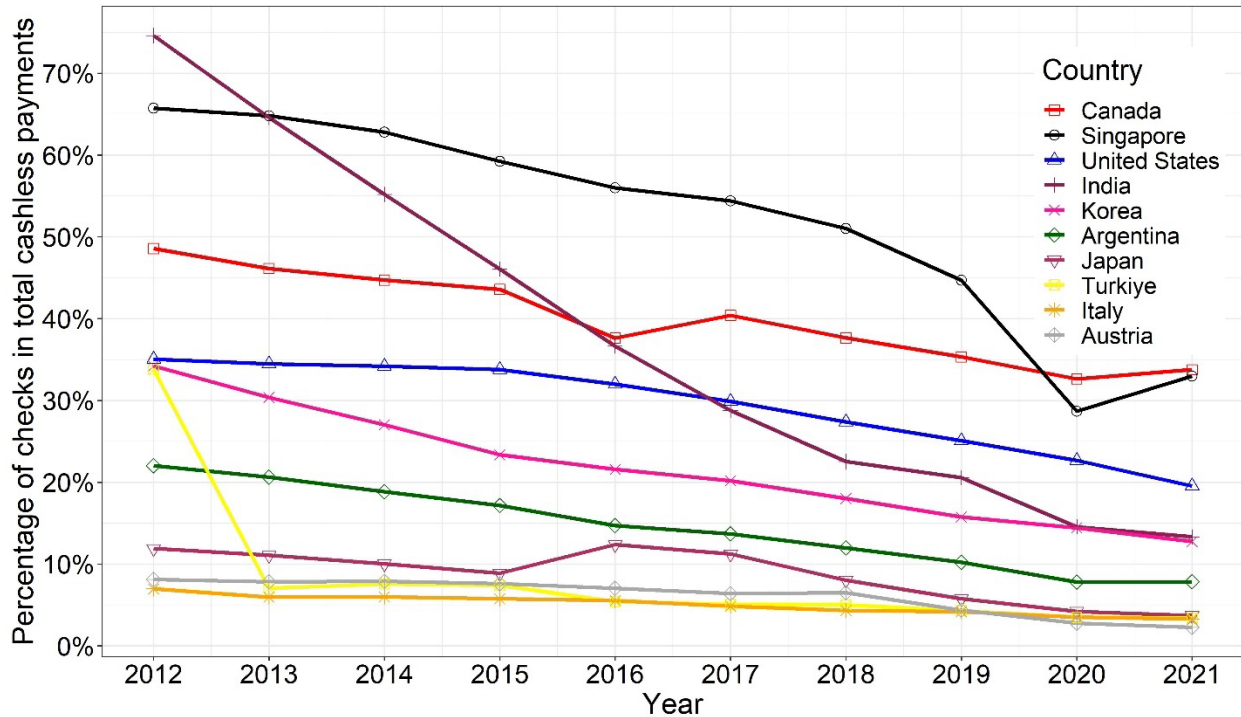
Note: Data for Spain in 2012 and 2013 are interpolated.  
Source: BIS Redbook <[stats.bis.org/statx/toc/CPMI.html](https://stats.bis.org/statx/toc/CPMI.html)>

Figure 5 shows that the share of check volume in all cashless payments declined sharply for countries with relatively low initial shares. Just as figure 4 shows for high-share countries, the rates of decline in these shares are outcomes of both a decline in the volume of checks as well as an increase in the use of digital payment methods.

Figure 6 displays a time series of the fraction of check value in the total value of all cashless payments for 10 countries with relatively high check use.



**Figure 6: Change in the Fraction of Check Value in the Total Value of Cashless Payments, 2012-21**



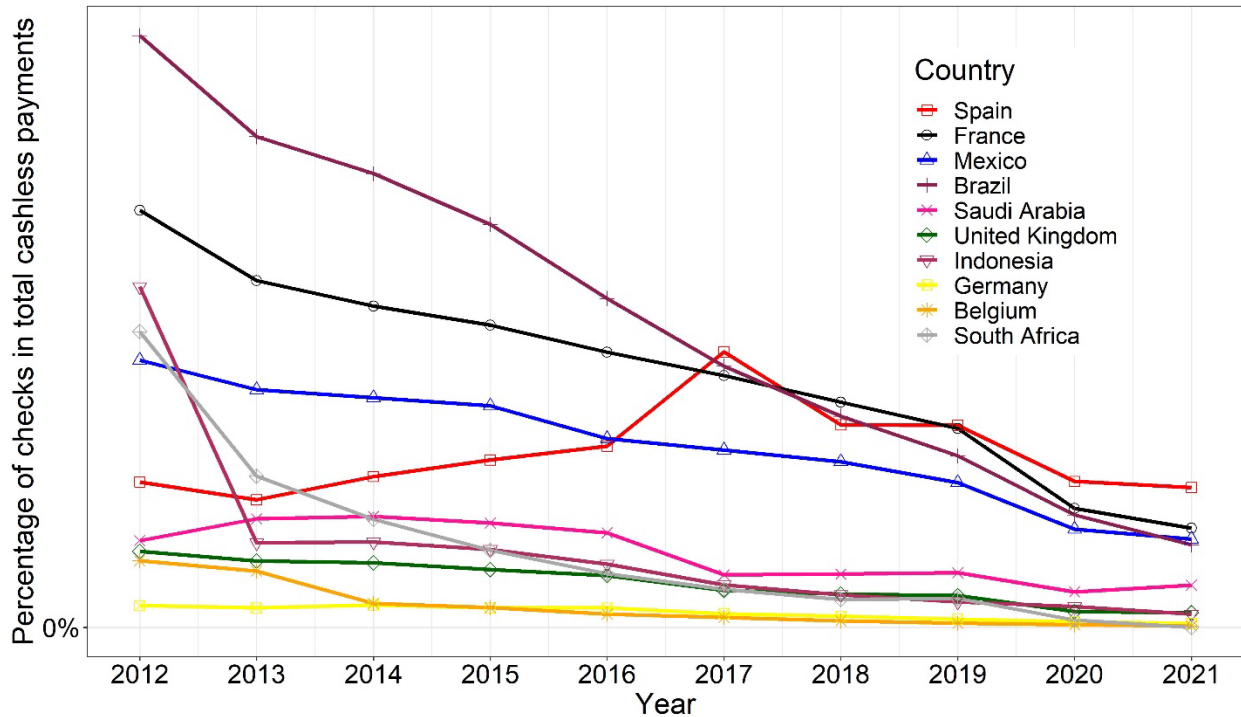
Note: Data for Spain in 2012 and 2013 are interpolated.  
Source: BIS Redbook <[stats.bis.org/statx/toc/CPMI.html](https://stats.bis.org/statx/toc/CPMI.html)>

As figure 6 demonstrates, India exhibited the steepest decline in the fraction of check value in terms of the value of all cashless payments. This decline stems mainly from an increase in the use of digital payments rather than a decline in the value of checks. All other countries also exhibited a decline in this share, which stems from both a decline in the value of checks as well as an increase in the use of other (digital) cashless means of payment.

Figure 7 displays a time series of the fraction of checks' value in terms of the total value of all cashless payments for 10 countries with relatively low use of checks.



**Figure 7: Change in the Fraction of Check Value in Total Cashless Payments, 2012–21**



Note: Data for Spain in 2012 and 2013 are interpolated.  
Source: BIS Redbook <[stats.bis.org/statx/toc/CPMI.html](https://stats.bis.org/statx/toc/CPMI.html)>

Like figure 6, figure 7 shows that the trend for most of the countries is a decrease during the 10 years. Spain is the only country that experienced increases as well as decreases. From 2012 to 2017, Spain had an increasing trend, which changed in 2017 as the fraction of check value in total cashless value decreased. These decreases can be viewed in two ways. Because it is a fraction, it is either a decrease in check value or an increase in total cashless value. Brazil saw the steepest decrease, followed by France.

### 5. Measuring the shift from checks to other cashless means of payment

Because checks are classified as a noncash payment instrument, one might expect a positive correlation between the use of checks and the use of all cashless payment methods (in terms of volume, value, or both). On the other hand, because checks are also classified as a paper payment method, the decline in check use may correspond to a shift toward nonpaper payment methods (see Cohen et al. 2022). If this hypothesis is correct, then we should expect a negative correlation between the use of checks and the use of other cashless payments.

Table 2 shows the correlation between the check use of and the use of all cashless payment methods.

**Table 2: Check Values and Total Cashless Value of Payments, and Check Volume and Total Cashless Check Volume**

<b>Correlation coefficients between checks and cashless payments</b>					
<b>Country</b>	<b>Argentina</b>	<b>Austria</b>	<b>Belgium</b>	<b>Brazil</b>	<b>Canada</b>
<b>Value</b>	0.9907	0.3901	-0.90	-0.91	-0.36
<b>Volume</b>	-0.9216	-0.9740	-0.9008	-0.8751	-0.2590
<b>Country</b>	<b>France</b>	<b>Germany</b>	<b>India</b>	<b>Indonesia</b>	<b>Italy</b>
<b>Value</b>	-0.74	0.2142	-0.78	-0.87	0.6368
<b>Volume</b>	-0.9670	-0.8892	-0.8997	-0.9295	-0.9482
<b>Country</b>	<b>Japan</b>	<b>Korea</b>	<b>Mexico</b>	<b>Saudi Arabia</b>	<b>Singapore</b>
<b>Value</b>	0.3523	-0.72	-0.93	0.0704	-0.53
<b>Volume</b>	-0.5863	-0.9624	-0.9672	-0.8453	-0.3036
<b>Country</b>	<b>South Africa</b>	<b>Spain</b>	<b>Türkiye</b>	<b>UK</b>	<b>United States</b>
<b>Value</b>	-0.78	0.5618	0.9817	-0.90	-0.88
<b>Volume</b>	-0.9269	-0.9582	-0.8250	-0.9735	-0.9960

Source: BIS Redbook <[stats.bis.org/statx/toc/CPMI.html](https://stats.bis.org/statx/toc/CPMI.html)>

## 5.1 Correlation by value

Starting by check value, table 2 shows both positive and negative correlations. The countries with positive correlations are Argentina, Austria, Germany, Italy, Japan, Saudi Arabia, Spain, and Türkiye.

We focus first on the countries that exhibit strong positive correlations: Türkiye and Argentina. To have a correlation, the two variables must either increase or decrease simultaneously. Looking closely at the data for the two countries, we see that in both countries the value of checks has increased year over year since 2012, much like the total value of cashless payments. Both increases are not proportional, as figure 2 shows. The total amount of cashless value increases largely compared to the value of checks. The strong correlation, though, shows that despite the decrease in the volume of checks in Türkiye and Argentina (depicted in figure 1), checks' value increased in those countries. Other noncash payment methods increased, but people from Argentina and Türkiye are not ready to abandon the use of checks for large-value transactions.

Second, all other countries in table 2 exhibit a relatively moderate correlation. That is, for most of these countries, we can observe both a decrease in total value of cashless payment and a decrease in check value, perhaps implying that check values were a major part of total value of cashless payment.

Therefore, a drop in both check volume and values caused a simultaneous drop in cashless payments.



Thus, table 2 implies that people from these countries who were using checks did not fully shift from checks to other payment methods.

Looking further at check values in table 2, it is apparent that most countries exhibit a strong negative correlation between total check value and total value of all cashless payments. In other words, a decrease in check values accompanies an increase in the total value of cashless payment, perhaps suggesting that, in these countries, people are shifting from checks to other cashless payment methods.

## 5.2 Correlation by volume

Table 2 shows only negative correlation in volumes, unlike the correlation between check value and total check value, which is positive as well as negative. Some countries—such as the United States, Germany, and France—exhibit strong correlations. Others exhibit moderate or low correlations, such as Japan, Canada, and Singapore. Whether the correlation is strong or not, it is still a negative correlation, which implies that both check volume and total cashless check volume are moving in different directions. Among all countries, check volume is decreasing while the total volume of cashless payment is increasing. As stated above, this negative correlation implies that people are shifting from checks to other cashless means of payments. Finally, countries showing weak correlations between check volume and the volume of all cashless payments might see trends in cashless payment volume, check volume, or both significantly evolving.

## 6. Conclusion

This report compares the use of checks among 20 CPMI countries, both in terms of volume (number of checks) and value (total amount). We then analyze the decline in check use as a fraction of all noncash payment methods from 2012 to 2021.

The main advantage of using CPMI data is that the data are provided by central banks using the same payment classification requirements that facilitate international comparisons. However, using these data has two drawbacks. First, there are no CPMI data on cash, only on cashless payment methods, because data on cash payments are generally collected by surveys of consumers and merchants, which are very costly and generally rely on a small number of survey respondents.

Second, and more importantly (as we discussed in the introduction), the CPMI data are restricted to the aggregate number and value of checks. Lack of data by country on how checks are used, and who the users are, precludes a comprehensive international comparison of check usage. Ideal data would distinguish among consumer, business, and government checks as well as between consumer bill payments and general payments. For example, in Germany, whose population is 84 million, checks are usually issued by





businesses and not consumers or private individuals. It is likely that checks are used mainly by lotteries and insurance companies (such as for payment of benefits and refund of overpaid premiums). In contrast, US consumers wrote 1.818 billion checks and US businesses wrote 1.839 billion checks.

Also, this report does not make an international comparison of how checks are cleared and settled and when each country incorporated the use of “substitute checks” in the form of check images. In the United States, checks are cleared via a variety of channels including the [Federal Reserve](#), [the Clearing House](#), corresponding banks, other organizations, and “on-us” (agreements among large banks to settle checks internally). Retail payments in Canada in general, and checks (including paper checks) in particular, are cleared via the Automated Clearing Settlement System, which is owned and operated by [Payments Canada](#). In the United Kingdom, paper-based payments are cleared via the [Cheque & Credit Clearings Company](#), a nonprofit organization that clears checks denominated in euros and US dollars. In France, [STET](#) manages checks via a system called CORE ([COmpensation REtail](#)). In Germany, checks are cleared via the [Bundesbank’s retail payment system](#). In Italy, Check Image Truncation handles checks in electronic form and their settlement through the Bank of Italy’s [BI-Comp clearing system](#). Although the payments system is balkanized internationally, some overarching trends are nevertheless apparent and worth noting to infer future developments.

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