



The cash industry in the midst of the Covid-19 crisis

Developments in the cash industry have been marked in recent years by fundamental trends, such as the rapid dematerialisation of payment instruments and the expansion of e-commerce. These trends have resulted in a decline in the use of cash, and hence in the volumes processed by the cash industry as a whole. Paradoxically, the demand for banknotes, driven by non-transactional needs, has never been higher. The health crisis has accentuated these developments, acting as a catalyst for changes in behaviour. In this context, the Banque de France, as the guarantor of citizens' freedom to choose their means of payment, constantly strives to preserve the ease of access to and acceptance of cash, in accordance with the National Cash Management Policy that it launched in 2019.

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20%
of currency in circulation
is for use in settling transactions
in the euro area

1.4 billion
fewer banknotes in 2020
than in 2019 were returned
to cash centres

-60%
the decline in ATM withdrawals
(in value terms, year-on-year)
in the first weeks of the lockdown
announced on 16 March 2020

Change in ATM withdrawals, in value terms, before and after the Covid-19 lockdown in 2020

(as a %; daily data change compared to the same day in 2019, with "D" being the day of the lockdown announcement)



Source: Banque de France.

Note: ATM, automated teller machine.



1 Trends in banknote circulation up to 2020

The use of cash as a means of payment has been declining for almost ten years. This trend can be explained in particular by the growing competition from cashless payment methods¹ (whose share rose further with the increase in May 2020 in the contactless card payment limit from EUR 30 to EUR 50) and changes in consumption patterns (in particular the development of online purchases). According to the latest survey on the use of cash by households in the euro area,² conducted in 2019-2020 by the European Central Bank (ECB), while cash still accounts for the bulk of point-of-sale (POS) and person-to-person (P2P) transactions in the Eurosystem and in France in volume terms, its share is declining both in volume and in value terms (see table).³

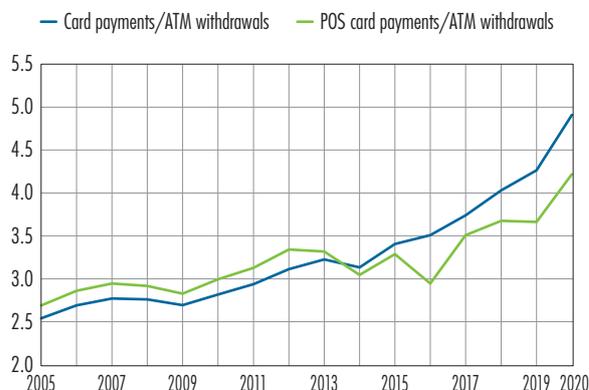
The dematerialisation of payment instruments has accelerated over the last five years. Before 2010, card payments were 2.7 times higher than ATM withdrawals, which are a good indicator of cash payments (see Chart 1). This ratio, which still stood at 3.1 in 2014, rose to 4.3 in 2019. In 2020, with the sharp decline in ATM withdrawals, it increased to around 5. The increase is less marked for card payments in point-of-sale (POS) outlets alone, with the ratio rising from 3 to 3.7 over the 2014-2019 period and then to 4.2 in 2020. The stronger growth in the first ratio can be attributed to e-commerce, which is taken into account in the first calculation of the card payment, and which is growing particularly fast.

Share of cash in payment instruments

		2016	2019
Volume	France	68	59
	Euro area	79	73
Value	France	28	25
	Euro area	54	48

Source: ECB, SUCH (2016) and SPACE (2019) surveys.

C1 Ratio of card payments to ATM withdrawals, in value terms



Sources: *Groupement des Cartes Bancaires CB*, Banque de France
Note: Point of sale (POS) refers to retailers.

As a result, the volume of banknotes flowing from the public to the cash industry⁴ is steadily decreasing. In particular, cash deposits by banks and other players at Banque de France counters have been declining for a decade. These payments decreased by 250 million banknotes per year in the years 2014-2016 and by 500 million banknotes per year in the years 2017-2019, reducing the level of inflows from more than 7 billion banknotes in the early 2010s (peak) to about 4.6 billion in 2019. With the health crisis, this decline became even more pronounced in 2020 (-1.1 billion banknotes), bringing the level of inflows to an all-time low of 3.5 billion banknotes (see section 2). To a lesser extent, coins followed the same long-term trend as banknotes, with inflows to Banque de France counters continuing to fall.

However, the decline in inflows of banknotes to the cash industry did not prevent net issuance, i.e. partly banknotes in circulation,⁵ from growing at a sustained pace in France and the rest of the euro area: on average, 7% per year (in value terms) over the period 2010-2019 and by almost 11% in 2020. The trend in the euro area is similar, with an even more marked acceleration in 2020, from an average annual increase of 5% in the 2010s to 11% in 2020 (see Chart 2).

1 In contrast to banknotes and coins, cashless means of payment are instruments that allow the transfer of funds held in accounts by credit institutions, equivalent institutions (the *Caisse des dépôts et consignations*, the Treasury, the Banque de France etc.) and , institutions following the remittance of a payment order.

2 SUCH survey: study on the use of cash by households in the euro area.

3 Based on French data from the ECB SPACE survey on the payment attitudes of consumers in the euro area, see Chouteau et al. (2020).

4 The cash industry refers to all the players and processes involved in issuing and collecting banknotes and coins throughout the country. In addition to the Banque de France, this includes banks, cash-in-transit companies and the retail sector.

5 This "migration" of banknotes and coins between euro area countries – linked notably to tourism and cross-border purchases – means there is no way of knowing exactly how many banknotes are in circulation in each Eurosystem member country. Since 2002, the difference between the total number of banknotes disbursed via a central bank's counters and those lodged with the same central bank has been referred to as "national net issuance" rather than "national circulation".



Net issuance increases because outflows from the Banque de France counters (withdrawals) are systematically higher than inflows (deposits): some of the banknotes that leave the central bank do not return to its counters and, consequently, increase the stock of money in circulation.

This discrepancy between inflows to the Banque de France and net issuance is what has been referred to in recent years as the “cash paradox”: cash has never been so little used for transaction purposes and, at the same time, it has never been so much in demand by the public.

This paradox in fact illustrates the wide range of reasons for holding cash. Indeed, as well as being used as a means of payment, euro banknotes, and

especially those with a high face value, are held by European households for hoarding purposes, especially in times of economic uncertainty and historically low interest rates. In addition, there is an increasing demand for euro notes outside the euro area. In its most recent work, the ECB (Zamora-Pérez, 2021) estimates that transactional use of euro banknotes accounts for around 20% of their circulation in value terms. The remaining 80% is split roughly evenly (40-40, within 10 percentage points, more or less) between cash held outside the euro area and euro area citizens’ holding cash savings (including, at the margin, by credit institutions).

2 2020 was heavily impacted by the health crisis

The economic crisis and payment behaviour have severely affected the use of cash

The inflow of banknotes into the cash industry depends on both the level of household consumption (in value terms) and economic agents’ payment behaviour.

Consumption is estimated to have fallen by 7.0% in volume terms in 2020 (Banque de France, 2021), whereas it grew annually by 1.3% on average over the period 2016-2019. In the years prior to 2020, consumption increased steadily and thus contributed positively to banknote inflows.

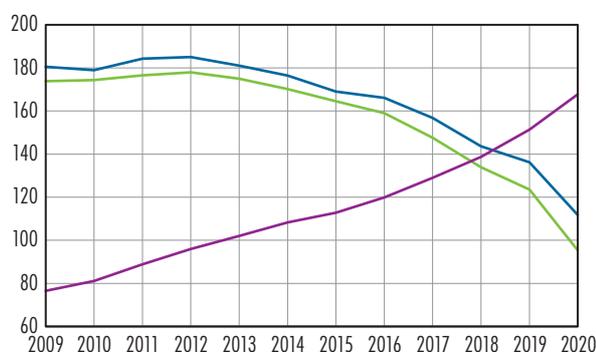
The decline in inflows of banknotes into the cash industry observed each year was thus, until 2019, solely related to changes in the behaviour of households in their use of means of payment for day-to-day purchases. Indeed, according to recent ECB household surveys,⁶ the share of payments made in cash declined (in value terms) between 2016 and 2019 at a rate of almost 1 percentage point per year, to 25.3% in 2019. E-commerce also grew strongly, from a turnover of EUR 71.5 billion in 2016 to EUR 112 billion in 2020 (Fevad, 2017 and 2021), an average increase of 12% per year and a 13.4% share of retail trade in 2020. Household payment habits have also changed with an increasing use of higher denomination banknotes, such as the EUR 50 note.

C2 Flows and net issuance of banknotes in value terms

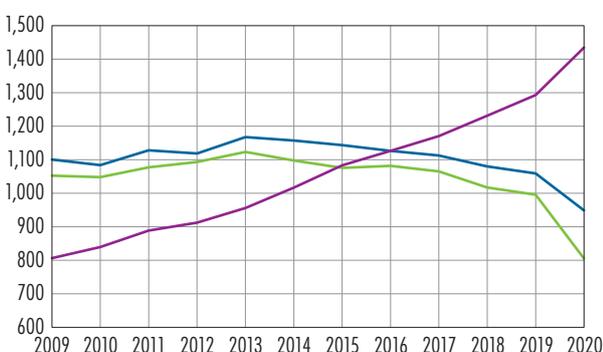
(EUR billions)

— Withdrawals (outflows) — Deposits (inflows) — Net issuance

a) At Banque de France counters



b) Within the Eurosystem



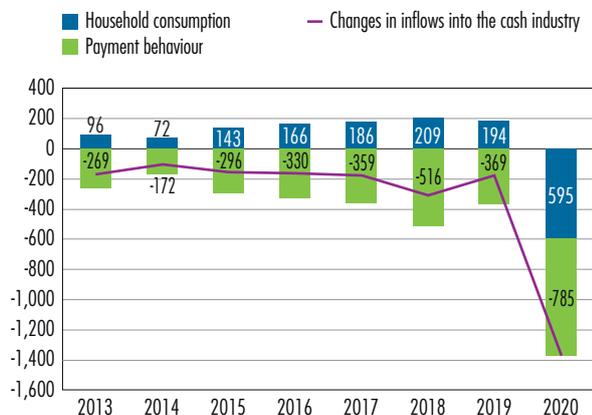
Sources: ECB, Banque de France.

⁶ SUCH (2016) and SPACE (2019) surveys.



C3 Contribution of household consumption and payment behaviour to banknote inflows into the cash industry

(in millions of banknotes)



Source: Banque de France.

Note: Payment behaviour of households in terms of the means of payment used (cash, other).

Lastly, over the 2013-2019 period, changes in payment behaviour contributed on average to reducing the number of banknotes flowing into the cash industry in France by just over 300 million per year, while growth in consumption contributed to increasing it by 150 million, i.e. an annual deficit of 150 million banknotes (see Chart 3 above).

In 2020, household consumption and payment behaviour both acted in tandem to push down banknote inflows.

The sharp fall in consumption resulted in a loss of almost 600 million banknotes and the negative contribution of changes in payment habits amounted to almost 800 million fewer banknotes, leading to an overall fall in banknote inflows of almost 1.4 billion.

A year characterised by lockdowns and exits

The impact of the health crisis was felt very strongly as of the announcement, on 16 March 2020, of a public lockdown following several weeks of a worsening in the epidemic. In short, the two lockdowns in 2020 had the following effects on banknote flows:

- During the hours following the announcement of the lockdown by the President of the Republic, until the actual implementation of the lockdown (the next day

or the day after): high levels of withdrawals from the Banque de France and very high levels of withdrawals from ATMs.

- In the first few weeks of the lockdown, there was a sharp drop in flows at Banque de France counters and, to a large extent, in ATM withdrawals.
- Last weeks of the lockdown and in-between periods, i.e. between two lockdowns: return, but only partially, to "normal".

When the lockdown was announced on 16 March, the possibility of this decision had already been discussed in depth for several days. The banks took precautions and withdrew large volumes of banknotes from Banque de France counters. ATMs were therefore able to be satisfactorily supplied and the very sharp rise in withdrawals on 17 March, of almost 80% over one year (see Chart 4), did not cause any significant difficulties: there was no shortage of banknotes.

Overall, the cash industry has proved to be resilient during the pandemic. There was constant coordination and dialogue between the different players and solidarity was achieved. The Paris financial centre's crisis unit for the cash industry⁷ met 34 times in three months, in spring 2020 to discuss and prevent difficulties.

As regards the general public, the relative "rush" to ATMs when the lockdown was announced reflected precautionary behaviour (fear of running out of banknotes, building up a stock of banknotes), but also reflected a peak of consumption. As mentioned above, uncertainty is a significant factor in money holding: if it increases, the demand for money grows (Delmas et al., 2020). This is confirmed by lockdown episodes. In this context, net issuance, i.e. the stock of money in circulation (including hoarded cash holdings⁸), increased significantly in France as well as in the other euro area countries, and in particular in Germany. After the consumption peak and the time needed to build up reserves, i.e. after one or two days, withdrawals fell sharply, as did deposits at Banque de France counters,

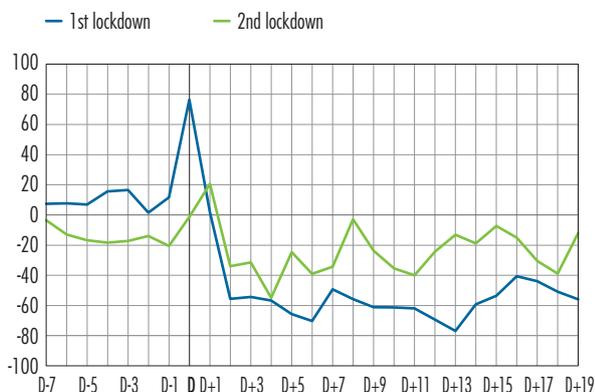
⁷ Banks, cash-in-transit companies, ministries, professional organisations, the Groupement des Cartes Bancaires CB (CB Bank Card Consortium, Banque de France, etc.

⁸ Net issuance in year N corresponds to net issuance in year N-1 plus net outflows in year N, i.e. the difference between outflows in year N and inflows in year N (this difference has always been positive in recent years).



C4 Change in ATM withdrawals, in value terms, before and after the Covid-19 lockdown in 2020

(as a %; daily data change compared to the same day in 2019, with "D" being the day the lockdown was announced)



Source: Banque de France.

Note: ATM, automated teller machine.

in line with the sharp drop in consumer spending, particularly on local goods. The impact of the second lockdown was less significant than that of the first.

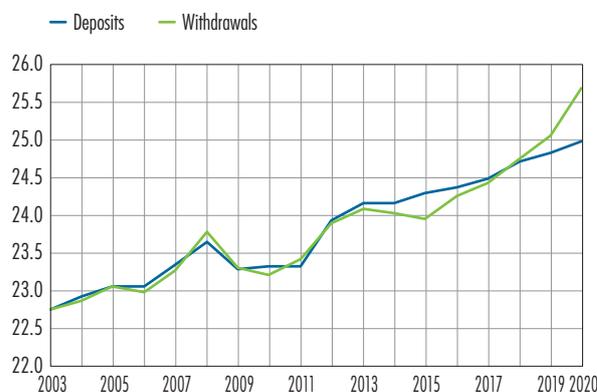
A sharp rise in the value of the average banknote

The health crisis has led to a sharp increase in the average value of banknotes (AVB)⁹ flowing in and out of the cash industry. This increase is partly due to a higher demand for the EUR 50 banknote. This denomination is more widely available in ATMs. Households use this denomination more frequently for day-to-day expenses or for hoarding purposes. This has resulted in an increase of 2 percentage points in the share of EUR 50 banknotes in the total number of banknotes received at the counters of the Banque de France, from 22% in 2019 to 24% in 2020. This increase in the AVB in 2020 is much more pronounced for banknote outflows than for inflows, which may respond with a lag, i.e. the time it takes for the banknotes put into circulation to return to the central bank's counters. As regards outflows from the Banque de France (see Chart 5), they rose by 63 cents in 2020 (compared with an average of 16 cents per year over the period 2013-2019). As regards inflows, the increase is more modest (15 cents in 2020, compared to an average of 11 cents per year over the period 2013-2019).

⁹ This is calculated by dividing the total value of banknote inflows by their total volume.

C5 Average value of banknotes withdrawn and deposited at Banque de France counters

(in euro)



Source: Banque de France.

Thus, the difference between the AVB received and put into circulation in 2020 is unprecedented (70 cents). The question as to how this will evolve remains to be seen: either the inflow AVB will catch up with the outflow value, confirming the change of use that occurred in 2020, or a certain return to normalcy will occur, with the outflow AVB returning to its long-term trend. The increase in AVB is also reflected in higher average ATM withdrawals, particularly during lockdown periods, and probably in connection with the restrictions on movement during these periods.

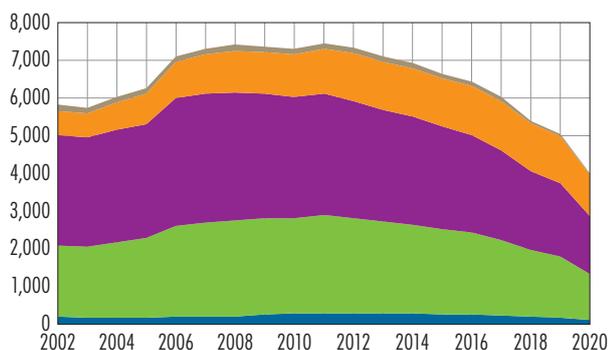
The higher demand for the EUR 50 banknote in recent years is clearly shown by the statistics on withdrawals at Banque de France counters (see Chart 6). In these outflows, the share of the EUR 50 banknote increased from 20% of the volumes withdrawn in 2016 to 27% in 2020. In contrast, the share of the EUR 20 banknote remained broadly stable (around 39%) and the share of the EUR 10 banknote decreased (from 34% in 2016 to 30% in 2020). Between 2019 and 2020, the increase in the share of EUR 50 banknote was particularly marked, by 2.5 percentage points.



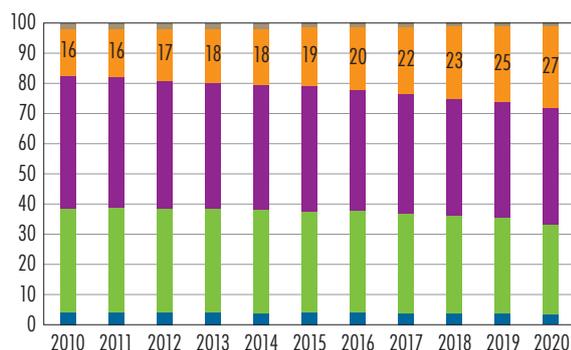
C6 Banknote withdrawals from the Banque de France, by denomination

■ 5 ■ 10 ■ 20 ■ 50 ■ 100 - 200 - 500 euros

a) In value terms
(EUR millions)



b) Distribution
(%)



Sources: ECB, Banque de France.

BOX 1

How to predict banknote inflows?

With the unprecedented economic shock caused by the health crisis, the level of uncertainty remains particularly high today. The March 2021 macroeconomic projections of the Banque de France foresee a recovery of the French economy with GDP growth of 5.4% in 2021 and 3.9% in 2022. Household consumption is expected to rebound in 2021 by 4.0% and especially in 2022 by 6.4%. As far as payment behaviour is concerned, it seems from the surveys that the changes observed in 2020 will continue once the crisis is over, and at a sustained pace. According to the IMPACT¹ survey conducted by the European Central Bank as a follow-up to the SPACE² survey, in July 2020, 39% of French citizens have changed their payment habits as a result of the pandemic and 86% of these people believe that they will maintain these new habits after the crisis. This result suggests that the payment habits adopted in 2020 will continue, to a significant extent, after the crisis.

In total, banknote receipts at Banque de France counters could fall by 300 million banknotes in 2021 than in 2020, and by a further 200 million or so in 2022, to just over 3 billion.

1 IMPACT: impact of the pandemic on cash trends.

2 SPACE: study on the payment attitudes of consumers in the euro area.

3 The National Cash Management Policy (NCMP)

The decline in the use of cash raises a number of challenges, both in terms of the role of cash in society and the organisation of the cash industry. In order to address these challenges, the Banque de France defined a strategy in 2019, together with all the players in the sector (banks, cash-in-transit companies, public authorities, etc.), with the aim of managing this downturn

in an orderly manner. Discussions with the public have made it possible to formalise this strategy through a National Cash Management Policy (NCMP).

By amplifying trends already underway, the 2020 health crisis has further underlined the need for deploying such a strategy. This covers five areas: acceptability and accessibility of cash, quality of cash circulation, robustness and efficiency of the cash industry.



BOX 2

The five areas of the National Cash Management Policy (NCMP)

Acceptability

The decline in the use of cash can lead to situations where retailers refuse to accept cash as a means of payment. Concerns over the risk of the virus being transmitted through the handling of banknotes may also have contributed to these refusals in 2020. However, law prohibits these, as cash is “legal tender” and must therefore be accepted by retailers.

In response to these refusals, the Banque de France sent letters to the retailers’ organisations concerned. The Ministry of Finance is also involved, in cooperation with the Banque de France: the Directorate General for Competition, Consumer Affairs and Fraud Control (DGCCRF) launched a national investigation in June 2020, which ran until 30 March 2021, with inspections carried out at retailers to ensure that cash was accepted and that no misleading information was given to customers about possible payment methods. Depending on the findings, this investigation may give rise to various educational or punitive measures.

Accessibility

As a central bank, the Banque de France is neutral as regards the choice of means of payment for French citizens. All citizens must be free to choose their means of payment and thus be able to use cash in particular. With bank branches closing and the number of ATMs shrinking, it is important to ensure that people have adequate access to cash throughout the country. The analysis focuses not only on access to ATMs but also on cash withdrawal services at merchants, which have developed in recent years and are a possible substitute for the reduction in the number of ATMs. Public analyses have been carried out on this subject.

While it appears at present that the situation is very satisfactory in this respect, it is nevertheless being closely monitored on an ongoing basis with industry professionals.

Quality

The quality of cash and in particular of banknotes is now good. However, the reduction in flows and the increased use of external recycling are changing the quality control framework and making it necessary to make certain adjustments in order to maintain the good quality of banknotes in circulation and, hence, an environment that makes counterfeiting difficult. The external recycling rate, which rose from 10-20% between 2012 and 2017 to around 35% in 2020, will continue to increase and more than half of all banknotes will be recycled outside the Banque de France within a few years. Renewed quality control procedures and a more accurate monitoring process are being set up in 2021 to adapt to this new context.

.../...



Robustness

Insofar as the organisation of the cash industry is changing due to the decline in cash use, it is essential to assess how robust it is to shocks of all kinds. Although its use is decreasing, cash is still one of the few instruments of last resort that can be used: for example, in the event of a breakdown in payment systems that prevents the use of bank cards. From this point of view, the pandemic was a real-life test, but many other crises affecting different links in the cash chain may occur.

A full review will be conducted in 2021 with the industry to ensure that all potential crises are taken into account and that action plans are in place to deal with them.

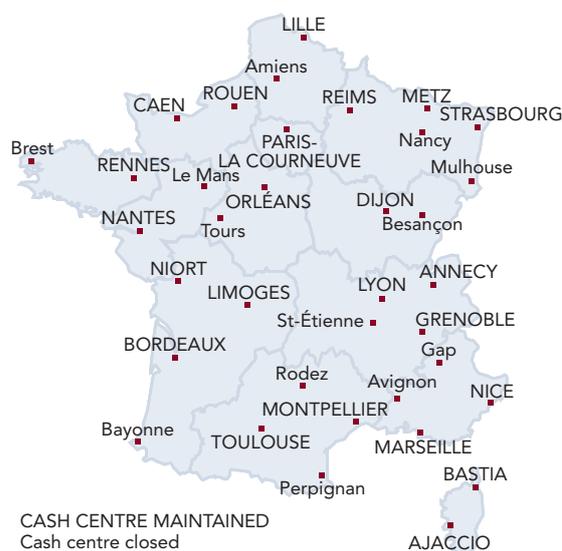
Efficiency

In order to keep the unit cost of processing banknotes under control, the entire sector is being restructured to adapt to greatly reduced flows. This reorganisation has already begun but will continue.

In January 2021, the Banque de France announced a plan to adapt its network of cash centres. This plan involves a downsizing from 37 cash centres at the beginning of 2021 to 23 at the end of 2022. In return, some 15 “auxiliary banknote storage facilities” will be created by the cash-in-transit companies for Banque de France banknotes. The plan also aims to ensure that the development of external recycling is better managed, so that the roles of the different players in the sector are appropriately balanced.

In addition to controlling the unit cost of processing banknotes, the efficiency of the sector must also be assessed in terms of its environmental footprint, and efforts are also being made in this area.

Network of Banque de France cash centres scheduled for end-2022



Source: Banque de France.



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