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German general government debt up in 2020 by €275 billion to €2.33 trillion, debt ratio up from 59.7% to 70%

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In the year the coronavirus pandemic began, general government debt in Germany as defined in the Maastricht Treaty was up by €275 billion to €2.332 trillion. By contrast, debt had been repaid in preceding years on the whole.

The debt ratio, meaning the ratio of debt to nominal gross domestic product (GDP), rose by 10.3 percentage points to 70%, which is the sharpest increase in the debt ratio within the space of a year since German reunification. Just one year previously, Germany's debt ratio, at 59.7%, had dropped below the Maastricht Treaty's reference value of 60% for the first time since 2002. By way of comparison, during the economic and financial crisis, the debt ratio increased by 16.8 percentage points in 2009 and 2010 combined and reached an all-time high of 82.5% – due in part to the assumption of extensive risk assets from the banking sector.

Just over half of the rise in government debt can be traced back to the deficits of central, state and local government and social security funds, totalling €140 billion, while general government used the other half to accumulate financial assets. This primarily involved general government topping up its deposits significantly, by €81 billion in net terms. In addition, government financial assets increased by €36 billion as a result of government-guaranteed assistance loans, which are refinanced in large part by the Economic Stabilisation Fund, and government stakes in individual firms. Tax deferrals gave rise to further receivables on a smaller scale. Overall, three-quarters of the rise in government debt was attributable to central government, which mainly bore the costs of the pandemic.

The government-owned "bad banks" marginally reduced their debt. Support measures in favour of domestic financial institutions added €184 billion to the debt level and 5.5 percentage points to the debt ratio at the end of 2020. Assistance measures for euro area countries accounted for €87 billion (2.6 percentage points).

Year	Debt level (€ billion)	% of GDP

2020	2,332	70.0
2019	2,058	59.7
2018	2,074	61.8
2017	2,123	65.1
2016	2,172	69.3
2015	2,189	72.3
2014	2,216	75.7
2013	2,214	78.8
2012	2,229	81.2
2011	2,151	79.9

The EU Member States report data on the general government fiscal balance and on debt to the European Commission each year at the end of March and end of September – known as the SGP compliance report. To this end, the Federal Statistical Office calculates the balance and the Bundesbank the debt level.

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Cash use in Germany

Cash hoarding by German households – an empirical analysis of how much cash they store and why

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Summary

Estimates by the Bundesbank suggest that banknotes worth around €268 billion were in circulation in Germany in 2018. Of that amount, roughly 20% was used directly for transactions. The other, far larger share – somewhere in the region of €200 billion – is thought to be hoarded, i.e. stored for an extended period of time by households and firms. To discover more about the whereabouts of these cash reserves and how they were being used, the Bundesbank commissioned a research survey at the beginning of 2018 in an attempt to find out how much cash households were storing outside their wallets at home or in a safe deposit box. The survey also explored the extent to which these amounts might be related to tax offences, such as illicit work or tax evasion.

According to the findings of the study, individuals in Germany kept an average of €1,364 in cash at home or in a safe deposit box at a bank in 2018. Cash reserves were therefore significantly higher than the amounts of cash that individuals kept in their wallets for short periods of time for transaction purposes (roughly €107). The banknote denomination used most frequently for cash hoarding purposes was €50. The distribution of the amounts among the population was extremely uneven and heavily concentrated. On average, older people, higher earners and self-employed people held the largest amounts of cash.

The data provide no specific indications of tax motives for storing cash. Though 12% of those who kept cash reserves felt that tax considerations could certainly play a role in the storage of cash nowadays, a more detailed regression analysis found no evidence to confirm this suspicion for the existing observations. Rather, a lack of trust in the security and robustness of technical infrastructure appears to be a major factor in explaining cash reserves.

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1 Introduction

Since the introduction of the euro as a physical currency in 2002, the Bundesbank has put cash worth roughly €700 billion net into circulation.[1] Cash is anonymous, so official statistics on the use and whereabouts of issued banknotes and coins are scarce. For this reason, the Bundesbank regularly produces research reports using a variety of empirical methods to analyse the cash in circulation in Germany and abroad. The present study investigates cash hoarding by households in Germany in 2018.

The economic model on the use of cash first subdivides the net cash issued by a central bank into cash in circulation domestically and abroad. The domestic circulation of cash is then broken down further into domestic transaction balances and domestic hoarding balances. The transaction balances comprise cash that is used at short notice to purchase goods and that is part of the constant cash cycle between the Bundesbank, commercial banks, retailers and consumers. By contrast, the hoarding balances serve as longer-term stores of value and are withdrawn from the constant cash cycle until further notice (Boeschoten, 1992; Bartzsch et al., 2011a, 2011b).

For 2018, the Bundesbank puts the domestic stock of banknotes at around €268 billion.[2] Transaction balances account for around €58 billion of that figure. Estimating and interpreting domestic hoarding, on the other hand, is a challenge. To date, it has only been calculated indirectly with the aid of macroeconometric models and constitutes a residual. This approach is designed to capture cash held for longer

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1 As at the end of 2018. The figures cited in this study on banknotes in circulation are based on an internal extrapolation of estimates taken from the Bundesbank's Monthly Report (2018a).
2 Coins have been excluded from this estimate due to their small share of Germany's cumulative net issuance (around 1.2%).

periods of time in the private non-bank sector (households and firms), with previous estimates coming to a figure of around €200 billion. However, these values will inevitably also include cash that has been irretrievably lost or destroyed. It is also unclear how hoarding balances are distributed across households and firms.

The present study uses personal interviews followed by a microeconometric evaluation to analyse the hoarding of cash in the household sector. Household cash holdings are currently a matter of political interest: although the almost universal availability of cashless payment instruments has diminished the role of cash in official economic activity, demand for banknotes and coins in Germany has been increasing for years (Deutsche Bundesbank, 2018a, 2018b). This discrepancy raises the question of whether the population is using the cash issued exclusively for legitimate purposes. In particular, the inexplicably high levels of domestic hoarding are often linked to informal or illegal activities. Calls for restrictions on cash payments or even for cash to be abolished altogether have been voiced (Bofinger, 2015; Rogoff, 2016; Sands, 2016). However, there is a lack of scientifically substantiated insights into who exactly is hoarding cash in Germany and why. In response to the ongoing debate, this paper explores the following research questions:

- How high is the amount of cash hoarded by German households? This comprises all cash holdings kept by households that are not directly used for transaction purposes.
- Which population groups hold the most cash? What role do age, education, region and economic and financial situation play?
- Are there indications of tax motives for storing cash (e.g. tax evasion or illicit work)? And what legitimate reasons for storing cash are of significance (e.g. financial or technical security concerns)?

To answer these research questions, a survey entitled "Cash use in Germany" was conducted at the beginning of 2018. Roughly 2,000 participants provided information on the cash they store outside their wallets at home or in a safe deposit box at a bank. At the same time, the questionnaire gathered indications of individuals' honesty in tax matters. Owing to the highly sensitive nature of these topics, the main challenge was to obtain a representative sample with truthful answers. A wide range of confidence-building measures were incorporated into the study to boost participation and response rates, including the option of switching to a computer-assisted self interview (CASI) and a very deliberately structured questionnaire.

This paper will continue by describing the survey design and the stages involved in greater detail, before calculating average household hoarding levels in Germany using the personal data obtained from the survey. This will be followed by a descriptive analysis of how the amounts are distributed across the population and a breakdown by socio-demographic factors. The paper concludes with a regression analysis examining whether there is a correlation between storing larger amounts of cash and an individual's tax morale. Besides considering the individual's general tax morale, this analysis specifically incorporates the provision of undeclared labour as a possible determinant of the amount of cash hoarded.

The study found that households in Germany hoarded €1,364 on average, with older and better-earning individuals tending to hold more cash. There are no specific indications of tax motives for storing cash. Though 12% of those who kept cash reserves felt that tax motives could play a role in the storage of cash, the more detailed regression analysis found no evidence to confirm this suspicion for the existing observations. Rather, a lack of trust in the security and robustness of technical infrastructure appears to be a major factor in explaining cash reserves.