

Béla Simon: The role of cash in corporate financial management – Where are petty cash holdings high?*,¹

Our article attempts to find an answer to how the cash requirement of the national economy is distributed among the largest cash-using sectors, i.e. corporations and households, and to what extent individual sections of the corporate sector contribute to the sector's cash demand. The analysis has been made possible by the corporate data sources that have recently become available to the central bank's statistical service. The data confirm the results of earlier surveys on the correlation between cash holdings and other corporate characteristics, while simultaneously providing a more refined picture of the developments over time of cash-holding. Accordingly, until the mid-2000s the corporate sector held a growing portion of the cash in circulation; firms' cash holdings constituted an increasing portion of their funds, assets and sales revenues. From 2006, the process reversed, and from this moment on growth of cash in circulation has exclusively taken place in the household sector. New data available also allow a revision of the earlier statistical estimates regarding the holding of cash. The results presented in this article will be published in the financial account statistics in January 2010.

INTRODUCTION

It is not easy to establish how economic agents share cash in circulation and to what extent they contribute to the cash demand of the national economy. The primary reason is that it is difficult to separate the sectors most involved in holding cash, i.e. corporations and households, and to assess the amounts of money they hold. Until 2000, the corporate sector referred to the set of enterprises with legal personality, while enterprises without legal personality, called small enterprises, were taken into account in the household sector in the statistics. The borderline between the sectors was modified in 2001: since then all incorporated market producers have been considered as corporations, while the household sector consists of the population and sole entrepreneurs. Therefore, with the change in the rules of classification, smaller enterprises that were not previously separated in statistical terms from the households that run them and the cash holdings of which had never been subject to examination were transferred to the corporate sector.²

The chosen method for distinguishing economic sectors and for observing their assets and liabilities has a basic effect on the picture one obtains of their respective financial wealth

and financing processes transmitted by statistics. Accordingly, the distribution of the cash available in the economy among economic agents affects their wealth and net lending. Therefore, it is essential that good estimates of financial assets which cannot be monitored in a comprehensive manner are prepared in the statistics dealing with the measurement of these indicators (in the financial accounts). This allows statistics to give a reliable answer to the question of the financial assets in which individual economic sectors invest the amount remaining from their income after consumption and investment, and thus which other sectors' consumption and investment, which spend in excess of their revenues, they finance.

The central bank's financial accounts statistics³ are the only domestic data compilation presenting the cash holdings of all economic sectors, as well as their developments over time and their relationship with other elements of wealth. The amount of cash held by individual economic agents has until now been determined in the statistics on the basis of a methodology developed in the mid-1990s. The essence of this is that available forint cash⁴ was always divided between non-financial corporations and households according to a fixed rate (of 7% and 93%, respectively), considering the

* The views expressed in this article are those of the author(s) and do not necessarily reflect the official view of the Magyar Nemzeti Bank.

¹ Ildikó Kozmits and Katalin Marosi Németh were co-authors of the article.

² Distinguishing small enterprises from households is not easy in practice. However, consistent accounting can be followed in the cases where the household temporarily uses some of the cash of its enterprise, as the decrease in the corporate financial asset is offset by a financial claim vis-à-vis the household.

³ The data of the financial account statistics are available on the website of the MNB.

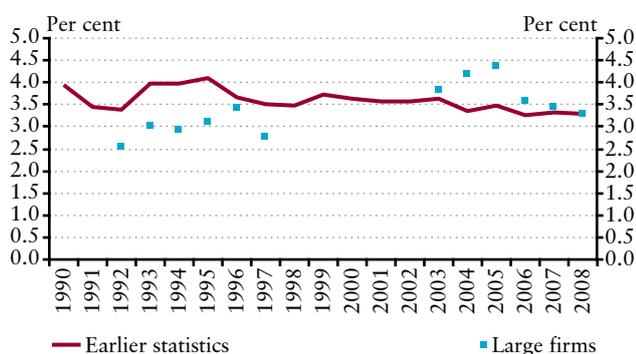
⁴ The part remaining from the amount issued by the central bank after deducting the known cash holdings of financial corporations, the general government and the post office.

amount of foreign currency owned by firms as being negligible. The ratio of this division was established on the basis of earlier central bank data collections and surveys, according to the valid sectoral breakdown at the time; due to lack of new information it could not be revised or modified until now.

WHAT JUSTIFIES THE MODIFICATION OF CASH DISTRIBUTION?

Data from large firms' annual reports⁵ provided the first tell-tale signs that statistics obtained using the earlier calculation method probably underestimated the amount of cash held by the corporate sector. While the statistics prepared with the fixed-ratio distribution of cash in circulation reflected the fact that the cash held by firms represented a declining ratio within their funds, the cash ratio calculated from the data of large firms showed a rising trend, and by the mid-2000s this significantly exceeded the statistics for the sector as a whole (Chart 1).

Chart 1
Cash ratio within corporations' funds according to the earlier statistics and the large firms' reports*



* Excluding post office cash.

Sources: MNB, financial accounts, annual reports of large firms.

Comprehensive observation of the amount of cash held by corporations was first carried out within the framework of the 2008 corporate tax return.⁶ Based on the tax return data, the 2008 year-end cash on hand of non-financial corporations – excluding post office cash – was estimated to be HUF 336 billion. This amount represents nearly 5% of the balance sheet total or annual sales revenue of the

corporate sector. According to the new observation, at 2008 year-end firms held an average of 7.6% of their funds in cash (their deposit holdings amounted to approximately HUF 4100 billion). At the same time the financial accounts statistics showed HUF 148 billion of corporate cash, representing 3.3% of funds (see Chart 1).

Therefore, the cash estimate based on the fixed division ratio resulted in a much lower corporate cash holding for year-end 2008 than the actual figure. The possible underlying reason is that the organisational scope of the corporate sector was much narrower when the division ratio was established. The estimation procedure did not take into account the expansion of the corporate sector, which resulted in an increase in the cash requirement during the years under review. Inclusion of the new data for 2008 year-end in the statistics also requires the adjustment of data for earlier periods in order to obtain a time series of corporate cash holding with uniform content.

ESTIMATION OF RETROSPECTIVE DATA

Tracing back the cash holding of non-financial corporations can be done using estimation, divided into four periods:

- detailed estimates between 2003 and 2007, using annual reports of large firms,
- simple estimates between 1998 and 2002, taking account of the growth rate of funds and cash in circulation,
- more complex estimates between 1992 and 1997, using aggregate reports of large firms and taking account of the growth rate of funds and cash in circulation,
- simple estimates between 1990 and 1991, taking account of the growth rate of funds and cash in circulation.

Between 2003 and 2007, annual reports of large firms allow for good quality estimations. While the data of large firms do not represent the data of the whole sector, adequate correction of such data (rendering them comprehensive) can be carried out in a breakdown by firm size and economic activity.⁷ For lack of firm-level data, only simpler estimation was possible for the period before 2003. In carrying out the estimation, we retrospectively assessed year by year the amount of corporate petty cash on the basis of the

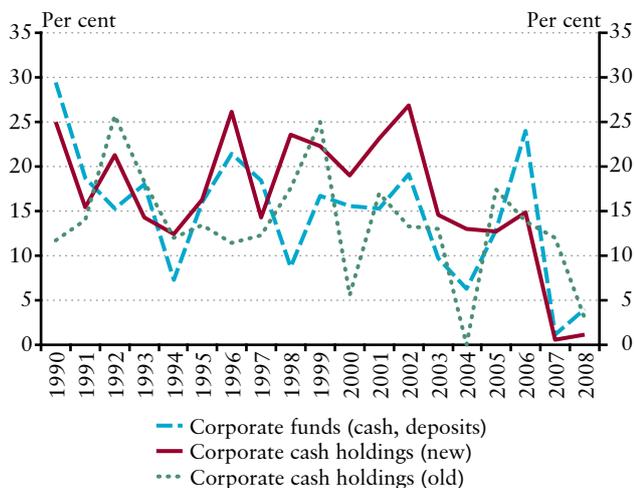
⁵ These large firms account for two thirds of the assets of the corporate sector, but their cash at hand covers hardly one fourth of the cash holding of the sector. Therefore, this group does not adequately represent the cash demand of the sector, but for the period under review the cash holdings of only this scope of firms are known (in an aggregate manner between 1992 and 1997, by firms between 2003 and 2008).

⁶ As opposed to earlier years, the balance sheet attached to the tax returns contains the year-end cash at hand of enterprises separated from the funds.

⁷ Firms preparing detailed annual reports cover an increasingly small portion of the corporate sector as firm size declines, but they represent nearly 5% of the assets of enterprises with a balance sheet total of less than HUF 10 million. This allows the preparation of an estimate for the corporate sector as a whole.

Chart 2

Annual growth rates of corporate funds and cash holdings



Sources: MNB, financial accounts, annual reports of firms.

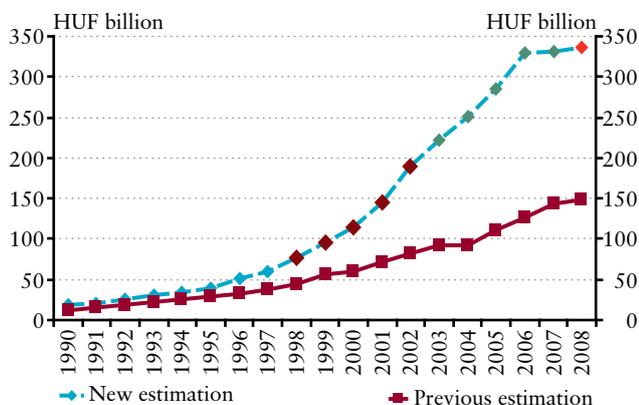
developments in the two known external variables, i.e. corporate funds and the available divisible forint cash. As corporate cash is a part of both corporate funds and cash in circulation (to be divided between households and firms), we estimated the growth rate of corporate cash from their annual growth rate. The four estimation periods are also shown in Chart 2.

Taking into account the expansion of corporate funds and cash in circulation together, around 1996 and in the first half of the 2000s a higher estimate for the growth rate of corporate petty cash than previously was produced. As a

Chart 3

Outstanding cash amount of corporations according to the previous and new estimation

(forint and foreign currency)*



* In the time series of the new estimate, the data points with different colours indicate the different estimation periods.

Sources: MNB, financial accounts, annual reports of large firms. Excluding post office cash.

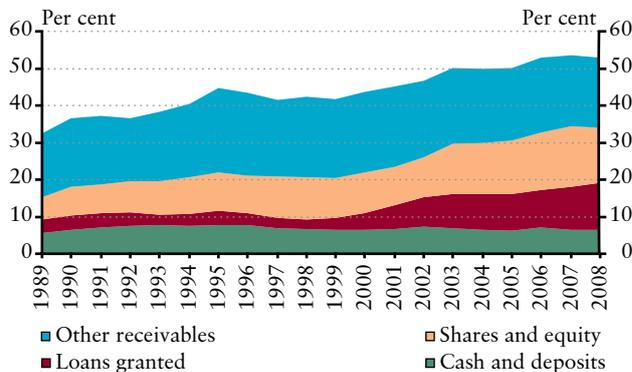
result of the higher growth rate, moving back in time, the newly estimated cash holding gradually converges with the previous one, although the difference does not cease going back to 1990 (Chart 3), which is in line with the fact that small enterprises were added to the corporate sector retroactively.

CHRONOLOGICAL DEVELOPMENTS IN CASH HOLDING

According to the financial account statistics, financial assets (funds, securities, shares and other equity, receivables) at the whole-economy level represent an increasing portion of non-financial corporations' assets, while the weight of non-financial assets (i.e. intangible assets, tangible assets and inventories) is declining in the balance sheet. While in the early 1990s less than 40% of corporate assets appeared in the form of financial assets, today this ratio stands at around 53%. The main reason is that with the spread of indirect ownership, acquiring ownership shares and extending loans have become more common among firms. At the same time, the weight of funds considered as traditional means of financial management and other receivables remained broadly unchanged or decreased in the corporate balance sheet (Chart 4).

Chart 4

Portion of main financial assets in the balance sheet*



* Based on the end-of-year holdings data of non-financial corporations, excluding post office cash.

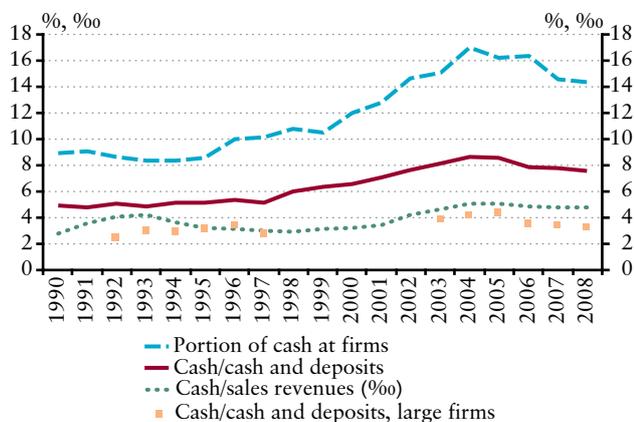
Sources: MNB, financial accounts.

Until 1993, the ratio of cash and bank deposits, which fall within the category of corporate funds, gradually increased to nearly 8% in the balance sheet, and then the decline observed from 1997 was again temporarily replaced by higher (7.7%) values around 2002 and 2006. According to the earlier estimate of corporate cash holdings, the ratio of money on account increased continuously within the funds of firms for 10 years starting from 1996, while that of cash declined

Chart 5

Portion of cash at firms compared to the cash in circulation, to the sales revenue and the corporate funds

(new estimation)*



* Excluding post office cash.

Sources: MNB, financial accounts, annual reports of firms.

(from 4% to 3.3%; see Chart 1). Apart from the first half of the 1990s, the earlier estimated corporate cash holdings amounted to a stable ratio of 2‰ of annual sales revenue. Accordingly, based on earlier financial account data we came to the conclusion that year-by-year domestic non-financial corporations essentially increased their funds in proportion to their incomes, while the role of cash within corporate assets and funds steadily declined at the whole-economy level.

However, according to the new estimates, the ratio of cash holdings possessed by firms to corporate funds as a whole, to annual corporate sales revenue and to the divisible amount of cash in circulation showed an increasing trend until the mid-2000s (Chart 5). Growth in the use of cash was observed during this period, irrespective of firm size or sectoral classification. However, since 2006 a reduction in cash holdings characterised the entire sector: cash at hand stopped increasing, and the corporate sector's share in the amount of money in circulation declined.

FORINT OR FOREIGN CURRENCY?

By switching from the fixed-ratio division of cash in circulation to the direct observation of the amount of money held by firms in the statistics, the amount of cash revealed in case of households also changes. It is now not the fixed ratio of the divisible forint cash that is attributed to households,

but the sum remaining after the deduction of the forint cash held by the corporate sector. However, the tax returns and annual reports of firms contain combined holdings of forint and foreign currency cash at hand, and the retroactive estimation described above was also prepared for this total corporate cash amount. Nevertheless, in order to make corporate statistics more detailed and to determine the amount of forint cash held by households, the newly produced corporate cash data must be broken down to forint and foreign currency. To date, no estimate has been prepared regarding the amount of foreign currency held by the corporate sector; the newly developed simple procedure is presented below.

We have almost no information on the currency structure of corporate cash and the foreign currency holdings of firms. Surveys conducted with small samples of firms and data collection from large firms by the central bank launched in 2008 may be a basis for the estimation of the amount of foreign currency held in cash in the cash office. Based on this latter data source, total cash holdings in the cash offices of domestic large firms that have trade or financing relations with the rest of the world fluctuated between HUF 15 billion and HUF 20 billion in 2008, of which foreign currency amounted to HUF 1-1.5 billion, i.e. less than 10%. According to the findings of the central bank's questionnaire survey aiming at analysing the exchange rate exposure of the corporate sector, at year-end 2004 and 2006 foreign currency amounted to 11% and 7% of cash at hand, respectively.⁸ The data sources show that most of the firms holding foreign currency and those holding the largest amounts are found in *manufacturing* and *trade*, but other industries of the national economy such as *transport*, *storage* and *hotels and restaurants* also account for a significant weight. In the data disclosures and surveys, around one-tenth of firms reported foreign currency holdings, and within these firms, foreign currency at hand usually equals the amount of forint cash at hand.

Within firms' bank deposits, the share of foreign currency deposits stood at around 20% for a long time, but since Hungary's EU accession, it has gradually increased to over 30%. With regard to cash, we estimate that foreign currency amounts to up to 10%, and we do not expect any significant shift in this ratio over time. Accordingly, we indicate foreign currency holdings worth HUF 34 billion as a new estimate in the financial accounts statistics at year-end 2008, which represents 10% of the foreign currency holdings held by Hungarian economic sectors. Consequently, forint cash

⁸ For a summary of survey results, see Katalin Bodnár: Exchange rate exposure of domestic SMEs, financial stability risks of their foreign exchange borrowing (A hazai kis- és középvállalatok árfolyamkitértésége, devizahitelezésük pénzügyi stabilitási kockázatai) (*MNB Studies*, 2006) and Katalin Bodnár: Exchange rate exposure of Hungarian enterprises – results of a survey (*MNB Occasional Papers*, 2009).

Table 1**Estimation of corporate cash holdings**

Outstanding amounts, year-end 2008, HUF billion	Old figures	New figures
Forint currency in circulation (banknotes and coins)	2,309	2,309
of which: cash held by financial corporations	174	174
of which: cash held by general government	2	2
of which: cash held by post offices	22	22
of which: remaining distributable amount	2,111	2,111
forint currency held by corporations	148	302
forint currency held by households	1,963	1,809
Foreign currency held by non-financial corporations	0	34
Total cash holdings of non-financial corporations	148	336

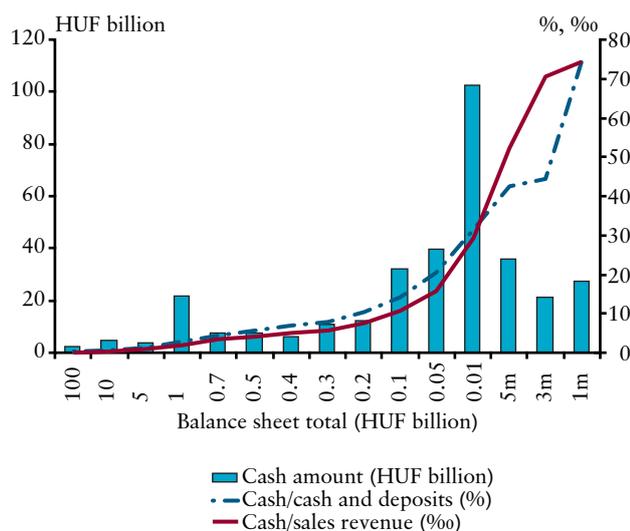
holdings held by corporations should amount to HUF 302 billion (Table 1).

THE USE OF CASH DEPENDING ON FIRM SIZE

A concordant result of the surveys is that the use of cash is more frequent among smaller firms. With the decline in firm size,⁹ the weight of funds in the balance sheet increases, and the share of cash within funds also becomes higher. While the largest firms hold hardly 1% of their funds on average in cash, this ratio exceeds 50% for the smallest firms (Chart 6).

Chart 6

Corporate cash holdings compared to the funds and sales revenue, broken down by size of corporations, 2008*



* The balance sheet total declines along the horizontal axis from left to right; the smallest values are to be understood in HUF millions (m).

Source: MNB Statistics (based on annual reports and firms' tax returns).

As firm size declines, the ratio of cash shows an increasingly contrasting picture: increasing average values conceal the data of many enterprises that use cash almost exclusively, while others do not report any cash at all in their balance sheets.

The weight of smaller enterprises in determining the cash holding of the corporate sector is well illustrated by the fact that enterprises with a balance sheet total of less than HUF 100 million account for two-thirds of total holdings, but only for a mere 7% of the assets, 11% of the sales revenue and 18% of the funds of the corporate sector. Within this, one-quarter of the cash holding belongs to firms with assets of less than HUF 10 million. At the same time, these firms possess only 5% of corporate funds and their contribution to the sales revenue of the sector is a mere 2%.

The highly varied distribution of cash holding described above makes it difficult to estimate the cash holdings possessed by firms. The examination of the use of cash requires surveys concentrating on smaller organisations, without which, however, other corporate characteristics can be observed and estimated at a good quality level. This is also a reason why there are not many cash surveys and analyses presenting cash holding practices.

USE OF CASH IN A BREAKDOWN BY INDUSTRY

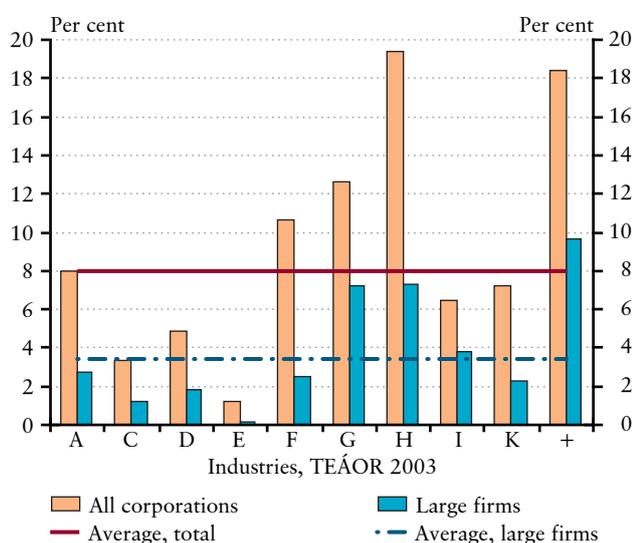
Certain economic activities require more cash while others require less. Therefore, it is worth examining to what extent individual industries of the national economy contribute to the cash demand of the corporate sector as a whole. Firms belonging to the industries of trade, repair (G) and real estate, renting and business activities (K) account for most of

⁹ For practical reasons, firm size is measured based on balance sheet total in the article. Since there is a close relationship between the sales revenue of the firm and the balance sheet total, statements regarding the balance sheet are also valid for the sales revenue.

the amount of cash held by the corporate sector. Within corporate funds, cash has the biggest weight in the following sectors: hotels and restaurants (H) and education, health and social care and other services (+). Construction firms (F) possess 11% of the total amount of cash held by firms, representing hardly more than 10% of the funds of construction firms. Accordingly, construction firms are close to the whole-economy average in terms cash use. However, the construction industry's sales revenue represents only 5% of the sales revenue of the non-financial corporate sector, and thus cash at hand as a proportion of the sales revenue is double the whole-economy figure (10.5‰). An even higher cash holding as a proportion of sales revenue is observed in hotels and restaurants (H), real estate, renting and business activities (K) and education, health and social care and other services (+). However, in the case of firms engaged in trading activity, the high amount of cash is coupled with a high turnover rate; therefore, the average amount that can be found in the cash office only equals the sales revenue of 1 or 2 days. For the smallest firms in the industry, a level tenfold the average value for the sector is measured, although this is also true for most other industries.

Chart 7

Corporate cash holdings compared to corporate funds, broken down by industry, 2008*



* Meanings of the industry codes: A – agriculture, C – mining, D – manufacturing, E – electric energy, gas and water supplies, F – construction, G – trade, repair, H – hotels and restaurants, I – transport, storage and communication, K – real estate, renting and business activities, + – other industries (education, public health, other community, personal services).

Sources: Annual reports, tax returns of firms.

CONCLUSIONS

Both the corporate and the household sectors contribute to the cash demand of the Hungarian economy, which is high in international comparison. However, the growth of the amount of cash in circulation, which cannot be explained by economic fundamentals, has clearly been related to the household sector and not the corporate sector in recent years. According to the new data available and expert estimates, the corporate sector possessed an increasing portion of cash in circulation for a decade starting from the mid-1990s. Subsequently, however, the cash holdings of firms stopped increasing, so the additional currency issued since then has served the purpose of meeting households' cash demand. From 2006 a fall in the cash requirement of enterprises was observed irrespective of firm size and activity, which was coupled with a stagnation in bank deposit holdings.

The revelation of a considerably higher amount of corporate cash holdings in statistics than previously postulated entails a decline in the amount of cash in circulation attributed to the household sector. The rearrangement of cash holdings across sectors and taking account of corporate foreign currency holdings alter the assets and net lending of sectors. We trust that the emergence of new cash data render the financing data and balance indicators of the sectors concerned more precise, giving a more complete picture of firms' cash use and the role of cash in corporate financial management.

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EXPLANATION OF THE MAIN TERMS USED IN THIS ARTICLE

Cash: Banknotes and coins considered as legal tender and issued by a central bank or government institution. Domestic economic agents may possess cash denominated in the national currency (forint) and foreign currency as well. The amount of cash held by economic organisations is measured by the amount recorded in their (forint and foreign currency) petty cash holdings.

Funds: The combined holding of cash at hand, cheques and short-term bank deposits held by economic organisations and shown as assets in their balance sheets in line with Hungarian accounting regulations. In the case of non-financial

corporations, owing to the low amount of cheques and deposits with a remaining maturity of over one year, funds essentially mean the total amount of cash and bank deposits, in conformity with the statistical categories.

Non-financial corporations: The group of incorporated market producers registered in Hungary and engaged in non-financial activity as their main activity in statistics. In this article, we also refer to the sector of non-financial corporations as ‘corporations’. Owing to its special activity and its related high cash holding, Magyar Posta Zrt., which falls within the sector of non-financial corporations, is not taken into account in this article in the analysis of corporate cash holding.

Large firms: In this article this term refers to the group of corporations that prepare detailed (versus simplified) annual reports, in line with the relevant accounting regulations. Some of these firms, due to the different size categories applied in the classification, are classified as small and medium enterprises pursuant to the SME legislation. Approximately 6% of domestic enterprises (around 26,000 firms at present) prepare detailed annual reports, from the balance sheets of which the amount of cash held in the firm’s cash office at the end of the business year can be established. The other enterprises report their funds in one sum in the balance sheet of their simplified report.