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VARIABLES AFFECTING EMERGENCY BUFFER IN PERSONAL FINANCE

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Abstract: *Managing personal finances is a valuable skill. Rules of thumb simplify financial management and help families translate theoretical knowledge into practical application. In this study, we focus on the emergency buffer, a crucial component of sound personal finances. Our data confirms that maintaining an emergency buffer remains relevant today. However, it is common for households to have insufficient buffers for unexpected events. This paper aims to identify variables that positively affect the size of households' emergency buffers. We hypothesize that monthly gross income is the primary factor influencing the establishment of an emergency buffer. We compare the levels of emergency buffers across European countries against variables such as monthly gross income, personal financial assets (PFA), and net wealth. We examine how these buffers change in relation to these variables. Our results indicate that in the countries where households typically meet the recommended emergency buffer, there is a common trend of higher monthly income, PFA, and net wealth. We find that PFA has the strongest correlation with the ability to maintain a sufficient emergency buffer.*

Keywords: *personal finance, HFCS, emergency buffer, monthly gross income, personal financial assets, net wealth*

JEL Classification: D14, D31, G51

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1 Introduction

Personal finance today is an interdisciplinary field encompassing economics, psychology, and sociology. It involves analyzing money holdings, providing financial advice, planning household finances, and offering financial education. The ability to manage personal finances is a valuable skill, and it is crucial to translate theoretical knowledge into practical applications for households. Rules of thumb provide necessary simplification, making this transfer easier. These rules are commonly applied in areas such as budgeting, maintaining an emergency buffer for periods of uncertainty, managing external debt through loans, saving for retirement, and creating investment portfolios.

Our analysis focuses on the emergency buffer in European households, a vital component of sound personal finance. An adequate emergency buffer enhances a household's ability to meet its financial obligations during unexpected events, such as job loss. We aim to identify common characteristics of households that successfully maintain sufficient emergency buffers by examining variables that positively influence the size of these buffers.

We hypothesize that monthly gross income is the primary variable positively influencing the creation of an emergency buffer. We expect that families with higher monthly incomes are better positioned to build an emergency buffer, thereby adhering to the recommended guidelines in this area.

Our focus on emergency buffers stems from the understanding that economic cycles can adversely affect families. This paper's importance is underscored by the fact that many governments are running deficits and accumulating high debt levels, reducing their ability to support households during economic crises. Consequently, households need to build sound personal finances and become self-reliant.

Our results have practical implications and suggest directions for future research. They highlight the variables that positively influence the creation of an emergency buffer, emphasizing its role as a crucial component of sound personal finance.

This paper is organized as follows: Section 2 examines the perspectives of key economic schools of thought on the demand for money and presents a modern

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approach to personal finance. Section 3 outlines the methodology of our observations. Section 4 presents the results, and section 5 offers concluding remarks.

2 Literature review

The analysis of the motives for holding money has garnered significant attention from two main economic schools of thought in the 20th century: Neoclassical and Keynesian (Lisý, 2015).

Milton Friedman, a prominent representative of the Neoclassical school, focuses on the motivations behind money accumulation. In his article "The Quantity Theory of Money: A Restatement" (1956), he examines the specifics of the demand for money, continuing the University of Chicago's tradition of emphasizing the importance of money. Friedman investigates why people choose to hold money, suggesting that, similar to the demand for consumer goods, the demand for money depends on total wealth, prices, and the expected returns of alternative assets. Additionally, personal preferences play a significant role. For households, Friedman identifies several motivations: bridging the period between income and expenditure, maintaining a short-term financial buffer during times of uncertainty (which aligns with our observations), and keeping savings beyond the buffer. Friedman rejects alternative views on cash, arguing that money is just one form of holding property, similar to equities and bonds. He expands the concept of portfolios to include real assets and human capital. In Friedman's perspective, money is understood primarily as a form of property and only secondarily as a means of payment.

Friedman observed that Keynes shifted the quantitative theory of money from focusing on the money supply to analyzing savings, encompassing household assets and liabilities, thereby integrating money into the broader context of personal finance. In his 1961 article "The Demand for Money," Friedman further developed the analysis of money from the perspective of money holding, discussing it in two ways:

- as assets held in the monetary form (money),
- as an asset earned (income).

In our observations, we utilize Friedman's money-to-income ratio. At the end of the 19th century, the average household held money savings equivalent to twice their monthly income. Nearly 100 years later, this ratio had increased to eight times monthly income, reflecting higher living standards and real income growth. Interest rates also play a crucial role; lower returns reduce the motivation to invest in alternative assets, leading households to maintain funds as a buffer. The business cycle stage further influences the buffer size: financial reserves decrease during growth periods and increase during economic downturns due to heightened uncertainty. Understanding the motives for holding money is essential.

The 1929 stock market crash in New York initiated a crisis that spread to Europe, bringing Keynesianism to the forefront. The theory posits that the state should ensure effective demand growth through budgetary measures and influence the money supply to impact employment, production, and gross domestic product.

In "The General Theory of Employment, Interest, and Money" (1936), Keynes outlines eight subjective reasons that deter consumption, providing a comprehensive list of motives for saving. These motives include:

- Creating a buffer for unforeseen events (a perspective we also rely on in our observations),
- Securing the future, such as for retirement or a family member’s education,
- Enjoying property and interests in the future rather than immediate consumption,
- Gradually increasing the standard of living,
- Achieving a sense of financial independence,
- Holding money for speculative purposes, being ready for bargain purchases,
- Leaving a legacy,
- Satisfying the need to accumulate assets.

Keynes contributed significantly to the understanding of why people hold money. He believes that wealth can be held in the form of money or securities, abstracting from real forms of wealth accumulation. He introduces the concept of liquidity preference, which he defines as the interest rate level at

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which households prefer holding money over bonds. The concept adds to the theoretical understanding of the size of the financial buffer, noting that the buffer size depends on income level and the phase of the economic cycle.

Today, the analysis of money holdings, financial advice, household financial planning, and financial education forms an interdisciplinary field known as personal finance, incorporating elements from economics, psychology, and sociology (Schuchardt, 2007). Finance theory can rationalize the behavior of most households and address the gap between actual and optimal financial behavior. Therefore, theoretical knowledge must be effectively transferred to households through education. Recognizing that households often make investment mistakes, the challenge is to apply financial theory to education in ways that alter household behavior (Lyons, 2008). A growing body of literature highlights the low level of financial literacy in the general population and its impact on individual decision-making. The question, then, is how to improve this literacy effectively. Drexler (2014) found that simplifying financial education increases its efficacy, particularly for less sophisticated clients. A simplified rule of thumb training appears well-suited to meet their needs, supporting the use of such rules.

One widely accepted rule of thumb in personal finance is that the optimal size of an emergency buffer is 3 to 6 months of living expenses (Whittle, 2017; Sabat, 2019). The buffer gives households enough time to replace lost income. An insufficient emergency buffer poses risks to households in any economic environment, including the inability to meet obligations, a decreased standard of living, and the forced sale of assets at market prices. Liquidity risk is immediate and persists until the household's income is restored. Conversely, maintaining a high emergency buffer introduces market risk. In an inflationary environment with negative real interest rates, the purchasing power of financial assets declines, resulting in irreversible depreciation. Depreciation reduces the household's future standard of living as prices rise, illustrating the trade-off between liquidity and market risk in personal finance management.

The study "Determinants of Household Savings: A Cross-Country Analysis" by Fredriksson examines the factors that influence household saving. It highlights that income uncertainty significantly encourages households to increase savings as a precautionary measure. The findings suggest that social security spending reduces household savings, as government welfare

programs lower the need for precautionary saving. In contrast, interest rates showed no significant impact on savings. These findings highlight the complex nature of saving behaviors across different countries and demographic groups (Fredriksson, 2021).

Bloch's study emphasizes that economic growth and income distribution are key determinants of saving rates in middle-income countries. Higher economic growth supports greater savings as households allocate a larger portion of rising incomes to savings. Income inequality also plays a crucial role; wealthier households save a higher share of their income, boosting overall savings, even when lower-income households save minimally. The research identifies four significant factors: higher income and a greater industrial share increase savings, while higher military spending and unemployment affect them negatively (Bloch, 2023).

The paper "Dynamics of Household Savings and Consumption in the Euro Area" by Mária Bohdalová investigates how Eurozone households allocate income between savings and consumption. The study estimates saving and spending rates, with a focus on the effects of the Global Financial Crisis (GFC) and varying national conditions. It found that the spending rates in the Eurozone are close to one, indicating that households spend most additional income. Following the GFC, households became more cautious, increasing their savings. Rising interest rates reduced consumption, while wealthier countries exhibited a lower spending rates (Bohdalová, 2019).

3 Data and methodology

We examine household finances in countries that participated in the Household Finance and Consumption Surveys (HFCS) in 2010, 2014, 2017, and 2021. These surveys are conducted by national central banks under the governance of the European Central Bank (ECB). For each country and survey wave, we calculate Friedman’s money-to-income ratio using deposits (representing short-term financial buffers) and monthly gross income (derived from annual gross income). We focus on countries that participated in all four HFCS surveys, using the median values for each country and wave as inputs for our analysis.

To ensure comparability across different years, we adjust the data for inflation

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using adjustment factors provided by the HFCS for each country and wave. All figures are presented in euros. For descriptive purposes, we calculate the average money-to-income ratio for all survey waves for each country. We include these averages in our tables. It allows us to identify common features of household finances in countries that achieve a minimum money-to-income ratio of three.

The primary outcome of our analysis is the correlation between the money-to-income ratio and various financial variables. We use the label "ALL" to represent the main correlation results, which include all participating countries. Additionally, we use the label "SELECT" to indicate correlations based on data from countries with populations exceeding one million, excluding Malta and Luxembourg.

We make three main observations, comparing money-to-income ratios to variables such as monthly gross income, personal financial assets (PFA), and net wealth. We track how the money-to-income ratio changes in relation to these variables. For our analysis, we use reliable, publicly available HFCS data collected by national central banks, employing both tabular and graphical methods to process and present the data.

4 Results

In our research, we observe that only a few countries have households that meet the recommended financial rules of thumb. These countries are Malta, Austria, Belgium, Luxembourg, the Netherlands, and Cyprus. In contrast, a much longer list of countries has a money-to-income ratio below three, including France, Italy, Germany, Portugal, Spain, Slovakia, Finland, Greece, and Slovenia. We aim to identify variables that positively affect the money-to-income ratio. Specifically, we examine the impact of variables such as monthly gross income, personal financial assets (PFA), and net wealth.

Variable 1 - monthly gross income

The first variable we examine is monthly gross income, derived from annual gross income per household. This includes employment income, self-employment income, public pension income, unemployment benefits, investment income, and regular income from other sources. The relationship

Table 1: Comparison of households' money to income in individual countries and monthly gross income of households

Country	Money to Income						Monthly Gross Income				
	2010	2014	2017	2021	avg		2010	2014	2017	2021	avg
Malta	7.2	7.0	6.0	4.8	**6.2**		1 989	2 052	2 231	2 475	**2 187**
Austria	3.9	4.0	3.7	4.5	**4.0**		3 328	3 343	3 707	3 583	**3 490**
Belgium	3.6	3.6	3.2	3.6	**3.5**		3 397	3 859	3 893	3 925	**3 768**
Luxembourg	2.6	2.9	3.4	4.8	**3.4**		6 473	5 904	6 232	7 467	**6 519**
Netherlands	3.0	2.4	3.7	4.3	**3.4**		4 080	4 045	4 049	3 733	**3 977**
Cyprus	2.2	6.5	1.4	1.8	**3.0**		2 885	1 898	2 169	2 333	**2 321**
France	2.7	2.8	2.5	3.6	**2.9**		2 835	2 739	2 856	2 608	**2 760**
Italy	2.7	2.4	2.6	3.3	**2.8**		2 438	2 148	2 114	2 267	**2 242**
Germany	2.9	2.3	2.4	3.3	**2.7**		3 190	3 253	3 574	3 733	**3 438**
Portugal	2.7	2.6	2.3	2.9	**2.6**		1 446	1 340	1 486	1 750	**1 505**
Spain	2.0	1.9	2.5	3.0	**2.3**		2 144	1 910	2 061	2 333	**2 112**
Slovakia	2.1	1.6	1.5	2.2	**1.9**		1 135	1 213	1 474	1 750	**1 393**
Finland	1.5	1.5	1.5	1.8	**1.6**		3 508	3 489	3 499	3 425	**3 480**
Greece	2.0	1.4	0.6	1.2	**1.3**		1 968	1 476	1 580	1 608	**1 658**
Slovenia	0.5	0.5	0.7	0.6	**0.6**		1 710	1 318	1 442	2 083	**1 638**
r(ALL)	25.8%									ABOVE 3	3 710
r(SELECT)	45.5%									BELOW 3	2 247

Source: Household Finance and Consumption Survey 2010, 2014, 2017, 2021.

between income and the money-to-income ratio has been discussed extensively in the literature, notably in the works of Friedman and Keynes.

We created a table listing countries with available data for calculating the money-to-income ratio. For this calculation, we used the absolute amount of deposits and annual gross income. From these inputs, we determined the money-to-income ratio for each survey wave (2010, 2014, 2017, and 2021) and calculated the corresponding average value for each country. We then compared these ratios to the first variable, monthly gross income.

Our analysis reveals that, generally, households in countries where the financial buffer meets the minimum ratio of 3 have more than 60% higher monthly incomes. However, when examining individual data, we find a relatively weak correlation between monthly income and the money-to-income ratio (25.8%). For selected countries, the correlation nearly doubles but remains moderate at 45.5%. Figure 1 illustrates the data points excluded from the correlation calculation (labeled "SELECT").

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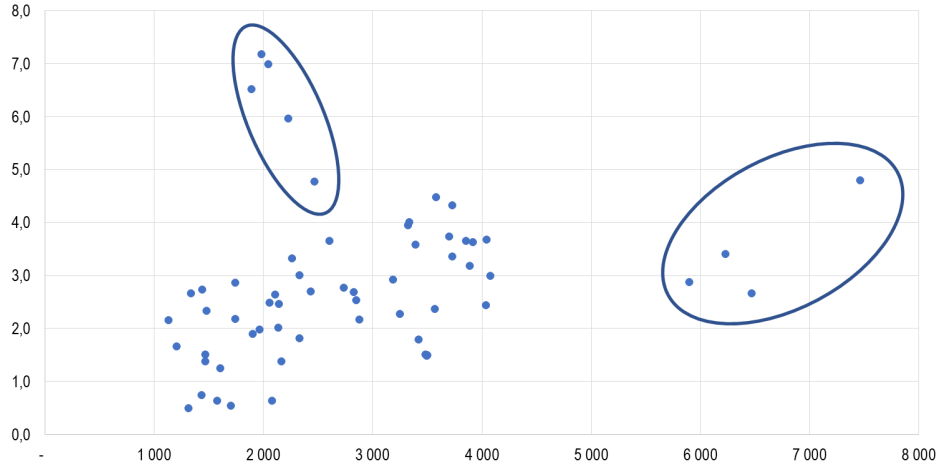
Figure 1: Relationship between money to income (y-axis) and monthly gross income (x-axis) for households in individual countries



Source: Household Finance and Consumption Survey 2010, 2014, 2017, 2021.

Variable 2 - personal financial assets

The second variable we examine is personal financial assets (PFA), which represents the asset side of households' balance sheets. PFA includes deposits, securities (mutual funds, stocks, bonds), and life insurance policies of household members. It excludes real assets like residences and other valuables, as well as liabilities like mortgages and other consumer loans.

Using the same list of countries from Table 1, we collect the corresponding values for personal financial assets. We then compare these values to the money-to-income ratio to assess the relationship between personal financial assets and the financial buffer.

Table 2: Comparison of households' money to income in individual countries and personal financial assets of households.

Country	Money to Income						Personal Financial Assets				
	2010	2014	2017	2021	avg		2010	2014	2017	2021	avg
Malta	7.2	7.0	6.0	4.8	**6.2**		27 233	23 968	26 355	16 800	**23 589**
Austria	3.9	4.0	3.7	4.5	**4.0**		16 693	17 303	16 737	18 700	**17 358**
Belgium	3.6	3.6	3.2	3.6	**3.5**		32 146	32 036	27 705	28 500	**30 097**
Luxembourg	2.6	2.9	3.4	4.8	**3.4**		33 444	35 206	31 870	80 400	**45 230**
Netherlands	3.0	2.4	3.7	4.3	**3.4**		25 324	23 661	24 295	20 700	**23 495**
Cyprus	2.2	6.5	1.4	1.8	**3.0**		23 687	15 854	10 248	5 500	**13 823**
France	2.7	2.8	2.5	3.6	**2.9**		12 464	12 502	11 673	15 200	**12 960**
Italy	2.7	2.4	2.6	3.3	**2.8**		10 456	7 217	7 217	10 000	**8 723**
Germany	2.9	2.3	2.4	3.3	**2.7**		20144	18 145	18 075	25 900	**20 566**
Portugal	2.7	2.6	2.3	2.9	**2.6**		5 632	5 220	4 662	6 300	**5 454**
Spain	2.0	1.9	2.5	3.0	**2.3**		8 575	7 228	9 196	12 000	**9 250**
Slovakia	2.1	1.6	1.5	2.2	**1.9**		3 041	2 890	3 095	5 000	**3 506**
Finland	1.5	1.5	1.5	1.8	**1.6**		8 697	9 316	10 627	12 600	**10 310**
Greece	2.0	1.4	0.6	1.2	**1.3**		4 722	2 013	998	2 200	**2 483**
Slovenia	0.5	0.5	0.7	0.6	**0.6**		1 937	1 168	1 477	2 700	**1 821**
r(ALL)	57.2%									ABOVE 3	25 599
r(SELECT)	64.7%									BELOW 3	8 341

Source: Household Finance and Consumption Survey 2010, 2014, 2017, 2021.

We observe that, generally, households in countries where the financial buffer meets a minimum ratio of 3 have more than three times the value of personal financial assets (PFA) compared to households in countries with a ratio below 3. Calculating the correlation, we find a moderate to strong relationship between PFA and the money-to-income ratio (57.2%). For selected countries, this correlation is even higher (64.7%). Figure 2 illustrates the data points excluded from the correlation calculation (labeled "SELECT").

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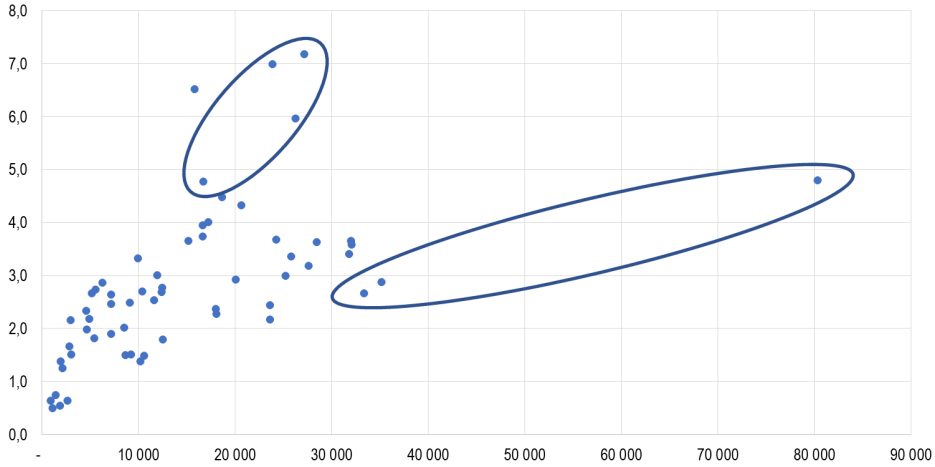
Figure 2: Relationship between money to income (y-axis) and personal financial asset (x-axis) for households in individual countries



Source: Household Finance and Consumption Survey 2010, 2014, 2017, 2021.

Variable 3 - net wealth

The third variable we examine is net wealth. Unlike personal financial assets (PFA), net wealth includes real assets such as the main residence for homeowners, other real assets like vehicles, the value of self-employment businesses, and other valuables. To calculate net wealth, we deduct outstanding liabilities, including mortgage loans, overdraft debt, credit card debt, and consumer loans, from the total household assets. Thus, net wealth represents the difference between a household's total assets and total liabilities.

Table 3: Comparison of households' money to income in individual countries and net wealth of households

Country	Money to Income					Net Wealth				
	2010	2014	2017	2021	avg	2010	2014	2017	2021	avg
Malta	7.2	7.0	6.0	4.8	**6.2**	233 159	228 509	248 899	273 600	**246 042**
Austria	3.9	4.0	3.7	4.5	**4.0**	94 470	96 516	89 302	127 800	**102 022**
Belgium	3.6	3.6	3.2	3.6	**3.5**	250 131	244 935	228 188	242 400	**241 413**
Luxembourg	2.6	2.9	3.4	4.8	**3.4**	476 847	479 832	524 331	717 700	**549 677**
Netherlands	3.0	2.4	3.7	4.3	**3.4**	95 027	90 664	73 103	105 600	**91 098**
Cyprus	2.2	6.5	1.4	1.8	**3.0**	286 071	170 686	200 765	200 400	**214 481**
France	2.7	2.8	2.5	3.6	**2.9**	134 775	122 111	124 797	125 700	**126 846**
Italy	2.7	2.4	2.6	3.3	**2.8**	192 875	151 562	136 405	159 000	**159 960**
Germany	2.9	2.3	2.4	3.3	**2.7**	60 549	66 862	75 723	106 700	**77 458**
Portugal	2.7	2.6	2.3	2.9	**2.6**	88 654	69 944	75 810	99 600	**83 502**
Spain	2.0	1.9	2.5	3.0	**2.3**	171 075	126 286	122 415	127 700	**136 869**
Slovakia	2.1	1.6	1.5	2.2	**1.9**	74 443	55 904	77 706	97 000	**76 263**
Finland	1.5	1.5	1.5	1.8	**1.6**	111 906	113 879	110 606	104 000	**110 098**
Greece	2.0	1.4	0.6	1.2	**1.3**	109 359	65 512	59 888	84 600	**79 840**
Slovenia	0.5	0.5	0.7	0.6	**0.6**	114 765	85 347	96 632	118 800	**103 886**
r(ALL)	35.4%								ABOVE 3	240 789
r(SELECT)	25.2%								BELOW 3	106 080

Source: Household Finance and Consumption Survey 2010, 2014, 2017, 2021.

In this third set, we again use the list of countries from Table 1 and collect the corresponding values for net wealth. Then we compare these values to the money-to-income ratio for each country. Our analysis shows that countries where households maintain a financial buffer with a minimum ratio of 3 generally have higher net wealth than those with a ratio below 3. However, the difference is less pronounced compared to personal financial assets (PFA), with households in high-ratio countries having just over twice the net wealth of those in low-ratio countries.

When we calculate the correlation, we find a relatively weak relationship between net wealth and the money-to-income ratio (35.4%). For selected countries, this correlation is even smaller (25.2%). Figure 3 illustrates the data points excluded from the correlation calculation (labeled "SELECT").

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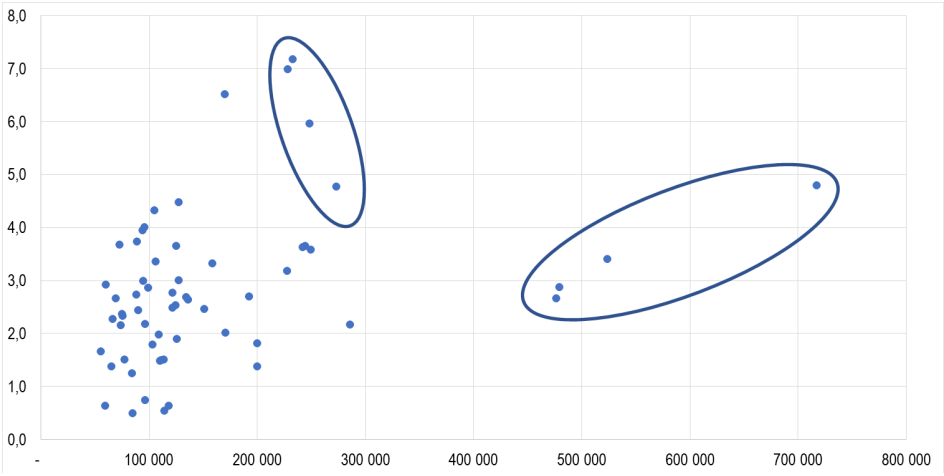
Figure 3: Relationship between money to income (y-axis) and net wealth (x-axis) for households in individual countries



Source: Household Finance and Consumption Survey 2010, 2014, 2017, 2021.

5 Conclusion

In our observations, we aim to identify variables that positively affect households' ability to meet the rule of thumb for maintaining an emergency buffer in personal finance. We hypothesize that monthly gross income (Variable 1) is the primary factor influencing the ability to create an emergency buffer. We compare aggregate data for the money-to-income ratio (emergency buffer) of households in various countries with several variables, beginning with monthly gross income, followed by personal financial assets (PFA) and concluding with net wealth.

Slovakia belongs among the countries with an insufficient emergency buffer for median household, covering only 1.9 months of monthly income. Our results indicate that in countries where the representative household meets the emergency buffer rule of thumb, the common characteristics include higher monthly income, higher PFA, and higher net wealth. Households in countries with sufficient emergency buffer have 65% higher monthly income, more than 3 times higher PFA, and more than twice the net wealth.

Among variables, PFA (Variable 2) shows the highest correlation with the ability to maintain a sufficient emergency buffer, with a correlation level of almost 65%, indicating a medium to strong correlation. However, it is important to note that this correlation suggests a potential relationship between variables

but does not imply causation. The correlation between PFA and the size of emergency buffer suggests that creating PFA requires financial education, an understanding of personal finances, and self-control, which in turn supports the creation of an emergency buffer. Conversely, higher monthly income creates environment, which supports creation of emergency buffer. However, it is not as strong a predictor of the ability to establish an emergency buffer as PFA.

Table 4: Summary table of analytical results for all variables

	variable 1	variable 2	variable 3
above 3	3 710	25 599	240 789
below 3	2 247	8 341	106 080
r(ALL)	*25,8%*	*57,2%*	*35,4%*
r(SELECT)	*45,5%*	*64,7%*	*25,2%*

Source: Author.

The collected money-to-income ratios confirm that the issue of maintaining an emergency buffer remains relevant today. It is quite common for households to have insufficient emergency buffers. Our analysis indicates that if the goal is to strengthen households' emergency buffers, future research should focus on motivations and strategies to improve the creation of personal financial assets (PFA). Additionally, we recommend validating these findings using data from individual households in selected countries.

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REFERENCES

[1] Bloch, W. (2023). What drives the savings rate in middle-income countries? *Economics and Business Review*, 9(4), 56–73. https://doi.org/10.18559/ebr.2023.4.1072

[2] Bohdalová, M., & Pažický, M. (2019). Dynamics of household savings and consumption in the Euro Area. *Ekonomický časopis*, *67*(7), 679–697

[3] Drexler, A., Fischer, G., & Schoar, A. (2014). Keeping it simple: Financial literacy and rules of thumb. *American Economic Journal: Applied Economics, 6*(2), 1-31. http://doi.org/10.1257/app.6.2.1

[4] European Central Bank. (n.d.). *Household Finance and Consumption Survey (HFCS)*. European Central Bank. Retrieved August 15, 2024, from https://www.ecb.europa.eu/stats/ecb_surveys/hfcs/html/index.en.html

[5] Fredriksson, C., & Staal, K. (2021). Determinants of household savings: A cross-country analysis. *International Advances in Economic Research, 27*(4), 257–272. https://doi.org/10.1007/s11294-022-09842-x

[6] Friedman, M. (1969). *The optimum quantity of money and other essays*. New York: De Gruyter.

[7] Keynes, J. M. (1963). *Obecná teorie zaměstnanosti, úroku a peněz.* Praha: Nakladatelství Československé akademie věd.

[8] Lisý, J., Hontyová, K., & Majdúchová, H. (2015). *Základy ekonómie a ekonomiky.* 11th updated and revised edition. Bratislava: Vydavateľstvo EKONÓM.

[9] Lyons, A. C., & Neelakantan, U. (2008). Potential and pitfalls of applying theory to the practice of financial education. *Journal of Consumer Affairs*, 42(1), 106–112. https://doi.org/10.1111/j.1745-6606.2007.00097.x

[10] Sabat, J., & Gallagher, E. (2019). Rules of thumb in household savings decisions: Estimation using threshold regression. Available at SSRN: https://doi.org/10.2139/ssrn.3455696

[11] Schuchardt, J., Durband, D., Bailey, W. C., DeVaney, S. A., Grable, J. E., Leech, I. E., ... & Xiao, J. J. (2007). Personal finance: An interdisciplinary profession. *Journal of Financial Counseling and Planning, 18*(1), 61–72. Available at SSRN: https://ssrn.com/abstract=2228830

[12] Whittle, R., et al. (2017). Financial rules of thumb: A review of the evidence and its implications. Available at: https://e-space.mmu.ac.uk/629985/