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# TRIGGER OF FINANCIAL FRAGILE AND FINANCIAL INSECURED (STUDY ON HOUSEHOLD GROUP)

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***Abstract***

*The economic crisis has a significant impact on the financial condition of the community and households. The emergence of financial fragility, as a result of declining income, spikes in spending, the absence of emergency funds, preparedness funds or buffers. From the crisis, it teaches the importance of having good financial planning, in order to be more able to withstand economic shocks in the future. This study aims to study the factors that impact financial fragility, and see how it impacts financial insecurity. Survey data in this study will be analyzed using path analysis on the variables of financial insecurity, financial fragility, debt burden, healthcare investment and savings preparedness. The results show that debt burden is a factor that plays a fairly large role. In addition, financial fragility and healthcare investment affect the increase or decrease in financial insecurity. However, the savings preparedness variable does not have a significant effect on the increase or decrease in financial insecurity. The fundamental contribution of this study highlights the crisis that causes households to face financial difficulties and causes changes in lifestyle patterns and social challenges. This is mainly due to the absence of financial buffers, not investing in health and not providing sufficient preparedness funds.*

***Keywords:*** *Financial insecurity; Financial fragility; Debt burden; Healthcare investment and savings preparedness.*

**Abstrak**

Krisis ekonomi memberikan dampak signifikan pada kondisi keuangan masyarakat dan rumah tangga. Munculnya kerapuhan keuangan, sebagai akibat menurunnya pendapatan, lonjakan pengeluaran, ketiadaan dana darurat, dana kesiapsiagaan atau penyangga. Dari peristiwa krisis, mengajarkan pentingnya memiliki perencanaan keuangan yang baik, agar lebih mampu bertahan terhadap guncangan ekonomi di waktu yang akan datang. Penelitian ini bertujuan melakukan kajian faktor-faktor yang berdampak pada kerapuhan keuangan (*financial fragility*), serta melihat bagaimana dampaknya terhadap ketidak-amanan keuangan (*financial insecurity*). Data survey dalam penelitian ini akan dianalisis menggunakan path analysis terhadap variabel f*inancial insecurity, financial fragility, debt burden, healthcare investment dan savings preparedness*. Hasilnya menunjukkan bahwa debt burden merupakan faktor yang memiliki peranan cukup besar. Selain itu, *financial fragility* dan *healthcare investment* mempengaruhi peningkatan atau penurunan *financial insecurity*. Namun, variabel savings preparedness tidak berpengaruh signifikan terhadap peningkatan atau penurunan *financial insecurity*. Kontribusi mendasar penelitian ini menyoroti krisis yang menyebabkan rumah tangga menghadapi kesulitan keuangan dan menimbulkan perubahan pola kehidupan dan tantangan sosial. Hal ini terutama akibat tidak adanya penyangga keuangan, tidak melakukan investasi pada kesehatan dan tidak menyediakan dana kesiapsiagaan yang cukup.

**Kata Kunci:** Ketidakamanan finansial; Kerapuhan finansial; Beban utang; Kesiapan investasi dan tabungan layanan kesehatan.

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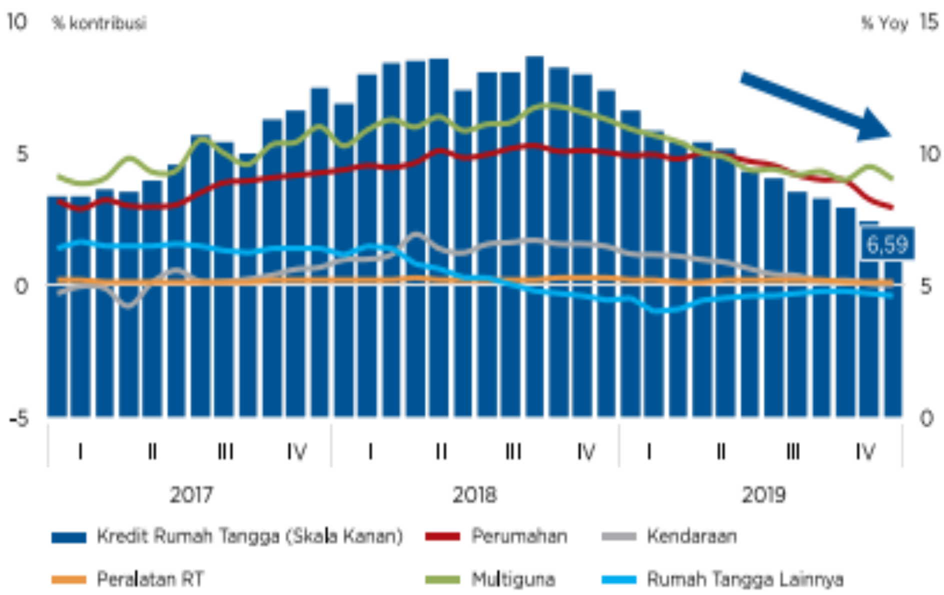
## INTRODUCTION

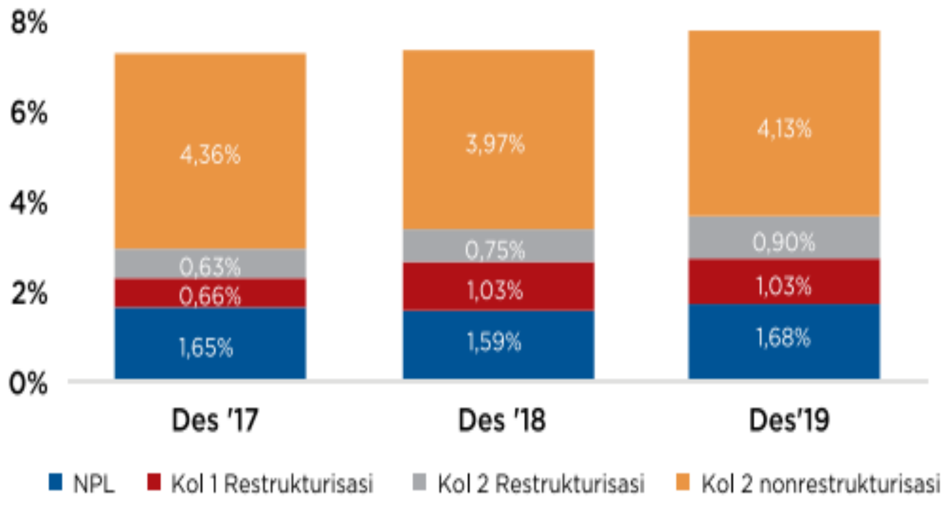
The trigger for the emergence of financial fragility problems that continue to financial insecurity, begins with the existence of crisis conditions such as the Covid 19 pandemic which has an impact on the economic and financial capabilities of the community. The increasing risk of household finances, especially in terms of the declining ability to pay debts, as indicated by the increasing share of households having difficulty paying debts from 13.0% in 2018 to 13.3% of total respondents in 2019, especially in households with incomes of less than IDR 2 million per month. The crisis conditions also triggered an increase in the unemployment rate due to the slowing growth of Household Credit and Installments as reflected in the decreasing debt service ratio (DSR) throughout 2019, especially in the group of Households earning IDR 3 million to IDR 5 million per month. The increase in workers affected by layoffs reached more than 3 million people at the end of the second quarter of 2020, which is expected to continue to increase considering that 56.5% of the Indonesian workforce works in the informal sector.




Sumber: Bank Indonesia, diolah

**Figure 1.** Household Credit Growth

The increasing financial risk of Households (RT) can also be indicated by the decline in credit quality, where the Non Performing Loan (NPL) Ratio and the RT credit LaR ratio tend to increase, with the largest composition being housing credit where the LaR reaches 11.65%.




Sumber: Bank Indonesia, diolah

**Figure 2.** Development of Home Credit Risk

The Indonesian Institute of Sciences (LIPI) also released the results of a survey on the impact of Covid-19 on the RT economy, where the majority of income declines occurred in households that work as small business actors, they were forced to reduce production or close their businesses (Figure 3). Some of them used savings, followed by mobile credit and selling assets to cover daily needs

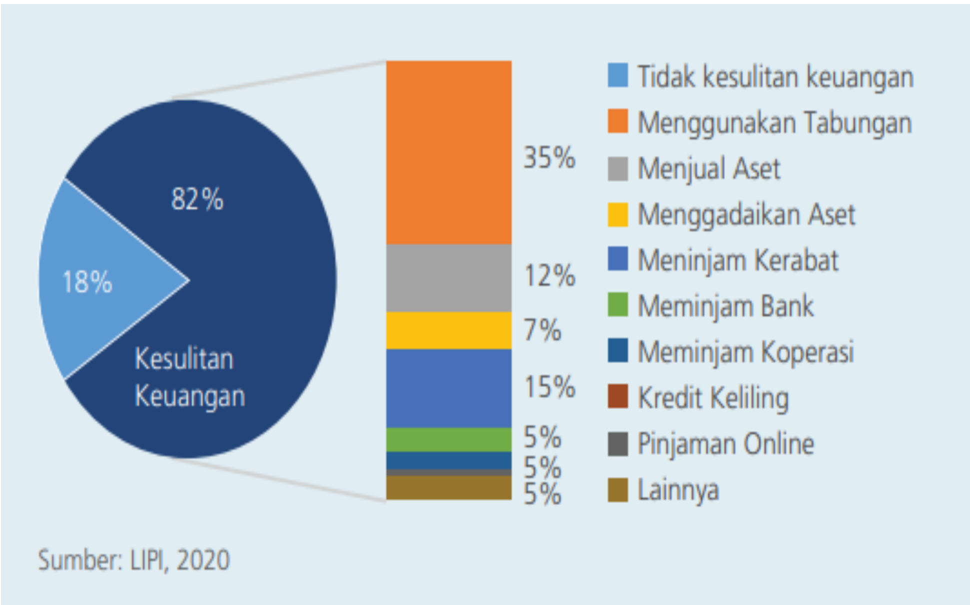



**Figure 3.** Household Financial Conditions During the Pandemic

In order to obtain a suitable model for solving household financial problems, a review of several important theoretical foundations was conducted, namely personal finance management theory**,** behavioral finance theory , risk management, as well as a study of relevant research results, as a basis for compiling a research model that is still rarely carried out.

Several studies are related to factors that form financial insecurity such as income inequality and shocks (Dean & Steele, 2022), unstable employment and the informal sector. (Irvine & Rose, 2024), (Rasdi et al., 2021). Furthermore, lack of savings and access to credit (Lusardi & Mitchell, 2023). Another factor are low savings and high debt (Ampudia et al., 2021) and vulnerable families due to the covid 19 crisis (Chhatwani & Mishra, 2021). Next is related to higher levels of initial resilience (Clark & Mitchell, 2022), (Ampudia et al., 2021).individual cognitive and non-cognitive abilities of individuals (Kleimeier et al., 2023). One of the most important factors is the debt burden (Medialdea García & Sanabria Martín, 2022);(Aldashev & Batkeyev, 2023)

The next important factor is income inequality. (D'Orazio, 2019), health investment is also an important thing to highlight the ease of access to Public Insurance Guarantee services (Long et al., 2023); (Bellerose et al., 2022); (Jones et al., 2021). The search results that affect financial fragility are saving preparedness . This is in accordance with research by Hoechle & Graef (2023). This theory refers to the process of managing individual or family finances with the aim of achieving stability and achieving financial goals. Concepts such as debt management, and investment and the availability of emergency funds are important because they are funds saved to cover unexpected costs such as health costs or home repairs. In addition, it is necessary to maintain a debt ratio that measures the burden of debt to income. While investment is the allocation of funds for long-term investments such as property, stocks, or mutual funds, with the aim of increasing wealth. Furthermore, Risk Management Theory where financial risks can come from various directions such as job loss, natural disasters, or health problems. This study is also supported by the Behavioral Finance Theory which states that psychological factors can influence individual and family financial decisions. In the context of the household, behavioral biases such as overconfidence (too confident in taking investment risks) and loss aversion (fear of losing so that they tend to postpone important decisions) are often problems in financial management (Kahneman & Tversky, 2018; Thaler, 2019). In addition, good financial management starts from making an adequate budget.

## LITERATURE REVIEW

### Financial Insecurity

Financial insecurity is defined as a feeling of economic insecurity due to the lack of financial stability. This insecurity can stem from various factors such as low income, job instability, and lack of access to financial services. The causes include income inequality and shocks (Dean & Steele, 2022). This inequality creates economic disparities such as decreased purchasing power and financial instability. Other factors are unstable employment and the informal sector which are also major causes of financial insecurity . Insecure employment limits access to social goals, and poses mental health risks . (Irvine & Rose, 2024). According to Lusardi & Mitchell (2023)that many households in developed and developing countries do not have adequate access to formal financial services such as savings or credit. This will exacerbate financial insecurity, they do not have a financial cushion when facing unexpected expenses. Another factor is the increase in the cost of living. Housing is the largest expense for low-income individuals, inherently related to economic security especially among middle and low -income workers. (Westbrook, 2024).

The phenomenon of financial insecurity has been widely studied, for example Hasler et al. (2023), which underlines the importance of financial literacy in reducing financial insecurity. Lack of understanding of financial products often makes individuals vulnerable to poor financial decisions, which ultimately increases financial insecurity . According to Sun et al. (2022), The COVID-19 pandemic has had a significant impact on household financial behavior, especially hitting low-income households and families with many dependents, trapping many of them in serious. Rasdi et al. (2021) attempted to explore the spillover effects of financial insecurity on the burnout-disengagement relationship during the pandemic, the results showed that when financial insecurity increased, the effect of burnout on work disengagement increased among part-time workers. So financial insecurity is a complex and profound problem, with impacts that permeate various aspects of life, from mental health to productivity and social well-being. This phenomenon is further exacerbated during the Covid-19 pandemic. That financial literacy, income stability, and better access to financial assets are key to reducing financial insecurity, through more effective policy interventions to help the most vulnerable groups

**Financial Fragility**

Financial fragility is a concept that refers to the inability of an individual or household to cope with a sudden financial shock, such as a job loss, unexpected health care costs, or a decrease in income. Financial fragility measures how quickly a person can cope with a financial crisis without relying on debt or illiquid assets. Individuals or households that are considered financially fragile typically do not have sufficient savings, liquid assets, or financial reserves to cope with unexpected expenses. Financial fragility is often one of the main factors that drives financial insecurity . When an individual or household is financially vulnerable, they are more likely to experience financial insecurity due to their inability to handle emergency financial situations. Some characteristics of financial fragility are lack of emergency savings, irregular income, high debt, and limited access to liquid assets. According to Kleimeier et al. (2023) that negative personal experiences during the pandemic, namely job loss or reduction or COVID-19 infection, are associated with higher objective and subjective financial fragility. Individual cognitive abilities such as financial literacy as well as non-cognitive abilities (internal locus of control; psychological resilience) help to counteract higher financial fragility.

Financially vulnerable households are more vulnerable to economic shocks such as recessions, pandemics, or sudden increases in the cost of living. Increased feelings of financial insecurity can affect mental health, the accuracy of economic decision-making, and the ability to plan for the future (Yulianto, 2020).

Some studies which discusses the concept of financial fragility and its impact on financial insecurity, including: Ampudia et al. (2021) which analyzes financial fragility in the Euro area and the results show that households with low savings and high debt are more vulnerable to economic shocks. That financial fragility is a strong predictor of financial insecurity, especially among low-income households. Furthermore Mitchell & Lusardi (2023) who examined the relationship between financial literacy, financial fragility, and the ability to survive a financial crisis. Mitchell & Lusardi (2023)found that low financial literacy increases financial fragility, which in turn worsens financial insecurity. His research suggests financial education as an important step to reduce financial vulnerability. Furthermore, Chhatwani & Mishra (2021) examined the impact of the Covid-19 pandemic on financial fragility and financial insecurity among households in the United States. The results showed that households that were already financially vulnerable before the pandemic experienced a greater decline in financial well-being during the pandemic, which exacerbated their insecurity. According to Kleimeier et al. (2023) Individual cognitive abilities (e.g., financial literacy) as well as non-cognitive abilities (e.g., internal locus of control; psychological resilience) help to counteract this higher financial fragility. Finally, Kleimeier et al. (2023)we examine the role of government financial support (e.g., income support; debt relief) and find that it is negatively associated with financial fragility only for the most economically vulnerable households. Research conducted Clark & Mitchell (2022)on the financial resilience of Americans during the Covid-19 pandemic found that higher initial levels of resilience were, in fact, associated with lower levels of financial fragility a year after the pandemic. This suggests that they were able to respond efficiently to shocks. This research explores the prospects and experiences of the pandemic, the need to build more resilient health care systems, promote sustainable initiatives to strengthen social protection and inclusion, crisis preparedness and response.

So it can be concluded that financial fragility and financial insecurity are two interrelated concepts that have a major impact on the economic well-being of individuals and households. Financial vulnerability, characterized by a lack of emergency savings, irregular income, and dependence on debt, increases the risk of financial insecurity, especially when households face economic shocks. The discussion above reinforces the understanding that financial fragility is one of the main causes of financial insecurity, and that improving financial literacy, stabilizing income, and building financial reserves are important steps to reduce financial insecurity. In addition, economic policies that support social protection and access to emergency savings are also key to addressing the problem of financial fragility and its impact on financial well-being.
**$H_1$:** Financial Fragility has a positive impact on Financial Insecurity.

## Debt Burden

Debt burden is a condition in which the proportion of income allocated to debt payments becomes high, reducing the ability of individuals or households to meet basic needs or build financial reserves. Debt burden can occur from various types of debt, such as mortgages, student loans, consumer loans, or credit card debt, which further burden household expenses and can have a negative impact on financial stability. Benefits of having debt according to Leclaire (2023) that household debt plays a role in economic growth from a post-Keynesian approach. that household debt is important for financial stability. It affects the level of household consumption, the rate of return on mortgages and other debt held by banks and other financial institutions, the rate of return on the production of goods and services, and the overall welfare of households in our economy. However, other research results that debt is a burden for society (Aldashev & Batkeyev, 2023). Results of testing the resilience of urban and rural households to various shocks, including job losses, and income declines. Where about one-third of household debt may be problematic, especially in rural areas, that low-income households are more vulnerable. The need for financial literacy is explained by Cziriak (2023) that financial literacy can protect household financial capacity in times of crisis, financial literacy is associated with lower financial vulnerability and appears to reduce the negative consequences of income loss on the ability to cope with emergency expenses. Low-income households have a greater debt burden than higher-income households (Ampudia et al., 2021). Financially fragile households typically do not have sufficient savings or liquid assets to cope with emergencies. High debt burden can exacerbate this condition by increasing the risk of being unable to cover sudden expenses without having to take on further debt, which ultimately increases their financial vulnerability. Some characteristics of debt burden that affect financial fragility such as high debt-to-income ratio, late debt payments, dependence on debt for daily expenses, this indicates excessive debt burden and strengthens financial fragility.

Some research results that discuss the concept of debt burden and its impact on financial fragility, including Medialdea García & Sanabria Martín (2022), after the last major financial crisis, increasing income inequality during the expansion phase can force middle and low-income groups to rely more on debt to finance their consumption. This debt-driven consumption will stimulate economic growth, but it will also explain why it is not sustainable because families will become more financially fragile. Furthermore, Ampudia et al. (2021) examines the financial vulnerability of households in the Euro area and shows that households with high debt burdens are more vulnerable to economic shocks and have less ability to cover emergency expenses. The results show that debt burden is a strong predictor of financial fragility in the area.

It can be concluded that high debt burden is one of the main causes of financial fragility in households, especially when most of the income is used to pay debts. With high debt burden , households have little reserves to face emergencies or economic shocks. This increases the risk of debt default, drains savings, and forces individuals to take on more debt to cover urgent expenses. Previous research results have highlighted that excessive debt burden exacerbates household financial vulnerability. Policies aimed at reducing debt burden , such as better debt regulation and financial literacy programs, can help reduce financial fragility and improve household economic stability. The results of D'Orazio (2019) show that income inequality is detrimental to financial stability because it leads to higher credit demand, higher unemployment rates, economic volatility, and financial fragility. According to him, social interaction significantly reduces household financial fragility; social interaction reduces household financial fragility by increasing financial literacy; this impact is especially pronounced in subgroups with higher financial literacy, urban households and internet users. Therefore, household financial fragility can be reduced by improving social interaction conditions and narrowing the financial literacy gap. that residential area, and income group have differential effects on household consumption and debt through predetermined variables. Specifically, the results show that debt has a negative or positive effect on household
**$H_2$:** Debt Burden has a positive effect on Financial Fragility.

### Healthcare Investment

Healthcare investment refers to the allocation of financial resources, infrastructure, and policies aimed at improving access, quality, and efficiency of health services. These investments can be made by governments, the private sector, and international institutions to strengthen health systems, such as building health facilities, training medical personnel, health research, and providing affordable health services. When health investments are low or inefficient, people often face high health costs, which can worsen financial fragility.

According to research Long et al. (2023), there is a positive relationship between higher education and family health, especially the role of women, where women with higher education can bring more benefits to family health through behavioral and economic channels. However, highly educated women have psychological status, while highly educated men build wider social networks, which will improve family health. While the results of natural experiments Bellerose et al. (2022)to study the impact of expanding public insurance and health care utilization, show that the expansion of policies on health affordability by the government can increase the eligibility of health programs for low-income adults regardless of their pregnancy or parenthood status. Furthermore, research that examines the impact of changes in public long-term care spending on public hospital use, shows that reductions in public long-term care spending lead to a substantial increase in the number of emergency department visits made by patients aged 65 and over (Crawford et al., 2021). Further research Jones et al. (2021) which aims to analyze factors related to mental health management, where increasing access to health services encourages increased financial stability among students. Healthcare investment also includes several aspects that have a direct impact on financial fragility, including Universal Health Insurance or easy access to affordable or subsidized health insurance to reduce personal medical costs.

The results of the study on the relationship between healthcare investment and financial fragility explain that health spending has the potential to reduce maternal and infant mortality rates in low- and middle-income countries. So there is a need to increase health care spending, especially in developing countries, especially to reduce infant and maternal mortality rates. (Owusu et al., 2021). That countries with low average mortality rates due to COVID-19 have high spending in the health sector, namely >7.5% of GDP, high health spending per capita, namely >$2,300 (Coccia, 2021).

The study, which highlights the ideal and optimal health expenditures for several countries, shows that all countries considered underspend on health care, except the United States. Underspending is particularly severe in China, India, and the Russian Federation. That the main and pressing problem in many countries is underspending on health at the macroeconomic level, rather than containing costs at the microeconomic level. (Chen et al., 2021). Another finding in China, the insurance service package varies across regions and schemes and is largely determined by financial contributions, resulting in limited service coverage in less developed areas. Vietnam, on the other hand, has focused on providing a comprehensive and universal service package to all enrollees, thus approaching UHC in a more equitable manner (Mao et al., 2020). While the study looked at the utilization of public facilities for both outpatient and inpatient services, it found that there was a significant increase in the utilization of public facilities for both outpatient and inpatient services, across the country. As a result, there was a dramatic decrease in the overall financial burden on patients who would otherwise have used the services of private healthcare providers. This evidence, may suggest that it is prudent to invest more directly in strengthening the public healthcare delivery system. (Muraleedharan et al., 2020). While studies highlighting the use of artificial intelligence (AI) in the healthcare industry have shown that there are positive economic impacts in favor of or against investment in artificial intelligence (AI) solutions in the healthcare industry. These impacts are most relevant to healthcare providers and insurers as well as the pharmaceutical and medical technology sectors. While the broad economic impacts of digital health solutions in general have been assessed many times in the literature and their benefits to patients and society have also been analyzed, the specific economic impacts of AI in healthcare have only been discussed sporadically (Wolff et al., 2020). Other studies have explained that political economy has driven the evolution of the health financing landscape since the establishment of early modern health systems in East Asian and ASEAN countries and continues to develop in the future (Jakovljevic et al., 2021)

It can be concluded that if health investment is inadequate, people are more vulnerable to financial fragility. Some of the impacts of inadequate health investment include high health costs, which can drain individual and household savings, and trigger financial fragility. Furthermore, limited access to health services, which worsens financial fragility. Furthermore, the lack of health insurance, if lacking, will worsen financial fragility. Previous research has revealed the importance of healthcare investment in protecting individuals and households from financial fragility. By increasing access to quality and affordable health services, people can be more financially stable, thereby reducing the risk of economic shocks caused by health costs.
**$H_3$:** Healthcare Investment has a negative effect on Financial Fragility.

## Saving Preparedness

Saving preparedness (SP) is a concept that refers to the readiness of individuals or households to face urgent or unexpected financial needs through adequate savings. SP reflects how well an individual or household prepares itself to cope with economic shocks, such as job loss, sudden medical expenses, or other unexpected costs. Strong savings readiness allows individuals to face such situations without having to take on debt or drain valuable assets.

Lack of SP contributes directly to financial fragility. Individuals who do not have sufficient savings are more vulnerable to financial fragility because they are more likely to rely on debt, defer payments, or other emergency measures that can worsen their financial situation.

Several studies that discuss the impact of saving preparedness on financial fragility include those that highlight the problem of liquidity adequacy, where the results show that households with limited liquidity tend to be more negatively affected by shocks, although not all sources of liquidity are equally effective in protecting households from shocks. That there is a need for policy makers and program administrators to develop tools that can facilitate access to various types of liquidity to offset various financial risks for households (Bufe et al., 2022). Another result is that households that are less financially intelligent and have low incomes are at high risk of not saving enough (Hoechle & Graef, 2023).

A study that highlights the importance of financial literacy by Erdem & Rojahn (2022) explaining that during the crisis (COVID-19) where the better the financial literacy, the more protected individuals are from macroeconomic shocks. Furthermore, the identification of community preparedness from the perspective of family financial planning, and the use of digital money was studied by Setiadi & Frederika (2022), the results showed that family literacy about financial planning for disaster preparedness is relatively significant, although only a few families implement financial planning. In addition, digital money can be used as an individual solution for disaster preparedness at the family level, and as a collective solution for financial disaster preparedness at the

community level. However, its use is still low and relatively concentrated in young adult families. Digital money is a promising disaster preparedness resource for the next generation. Furthermore, research by Anvari-Clark & Ansong (2022) shows that saving habits and increasing savings are very strong in supporting financial well-being than financial shocks and income volatility. The characteristics of Saving Preparedness include sufficient savings, having liquid assets, such as savings or emergency funds, having a habit of saving regularly even though income varies, and long-term financial planning, such as children's education, housing, or retirement.
**$H_4$:** Savings Preparedness has a negative effect on Financial Fragility

## RESEARCH METHODS

### Selection of Population and Sample Objects

This study uses a household population (RT) in the Depok area which is part of the West Java region but is located on the outskirts of the capital city. Sample selection with consideration of households affected and having a difficult experience when Covid 19 occurred, namely 330 respondents and was carried out in 2022 to 2023. To find out the main factors of financial fragility, a literature review was carried out, followed by an empirical study of the framework.

### Data Analysis Methods

Based on the literature review, an analysis was then conducted to describe the respondents' responses to questions from all variables used in this study. The analysis technique used a simple path analysis design . With the categorization of the Average Likert Score which includes Not Good / Very Low / Ineffective; Less Good / Low / Less Effective; Good / High / Effective; Very Good / Very High / Very Effective ( Supranto , 2000:63).

## RESULTS AND DISCUSSION

## RESULTS

### Descriptive Analysis

Based on the results of a survey conducted in the suburbs of the capital city of Jakarta, namely the Depok area which is part of the West Java region, as many as 330 respondents were selected from families who were most severely affected by the Covid crisis. The survey was conducted in 2022-2023, namely the conditions after the crisis, and the following descriptive data can be obtained:

**Table 2.** Descriptive Data by Gender and Age

| Gender | | Age (years) | | | |
|---|---|---|---|---|---|
| **Man** | **Woman** | **20-35** | **36-45** | **46-55** | **56-65** |
| 38.3% | 61.7% | 30.4% | 21.7% | 38.3% | 9.6% |

**Table 3.** Descriptive Data by Age of Marriage and Formal Education

| Age Of Marriage (Years) | | | Formal Education | | | | |
|---|---|---|---|---|---|---|---|
| **1-10** | **11-20** | **Above 20** | **Junior High School** | **High School** | **Dipl 1,2,3** | **S1** | **S2** |
| 38.3% | 12.2% | 49.6% | 5.2% | 38.3% | 12.2% | 41.2% | 2.6% |

From the survey results, information was also obtained that all respondents or 100% already have a bank account and participate in government insurance, namely BPJS. They have an average of 2 children and are able to set aside income for investment in the health sector with the largest number of 67% of respondents investing 5% of the total amount of RT investment, this amount is suspected from the experience of the Covid crisis they have 5% for reserves in case of health problems including participation in insurance. This figure was previously suspected to be smaller than 5% and may not even be available.

**Table 4.** Respondents' Investment Data on Health

| Investing in health | | | |
|---|---|---|---|
| % of total investment | 5% | 10% | 15% |
| % of respondents | 67 | 25.2 | 7.8 |

**Response to Financial Fragility**

Based on descriptive data related to financial fragility, it can be explained that 67% of respondents made the decision to set aside funds for health, but based on the percentage of their income, it was only 5% of their monthly income. However, those who have health insurance coverage are 83.5%, and have bank accounts are 83.5%. However, 73% of respondents have an average expenditure level of IDR 72,000,000 to 120,000,000, which is much higher than the Indonesian GNI income level of US$ 4,050 or around 58,000,000. This is what allows for low levels of savings and emergency funds, and is thought to be due to inappropriate financial behavior.

The average score of the financial fragility variable is 2.64 with a low average category. The lowest average statement is 2.37, where it is necessary to regulate spending money/shopping for secondary things such as clothes, bags, and others (FF-3) and the amount of savings is decreasing due to the large amount of spending during Covid-19 (FF-4), and the highest average statement is 3.13 in the statement that having obligations or debts related to home or vehicle ownership is a heavy burden (FF-1).

**Response to Financial Insecurity**

Data from the survey results show that the average score of the financial insecurity variable (Z) is 3.49 with a high average category. The lowest average statement is 3.32 on the statement that extended family support plays a role and influences in overcoming family stress and problems (FI-7) and the highest average statement is 4.23. When experiencing uncertainty and worry, there needs to be an action of sharing or reporting (FI-3).

**Response to Debt burden**

The average score of the bebt burden variable (X1 ) is 3.00 with a low average category. The lowest average statement is 2.50 in the statement The debt burden owned is intended for long-term investment such as housing needs, children's education needs, and others (DB-1) and the highest average statement is 3.70 in the statement The debt owned exceeds the assets owned (DB-3).

**Response to Healthcare Investment**

The average score of the Healthcare Investment Variable (X2 ) is 2.74 with a low average category. The lowest average statement is 2.17 on the statement that having an insurance policy is important to protect the family in dealing with health problems (HI-2), and the highest average statement is 3.42 on the amount of insurance costs paid being a significant burden (HI-3) and health insurance payments have disrupted the fulfillment of basic needs such as food and education (HI-4).

**Response to Savings Preparedness**

The average score of the savings preparedness variable (X3 ) is 2.20 with a low average category. The lowest average statement is 1.97 on the family must have confidence in the benefits of savings when a disaster occurs (SP-1) and the highest average statement is 2.33 on the statement that having emergency savings is needed when family members face health problems (SP-5).

**Validity and Reliability Test**

The results of the validity test show that in the variables used, all items are valid because the correlation r value is greater than the critical r. For the reliability test, all variables are reliable because the reliability value is greater than 0.500. The hypothesis test design in this study was carried out to test the hypothesis that has been formulated and is in accordance with the path diagram presented in the analysis design, with the following model:

$$\text{Equation-1: } Y = \rho yx_1 X_1 + \rho yx_2 X_2 + \rho yx_3$$
$$\text{Equation-2: } Z = \rho zyY + \rho zx_1 X_1 + \rho zx_2 X_2 + \rho zx_3$$

**Classical Assumption Test**

The Kolmogorov-Smirnov normality test , that in structural model 1 with a sig. value of 0.239 and structural model 1 with a sig. value of 0.745. Reject H 0 if sig <α. Accept H 0 in other cases. It can be seen that the significance value in structural models 1 and 2 is greater than the α value (0.05). It can be concluded that the residual data is normally distributed in both models. That there is no heteroscedasticity in the model, so that the path model of the first structural equation analysis is suitable for predicting the Financial Fragility (Y) variable and the second structural equation obtained, namely variables X1, X2 and X3 and variable Y are suitable for predicting Financial Insecurity. The results of the Durbin Watson test, it can be concluded that there is no autocorrelation in model 1. This means that there is no correlation between the residuals in one observation and other observations in the first structural equation model. Likewise, there is no autocorrelation in model 2. This means that there is no correlation between the residuals in one observation and other observations in the second structural equation model. Based on the analysis results, the VIF value There are no multicollinearity problems, so the assumptions or requirements for using the path analysis method on the first structural equation and the second structural equation have been met.

**Path Analysis of Structural Model 1 and Structural Model 2**

In the first structural model, the correlation coefficient (R) value is 0.551, which means the correlation or relationship between the Financial Fragility variables with its independent variables classified as strong. R square or coefficient of determination is 0.303. This means 30.3% variation or change in the Financial Fragility variable can be explained by the variables used, while the remaining 69.7% is explained by other factors outside the model studied. In the second structural model, the correlation coefficient (R) value is 0.509, which means that the correlation or relationship between the Financial Insecurity variables with its independent variables, is quite strong. R square or coefficient of determination is 0.259, this means 25.9% variation or change in the Financial

Insecurity variable can be explained by the variables Debt Burden , Healthcare Investment, Savings Preparedness And Financial Fragility . While the remaining 74.1% is explained by other factors outside the model studied.

Based on the results of IBM SPSS 22 processing, the simultaneous influence test (F test) on the first Structural model was obtained, the calculated F value was 9.593 with a significance value of 0.000. With a significance level of 5%, the F table = 2.50 was obtained. Because the calculated F value> F table ( 9.593 > 2.50) and the significance value is less than 5%, then H 0 is rejected. This means that there is a significant simultaneous influence of all X variables, as well as Y variables on Financial Insecurity (Z). This means that all factors can influence Financial Insecurity to become more developed or vice versa to not develop.

Based on the results of the simultaneous influence test (F test) on the second Structural model, the calculated F value was 16.098 with a significance value of 0.000. With a significance level of 5%, Ftable = 2.732 was obtained. Because the calculated F value> Ftable ( 16.098 > 2.732) and the significance value is less than 5%, H0 is rejected. This means that there is a significant simultaneous influence of all Debt Burden variables , Healthcare Investment variables, Savings Preparedness variables on the Financial Fragility variable (Y)" . This means that the overall Debt Burden factor, Healthcare Investment , Savings Preparedness can influence Financial Fragility to develop further or vice versa Financial Fragility become undeveloped.

## Partial Effect Test (t-Test)

The results of the t-test show which independent variables have a significant influence on the dependent variables in the structural model.

**Table 5.** t-Test, First and Second Structural Equations

| | Structural Model 1 | | | | Structural Model 2 | | | |
|---|---|---|---|---|---|---|---|---|
| | **Standardized Coefficient $\beta_i$** | **Std E $\beta_i$** | **t** | **sig** | **Standardized Coefficient $\beta_i$** | **Std E $\beta_i$** | **t** | **sig** |
| *Debt Burden* (DB) | 0.274 | 0.105 | 3.314 | 0.001* | 0.260 | 0.125 | 2.897 | 0.005* |
| *Healthcare Investment* (HI) | -0.398 | 0.102 | -4.177 | 0.00* | -0.226 | 0.125 | -1.846 | 0.068** |
| *Savings Preparedness* (SP) | -0.247 | 0.087 | -2.788 | 0.006* | 0.051 | 0.099 | 0.507 | 0.613 |
| *Financial Fragility* (FF) | | | | | 0.341 | 0.108 | 3.496 | 0.001* |

**Source:** IBM SPSS 22 Processing Results * significant with α=5% and ** significant with α=10%.

## Structural Model 1

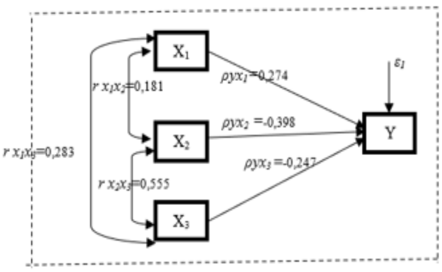
Through the t student distribution table with a 95% confidence level for the 2-way test on each independent variable, the t table value is 1.99. With the criteria for rejecting H 0 if t count > t table or significance value (sig.) < 0.05. then from the table it can be seen that Debt Burden (X 1 ), Healthcare Investment (X 2 ), Savings Preparedness (X 3 ) have a significant influence on Financial Fragility (Y) individually (partially). This means that the Debt Burden factor even though there is no Healthcare Investment and Savings Preparedness still influence Financial Fragility to develop more or, conversely, to not develop , and so on. Healthcare Investment even though it doesn't exist Debt Burden and Savings Preparedness still influences Financial Fragility to become more developed or vice versa to become less developed. as well as Savings Preparedness even though there is none Debt Burden and Healthcare Investment still influences Financial Fragility to become more developed or vice versa to become less developed.

### Structural Model 2

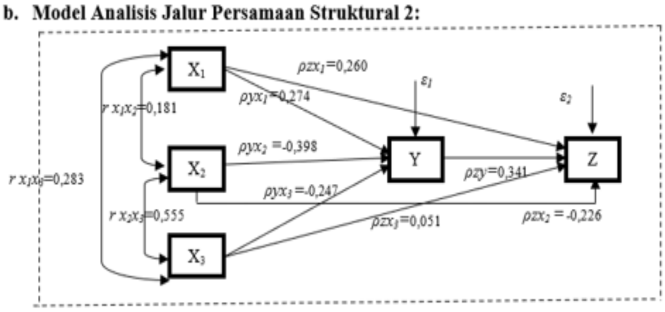
Through the t student distribution table with a 95% confidence level for the 2-way test on each independent variable, the t table value is 1.99. With the test criteria, reject H 0 if t count > t table or significance value (sig.) < 0.05. From the table, it can be seen that debt burden (X 1 ) , healthcare investment (X 2 ) , and financial fragility (Y) on financial insecurity (Z) have an effect individually (partially). Except Savings Preparedness does not have a partial effect on Financial Insecurity (significance value (sig.) > 0.05) This means that the debt burden factor even though there is no healthcare investment, savings preparedness, and financial fragility still influence financial insecurity to become more developed or vice versa to not develop. Likewise, the healthcare investment factor even though there is no debt burden, savings preparedness, and financial fragility still influences financial insecurity to become more developed or vice versa to not develop. Furthermore, financial fragility even though there is no debt burden, healthcare investment, and savings preparedness still influences financial insecurity to become more developed or vice versa to not develop.

### Path Analysis Model

**a. Model Analisis Jalur Persamaan Struktural 1:**




**b. Model Analisis Jalur Persamaan Struktural 2:**




### The Indirect Influence Coefficient Test for Structural Model 2 is as Follows

**Table 6.** Test of Indirect Influence Coefficient of Second Structural Model

| Track | Coefficient (βi) | Standard error (SE. βi) | t | Sig α |
|---|---|---|---|---|
| $\rho zx_{1}$ □ $y$ | 0.089 | 0.032 | 2,715 | 0.008 |
| $\rho zx_{2}$ □ $y$ | -0.077 | 0.036 | -2.139 | 0.035 |
| $\rho zx_{3}$ □ $y$ | 0.017 | 0.019 | 0.895 | 0.373 |

a. The results of testing the indirect influence of Debt Burden through the Financial Fragility variable indirectly on reducing Financial Insecurity. shows a sig value of 0.008 <α = 5%. It can be concluded indirectly that the Debt Burden variable through the moderating variable Financial Fragility has a significant positive effect on increasing Financial Insecurity
b. The results of testing the indirect influence of Healthcare Investment through the Financial Fragility variable indirectly on reducing Financial Insecurity. shows a sig value of 0.035 < α = 5%. It can be concluded indirectly that the Healthcare Investment variable through the moderate variable Financial Fragility has a significant negative effect on increasing Financial Insecurity
c. indirect influence test of Savings Preparedness through the Financial Fragility variable indirectly on the decrease in Financial Insecurity showed a sig value of 0.373 <α = 5%. It can be concluded that indirectly the Debt Burden variable through the moderate Financial Fragility variable does not have a significant effect on increasing Financial Insecurity.

### Direct and Indirect Influence of Independent Variables on Dependent Variables in the First and Second Structural Equation Models

**Table 7.** t-test of Influence Coefficient First and Second Structural Equations

| Track | Structural Model 1 | | | Structural Model 2 | | |
|---|---|---|---|---|---|---|
| | Direct Influence Coefficient | Indirect Influence through variable Y | Total Influence | Direct Influence Coefficient | Indirect Influence through variable Y | Total Influence |
| $\rho zx_{1}$ □$y$ | 0.274 | - | 0.274 | 0.260 | 0.089 | 0.349 |
| $\rho zx_{2}$ □$y$ | -0.398 | - | -0.398 | -0.226 | -0.077 | -0.303 |
| $\rho zx_{3}$ □$y$ | -0.247 | - | -0.247 | 0.051 | 0.017 | 0.068 |
| $\rho zy$ | - | - | 0.274 | 0.341 | - | 0.341 |

**Source:** IBM SPSS 22 Processing Results * significant with α=5% and ** significant with α=10%.

## DISCUSSIONS

### First Structural Model

### Direct Influence

The path coefficient ρ yx1 is 0.274, meaning that the debt burden variable has a direct positive effect on financial fragility of 0.274. improvement debt burden of 1 unit, will affect the increase in financial fragility by 0.274. The path coefficient ρyx 2 of -0.398 means that the Healthcare Investment variable has a direct negative effect on financial fragility of -0.398. Thus, the decrease in healthcare investment by 1 unit will affect the increase in financial fragility by 0.398. The path coefficient ρ yx3 of -0.247 means that the savings preparedness variable has a direct negative effect on financial fragility of -0.398. Thus, the decrease in savings preparedness by 1 unit will affect the increase in financial fragility by -0.247.

### Total Influence

The total influence of the debt burden variable on financial fragility is 0.274, meaning that an increase in the overall debt burden can influence or contribute to an increase in financial fragility. of 0.274. Financial fragility , can be influenced by the ability to pay expected and unexpected costs, without sufficient liquidity. Increasing debt results in increasing household arrears, which allows for income and wealth shocks. The increase and accumulation of debt will be very vulnerable due to rising interest rates and the provision of collateral. In addition, consumption/saving behavior, during a crisis, will increase vulnerability and income inequality.

The total effect of healthcare investment variables on financial fragility is -0.398 . This means that an increase in overall healthcare investment can affect or contribute to a decrease in financial fragility by -0.398. Financial difficulties in household groups during the crisis are thought to cause fragility due to low investment in health. So it is necessary to form social networks and participation in insurance services, as well as government support. The total effect of Savings Preparedness variables on Financial Fragility is -0.247. This means that an increase in overall Savings Preparedness can affect or contribute to a decrease in Financial Fragility by -0.247. This is due to the absence of financial buffers and preparedness. So it is necessary to have government support through increasing financial inclusion and forming social networks. Testing shows that Healthcare Investment is a factor that has a fairly large role in sequence, namely -0.398. Next is Debt Burden 0.274%, and Savings Preparedness of -0.247 on increasing or decreasing Financial Fragility .

**Second Structural Model**

The path coefficient ρ zx1 is 0.260, meaning that the Debt Burden variable has a direct positive effect on Financial Insecurity of 0.260. An increase in Debt Burden by 1 unit will affect an increase in Financial Insecurity of 0.260. The path coefficient ρ zx2 is -0.226 A decrease in Healthcare Investment by 1 unit will affect an increase in Financial Insecurity of 0.226. The path coefficient ρ zx3 is 0.051 , meaning that the Savings Preparedness variable has a direct negative effect on Financial Insecurity of 0.051. A decrease in Savings Preparedness by 1 unit will affect a decrease in Financial Insecurity of 0.051, although this variable has no significant effect on Financial Insecurity. The path coefficient ρ zy is 0.341, meaning that the Financial Fragility variable has a direct positive effect on Financial Insecurity of 0.341. A decrease in Financial Fragility by 1 unit will result in a decrease in Financial Insecurity by 0.341.

Debt Burden dimension through the Financial Fragility variable indirectly on the decrease in Financial Insecurity is 0.089. The influence of the Healthcare Investment dimension through the Financial Fragility variable indirectly on the decrease in Financial Insecurity is -0.077. This means that indirectly the Healthcare Investment variable through the moderate variable Financial Fragility has a significant positive effect on the increase in Financial Insecurity. Savings Preparedness through the Financial Fragility variable indirectly has an effect on the decrease in Financial Insecurity of -0.077. This means that indirectly the Savings Preparedness variable through the moderate variable Financial Fragility has a small effect on Financial Insecurity. This is supported by the results of the significance test sig $\alpha > 0.05$ which shows that indirectly Savings Preparedness has no effect on Financial Insecurity.

The total influence both directly and indirectly of the Debt Burden variable on Financial Insecurity is -0.349. In a crisis, job disruptions have an impact on personal financial pressure, due to excessive leverage. The total influence both directly and indirectly of Healthcare Investment on Financial Insecurity is -0.303. The total influence both directly and indirectly of the Savings Preparedness variable on Financial Insecurity is 0.068.

Where financial security is characterized by the availability of financial buffers or safety nets, such as bank accounts, credit cards and others that are based on social ties. There needs to be an effort to encourage savings and increase retirement savings and financial literacy that can reduce financial fragility. While the total influence both directly and indirectly of the Financial Fragility variable on Financial Insecurity is 0.341. Where there is a status of financial instability or shock, as well as bankruptcy. That the growth in the use of consumer credit and the increase in the proportion of households in debt, creates a negative financial situation. People with a lot of debt are very vulnerable to interest rate increases. That savings help individuals become more prepared for income shocks. Debt Burden is a factor that has a fairly large role in sequence, namely 0.349. Next is Financial Fragility 0.341. Then, Healthcare Investment is -0.303 on the increase or decrease in Financial Insecurity. However, the Savings Preparedness variable does not have a significant effect on the increase or decrease in Financial Insecurity. It can be seen that the coefficient of influence is very small.

## CONCLUSION

Financial fragility, financial insecurity, and savings preparedness are all factors that can affect financial stability and financial stability. Debt burden is a significant determinant of financial instability, having a positive impact on financial stability, while savings preparedness is a measure of financial preparedness, having a negative impact on financial instability. On the other hand, healthcare investments have a negative impact on financial stability, while savings preparedness has a positive effect on financial stability. However, the relationship between financial fragility and financial stability is not significant, as is the relationship between debt and financial stability. Therefore, it is important to consider the impact of financial stability and financial stability on individuals and businesses to ensure their financial stability and financial stability.

This research is expected to contribute to the solution of financial fragility and financial insecurity problems, especially if an economic crisis occurs causing households to face financial difficulties and causing changes in lifestyle patterns and social challenges. Especially due to high debt burdens, no financial buffers, no investment in health and provision of disaster preparedness funds. As well as being a basis for thinking to develop a community financial model, especially in disaster-prone areas and being a consideration for local governments for financial and health system policies.

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