The Determinants of Saving Behaviour for Retirement Preparation for the Millennial Generation

Ratna Juwita*
*Jurusan Akuntansi, Politeknik Negeri Jakarta, Depok, Jawa Barat, Indonesia &
Faculty of Economics and Business, Universitas Indonesia, Jakarta, Indonesia*
Email: ratna.juwita@akuntansi.pnj.ac.id

Lini Ingriyani[1,]
[1]*Jurusan Akuntansi, Politeknik Negeri Jakarta, Depok, Jawa Barat, Indonesia*

**Adzra Karamina Rivani; Maria Regina Yofanka; Saffana Putri Andriana;
Siti Maghfiroh Aulia R.**
[2]*Faculty of Economics and Business, Universitas Indonesia, Jakarta, Indonesia*

* Corresponding Author

Abstract
Purpose: The total pension funds in 2019 were only around 6.03% of the country's Gross Domestic Product. This amount is low compared to other Asian countries. Also, the development of pension funds in Indonesia is still stagnant, especially for voluntary pension funds. The unpreparedness of pension funds harms the future of Indonesian society. The survey found that nine out of ten Indonesians still must work during retirement to make ends meet. For this reason, it is necessary to research to see what factors determine saving behavior for retirement preparation. Previous studies studying saving behavior related to pension funds have focused only on retired people or women. In Indonesia, research about pension funds is only at the case study stage on certain pension fund products or using other variables in certain cities. The author tries to look at the saving behavior of the millennial generation because the readiness to save for a pension fund indeed starts when someone starts working, not when they enter retirement. The millennial generation is Currently the generation that has started working and has yet to enter retirement age. The author combines psychological factors such as Future Time Perspective and Financial Risk Tolerance with the intelligence factor, namely financial literacy, to see the effect on saving behavior for retirement funds. These three factors have never been studied in the millennial generation and have also not been studied in Indonesia. Therefore, the author tries to address this gap in this study.
Design/methodology/approach: The research method used is multiple regression using primary data from questionnaires. The data analysis process method was carried out in several stages, including pilot tests, reliability and validity tests, classical assumption tests, descriptive analysis, and hypothesis testing analysis.
Findings: This study concludes that there is no evidence to support a significant positive relationship between the future time perspective and individual life approaches that focus on the future towards retirement saving behavior in the Millennial generation. In addition, this study also found no evidence that financial risk tolerance has a significant relationship with retirement saving behavior in the Millennial generation. In contrast, this study found that knowledge of financial planning for retirement has an important positive relationship with retirement saving behavior in the Millennial generation.

Research limitations/implications: In this study, the respondents are millennials living in the Jabodetabek area (metropolitan area), so the respondent's answers only reflect the responses of some people regarding the behavior of saving for retirement.

Practical implications: For Pension Fund Policy Holders, the results of this study can be used as material for consideration and evaluation of the factors that influence people's motivation to plan their pension funds, especially for policies aimed at the Millennial generation. From these new insights, pension fund policymakers can adjust the right approach and optimal strategy by increasing content and access to retirement financial planning literacy to improve people's motivation to join the pension fund program. For non-government pension fund service providers, the results of this study can be used as material for consideration and evaluation of the factors that influence people's motivation to plan their pension funds, especially the literacy factor of financial planning for retirement in the context of marketing approaches and public education or target markets, especially the Millennial generation, to attract people to join pension fund services.

Originality/value: The author combines psychological factors such as Future Time Perspective and Financial Risk Tolerance with the intelligence factor, namely financial literacy, to see the effect on saving behavior for retirement funds. These three factors have never been studied in the millennial generation and have also not been studied in Indonesia. Therefore, the author tries to address this gap in this study.

Keywords: Retirement Preparation, Future Time Perspective, Financial Risk Tolerance, Financial Literacy, Pension Fund

Introduction

The Ministry of Finance stated that Indonesia's total pension funds in 2019 were only around 6.03% of the country's total Gross Domestic Product. The government also projects that this figure will reach 13% in 2045 (Ministry of Finance, 2020). That amount is classified as low compared to other Asian countries. Policy Board Fiscal also stated that the development of pension funds in Indonesia is still stagnant, especially for voluntary pension fund (Kontan, 2020). Based on data, in 2020 the proportion of the productive age in Indonesia is higher than non-productive age (BPS, 2021). Apart from that, Millennials Generation born in 1981-1996 were 69.38 million or 25.87% of total population, the second largest in Indonesia after Generation Z. Millennials dominate the proportion of productive age in Indonesia, so it should be a potential target for pension fund planning programs. Therefore, the population's high productivity but not accompanied by the development of the pension fund industry must be observed.

The lack of retirement funds negatively impacts Indonesian society. The 2018 HSBC Future of Retirement Survey conducted by HSBC Indonesia found that nine out of ten Indonesians still have to work during their retirement to meet their economic needs (Media Indonesia, 2021). Apart from that, culture *Lots of kids sustenance,* which is still quite commonly implemented in Indonesian families delivering parents tend to expect the financial assistance from their children after retirement (Republika, 2021). This culture influences individual decisions not to prepare retirement funds because they believe their children can bear their retirement expenses. This belief led to the birth of *sandwich generation,* a generation that is required to fulfill the needs of the economy of the children and their parents. Quantum Magna Financial stated that retirement fund preparation must be popularized since individuals are in their 20s to avoid being late and harming others in the future (Republika, 2021).

Various factors influence the desire and readiness of pension fund participants. The research of Indonesia Financial Services Authority in 2020 show that one determinant factor for Pension fund ownership is financial literacy. Increasing financial literacy is needed to improve community awareness to participate independently in the pension fund program. Howlett, Kees, and Kemp's (2008) was also fruitful, with similar conclusions, using *Knowledge of Financial Planning for Retirement* (KFPR) as a financial literacy factor.

Apart from financial literacy, this research will combine aspects of psychology to research how it influences the behavior in preparing for retirement. Psychological factors studied take two significantly different aspects. The first factor is a genuinely managing view of future risks, i.e., *future time perspective* (FTP). FTP measures the degree to which an individual focuses on the future rather than the present or past. This future orientation includes the phenomenon of cognitive complex motivational, which is anticipating and evaluating somebody's future. Howlett, Kees, and Kemp (2008) stated that FTP encourages someone to join the retirement program.

In contrast to FTP, the second psychological factor studied is the perspective of someone to take current risks viz *financial risk tolerance* (FRT). FRT is an approach to favorable economic risk so that they do not hesitate to accept uncertain choices (Grable, 2016; Shin & Kim, 2018; Wahl & Kirchler, 2019). The tolerance of financial risks affects how people invest their resources for short-term and long-term goals, like saving for purchases of goods or retirement savings.

With combines cognitive factors in the form of KFPR and psychological factors, namely FTP and FRT, this research focuses on the extent to which these factors influence the tendency of individuals to save for retirement among millennials generation in the Jakarta, Bogor, Depok, Tangerang, Bekasi (Jabodetabek) areas. The target respondents in this research are the Generation Millennials. Millennials Generation are a group demographic after Generation X, born in the early 1980s to the 1995s. The ages range from 26 years to 41 years. Millennial Generation were chosen because Indonesia's dominant proportion of residents is productive age (BPS, 2021). Apart from that, Millennial have entered the world of work so that they will be more relevant to the discussion related to retirement. Jabodetabek is chosen as a sample because of similar economies between these five regions. One of them is seen from the cost of living with the indicator Consumer Price Index (CPI) where in 2020 Jakarta obtained a figure of 105.36%, Bogor obtained a figure of 106.18%, Depok obtained a figure of 105.71%, Tangerang obtained a figure of 105.66%, and Bekasi obtained a figure of 106.73% with a base year of 2012 (SIMATA, 2021). Jabodetabek is also the most populous metropolitan area with the highest level of economy in Indonesia.

Literature Review
Retirement Saving Behavior
Economists define saving as an action that consumes less than the number of resources with motivation to fulfill future needs (Mori, 2019). Individuals generally save to meet specific targets they want to achieve, including financial security in the future day. When retirement, generally people do not have a sufficient or exact source of income to meet their economic needs. At that time, people must have savings or prepared funds to be sufficient for the economy after retirement.

To fulfill the economic needs after retirement, individual behavior is influenced by *Retirement Saving Behavior* (RSB). Joo and Grable (2005) believe that RSB is influenced by various factors, namely environment, like culture, social class, family, and situation work; individual differences, such as motivation, involvement, knowledge, attitudes, personality, style of life, and demographics; and psychological process factors that include information processing, learning, and attitudes. Additionally, Yoong et al. (2012) highlighted the effect of financial literacy and knowledge on RSB, where individual literacy affects RSB. From both arguments, it can be concluded that financially insightful individuals understand the importance of planning for retirees and tend to better prepare for retirement.

Knowledge of Financial Planning for Retirement

The Indonesian Financial Planning Standards Board (FPSB) states that financial planning is a process for achieving a person's life goals through integrated and planned financial management. There are six areas of financial planning: financial management, risk management and insurance planning, planning investment, planning day old age/retirement, planning taxes, and planning treasure heir. Financial planning must be based on knowledge to achieve the goal, like in planning old age day/retirement, where the goal is financial security in old age. Individuals need more knowledge about savings, retirement, and investment plans to secure a better retirement (Jacobs-Lawson & Hershey, 2005). The studies of Lusardi and Mitchell (2011) and van Rooij et al. (2011) show that a person with good financial literacy is more likely to carry out planning to retire. Hershey and Mowen (2000) stated that individual knowledge about the financial planning process influences quality decision of pension savings. The quality of decision-making about pension savings will worsen if the individual lacks knowledge about financial planning, which will impact an insecure old age because of poor financial planning, and vice versa.

Future Time Perspective

Future Time Perspective (FTP) is a different tendency for each individu regarding thinking about the future (Betts, 2013). FTP is defined as the individual views and perspective in planning for long period (Hershey, 2004; Hershey et al., 2007a; Adams & Rau, 2011). Future orientation was a significant predictor of planning and saving pre-retirement. Hershey et al. (2010) sought to determine whether individuals are worried about their retirement financial future and how far they are taking steps in effective planning and savings to ensure a standard, fulfilling life. In his research, Hershey found that FTP positively influences the practice of planning and saving, both directly and indirectly. This research produces a similar conclusion to research conducted by Lusardi (1999), Webley and Nyhus (2006), Hershey et al. (2007a), and Hershey et al. (2007b). Based on the arguments above, someone focused on the future influences the preparation of finances, including retirement.

Financial Risk Tolerance

Financial Risk Tolerance (FRT) is the volatility an individual is willing to accept when making financial decisions that contain risk of loss (Cordell, 2001). It is important to note that risk tolerance is a complex attitude with four aspects - financial, physical, social, and ethical. Both in context of professional practice or empirical research, risk tolerance is essential in savings and investment choices for retirement or other household goals. Choices regarding investment products, allocation plans, assets, and portfolio accumulation strategies have been linked with risk tolerance. The level of risk accepted in making financial decisions also influences individual behavior in preparing savings as an investment with low *return* and risk. Through

their research, Larson et al. (2016) also found that tolerance of risks influences investment decision.

Theoretical Framework and Hypothesis Development
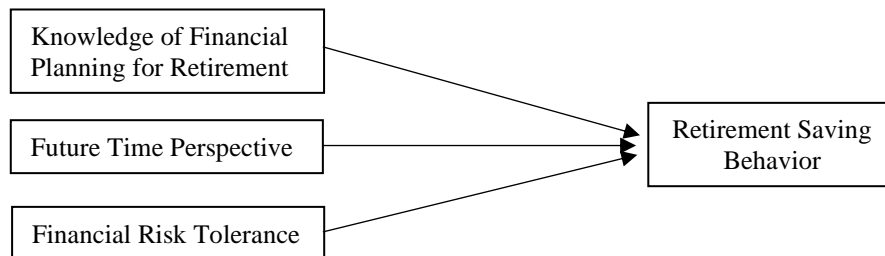The model used in this research can be seen in Figure 1.

Figure 1: Theoretical Framework
Source : Alkhawaja and Albaity (2020)

Retirement planning is about "how much is needed for retirement" (Fernandes et al., 2014). Hershey and Mowen (2000) believe in the influence of an individual's knowledge of the financial planning process on quality decision in pension savings. Mitchell and Moore (1998) stated that a lack of adequate knowledge causes failure in retirement plans. Retirement planning is a very complex issue and demands a certain level of financial knowledge. The studies of Lusardi and Mitchell (2011) and van Rooij et al. (2011) show that someone with good financial literacy is more likely to carry out retirement planning. Additionally, individuals capable of good financial literacy plan for their retirement better (Hassan et al., 2016) and more confident in retirement period (Robb & Woodyard, 2011).

Bernheim et al. (2001) studied individuals across highest productive ages (35-49 years) and showed that adults who take personal finance education have more responsible financial behavior than untrained adults. It can be said that the level of financial literacy has a strong relationship with financial behavior (Fernandes et al., 2014). Grable et al. (2009) and Perry and Morris (2005) report that positive effects on financial behavior are seen when an individual's financial knowledge increases. The explanation gives rise to a hypothesis as follows.
H1: There is a positive significant relationship of KFPR to RSB in generation millennial.

FTP is linked with the tendency to plan and save for the future (Jacobs-Lawson & Hershey, 2005) and influences the decision to plan for retirement (Parker et al., 2013). Howlet et al. (2008) also revealed a similar statement that someone with a high FTP is more likely to plan a pension than people with a low FTP. Hershey and Mowen (2000) also found a significant positive connection between FTP and RSB, which aligns with previous research results. It gives rise to a hypothesis as follows.
H2: There is a positive significant relationship of FTP to RSB in generation millennial.

FRT is the highest uncertainty a person could possibly take when making financial choices (Grable, 2000; Larson et al., 2016). Croy et al. (2010) link risk tolerance with a tendency to plan; the more the risk tolerance an individual has, the higher the tendency to make plans. Additionally, Joo and Grable (2005) connect risk tolerance with savings and investment will; according to them, individuals with a less risk tolerance are less willing to save for retirement.

Jacobs-Lawson and Hershey (2005) found that individuals with a high-risk tolerance prefer to invest in high-risk investments such as stocks, while those who avoid risk prefer to invest in bonds and certificate of deposits. A significant positive correlation was found between FRT and retirement options, which confirms that people who have more tolerance of financial risk make more ambitious financial plans. Individual preferences of risk and return on each investment raises the hypothesis that the level of tolerance for financial risks associated with behavior for retirement saving.

H3: There is a significant relationship of FRT to RSB in generation millennial.

Method

The research method that authors used is quantitative research. This research will use primary data collected through questionnaires. The criteria for respondents needed in this research are millennials who work and live in the area of Jabodetabek (Jakarta, Bogor, Depok, Tangerang, and Bekasi) to know their preparation for retirement. The minimum sample size used in this research is five times the number of indicators, that is 5x18=90 respondents (Hair, 2018). Research uses a Likert scale with five points to measure each item of the variable being tested, beginning from "strongly disagree" (1) to "strongly agree" (5). The statements for each variable item are displayed in Table 1.

Table 1: Operational Research Variables

Variables	Indicators	Variable Operationalization
Retirement Saving Behavior (RSB)	RSB 1	I give significant financial contributions to a retirement savings plan that I made up of my own will.
	RSB 2	Compared to my colleagues, I saved a significant amount for retirement.
	RSB 3	I routinely build up sizable savings for retirement.
	RSB 4	I made an effort on my willingness to save for retirement, not just savings from my office. _
	RSB 5	I save according to my plan for the future life.
Knowledge of Financial Planning for Retirement (KFPR)	KFPR 1	I understand about financial planning for retirement.
	KFPR 2	Of most people, I know a lot about financial planning for retirement.
	KFPR 3	I am confident that I can do financial planning for retirement.
	KFPR 4	When I need financial services, I know exactly where to get information about what to do.
	KFPR 5	I have knowledge about social security in Indonesia and its mechanisms.
	KFPR 6	I have knowledge about planning investment method and its mechanisms.
Future Time Perspective (FTP)	FTP 1	The future in long period is too gray to plan.
	FTP 2	My future is very vague and uncertain.
	FTP 3	In my life principle, I deal with everyday problems only.
	FTP 4	I enjoy life in current time and don't know what to expect to happen in the future.
Financial Risk Tolerance (FRT)	FRT 1	I prefer investments that have high returns, although they are riskier.
	FRT 2	For investment retirement, overall growth potential is more important than thinking about risk level.
	FRT 3	I am willing to make a risky investment to ensure my finances in retirement are sufficient.

To validate variables and question items, the author used assessments from the Keiser-Meyer-Olkin Measure of Sampling Adequacy (KMO), Anti-Image Matrix, and Component Matrix. The assessment standards above must exceed 0.5 for a good category. To test the reliability, the author uses Cronbach Alpha with a threshold above 0.60 to categorize a variable as reliable (Malhotra & Birks, 2007). Multiple linear regression was used to prove the research hypothesis, with the classical assumption test previously carried out, such as normalized, heteroscedasticity, and multicollinearity tests.

Findings
Descriptive Analysis
The total number of respondents who complied with the sample criteria in this study is 108 people. Table 2 shows descriptive statistics for each research variable.

Table 2: Validity and Reliability Test

Variables	Minimum Value	Maximum Value	Mean	Average value
Retirement Saving Behavior (RSB)	1	5	4.241	
	1	5	3.694	
	1	5	3.806	3.896
	1	5	4.009	
	1	5	3.731	
Knowledge of Financial Planning for Retirement (KFPR)	1	5	3.8145	
	1	5	3.4758	
	1	5	3.5887	3.595
	1	5	3.6209	
	1	5	3.4677	
	1	5	3.6048	
Future Time Perspective (FTP)	1	5	2.537	
	1	5	2.250	2.495
	1	5	2.352	
	1	5	2.843	
Financial Risk Tolerance (FRT)	1	5	2.907	
	1	5	3.472	3.056
	1	5	2.787	

The RSB variable shows the highest average value compared to other variables, with a mark of 3.896 on a scale maximum of five. The respondents' retirement saving behavior is quite good. The average KFPR value is 3.595, which means that respondents have pretty good knowledge of financial planning for retirement. FTP is the variable with the most minor average. The value is 2.495, which means the respondent does not overthink his future. The last variable is FRT, with an average value of 3.056. It was concluded that the respondents' financial risk tolerance was quite neutral in this study.

Validity and Reliability Test
Following the validity and reliability test results in Table 3, It was concluded that all variable indicators in this study had a KMO value of > 0.5. Apart from that, they can also be viewed by each question indicator via the Anti-Image value, which has a value of more than 0.5. Then, all variables generate Cronbach's Alpha > 0.75, meaning each indicator has a high level of reliability. The explanation indicates that the indicator items RSB, KFPR, FTP, and FRT have met the minimum validity and reliability testing requirements.

Table 3: Validity and Reliability Test

Variables	Indicators	KMO	Bartlett's Test	Anti-Image	Conclusion	Cronbach's Alpha	Conclusion
Retirement Saving Behavior (RSB)	RSB 1	0.836	0.000	0.905	Valid	0.856	Reliable
	RSB 2			0.836	Valid		
	RSB 3			0.844	Valid		
	RSB 4			0.814	Valid		
	RSB 5			0.809	Valid		
Knowledge of Financial Planning for Retirement (KFPR)	KFPR 1	0.857	0.000	0.845	Valid	0.880	Reliable
	KFPR 2			0.873	Valid		
	KFPR 3			0.849	Valid		
	KFPR 4			0.883	Valid		
	KFPR 5			0.847	Valid		
	KFPR 6			0.838	Valid		
Future Time Perspective (FTP)	FTP 1	0.794	0.000	0.834	Valid	0.859	Reliable
	FTP 2			0.819	Valid		
	FTP 3			0.775	Valid		
	FTP 4			0.761	Valid		
Financial Risk Tolerance (FRT)	FRT 1	0.642	0.000	0.608	Valid	0.765	Reliable
	FRT 2			0.818	Valid		
	FRT 3			0.604	Valid		

Normality test

The normality test using *the Kolmogorov-Smirnov Test* is presented in Table 4. Based on Table 4, the significance value is > 0.05, which indicates that the residual is normally distributed.

Table 4: Normality Test

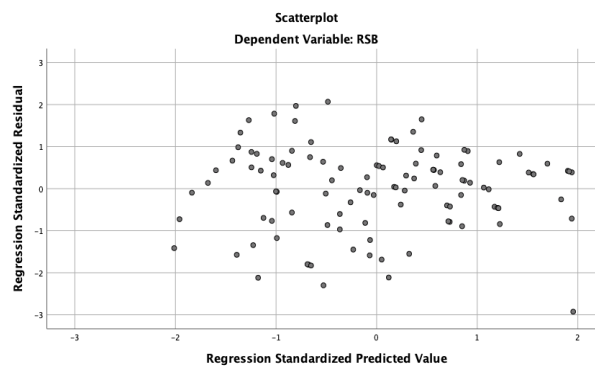| Kolmogorov-Smirnov Test	
Statistical Tests	0.069
Sig.	0.200

Heteroscedasticity Test

Figure 2: Heteroscedasticity Test
Source: Results of Data Processing

The heteroscedasticity test was done by looking at the scatterplot in Figure 2. Based on the scatterplot, it can be seen that the residual data is spread around value 0 and does not form a specific pattern. It can be concluded that there was no heteroscedasticity problem in the models.

Multicollinearity Test

The Tolerance value and VIF levels can be seen to test the multicollinearity. Table 5 shows that all variables have a Tolerance value above 0.1 and a VIF value below 10. Therefore, there was no multicollinearity problem in the models.

Table 5: Multicollinearity Test

Variables	Tolerance	VIF
Knowledge of Financial Planning for Retirement (KFPR)	0.795	1.258
Future Time Perspective (FTP)	0.949	1.054
Financial Risk Tolerance (FRT)	0.760	1.316

Multiple Regression Test

The multiple regression tests are displayed in Table 6. From the results of the F test, it is known that it has a significance value less than 0.5, which means the model is suitable to use. The R square value is 0.423, which shows 42.3% variations in the RSB variable, can be explained by variations of KFPR, FTP, and FRT. The conclusion that can be drawn from the regression results is that KFPR influences RSB, while FTP and FRT do not significantly influence RSB.

Table 6: Regression Results

Variables	Coef	t	Sig	Conclusion
Constant	1.719	5.603	0.000	
Knowledge of Financial Planning for Retirement (KFPR)	0.621	7.592	0.000	H1 accepted
Future Time Perspective (FTP)	-0.073	-1.344	0.182	H2 rejected
Financial Risk Tolerance (FRT)	0.018	0.261	0.794	H3 rejected
R square	0.432			
F-Statistics	25.389			
Sig(F-stat)	0.000			

Discussion and Conclusion

The Influence of Knowledge of Financial Planning for Retirement on Retirement Saving Behavior of the Generation Millennial

Based on Table 6, it is known that KFPR significantly positively influences RSB. Generation Millennials with high knowledge about financial planning for retirement have positive behavior for retirement saving. This result shows the importance of the role of financial knowledge in general and financial knowledge about retirement planning to increase retirement saving in generation Millennials (Hershey & Mowen, 2000; Ekerdt et al., 2001; Alkhawaja & Albaity, 2020).

The Influence of Future Time Perspective on Retirement Saving Behavior of the Generation Millennial

Regression results show that FTP has no significant effect on RSB in generation millennials. Individuals who are still young will tend to save money to make things easier in financial planning, such as setting consumption costs (Almas et al., 2020), which is not for planning in long-term savings like retirement saving.

The Influence of Financial Risk Tolerance on Retirement Saving Behavior of the Generation Millennial

The last variable, FRT, was not proven to significantly influence RSB in the generation millennial. This result is supported by research by Koposko (2013), Gutierrez and Hershey (2014), and Alkhawaja and Albaity (2020), who found that individuals who have different

levels of risk tolerance are still taken retirement saving into their consideration with different goals. There is no substantial evidence that generation millennials in Jabodetabek who prefer to invest their money in high or low-risk investments will apply the same approach when preparing for retirement saving. This result means that risk-averse and risk-taker investors are not determinant factors when preparing pension funds.

Conclusion

The conclusions that can be drawn from this research is the only factor that influences retirement saving behavior in the generation of millennials in Jabodetabek is knowledge of financial planning for retirement. Future time perspective and financial risk tolerance are not proven to significantly impact retirement saving behavior in generations of Millennials in the Jabodetabek area. To improve behavior in preparing retirement funds for the community, in particular generation millennials, Policymakers and providers of pension fund products should be more focused on the improvement of quality and access to financial literacy in planning for retirement.

This research has limitations that the respondents used were millennials who live in the area of Jabodetabek, so the respondents' answers only reflect answers from some people about the behavior of retirement saving and do not represent the whole population in Indonesia. This research is expected to be followed up with more research into the factors that influence retirement saving behavior in society, both external and internal factors to individuals who have not been reached in this research so that it can obtain complete, objective, and illustrative conclusions factors that influence general retirement saving behavior.

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