

# ANALYSIS OF THE BENEFITS OF FINANCIAL TECHNOLOGY AND FINANCIAL SOCIALIZATION TOWARDS FINANCIAL BEHAVIOR IN STUDENTS IN SURABAYA POST PANDEMIC WITH FINANCIAL LITERACY AS THE INTERVENING VARIABLE

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## Abstract:

*The purpose of this study is to investigate financial behavior among university students in Surabaya and analyze the relationship between perceived usefulness of financial technology, financial socialization, and financial literacy as an intervening variable. Conclusive causality research is used for this research with primary data collected from questionnaires. The sampling techniques used a combination of proportional stratified random sampling and purposive sampling towards 466 university students from 6 universities in Surabaya. Data analyzed using Partial Least Squares - Structural Equation Model (PLS-SEM) techniques. The result shows that financial literacy and financial socialization positively impacts financial behavior while perceived usefulness of financial technology variables does not affect financial behavior. Mediation results show that financial literacy is able to mediate perceived usefulness of financial technology and financial socialization towards financial behavior of university students in Surabaya. Through this research is expected to be the reference for various parties, especially for curriculum makers to consider optimization technical teaching strategies and assessment indicators in basic financial outreach.*

**Kata kunci:** *Perceived Usefulness, Financial Technology, Financial Socialization, Financial Literacy, Financial Behavior.*

## INTRODUCTION

The rapid development of time has prompted a change in the direction of Indonesian people's behavior towards a consumerist culture. The tendency of the reality of society to spend their income on lifestyle support goods without saving in the form of savings can eventually create problems which may lead to financial failure (Jazuli & Setiyani, 2021). The results of the OJK consumer survey prove that since 2020, there has been an increase in the average proportion of income used for consumption reaching above 70% in contrast to the proportion of income used for savings which is in the range of 14.9% (Otoritas Jasa Keuangan, 2022). This situation was also worsened by the emergence of the Covid-19 pandemic which was the turning point for changes in the structure of the financial order due to the emergence of innovations in financial technology. The presence of financial applications further complicates knowledge of the financial world which results in implementation errors in public financial management. The majority of society even perceives online shopping through e-commerce as a form of pleasure. Based on data from the Indonesian Economic A report published by Bank Indonesia shows that there has been an increase in e-commerce transactions from year to year where in 2022, it has reached 526T or an increase of 31% from the previous years (Universitas Katolik Parahyangan, 2022). The emergence of panic buying, the ease of making online transactions, paylater, and online loans have in fact become the mediators that have increase the consumptive activities of the Indonesian people.

*Financial literacy* has become a common issue widely discussed because it is closely related to managing finances. However, this issue remains an important issue because it

influences many aspects such as lifestyle and predictions of one's future prosperity. Regardless of gender, age and profession, the importance of financial literacy is needed in ensuring the quality of life of individuals (Radianto, Kristama, & Salim, 2021). Financial literacy education has indeed been socialized from a young age until its inclusion in the university's curricula. Students as *agents of change* are expected to have a solid foundation in making financial decisions since they sit in the lecture bench (Radianto, Efrata, & Dewi, 2020). Moreover, students are at the forefront of receiving financial socialization externally from social agents (education, social media, parents, friends) who can increase literacy of technology, especially in the financial sector.

The relationship between *financial literacy* and *financial behavior* has indeed been extensively researched by several researchers, including Abeyrathna (2020), Wasita, Artaningrum & Clarrissa (2022), and Sugianto, Radianto, Efrata & Dewi (2019). Likewise, research by Isham & Anar (2021) and Marpaung, Purba & Maesaroh (2021) examine the relationship between *financial technology (fintech)*, *financial socialization*, and *financial literacy*. Despite these studies, it is still rare to link the perceived usefulness of *financial technology* and *financial socialization* to *financial behavior*, as well as understanding how financial literacy mediates the relationship between these three variables, especially in post-Covid-19 pandemic. This shows a very important correlation between the four variables because it refers to an individual's socioeconomic changes.

The emergence of *financial technology* creates an open access in making payment transactions without face-to-face interaction. The use of financial technology can be useful in introducing financial products offered to help an individual to gain insight and competence in managing their finances. This applies equally to *financial socialization* which is intended to introduce financial products by the closest parties, such as parents or friends, in influencing an individual's financial behavior. The introduction of financial products channeled by the two variables not only has an impact on financial behavior, but also increases one's financial literacy in knowing the world of finance closer. The increase in financial literacy will result in an escalation of skills in sorting out the pros and cons before making a financial decision regarding investments, loans, savings, and consumption.

This study focuses on students from class 2020 - 2021 in Surabaya. Students from class 2020 - 2021 are in their 4th and 6th semester and have been exposed to several exposure and outreach that can increase literacy in *financial management* using *financial technology* applications. The nature of curiosity and information openness encourages students to adapt to technological developments. Technology adaptation can be applied in students' daily lives, which can help improve their *financial management* performance in terms of convenience, practicality, and efficiency in financial transactions. The above statement can be proven through this study which aims to review the role of perceived usefulness of *financial technology* and *financial socialization* on *financial behavior* of students in Surabaya during post-pandemic with *financial literacy* as an intervening variable. The research findings are expected to contribute to curriculum makers to consider the substantive aspects of teaching strategies and assessment indicators in outreach and perceived usefulness of *financial technology* that are more appropriate in *financial literacy* to improve students' *financial behavior*.

## **THEORETICAL BASIS**

### ***The Theory of Planned Behavior (TPB)***

*The Theory of Planned Behavior (TPB)* is a theory that reviews the changes in behavior that are motivated by one's internal intentions and desires in determining actions, while still considering subjective norms and external perspectives as behavior controls. This theory focuses on the assumption that encouraging individual's intentions and goals via increasing their motivation to try and plan efforts to display the behavior (Ajzen, 1991). The change of behavior is also supported by the individual's background, including the aspects of personal, social, and information (Lathiifah & Kautsar, 2022). These 3 factors include personal internal factors, such as intelligence, emotion, personality, as well as social and information external factors, such as education, experience, and knowledge, which encourage differences in perceptions to bring up the behavioral dissimilarity of everyone.

### ***Technology Acceptance Model (TAM)***

*Technology Acceptance Model (TAM)* is a theory that evaluates the reactions of acceptance and benefit of individual users to *information technology* innovation systems that refer to the relationship between external aspects of the system that influence individual's behavioral intentions (Davis, 1996). The intention has an indirect impact on 2 relevant aspects of evaluating reactions to technology use, namely perceived usefulness, and perceived ease of use (Mulasiwi & Julialevi, 2020). *Perceived usefulness* refers to an individual's belief in the use of technology systems that can increase their work performance. While *perceived ease of use* is a belief in the ease of use resulting in the use of technology that can accelerate the completion of work.

### ***Financial Behavior***

*Financial behavior* is the ability to manage assets and distribute budgets according to individuals' financial circumstances (Harianto & Isbanah, 2021). *Financial behavior* is closely related to the responsibility and the role of financial management in managing expenses, investments, savings and pension funds, and the proportion of debt to maintain quality of life (Wahyudi, Tukan, & Pinem, 2020). The right reflection of *financial behavior* describes the individual's capability in balancing the allocation of expenses and income.

### ***Financial Literacy***

*Financial literacy* is a combination of one's awareness, skills, and intellectual competence in understanding the world of finance. Financial proficiency can serve as the basis for making financial decisions to create prosperous financial quality (Ishar & Anam, 2021). According to OECD *International Network on Financial Education*, there are 3 instruments that can measure the quality of literacy, which are *financial knowledge*, *financial behavior*, and *financial attitude* (Dara & Mariah, 2020).

### ***Financial Technology***

*Financial technology* is a combination of financial technology system innovations and services that create business models or financial applications (Mulasiwi & Julialevi, 2020). The presence of *financial technology* can affect financial stability in a country by creating increased efficiency and security of financial transactions (Wahyudi, Tukan, & Pinem, 2020). *Financial technology* was created as a solution in the field of financial services in the use of technology as a modification of information technology that facilitates public access to financial products.

## **Financial Socialization**

*Financial socialization* includes individual interactions with their internal and external social environment in influencing the acquisition of information and knowledge in the financial sector (Dewanti & Asandimitra, 2021). The development of financial capabilities is influenced by *family socialization process* and *financial socialization outcomes* caused by financial social agents close to the individual's scope (Sebastian, 2022). These social financial agents can be in the form of education, the media, parents, or friends.

## **Hypothesis Development and Framework**

*Financial technology* has become a medium to increase the stability and security of financial transactions by maximizing the implementation of technology. The change in the structure of the financial order creates access for the public to get to know the financial products. *Financial technology* has been widely applied in banking and investment sectors through the existence of financial application services and products, such as *mobile banking*, *investment brokers*, and *P2P lending* which allows people to transact *online* (Lathiifah & Kautsar, 2022). This progress is closely related to the TAM theory in which developments in the financial world increase in terms of perceptions of the use of *financial technology* that is implemented by society in financial decisions. Each of these financial decision-makers is expected to improve their performance and knowledge of financial management in terms of ease of transaction according to the proportion of savings, consumer spending, and investment product selection. This hypothesis is supported by previous research which shows that *financial technology* has a positive effect on individual's *financial behavior* (Khofifah, Wahyuni, & Subaida, 2022). This is in contrast with a study by Wahyudi, Tukan & Pinem (2020) which stated that *financial technology* has no effect on *financial behavior*, indicating that there is no beneficial role from *financial technology* in influencing financial management abilities.

## **H1: Perceptive usefulness of financial technology affects the financial behavior of students in Surabaya**

The influence of *financial socialization* on *financial behavior* is based on the TPB theory which states that individual behavior is influenced by external perspectives in the form of support and perceptions that creates subjective norms into a behavioral control. The creation of behavioral control affects the boundaries of behavior that encourage a person to behave in accordance with predetermined norms. The external environment also indirectly acts as a social agent that provides socialization that can hone individual capabilities. Proper socialization will develop one's competence in making financial decisions and planning (Dewanti & Asandimitra, 2021). Therefore, if a person receives a lot of *financial socialization*, it will affect *financial behavior* and vice versa (Jazuli & Setiyani, 2021). However, another similar study shows the opposite result where it does not find any significant relationship between financial socialization and financial behavior (Harianto & Isbanah, 2021).

## **H2: Financial socialization affects the financial behavior of students in Surabaya**

One of the most important aspects of *financial literacy* is the responsibility one has in managing finances to avoid financial problems (Radianto, Efrata, & Dewi, 2020). Adequate literacy skills indicate the ability to estimate and determine the most effective method in balancing expenditure and income. Furthermore, the skills also promote an understanding of risks and returns, which can affect how a person manage its financial management especially in the field of saving and investment (Waranyasathid & Htin, 2020). The influence of this literacy underlies a person's intentions and goals in determining their financial behavior. According to TPB theory, the existence of background external variables in the form of information encourages the formation of intentions and motivations to seek appropriate *financial behavior*. This is in line

with research conducted by Novitasari, Juliana, Asbari & Purwanto (2021) and Wasita, Artaningrum & Clarissa (2022) which stated that *financial literacy* has an effect on *financial behavior*. These results are inversely proportional to the research of Muntahanah, Cahyo, Setiawan & Rahmah (2021) which shows that *financial literacy* has no effect on *financial behavior*.

**H3 : *Financial literacy affects the financial behavior of students in Surabaya***

The relationship between perceptive usefulness of *financial technology* and *financial behavior* through *financial literacy* is influenced by the underlying concept of TAM, which states that the ease of transactions increases the effect of product benefits accompanied by an increase in *financial literacy*. Free open access for the public creates an opportunity to become more familiar with financial products in circulation and how to use them. An increased understanding and skills driven by awareness of good financial management will create a positive correlation for conducting transactions and utilizing financial services, such as using investment applications, savings and having a loan properly, which can improve financial behavior performance. This is in line with the research by Khofifa, Wahyuni & Subaida (2022) and Mulasiwi & Julialevi (2020) which shows that there is a positive effect of *financial technology* on both *financial literacy* and *financial behavior*.

**H4 : *Financial literacy mediates the effect of perceptive usefulness of financial technology on financial behavior of students in Surabaya.***

The relationship of *financial socialization* to *financial behavior* through *financial literacy* is based on the TPB theory, which refers to encouragement from *social agents* as external parties in monitoring individual behavior. This leads to the development and achievement of one's financial behavior that focuses on welfare and survival. Several suggestions from the social agents affect the development of awareness, knowledge, attitudes, and actions, which indicates financial literacy (Ishar & Anam, 2021). The higher the literacy competency increases; the skills and understanding will also increase – leading to proper financial planning and allocation. This is in line with a study by Jazuli and Setiyani (2021).

**H5 : *Financial literacy mediates the effect of financial socialization on financial behavior of students in Surabaya.***

Based on the description of the hypothesis presented, the framework can be seen in Figure 1.

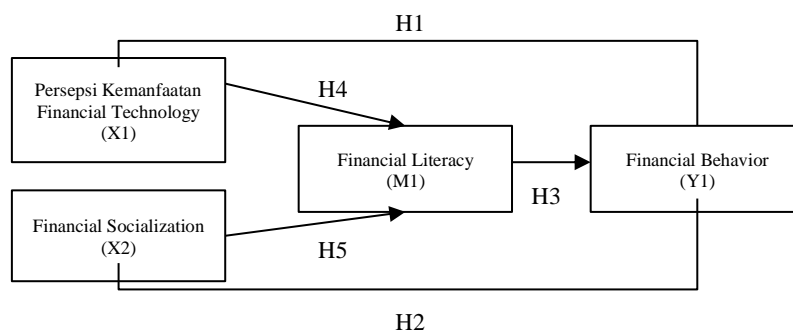


Figure 1. Thinking Framework

## RESEARCH METHOD

This research is classified as a conclusive causality which is useful to identify the causal relationships caused by the independent variable to the dependent variable with or without a mediating variable. The type of data used is primary data that is obtained through questionnaire data collection and quantitative approach.

### Population and Respondents

This research focuses on students studying at 6 universities in Surabaya, namely Ciputra Surabaya University, Widya Mandala Catholic University, Petra Christian University, Surabaya University, Airlangga University and Surabaya State University as a population that has received a lot of information and socialization regarding financial management and has a high level of high technology proficiency & adaptability. The population group includes 43,282 students (Universitas Negeri Surabaya; Universitas Airlangga Direktorat Pendidikan; PDDikti, 2022). *Purposive sampling* and *proportional stratified random sampling* are chosen as the sampling methods with the criteria of respondents aged 19 – 22 years old, studying in their 4<sup>th</sup> – 6<sup>th</sup> semester in Surabaya and actively use *financial technology*, both in *digital payment system* (OVO, Gopay, Dana, Qris), *online investment* (Bareksa, IPOT, Bibit), or *paylater* and *online loans*. Based on sample measurements using the Slovin formula with a significance level of 5% and a confidence level of 95%, the number of respondents collected was 466 samples.

### Variable Measurement

The variable measurements are assessed through 13 indicators, where each variable has 6-7 questions. There are 2 independent variables and 1 dependent variable with 1 intervening variable that mediates the relationship between the three variables. The indicators of the independent variable of perceived usefulness of *financial technology* were adapted from Ananda's (2019) and Prihartini's (2022) research relate to the believe that *financial technology* can assist an individual to improve their personal financial management. The indicators used for the independent variable *financial socialization* were adopted from a study by Chandra (2021) which measures *social agents* who interact with the individuals to socialize behavior that affects *financial management*. The indicators of the intervening variable, *financial literacy*, was adapted from OECD research (2022) which are individual knowledge and capabilities in making financial decisions. The indicators of the dependent variable of *financial behavior* were adapted from OECD research (2022), which are needed to evaluate the correlation of capabilities and behavior in making *financial decisions*.

The following is the operational definition of the variable between the independent variable (X), the dependent variable (Y), and the intervening variable (M) with the following indicators:

Table 1. Variable Operational Definitions

Variable	Indicator	Statements
Perceived Usefulness of <i>Financial Technology</i> (X1)	Perceived Usefulness (X1.1)	(X1.1a) The use of <i>financial technology</i> is a useful payment method (X1.1b) Overall, <i>financial technology</i> services enable the process of financial transactions to occur more quickly (X1.1c) <i>Financial technology</i> is a practical means of transaction (X1.1d) Using <i>financial technology</i> services provides a sense of comfort in conducting non-cash financial transactions (X1.1e) The use of <i>financial technology</i> services increases the variety of financial products to choose from (X1.1f) Using <i>financial technology</i> services can increase effectiveness in conducting non-cash financial transactions (X1.1g) The use of <i>financial technology services</i> can increase the productivity of financial performance through non-cash transactions

<i>Financial Socialization (X2)</i>	<i>Parents Influence (X2.1)</i>	<b>(X2.1a)</b> My parents taught me to save some money / save <b>(X2.1b)</b> My parents taught me how to invest <b>(X2.1c)</b> My parents taught me how to manage finances
	<i>Media Influence (X2.2)</i>	<b>(X2.2a)</b> I receive a lot of financial information from the internet, radio, tv, magazine bulletins, or newspapers
	<i>Peers Influence (X2.3)</i>	<b>(X2.3a)</b> My friends provide information related to financial instruments to me
	<i>Education Influence (X2.4)</i>	<b>(X2.4a)</b> The university gave me a lot of counseling and materials related to financial information
<i>Financial Behavior (Y)</i>	<i>Consumption (Y1)</i>	<b>(Y.1a)</b> My spending is in accordance with the proportion of the budget that I made
	<i>Cash Management (Y2)</i>	<b>(Y.2a)</b> I always record and save my spending transactions <b>(Y.2b)</b> My monthly money is sufficient to cover my needs for a month
	<i>Saving dan Investment (Y3)</i>	<b>(Y.3a)</b> I invest in financial instruments <b>(Y.3b)</b> I save periodically / routinely from the money I earn
	<i>Credit Management (Y4)</i>	<b>(Y.4a)</b> I avoid borrowing money unless it's an emergency
<i>Financial Literacy (M)</i>	<i>Basic Knowledge (M1)</i>	<b>(M.1a)</b> I understand that budgeting is useful to control my personal expenses <b>(M.1b)</b> Financial record keeping helps me plan priorities <b>(M.1c)</b> Financial planning is very important for my future
	<i>Savings (M2)</i>	<b>(M.2a)</b> I save money for unforeseen needs <b>(M.2b)</b> I set aside some money for future welfare
	<i>Ivestment (M3)</i>	<b>(M.3a)</b> I understand that investment is a way to get future profits by investing now
	<i>Debt (M4)</i>	<b>(M.4a)</b> I will only seek assistance by borrowing money from other people if there are urgent needs to be purchased

### Data Analysis Method

The answers from the operators filled in by respondents were estimated through *Likert* scale measurements with "1" reflecting strongly disagree up to "7" for the value of strongly agree, which was then totaled and averaged for each variable indicator. The average scaling results will be interpreted in the weight of the respondents' response categories based on the three-box method, which will be analyzed using the *Structural Equation Modeling - Partial Least Square* (SEM - PLS) analysis method. Through this method, it will assess the relationship between latent variables through the reflective measurement model. The data will be analysed with SMARTPLS 3.0 and SPSS 26 software.

### DATA ANALYSIS AND DISCUSSION

Of the 466 questionnaires that were distributed to students studying at 6 universities in Surabaya, all questionnaires have been returned by the respondents and all questionnaires could be processed.

#### Respondent's Characteristics

The distribution of respondents in this study was mostly dominated by women as much as 60.9% or 284 respondents, while 39.1% or 182 were men. 66.5% of the total respondents are students who are studying their fourth semester, while the other 33.5% are in semester 6. The age range of the respondents in this study ranged from 19-22 years, where 72.3% of the respondents are aged 19-20 years and 27.7% of the others are students aged 21-22 years. 67.8% of respondents get income from parents' pocket money without getting other sources of income, while the remaining 32.2% get additional sources of income, receive scholarships, or work. The

distribution of respondents focused on 6 major universities in Surabaya. Thus, most of the students had an income in the range of Rp. 3,000,000,-. Students who lived in boarding houses had as many as 157 respondents and those who lived with their parents had as many as 138 respondents. The choice of place to live was also based on the distance and cost factors. Therefore, 48.9% of respondents chose to live in a boarding house, while 47% of other respondents chose to live with their parents, and the remaining 4.1% chose a place to live other than living with their parents or boarding house.

### Descriptive Statistical Analysis

Descriptive statistics provide an overview of students' views on the variable perceptions of the benefits of *financial technology*, *financial socialization*, *financial literacy*, and *financial behavior* which are projected in calculating trends and distributing data. The independent variable perceived usefulness of *financial technology* has the lowest value of 11 and the largest value of 49 with an average of 40.1 and a data distribution level (standard deviation) of 7.01. The independent variable of *financial socialization* has the lowest value 13 and the largest value 42 with an average of 31.5 and a data distribution of 6.63. The *financial literacy* variable has the lowest value of 14 and the highest value of 49 with an average of 39.48 and a data distribution level of 7.18. The *financial behavior* variable has the lowest value of 8 and the highest value of 42 with an average of 30.63 and a data distribution of 7.36.

The mean coefficient value that is greater than the standard deviation value in all research variables implies that the distribution is normal and heterogeneous, indicating that it does not cause bias. The results of the average data frequency distribution index are then categorized based on the three-box method, which shows the reference level of student perspectives on the variables studied through the assessment of the interpretation of each variable indicator. The coefficient range of the Likert index values is 14.29 – 100, which is divided into low (14.29 - 42.86), medium (42.87 - 71.43), and high (71.44 - 100) categories. Based on the calculation, it can be concluded that the variable perceptions of the benefits of *financial technology*, *financial socialization*, *financial literacy*, and *financial behavior* of Surabaya students are in the high category.

Table 2. Respondent Answer Index Results

Variable	Indicator 1	Indicator 2	Indicator 3	Indicator 4	Indicator 5	Indicator 6	Indicator 7	Average	Category
X1	80,47	82,65	83,29	82,16	80,59	82,86	81,21	<b>81,89</b>	<b>High</b>
X2	87,25	70,14	81,79	76,03	68,7	68,18	-	<b>75,34</b>	<b>High</b>
M	83,45	83,35	87,16	82,96	82,77	80,87	67,35	<b>81,13</b>	<b>High</b>
Y	74,77	69,44	77,16	60,91	71,86	83,48	-	<b>72,94</b>	<b>High</b>

Source: Data Processed SPSS 26

### Validity Test

The validity test assesses the validity of variable indicators through convergent validity and discriminant validity. Convergent validity measures the correlation of indicators in the same dimension (Chin, 1998). The *outer loading* value is considered sufficient if the value lies between 0.5 - 0.6 on the latent variables 3 - 7. Discriminant validity is used to ensure the heterogeneity of each latent variable model through the *Fornell Larcker-Criterion* test. The test results show that the 2 indicators could not explain the latent variables (M1.4a and X2.1a). Due to this reason, they were removed from the research model.

Table 3. Validity Test Results

Variable	Fornell Larcker-Criterion	Average Variance Extraction
Perceived Usefulness of Financial Technology (X1)	0.788	0.511
Financial Socialization (X2)	0.733	0.623



Financial Literacy (M)	0.715	0.537
Financial Behavior (Y)	0.789	0.622

Source: *Output SmartPLS 3.0 Algorithm*

The standard for measuring validity is if the *Fornell Larcker-Criterion* is more than  $R^2$  and *Average Variance Extraction (AVE)*  $>0.5$  (Wahyudi, Tukan, & Pinem, 2020). In this study, the  $R^2$  value is 0.544; thus, based on the coefficient value shown in table 3, the variable perceptions usefulness of *financial technology*, *financial socialization*, *financial literacy*, and *financial behavior* are declared as valid and have fulfilled the due diligence evaluation both convergently and discriminantly.

### Reliability Test

The reliability test refers to calculating the level of internal consistency of the assessment indicators used in research through *Composition Reliability (CR)* and *Cronbach's Alpha* tests (Huang, 2021). Determining the consistency of the research instrument is measured through a comparison of CR values, while the benchmark for evaluating the level of reliability in describing the correlation of each variable scale is assessed through *Cronbach's Alpha*. A variable is said to be reliable if the CR and *Cronbach's Alpha* coefficient values for each variable are  $> 0.7$ .

Table 4. Reability Test Result

Variable	Composite Reliability	Cronbach's Alpha
Perceived Usefulness of Financial Technology (X1)	0.920	0.899
Financial Socialization (X2)	0.853	0.786
Financial Literacy (M)	0.908	0.878
Financial Behavior (Y)	0.860	0.804

Source: *Output SmartPLS 3.0 Algorithm*

Based on the results of table 4, the CR and Cronbach's Alpha numbers for each variable, which are perceived usefulness of *financial technology*, *financial socialization*, *financial literacy*, and *financial behavior*, have a value of  $> 0.7$ . This indicates that all variables are reliable because they meet the *Composite Reliability* and *Cronbach's Alpha* requirements.

### Uji $R^2$

Te  $R^2$  test aims to assess the ability of each independent variable to relate the variance of the effect on the dependent variable. The following is the  $R^2$  test performed using SmartPLS 3.0:

Table 5.  $R^2$  Test Result

Variable	R-Square	R-Square Adjusted
Financial Behavior (Y)	0.544	0.541
Financial Literacy (M)	0.297	0.294

Source : *Output SmartPLS 3.0 Algorithm*

Based on the results shown in table 5, the  $R^2$  of *financial behavior* in this study is 0.544, which means that financial behavior can be explained by 54.4% by the variable perceived usefulness of *financial technology*, *financial socialization*, and *financial literacy*. On the other hand, the remaining 46.6% can be explained by other external variables. The  $R^2$  of *financial literacy* is worth 0.297 which means that *financial literacy* is weak because it can only be explained by 29.7% of the perceived usefulness of *financial technology* and *financial socialization* variables.

### Uji $Q^2$ (Predictive Relevance)

The  $Q^2$  test acts in measuring the ability of the model to produce a good estimate of the observed value. The following are the results of the  $Q^2$  test using the SmartPLS 3.0 *blindfolding* method:

Table 6.  $Q^2$  Test Result

Variable	SSO	SSE	$Q^2 (=1-SSE/SSO)$
Financial Behavior	2796,000	2042,761	0,269
Financial Literacy	2796,000	2295,828	0,179

Source : *Output SmartPLS 3.0 Blindfolding*

Parameter capability reflects the quality of predictive relevance, where it is better when the  $Q^2$  value is greater than 0. According to the data shown on table 6, the research observation estimates are categorized as good for testing hypotheses in finding the association of latent variables because they are at 26.9% for *financial behavior* and 17.9% for *financial behavior literacy*.

### Uji $F^2$

The following table shows the results of the  $F^2$  test using SmartPLS 3.0:

Table 7.  $F^2$  Test Result

Variable	Financial Behavior (Y)	Financial Literacy (M)
Perceived Usefulness of Financial Technology (X1)	0.009	0.308
Financial Socialization (X2)	0.131	0.020
Financial Literacy (M)	0.676	-

Source : *Output SmartPLS 3.0 Algorithm*

Table 7 shows the weak influence of perceived usefulness of *financial technology* on *financial behavior* of 0.009 or 0.9%, but has a strong influence on *financial literacy*, namely 0.308 or 30.8%. *Financial socialization* also has a weak influence on *financial behavior* and *financial literacy* where it only reaches 0.131 or 13% for *financial behavior* and 0.020 or 2% for *financial literacy*. *Financial literacy* has a strong influence on *financial behavior* of 0.676 or 67.6%.

### Hypothesis Testing

Table 8. T-Test Result

	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics ((O/STDEV))	P-Values
Perceived usefulness of Financial Technology -> Financial Behavior	-0,076	-0,076	0,042	1,815	0,070
Financial Socialization -> Financial Behavior	0,261	0,265	0,049	5,282	0,000
Financial Literacy -> Financial Behavior	0,662	0,660	0,049	13,503	0,000
Perceived usefulness of Financial Technology -> Financial Literacy -> Financial Behavior	0,325	0,326	0,040	8,207	0,000
Financial Socialization -> Financial Literacy -> Financial Behavior	0,084	0,085	0,031	2,686	0,007

Source : *Output SmartPLS 3.0 Bootstrapping*

The original sample value indicates a positive or negative relationship between the independent variables and the dependent variable. The *T-Statistic* shows whether there is an influence resulting from the independent variable on the dependent variable with a *T-Table* level > 1.96. P-Value is useful in assessing the level of significance of the effect of the independent variables on the dependent variable with a *P-Value* level <0.05. Therefore, it can be concluded that *financial literacy* and *financial socialization* have a positive effect on *financial behavior*, while perceived usefulness of *financial technology* has no effect on *financial behavior*. *Financial literacy* is also able to mediate the effect of *financial socialization* and perceived usefulness of *financial technology* on *financial behavior*.

## Discussion

### **The effect of perceived usefulness of *financial technology* on *financial behavior***

Based on the hypothesis testing that has been conducted, it shows that the perceived usefulness of *financial technology* has no effect on the financial behavior within students who live in Surabaya. This could be caused by the risks and negative social stigma that are still strongly attached to *financial technology*. The danger of fraud, digital crime, data leakage creates fear and a lack of trust for students to use the technology as a financial management tool, especially when investing with large capital (Erlangga & Krisnawati, 2020). A strict privacy safeguard for telephone numbers, ID cards, and other personal information are still the barrier to efficiently applies *financial technology* in optimizing student finances. The test results support the TAM theory which indicates that there are beliefs and aspects of trust in the *financial technology* system that must be implemented to increase behavioral intentions and improve the performance (Davis, 1996).

The respondents' answers acknowledge perceived usefulness of *financial technology* as a practical tool that provides convenience and increases productivity. However, the main problem lies in their trust and the development of a variety of financial technology innovations. Furthermore, the problem lies in the development of education and students' abilities in product introduction as well as trust in privacy guarantees which do not go hand in hand. Thus, students only know its benefits without trusting and understanding the way to properly implement *financial technology* in managing their finances.

The practice of not using *financial technology* optimally results in no perceived advantage in the productivity of one's financial control. This finding is in line with studies by Widiastuti, Jati, Nawarini & Setyawati (2020), Wati & Panggiarti (2021), and Haqiqi & Pertiwi (2022). However, it contradicts with previous studies by Safitri (2021) and Mukti, Rinofah & Kusumawardhani (2022) which shows the positive influence of perceived usefulness of *financial technology* towards *financial behavior*.

### **The effect of *financial socialization* on *financial behavior***

The study shows that *financial socialization* has a positive effect on the *financial behavior* in students in Surabaya. The finding is relevant to the *theory of planned behavior* (TPB) which states that there is an influence of information and subjective norms transmitted by the surrounding environment as behavioral controls in influencing one's financial management goals (Ajzen, 1991). The significant relationship that exists between *financial socialization* and *financial behavior* implies an optimization of *financial socialization* which is conveyed because of the maximum frequency of socialization carried out by *social agents*, especially those carried out by parents, as the main educators and have the closest interactions with the students. This implication is supported by the respondents' assessments showing that *financial socialization* is indicated as a high level. Optimization of *financial socialization* refers to the ability of socialization to provide a better change of perspective in controlling financial decisions, especially to improve the proportion of savings and investment.

The effect of *financial socialization* will be more substantial when the frequency of socialization carried out by the *social agents* is intensified in providing financial information, such as relevant means or solutions to escalate individual reliability in managing their own finances. The level of exposure experienced by the individual will have a stimulant impact on the considerations that are made before they make a financial decision. In this stage, the role of *social agents* is needed because a person's financial behavior is not only influenced by internal capabilities but also by external exposure. This finding is in line with studies by Safitri &

Kartawinata (2020), Ameer & Khan (2020), and Ameliawati & Setiyani (2018), although it contradicts with studies by Harianto & Isbanah (2021) and Dewanti & Asandhimitra (2021).

### **The effect of *financial literacy* on *financial behavior***

*Financial literacy* has a positive effect on the financial behavior of students in Surabaya. Thus, it indicates that the higher the *financial literacy* possessed by individuals will affect their *financial behavior*. In line with the *theory of planned behavior* (TPB), it indicates that personal desires and goals are build based on internal factors of intelligence and knowledge information to increase motivation in managing finances (Ajzen, 1991). The awareness of the risks and returns on a financial product will create an understanding and skills in solving the financial problems they experience. The level of *financial literacy* will affect how a person distinguishes between needs and desires in avoiding consumptive behavior.

The wrong way of managing income is very relevant to the erroneous perception of individual needs. In general, everyone will have heterogeneity of needs when faced with differences in social and economic status. An accurate understanding of their financial basis, the proportion of debt, savings, and investment will support the suitability of individual's interpretations regarding the concepts of time, *value of money*, and *return* to form an optimal financial strategy. This strategy can be in the form of determining the means of investment diversification, the ratio of savings and emergency funds, spending priorities, and the appropriate time to invest. The accuracy of strategy determination will reflect the quality of student's *financial behavior*. This findings is releavent to studies conducted by Pusparani & Krisnawati (2019), Putri & Tasman (2019), and Latiifah & Kautsar (2022).

### **The effect of *financial literacy* mediation on the relationship of perceived usefulness of *financial technology* with *financial behavior***

*Financial Literacy* simultaneously mediates the effect of perceived usefulnesss of *financial technology* on the *financial behavior* of students in Surabaya – indicating an indirect relationship between the perceived usefulness of *financial technology* on *financial behavior* through *financial literacy*. The existence of belief in the benefits will result in the formation of individual's reactions and awareness to try to replace conventional financial management media with *financial technology*, which is recognized to increase effectiveness and performance. The existence of individual's awareness in using *financial technology* supports the creation of information distribution and opportunities to introduce the financial products that can be implemented in one's financial portfolio. This will certainly distinguish literacy possessed before and after being exposed to *financial technology* innovations. This result is closely related to the concept of the TAM theory where the benefit aspect supports an increase in behavioral intention, thereby supporting an increase in financial performance (Davis, 1996).

Understanding the importance of managing income in precise proportions in savings, expenses, debt, and investment will be a provision for students to make *financial literacy* an intermediary in linking *financial technology* and *financial behavior*. Recognizing the advantages of *financial technology* and the need created by introducing a good financial planning system places *financial technology* as a tool for online transactions to maximize profits. Moreover, with a high level of literacy, it encourages students' knowledge of financial products so that they can smoothly learn and hone their capabilities in using the financial system, especially to assist them in making budgets, paying bills, or investing in facilities that are guaranteed and supervised by authorities, such as OJK and CoFTRA. This guarantee can resolve a sense of wariness in the use of financial technology because students already have some insights regarding the appropriate financial institutions, products, and applications. This finding is consistent with the research conducted by Khofifa, Wahyuni & Subaida (2022), Rahmad (2020), and Hijir (2022).

## **The effect of *financial literacy* mediation on *financial socialization* with *financial behavior***

The findings show that *financial literacy* partially mediates the effect of *financial socialization* on the *financial behavior* of students in Surabaya. The presence of *financial literacy* as an intermediary variable still influences the relationship of *financial socialization* to the *financial behavior* of students in Surabaya which is consistent with the TPB theory. Proposals, invitations, and ideas that are channeled as subjective norms will foster another perspective on the object of individual behavior. The creation of vertical and horizontal relationships between parents, lecturers, and friends as one of the *social agents* will shape expectations in achieving goals and perceptions which are implicitly expressed in financial socialization.

Consequently, students will try to meet these expectations by imitating and implementing socialization in their financial decisions. The existence of financial information and opinions conveyed, such as financial application preferences, budget proportions, and financial plans or limitations in fulfilling a lifestyle will persuade the individuals to follow the example and the advice given. Balanced financial information improves one's financial literacy and management. This is because *social agents* open access for students to get to know financial products that are circulating in society.

Interactions that exist with *social agents* encourage a process of exchanging ideas and knowledge. Students who previously only knew one or two financial products immediately got exposure to other types of financial commodities which certainly can increase their fluency and knowledge related to financial concepts. This knowledge and fluency will later become the basis to assess and evaluate their understanding in improving and controlling every financial decision. The right financial decisions indicate better financial behavior as well. These findings are in sync with previous studies conducted by Rachmawati & Nuryana (2020), Sundarasen, Rahman & Danaraj (2016), and Jazuli & Setiyani (2021) which explain the influence of *financial literacy* in mediating *financial socialization* on *financial behavior*.

## **CONCLUSIONS AND RECOMMENDATIONS**

The results of the study prove the role of *financial socialization* and *financial literacy* in influencing the *financial behavior* of students in Surabaya. *Financial literacy* can simultaneously mediate the relationship of perceived usefulness of *financial technology* and partially mediate *financial socialization* towards students' *financial behavior*. The maximum level of *financial socialization* given by *social agents* to the students can increase their financial perceptions in the implementation and introduction of financial products. The development of an understanding about the world of finance that is conveyed directly or indirectly can have an impact on the way individual finances are managed. Students, who are the generation of technology literate and the target of exposure from various media, are indeed found to be easier to be open-minded in receiving financial information related to financial features, systems, and products that can broaden their horizons.

Intellectual progress that is owned provides greater space in determining the balance of spending and saving. The concept of *return* and *risk* which is strongly attached to every financial product will be increasingly understood by students through *financial socialization* and confidence in the benefits of *financial technology*. It is these theories and financial schemes that students know that then become the basis for implementation in practice of managing their finances. The variable perceived usefulness of *financial technology* does not directly influence the *financial behavior* of students in Surabaya. Lack of trust, despite recognizing the benefits of *financial technology*, will create a sense of reluctance and wariness, which results in students' reluctance to use *financial technology* to optimize portfolio profitability and financial decisions. It

will be different if there is confidence in the benefits of *financial technology* accompanied by an increase in the level of student *financial literacy*. Knowledge about guaranteed institutions, financial supervisors, or quality financial applications can make students more confident in using *financial technology* so that it plays a role in individual's financial management.

*Social agents* and OJK (Financial Services Authority) should be able to provide counseling and education to students so that they can provide a stronger financial foundation that can affect the quality of students' life in the future. Students, as the next generation of the nation, must be able to manage their finances well to contribute to the progress of the country. Universities, as educational institutions, must also be able to accommodate a standard curriculum of teaching and assessment so that they can provide knowledge theoretically and practically in the field of finance. Learning and having the right scope of socialization will produce superior seeds. Future research is expected to be able to use a model and scope of research objects that are not only focused on students to produce a more accurate research model. The addition of intervening and mediator variables in assessing the connectedness of variables can also be done to provide perspective heterogeneity from the role of other variables that can influence individual financial management.

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