

تأثير المستشار الآلي في توفير إدارة مالية شخصية أفضل

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الملخص

هدفت الدراسة الحالية إلى تحديد تأثير المستشار الآلي بأبعاده (الأتمتة، إمكانية الوصول، التخصيص، والرؤى المستندة إلى البيانات، والرصد والتنبيهات في الوقت الحقيقي، والتخطيط القائم على الأهداف) في توفير إدارة مالية شخصية أفضل (PFM) بين المستثمرين البالغين في الأردن. تم اعتماد المنهجية الكمية، وتم الإجابة على استبانة تدار ذاتياً من قبل (413) مستثمراً بالغاً في الأردن. تم استخدام برنامج SPSS لفحص وتحليل البيانات الأولية التي تم جمعها. أشارت نتائج الدراسة إلى قبول الفرضية الرئيسية بأن "المستشار الآلي له تأثير إحصائي إيجابي على الإدارة المالية الشخصية". كما أشارت الدراسة إلى أن (التخطيط المبني على الأهداف) هو الأكثر تأثيراً بين متغيرات الدراسة الفرعية. وأوصت الدراسة بأن تلتزم المنظمات التي تدعم وتبني برامج التكنولوجيا المالية مثل robo-advisor بتقديم المشورة التي تشرح كيف يمكن للأفراد الاستفادة من استخدام robo-advisor لإدارة شؤونهم المالية. انطلقت الدراسة الحالية من نظرية التمويل السلوكي، التي وجد أنها تتداخل مع استخدام المستشار الآلي، حيث إن الأتمتة وإمكانية الوصول والتخصيص والرؤى المستندة إلى البيانات والمراقبة والتنبيهات في الوقت الحقيقي والتخطيط القائم على الأهداف قد تحيد الأفراد عن اتخاذ قرارات مالية عاطفية في إدارتهم المالية الشخصية.

الكلمات المفتاحية: الذكاء الاصطناعي، التكنولوجيا المالية، المستشار الآلي، الأتمتة، إمكانية الوصول.

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The Impact of Robo-Advisor in Presenting a Better Personal Financial Management

Abstract

The current study aimed to determine the impact of a robo-advisor including (automation, accessibility, personalization, data-driven insights, real-time monitoring and alerts, goal-based planning) in providing better personal financial management (PFM) among adult investors in Jordan. Quantitative methodology was adopted, and a questionnaire was self-administered by (413) adult investors in Jordan. SPSS software was used to examine and analyze the primary data collected. Results of the study indicated the acceptance of the main hypothesis: "Robo-advisor has a positive statistical impact on personal financial management." In addition, the study indicated that (goal-based planning) is the most influential among the study sub-variables. The study recommended that organizations that support and adopt fintech software such as robo-advisor commit to provide advice that explains how individuals can benefit from using robo-advisor to manage their finances. The current study started from behavioral finance theory, which has been found to interfere with robo-advisor use since automation, accessibility, personalization, data-driven insights, real-time monitoring and alerts, and goal-based planning may deviate individuals from making emotional financial decisions in their personal financial management.

Keywords: Artificial Intelligence, Financial Technology, Robo-Advisor, Automation, Accessibility

1-Introduction:

Technology has not only invaded medicine, education, and marketing, but has become an integral part of the business world, specifically in financial matters, and beyond that, technology has become an essential part of managing the funds of organizations and individuals together (Shanmuganathan, 2020). The history of technology and financial digitization extends over long stages, as pointed out by (Stone et al., 2020). Between the years 1960-1970, banks began to rely on computers to manage their internal operations, and in the years 180-1990, reliance on technology in financial operations increased and banks began to provide their services through the Internet.

After that, since the beginning of the second millennium, the Internet and digitization appeared in many financial fields, which included electronic payments, electronic shopping, all the way to what is known today as fintech, which essentially appeared as a type of financial digitization for emerging companies (Liu et al., 2020). Many financial technological tools that entered the financial world and included smart financial analyses, blockchain, and artificial intelligence in analyzing financial data (Wolff et al., 2020) accompanied this development.

2-Problem Statement:

With the course of time, there appeared the concepts of artificial intelligence in finances or the so-called fintech as in financial technology. This technology took financial management into a different level of development and enhancement, and it managed to reform the financial hierarchy into a new concept of technology-dependent field. Among tools of fintech in the financial field is AI-based personal financial management (PFM). This tool refers to the employment of artificial intelligence in managing individuals' personal financial matters. These programs are based on managing the wealth and financial matters of individuals by creating insights and recommendations based on specific algorithms based on automated

analysis of inputs (financial data). It serves individuals by directing future recommendations and different opinions on informed ideas for money and wealth management in order to help individuals make informed financial decisions. One of the most important artificial intelligence tools in money management is the Robo-advisor, which is an automated investment platform that is based on a set of algorithms and matrices aimed at managing money and providing financial and investment advice. Nowadays, with the wide spread of technologies in different life sectors, and the ongoing dependence on robots and automated service, one may ask a question of “how – me as an individual – could benefit from these technologies in better managing my finances?”.

1.1. Aim, Questions and Objectives of Study:

Based literary gap and problem statement presented earlier, this current study seeks to examine the effectiveness of robo-advisor in enhancing a better personal financial management among individuals in Jordan. Reaching the aim will be done through answering the following question:

“How can robo-advisor enhance and support a better personal financial management among individuals?”

In order to answer the previous main question, it is important to go through objectives of study which included:

- Shed the light on the concept of robo-advisor within PFM field
- Explore the benefits of fintech in PFM
- Highlight the characteristics of robo-advisor for adults in managing finances
- Indicate the impact of robo-advisor on enhancing personal financial management

2. Literature Review:

2.1. Artificial Intelligence in Finances:

According to Go et al. (2020), the financial services sector has witnessed a major change due to the emergence of artificial intelligence AI as one of the technological innovations that has been able to change the mechanism of work and provision of financial services. This technology has allowed the financial sector to make significant improvements in the efficiency of financial analysis, and provide a more effective user experience (Pallathadka et al., 2023).

Goodell et al. (2021) emphasized that artificial intelligence in the financial industry has enhanced the options for graphical analysis and forecasting with high speed and accuracy. This sector has also become able to analyze large financial data, identify different financial patterns, and predict future behavior of financial markets in order to be able to make informed investment decisions that will lead to improved investment performance. On the other hand, artificial intelligence in the financial sector has been found to improve the operational efficiency of many financial and administrative processes due to its ability to carry out repetitive tasks linked to huge data without human intervention or error.

As for Lin (2019), it was found that relying on artificial intelligence in the financial sector has contributed to enhancing the ability of this sector to ensure a higher level of security due to its ability to detect fraud and identify illegal activities. This takes place through the automated analysis of data and various algorithms based on analyzing customer files and their financial goals.

Among the artificial intelligence services in the financial sector is the provision of what is known today as robo-advisor, which has constituted a qualitative shift in wealth management and financial matters for individuals and organizations by relying on specific algorithms and matrices capable of providing investment advice to individuals and provide them with a future financial plan (Mhlanga, 2020).

2.2. Robo-Advisor in Finances:

Belanche et al. (2019) indicates that robo-advisor is an investment platform that relies on artificial intelligence algorithms and concepts in order to provide advice related to personal money management, wealth, and digital financial portfolio management.

Shanmuganathan (2020) believes that adopting the robo-advisor, in its general sense, constitutes a digital solution to simplify financial and investment operations by employing technology that would provide less expensive and more effective financial and advisory services.

As for Bhatia et a. (2021), confirmed that integrating artificial intelligence in all its forms into the financial management process guarantees individuals many benefits, including tracking income, determining expenses, classifying bills and financial liabilities, and providing a comprehensive view of individuals' financial health.

Among the benefits individuals can access by using the robo-advisor is the ability to identify spending patterns and adopt individuals' adoption of any risks they may be exposed to, and it also provides a budget allocated for savings strategies.

Through artificial intelligence, the robo-advisor can help individuals know and achieve financial goals, and this is done by using the individual's financial data, spending and consumption patterns, and arriving at a mechanism through which expenses are reduced and savings are increased (Digmayer, 2022; Hakala, 2019). Among the benefits of robo-advisor is the ability to provide many recommendations related to investment opportunities available to the individual, and it provides a clear mechanism for managing debts, insurances, and the ability to bear risks.

However, many previous studies presented some aspects of robo-advisors that might be of benefit in enhancing personal financial management as in the following:

2.2.1. Automation:

One of the basic features of robo-advisors is a digital platform whose function is to provide automated financial advice and manage financial portfolios. Automation contributes to simplifying investment options for individuals based on algorithms and computer matrices capable of implementing balanced investment strategies. Through automation, one achieves efficient and consistent investment and money management (Ruslan et al, 2022).

2.2.2. Accessibility:

Quintero and Quintero (2023) argued that the idea of accessibility comes from the ability of robo-advisors to make investment and financial planning available to everyone, whereas in the past, seeking financial advice had to be from accredited bodies and usually involved a large financial cost. Through robo-advisor, financial advice has become available and relatively low-cost, and individuals of different ages, levels, and experience can deal with robo-advisor due to its easy-to-use interface and simple options.

2.2.3. Personalization:

Beck (2021) argued that although robo-advisor is a robo-advisor, it is able to provide a good level of customization in order to meet individual needs based on their requests and preferences based on algorithms. The robo-advisor collects data about the individual and the desired financial goals, and studies their risks, time horizon, investment preferences and goals to be achieved.

2.2.4. Data-driven insights:

The robo-advisor takes advantage of using current data and information in as an approach to provide data-based strategies for the purposes of investment. This is launched – as according to D'Hondt et al. (2020) - by making an analysis of large amounts of data and classify them based on financial patterns and check if they have investment orientation. It can be a tool for individuals to predict the market and be aware of possible fluctuation.

2.2.5. Real-time monitoring and alerts:

One of the major aspects of the robo-advisor is the frequency of its notifications of any alter to their speculation portfolios. The robo-advisor screens the execution of the venture and the advertisement in terms of any changes or deviations and informs individuals urgently in order to require any pressing activities or choices.

2.2.6. Goal-based planning:

Goal-based planning supports individuals reach goals which robo-advisors was used for. This helps to understand financial goals and determine investment directions in order to achieve them. These trends include planning for retirement, financing children's future education, and purchasing property based on a specific schedule (Riley, 2019).

2.3. Personal Financial Management (PFM):

According to Bitrián et al. (2021), personal financial management (PFM) refers to the process of managing an individual's financial resources in an effective manner in order to reach informed decisions capable of achieving the individual's future financial goals. Yogasnumurti et al. (2021) argued that PFM is built on many activities, tools and strategies that track individuals' income, expenses, and savings and guide their decisions towards financial stability and security. Waliszewski and Warchlewska (2020) Provide the core services that PFM, including preparing budgets, savings, debt management, investment planning, risk and insurance management, retirement planning, and dealing with tax matters.

PFM helps individuals control their financial matters more effectively. It also works to facilitate the achievement of financial and investment goals and reduce financial pressures on individuals by directing them towards what is in their best interest in the short and long term (Putri and Tasman, 2019).

2.4. Hypotheses Development:

Anshari et al. (2022) aimed to investigate the capabilities of the robo-advisor in PFM by identifying the variables and opportunities it presents to individuals in order to manage their money. The study analyzed the robo-advisor in terms of the financial services provided and the nature of individual interaction with them. The study reached the conclusion that the robo-advisor helps individuals manage their money by providing **future insights** in this field. In addition to **personalized, comprehensive and dynamic financial advisory** services for users.

Ruslan et al (2022) aimed at examining AI in fintech influence on decision making process of youth in the field of investments using robo-advisor instead of micro-investing. Researcher employed quantitative methodology using a survey that was self-administered by a sample of young investors. The controllers of study included variables of (perceived usefulness, ease of use, trust, perceived risk, and social influence). Results of study indicated that perceived usefulness was influential on youths' orientation towards using robo-advisor platforms. In addition to that, it appeared that youths were impacted by the social influence of using robo-advisor which indicated that applicability of Behavioral Finance Theory.

Belanche et al (2019) aimed to explore the factors that influence individuals' adoption of robo-advisor as an automated financial advisor. The researchers collected data (questionnaire) on a sample of customers who had knowledge of using robo-advisor in order to study the level of perceived usefulness, automation of processes, real-time information, ease of use, and financial knowledge. The study reached the conclusion that there was an impact of **perceived usefulness and automation of processes** on individuals' adoption of the robo-advisor, and they were affected by the factor of **trust and goal-based planning**.

Oehler et al., (2022) aimed to explain the characteristics of individual investors and their decisions using robo-advisor and to identify the mechanism of influence of

various factors such as risk tolerance on the adoption of robo-advisory services. The researchers collected data through a questionnaire for a number of investors using robo-advisor. The study reached the conclusion that **supporting risk control, automation, and personalization** had the greatest impact on improving the quality of decisions made by individuals regarding investments. The study confirmed that financial knowledge is very important in using robo-advisor.

3. Literary Gap and Underpinning Theory:

In the current study, the literature gap stems from the lack of in-depth studies on how robo-advisor affects individuals' financial management in terms of benefits, advantages, and effectiveness. In addition, there was a lack in previous empirical studies that examined the usability of robo-advisor in improving personal financial management (PFM); this has motivated the researcher to carry out this current research.

It is worth mentioning here that the underpinning theory of current research study is "Behavioral Finance Theory" (BFT). This theory is based on the idea that individuals usually make their financial decisions based on their cognitive and psychological tendencies (Sattar et al., 2020). With regard to the current study, the entry of theory into the goal of the study comes through examining the role of the robo-advisor, relying on algorithms and matrices, in alleviating the bias of individuals' psychological and cognitive tendencies when making financial decisions and reducing emotional decisions. This is shaped by providing advice, consultancy, enlightened ideas, and avoiding excessive confidence and fear of loss. BFT was the results of many prominent researchers in the field of behavioral finance including Daniel Kahneman, Amos Tversky, Richard Thaler, Robert Shiller and Daniel Kahneman (Baddeley, 2019)

3.1. Model and Hypotheses:

According to aim, question and objectives of study. Researcher was able to build a model that forms the relationships between variables and from which study hypotheses were extracted:

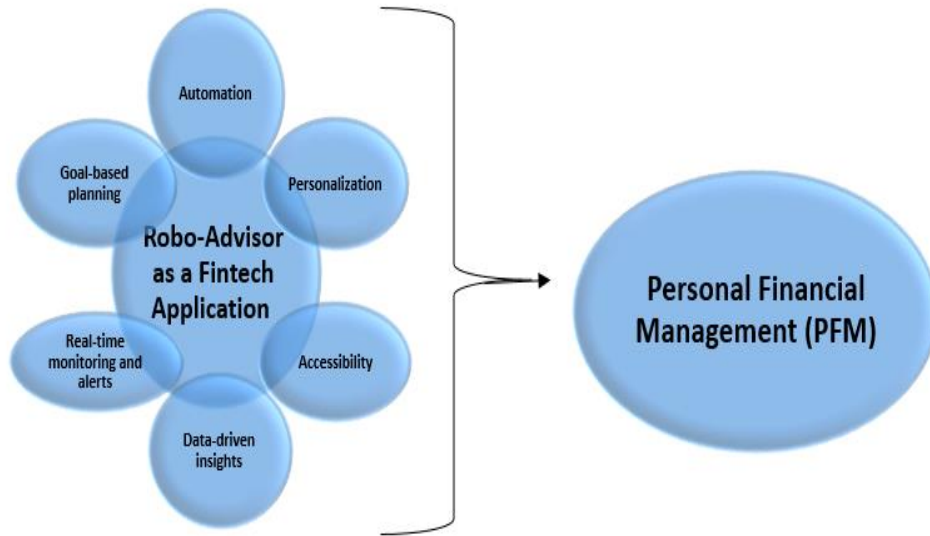


Figure 1. Study Model (Ruslan et al., 2022; Quintero and Quintero, 2023; Riley and Schild, 2019)

Based on model above, following set of hypotheses was extracted:

Main Hypothesis:

H: Robo-advisor has a statistical impact on personal financial management

Sub-Hypotheses:

H1: Automation has a statistical impact on personal financial management

H2: Accessibility has a statistical impact on personal financial management

H3: Personalization has a statistical impact on personal financial management

H4: Data-driven insights has a statistical impact on personal financial management

H5: Real-time monitoring and alerts has a statistical impact on personal financial management

H6: Goal-based planning has a statistical impact on personal financial management

4. Methods and Materials:

4.1. Methodological Approach:

Reaching the main aim and answering study questions was done depending on quantitative approach. This approach was seen to be more beneficial as it can adopt a larger study sample and gain more insights that can support the hypotheses and be generalized in the future.

4.2. Tool of Study:

A questionnaire was developed in order to form a survey tool for the study and collect primary data. The questionnaire was built by the researcher and through the help of previous literature. It consisted of two main sections. The first took into perspective demographics of study sample. While the other section consisted of statements related to study sub-variables (controllers) that included (Automation, Accessibility, Personalization, Data-driven insights, Real-time monitoring and alerts and Goal-based planning). The questionnaire was built on Likert 5point scale and was self-administered by study sample. Following table presented distribution of questionnaire statements on study controllers:

Table 1. Statements Distribution

Variable	# of Statements
Robo-Advisor as a Fintech Application	
Automation	6
Accessibility	6
Personalization	5
Data-driven insights	5

Real-time monitoring and alerts	5
Goal-based planning	5
Personal Financial Management (PFM)	7

4.3. Population and Sampling Technique:

Population of study consisted of citizens (individuals) who were above 25 years and had a stable income. A convenient sample of (600) individuals was chosen to represent the population. The link to the questionnaire was sent randomly to platforms and social media accounts that marketed for robo-advisors and other AI financial tools in order to individuals to have access to the questionnaire. The questionnaire remained online for four consecutive weeks, and after application process it was found that response rate was 68.8% indicated that the percentage responded to the questionnaire was statistically accepted.

4.4. Statistical Processing:

Statistical package for social sciences SPSS was chosen to be the main tool to mitigate and tackle primary data. Testing reliability and consistency of study tool was done using Cronbach's Alpha, Results indicated that tool was reliable and consistent as Alpha was higher than 0.70 as table below. Multiple regression analysis was used, which is one of the statistical tests that seeks to estimate the linear relationship between variables and the extent of the influence of each variable on the other (Iwasaki, 2020). In the current study, multiple regression analysis was used in order to determine the relationship between the variables and explain it. In other words, multiple regression was used in order to understand the mechanism of intersection of the relationship between the variables and to demonstrate the effect of the independent variable and its sub-dimensions on the dependent variable. In addition, multiple regression analysis was relied upon in order to estimate the effect of each sub-variables of the independent variable on the dependent variable. Multiple regression analysis would also identify the factors that affect the relationship

between variables and estimate these factors based on the existing data (AL-Khaiat et al., 2022; Roberts and Roberts, 2020).

Table 2.Alpha

Variable	α
Automation	0.844
Accessibility	0.883
Personalization	0.870
Data-driven insights	0.871
Real-time monitoring and alerts	0.888
Goal-based planning	0.887
Personal Financial Management (PFM)	0.915

5. Results and Discussion:

5.1. Demographic Results:

Table below presented demographic results of participants. It was seen that majority of respondents were males forming 55.9% of study who held MA degree forming 54% of the study. In addition to that, it was reached that majority of respondents received a stable income with the majority's income being \$1001-\$1500 forming 39.5% of total sample.

Table 3. Demographics:

	f	%
Gender		
Male	231	55.9
Female	182	44.1
Educational Level		
BA	174	42.1
MA	223	54.0
PhD	16	3.9
Income		
Less than \$1000	130	31.5
\$1001-\$1500	163	39.5

\$1501-\$2000	94	22.8
\$2001+	26	6.3
Total	413	100.0

5.2. Descriptive Statistics of Questionnaire:

Mean (μ) and standard deviation (σ) of questionnaire statements were calculated. It was found that all variables were positively received by respondents as they all scored higher than mean of scale 3.00. The highest mean was scored by (PFM) 3.921/5.00 compared to the lowest mean 3.836/5.00 scored by (Automation) but still positive as it was higher than mean of scale.

Table 4. Descriptive Statistics :

Statement	μ	σ
Robo-advisor is able to mimic different aspects of financial management	3.789	.994
Options of robo-advisor makes financial management easier on me	3.702	.966
I can reach my financial data and create investment portfolios through robo-advisor	3.889	.877
I can reach personalized recommendations if I felt I needed to.	3.981	.927
Robo advisor gives me more efficient and accurate financial management	3.719	.944
Robo-advisor reduces need for manual calculations and analysis.	3.935	.793
Automation	3.836	.685
Robo-Advisors presents more accessible PFM options	4.010	.906
Traditional financial advisory services are expensive	3.918	.877
Robo-advisor doesn't require a significant investment of time and resources.	3.959	.831

Robo-Advisors is affordable regardless of income and educational level	3.654	.952
Robo-advisor me opportunities to access professional financial advice	4.051	.779
Ever since I've used robo-advisor I am more financially aware	3.913	.832
Accessibility	3.917	.683
Robo-Advisors presents financial solutions based on my financial goals	3.973	.890
It highlights for me the risk tolerance, and other relevant factors.	4.097	.848
Robo-advisor provides recommendations and investment strategies.	3.806	.887
The fact that robo-advisor is personalized enhances my financial awareness	3.889	.832
It has the ability to align financial management practices with my needs and preferences.	3.794	.838
Personalization	3.912	.697
Data analytics in Robo-Advisors provide valuable insights into my financial situation.	3.743	.907
Now I can be aware of my financial transactions, spending patterns, and investment performance	3.952	.877
Robo-Advisors offer me a complete view of my finances.	4.036	.854
Through robo-advisor my decisions are more informed	3.855	.891
It helped me identify areas for improvement, and set realistic financial goals.	3.743	.974
Data-driven insights	3.866	.732
Robo-Advisors enable me to monitor their financial activities in real-time	3.709	1.028

It an option to receive alerts and notifications about important events.	3.893	.811
It has the ability to track expenses and receive reminders for bill payments	3.867	.861
I am happy with the fact that I get a timely information that helps me up-to-date	4.010	1.017
I can always make proactive financial decisions through robo-advisor	3.978	.882
Real-time monitoring and alerts	3.892	.768
Robo-Advisors ease goal-based financial planning	4.061	.853
It allows me to set specific financial goal and track its progress.	3.896	.901
Now I can monitor my saving for retirement, planning to buy a house, or paying off debt	3.801	.963
Robo-Advisors provide strategies and recommendations to help me achieve my goals.	3.741	1.030
My PFM is enhanced with a clear roadmap and actionable steps.	3.918	.817
Goal-based planning	3.883	.760
Automated expense tracking is the first step towards a better PFM	3.877	.871
Managing finances requires intelligent budgeting and planning	4.019	1.024
PFM should be based on personalized financial recommendations	3.981	.845
A part of PFM is to have intelligent investment management advisory	4.065	.826
Quick and real-time access to personal data can help in making sensitive decisions	3.906	.878
Wealth and financial management can't be done today without artificial intelligence	3.816	.937
AI is important when it comes to intelligent budgeting	3.785	.970
Personal Financial Management (PFM)	3.921	.741

5.3. Multicollinearity Test

VIF and Tolerance were calculated for the independent variables to see whether there was multicollinearity between them. Table (5) showed that VIF values were less than 10 and Tolerance values were more than 0.10, suggesting that multicollinearity does not exist (Gujarati & Porter, 2009).

Table 5. Multicollinearity

variable	Tolerance	VIF
Automation	.339	2.947
Accessibility	.190	5.255
Personalization	.219	4.573
Data-driven insights	.163	6.128
Real-time monitoring and alerts	.159	6.295
Goal-based planning	.148	6.762

5.4. Hypotheses Testing:

5.4.1. Main Hypothesis:

Multiple regression was used in order to test the main hypothesis “**Robo-advisor has a statistical impact on personal financial management**”. It was clear that the independent variables have a highly substantial and positive correlation with the dependent variable ($r = 0.967$). The independent factors accounted for an additional **93.5%** of the variation in the dependent variable. Statistical analysis also demonstrates that the F value was statistically significant at the 0.05 level. This shows that Robo-advisor has a statistical impact on personal financial management

Table 6. Main Hypothesis Testing

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	R	R Square	F value	Sig.
	B	Std. Error	Beta						
1 (Constant)	.218	.058		3.743	.000	.967	.935	971.399	.000

Automation	-.009	.024	-.008	-.385	.700				
Accessibility	-.051	.031	-.047	-1.615	.107				
Personalization	-.046	.029	-.043	-1.594	.112				
Data-driven insights	.194	.032	.191	6.107	.000				
Real-time monitoring and alerts	.405	.031	.420	13.211	.000				
Goal-based planning	.461	.032	.474	14.380	.000				

Table 6 above included multiple regression of sub-hypotheses. Results indicated that variables of (automation, accessibility and personalization) weren't significant as according to their Beta. On the other hand, it appeared the (data-driven insights, real-time monitoring and alerts, and goal-based planning) were significant. This has led to reaching the following indications:

- Automation has no statistical impact on personal financial management
- Accessibility has no statistical impact on personal financial management
- Personalization has no statistical impact on personal financial management

On the other hand, multiple regression indicated that:

- Data-driven insights has a statistical impact on personal financial management
- Real-time monitoring and alerts has a statistical impact on personal financial management
- Goal-based planning has a statistical impact on personal financial management.

The regression equation is:

$$\text{Personal financial management} = 0.218 - 0.099(\text{Automation}) - 0.051(\text{Accessibility}) - 0.046(\text{Personalization}) + 0.194(\text{Data-driven insights}) + 0.405(\text{Real-time monitoring and alerts}) + 0.461(\text{Goal-based planning})$$

5.5. Discussion:

Current research was carried out in order to highlight the positive impact of robo-advisor in terms of (Automation, Accessibility, Personalization, Data-driven insights, Real-time monitoring and alerts and Goal-based planning) in enhancing personal financial management PFM among Jordanian citizens who use this approach. A convenient sample of (413) individuals responded to the online questionnaire and SPSS was used to analyze the gathered primary data. Results of study accepted the main hypothesis that argued "Robo-advisor has a statistical impact on personal financial management". In other words, results of study supported the fact that robo-advisor has the ability to support individuals in managing and enhancing their financial affairs by presenting different options and aspects that helps them make the right decisions.

In terms of controllers of study, it was found that the highest influence of robo-advisors was registered by goal-based planning which scored the highest $B=0.461$ and the strongest correlation to the dependent variable (PFM) making this variable as the most influential of all. Results assured that robo-advisors have the ability to enhance better PFM through presenting clear goal setting that is based on real data entered to the programs. In addition to that, it can customize possible investment strategies based on "what if" scenarios that enhances the portfolio management. This was agreed on by Anshari et al. (2022) and Ruslan et al (2022) who confirmed that in addition to the previous benefits, goal-based planning can track and visualize progress which makes easier for individuals to guide their financial decision making.

Real-time monitoring and data-driven insights came in the second rank of influence and registered a $B= 0.405$ and 0.194 respectively. The idea of data-driven insights helps PFM through presenting guidance and suggestions that are driven from the data already there; the entered data help in supporting positive guidance in

a real-time monitoring that is dedicated for the benefit of an individual. This indicated that robo-advisors presented orientations and results that are sourced from the entered data, it has the ability to personalize recommendations in a real-time situation in order to reach accurate financial management. Such results agreed with Oehler et al., (2022) arguing that robo-advisors are suitable for PFM as they drive data according to individuals' real information in real-time and based on what was entered.

Accessibility came in the third rank with $B = -.051$ indicating that robo-advisors make financial data, information, insights and guidance more accessible through the enhanced user experience that it presents. In addition to that, the design, mobile applicability, and language customization makes easier and more accessible to individuals so they can be aware of their financial data all the time. In other words, robo-advisors are user friendly and can be used by individuals of different languages, backgrounds and educational levels making them suitable for all users.

In the fourth rank appeared the variable of personalization scoring $B = -.046$ and appearing as an influential factor that enhances PFM. Personalization and customization is considered to be of great importance as it supports all kinds of decisions for individuals including expenses, savings, investments and many other financial strategies that they might need. These insights appear in a form of direct guidance to individuals to make the right financial decisions that are based on their own data along with the details and goals that are set priory.

In the fifth rank, study found out that robo-advisors have the ability to enhance PFM through eliminating personal and emotional biases making individuals more objective in their decision-making. This takes place through automation which also appeared to be influential with a $B = -.009$. In addition to that, it has the ability to rebalance portfolio efficiently and support individuals' ability to deal with taxes. This

was agreed on by Belanche et al (2019) who argued that automation enhance risk management predictions and be influential in terms of cost.

6. Conclusion and Implications:

Built on automation, robo-advisors provide access, personalization, data-driven insights, real-time monitoring and alerts, and goal-based planning for individuals to manage their wealth. These features combine to provide users with a convenient, cost-effective and tailored investment experience. By leveraging technology and algorithms, robo-advisors provide efficiency, accessibility, and personalized investment strategies to a wide range of investors.

Current study results with both theoretical and practical implications. From a theoretical perspective, the study presented a literary account on the relationship between robo-advisors and financial management from an individual perspective. Normally, employing AI-based financial solutions is adopted by organizations or entities that seek a professional financial management. The current study looked at the concept of robo-advisor from the lens of individuals as an approach for them to run their financial affairs effectively and efficiently.

From a practical perspective, current study might be seen as an approach for individuals to understand the concept of robo-advisor and how to benefit from such technologies in their life. In addition to that, it highlighted the aspects from which an individuals can gain the best use of robo-advisors.

6.1. Recommendations:

From the study's results, discussion and conclusion, researcher recommended the following:

- Organizations supporting and adopting fintech software such as robo-advisor should commit to providing advice automation techniques.

- Robo-advisor systems and services should be presented in a more accessible approach in order to increase accessibility for individuals.
- More personalization should be put into perspective in order to set financial goals, improve investment strategies, and simplify the financial planning process for individuals.

Launching from recommendations of study, it is suggested to:

- Conduct a study that examines the total limitations and potential obstacles associated with using the robo-advisor to manage personal funds.
- Conduct a study regarding the need for human supervision of the robo-advisor in terms of bias in the algorithmic decision-making process.

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