

Financial technology and Investment Decisions in the Financial Markets: Risks and Opportunities

التكنولوجيا المالية وقرارات الاستثمار في الأسواق المالية:
المخاطر والفرص

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Abstract

This study explores the influence of Fintech, specifically robo-advisors and cryptocurrencies on investment decisions within financial markets. Employing an analytical approach, we examine how these emerging financial technologies shape investment behaviors and strategies. The findings indicate that both robo-advisors and cryptocurrencies, despite being relatively recent innovations, have significantly transformed the investment landscape. Robo-advisors have democratized access to investment opportunities by offering cost-effective and user-friendly portfolio management solutions, while cryptocurrencies have introduced a new asset class that enhances diversification and risk management for investors. This study highlights the potential of these technologies to redefine traditional investment practices.

Keywords: Investment ; Investment decision; Fintech; Cryptocurrency; Robo-Advisor.

المخلص

تتطرق هذه الدراسة إلى تأثير التكنولوجيا المالية، وتحديدًا المستشارين الآليين والعملات المشفرة، على قرارات الاستثمار داخل الأسواق المالية. بحيث، وباستخدام منهجية تحليلية، سيتم دراسة كيف تشكل هذه التقنيات المالية الناشئة، وكذا سلوكيات واستراتيجيات الاستثمار. تشير النتائج إلى أن كلاً من المستشارين الآليين والعملات المشفرة، على الرغم من كونهما ابتكارين حديثين نسبيًا، قد أحدثا تحولًا كبيرًا في مشهد الاستثمار. فقد ساهم المستشارون الآليون في الوصول إلى فرص الاستثمار من خلال تقديم حلول إدارة محافظ فعالة من حيث التكلفة وسهلة الاستخدام، بينما قدمت العملات المشفرة فئة أصول جديدة تعزز التنوع وإدارة المخاطر للمستثمرين. تبرز هذه الدراسة الإمكانيات الكامنة في هذه التقنيات لإعادة تعريف الممارسات الاستثمارية التقليدية.

الكلمات المفتاحية: استثمار؛ قرار استثماري؛ تكنولوجيا مالية؛ عملة رقمية؛ مستشار رقمي.

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Introduction

Investment in financial markets is a cornerstone of economic growth and individual wealth accumulation. Through strategic investment, individuals can not only secure their financial futures but also contribute to the overall stability and development of their economies. However, the journey of investing is often fraught with challenges. Investors must navigate complex market dynamics, make informed decisions amid uncertainty, and assess various risks that could impact their portfolios. The intricacies of investment decision-making can be overwhelming, particularly for those who lack experience or access to expert advice.

In this context, the emergence of financial technology (Fintech) has been a game-changer. Fintech innovations are designed to simplify and enhance the investment experience, providing tools and resources that empower both novice and seasoned investors. Financial technology (Fintech) is rapidly transforming the financial services industry. Fintech companies are developing innovative new products and services that are making it easier, faster, and more affordable for people to access financial services. One of the most significant impacts of Fintech on financial markets has been on investment decisions. Fintech companies are providing investors with new tools and resources to help them make more informed investment decisions. For example, automated investment platforms, or robo-advisors, use sophisticated algorithms to tailor investment strategies to individual preferences, risk tolerances, and financial goals. Robo-advisors have made it possible for people to invest in financial markets without the need for expensive financial advisors.

Another way that Fintech is impacting investment decisions is by providing investors with access to new investment opportunities. For instance, cryptocurrency exchanges allow investors to buy and sell cryptocurrencies, which are a new asset class that is not correlated with traditional financial markets. Cryptocurrencies offer investors a way to diversify their portfolios and to reduce their overall risk.

Overall, Fintech has the potential to significantly enhance investment decisions, making it easier, faster, and more affordable for individuals to access financial markets. Fintech companies provide innovative tools and resources that empower investors to make more informed choices.

However, while Fintech brings numerous benefits, it is crucial to acknowledge the associated risks. The reliance on algorithms and automated systems can lead to a lack of human oversight, potentially resulting in poor decision-making during market volatility. Furthermore, the ease of access to various investment options may encourage impulsive trading behavior, especially among inexperienced investors. There is also the risk of cybersecurity threats, as digital platforms can be vulnerable to hacking and fraud. In this evolving landscape, investors must weigh the potential advantages of Fintech solutions against these risks, ensuring they remain informed and cautious in their investment decisions.

This research aims to answer the question: **How is Fintech affecting investment decisions?** It will explore how technological innovations in finance are reshaping

investment practices, enhancing accessibility, and transforming decision-making processes for investors. The study will focus on various Fintech solutions, including robo-advisors and cryptocurrency platforms. These tools offer personalized insights, reduce costs, and democratize access to financial markets, enabling a wider range of individuals to participate in investing. By analyzing case studies of specific Fintech platforms and their impact on investor behavior, this research will assess both the benefits and risks associated with these innovations. This examination will provide a deeper understanding of how Fintech is influencing investment dynamics and what it means for investors in today's financial landscape.

As an initial hypothesis, we propose that Fintech has a positive impact on investment decisions by making them more informed and accessible. A secondary focus will be on the risks associated with these Fintech innovations, including technological vulnerabilities, data privacy concerns, and regulatory uncertainties. By examining both the benefits and risks, we can gain a comprehensive understanding of the overall impact of Fintech on investment practices.

The remaining parts of this research is divided into sections; In the first part we will delve into the financial markets and investment decision, in the second part we will explore the impact of fintech on investment decision in the MENA region.

I- Investment decision in the financial markets

Investment decisions are among the difficult and most sensitive decisions due to their importance for the national economy and economic units. This decision holds great significance in allocating scarce resources and can be considered a form of national income distribution.

Therefore, this decision should be based on fundamental principles to protect scarce resources and avoid their waste.

I-1 - The Concept of Investment:

Researchers and authors have provided various definitions of investment that differ depending on the perspective. Investment, from the individuals' point of view, is seen as sacrificing certain present values to obtain uncertain future values. (النجار، 2017، صفحة 114) It is defined as a purposeful human activity aimed at increasing material and moral wealth by employing funds in productive projects that take into account societal priorities and ethical standards. (غازي، 2018، صفحة 20) From a financial perspective, it is defined as the current commitment of funds or other assets with the expectation of future returns. For instance, when a person buys stocks, they anticipate future returns justifying the time and money allocated to them, which are associated with investment risks. (الدعوي، 2019، صفحة 28)

Overall, investment can be defined as the allocation of funds and economic units for a specified period with the aim of obtaining future returns that exceed the invested capital, while bearing the associated risks of this investment.

I-2 - Investment instruments:

Investment instruments represent assets acquired by the investor through the investment of their funds. These instruments take various forms and can be in the form of financial securities, real estate, precious commodities, foreign currencies, and more. Entering into multiple types of investments is often referred to as an investment portfolio.

Investment instruments can be categorized as follows: (كداوي، 2008، صفحة 3)

A - Real Investment instruments: These are investments that involve ownership of an asset with its own economic value. Using such an asset provides additional economic benefits, either in the form of a commodity or service, such as real estate and precious metals.

B - Financial Investment instruments: Financial investments involve financial securities, which do not grant the holder ownership of a real asset but provide them with financial rights that allow them to claim ownership of a real asset. Financial securities include stocks, bonds, and more.

I-3 - Participants in the Securities Market:

The key participants in the securities market include:

- Governments: Governments, through their ministries and local entities, are among the principal participants in stock exchanges as they utilize them as sources of financing.
- Companies and Banks: Both public and private economic entities actively participate in stock exchanges and financial markets.
- Investors: Investors and founders are significant participants in advanced stock markets, given their capacity to mobilize long-term savings and channel them into stock exchanges. They are known for their stability and resilience in their savings and investment capabilities.
- Investment Banks: Financial institutions specialized in issuing securities play an essential role in providing investment services to economic units.
- Brokers and Intermediaries: Brokers and intermediaries are among the primary actors in stock markets due to their vital role in offering comprehensive services to market participants.

I-3 - Decision-Making Process:

The decision-making process is the process of choosing among available alternatives. Some distinguish between the decision and the decision-making process, stating that a decision is the act of choosing between two or more alternatives, whereas the decision-making process is the objective and conscious process of study and rational evaluation to reach a decision. (الجبوري، p. 94 , 2014)

Therefore, we can define the decision-making process is a rational and conscious process of selecting one alternative from several available alternatives. It is based on objective and rational criteria, involving the comparison of alternatives and their evaluation based on specific standards.

The investment decision is defined as the decision that focuses on how to utilize the acquired funds. It seeks to achieve the best utilization for obtaining suitable returns based on the level of risk associated with these funds when invested. (هياش و مناع، 2018، صفحة 635) The investment decision is considered a critical strategic decision in the lives of individuals or economic units. It requires expertise, knowledge, and careful analysis, especially when investing in financial securities such as stocks and bonds. It involves a thorough analysis and an understanding of financial markets before making this decision.

Typically, investment decisions are made by investors and investment managers. Investors usually conduct investment analysis by utilizing various methods such as fundamental analysis, technical analysis, and judgments. This decision is influenced by market information and prevailing market conditions, in addition to expected market outcomes. (النوري و ثابت، 2018، صفحة 66)

I-4 -Types of Investment Decisions:

Every investment decision made by an investor aims to maximize returns and minimize risks. Accordingly, investment decisions fall into three types: (وليد حسن ، طالب خضر ، و علك حافظ ، 2013)

A - Purchase Decision: This decision is made by an investor when they believe that the market price of an investment instruments is less than its present value. It creates an incentive for the investor to buy that instrument, anticipating capital gains in the future when the market price increases.

B - Non-Trading Decision: When the market price equals the present value of an investment instrument, the market reaches an equilibrium state. This state compels both buyers and sellers to refrain from trading, as there is no clear incentive for either action.

C - Sale Decision: After reaching equilibrium in the market, dynamics continue to create additional desire for new investors to buy the instrument. If a current investor believes that the price remains below the present value, they may raise the price of the instrument above its present value, encouraging other investors to sell. At this point, the investor's decision becomes a sale decision.

I-5 - Factors influencing investment decision in financial markets:

The factors influencing investment decisions in the securities market can be categorized as internal and external factors.

Internal Factors	External Factors
Education: It involves the development of effective strategies for acquiring and retaining information, as well as the application of this knowledge in making sound investment decisions	Economic Conditions: The overall state of the economy can have a significant impact on the performance of financial markets and investment decisions. Factors such as GDP growth, interest rates, unemployment, and inflation can affect investment prices and returns.
Critical thinking: Decision-making is a part of thinking strategies, as it requires the use of various thinking skills with full awareness of the mental processes involved during the decision-making process.	Market Trends: Market trends can also have a substantial influence on investment decisions. For instance, if a specific sector of the economy is growing rapidly, stocks in that sector are likely to perform well. Conversely, if a sector is in decline, the performance of stocks in that sector may lag.
Motivation is defined as a series of processes that stimulate, sustain, and preserve goal-directed behavior and ultimately lead to its cessation. Motivation plays a crucial role in driving and maintaining behavior. It involves a complex interplay of psychological, emotional, and cognitive processes that encourage individuals to pursue specific goals or objectives.	Geopolitical Events: Geopolitical events, such as wars, natural disasters, and political instability, can also have a substantial impact on financial markets. These events can create uncertainty and market volatility, leading to price fluctuations.
4- Ethics: These are a set of principles and ideals that help individuals distinguish between right and wrong and act accordingly based on that distinction. Personality: A relatively stable set of traits shaped by genetics, social, cultural, and environmental factors.	Government Policies: Government policies can also significantly affect financial markets. For example, changes in tax rates can impact corporate profitability, which, in turn, can affect stock prices and investor willingness to invest in them.

Source: (عيسى ، بلمهدي ، و بوعزارة ، 2022) & (الشبيب، 2017، صفحة 75)

II- Fintech and investment decision

While the term "fintech" has gained traction only in recent years, its roots can be traced back to earlier innovations such as blockchain, cryptocurrencies, and new payment systems like Google Pay and Alipay. The origins of fintech date back to the 1860s, following the successful establishment of the first permanent transatlantic cable in 1866.

Though fintech began to gain prominence in the early 1990s, it wasn't until after the 2007 financial crisis, particularly the subprime mortgage crisis, that it became widely recognized. This crisis eroded public trust in traditional banking institutions and, coupled with new regulatory measures, paved the way for fintech companies to emerge as significant competitors in the financial landscape. (Kaji et al., 2021, p. 1)

II- 1- Definition of fintech

Fintech, short for financial technology, is defined as the innovative technologies that financial services firms adopt to automate and enhance the delivery and utilization of financial services.(Julia Kagan, 2023)

The term "financial technology," or "fintech," encompasses a range of innovative business models and cutting-edge technologies that can revolutionize the financial services sector. On one side, fintech includes novel business models such as mobile payments, crowdfunding, cryptocurrencies, and high-frequency trading. On the other, it incorporates emerging technologies like blockchain, the Internet of Things (IoT), and artificial intelligence (IOSCO, 2017, p. 4).

The following table illustrates the emerging technologies in the fintech landscape along with the innovative services they provide. This overview highlights the diverse applications of these technologies, showcasing how they are reshaping financial services and enhancing investment opportunities for individuals and institutions alike.

Table N°1: Technologies and Innovations in Fintech: Services, Products, and Business Models

Technology	Financial service and product	New model business
Blockchain	Smart contract Cryptocurrencies	CBDC
Artificial intelligence	Expert advisors Robo advisors Credit worthiness analysis	Crowdfunding Mobile money

Source: by the researcher based on (IOSCO, 2017)

II-2- New financial services and products and their impact on investment decision:

Fintech has the potential to enhance access to financial services by increasing their availability and affordability. (Woo, 2018, p. 5) Among the various innovations within the fintech sector, robo-advisors and cryptocurrencies stand out as significant contributors. Robo-advisors simplify investment management, making it accessible to a broader

audience, while cryptocurrencies introduce new avenues for diversification and investment opportunities.

II- 2- 1- Robo advisors

A robo-advisor is an online platform that leverages algorithms to offer automated portfolio management services for investors. It assists investors in optimizing the return-to-risk ratio of their portfolios by automatically allocating assets across various financial instruments, such as stocks and bonds (Sabir et al., 2023, p. 2).

Robo-advisors can play a significant role in fostering a sustainable and inclusive economy by optimizing profits. They empower investors by providing enhanced accessibility, affordability, and convenience in managing their investments (Sabir et al., 2023, p. 2).

Advantage of robo-advisors

Robo-advisors represent a significant advancement in the realm of investment management, offering innovative solutions that cater to a diverse range of investors. By leveraging technology, these platforms simplify the investment process, making it more user-friendly and accessible. This democratization of investment services allows individuals, regardless of their financial background, to engage in the financial markets. Two key advantages of robo-advisors are their accessibility and cost-effectiveness, which further enhance their appeal.

Accessibility: Robo-advisors enhance investment opportunities for a broader audience, including those with limited funds. By setting low minimum investment thresholds, they enable individuals to begin investing with smaller amounts.

Cost-Effectiveness: Typically, robo-advisors charge lower fees than traditional financial advisors. This affordability can significantly decrease overall expenses for investors, making investment management more economical (Sabir et al., 2023, p. 2)

Risks and challenges of robo-advisors:

While robo-advisors offer numerous benefits, they also come with certain limitations that potential investors should consider. One notable drawback is the lack of personalization; since these platforms are generally designed for a broad audience, they may not deliver the tailored advice and insights that a human financial advisor can provide. Additionally, robo-advisors depend heavily on algorithms to make investment decisions. This reliance on automated processes poses a risk, as inaccurate algorithms or those that fail to adapt to evolving market conditions could lead to financial losses for investors.

Robo advisors and investment decision:

Robo-advisors significantly influence investment decisions by providing a streamlined and data-driven approach to financial management. They create tailored investment

portfolios aligned with individual risk profiles and financial goals, ensuring a diversified and balanced asset allocation. By mitigating the emotional aspects of investing, these platforms promote objective decision-making and help reduce impulsive actions during market fluctuations. Additionally, their continuous monitoring and automated rebalancing maintain alignment with the investor's risk tolerance, while lower minimum investment requirements enhance accessibility for a broader audience. Overall, the integration of robo-advisors into the investment landscape reflects a shift towards more efficient and inclusive financial management.

Case study: Wahed-Invest

Wahed Invest, a fintech company based in New York, was established in the USA in 2017 and had amassed 200,000 customers worldwide by 2021. The platform offers digital financial services to retail clients across the globe, focusing on ethical and halal wealth management to address issues of financial inequality and exclusion. With Wahed Invest, individuals can invest their assets in compliance with Shari'ah principles, regardless of the size of their investment (Wahedinvest, 2022).

Wahed Invest has made the concept of robo-investing accessible for individuals seeking Shari'ah-compliant investment options. By offering lower fees compared to traditional wealth management services, it enables those with limited savings to create a portfolio that adheres to Shari'ah principles (Khan, 2022).

As noted by Aris Parviz, head of North American operations for Wahed Invest, establishing harmonized regulations across countries and fostering a supportive business environment are crucial for the growth of emerging Islamic fintech companies (Economist, 2020, p. 4).

II-2-2- Cryptocurrencies

A cryptocurrency is a type of digital or virtual currency that utilizes cryptography for security, making it extremely difficult to counterfeit or double-spend. Most cryptocurrencies operate on decentralized networks powered by blockchain technology, which serves as a distributed ledger maintained by a network of computers. A key characteristic of cryptocurrencies is their lack of central issuance, which means they are typically resistant to government control or manipulation (Jake, 2021).

Bitcoin is the pioneering decentralized cryptocurrency, representing a form of digital asset that employs public-key cryptography to record, sign, and transmit transactions on the Bitcoin blockchain. This blockchain technology was developed specifically for Bitcoin and serves as the foundational framework for other cryptocurrencies, facilitating secure, peer-to-peer transactions that are recorded in a distributed ledger (Council, 2021, p. 2).

Launched on January 3, 2009, by an anonymous programmer or group of programmers using the pseudonym "Satoshi Nakamoto," the Bitcoin network (capitalized "B") functions as a peer-to-peer electronic payment system. It utilizes a native cryptocurrency called bitcoin (lowercase "b") to transfer value online and can also serve as a store of

value akin to gold and silver. This currency does not exist in a physical form; instead, value is exchanged directly between the sender and receiver without the need for banking intermediaries. All transactions are conducted transparently through a distributed ledger technology known as blockchain, which is both immutable and publicly accessible (Coindesk, 2021).

Advantage of cryptocurrencies:

Cryptocurrencies have significantly influenced the landscape of investment and financial decision-making. As a rapidly evolving asset class, they offer unique opportunities for diversification within investment portfolios. Due to their low correlation with traditional assets such as stocks and bonds, cryptocurrencies can help spread risk and serve as a hedge against inflation, making them an appealing option for investors seeking to enhance their portfolio's resilience.

Risks of cryptocurrencies:

Cryptocurrencies offer unique investment opportunities but also come with significant risk including;

Volatility: Cryptocurrencies are a volatile asset class and their prices can fluctuate wildly. This means that investors could lose money if they sell their cryptocurrencies at a time when the market is down.

Lack of regulation: Cryptocurrencies are largely unregulated, which means that there is no government agency that protects investors from fraud or other abuses.

Complexity: Cryptocurrencies can be complex to understand and use. This can be a barrier to entry for new investors.

Therefore, it's crucial for investors to conduct thorough research, understand the technology, and carefully consider their investment goals and risk tolerance before including cryptocurrencies in their portfolios. Additionally, staying informed about the evolving regulatory landscape is essential for making informed investment decisions.

Cryptocurrencies and investment decision:

Cryptocurrencies play a pivotal role in shaping investment decisions by offering a novel asset class that is often uncorrelated with traditional markets. This characteristic allows investors to diversify their portfolios and potentially mitigate risk during market volatility. The decentralized nature of cryptocurrencies also empowers individuals to take control of their investments without relying on traditional financial intermediaries, fostering a more inclusive investment environment. As a result, the growing acceptance and integration of cryptocurrencies into investment strategies are influencing how investors make decisions in today's dynamic financial landscape.

Conclusion

The integration of fintech into investment decision-making has ushered in a transformative era for investors. By leveraging innovative technologies, fintech solutions like robo-advisors and cryptocurrencies have made investing more accessible, efficient, and informed. Robo-advisors streamline the investment process by using

algorithms to tailor portfolios based on individual risk profiles and financial goals, while simultaneously reducing costs and emotional biases.

On the other hand, cryptocurrencies have introduced a new asset class that not only diversifies investment portfolios but also offers protection against traditional market fluctuations. Their decentralized nature and potential for high returns have captured the attention of both novice and experienced investors alike.

As fintech continues to evolve, it holds the potential to further democratize access to financial markets and enhance the quality of investment decisions. However, it is essential for investors to remain vigilant about the associated risks, ensuring that they leverage these tools wisely. Ultimately, the synergy between fintech and investment decision-making can lead to a more inclusive and dynamic financial landscape, paving the way for innovative opportunities that were once beyond reach for many.

Results:

From this study, we can draw the following key findings that highlight the transformative impact of fintech on investment decision-making:

- Cryptocurrencies and robo-advisors are providing investors with access to new investment opportunities.
- Robo-advisors are making it easier for investors to create and manage diversified portfolios.
- Robo-advisors can help to reduce the risk of human bias in investment decisions.
- Cryptocurrencies presents risks related to volatility, lack of regulation and complexity.
- Investors could lose money if the algorithms used by robo-advisors are not accurate.

Recommendations:

Based on the findings of this study, we propose the following recommendations:

- Promote the use of digital technologies to improve the efficiency and transparency of financial markets. This could involve initiatives such as developing digital identity systems, streamlining financial regulations, and encouraging the use of blockchain technology.
- Invest in education and training to develop the skills needed to participate in the digital economy. This is essential for ensuring that MENA countries are able to benefit from the opportunities offered by new technologies such as cryptocurrencies and robo-advisors.
- Create an environment that is supportive of innovation and entrepreneurship. This could involve initiatives such as providing tax breaks for startups and creating venture capital funds.

- By taking these steps, MENA countries policy makers can help to position their countries as leaders in the global financial system and to create new opportunities for economic growth and development.
- Develop a clear and comprehensive regulatory framework for cryptocurrencies and robo-advisors. This framework should be designed to protect consumers and investors, while also promoting innovation and economic growth.
- Encourage the development of innovative financial products and services that leverage cryptocurrencies and robo-advisors. This will help to promote the growth of the cryptocurrency and robo-advisor ecosystems and to make them more accessible to a wider range of people.

References

1. Coindesk. (2021, 10 12). *Bitcoin*. Retrieved from Coindesk: <https://www.coindesk.com/price/bitcoin/>
2. Council, U. N. (2021). *Harnessing blockchain for sustainable development: prospects and challenges*. Geneva: Commission on Science and Technology for Development.
3. Economist. (2020). *Islamic fintech: Reaching the next generation of Muslims*. The Economist Intelligence Unit Limited.
4. European Commission. (2016, 05 03). *Crowdfunding in the EU Capital Markets Union*. Consulté le 12 28, 2021, sur financial stability, financial services and capital markets union: https://ec.europa.eu/info/sites/default/files/crowdfunding-report-03052016_en.pdf
5. IOSCO. (2017). *IOSCO research report on financial technology (fintech)*.
6. Jake, F. (2021, 10 12). *Cryptocurrency*. Retrieved from investopedia: <https://www.investopedia.com/terms/c/cryptocurrency.asp>
7. Julia Kagan. (2023, April 27). *Financial Technology (Fintech): Its Uses and Impact on Our Lives*. Investopedia. <https://www.investopedia.com/terms/f/fintech.asp>
8. Kaji, S., Nakatsuma, T., & Fukuhara, M. (Eds.). (2021). *The Economics of Fintech*. Springer Singapore. <https://doi.org/10.1007/978-981-33-4913-1>
9. Khan, S. (2022, 03 19). *Wahed Invest: a Sharia-compliant investment robo-adviser*. Retrieved from Thenationalnews: <https://www.thenationalnews.com/business/banking/wahed-invest-a-sharia-compliant-investment-robo-adviser-1.695063>
10. Sabir, A. A., Ahmad, I., Ahmad, H., Rafiq, M., Khan, M. A., & Noreen, N. (2023). Consumer Acceptance and Adoption of AI Robo-Advisors in Fintech Industry. *Mathematics*, 11(6), 1311. <https://doi.org/10.3390/math11061311>
11. Wahedinvest. (2022, 03 19). *Bridging the wealth gap through values, finance and technology*. Retrieved from Wahedinvest: <https://wahedinvest.com/about-wahed-inc/>
12. Woo, P. (2018). Fintech: a game changer Transforming sustainable Finance across Asia. *The Asia-Pacific Business forum*. KPMG.
13. World Bank. (2013). *Crowdfunding's Potential for the Developing World*. Retrieved 12 28, 2021, from infoDev, Finance and Private Sector Development Department.: <https://documents1.worldbank.org/curated/en/409841468327411701/pdf/840000WP0Box380crowdfunding0study00.pdf>

14. الجبوري، م. (2014). تكامل المعلومات المالية وغير المالية وانعكاسه على قرارات المستثمرين في سوق العراق للأوراق المالية. رسالة ماجستير في المحاسبة. العراق: كلية الإدارة والاقتصاد، جامعة بغداد.
15. الشبيب ك. (2017). الاستثمار والتحليل الاستثماري. الأردن: دار السيرة للنشر والتوزيع.
16. جميل النجار. (2017). العوامل السلوكية المحددة لقرارات المستثمرين الأفراد وأثرها في أداء المحفظة الاستثمارية، دراسة تحليلية من سوق فلسطين للأوراق المالية. مجلة الجامعة العربية الأمريكية للبحوث، مجلد 3، العدد 2.
17. حسن وليد حسن ، ابتهاج طالب خضر ، و عبد الناصر علك حافظ . (2013). قرار الاستثمار والعوامل المؤثرة في ترشيدها في أسواق الأوراق المالية بالنسبة لصغار المستثمرين. مجلة الدراسات الاقتصادية، المجلد 8، العدد 22.
18. طلال كداوي. (2008). تقييم القرارات الاستثمارية. دار اليازوري.
19. عبد الواحد رواء غازي. (2018). معايير المحاسبة والإبلاغ المالي الدولية ودورها في كفاءة الاستثمارات، دراسة تطبيقية على عينة من المصارف المدرجة في سوق العراق للأوراق المالية. رسالة ماجستير في التقنيات المالية والمحاسبية. العراق، الكوفة.
20. علاء محسن مطلق الدعيمي. (2019). قياس ميول المستثمرين وتأثيرها على عوائد الاستثمار بالأوراق المالية، دراسة تطبيقية في سوق العراق للأوراق المالية. رسالة ماجستير في العلوم المالية والمصرفية. العراق: كلية الإدارة والاقتصاد، جامعة كربلاء.
21. علي النوري، و ناصر ثابت. (2018). تأثير تبني تطور المعايير الدولية للإبلاغ المالي في جودة المعلومات المحاسبية وانعكاسها على كفاءة قرارات الاستثمار في البيئة العراقية. رسالة ماجستير في المحاسبة، كلية الإدارة والاقتصاد. العراق: جامعة بغداد.
22. فارس هباش ، و ريمة مناع. (2018). أثر المعلومات المالية في اتخاذ القرارات الاستثمارية في سوق عمان المالي. مجلة الدراسات المالية، المحاسبية والإدارية، 635.

23. نجاة عيسى ، طارق بلمهدي ، و أحلام بوعزارة . (2022). تداعيات استخدام تكنولوجيا المعلومات والاتصال على القرار الاستثماري لأسواق الأوراق المالية العربية في ظل أزمة جائحة كورونا. مجلة الدراسات المالية والمحاسبية والإدارية، المجلد 9، العدد 1.