ELMİ TƏDQİQAT Oktyabr 2026, Cild: 6, Sayı: 10, s. 131−146
SCIENTIFIC RESEARCH October 2026, Volume: 6, Issue: 10, pp. 131−146
DOI: https://doi.org/10.36719/2789-6919/64/131-146

Effectiveness of the robo-advisor in managing and enhancing investment portfolio returns: analytical and evaluative study of the "Tamra Capital" platform

Drifa Ghezali

Abstract. *This study evaluated the performance of risk and investment optimization strategies implemented on the "Tamra Capital" fintech platform, a pioneer in Gulf Cooperation Council countries, aligned with Saudi Vision 2030 by contributing to liquidity integration in automated Islamic systems and enhancing small-investor participation. We found that the added value of robo-advisors goes beyond investment allocation strategy; it includes rebalancing dynamics and the ability to deliver performance that covers fees and Zakat. The "Aggressive Tamra" strategy recovered strongly from the shock in March 2025 and delivered a return of over 107%; by mid-2026, it outperformed the nearest rival by 23.82%. Based on these findings, it was suggested to implement a multidisciplinary supervisory system; impose cyclical supervision on algorithm transparency; improve reporting of net returns after fees and Zakat; design a variety of Islamic products with a longer investment horizon (beyond two years) that can effectively ride volatility and deliver compounded returns.*

Keywords: *Robo-advisor, Tamra capital, dynamic rebalancing, Islamic investment portfolios, risk management*

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Received: 8 April 2026; Accepted: 17 July 2026; Published online: 30 October 2026
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İnvestisiya portfeli gəlirlərinin idarə edilməsində və artırılmasında robo-məsləhətçinin effektivliyi: "Tamra Capital" platformasının analitik və qiymətləndirici tədqiqi

Drifa Qezali

Xülasə. *Bu tədqiqat Körfəz Əməkdaşlıq Şurası ölkələrində qabaqcıl olan və avtomatlaşdırılmış İslam sistemlərində likvidlik inteqrasiyasına töhfə verməklə və kiçik investorların iştirakını artırmaqla Səudiyyə Ərəbistanı Vizyonu 2030 ilə uyğunlaşan "Tamra Capital" fintech platformasında tətbiq olunan risk və investisiya optimallaşdırma strategiyalarının performansını qiymətləndirdi. Biz aşkar etdik ki, robo-məsləhətçilərin əlavə dəyəri investisiya bölgüsü strategiyasından kənara çıxır; buraya balanslaşdırma dinamikası və haqları və zəkatı əhatə edən performans təmin etmək qabiliyyəti daxildir. "Aqressiv Tamra" strategiyası 2025-ci ilin mart ayında şokdan güclü bir bərpa nümayiş etdirdi və 107%-dən çox gəlir əldə etdi; 2026-cı ilin ortalarına qədər ən yaxın rəqibini 23,82% üstələdi.*

Bu tapıntılara əsasən, çoxsahəli nəzarət sisteminin tətbiqi; alqoritm şəffaflığına dövri nəzarətin tətbiqi; haqları və zəkatı ödədikdən sonra xalis gəlirlərin hesabatlılığının yaxşılaşdırılması; dəyişkənliyi effektiv şəkildə idarə edə və mürəkkəb gəlirlər verə bilən daha uzun investisiya üfüqünə (iki ildən çox) malik müxtəlif İslam məhsulları dizayn etmək təklif edildi.

Açar sözlər: *Robo-məsləhətçi, Tamra kapital, dinamik yenidən balanslaşdırma, İslam investisiya portfelləri, risklərin idarə edilməsi*

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1. Introduction

1.1. Context and Background

The field of finance and banking, as well as financial advisory, has experienced significant innovation through digitalization, given the rapid evolution of technology. Digitalization, however, has evolved beyond a technology upgrade. Digitalization is now a change in how financial products are delivered, enabling innovation, operational efficiency, business growth and improved customer experience in finance and banking.

The implementation of Artificial Intelligence in Banking (AIB) and Robo-advisory has changed the way investment is delivered. It has reduced the need for high-skill, high-time, and high-cost processes. Robo-advisory uses data and algorithms to create personalised investments while reducing 'human' involvement and costs. This has democratised investing, as more people can now invest. Before this, only High-Net-Worth Individuals (HNWIs) could utilise these types of investment products.

"Tamra Capital" is a robo-advisor used in the investment market in Saudi Arabia. It uses artificial intelligence and algorithms to allocate and manage investments in accordance with "Modern Portfolio Theory" (MPT) and Islamic investing.

1.2. Research Problem: Hence, the research problem is raised as follows:

To what extent do robo-advisors on the "Tamra Capital" platform aid investment portfolio management and performance?

The main research question was split into the following sub-questions in order to address the elements of the research:

- What is a robo-advisor? What technology and financial tools does it use to handle investment portfolios?
- What are the differences between a human wealth management service and an automated service?
- How effective is the investment allocation strategy used on the Tamra Capital platform at optimizing investor performance while also managing risk?

1.3. Research Hypotheses:

This research hypothesizes that the robo-advising used on the Tamra Capital platform supports effective investment portfolio management by lowering costs and improving the risk/reward ratio.

1.4. Research Objectives:

- To define what a robo-advisor is, its parts and its functioning;
- To determine the major distinction between conventional and online investing;
- To examine and assess the performance of the investment delivery system used on the Tamra Capital platform regarding both return from the investment portfolio and risk management.

1.5. Research Importance:

There are two main aspects to the importance of this research:

- Theoretical Importance

This research has theoretical importance as it applies theories and ideas behind robo-advisors and FinTech to the current investment landscape in the Arab world as a whole, and specifically in Saudi Arabia. This research is important because it compares the effectiveness and efficiency of algorithmic automated investing with conventional investing and contributes to research on developing investment products in the Arab world.

- Practical Implications

This research has practical implications due to its utilization of real market data from the 'Tamra Capital' platform, which is an applied product within the Gulf and Saudi financial markets. The research can provide a useful yardstick for investors, academics, and management to assess the application of artificial intelligence and algorithms for cost minimization, investment allocation, and return generation.

1.6. Theoretical basis of a robo-advisor and how it operates

1.6.1 Introduction to Robo-advising:

Robo-advising has revolutionized the investment field by bringing Wealth Tech into a new era of financial services. Robo-advising began around the end of the first decade of the 21st century, amid significant financial turmoil and investor dissatisfaction with the investment landscape. Over the last two decades, these robo-advisers have spread globally from their initial implementation in the United States. Though often referred to as financial advisory services, robo-advisers primarily deliver automated investment advice (a subset of financial advice) (Arshi et al., 2026, p. 2).

This type of Robo-advisory service uses the Markowitz Mean-Variance Optimization model. Investors provide information about their investment objectives, time horizon and risk preference via online questionnaires. Using algorithms, it creates a well-diversified investment portfolio tailored to the investor’s objectives and preferences. These funds may consist of low-fee Exchange-Traded Funds (ETFs) (Bhattacharjee, 2026, p. 955).

Robo-advisory has become more popular over the years, and since 2008, the number of Robo-advisory services has increased substantially. This has helped promote digital finance and FinTech and made

financial products and services more available and affordable to most investors who previously did not receive appropriate investment services (Kekana, 2025, p. 365).

1.6.2. Definition of Robo-Advisor

Robo-advisors are an application of algorithms in investment and wealth management services that provide low cost and increased availability with reduced human involvement (Akhtar et al., 2025, p. 1).

Robo-advisors are online applications that gather customer data and use systems built on cloud computing, artificial intelligence and Application Programming Interfaces (APIs). Robo-advisors can link to external data, such as financial networks and pathways in the marketplace, data pipelines and news sources and operate by ingesting and processing that data (Virk & Al-Khalidi, 2026, p. 222).

A robo-advisor is an artificial intelligence application that enables retail investment globally. The robo-advisor uses investor cognitive patterns and transaction data to reduce behavioral biases in finance, such as overconfidence and loss aversion. The robo-advisor can also address substantive issues in applying behavioral knowledge to finance for early identification of financial distress and crises, as well as incorporating behavioral knowledge into finance (Kulkarni et al., 2025, pp. 2–3).

A robo-advisor can therefore be described as a system that uses artificial intelligence to deliver financial recommendations and handle investment decisions for clients, providing greater transparency and lower fees.

1.6.3. Architecture of an AI-based robo-advisor

An intelligent robo-advisor can be composed of the following 5 core elements that combine to deliver autonomous investment decisions (Virk & Al-Khalidi, 2026, pp. 222–223):

- Data Inputs: Market, macroeconomic, news (NLP) and alternative data aggregation
- Data Processing: Transforms raw data into analytically ready data through data cleaning and processing
- AI Engines: Portfolio rebalancing, portfolio modelling and client risk profiling
- Human in the loop: Portfolio creation and approval of high-risk decisions
- Governance and Risk: Algorithmic interpretation, data security implementation and process governance

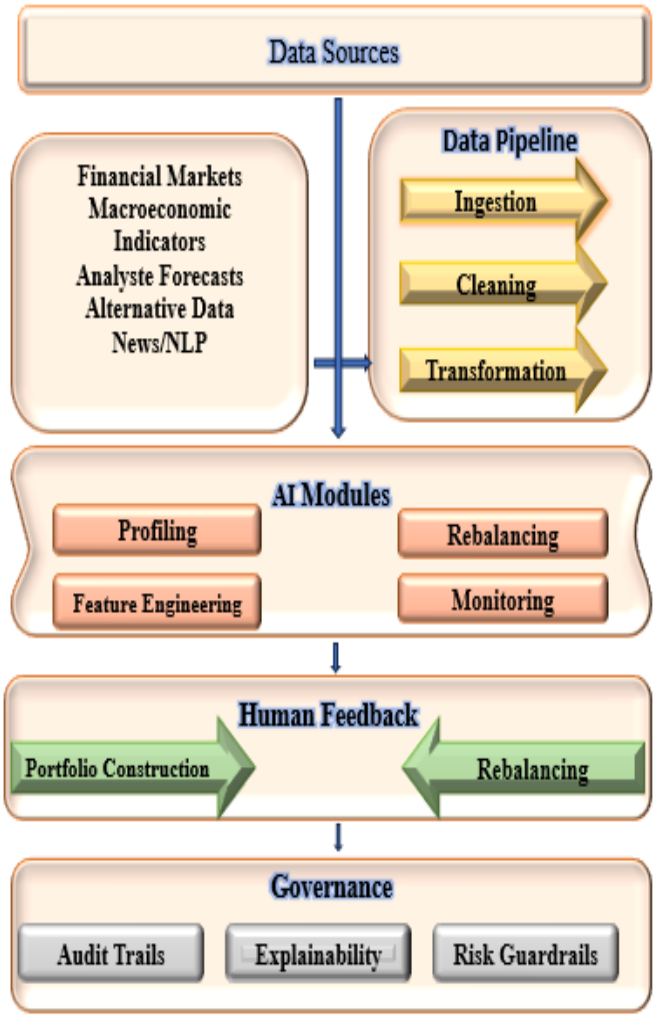


Figure 1
Robo-advisor architecture

Source. Prepared by the researcher based on (Virk & Al-Khalidi, 2026, pp. 222–223).

1.6.4. Operation of Robo-Advisors

Robo-advisors use four key mechanisms to deliver optimal, precise investment services (CUSP Wealth, n.d.).

- Risk Profiling:

Data Collected: Beyond formal data, the questionnaire also gathers investment objectives, investment horizon, income consistency and mental/emotional/financial tolerance for losses (tolerating a 20% loss in the investment portfolio, for example).

Additional Factors: Short-term liquidity requirements (2-3 years) and religious/law requirements (for example, Shariah-compliant investments) are also factored in.

Resulting Profile: A portfolio ranging from conservative and defensive to growth-oriented is assigned to the investor.

- Portfolio Construction:

Investment Approach - Passive with ETFs using "Modern Portfolio Theory," which attempts to provide the maximum return for a given amount of risk.

Types of Assets held - Portfolios may hold stocks, commodities, REITs and other alternative assets. Conservative portfolios may hold only fixed-income assets. A portfolio can hold a wide variety of asset types.

Objective Allocation - Assets are allocated using a disciplined method that eliminates emotional or behavioral biases that might impede performance during market volatility.

- Rebalancing & Monitoring:

Tracking and correction of deviation - The portfolio is tracked over time to correct any shift in asset weights due to market volatility (for example, if the weight in stocks increases past the desired level).

Adjustment method: Threshold adjustment (2%-3% off threshold) is more effective than time-based adjustments because transactions are made immediately to correct an offset and no excess fees are incurred.

Practical use: This approach suits active traders or people with busy schedules who do not have time to check daily.

- Goal-oriented investing:

Connecting investments to a goal: Instead of connecting investments only to the equity markets, this method connects investments to progress toward a specific goal (education, home ownership, retirement, etc.). This increases the investor's accountability to their investments.

Adjustment to asset allocation: As the investor nears their goal date, the investment strategy shifts into lower-risk investments to help protect the value already achieved.

2. Methods

2.1. Research Methodology

To address the research problem, a descriptive research method was used to develop a theoretical research framework. Information and data were gathered on robo-advisory services and on data analysis techniques used to examine the performance of investment portfolios available on the 'Tamra Capital' platform from the relevant research literature.

The research is sequenced into three axes:
Axis I: Theoretical basis of a robo-advisor and how it operates
Axis II: 'Tamra Capital' platform - concept, services and investment allocation

Axis III: Analysis of the performance and efficiency of investment portfolios on the 'Tamra Capital' platform

2.2 Differences between Traditional and Digital Investing

Problems with the traditional investment advice process include barriers that prevent small investors from participating. These issues include financial and cost barriers. Traditional financial advisers can charge up to 1% or more per year of assets under management. For a $50,000 portfolio, this would equate to $500 per year. This amount reduces the investor's return, and the effect compounds over time. Financial institutions also exhibit implicit exclusion by having a minimum balance of $100,000 to $1 million and excluding many small investors (Bhattacharjee, 2026, p. 955). The key differences between traditional and robo-advisers are presented in the following table:

Table 1
Differences between a robo-advisor and a traditional human advisor

Criteria	Robo-Advisor	Human Advisor	Advisory & Analytical Impact
Cost Efficiency & Fees	Charges low fees (around 0.25% of assets under management).	Works with relatively high commissions (1%–3%).	Low fees positively affect portfolio compound returns in the long term.
Accessibility & Financial Democracy	Allows investment with very low minimums (or none).	Imposes high minimum investment thresholds, including operating costs.	Expands the investor base and enables small investors to enter financial markets.
Psychological Factor (Discipline)	Adheres to programmed algorithms, free from emotions and impulses.	May be influenced by psychological factors such as fear or optimism during crises.	Ensures more disciplined, objective investment decisions, free from emotional tendencies.
Operational Scalability	Can manage large numbers of portfolios and rebalance them automatically.	Limited capacity, serving only a certain number of clients per advisor.	Provides portfolio management services to a wide audience with equal time efficiency.
Performance & Financial Assessment	Excels in stable markets, performs during crises based on foundational expertise.	Excels in complex financial planning; performs during crises, relying on expertise.	Superior overall performance in selecting financial instruments based on the investor's financial situation.

Source. Prepared by the researcher based on (FasterCapital, n.d.).

The above table shows that the robo-advisor provides significant advantages in cost, objectivity and scale. However, a human wealth manager has advantages in qualitative risk analysis and handling more sophisticated financial products. This suggests a future for an integrated financial services industry.

2.3. "Tamra Capital" - concept, services and investment allocation

"Tamra Capital" represents an innovative application of fintech to the Arab world, particularly within the Gulf Cooperation Council member states, in the context of Saudi Vision 2030. "Tamra Capital" has broken through financing barriers for small investors, allowing them to invest small sums and withdraw

automatically. Algorithmic solutions have also added liquidity to the national financial system while fully complying with Islamic Shariah requirements.

2.3.1 Description of the "Tamra Capital" Platform and its Services

Tamra Capital is a Saudi entity licensed by the Capital Market Authority to offer investment management and advisory services as of November 23, 2021 (License No. 30-20212). The Capital Market Authority has approved Tamra Capital to begin operations, and it has deployed a secure, automated platform to expand investment opportunities for investors and address the limitation of being restricted to a single segment. Through Tamra Capital, investors can invest accurately and easily in local and international investment funds, with a focus on Islamic Shariah-compliant Exchange-Traded Funds. (Tamra Capital, n.d.).

Tamra also received a license from the Saudi Central Bank ("SAMA") for deferred payment services within the Kingdom of Saudi Arabia on June 21, 2023. Tamara also received a license for personal consumer loans on February 2, 2025, under No. (95/202502). Tamara's primary business is generating and managing consumer receivables in installments through a network of stores within the Kingdom of Saudi Arabia. (Tamara, 2025)

Tamara operates in Gulf Cooperation Council countries, including Kuwait, the UAE, and Saudi Arabia. The company also works with major brands like IKEA and SHEIN and integrates with many online marketplaces, including Shopify and WooCommerce (KPMG, 2024, p. 14). Tamara is a unicorn company in Saudi Arabia and needs large capital to support its current growth and future capital appreciation. In the fourth quarter of 2023, Tamara raised $340 million USD (1.27 billion SAR) in a Series C round led by Sanabil Investments and SNB Capital. After this funding event, Tamara was awarded "Unicorn" status with a valuation of $1 billion USD (Fintech Gate, 2023).

Tamra Capital provides investment services using a scientific method and avoids making unrealistic claims. Therefore, it suits investors who value financial responsibility and transparency. Tamra offers various core investment services. These are as follows (Tamra Capital, n.d.):

- Invest in local and international investment funds.
- An online secure system enabling completely automated investment management.
- Investing in Shariah-compliant Exchange Traded Funds.
- Providing professional financial analysts to aid clients in investment decisions and offer professional investment advice.

2.3.2 Steps for Investing on the "Tamra Capital" Platform

Investing on the Tamra platform involves building wealth via investments using their "Robo-Advisor". This system automates investments, provides personalised recommendations and invests based on the client's data and objectives at a low subscription cost. The platform requires no minimum or maximum investment, and an annual compounded return of up to 12% is possible, depending on the investment portfolio selected. The investment process on the Tamra platform can be broken down as follows (Tamra Capital, n.d.).

- Registration: Investor information is quickly authenticated via the National Unified Access, and the account is created immediately. An IBAN is generated within minutes.

- Investment Objective: An investment objective is established via a series of questions, and a suitable investment fund is chosen based on the desired degree of risk.

- Deposit: A variable amount can be transferred to the investment account, where funds will be invested within a maximum of 5 business days.

- Management: Ongoing management and assistance are provided, including automatic portfolio rebalancing, reinvestment of distributed returns, and periodic statements.

2.3.3 Investment Distribution Strategy:

Tamra provides 8 investment funds that cater to varying risk levels. These funds allow users to enter the investment world and select the right mix of investment products (cash, gold, real estate, sukuk, stocks) to reach their investment objective. (Tamra Capital, n.d.).

Table 2
Types of investment portfolios on Tamra and Their asset allocation by risk level

Portfolio	Risk Level	Asset Allocation and Strategy
Emergency Portfolio	Very Low	Concentrates entirely in money markets to provide high liquidity and capital protection with low returns; suitable for short-term goals.
Conservative Portfolio	Low	Focuses on sukuk to reduce volatility, with balanced allocations in US stocks, real estate, and gold to achieve growth and hedge against inflation.
Moderate Portfolio	Medium	Sukuk constitute half (50%) to control volatility, while the remaining portion is distributed among US, developed, and emerging market stocks, along with gold and real estate.
Growth Portfolio	Medium to High	Relies heavily on equities to boost returns, with partial protection provided through sukuk and gold, suitable for those willing to take higher risks.
Aggressive Portfolio	High	Sukuk allocation decreases in favor of increased equity shares (US, developed, and emerging markets), maintaining moderate allocations in real estate and gold to increase expected returns.
Adventurous Portfolio	Very High	Concentrates primarily on US equities to maximize returns against high risk, with very low allocations to sukuk, real estate, and gold.
Saudi Portfolio	Specialized (Local)	Invests 100% in Saudi equities to directly benefit from the growth of the local economy and the Saudi market.
Flexible Portfolio	Customized	Gives you complete freedom to determine investment proportions in available ETFs to design your portfolio according to your own vision.

Source. Prepared by the researcher based on (Tamra Capital, n.d.).

2.3.4 Opportunities and Challenges of Using the "Tamra Capital" Platform

- Interdisciplinary collaboration (data science, behavioral science, economics, law) needed for regulation to ensure economies of scale for financial efficiency and market integrity;

- Mobile, simplified, and low-cost access to wealth management platforms is enabling less experienced users to receive automated advice;
- Falling management fees through passive investments are revolutionizing wealth management via digital advisory platforms;
- Increasing competition, but large investment banks are focusing on the inclusion of robo-advisors in their own digital strategies due to the increasing size and market of robo-advisors predicted via the "Delphi method";
- Young retail investors (18-29 years) need funds and have low financial literacy, which precludes them from engaging with a human wealth manager. Automated platforms are a great fit for them due to cost.
- Data security and cybersecurity issues due to the storage and collection of investor financial information. Data breaches and cyberattacks can harm digital wealth management platforms' reputation and cause investor losses. (Kumari et al., 2024, pp. 46–47).

Below is a list of the most important system and cybersecurity risks associated with robo-advisors:

Table 3
Classification of cybersecurity threats in the field of Robo-Advisory

Cybersecurity Threat Category	Explanation and Definition	Applied Scenario / Case Study
Identity and Access	Unauthorized exploitation of credentials and breach of permissions to bypass security levels.	Leakage of API Keys, enabling hackers to control and modify client portfolios.
Data and Algorithm Integrity	Manipulating inputs or practicing "Data Poisoning" to confuse automated decision-making mechanisms.	Injecting misleading or incorrect market data, causing algorithm deviation and distorted asset allocation strategy.
Provider Concentration and Reliability Risks	Excessive reliance on a limited number of technology providers, creating a Single Point of Failure.	Sudden outage of the platform's cloud services, resulting in a total paralysis of automatic portfolio rebalancing operations.
Information Manipulation	Employing misleading media content or generating fake news with AI to directly influence algorithmic decisions.	Spread of fabricated financial rumors leading to coordinated mass sell-offs among robo-advisor platforms.
Systemic Risk Propagation	Transfer of security incidents and breaches across interconnected networks and financial institutions.	A security breach of the Custodian, disrupting services and workflows for several linked investment platforms.

Source. Prepared by the researcher based on (Virk & Al-Khalidi, 2026, p. 224).

2.4. Performance Simulation Model

Auto-investment systems available on Tamra Capital are tested by simulating an initial one-off investment of 10,000 SAR made on 1 January 2023, with no cash added or withdrawn over the three-and-a-half-year investment period, until 30 June 2026.

3. Results

3.1. Performance of the main portfolios between 2023 and the end of mid-2026

In order to test the performance of the auto-investment systems present on the Tamra Capital platform, a simulation of investment is conducted by initially depositing 10,000 SAR as a one-off investment on the 1st of January 2023 and assuming that no further cash is deposited or withdrawn during the three-and-a-half-year investment period ending on the 30th of June 2026.

Table 4

Performance indicators for investment portfolios

Portfolio	Investment Value at End of Period (SAR)	Total Return (%)	Estimated Monthly Growth Rate	Volatility Level
Adventurous	20,740	107.40	Highest Growth Rate	Very High
Aggressive	17,927	79.27	High Growth	High
Moderate	16,987	69.87	Balanced Growth	Medium
Conservative	15,091	50.91	Safe Investment Growth	Low and Stable

Source. Prepared by the researcher based on Tamra Capital (2026).

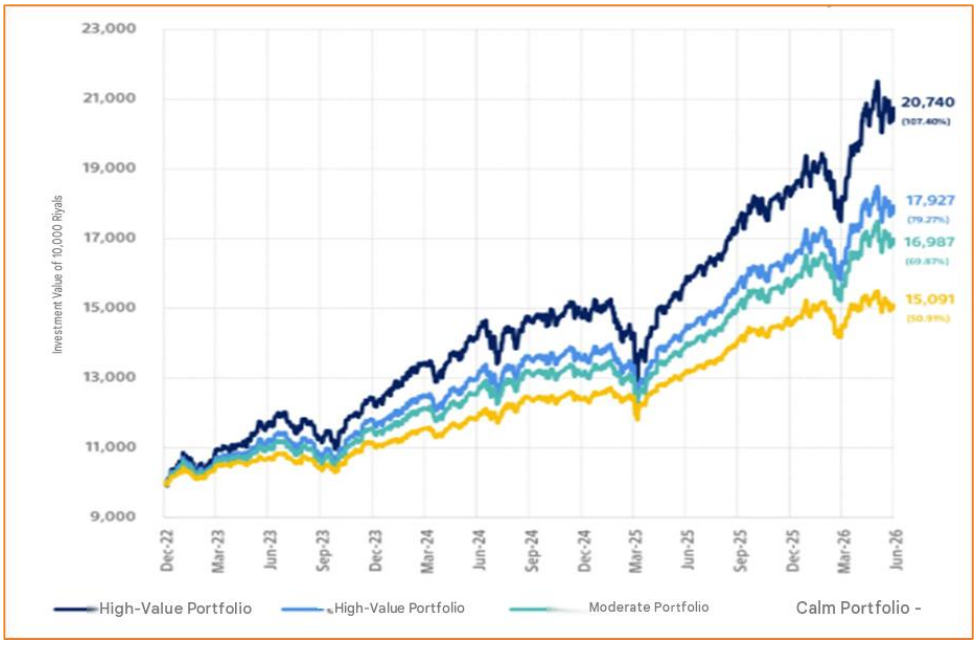


Figure 2

Evolution of an Initial Investment of 10,000 SAR by Portfolio Risk Level (January 2023 – June 2026)

Source. Tamra Capital (2026).

From the table and figure above, it is noted that:

Fan-Out Effect: All the portfolios start from the same value (10,000 SAR on December 22). After that, the riskier portfolios gradually start to separate. The return difference between the highest-return portfolio (Adventurous) and the lowest-return portfolio (Conservative) is 5,649 SAR, or a 56.49% difference. This demonstrates the risk premium earned by taking risk and illustrates the Risk-Return Tradeoff. General Trend and Short-term fluctuations: All portfolios show an upward trend. This could reflect an increasing trend in the underlying assets that make up these portfolios over the medium or long term, or an overall positive economic environment. There are also periods of decrease (March 2025, March 2026). During these times, the Adventurous portfolio shows the largest decrease, while the Conservative portfolio has remained relatively constant. This demonstrates that the Adventurous portfolio is more sensitive to shocks than the Conservative portfolio. Short term vs Medium term: Over the short term (between December 22 and March 23), performance differs little across the portfolios. Over the medium term (over two years), the accumulation of increases in the underlying assets becomes evident. This shows that high-risk portfolios need a long time frame to manage these variations and reach desired returns.

3.2. Comparing the Performance of the Tamra Capital Portfolio with Counterparts on Other Robo-Advisor Platforms

3.2.1. Performance of Portfolio with One Initial Deposit Without Fees and Zakat over the Period (January 2023 - June 2026)

This comparison compares the performance of the "risk-seeking" portfolios (i.e., the highest-risk-level portfolios) offered by Tamra Capital with those offered by other robo-advisor platforms to determine whether Tamra Capital's investment and portfolio management tools and skills outperform other platforms. For this comparison, a 10,000 SAR initial deposit is made on January 1st, 2023, as a lump sum, with no further deposits. Fees and Zakat are also not deducted. The investment is held for three and a half years until the end of the first half of 2026. An example of this is shown in the figure below:



Figure 3

Evolution of a 10,000 SAR Investment on the Tamra Capital Platform and Competing Platforms Covering Fees and Zakat (January 2023 – June 2026)

Source. (Tamra Capital, 2026).

As mentioned in the above figure, excluding the impacts of fees and Zakat, the evolution of performance for the period (2023 - mid-2026) can be divided into three stages as follows:

- Convergence and Setup stage (2023): All platforms experienced a convergence in performance and results in the first year. Overall performance also increased, with minor readjustments (such as the drop in September 2023).
- Widening and reaction to economic cycles stage (2024 - 2025): From 2024, the "Adventurous Tamra" portfolio started to diverge from the other platforms, with increasing investment value, with "Platform 3" also increasing at an increasing rate whilst Platform 1 and 2 increased at a slower rate.

All funds were down in March 2025, but Tamra Capital showed strong investment resilience and a solid recovery from the crash, with a better recovery and continued gains through June 2026.

- Structural Separation and Performance Maximization stage (January - June 2026): By the end of June 2026, the difference between the Tamra Capital fund and the rest was at its maximum. Tamra Capital more than doubled the initial investment and outperformed the next-best-performing fund (Platform 3) by 23.82% (107% vs. more than doubling). Tamra Capital also outperformed the lowest-performing fund (Platform 1) by 45.41% during this period.

This is due to variations in rebalancing techniques and/or algorithms used by the platforms. As a result, by mid-2026, a large accumulated gap favors Tamra.

3.2.2. Portfolio Performance with One Initial Deposit Including Fees and Zakat for the Period (January 2023 - June 2026)

For greater practicality, this aspect evaluates the real net performance of the "risk-seeking" (highest risk) portfolios for Tamra Capital and other platforms for which data is available. For this, a lump sum of 30,000 SAR is deposited on January 1, 2023 and left for 3.5 years until June 30, 2026. Management fees (on any investment less than 60,000 SAR with Tamra Capital, an annual fee of 240 SAR is charged and deducted monthly) and Shariah Zakat are deducted monthly and annually, respectively, as shown in the figure below:



Figure 4

Evolution of Net investment value of 30,000 SAR on the Tamra capital platform and competing platforms including fees and zakat (2023 - 2026)

Source. (Tamra Capital, 2026).

As shown in the chart above, over the long term (2023 through 2026), the Tamra portfolio continues to outperform all other portfolios by a reasonable margin. This is good, as it demonstrates the power of the allocation and rebalancing strategies employed by the Tamra portfolio to improve the investor's net return. When considering the performance path with fees and Zakat included for the period (2023 - mid-2026), three distinct stages can be observed:

The phase of convergence and first fee application (2023). All systems performed in lockstep, reacting similarly to global and local news. From 2024 to 2025, the phase shifted to separation and fee-structure unwinding. The "Adventurous Tamra" fund significantly outperformed the others. Returns were high enough to absorb fees and Zakat effectively. The other funds clearly showed the impact of fees and cost reductions. The Tamra fund also showed more recovery from the April 2025 correction. In the first half of 2026, the fund achieved structural maturity and became profitable on a net basis. The fund returned over double the initial investment (102.50%) and returned 33.94% and 48.93% more on a net basis than Platforms 1 and 3, respectively. This indicates much lower fees and costs relative to return on invested capital. Zakat and management fees have been stripped from all numbers.

4. Discussion

4.1. Discussion of Findings

Tamra Capital has clearly provided investment management services via robo-advisors. The high returns achieved by Tamra's funds over the research period (December 2022 - June 2026) were not random; they resulted from planning, persistence and superior execution in a highly competitive environment. However, what makes Tamra distinctive is not only its performance but also the nature of the service it provides, including transparency, fundamental analysis, understanding customer requirements at varying levels, risk management and so on. The main conclusions can be listed as follows:

- Tamra is a robo-adviser that uses artificial intelligence to provide financial services, including investment management and financial advice. It provides lower fees and greater transparency to clients;
- Tamra provides investment through 8 funds (Emergency, Conservative, Moderate, Growth, Aggressive, Adventurous, Saudi and Flexible). These funds conform to Islamic Shariah and provide investment at differing levels of risk in order to facilitate portfolio allocation;
- The emergence of robo-advising has been driven by economics, regulation, behavioural analysis, data and analysis of markets. These factors have also resulted in the requirement for regulation that supports market integrity and financial values;
- For investment strategies (especially higher risk strategies), two years are required to capture the true return differential. While short-term movements and shocks can be mitigated over two years, the opportunity for capital and compound returns can be exploited;
- Analysis of the core funds over the period (2023 - June 2026) indicates a medium- to long-term risk premium for increasing risk. The Adventurous fund displayed a 56.49% return differential compared to the Conservative fund. However, this relationship is shock-sensitive, and there is a greater risk of drawdowns for higher-risk funds during market shocks as opposed to lower-risk conservative funds;
- It has been determined through this research that the value and uniqueness of robo-advising lies not only in initial portfolio allocation but also in the management of return, risk and rebalancing that can account for fees and the cost of Zakat. The quality of these processes distinguishes the robo-adviser. This is clearly evident in the "Tamra Adventurous" fund's response to the shock in March 2025 and its ability to maintain value. The fund achieved returns in excess of 107% and consistently outperformed the next-best-performing fund by 23.82% in mid-2026.

4.2. Recommendations

Based on the findings of this research, we recommend the following:

- Adopt an interdisciplinary regulation. A regulation that combines law, economics, behavioral and AI elements would allow innovation in finance while maintaining market integrity.
- Introduce requirements for algorithm transparency (algorithm auditing). Algorithms involved in risk management and rebalancing would benefit from periodic audits to ensure they can cope with market shocks and adequately serve investor interests during a market crash.
- Enhance disclosure of fees and Zakat in robo-investment products. Robo-investment products should calculate fees and Zakat automatically and transparently so investors can determine the net return on their investments.
- Enhance shock and recovery capability in algorithms. Beyond the initial investment choice, algorithms should also consider shock and recovery capability.
- Improve market efficiency through economies of scale. Lowering fixed costs and passing any resulting savings to investors would support investor protection while also enhancing market competition.
- Enhance the availability of Shariah-compliant investment products. A variety of Islamic investment products across different risk levels would cater to both conservative and more aggressive investor preferences.
- Adopt a long time horizon. A time horizon of more than two years (especially for riskier investments) would allow investors to cover market cycles while also benefiting from compounding returns on their invested money.
- Adopt net return as a performance measure for robo-advisers. Measure performance between different robo-advisors using net return after fees, Zakat and all other charges.

5. References

Akhtar, F., Akhtar, S., & Laeeq, M. (2025). Evolution of robo-advisors: A literature review and future research agenda. *International Journal of Consumer Studies, 49*(6), Article e70131. https://doi.org/10.1111/ijcs.70131

Arshi, T., Pandey, L., Virmani, N., Bhandari, D., & Jagtap, S. (2026). Unveiling the key enablers of robo advisor using fuzzy-AHP approach: A decision-making framework. *Journal of Open Innovation: Technology, Market, and Complexity, 12*(2), Article 100772. https://doi.org/10.1016/j.joitmc.2026.100772

Bhattacharjee, K. (2026). Closing the wealth gap: How robo-advisors could reduce financial inequality. *International Journal of Advanced Research, 14*(1), 953–965. https://doi.org/10.21474/IJAR01/22627

CUSP Wealth. (n.d.). *Robo-advisor vs financial advisor: Which is right for you in the UAE?*. https://cuspwealth.com/blog/robo-advisor-vs-fin-advisor

FasterCapital. (n.d.). *Robo advisors and wealth management: Robo advisors vs human advisors—Which approach wins in business?*. Retrieved August 11, 2026, from https://fastercapital.com/arabpreneur/

Fintech Gate. (2023, December 18). *Saudi Tamara for deferred payment secures $340 million funding and joins the unicorn club*. https://fintechgate.net/2023/12/18

Kekana, M. K. (2025). The role of robo-advisors in digitally transforming retirement planning in South Africa: A literature review. *International Journal of Business Ecosystem & Strategy, 7*(5), 362–374. https://doi.org/10.36096/ijbes.v7i5.970

KPMG. (2024). *Unlocking the future: An overview of the FinTech opportunity in Saudi Arabia*. https://assets.kpmg.com/content/dam/kpmg/sa/pdf/2024/09/unlocking-future-fintech-sa.pdf

Kulkarni, M. S., Patil, K. P., & Pramod, D. (2025). The role of robo-advisors in behavioural finance, shaping investment decisions. *Cogent Economics & Finance, 13*(1), Article 2571403. https://doi.org/10.1080/23322039.2025.2571403

Kumari, A., Iqbal, N., & Fazil, S. (2024). Determinants shaping choices for robo and human advisors in the German financial market: The analysis of retail consumers. *International Journal of Management Research and Emerging Sciences, 14*(4), 44–63. https://doi.org/10.56536/ijmres.v14i4.668

Tamra Capital. (n.d.). *Tamra Capital*. Retrieved August 7, 2026, from https://tamracapital.sa/#about

Tamra Capital. (2026). *Performance of Tamra Capital portfolios*. https://tamracapital.sa/

Virk, N., & Al-Khalidi, M. (2026). Cybersecurity risk and robo-advisory. In N. Nahidi & A. Zarifis (Eds.), *AI, FinTech, and the future of robo-advisory* (pp. 221–247). Springer. https://doi.org/10.1007/978-3-032-18109-1_10