

---

## Smart Monetization: Gen Z Teenagers' Tiktok and Youtube Income Optimization Through Portfolio Theory

---

**Debi Carolina<sup>1</sup>, Muhamad Helmi<sup>2</sup>, Faitullah<sup>3</sup>**

Sekolah Tinggi Ilmu Ekonomi Mulia Darma Pratama<sup>1,2</sup>,

Akademi Keuangan dan Perbankan Mulia Darma Pratama<sup>3</sup>

E-mail: [debi\\_carolina@stie.muliadarma.ac.id](mailto:debi_carolina@stie.muliadarma.ac.id)<sup>1</sup>, [muhamad\\_helmi@stie.muliadarma.ac.id](mailto:muhamad_helmi@stie.muliadarma.ac.id)<sup>2</sup>,  
[faitullah@akubank.muliadarma.ac.id](mailto:faitullah@akubank.muliadarma.ac.id)<sup>3</sup>

### ABSTRACT

*This study explores the application of Markowitz Portfolio Theory to manage the volatile income of Gen Z teenagers who earn money through TikTok and YouTube monetization. Using a quantitative approach and questionnaire-based data, the research examines how diversification principles can stabilize earnings and promote smarter financial behavior among young creators. The findings indicate that combining income streams from both platforms can reduce income volatility and improve financial sustainability. This study contributes to the enhancement of digital financial literacy by illustrating how portfolio diversification principles can guide teenagers in managing their earnings more effectively. The implications emphasize the importance of early investment education and the role of financial institutions in developing youth-focused financial literacy programs.*

*Keywords: Markowitz Portfolio, Gen Z, Monetization, Investment Diversification.*

### INTRODUCTION

Digital Financial Literacy has created new economic opportunities (My, 2023), especially for Gen Z youth who are adept at utilizing technology and social media. Platforms such as TikTok and YouTube are not only a means of expression but also a promising source of income (Risnawati & Studi Manajemen, 2021). Data from We Are Social (2024) shows that Indonesia has more than 143 million YouTube users and 109 million TikTok users, with the majority of users aged 16-24 years. Through monetization features such as AdSense, endorsement, affiliation, and live gifts, teenagers are now able to earn millions to tens of

millions of rupiah per month (Li et al., 2024). However, problems arise when teenagers' significant income is used more for lifestyle consumption rather than long-term investment. The OJK 2023 survey shows that the financial literacy of Indonesian teenagers is only 35%, lagging behind Malaysia (60%) and Singapore (70%). This low financial literacy causes adolescents to lack understanding of risk management and optimization of investment returns (Lusardi & Mitchell, 2014). Recent empirical studies in Indonesia have shown that financial literacy and risk tolerance significantly influence investment decisions among

Generation Z, with PLS-SEM analysis of a sample of 120 respondents revealing a strong positive correlation (Tubastuvi et al., 2024). Additionally, specific survey data from the United States indicates that TikTok and Instagram users among Generation Z tend to experience higher financial satisfaction when using social media as a source of investment advice (Olajide & Pandey, 2024). Markowitz Portfolio Theory (1952) offers a solution through the concept of risk diversification by combining various assets that have low correlation. This strategy can help novice investors, including Gen Z teens, to maximize returns with controlled risk (Mba et al., 2022). The application of portfolio theory allows teens with income from TikTok and YouTube to allocate income to various investment instruments according to risk profile. However, studies on this application specifically for teenage digital creators, especially Gen Z, are still very limited. As social media income is volatile, portfolio theory could potentially be a strategic solution for their financial risk management. This suggests a research gap that needs to be addressed. According to (Anggraini, Puspa & Cholid, 2022, Viana et al., 2022) teenagers who have basic knowledge about investment diversification tend to be wiser in managing their income. Investment diversification is a key principle in portfolio theory proposed by Markowitz (1952), emphasizing the importance of spreading investments across various financial instruments

to reduce risk. However, understanding of this concept is still low among teenagers, especially in Palembang City, which has a rapidly growing creative economy. In 2024, the economy of South Sumatra Province grew by 5.03%, with the provision of accommodation and the eating and drinking sector recording the highest growth of 9.39% (BPS Prov. Sumatera Selatan, n.d.). This growth reflects increased economic activity, including in the creative economy sector, which involves teenagers as the main actors. However, the level of financial literacy among Palembang youth still requires special attention. The South Sumatra Provincial Government targets the level of financial literacy and inclusion to reach 90% by 2024 (Husnul Iga Puspita, n.d.). Although financial education efforts have been made, such as financial literacy activities organized by the Indonesian Securities Companies Association in collaboration with the Indonesia Stock Exchange in Palembang in April 2024 (Asosiasi Perusahaan Efek Indonesia, n.d.). The challenges in improving financial literacy among teenagers are still significant. The Financial Services Authority and the Central Bureau of Statistics have also conducted a National Survey on Financial Literacy and Inclusion (SNLIK) in 2024 to measure the level of financial literacy and inclusion of Indonesians Indonesia (Otoritas Jasa Keuangan, n.d.). However, specific data on the financial literacy of adolescents in Palembang, especially those involved in the digital creative

industry, is still limited. Therefore, this research is important to explore the extent to which teenagers in Palembang City understand and apply the concept of investment diversification based on Markowitz portfolio theory in managing their income. The results of this study are expected to provide insight into the financial literacy patterns of adolescents in the digital era and provide recommendations for financial institutions and local governments in improving investment education for the younger generation in Palembang City.

In the digital age, social media platforms such as TikTok and YouTube have become a major source of income for many Gen Z teens. As the creator economy develops, content monetization becomes an increasingly complex and dynamic aspect (Kopf, 2020). In recent years, TikTok and YouTube have become the main source of income for Gen Z teens, reflecting the shift towards a creator-based digital economy.

Monetization, namely Social media monetization, refers to the process of generating revenue through social media platforms by utilizing available content, audiences, or features (Bruce et al., 2023). Indicators of social media monetization are advertising revenue, product or service sales, sponsorship and endorsement, subscriptions or donations, and affiliate marketing (Hariyanto & Putra, 2022, Nur'aini, 2021, Ye et al., 2021).

Income, namely income from YouTube and TikTok monetization, where someone has the opportunity to make money from the number of people viewing videos and advertisements displayed, YouTube and TikTok users who upload content will be fitted with ads from Google, then the content creator will get wages (Fitriani, 2021).

A portfolio is a collection of investment instruments formed to fulfill a general investment objective. In making investment decisions, usually rational investors will choose the optimal portfolio, because they always want the maximum level of return from their investment (Bunga Wahyu Ningsih & Muhamad Helmi, 2021). Portfolio indicators are seen from investment return and risk (Kiky et al., 2022).

This research topic has been conducted by several previous studies, but has not comprehensively integrated aspects of financial literacy, social media income, and portfolio-based investment strategies. As the majority of young people in Asia, including in Indonesia, have a low level of financial literacy, they tend to have difficulties in making rational investment decisions (Zhu, 2024, Lal et al., 2023, Trivani & Soleha, 2023, Khan et al., 2024).

According to (Rieder, Borra, Coromina, et al., 2023), content creators are strongly influenced by platform algorithms and content performance. However, the focus of these studies only reaches the income aspect, without touching on how

creators manage their income for long-term needs such as investment (Hua et al., 2022). The study (Chai et al., 2023) emphasizes the importance of income diversification for digital businesses as a risk mitigation strategy, but the study does not target individual teenagers or digital creators as the research population.

Research conducted by (Sriyono et al., 2021) and (Kurniati et al., 2025) shows that portfolio theory is effective for determining stock investment combinations for novice student investors. However, it has not considered non-conventional sources of income such as digital content monetization. Although digital financial literacy is increasing, its impact on the investment practices of Indonesia's young generation is still minimal. Based on the results of these studies, it can be concluded that there is no research that directly applies Markowitz Portfolio Theory to manage Gen Z teenagers' digital income from TikTok and YouTube. In addition, there is no practical model based on primary data specifically designed for teenage creators as digital economy actors.

The novelty of this research lies in the direct application of Markowitz Portfolio Theory to volatile digital income, with a focus on Indonesian Gen Z teenagers. This research develops a return and risk-based investment diversification model as an applicable digital financial literacy guide, while providing scientific contributions and practical outputs for young content creators in

managing finances in a smart and sustainable manner.

Based on this background, this study aims to analyze the application of portfolio theory in the investment management of Gen Z teenagers who earn income from TikTok and YouTube. Furthermore, this study seeks to formulate appropriate diversification strategies and provide practical recommendations to improve teenagers' financial literacy. Thus, it is hoped that teenagers will not only be able to monetize their content intelligently, but also manage the proceeds wisely for the future:

How to analyze the application of Markowitz Portfolio Theory from Tiktok and YouTube income in the investment management of Gen Z teenagers?

What is the most suitable investment diversification strategy for Gen Z teenagers based on the results of portfolio analysis?

## RESEARCH METHODS

The research method uses quantitative methods to understand the monetisation patterns that are active as content creators on TikTok and YouTube with data sources obtained through questionnaires distributed to students and university students in Palembang city, who are the population, for sample selection using the Convenience Sampling technique, as many as 300 respondents, with the Slovin technique.

Research Instrument, data were collected using a perception-based questionnaire designed to measure respondents' understanding and application of investment diversification principles. The instrument consisted of four main dimensions:

1. TikTok and YouTube Earnings – perceptions of digital income stability, monetization consistency, and earning potential from each platform.
2. Investment and Financial Management – perceptions of financial behavior, saving habits, and investment decision-making.
3. Application of Markowitz Portfolio Theory – perceptions regarding risk awareness, diversification understanding, and portfolio balancing.
4. Gen Z Investment Diversification Strategy – perceptions related to asset allocation preferences and investment attitudes.

Each item was measured using a five-point Likert scale (1 = strongly disagree to 5 = strongly agree).

Before data collection, the instrument was tested for validity and reliability using Pearson correlation and Cronbach's Alpha.

Data analysis involved two main stages:

- a) Descriptive analysis, to summarize respondents' perceptions of income management and investment behavior.
- b) Portfolio analysis using the Markowitz Portfolio Model, to calculate expected return, variance, and covariance of income from TikTok and YouTube.

The main formulas used are as follows:

1. Expected Return ( $E(R_i)$ )

$$E(R_i) = \frac{\sum R_{it}}{n}$$

where:

$E(R_i)$  = expected return of asset i,

$R_{it}$  = actual return of asset i in period t,

$n$  = number of observations

2. Variance ( $\sigma^2_i$ )

$$\sigma^2_i = \frac{\sum (R_{it} - E(R_i))^2}{n - 1}$$

Variance measures the level of risk or volatility of each asset's return.

3. Covariance between Two Assets ( $Cov_{(ij)}$ )

$$Cov_{(ij)} = \frac{\sum (R_{it} - E(R_i))(R_{jt} - E(R_j))}{n - 1}$$

Covariance measures how two assets move together; a low or negative covariance indicates effective diversification potential.

4. Portfolio Expected Return ( $E(R_p)$ )

$$E(R_p) = w_1.E(R_1) + w_2.E(R_2)$$

where:

$w_1, w_2$  = proportion (weight) of each asset in the portfolio

#### 5. Portfolio Variance ( $\sigma_p^2$ )

$$\sigma_p^2 = w_1^2\sigma_1^2 + w_2^2\sigma_2^2 + 2w_1w_2Cov_{(12)}$$

Portfolio variance reflects the total portfolio risk considering both individual variances and the covariance between assets.

## RESULT AND DISCUSSION

The results of the validity and reliability tests show that the questionnaire used in this study has good quality to measure the variables studied, with a main sample of 300 respondents of content creator students in Palembang City. The validity test was conducted using Pearson correlation to ensure that each questionnaire item accurately measures the intended construct. The questionnaire covered four main dimensions: (1) TikTok and YouTube Earnings, (2) Investment and Financial Management, (3) Application of Markowitz Portfolio Theory, and (4) Gen Z Investment Diversification Strategy. The criterion for validity is that the Pearson correlation value ( $r$ ) must be greater than the  $r$ -table, which for a sample of 300 respondents at a significance level of  $\alpha=0.05$  is around 0.113 (based on the  $r$  distribution table with  $df=298$ ).

The following are the results of the validity test for each dimension based on a sample of 300 respondents:

**Table 1. Validity Test**

| No | TikTok and YouTube Income | Investment and Financial Management | Application of Markowitz Portfolio Theory | Gen Z Investment Diversification Strategy |
|----|---------------------------|-------------------------------------|-------------------------------------------|-------------------------------------------|
| 1  | 0.871                     | 0.777                               | 0.710                                     | 0.830                                     |
| 2  | 0.927                     | 0.741                               | 0.866                                     | 0.839                                     |
| 3  | 0.897                     | 0.698                               | 0.864                                     | 0.852                                     |
| 4  | 0.870                     | 0.770                               | 0.861                                     | 0.884                                     |
| 5  | 0.853                     | 0.796                               | 0.814                                     | 0.870                                     |

**TikTok and YouTube earnings:** The Pearson correlation values for the five items range from 0.853 to 0.927, well above the  $r$ -table (0.113), indicating that all items are valid in measuring the monetization and revenue patterns of the digital platforms. The highest correlation value (0.927) of the second item indicates that this item is particularly strong in capturing revenue data from TikTok and YouTube.

**Investment and Financial Management:** Correlation values ranged from 0.698 to 0.796, with the lowest item (0.698) still well above the  $r$ -table, confirming the validity of the items in measuring respondents' investment and financial management behavior. This value reflects that these items accurately describe how respondents manage their income.

**Application of Markowitz Portfolio Theory:** Correlation values between 0.710 to 0.866, all of which are valid as they exceed the  $r$ -table, indicate that these items are able to measure

respondents' understanding of the concept of risk diversification and portfolio management based on the Markowitz theory.

Gen Z Investment Diversification Strategies: Correlation values ranged from 0.830 to 0.884, confirming that these items are highly valid in evaluating relevant investment diversification strategies for Gen Z youth, with the fourth item (0.884) being the strongest.

The reliability test was conducted using Cronbach's Alpha to measure the internal consistency of the instrument, with the criteria being reliable if the Alpha value is  $> 0.7$ . The results of the reliability test based on a sample of 300 respondents are as follows:

Table 2. Reliability Test

| Dimension                                 | Cronbach's Alpha |
|-------------------------------------------|------------------|
| TikTok and YouTube Earnings               | 0,929            |
| Investment and Financial Management       | 0,811            |
| Application of Markowitz Portfolio Theory | 0,879            |
| Gen Z Investment Diversification Strategy | 0,907            |

TikTok and YouTube Earnings: The Cronbach's Alpha value of 0.929 indicates very high reliability, indicating that the items in this dimension are highly consistent and can be trusted to measure digital monetization patterns.

Investment and Financial Management: Alpha value of 0.811 indicates good reliability, ensuring

that the items in this dimension are consistent in measuring respondents' financial behavior.

Application of Markowitz Portfolio Theory: Alpha value of 0.879 reflects strong reliability, confirming that these items are reliable in evaluating the understanding of portfolio concepts.

Gen Z Investment Diversification Strategy: Alpha value of 0.907 shows excellent reliability, signaling that the items in this dimension are highly coherent in measuring relevant diversification strategies.

Based on data obtained from a survey of 300 Gen Z teenage respondents in Palembang City, the distribution of types of investments that have been made shows significant variations between categories. The bar chart presented illustrates the proportion of respondents for each type of investment, with the percentage calculated based on the total respondents. The results show that gold is the most popular type of investment, with 127 respondents or 42.33% of the total sample. The high preference for gold may reflect teenagers' perception of gold as a relatively safe and inflation-proof investment instrument, which is often the traditional choice among Indonesians. The "Other" category follows with a significant number of 110 respondents or 36.67%. This category likely includes various forms of informal or alternative investments that are not covered by

the main options, such as small-scale property investments, term savings, or micro-enterprises, indicating a diversification of interest beyond conventional instruments. Stocks occupy the third position with 62 respondents or 20.67%, indicating an interest in investing in the capital market, although the percentage is still relatively low compared to gold and other categories. This may be related to the limited level of financial literacy among teenagers, as supported by the OJK 2023 Survey data shows that the financial literacy of Indonesian teenagers is only 35%.

Mutual funds were chosen by 51 respondents or 17.00%, indicating a moderate adoption of professionally managed investment instruments. Deposits, with 34 respondents or 11.33%, showed a smaller preference, likely due to lower rates of return compared to other options such as gold or stocks. Meanwhile, crypto was the least preferred option, with only 29 respondents or 9.67%, which could reflect a perception of high risk or a lack of understanding of technology-based

crypto still have more limited adoption. This phenomenon is in line with previous research findings that suggest low financial literacy influences conservative investment choices (OJK, 2023). This result also confirms the need for more intensive financial education to expand teenagers' understanding of investment diversification, especially capital market-based instruments that can support the application of Markowitz Portfolio Theory for optimal risk management.

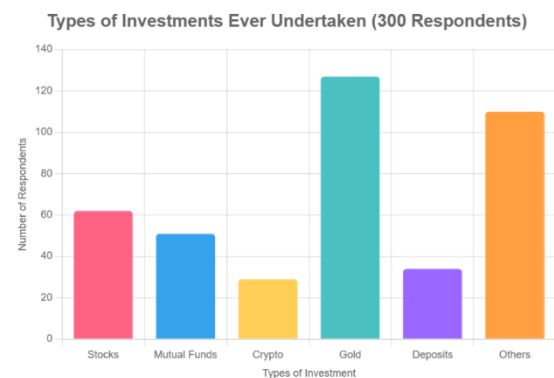


Figure 1: Types of Investments Made by Respondents

Table 3. Return and Risk Data from Tiktok and Youtube Revenue

investments among Palembang teenagers.

| Income  | $\Sigma$ Rit | E(Ri) | Variance | Standard Deviation | Covariance Tiktok-Youtube |
|---------|--------------|-------|----------|--------------------|---------------------------|
| Tiktok  | 1281,76      | 4,27  | 5494,67  | 74,13              | 102,8457                  |
| Youtube | 734,45       | 2,45  | 1804,09  | 42,47              |                           |

Overall, this distribution highlights that gold dominates the investment preferences of Gen Z youth, followed by other categories that reflect flexibility of choice, while modern instruments such as stocks, mutual funds, deposits, and

Based on data obtained from a survey of 300 Gen Z teenage respondents in Palembang City who are active as content creators on TikTok and YouTube, the analysis shows different patterns of return and risk (measured through variance and

standard deviation) between the two platforms. Income from TikTok shows an expected return ( $E(R_i)$ ) of 4.27, which is higher than YouTube's 2.45. This reflects TikTok's greater earning potential, possibly due to monetization features such as live gifts and endorsements that are more dynamic and dependent on real-time interaction with the audience, resulting in a  $\sum Rit$  (cumulative total return) of 1,281.76. However, this higher return comes with significantly greater risk, with a variance of 5,494.67 and a standard deviation of 74.13. This standard deviation indicates high fluctuations in earnings, which could be due to reliance on the platform's fickle algorithms and unpredictable viral trends, so earnings could spike or drop drastically from month to month.

In contrast, income from YouTube shows a lower

although its scalability potential is slower than TikTok. In theory, expected return is defined as the expected value of an asset's return, calculated as a weighted average of possible outcomes, while risk is measured through variance as the average squared deviation of expected return, or its standard deviation as a measure of dispersion. The use of variance as a proxy for risk was chosen because it is able to mathematically capture uncertainty, where rational investors tend to maximize return while minimizing variance. These findings are consistent with empirical regression analysis from national surveys, which show that young investors who utilize social media platforms exhibit variation in the balance of risk and return, with platforms such as Twitter influencing value-based diversification (Joseph & Ouyang, 2025).

Table 4. Calculation of Tiktok and Youtube Revenue Portfolio

| Revenue | $\sum Rit$ | $E(R_i)$ | Weight | Portofolio Return | Description                  |
|---------|------------|----------|--------|-------------------|------------------------------|
| Tiktok  | 1281,76    | 4,27     | 0,5    | 2,136264702       |                              |
| Youtube | 734,45     | 2,45     | 0,5    | 1,224090194       |                              |
|         |            |          |        | 3,360354896       | $E(R_p)$                     |
|         |            |          |        | 124,9387209       | Var.Portofolio               |
|         |            |          |        | 11,17759907       | Std. Deviation of portofolio |

expected return (2.45) with  $\sum a Rit$  of 734.45, but more manageable risk, with a variance of 1,804.09 and a standard deviation of 42.47. These characteristics make YouTube a relatively more stable source of income for Gen Z teens, especially through AdSense monetization that relies on long-term views and evergreen content,

Furthermore, the portfolio discussion combines revenue from TikTok and YouTube with an allocation weight of 0.5 each (equal weighting), resulting in a portfolio return ( $E(R_p)$ ) of 3.36, which is a weighted average of the individual returns (TikTok contribution: 2.14 and YouTube: 1.22). This return is lower than the return of

TikTok alone but higher than YouTube, indicating a reasonable compromise to achieve equilibrium. More importantly, the portfolio risk is significantly reduced, with a portfolio variance of only 124.94 and a standard deviation of 11.18, much lower than the individual risks of TikTok (74.13) or YouTube (42.47). This risk reduction is due to the relatively low covariance between TikTok and YouTube of 102.8457, which results in a correlation coefficient of around 0.033 (calculated as the covariance divided by the product of their standard deviations). This low correlation indicates that the revenue fluctuations of the two platforms do not move synchronously, so their combination creates an effective diversification effect.

In theory, covariance plays a crucial role in portfolio risk, where portfolio variance is calculated as  $\sum \sum X_i X_j \sigma_{ij}$  (where  $\sigma_{ij}$  is the covariance between assets  $i$  and  $j$ ), and optimal diversification occurs when assets are combined with low or negative covariance to reduce overall risk without proportionally sacrificing return. This model establishes an efficient frontier, where the optimal portfolio is the one that offers the highest return for a given level of risk, and its application to volatile income, such as from social media, proves that Gen Z teens can manage their finances more wisely through diversification, rather than relying solely on one platform. These results support the recommendation for young

digital creators in Palembang to proportionally allocate income to other investment instruments (such as stocks or mutual funds) to further expand diversification, in line with the goal of increasing financial literacy to a target of 90% by 2025.

From a theoretical perspective, the results of this analysis are in line with the Modern Portfolio Theory (MPT) proposed by Harry Markowitz in 1952, which emphasizes that rational investors will choose the optimal portfolio to maximize return by minimizing risk through diversification of assets that have low correlation. The higher expected return on TikTok with greater risk reflects the risk-return trade-off, where assets with high volatility tend to offer greater return potential, but require careful risk management to avoid significant losses. In addition, the reduction in portfolio risk through the combination of TikTok and YouTube demonstrates the effectiveness of diversification, where low covariances between assets reduce the overall variance, thus creating a portfolio that is on the efficient frontier that represents the optimal combination of return and risk. In the context of novice investors such as Gen Z teenagers, this application of the Markowitz model can be tailored to their risk profile (conservative, moderate, or aggressive), enabling a safer and more sustainable asset allocation, especially for volatile digital income. Furthermore, this portfolio optimization not only minimizes unsystematic risk through

diversification but also supports asset selection based on historical data to achieve mean-variance balance, as applied to investment instruments in the Indonesian capital market.

One relevant study is (Saputra et al., 2025), which designs financial math learning by integrating Markowitz Portfolio Theory and technology-based stock investment simulation. The study shows that this approach enhances students' understanding of diversification, expected return, and risk management through Markowitz's mean-variance model, where students (often including Gen Z students) gain hands-on experience in building optimal portfolios using historical stock data from digital platforms. This finding aligns with our results, where the low covariance (102.8457) between TikTok and YouTube revenues allows for a significant reduction in portfolio risk, while maintaining moderate returns. Technology integration in investment simulation supports diversification recommendations to manage Gen Z's volatile income.

These results are consistent with (Mba et al., 2022), who confirmed that the Markowitz mean-variance model minimizes portfolio risk under behavioral variations, providing strong empirical evidence for diversification benefits across asset classes. Similarly, (Lal et al., 2023) found that diversified information sources significantly improve the risk–return trade-off for Japanese investors, validating the efficient-frontier principle

observed in this study. Further, (Rieder, Borra, & Coromina, 2023) examined over 5 million YouTube channels and found that content creators' earnings are highly influenced by algorithmic volatility and audience engagement cycles. The high risk of TikTok income ( $\sigma = 74.13$ ) in this study empirically supports Rieder's results. However, the combination of YouTube and TikTok income in our portfolio model demonstrates that inter-platform diversification significantly mitigates such algorithmic dependency.

Another supportive study is (Mishra et al., 2024), which highlights the impact of digital financial literacy on financial decisions, where it explains 71% of the variance in investment decisions, including the risk-return analysis implicit in Markowitz Theory. These findings support our recommendation for digital education for Gen Z, as digital literacy can strengthen volatile income diversification, reduce reliance on a single platform, and support the efficient frontier. Despite the focus on women, it is relevant for Gen Z women as content creators in Palembang. This study shows that the understanding of risk and return, as applied to the TikTok-YouTube portfolio with a standard deviation of 11.18, can be improved through digital education.

Gen Z Investment Diversification Strategy, Gen Z's Investment Diversification Strategy focuses on spreading assets to minimize the risk of volatile

income from digital platforms such as TikTok and YouTube, by applying the principles of Markowitz Portfolio Theory. The research shows that the equal weighting combination (50% TikTok and 50% YouTube) generates a portfolio return of 3.36 with a standard deviation of risk of 11.18, much lower than the individual risks of TikTok (74.13) and YouTube (42.47). The low covariance between the two platforms (102.8457) allows for effective diversification, reducing volatility by 83% compared to TikTok alone, while maintaining moderate returns. For Gen Z, with low financial literacy to OJK's 2023 data, of only 35%. This strategy recommends portfolio allocation as follows: 40-50% to conservative assets such as gold (chosen by 42.33% of respondents) or time deposits (11.33%), 20-30% to stocks or mutual funds for long-term growth, and 10-20% to high-risk assets such as crypto (9.67% of respondents). This approach is tailored to Gen Z's risk profile, which is conservative (focus on YouTube stability and gold), moderate (combination of TikTok-YouTube with mutual funds), or aggressive (dominant TikTok with crypto). A study by (Tania & Tjhin, 2025) found that digital literacy influences financial attitudes and intention to use investment apps among Gen Z, with this literacy driving adoption of platforms for financial management. This strategy supports sustainable financial management and the 90% financial inclusion target in South Sumatra by 2024, while addressing the low national financial

literacy of 65.43% (Otoritas Jasa Keuangan, 2024) through Markowitz's efficient frontier-based digital education. According to (Sesri Sellinai et al., 2025), although young investors face significant risks, improving their financial literacy can help them make better investment decisions. Empirical correlations from a survey of young people in Mumbai (n=151) show that financial advertising on social media has a positive impact on investment tendencies, but can encourage riskier decision-making, thus supporting the need for diversification strategies as proposed in the Markowitz model (Isshikaa Kaur Jaggi & Rakesh Nair, 2024). Kiandra Putri Susanto & Endri Endri (2025) found that financial literacy is positively and significantly related to investment decisions. This finding indicates that Gen Z investors with high levels of financial literacy tend to have a better understanding of investment risks and returns, enabling them to make more accurate financial decisions. Conversely, Gen Z investors with low financial literacy are more likely to make irrational and detrimental investment choices.

Generation Z is proactively improving their financial literacy through self-learning, such as taking online courses or utilizing similar platforms. Meanwhile, financial institutions can support the improvement of Generation Z's digital financial literacy by providing platforms that are easily accessible and suitable for their needs (Lieanto & Kohardinata, 2025).

## CONCLUSION

Based on the results of the discussion, the research conclusions are summarized in the following points. The study demonstrates that applying Markowitz Portfolio Theory enables Gen Z teenagers to manage fluctuating digital income from TikTok and YouTube more effectively. Diversification across these platforms results in greater financial stability and extends the applicability of portfolio theory beyond conventional investment contexts.

The findings indicate that TikTok and YouTube exhibit distinct income patterns and risk profiles. Integrating both platforms provides a balanced strategy, confirming that diversification supports young digital creators in stabilizing income and enhancing financial resilience.

In a broader context, the study highlights the conservative investment tendencies of Gen Z teenagers in Palembang, which reflect their limited understanding of modern investment instruments. This underscores the urgent need to strengthen digital financial literacy and investment education for youth, particularly regarding diversification and risk management.

Implications of the research include the importance of integrating portfolio theory into financial education curricula and digital entrepreneurship training. Financial institutions and policymakers are encouraged to design

inclusive programs that promote early investment literacy, helping young creators adopt smarter, more sustainable approaches to managing and investing their digital

Practical Recommendations: Youth creators are encouraged to allocate their income to investment instruments such as stocks and mutual funds for further diversification, with Markowitz-based models as a guide for sustainable financial management.

## REFERENCES

- Anggraini, Puspa, S., & Cholid, I. (2022). *Pengaruh Literasi Keuangan, Tingkat Pendidikan, Pendapatan, Perencanaan Keuangan Dan Gaya Hidup Terhadap Pengelolaan Keuangan Pada Pengrajin Tempe Di Kecamatan Plaju*. 3(2), 178–187.
- Asosiasi Perusahaan Efek Indonesia. (n.d.). *Asosiasi Perusahaan Efek Indonesia*. Retrieved March 12, 2025, from [https://apei.or.id/id/news/detail/literasi-keuangan-palembang-2024/3651?utm\\_source=chatgpt.com](https://apei.or.id/id/news/detail/literasi-keuangan-palembang-2024/3651?utm_source=chatgpt.com)
- BPS Prov. Sumatera Selatan. (n.d.). *Ekonomi Sumatera Selatan Tahun 2024 Tumbuh 5,03 Persen - Badan Pusat Statistik Provinsi Sumatera Selatan*. Retrieved March 12, 2025, from <https://sumsel.bps.go.id/id/pressrelease/2025/02/05/857/ekonomi-sumatera-selatan->

- tahun-2024-tumbuh-5-03-persen.html?utm\_source=chatgpt.com
- Bruce, M. R., Adekoya, A. F., Boateng, S., & Appiahene, P. (2023). Prevalent User-centered Monetization Techniques in Social Media. *International Review of Management and Marketing*, 13(1), 19–28. <https://doi.org/10.32479/irmm.14005>
- Bunga Wahyu Ningsih, & Muhamad Helmi, M. H. dan D. C. (2021). Analisis Penentuan Portofolio Saham Yang Optimal Menggunakan ModelMarkowitz Pada Perusahaan Sektor Pertambangan Terdaftar Pada Periode Bursa Efek Indonesia Januari 2019 - Desember 2020. *JEMBATAN (Jurnal Ekonomi, Manajemen, Bisnis, Auditing, Dan Akuntansi)* , Vol.6,(2).
- Chai, S., Zhou, L., & Chen, Y. (2023). Digital Finance and Entrepreneurial Return Rate: Effects, Mechanisms and Inequality. *SAGE Open*, 13(4), 1–15. <https://doi.org/10.1177/2158244023120550>
- Fitriani, Y. (2021). Pemanfaatan media sosial sebagai media penyajian konten edukasi atau pembelajaran digital. *Journal of Information System, Applied, Management, Accounting and Research*, 5(4), 1006–1013. <https://doi.org/10.52362/JISAMAR.V5I4.60>
- Hariyanto, A., & Putra, A. (2022). KONTEN KREATOR YOUTUBE SEBAGAI SUMBER PENGHASILAN (Telaah Kritis Hukum Ekonomi Syari'ah). *Al-Hukmi: Jurnal Hukum Ekonomi Syariah Dan Keluarga Islam*, 3(2), 243–262. <https://doi.org/10.35316/ALHUKMI.V3I2.23>
- Hua, Y., Horta Ribeiro, M., Ristenpart, T., West, R., & Naaman, M. (2022). Characterizing Alternative Monetization Strategies on YouTube. *Proceedings of the ACM on Human-Computer Interaction*, 6(CSCW2). <https://doi.org/10.1145/3555174>
- Husnul Iga Puspita. (n.d.). *Pemprov Sumsel Kejar Target Tingkat Literasi dan Inklusi Keuangan 90 Persen di 2024*. Retrieved March 12, 2025, from [https://sumatra.bisnis.com/read/20230921/533/1697254/pemprov-sumsel-kejar-target-tingkat-literasi-dan-inklusi-keuangan-90-persen-di-2024?utm\\_source=chatgpt.com](https://sumatra.bisnis.com/read/20230921/533/1697254/pemprov-sumsel-kejar-target-tingkat-literasi-dan-inklusi-keuangan-90-persen-di-2024?utm_source=chatgpt.com)
- Isshikaa Kaur Jaggi, & Rakesh Nair. (2024). A Study on the Impact of Social Media Platforms and Financial Advertisements on Youth and Their Lifestyle in Mumbai. *International Journal For Multidisciplinary Research*, 6(1). <https://doi.org/10.36948/ijfmr.2024.v06i01.13927>
- Joseph, M., & Ouyang, C. (2025). *Socially Responsible Investing : Is Social Media an Influencer ?* 1–16.

- Khan, M. S., Azad, I., Moosa, S., & Javed, M. Y. (2024). Do we really need financial literacy to access the behavioral dynamics of generation Z? A case of Oman. *Heliyon*, 10(13), e32739. <https://doi.org/10.1016/j.heliyon.2024.e32739>
- Kiandra Putri Susanto, W. C. M., & Endri Endri, A. W. (2025). *Financial literacy , technological progress , financial attitudes and investment decisions of Gen Z Indonesian investors*. [https://doi.org/10.21511/imfi.22\(1\).2025.03](https://doi.org/10.21511/imfi.22(1).2025.03)
- Kiky, A., Suparman, M., & Marcella, V. (2022). Portofolio dan Diversifikasi Investasi Pasca Covid-19 Kajian Portofolio Saham Kapitalisasi Tinggi Di Indonesia. *Jurnal Ecodemica Jurnal Ekonomi Manajemen Dan Bisnis*, 6(1), 45–57. <https://doi.org/10.31294/eco.v6i1.11434>
- Kopf, S. (2020). “Rewarding Good Creators”: Corporate Social Media Discourse on Monetization Schemes for Content Creators. *Social Media and Society*, 6(4). [https://doi.org/10.1177/2056305120969877/ASSET/FA89BCAB-A9F7-4973-8732-20E7C204FD8D/ASSETS/IMAGES/LARGE/10.1177\\_2056305120969877-FIG2.JPG](https://doi.org/10.1177/2056305120969877/ASSET/FA89BCAB-A9F7-4973-8732-20E7C204FD8D/ASSETS/IMAGES/LARGE/10.1177_2056305120969877-FIG2.JPG)
- Kurniati, O., Sahara, R., Safitri, M., & Dasman, S. (2025). *EVALUASI PORTOFOLIO DALAM PASAR YANG BERUBAH: RISIKO DAN PELUANG DI ERA DIGITAL*. 6(2), 46–50.
- Lal, S., Sulemana, A. S., Nguyen, T. X. T., Khan, M. S. R., & Kadoya, Y. (2023). Information Sources for Investment Decisions: Evidence from Japanese Investors. *International Journal of Financial Studies*, 11(4). <https://doi.org/10.3390/ijfs11040117>
- Li, D., Goh, K.-Y., & Heng, C.-S. (2024). Strategic Content Generation and Monetization in Financial Social Media. *Information Systems Research*, June. <https://doi.org/10.1287/isre.2022.0482>
- Lieanto, C. T., & Kohardinata, C. (2025). Influence of Socio-Economic, Financial Literacy, and Digital Financial Literacy on Gen Z'S Investment Behavior. *Journal of Accounting, Entrepreneurship and Financial Technology (JAEF)*, 6(2), 155–174. <https://doi.org/10.37715/jaef.v6i2.5614>
- Lusardi, A., & Mitchell, O. S. (2014). The economic importance of financial literacy: Theory and evidence. *Journal of Economic Literature*, 52(1), 5–44. <https://doi.org/10.1257/jel.52.1.5>
- Mba, J. C., Ababio, K. A., & Agyei, S. K. (2022). Markowitz Mean-Variance Portfolio Selection and Optimization under a Behavioral Spectacle: New Empirical Evidence. *International Journal of Financial Studies*, 10(2). <https://doi.org/10.3390/ijfs10020028>
- Mishra, D., Agarwal, N., Sharahiley, S., & Kandpal, V. (2024). Digital Financial Literacy and Its Impact on Financial

- Decision-Making of Women: Evidence from India. *Journal of Risk and Financial Management*, 17(10). <https://doi.org/10.3390/jrfm17100468>
- My, R. M. Y. A. (2023). Ekonomi Kreatif dan Potensi Pertumbuhan Ekonomi Berbasis Industri Kreatif. *JMEB Jurnal Manajemen Ekonomi & Bisnis*, 1(2), 60–69. <https://doi.org/10.59561/jmeh.v1i2.155>
- Nur'aini, A. (2021). Monetisasi Youtube Perspektif Tafsir Maqashidi. *Jurnal Penelitian Agama*, 22(1), 65–86. <https://doi.org/10.24090/jpa.v22i1.2021.pp65-86>
- Olajide, O., & Pandey, S. (2024). *Social Media for Investment Advice and Financial Satisfaction : Does Generation Matter ?*
- Otoritas Jasa Keuangan. (n.d.). *Siaran Pers Bersama: OJK dan BPS Umumkan Hasil Survei Nasional Literasi dan Inklusi Keuangan Tahun 2024*. Retrieved March 12, 2025, from [https://ojk.go.id/id/berita-dan-kegiatan/siaran-pers/Pages/OJK-dan-BPS-Umumkan-Hasil-Survei-Nasional-Literasi-dan-Inklusi-Kuangan-Tahun-2024.aspx?utm\\_source=chatgpt.com](https://ojk.go.id/id/berita-dan-kegiatan/siaran-pers/Pages/OJK-dan-BPS-Umumkan-Hasil-Survei-Nasional-Literasi-dan-Inklusi-Kuangan-Tahun-2024.aspx?utm_source=chatgpt.com)
- Otoritas Jasa Keuangan. (2024). *Survei Nasional Literasi dan Inklusi Keuangan (SNLIK) 2024*. Otoritas Jasa Keuangan. Survei Nasional Literasi dan Inklusi Keuangan (SNLIK) 2024
- Rieder, B., Borra, E., & Coromina, Ò. (2023). *Making a Living in the Creator Economy : A Large-Scale Study of Linking on YouTube*. <https://doi.org/10.1177/20563051231180628>
- Rieder, B., Borra, E., Coromina, Ò., & Matamoros-Fernández, A. (2023). Making a Living in the Creator Economy: A Large-Scale Study of Linking on YouTube. *Social Media and Society*, 9(2). <https://doi.org/10.1177/20563051231180628>
- Risnawati, N., & Studi Manajemen, P. (2021). Peran Media Sosial Dimasa Pandemi untuk Kemajuan Perekonomian Di Masyarakat. *Jurnal Simki Economic*, 4(1), 35–46. <https://doi.org/10.29407/JSE.V4i1.56>
- Saputra, M. P. A., Saputra, R. S., & Laksito, G. S. (2025). Markowitz Portfolio Learning Design in Financial Mathematics with Technology-Based Stock Investment Simulation Practice. *International Journal of Research in Community Services*, 6(1), 47–53. <https://doi.org/10.46336/ijrcs.v6i1.846>
- Sesri Sellinai, Etty Zuliawati Zed, & Tri Mulyani. (2025). Impact of Risk Perception and Financial Literacy on Gen Z Investors' Investment Decision-Making in Jabodetabek Region. *Al-Kharaj: Jurnal Ekonomi, Keuangan & Bisnis Syariah*, 7(6), 1663–1678. <https://doi.org/10.47467/alkharaj.v7i6.7183>
- Sriyono, S.-, Prapanca, D.-, & Oktaviani, A.-.

- (2021). Pengambilan Keputusan Investasi Portofolio : Pendekatan Model Indeks Tunggal Saham. *Benefit: Jurnal Manajemen Dan Bisnis*, 6(2), 72–96. <https://doi.org/10.23917/benefit.v6i2.14489>
- Tania, J., & Tjhin, V. U. (2025). the Influence of Digital Literacy on Intention To Use Investment Applications in Generation Z: a Case Study on Financial Products. *Journal of Theoretical and Applied Information Technology*, 103(7), 2903–2916.
- Trivani, G., & Soleha, E. (2023). The Effect of Financial Literacy, Income and Self Control on Financial Behavior Generation Z (Study on Generation Z Financial Behavior in Bekasi Regency). *Economic Education Analysis Journal*, 12(1), 69–79. <https://doi.org/10.15294/eeaj.v12i1.67452>
- Tubastuvi, N., Azaria, M. J. F., Purwianti, W., & Aryoko, Y. P. (2024). Gen Z Investment Decision: Role of Financial Literacy, Financial Behaviour, Financial Experience and Risk Tolerance. *Airlangga Journal of Innovation Management*, 5(4), 721–739. <https://doi.org/10.20473/ajim.v5i4.61315>
- Viana, E. D., Febrianti, F., & Dewi, F. R. (2022). Literasi Keuangan, Inklusi Keuangan dan Minat Investasi Generasi Z di Jabodetabek. *Jurnal Manajemen Dan Organisasi*, 12(3), 252–264. <https://doi.org/10.29244/jmo.v12i3.34207>
- Ye, H., Yang, X., Wang, X., & Stratopoulos, T. C. (2021). Monetization Of Digital Content: Drivers Of Revenue On Q&A Platforms. *Journal of Management Information Systems*, 38(2), 457–483. <https://doi.org/10.1080/07421222.2021.1912934>
- Zhu, Y. (2024). The Impact of Social Media on Low-Income People. *Communications in Humanities Research*, 24(1), 254–261. <https://doi.org/10.54254/2753-7064/24/20231776>

#### CONFLICTS OF INTEREST

The authors declare no conflict of interest. No external funding was received for this study, and the funders had no role in the design of the study; in the collection, analyses, or interpretation of data; in the writing of the manuscript, or in the decision to publish the results.



© 2025 by the authors. Submitted for possible open access publication under the terms and conditions of the Creative Commons Attribution (CC Attribution-NonCommercial-ShareAlike 4.0) license (<https://creativecommons.org/licenses/by-nc-sa/4.0/>)