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The Buy and Hold Investment Strategy: Building and Evaluating Passive Portfolios from Iraq Stock Exchange

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Abstract. This paper examines the buy and hold investment strategy, a passive approach where investors buy securities and hold them long-term regardless of market fluctuations. The rationale is that patient investors are rewarded over time despite short-term volatility. This research analyzes building and evaluating a buy and hold portfolio. First, a 12-stock portfolio across sectors is constructed using equal weighting and optimization during the Covid-19 pandemic. Equal weighting underperforms optimization that sets asset weights based on risk and return. Next, a 12-stock banking sector portfolio is built. Again, optimization improves results over equal weighting by accounting for risk and correlations. Though past performance does not guarantee future results, historically the buy and hold strategy has provided steady growth for long-term investors able to hold through downturns. Proper diversification and research are critical when constructing a buy and hold portfolio. While sacrificing potential short-term gains, this passive strategy aims to produce satisfying returns over the long run for investors with the appropriate temperament and perspective. However, the strategy may not suit those requiring active management or with lower risk tolerance.

Keywords. Buy and Hold, Passive Portfolios, Covid-19 pandemic, Equal weighting portfolios

1. Introduction

Investors face the perennial question of how to best manage their portfolios. Active or passive management represents a key strategic decision. Active managers frequently buy and sell assets, trying to take advantage of shifting market winds. Meanwhile, passive managers employ a buy and hold approach, assembling portfolios they aim to hold through ups and downs. These contrasting philosophies reflect different assumptions regarding markets' behavior and investors' ability to time the market. While both approaches have merits, passive buy and hold strategies offer benefits for investors with longer time horizons and temperaments less suited to active trading. This paper examines constructing and evaluating buy and hold portfolios as a passive investment tactic.

The buy and hold strategy is premised on acquiring assets, especially stocks, and retaining them regardless of fluctuations. It assumes securities offer long-term growth and short-term volatility reflects noise investors should tune out. Extensive trading generates excessive fees without necessarily improving performance. Buy and hold portfolios are tailored

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to investors focused on the long view rather than short-term gains. Proper portfolio construction and diversification provide stability amidst market swings (Cavaliere et al., 2021).

This paper analyzes building and assessing buy and hold portfolios across economic conditions. Utilizing stocks from Iraq, portfolios are constructed for sectors and the banking industry specifically. Optimal portfolio weights based on risk and return are compared to equal stock weighting. The research examines portfolios during the Covid-19 pandemic. While past performance does not guarantee future results, this analysis provides insights into implementing a buy and hold approach. For investors with patience and appropriate risk profiles, this passive strategy may provide satisfying long-term returns.

2. Literature review

The buy and hold strategy is a passive investment approach and also a very conservative tactic where investors purchase and retain stocks for an extended period regardless of fluctuations in the market. This strategy also proposes that investors who hold their investments for a long time are likely to earn higher returns, (Puelz et al.,2022) Many financial experts indicate that this strategy is the best investment approach, especially during an economic recession in the market. Since economic conditions are characterized by stagnation and some investors' inability to predict the market's future state, some investors may lose patience because they lack information about the market and when it will recover again. (Ling et al., 2014)

Moreover, this strategy assumes that securities' value will increase over time. Therefore, the investor purchases those securities and retains them for an extended period, regardless of fluctuations in their market prices (Mary Auxilia et al., 2023). The rationale for buying and keeping them is to achieve reasonable long-term returns despite price volatility over short periods. Additionally, this strategy involves less frequent trading o f stocks than other strategies and reduces costs from excessive trading of securities, (Sindell, 2005). Hence, it is a type of strategy that recognizes market efficiency, as this strategy's basis is to track market indicators without trying to beat them. It makes little sense to frequently buy and sell securities, resulting in higher brokerage fees without increasing expected performance. (Bodie et al, 2008). The investor who follows this strategy selects a group of investments and retains them, meaning they do not alter their investment portfolio to improve returns or reduce risks (Tayh et al., 2023). It is also evident that when this investor chooses an investment portfolio to achieve investment returns and reduce time, effort, and costs, it is an active investment in the portfolio (Chandra,2012). Also, this strategy aims to purchase securities to retain them for an extended period, regardless of market fluctuations. The investor also carefully selects stocks as they do not care about short-term technical indicators and price movements (AL Abdullah et al., 2023). The meaning of "long-term ownership" is not absolute or fixed, usually approximating over five years. The buy and hold strategy work best in the US when proper research ensures the chosen investments have high credit ratings. (Dunis et al,2016).

It is clear there is an important fundamental difference between managing a bond portfolio and a stock portfolio on a buy-and-hold basis. Since bonds have a maturity date at the agreed term's end, stocks do not have a maturity date (Al-Raamadan & Hasan, 2022). Therefore, the bond manager must periodically reinvest funds. However, a stock manager can use a buy-and-hold strategy without ever adjusting the portfolio's composition once formed, (Brueggeman,2011). Fixed income portfolio managers often address this issue through investment diversification, dividing their funds equally into investments with regular maturities. For example, the manager can diversify by purchasing equal amounts of securities with

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maturities ranging from one to nine years rather than investing all the money in five-year securities. (Jordan et al,2017).

This strategy helps investors create a relatively stable long-term portfolio regardless of market fluctuations. During investment, investors must focus on properly diversifying the portfolio, (Kendall&Sullivan,2023). The long-term investment strategy can apply to other asset classes like real estate, gold, silver, etc. Periodic monitoring is still required with this strategy, like market conditions, company news, etc., to avoid unlimited and unexpected losses. Therefore, this strategy is ideal for investors without much time to find and monitor investment portfolios. Of course, this will help us avoid market fluctuations in the short term. (Gitman et al,2011). We cannot overlook that there are drawbacks to this strategy. The capital for each security is relatively high, which is considered a risk. Therefore, investors must have enough discipline during the long investment period not to be interested in other investments. However, the buy and hold strategy takes time to reap returns since investing heavily in one asset does not guarantee the investor high returns for the time and capital invested. Diversification is crucial to protect long-term investments (Kula et al,2017).

3. Methodology: Building and evaluating a buy-and-hold portfolio

This study involved constructing an investment portfolio according to the buy-and-hold strategy, a passive management approach based on purchasing stocks and retaining them for at least one year to achieve returns at the end of the year. This strategy's objective is to retain shares for an extended period to achieve a return meeting the investor's ambitions. The investment portfolio was built from main economic sectors in Iraq Stock Exchange, and the portfolio weights were based on two inputs: the buy-and-hold approach using equal weights and the efficient approach using optimization to obtain the best risk-adjusted return portfolio. To accomplish the highest return for the portfolio at a given risk level based on Sharpe ratio. The study period was throughout March 2020 to August 2023, and the portfolio performance evaluation included all sectors during Covid19 according to the Sharpe ratio (risk-adjusted return). The study sample comprises from 12 stocks from different sectors of Iraq stock exchange as in the table.1.

Table.1 Study sample of 12 stocks from different sectors

Company shares	Company names
BBOB	Bank of Baghdad
BNOI	National Bank of Iraq
NAME	Al-Amin Insurance Company
SKTA	Al-Karkh Games City
SMRI	Al Maamoura Real Estate Investment
IMOS	Modern seamstress
IITC	Al-Iraqiya Carpets and Furnishings
IRMC	Production of ready-made clothes
IIEW	Al-Iraqiya Engineering Works
HBAY	Babylon Hotel
HBAG	Baghdad Hotel
AIPM	Al-Iraqiya for meat production and marketing

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Whereas, after that, the study in the second phase analyzes the most active and profitable sector, the banking sector which encompasses from the most of private banks in Iraq. The sample of it was as the in table.2:

Table.2 Study sample of 12 stocks from banking sector

Company shares	Company names
BCOI	Commercial Bank of Iraq
BBOB	Bank of Baghdad
BIIB	Iraqi Islamic Bank
BIME	Middle Eastern Bank
BIBI	Investment Bank of Iraq
BNOI	National Bank of Iraq
BSUC	Sumer Bank
BGUC	Gulf Commercial Bank
BMFI	Mosul Bank for Development
BASH	Ashur International Bank
BMNS	Al-Mansour Investment Bank
BUND	United Bank for Investment

3.1. Buy-and-hold strategy portfolio of 12-stock from all sectors under Covid-19 outbreak.

Table (3) shows most correlation coefficients are weakly positive and negative. The strongest negative correlation is between Al-Karkh Games City (SKTA) and Bank of Baghdad (BBOB), with a correlation coefficient of (-0.3521152). This is good for investors to benefit from diversification when investing in these two companies. The highest positive correlation of 0.443599 is between Babylon Hotel (HBAY) and Karkh Games City (SKTA). This is worthless since their investment patterns overlap, so diversification has no potential benefit as their returns move together.

Table (3) Correlation matrix for 12 stocks from sector sample during Covid-19 outbreak.

	BBOB	*BNOI*	*NAME*	*SKTA*	*SMRI*	*IMOS*	*IITC*	*IRMC*	*IIEW*	*HBAY*	*HBAG*	*AIPM*
BBOB												
BNOI	**0.2316933**											
NAME	**0.1405859**	**0.337055**										
SKTA	**-0.3521152**	**0.248559**	**-0.01905**									
SMRI	**0.0391595**	**0.397357**	**0.013132**	**0.026342**								
IMOS	**-0.069266**	**0.033001**	**-0.07718**	**0.262328**	**0.145243**							
IITC	**0.0797507**	**0.103611**	**0.103486**	**0.034604**	**-0.06024**	**0.093426**						
IRMC	**0.1239813**	**-0.141**	**0.12683**	**-0.07892**	**-0.18976**	**-0.01026**	**0.098794**					
IIEW	**-0.0505887**	**0.220338**	**0.276605**	**-0.00731**	**0.218084**	**0.154136**	**-0.14481**	**-0.15247**				
HBAY	**-0.0883361**	**-0.04163**	**-0.2636**	**0.443599**	**0.151535**	**0.301225**	**0.262555**	**0.156363**	**-0.16658**			
HBAG	**0.2738874**	**0.232694**	**0.122963**	**0.059367**	**0.110522**	**0.032716**	**0.001569**	**-0.0649**	**0.242437**	**-0.06117**		
AIPM	**0.1767958**	**0.105222**	**0.158805**	**-0.08424**	**0.002663**	**-0.05936**	**0.136736**	**0.280388**	**-0.08921**	**0.074534**	**0.026084**	

Source: outputs of Excel portfolio formation

Table (4) shows the equal weight sector portfolio return was 0.000158 with a standard deviation and variance of 0.0490727 and 0.0024081, respectively, and a Sharpe ratio of 0.2740599. This is poor performance because it is valueless since the portfolio return is less than the 0.0024 risk-free return. To reach the optimal sector portfolio, optimization was used.

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The optimal portfolio return was 0.000335, higher than the equal weight portfolio, with a standard deviation of 0.0607995, variance of 0.0036966, and Sharpe ratio of 0.5111572, much better than the equal weight portfolio although not a stellar performance.

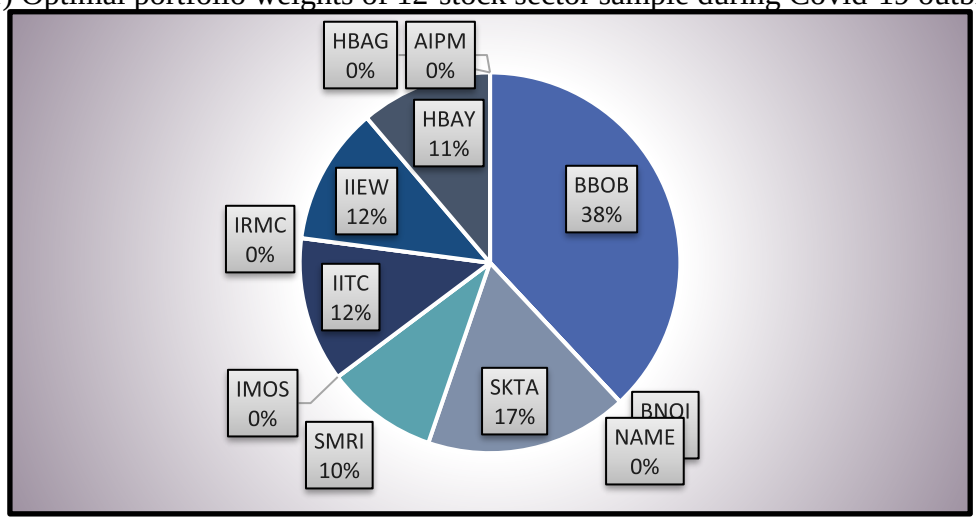
Table (4) Return and risk of 12-stock portfolio across sectors during Covid-19 outbreak.

Statements	Buy and hold portfolio of 12 stocks	Optimize a portfolio of 12 stocks
Portfolio Return	0.000158	0.000335
Portfolio Variance	0.0024081	0.0036966
Portfolio Risk	0.0490727	0.0607995
Sharpe Ratio	0.2740599	0.5111572
Rf	0.0024	0.0024

Source: outputs of Excel portfolio formation

Figure (1) shows the equal portfolio weights caused lower return and Sharpe ratios. Weights were assigned equally, ignoring correlations, excluding companies with positive correlations, and choosing stocks with negative correlations. For the optimal portfolio, optimization set the weights. Bank of Baghdad had the highest weight at 38% and Karkh Games City the second highest at 17.2%. Iraqi Carpets' weight was 12.3%, IITC Furniture 30.12%, and Al-Maamoura Real Estate 9.50%.

Figure (1) Optimal portfolio weights of 12-stock sector sample during Covid-19 outbreak



Source: outputs of Excel portfolio formation

Table (5) confirms Figure (1)'s equal portfolio weights caused lower returns and Sharpe ratios by ignoring correlations and excluding positive correlations. Optimization set Bank of Baghdad's weight highest at 38% and Iraqi Islamic Bank second highest at 25.6%. National Bank of Iraq weight was 1.13% and Al-Mansour Investment Bank 4.2%.

Table (5) Weights of 12-stock portfolio across sectors during Covid-19 outbreak.

Company shares	Buy and hold portfolio weights	Optimal portfolio weights for a sample of sectors
BBOB	8.3%	38%
BNOI	8.3%	0
NAME	8.3%	0
SKTA	8.3%	17.2%
SMRI	8.3%	9.5%

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IMOS	8.3%	0
IITC	8.3%	12.3%
IRMC	8.3%	0
IIEW	8.3%	11.7%
HBAY	8.3%	11.2%
HBAG	8.3%	0
AIPM	8.3%	0

Source: outputs of Excel portfolio formation

3.2. Buy-and-hold strategy portfolio of 12 stock from Banking sectors in time of Covid-19 outbreak.

Table (6) shows most banking sector correlations are weakly positive and negative. The strongest negative correlation is between Gulf Commercial Bank (BGUC) and Iraqi Islamic Bank BIIB at -0.3707, indicating diversification benefits when investing in them. The strongest positive correlation of 0.65397 is between Bank of Middle East (BIME) and Bank of Baghdad (BBOB), and 0.65086 between Assyria International Bank (BASH) and Bank of Middle East (BIME), indicating no diversification benefit since their returns move together.

Table (6) Correlation matrix for 12 banking stocks during Covid-19 outbreak.

	BCOI	*BBOB*	*BIIB*	*BIME*	*BIBI*	*BNOI*	*BSUC*	*BGUC*	*BMFI*	*BASH*	*BMNS*	*BUND*
BCOI												
BBOB	0.240877											
BIIB	-0.13011	-0.20711										
BIME	0.339854	0.65397	-0.03049									
BIBI	0.138865	0.185045	0.293455	0.24012								
BNOI	0.471816	0.231693	-0.20257	0.247733	0.016586							
BSUC	0.098384	0.010457	-0.21042	0.119651	0.022877	0.412151						
BGUC	0.523145	0.395246	-0.3707	0.584353	-0.05001	0.232376	0.240397					
BMFI	0.305094	0.216261	-0.1866	0.10548	0.03679	0.210941	0.167949	0.347389				
BASH	0.438319	0.5837	-0.18825	0.65086	0.106297	0.446833	0.196738	0.518557	0.291571			
BMNS	0.412891	0.099871	0.159595	0.206794	0.287975	0.179194	-0.01033	0.325312	0.10668	0.304154		
BUND	0.314221	0.455783	0.013553	0.556198	0.268317	0.253067	-0.04494	0.517315	0.232521	0.519368	0.289195	

Source: outputs of Excel portfolio formation

Table (7) shows the equal weight banking portfolio had a 0.010397 return with 0.060119 standard deviation and 0.003614 variance, and a Sharpe ratio of 0.133011, poor since below 1 as return is less than 0.0024% risk-free rate. Optimization improved this. The optimal portfolio had a 0.037759 return, higher than equal weight, with a 0.084326 standard deviation, 0.007111 variance, and 0.419318 Sharpe ratio, better but still low performance.

Table (7) Return and risk of 12 banking stock portfolio during Covid-19 outbreak

Statements	**Buy and hold portfolio of 12 stocks**	**Optimize a portfolio of 12 stocks**
Portfolio Return	0.010397	0.037759
Portfolio Variance	0.003614	0.007111
Portfolio Std.	0.060119	0.084326
Sharpe Ratio	0.133011	0.419318
Rf	0.0024	0.0024

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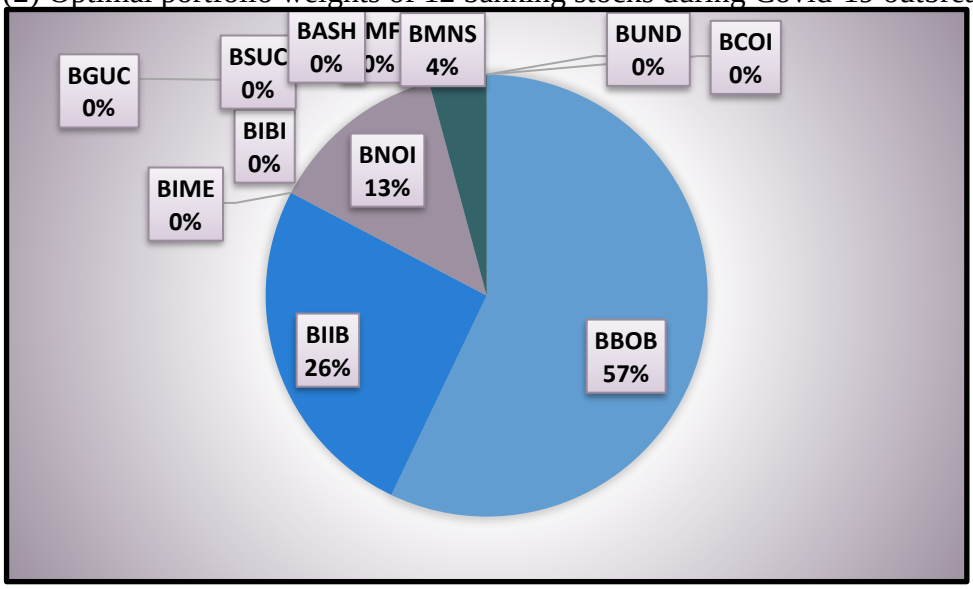
Source: outputs of Excel portfolio formation

Figure (2) shows equal portfolio weights caused lower returns and Sharpe ratios by ignoring correlations. Optimization set Bank of Baghdad's weight highest at 57.1% and Iraqi Islamic Bank second highest at 25.6%. National Bank of Iraq weight was 13.1% and Al-Mansour Investment Bank 4.2%.

Figure (2) Optimal portfolio weights of 12 banking stocks during Covid-19 outbreak.



Source: outputs of Excel portfolio formation

Table (8) confirms Figure (2)'s equal portfolio weights caused lower returns and Sharpe ratios by ignoring correlations. Optimization set Bank of Baghdad's weight highest at 57.1% and Iraqi Islamic Bank second highest at 25.6%. National Bank of Iraq weight was 13.1% and Al-Mansour Investment Bank 4.2%.

Table (8) Weights of 12 banking stock portfolio during Covid-19 outbreak

Company shares	Buy and hold portfolio weights	Optimal portfolio weights for a sample of banking sector stocks
BCOI	8.33%	0
BBOB	8.33%	57.10%
BIIB	8.33%	25.60%
BIME	8.33%	0
BIBI	8.33%	0
BNOI	8.33%	13.10%
BSUC	8.33%	0
BGUC	8.33%	0
BMFI	8.33%	0
BASH	8.33%	0
BMNS	8.33%	4.20%
BUND	8.33%	0

Source: outputs of Excel portfolio formation

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4.Conclusion

In conclusion, the buy and hold strategy is a passive, long-term approach where investors purchase securities and retain them regardless of market fluctuations, aiming to earn higher returns over time. This strategy recognizes markets are efficient overall and trying to time the market frequently fails. While investors sacrifice short-term gains for long-term, stable growth, proper diversification and research are vital to build a quality buy and hold portfolio resilient to recessions. This study demonstrated equal stock weighting underperforms optimization that weights assets based on risk and return. Though past performance does not guarantee future results, the buy and hold strategy historically rewarded patient investors able to weather temporary downturns. With the right temperament and perspective, buy and hold investing can provide satisfying long-term returns. However, investors must always examine their risk tolerance and goals to determine if this passive approach aligns with their needs or if they require a more active strategy.

References

[1] Al-Raamadan, N. S. A., & Hasan, M. F. (2022). Using Options Futures Derivatives Weather in Hedging. Technium Soc. Sci. J., 31, 430.

[2] AL Abdullah, M. J. M., Alyaseen, A. A. A. M., & Faez Hasan, M. (2023). Role of Company's Efficiency Measure in achieving return: Iraq's Private Banks Case. Technium Social Sciences Journal, 39, 377–392. https://doi.org/10.47577/tssj.v39i1.8233

[3] Brueggeman, W.B & Fisher, J.D. (2011). Real estate finance and investments (pp. 5-6). New York: McGraw-Hill Irwin.

[4] Bodie, Z, Kane, A & Marcus, A. (2008). Essentials of Investment. 7th Edition. McGraw Hill.

[5] Cavaliere, L. P. L., Keswani, S., Kumar, S., Mathew, S., Das, S., Hasan, M. F., Rajest, S. S., & Regin, R. (2021). The Impact of Portfolio Diversification on Risk Management Practices. NVEO-NATURAL VOLATILES \& ESSENTIAL OILS Journal| NVEO, 8447–8469.

[6] Chandra, P. (2012). Investment analysis and portfolio management. 8th edition. Tata McGraw-Hill Education Private Limited.

[7] Dunis, C. W & Middleton, P., & Karathanasopoulos, A. (2016). Artificial Intelligence in Financial Markets Cutting-Edge Applications for Risk Management, Portfolio Optimization and Economics. Macmillan Publishers Ltd. London.

[8] Jordan, B.D, Miller, T.W, Dolvin, S.D. (2017). Fundamentals of Investments Valuation and Management. 8th Edition. McGraw-Hill Education

[9] Kendall, J & Sullivan, R. (Eds.). (2023). Responsible Investment in Fixed Income Markets. Taylor & Francis.

[10] Gitman L.J., Michael D.J. & Scott, B.S. (2011). Fundamentals of Investing. 11th Edition, Pearson Education Inc. MA, USA.

[11] Kula, G. Raab, M., & Stahn, S. (2017). Beyond Smart Beta: Index Investment Strategies for Active Portfolio Management. John Wiley & Sons.

[12] Tayh, A., Faez, M., & Hammood, H. (2023). Measuring the level of banking performance according to the requirements of comprehensive quality management: an Application Study. Ishtar Journal of Economics and Business Studies, 4(1), 1–18. https://ishtareconomics.org/index.php/About/article/view/15

[13] Petzel, T.E. (2022). Modern Portfolio Management Moving Beyond Modern Portfolio Theory. 1th Edition. Canada: John Wiley & Sons, Inc.
[14] Sindell, K. (2005). Investing online for dummies. 2th edition. John Wiley & Sons. Inc.
[15] Ling, F.C.H, Yat, D.N.C., & binti Muhamad, R. (2014). An Empirical Re-Investigation on the 'Buy-and-hold Strategy' in Four Asian Markets: A 20 Years' Study. World Applied Sciences Journal, 30, 226-237.
[16] Mary Auxilia, P. A., Alvarado-Tolentino, J., Gonzales-Yanac, T., Huaman-Osorio, A., Durga, S., & Hasan, M. F. (2023). The Dynamic Role of Big Data Analytics in Learning and Development and Its Impact on Risk Analysis in Stock Market. In S. Yadav, A. Haleem, P. K. Arora, & H. Kumar (Eds.), Smart Innovation, Systems and Technologies (Vol. 290, pp. 157–164). Springer Nature Singapore. https://doi.org/10.1007/978-981-19-0108-9_17