Portfolio Management of Kala Investama during the Pandemic in Indonesia Stock Market

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Abstract:- Indonesia Stock Market is very volatile during the pandemic and it also affected on the portfolio performance of Kala Investama, an investment manager company that allocates most of the assets to stocks in Jakarta Composite Index (JCI). The portfolio performance for the last 6 months (January-June 2021) was inconsistent and tended to be below JCI's net performance by a margin of -12.71%, forcing Kala Investama had to overhaul its investment strategy to outperform JCI and certainly attract more investors. In this research, portfolio management was conducted from July to November 2021 by examining each investment strategy in portfolio to improve the net performance. This research combined multiple technical analysis to validate the movement of the stock price and minimize the risk of each investment strategy. Evaluation using Beta, Sharpe and Treynor ratio to measure the performance of the portfolio.

Based on the investment strategy from July-November 2021, Kala Investama portfolio performance achieves the net cumulative return of 44.67%, higher than the reference index (JCI) which is only 12.28%. It is also shown from Portfolio Performance Measurement that our portfolio has higher in Beta, Sharpe and Treynor ratio compared to the index which indicates the portfolio can outperform the market with a good portfolio management and relatively lower risk. With good portfolio management, it can attract more investors to invest in Kala Investama portfolio.

Keywords: *Portfolio Management, Technical Analysis, Jakarta Composite Index.*

I. INTRODUCTION

Indonesian economy was slowing down due to the pandemic, and it also impacted on stock prices in Indonesia Stock Market to fall free, as well as the index that overshadowed it, namely Jakarta Composite Index (JCI) [1]. Uncertainty over the end of the COVID-19 pandemic prompted investors to make adjustments to their financial portfolios, by shifting liquidity to safe heaven assets including in developing countries such as Indonesia. This puts pressure on the domestic capital market as it can be seen in figure 1. In this uncertain time, stock prices are very easy to control by certain sentiments and it is very volatile, so every act of investment must be more careful.

The portfolio performance of an investment company is certainly a factor of the client in determining the return of each investment. Benchmark performance of an investment company is measured by comparing the performance of an investment company with the index that is referred to. Kala Investama, which is an investment company, refers to the Jakarta Composite Index (JCI) as its main index. However, Kala Investama portfolio did not outperform the JCI by its monthly return performance from January to June 2021 as it can be seen in figure 2. Thus, a change in investment strategy is needed to manage the portfolio performance of Kala Investama above the index.
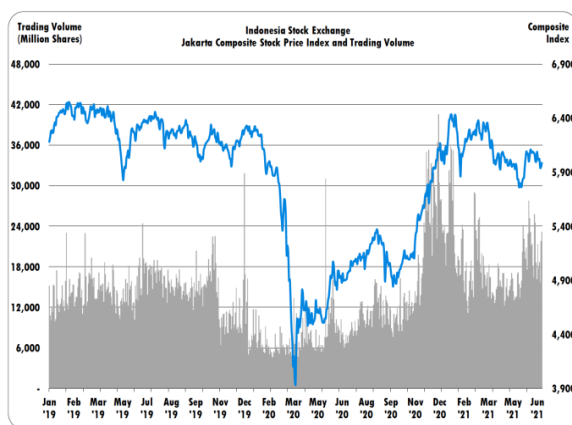

Fig. 1: Jakarta Composite Index

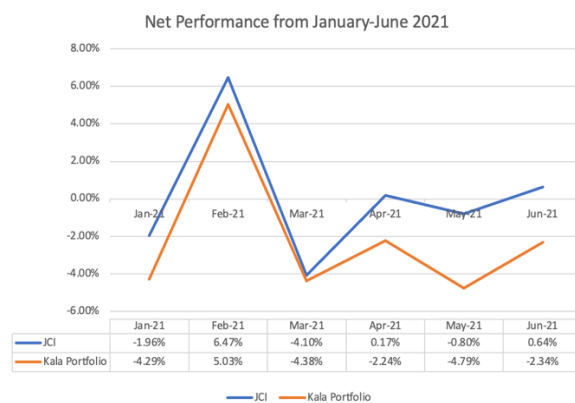|	Jan-21	Feb-21	Mar-21	Apr-21	May-21	Jun-21
JCI	-1.96%	6.47%	-4.10%	0.17%	-0.80%	0.64%
Kala Portfolio	-4.29%	5.03%	-4.38%	-2.24%	-4.79%	-2.34%

Fig. 2: Net Performance of JCI and Kala

II. LITERATURE REVIEW

A. Indonesian Stock Market

Since the merging of Surabaya Stock Exchange and Jakarta Stock Exchange in 2007 and change its name into Indonesia Stock Exchange (IDX), there were numerous improvements to attract more investor to invest their fund in IDX and there are no barriers for investor to entry [2]. They improved the services and engaged investors to invest in Indonesia Stock Market [3]. Eventually, in 2021 there are at least 700s public companies listed in IDX.

B. Chart

There are three type of charts that are most commonly used by analyzer or investment manager, such as Line Chart, Bar Chart and Candle Chart [4]. Each chart inform several information, such as the opening price, closing price, highest price and lowest price at a period of time.

The next detail concept and development of Dow Theory is Chart Pattern [5].There are two categories in chart pattern, which are the reversal pattern and continuation pattern. The reversal pattern is a pattern that indicate a reversal of a trend that might be happening and the continuation pattern is a pattern that indicate a continuation
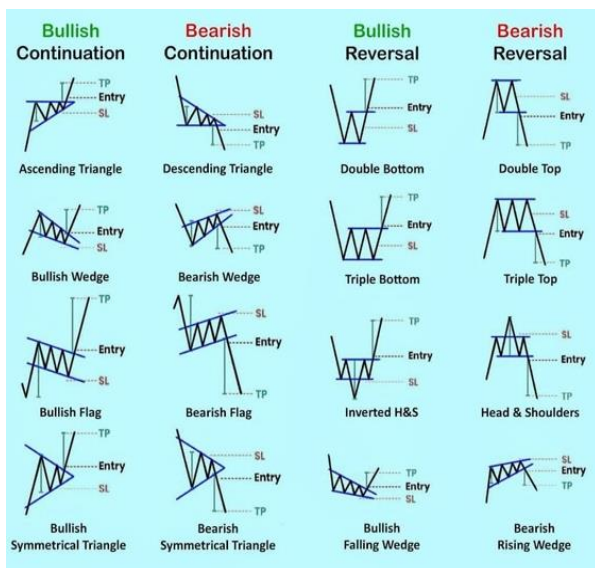
of a trend that might be happening. It can be seen in figure 3.

C. Fibonacci Retracement

In Fibonacci Retracement, there are several parameters that commonly used to find the support and resistance point in the trend, such as 0, 0.236, 0.382, 0.5, 0.618, 0.786 and 1 ratio [6]. To draw a Fibonacci Retracement, first we have to find the previous high/low swing and the next low/high swing and draw a line between those swing from each candle shadow.

D. Volume

Volume indicator shows trade transaction and number of shares changing hands in a single day/week/month thus it can be used to measure the intensity of changes in share prices [4].

E. Moving Average Convergence Divergence

Moving Average Convergence Divergence (MACD) helps to assess the correlation between two different Exponential Moving Averages (EMA) time periods, such as EMA-26 as slow length and EMA-12 as fast length [4]. In addition to analyzing the movement of shares with line intersections on MACD, there are other methods that use divergence over stock prices and MACD lines as it can be seen in figure 4.

Fig. 3: Chart patterns

Fig. 4: Divergence in MACD

F. Portfolio Performance Measurement

a) Beta

Beta is a measurement of expected move of portfolio compared to the market, as it is the JCI. Portfolio Beta comes from the products sum of investment weights and coefficient beta of the investment.
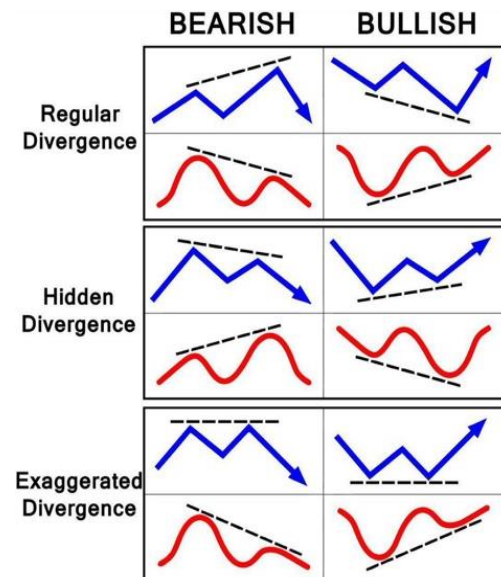
b) Sharpe Ratio

Sharpe ratio is a measurement of portfolio performance which is calculated based on the comparison of excess portfolio return with standard deviation.

c) Treynor Ratio

Treynor ratio is a portfolio performance measurement that is calculated based on the ratio of excess portfolio return to beta

III. RESEARCH METHODOLOGY

This research focuses on managing the Kala Investama portfolio from July 2021 to November 2021 with stocks from theJCI using technical analysis methods. To maintain the objectivity of this research, all analyses use technical analysis by using candle sticks as a reference for stock price movement analysis. This technical analysis is used to reposition the stocks that are being held in July 2021 and several other trading activities that can improve the performance of the Kala Investama portfolio. The overall portfolio will be analyzed through portfolio performance measurement to measure the performance of the portfolio compared to Jakarta Composite Index.

The flow of the investment strategy is as follow:
- The data is based on the historical movement of stocks listed on JCI and the study was limited by a period from July 2021 to November 2021;
- The investment strategy will be processed and analyzed with technical analysis methods;
- Screening stocks from the current holding portfolio and JCI;
- Analyzing from the 1-month to 1-day timeframe to find out the ongoing trend in the stock and the movement pattern. When pattern formed is successfully penetrated and the MACD shows the EMA-12 is above EMA-26, then make sure it is penetrated with a large purchase volume to ensure that the pattern penetration is valid;
- Ensuring that the risks and returns that we have made can be accepted for the execution of the order. Risk is based on tolerable stoploss, made on a support basis on a swing minor in the pattern. Make sure that the ratio of risk and return is 1:2 and the trade return should be above 1.36%.
- For repositioning portfolio, make sure that the post average price is still considered as a safe risk and return ratio.
- Measuring portfolio performance using Beta, Sharpe and Treynor ratio

IV. FINDING AND DISCUSSION

A. Holding Stocks in Portfolio (June 2021)

The holding stocks in Kala Investama portfolio in June 2021 are APLN (avg. price: 254.3; volume: 3000), BBTN (avg. price: 1737; volume: 27500), BRIS (avg. price: 2116; volume: 500), CTRA (avg. price: 1187; volume: 5000),

PPRO (avg. price: 118.6; volume: 800), PTPP (avg. avg. price: 1784; volume: 5500), PWON (avg. price: 577; volume: 10000), SIDO (avg. price: 820; volume: 5000), SRIL (avg. price: 264; volume: 5000), TLKM (avg. price: 3534; volume: 5500), TOWR (avg. price: 1470; volume: 5000) and WSKT (avg. price: 1470; volume: 5000). Each of it has different momentum to reposition the average price. The example of each momentum is shown below:

a) BBTN.JK
   As it can be seen in figure 5, BBTN finally confirmed a strong breakout with large volumes, making the opportunity to reposition BBTN shares. It penetrated a cup and handle pattern and the blue line MACD position is also above the red line MACD. The target profit is achieve with 20.6% capital gain.

b) CTRA.JK
   As it can be seen in figure 6, CTRA finally confirmed a strong breakout with large volumes, making the opportunity to reposition CTRA shares. It penetrated a cup and handle pattern and the blue line MACD position is also above the red line MACD. The target profit is achieve with 18.3% capital gain.

c) PTPP.JK
   As it can be seen in figure 7, PTPP finally confirmed a strong breakout with large volumes, making the opportunity to reposition CTRA shares. It penetrated an Ascending Triangle and the blue line MACD position is also above the red line MACD. The target profit is achieve with 16.7% capital gain.

B. Trading Activities (July-November 2021)
Here are some trading activities that have been done:

a) ABBA.JK
   It is seen from figure 8 that ABBA formed a Symmetrical Triangle pattern, and shortly after the breakout and retest on July 12, 2021. A buy order is carried out at a price of Rp252. The target profit is set at Rp338 with stoploss being at Rp230. Apparently in number 2 in figure 8, it shows a Symmetrical Triangle, and it is a valid breakdown with a bearish divergence MACD. Time to take profit with a 130% capital gain.

Fig. 5: BBTN chart

Fig. 6: CTRA chart

Fig. 7: PTPP chart

Fig. 8: ABBA chart

Fig. 9: BEBS chart

Fig. 10: BMRI chart

b) BEBS.JK
It is seen from figure 9 that BEBS formed a Bullish Wedge Pattern with a huge breakout volume. The intersection of MACD indicates that the next trend will be a bullish trend. However, the stock moved regarding stoploss and must obtain a capital loss of 19.67%.

c) BMRI.JK
In the figure 10, it is seen that BMRI formed a cup and handle pattern with purchase volume that

dominates at the time of breakout. Thus, the buy order was set on October 6, 2021, at Rp6450. Several days later, October 13, 2021, the target price was reach at Rp7075 and created 9.7% capital gain.

C. Complete Trading Activities (July-November 2021)
The following table 1 is the complete trading activity from July to November 2021.

Stock	Date	Order	Volume	Price	Avg. Price	Gain/Loss	Stock	Date	Order	Vol.	Price	Avg. Price	Gain/Loss
ABBA	13/07/21	Buy	50000	252	252	0.00%	BUKA	19/08/21	Buy	1500	775	838	-7.52%
	21/07/21	Sell	25000	354	252	40.48%	CENT	09/07/21	Buy	5000	280	280	0.00%
	09/08/21	Sell	25000	580	252	130.16%		09/07/21	Buy	5000	282	281	0.36%
ACST	14/07/21	Buy	5000	254	254	0.00%		09/07/21	Buy	5000	284	282	0.71%
	18/08/21	Sell	5000	242	254	-4.72%		09/07/21	Buy	10000	278	281	-1.07%
AKRA	16/07/21	Buy	3000	3330	3330	0.00%		04/08/21	Sell	12500	390	281	38.79%
	06/08/21	Sell	3000	3470	3330	4.20%		16/08/21	Sell	12500	380	281	35.23%
APLN	05/10/21	Buy	9800	135	162.8	-17.08%	CTRA	19/08/21	Buy	10000	860	969	-11.25%
	28/10/21	Sell	12800	136	162.8	-16.46%		07/09/21	Sell	10000	985	969	1.65%
ASII	30/11/21	Buy	1000	5825	5825	0.00%		07/10/21	Buy	5000	1010	989	2.12%
	30/11/21	Buy	3000	5925	5825	1.72%		17/11/21	Sell	10000	1170	989	18.30%
ASRI	03/11/21	Buy	50000	188	188	0.00%	ERAA	28/07/21	Buy	7500	605	605	0.00%
BABP	02/08/21	Buy	30000	426	426	0.00%		04/08/21	Sell	7500	665	605	9.92%
	04/08/21	Sell	15000	498	426	16.90%	FREN	17/09/21	Buy	15000	123	123	0.00%
	10/08/21	Sell	15000	535	426	25.59%		05/10/21	Buy	15000	98	110	-10.91%
	10/09/21	Buy	5000	338	338	0.00%		22/10/21	Sell	25000	83	110	-24.55%
	04/10/21	Buy	5000	280	309	-9.39%		03/11/21	Buy	75000	108	108	0.00%
	07/10/21	Buy	5000	274	297	-7.74%	ITMG	23/07/21	Buy	1000	16150	16150	0.00%
	29/10/21	Buy	10000	230	270	-14.81%		23/07/21	Buy	1000	16175	16162	0.08%
	17/11/21	Buy	25000	228	249	-8.43%		29/09/21	Sell	1000	20000	16162	23.75%
	24/11/21	Buy	25000	210	236	-11.02%		28/10/21	Sell	1000	22650	16162	40.14%
	26/11/21	Sell	25000	195	236	-17.37%	LPKR	05/07/21	Buy	5000	163	163	0.00%
BBNI	19/07/21	Buy	4000	4810	4810	0.00%		06/07/21	Buy	5000	161	162	-0.62%
	26/07/21	Sell	2000	5050	4810	4.99%		15/07/21	Sell	10000	149	162	-8.02%

	29/07/21	Sell	2000	4930	4810	2.49%		LSIP	08/11/21	Buy	5000	1415	1415	0.00%
	24/08/21	Buy	2000	5275	5275	0.00%			26/11/21	Sell	2500	1260	1415	-10.95%
	21/09/21	Sell	2000	5050	5275	-4.27%			30/11/21	Sell	2500	1220	1415	-13.78%
BBRI	06/08/21	Buy	5000	3960	3960	0.00%		MDKA	01/11/21	Buy	5000	3110	3110	0.00%
	20/09/21	Sell	2500	3570	3960	-9.85%		MEDC	09/11/21	Buy	15000	555	555	0.00%
	06/10/21	Sell	2500	4130	3960	4.29%			19/11/21	Sell	15000	535	555	-3.60%
BBTN	14/07/21	Sell	12500	1235	1737	-28.90%		MLPL	23/11/21	Buy	50000	352	352	0.00%
	09/08/21	Buy	20000	1390	1538	-9.62%		MNCN	19/08/21	Buy	17000	850	850	0.00%
	04/10/21	Buy	5000	1555	1540	0.97%			19/10/21	Sell	8500	930	850	9.41%
	13/10/21	Sell	20000	1650	1540	7.14%			29/10/21	Sell	8500	895	850	5.29%
	28/10/21	Sell	10000	1730	1540	12.34%		PRIM	04/08/21	Buy	15000	394	394	0.00%
	28/10/21	Sell	10000	1695	1540	10.06%			10/08/21	Sell	15000	350	394	-11.17%
BEBS	28/07/21	Buy	7500	615	615	0.00%		PTPP	04/10/21	Buy	10000	1170	1387	-15.65%
	28/07/21	Buy	500	610	614	-0.65%			18/10/21	Sell	15500	1370	1387	-1.23%
	29/07/21	Buy	2000	575	606	-5.12%		PWON	22/11/21	Sell	10000	546	577	-5.37%
	05/08/21	Sell	10000	510	606	-15.84%		SCMA	29/07/21	Buy	8500	2300	2300	0.00%
BMRI	06/10/21	Buy	3000	6450	6450	0.00%			10/08/21	Sell	8500	1965	2300	-14.57%
	13/10/21	Sell	3000	7075	6450	9.69%			16/09/21	Buy	1500	2090	2090	0.00%
BRIS	09/08/21	Buy	4000	2510	2466	1.78%			28/09/21	Sell	1500	1965	2090	-5.98%
	11/10/21	Buy	3000	2130	2331	-8.62%		SCNP	02/08/21	Buy	15000	390	390	0.00%
	27/10/21	Buy	10000	2150	2227	-3.46%			02/08/21	Sell	15000	376	376	0.00%
	28/10/21	Sell	10000	2070	2227	-7.05%		SIDO	10/08/21	Sell	5000	795	820	-3.05%
BUKA	04/08/21	Buy	8500	850	850	0.00%		TOWR	26/07/21	Sell	10000	1480	1254	18.02%
TLKM	09/08/21	Sell	5500	3280	3524	-6.92%			30/07/21	Sell	10000	1445	1254	15.23%
	15/11/21	Buy	5000	3600	3600	0.00%								

Table 1: Trading activities

D. Portfolio Performance Measurement

As it can be seen in figure 11, there is an improved performance of portfolio for the past 5 months and the return obtained from the Kala portfolio as of November 2021 amounted to 44.67% while JCI was 12.28%.
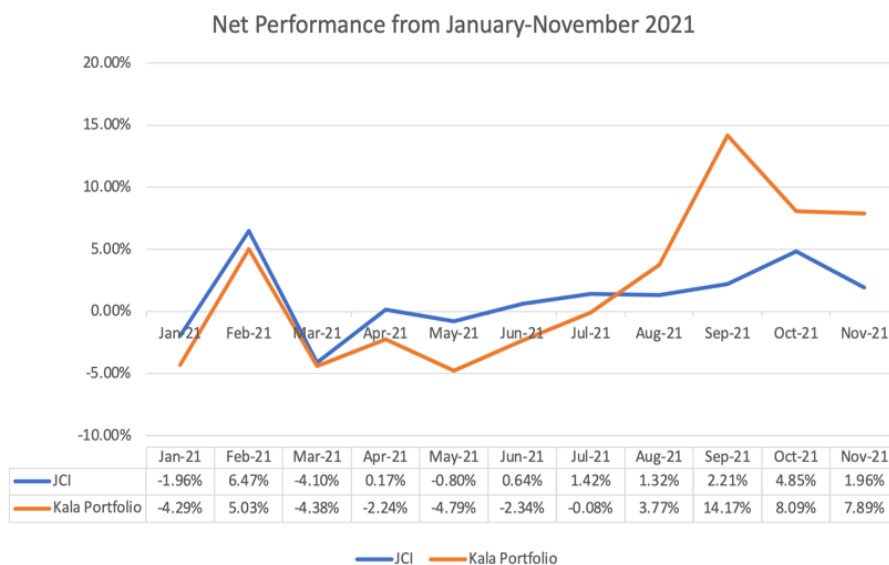

	Jan-21	Feb-21	Mar-21	Apr-21	May-21	Jun-21	Jul-21	Aug-21	Sep-21	Oct-21	Nov-21
JCI	-1.96%	6.47%	-4.10%	0.17%	-0.80%	0.64%	1.42%	1.32%	2.21%	4.85%	1.96%
Kala Portfolio	-4.29%	5.03%	-4.38%	-2.24%	-4.79%	-2.34%	-0.08%	3.77%	14.17%	8.09%	7.89%

Fig. 11: Portfolio performance of Kala Investama

Based on the data from figure 11, the amount of Kala's portfolio return is 44.67% while the index is 12.28% from July-November 2021. As it can be seen in table 2, the Beta of Kala's portfolio is 2.25, which it is calculated from the slope of return of Kala's portfolio and JCI. It shows that the Beta of Kala's portfolio is high enough to outperform the market. To know the risk of the overall portfolio, then it must be measured using the Investment Manager Performance Measurement. With the average risk-free rate is 2.36% [7], thus it can be calculated the portfolio management performance.

	Kala Investama Portfolio	Jakarta Composite Index
Return	44.67%	12.28%
Risk-free rate	2.36%	2.36%
Beta	2.25	1
Standard Deviation	6.05%	1.47%
Annual Risk	0.209	0.051
Risk-adjusted return	2.13	2.41
Sharpe ratio	6.99	6.74
Treynor ratio	0.188	0.099

Table 1: Portfolio Performance Measurement

V. CONCLUSION AND FURTHER RESEARCH

A. Conclusion

Management of a floating loss stock in portfolio must be analyzed immediately, especially if there is the right momentum to enter a trade, such as BBTN.JK shares that become profitable after repositioning. But it is not always stocks that are in floating loss must be repositioned, because the momentum of each stock is different, and the investment manager must pay attention to the level of stoploss that has been determined. If the movement of the stock passes the set stoploss level, the Investment Manager must be disciplined to make cut loss to prevent a deeper decline in the value of the asset. The safest thing to do to positioned the stock is when the trend is clear, and the trend is in a bullish position in a major trend.

By implementing this investment strategy in the last 5 months (early July – end of November 2021), Kala portfolio can generate cumulative return of 44.67%, superior to the benchmark index of JCI which produces a cumulative return of 12.28%.

B. Further Research

From the results of this study, it is seen that the increase in the value of portfolio assets is quite significant compared to the historical performance of Kala Portfolio. This could happen because most trades made on trades with primary trends in bullish conditions with probability to continue to rise in the trend are very large with the risk to reverse smaller direction. Ensuring the direction of a bullish trend is by looking at its higher high and higher low on the trend. Combining between several tools in technical analysis before entering a trade is very important to know the entry point and exit point in a trade.

In determining price positions, the investment manager must know the risk and return in a trade and the comparison between risk and return must be included in the risk profile of the investment manager, but in this study the risk and return ratio is set at 1:2. If the stock price movement touches its risk limit, then the stock should be immediately disengaged, and funds diverted to high-prospect stocks. Waiting for the moment to reposition the stock will take far more time than the transfer of cut loss funds to stocks that have other high prospects, so it is expected that high-prospect stocks can recoup losses due to previous trades. Thus, it can reduce the risk of a deeper decline in the value of the portfolio.

For further research, the researcher should implement the investment strategy and monitor the performance of the portfolio in a long period, because the current research is in a short period of time and during the window dressing season. The researcher has to prove this investment strategy is valid to minimize the risk and maximize the portfolio performance in order to outperform the market.

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