Key Macroeconomic Indicators Influencing Stock Return and Volatility: Empirical Evidence from a Study of Greater Bay Area, Hong Kong, China

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Abstract

This study is use to the existing literature to review the stock return and volatility by macroeconomics variables. It evaluates to the Hong Kong Hang Seng index as dependent of Y, inflation, money supply of M2, exchange rate of RMB, 12-months deposit rate and Hong Kong GPD as independent variables as X to examine the Hong Kong stock return. The data has been selected the variable factors as preferably measured on a continuous level. The multiple regression and testable hypotheses as research methodology used to define the null hypothesis and rejected the null hypothesis. The finding and result conclude that there is effect by Hong Kong GDP on Hong Kong stock return.

Keywords: Hang Seng index, GPD, Inflation, exchange rate by renminbi, deposit rate, money supply, Hong Kong, China

1. Introduction

The Hong Kong Stock Market is most important financial centre of wheeling and dealing that it after Japan and Shanghai is Asia's largest bourse. Standing shoulder to shoulder with New York and London, this is where the wheels of the world's financial institutions turn. Stock prices of securities marketed on the Hong Kong Exchanges and Clearing Limited (hereafter abbreviation name: Hong Kong Stock market). In January 2012 Hong Kong was ranked number one as the world's most economically free country, which will help its as a great place to live, work and, most importantly, invest. Since Hong Kong developed under the influence of the British, the Hong Kong Stock market is more like a Western stock exchange and one on the Chinese mainland. It offers more transparency and regulated by different standards which gives investors. As its good reputation, the Hong Kong stock market is becoming more popular stock exchange for the mainland Chinese companies to list their stocks and thus paving the way for companies to become familiar with the International stock markets.

It is especially those from the Chinese Mainland since 1997. Numerous agreements have been signed to facilitate trade and to allow Hong Kong's to engage in business practices in the Mainland. In addition, more Chinese companies have issued IPOs through the Hong Kong Stock Market, enabling the flow of more capital inflow and outflow from Mainland China that measures would be beneficial to the development of Hong Kong's stock. The economic shocks, specifically financial market shocks, from the Mainland to Hong Kong are likely to increase progressively over time. This may increase synchronization of real growth and inflation, but due to the continuing structural differences between the two economies and different stages of economic development, the domesticshocks will not necessarily become more similar. Hans Genberg, Li-gang Liu and Xiangrong Jin(2006).

Hong Kong's economy is characterised by free trade, low taxation and minimum government intervention. It is the world's 9th largest trading economy, with the mainland of China as its most significant trading partner. Hong Kong is also a major service economy, with particularly strong links to mainland China and the rest of the Asia-Pacific region. At the end-2012, Mainland enterprises continued to play a prominent role in the Hong Kong stock market. a total of 721 Mainland enterprises were listed on the Main Board and GEM, accounting for 47 % of the total number of listed companies and 57% of total market capitalization. In 2012, Mainland-related stocks accounted for 70% of equity turnover and 71% of total equity fund raised in the Hong Kong stock market.

Ying F , C, James T.K. lam, Hinson S. Y(2008) investigate the stock volatility in Hong Kong Stock market . Using the sample of constituent stocks of Hang Seng Index (HSI), we found that the mean daily realized volatilities of Hong Kong stocks to be significantly higher than their HSI counterpart, while the correlations between H-shares stay relatively lower than that of HSI stocks.

The investors should not invest to stocks purely based on economic cycles, not least at the prediction because of economic forecasts can be wrong Dongmin Kong,As Tusheng Xiao, Shasha Liu (2011). Somehow past economic

growth is not a reliable indicator of future stock gains. Accurately forecasting future economic growth might help but those forecasts are difficult to get right. If valuations are attractive, it makes sense to invest in the equity markets of slowly growing economies Najeb Masoud and Glenn Hardaker (2012).

2. Literature Review

Later in 2003, Hong Kong's economic growth was halted due to the outbreak of the SARS epidemic. It was until a year later that Hong Kong's economic activity and the stock market has gradual recoveries. Hong Kong stock market returns and portfolio diversification was better. The transformation of the Chinese economy is still at its early stage and the economy is expected to continue its strong pace of performance. As same year, the initial phase of Closer Economic Partnership Arrangement (CEPA) between the Mainland and Hong Kong came into effect. Under the CEPA framework, exports from Hong Kong meeting the rules of origin requirement covering 374 Mainland product codes enjoyed zero-tariff treatment upon entry into the Mainland, while Hong Kong service suppliers in 18 service sectors enjoyed preferential market access treatment in the Mainland.

It is most likely the result from the implementation of individual visit scheme and the objective of signing this agre ement is to strengthen trade and investment cooperation betweenMainland China and Hong Kong and promote joint development of the two sides. The number of mainland visitors has increased continuously from 2003 to 2012. t is very likely that a higher stock index (i.e. highermarket value of stocks and higher circulation of capital) attracts more Mainland companies to issue IPOs through the Hong Kong Stock Exchange to raise capital for eir business ventures, which in turn plays a role in the growth of China's economy. T h u s are certain degrees of interdependence between the developments of the two. China has begun to WTO commitment t o e x e c u t e as from 1 January 2002 for opening up the economy further for foreign participation, particularly in the service sectors. For instance, foreign companies are allowed to form joint v enture to provide services in the Mainland. Hong Kong i s the most important r o l e s as well as the largest source of foreign direct investment for the Mainland . T h u s i t surge in the Mainland's trade and investment flows will help boost Hong Kong's external trade in both goods and services. Moreover, the opening up of the Mainland's service sectors, including finance, professional services, and travel and tourism, will also provide ample new business opportunities for Hong Kong and China's major trading partners.

Notwithstanding the global economic downturn, the Mainland economy still maintained a robust growth of 8.4% in 2002The growth momentum from 2002 to 2012 which was gr adual 10% growth on GDP came from a further surge in domestic demand, which far outstripped the distinct moder ation in export performance. The common influence on Hong Kong a n d the Mainland economic t h a t will be better understood with a closer look at the structure of trade flows between Hong Kong . Hong Kong economy is against external shocks; what is the relative importance of Mainland shocks in influencing output and inflation in Hong Kong; t h e large portfolio capital outflows from China will be once its capital account is liberalized and what share of such flows will be routed through Hong Kong. Don g H e (2 0 0 8) .
Mainland policy actions and other major events in the Mainland china are important to the Hong Kong stock marke t that had measure economic is the Gross Domestic Product (GDP). We argues on the relationship between stoc k prices and the macro-economic variables, local GDP, 0ne year deposit interest rate, money supply (M2), inflation, RMB exchange rate. Results also indicate that stock returns of different firms behave differently in similar economic conditions that acquaint investors about the risk diversification opportunity in the stock market. Babar Zaheer But t, Kashif Ur Rehman, M. Aslam Khan and Nadeem ,Safwan (2010).

The majority of Hong Kong's stock prices can be explained by macroeconomic variables Dubravka Benaković, (2001) .It would be through Hang Seng stock index, local GDP, interest rate, money supply M2, inflation and RMB exchange rate. Further, it is well known that the volatility of stock returns is time varying. In order to account for the time variation effect, we use the multiple-regression and hypothesis technique in our study. Past values of the conditional variance for a default risk premium have information that is precedent to the conditional volatility for value premium and the small stock risk premium, and the conditional variance for the market risk premium has information about the future volatility of macroeconomic risk, as proxied by the conditional variance for GDP growth Angela J. Black (2006).

The effect of exchange rate on the stock prices Currency exchanges conducting and investment in renminbi is pretty much a "fact of life". Hong Kong has a decade of experience and a solid foundation.
The 10th anniversary of the launch of renminbi banking business in Hong Kong But our biggest and unique edge lies in our very close economic and business links with the mainland. Some 60 per cent of foreign direct investment into the mainland originates from Hong Kong and more than 50 per cent of the mainland's overseas direct

investment is destined to or intermediated through Hong Kong. Supported by these links, Hong Kong's offshore renminbi market has developed with greater size, depth and breadth, and such an intrinsic advantage will not erode simply because of the introduction of renminbi business in other places. But there is no place for complacency. Nor can we lose faith in ourselves.

The exchange rate of the relationship between stock prices and value of the currency for these firms should be positive. Hu, W. J., and Du, J. (2013). Hence, the relationship between exchange rate and stock prices is an empirical one variable. Mohamed A, Georgios C, Andrea C (2010). Roger B. AtindeÂhou Jean-Pierre Gueyie (2001) indicate that stock returns are sensitive to exchange rate risk and, mainly, to the US dollar relative to the Canadian dollar exchange rate. The sensitivity is, however, unstable over time. Moreover, there is an asymmetric response to exchange rate risk. Investors react more to a reevaluation of their portfolio after losses than to an appreciation after successive gains.

Given Hong Kong's close economic relations with the Mainland, the movement of the renminbi (RMB) is a key factor affecting the performance of Hong Kong's external sector, including both trade in goods and services. Before resuming a strengthening trend in the latter part of the year, and appreciated only mildly against the US dollar by past decade during 2002 and 2012. Going forward, the Mainland authorities are widely expected to proceed with the exchange rate regime reform in a controlled and gradual manner, avoiding significant fluctuations in the exchange value of the renminbi. Jianfa Shen (2008). Hong Kong capital market relation to Mainland China with RMB tradings.

Wai-Choi Lee (2012) the movement of the real exchange rate of RMB will lead to a movement of Hang Seng Index to a certain extent. When RMB appreciates against HK dollars, Hang Seng Index will rise. It might imply that the positive effect of capital flows to goods and assets markets in Hong Kong on Hong Kong stock market is dominant due to the revaluation of the RMB against the HKD.

The effect of Money Supply on the stock market Monetary policy is neutral or not has long been debated by economists. Some argue that monetary policy cannot affect stock prices, while others argue that monetary policy affects equity prices. Using various methodologies, there are two possible mechanisms in which MS affects stock prices Guneratne, Wickremasinghe (2011). Since the money growth rate is positively related to the rate of inflation, an increase in the MS may lead to an increase in inflation Wing K,W, JACK P. Richard D, T, Karen Y C. (2004). An increase in inflation increases the nominal risk-free rate, raising the discount rate in the valuation model, resulting in a negative relationship between MS and stock prices. On the other hand, the negative effect of inflation on stock prices, however, may be countered by the economic stimulus provided by money growth. Such stimulus, often referred to as a corporate earning effect, would likely result in increased future cash flow and stock prices. Inwon Jang David Kim (2009) monetary policy is the key to understanding the dynamics of the credit spread in the medium run as it appears to have a substantial influence on the default risk premium, which explains much of the credit spread dynamics.

The effect of inflation on stock market Inflation can be rely on two factors that one is cost push inflation that is driven by real factors like employment, consumption and production. Another cause financial factor of inflation is through an increase in money supply. An increase in inflation raises the nominal risk-free rate and the discount rate in the equity valuation model. The effect of a higher discount rate would be neutralized if cash flows increase with inflation. However, it is also possible to observe a positive relationship between the inflation and stock prices if inflation is expected, other things equal. Flannery, M.J. and Proto Papadakis (2002) shows that an expected increase in inflation decreases the expected return to money, thus reducing demand for money and increases demand for equity, resulting in positive correlation between inflation and equity prices, document a negative relationship between inflation and equity prices and together with a global market risk factor, explain the average returns for country and industry portfolios, and a wide variety of single- and double-sorted characteristics-based portfolios. Kewei Hou.a G, Andrew Karolyi, Bong Chan Kho (2006). Osamah M. Al-Khazali (2003) argued the short and long-term relationships ae existing between stock prices, inflation. It also investigates whether the proxy hypothesis can explain the puzzling negative relation between stock returns and inflation.

The effect of GDP on stock market The conditional variance for the market risk premium has information about the future volatility of macroeconomic risk, as proxy by the conditional variance for GDP growth. Angela J. Black (2006) .The link to macroeconomic conditions is that when GDP growth is falling and stock prices are falling. Results show that the correlation relationship does exist between stock prices and the macro-economic variables in the highly speculative Chinese stock market performance is positively related to that of macro-economy in the long term. Ming-Hua Liu , Ming-Hua Liu, Keshab M. Shrestha (2006).

The Gross Domestic Product (GDP) is an overall measure of net output produced within an economy in a specified period, GDP is compiled as total final expenditures on goods and services (including private consumption expenditure, government consumption expenditure, gross domestic fixed capital formation, changes in inventories, and exports of goods and services), less imports of goods and services. A detailed examination reveals the presence of seasonality in the overall GDP, Ilker Domac, Magda Kandil (2002). There are some of its main components

including private consumption expenditure, government consumption expenditure, exports of goods, imports of goods, exports of services, and imports of services. However, due to the presence of considerable short-term fluctuations, no clear seasonal pattern is found in gross domestic fixed capital formation. Therefore, the seasonally adjusted series of GDP is compiled separately at the overall level market, rather than summing up from its main components of banking sector and other control variables using a growth model, the research findings largely support the view that there is a stable, long-term equilibrium relationship between the evolution of the stock market and the evolution of the economy. Najeb Masoud and Glenn Hardaker(2012).

The effect of interest rates on stock market Changes in the interest rate affects the investors required rate of return, Khaled Hussainey; Le Khanh Ngoc (2009). i.e. the discount rate, and therefore stock prices. Because of this relationship, it is expected that interest rate and stock prices should have a negative relationship, Stephen H. Penman, Scott A. Richardson,İrem Tuna (2006). The share price index does not have any influence on macroeconomic variables except for the interest rate Abeyratna Gunasekarage , Anirut Pisedtasalasai, David M. Power (2004). Mohamed Essaied Hamrita (2011) also investigated the relationship between the relationship between interest rate returns and stock index returns is significantly different from zero only at the highest scales. The domestic macroeconomic variables and stock excess returns to evaluate the effects of macroeconomic variables on excess returns and assess market efficiency in the Southeast Asian economies prior to the 1997 Asian crisis. Using a battery of tests, monthly stock excess returns are best specified by autoregressive (AR) conditional Further, they report that Asian monetary authorities seem to have had a credibility problem in keeping inflation within a target range which has contributed to the 1997 crisis. The analysis provides evidence about the finding that interest rate returns are leading stock index returns**.** Mohamed E, H and Abdelkader T. (2011). Stuart Hyde (2007) he finds significant levels of exposure to exchange rate risk in industries in all four markets. Significant levels of interest rate risk are only identified in Germany and France. All three sources of risk contain significant information about future cash flows and excess returns. The high level of real interest rates is often viewed as a barrier to recovery in Hong Kong. In the face of such high real interest rates, a durable recovery in asset prices activity is thought to be unlikely. Indeed, Khaled Hussainey; Le Khanh Ngoc (2009) observers perceive a significant risk that the economy could fall into a deflationary spiral, leading to prolonged stagnation, interest rates and assessing their relationship to asset prices (such the prices of assets such as property, stocks, and capital) real activity.

Hang Seng Index represented stock return The Hang Seng passed the first of 10,000 point on December 10, 1993 and until to Jan 2002 maintenance about 10,000point. It passed the 20,000 point on December, 2006. In less than 10 months, it passed the 30,000 point milestone on October, 2007. After one year on October, 2008, the index further fell to 11000 points, having fallen nearly two-thirds from its all-time peak, but passed the 20,000 points on July 2009. As of the Dec 2012, the index is hovering around 19,000 to 20,000 points. The capital market effect and predicting cycle variation is stated by Kong Jeffrey E. Jarrett , Zhen Zhen Sun(2007). The Hang Seng Index ("HSI") is one of the earliest stock market indexes in Hong Kong. Publicly launched on 24 November 1969, the HSI has become the most widely quoted indicator of the performance of the Hong Kong stock market. To better reflect the price movements of the major sectors of the market, HSI constituent stocks are grouped into Finance, Utilities, Properties, and Commerce and Industry Sub-indexes. The Hang Seng Index adopts free float-adjusted market capitalization weighted methodology with a 15% cap on each constituent weighting.It can be constantly seen from the results that the quarterly-revised portfolios offer the highest profitability. This is further supported by the Sharpe's risk-adjusted return index. Kie Ann Wong, Lawrence S. Tai (2002).

3. Data Collection

The paper uses quarterly data from January 2002 to December 2012 financial data and the data are obtained from Hong Kong exchange stock , financial Statistics, published by the Hong Kong Monetary Authority and Hong Kong Census and statistics Department. Hang Seng stock indices are used in the Hang Seng Index, Exchange rate (EX) is denominated by the trade-weighted exchange rate index of the Chinese currency, Renminbi (RMB). Money Supply narrowly is defined MS, M2, is used as a proxy for the level of money stock in Hong Kong Financial market. An increase in the index indicates the appreciation of the domestic currency while a decrease in the index indicates the depreciation of domestic currency. The Inflation is measured by the consumer price index (CPI) and CIP is used as a proxy measure for real activity in Hong Kong inflation movement then inflation is considered to employment, consumption and business activities were found to affect levels and volatilities of risk factors, Thomas Gosnell, Ali Nejadmalayeri (2010).

The one-year time deposit rate set by the Hang Seng bank through Hong Kong Monetary Authority, is used as a indicated deposit interest rate in Hong Kong market. In this study, all variables are converted into natural logarithms. The primary implications are that represent to perceptions of risk and return vary inversely and that affect has a strong influence on valuation, Daniel, K., and S. Titman, 1997. This means that simple statistical measures of risk are unlikely to fully capture risk perceptions and that market volatility can be expected to be greater than a simple present value model would imply. Robert A. Olsen (2012).

This measures the variation of stock returns of Hong Kong to economic variable included factors: local GDP, interest rate, RMB exchange rate of HK dollars, money supply (M2), inflation .We obtained data on the quarter of GDP, 12 month interest rate, exchange rate, money supply (M2) and inflation and Hang Seng index of the Hong Kong index from Data stream. The quarter data covering January 2002 to December 2012 and sample size has 44observations. It investigates stock return of Honk Kong and uses Multiple Regression and link up with Lagged Explanatory Variables to advance testing. In terms of hypothesis type, it is of correlation type, in which the relationship among variables is analyzed according to the research goal in which the impact of independent variable on dependent variable will be considered through regression. The data are obtained from Hong Kong Monetary Authority, Economic Analysis and business facilitation Unit; Census and statistics; Hong Kong International Financial Statistics and Yahoo finance.

Hang Seng Index as dependent variable (Y) Hang Seng Index has classification is a comprehensive system designed for the Hong Kong stock by classification dichotomy by Hang Seng Indexes Company Limited. It reflects the stock performance in different sectors. It caters for the unique characteristics of the Hong Kong stock market and maintains and interact the international compatibility with to international industry classification.The Hang Seng index is the main indicator of the overall market performance in Hong Kong stock return thus to better reflect the price movements of the major sectors of the market, for the many eligible company of the final selection are based the market capitalization and trade turnover of the company and financial performance of the company. HSI constituent stocks are grouped into Finance, Utilities, Properties, and Commerce and Industry Sub-indexes. These 50 constituent companies represent about 70% of capitalization of the Hong Kong Stock Exchange they are denominated in Hong Kong dollars and trade the same as other equities. The stock return by the robustness and economic significance of predictability Kie Ann Wong Lawrence S. Tai (2000).

The Gross Domestic Product (GDP) as independent variable (X_1) The GDP Growth Rate is a percentage change in the seasonally adjusted GDP value in the certain quarter, compared to the previous quarter. The intensity of the production varies throughout the year due to climatic conditions and holidays. This makes a direct comparison of two consecutive quarters difficult. The Gross Domestic Product can be determined using three different approaches. The product, the income, and the expenditure technique should give the same result. Pan, G.L. (2000). In order to adjust for these conditions, many countries calculate the quarterly GDP using so called seasonally adjusted method. In sum, the product technique sums the outputs of every class of enterprise. The expenditure technique works on the principle that every product must be bought by somebody, therefore the value of the total product must be equal to people's total expenditures in buying products and services. The income technique works on the principle that the incomes of the productive factors must be equal to the value of their product, and determines GDP by finding the sum of all producers' incomes. As many other macroeconomic variables, GDP is a non-stationary time series. It has an increasing trend that changes the mean every period ,Parviz Saeidi1, Abolghasem Okhli (2012).

Exchange rate RMB against to Hong Kong Dollars as independent variable(X_2) Under this regime, Hong Kong dollars was pegged with US dollar and RMB was pegged with USD heavily regulated by government. Liang Ding (2010). The implement policies to make private consumption the source of Hong Kong's economic growth and to eliminate policies that prevent markets from determining the most efficient allocation of capital in the economy in order to ensure that healthy economic growth is sustained over the long term apply chains and the increasing use of renminbi for trade settlements Wayne M. Morrison, Marc Labonte (2013). Renminbi can help reduce the exchange rate uncertainty facing Hong Kong's companies, given the important role played by Mainland operations in the integrated regional.

HKMA controlled the bulk of the retail foreign exchange transactions. Under this condition, the RMB to the US dollar was maintained at constant level and Hong Kong as offshore RMB centre. It was a de-facto fixed exchange rate regime since 1993. Under this exchange rate regime, RMB was considered as a highly undervalued currency by other countries, and Chinese government has been under great pressure to revalue its currency and reform its exchange rate regime since then.

The Hong Kong dollar exchange rate strengthened and stayed that the strong-side was triggered repeatedly due to inflows of funds, which partly reflected increased allocation to Hong Kong dollar assets by china investors.
The stronger equity IPO activities to some extent supported the inflows. The Hong Kong dollar exchange rate then softened slightly and amid to RMB dollar increased allocation . Build up "liquidity pool" - Hong Kong as an offshore RMB centre to attract inflow of RMB to Hong Kong from overseas and the Mainland Develop various RMB related products and businesses in Hong Kong Introduce appropriate rules and systems for better regulation of the RMB market Hong Kong (an offshore RMB market) and Shanghai (an onshore RMB market) can complement each other in the process of RMB internationalization.

Time and Deposit interest rate as independent variable (X_3) The Interest rate is for a one year as same 12 month terms and applicable to new fund or existing funding converted from HKD deposit. The average interest rates for time deposits and savings deposits are compiled based on the interest rates quoted by major licensed banks after the deregulation of the Interest Rate Rules.

The following time deposit interest calculator is provided by the Bank of China (Hong Kong) website and allows you to calculate the principal plus Interest on HDK currencies. The low interest rate help to push up the equity ma rket in global areas. Instead, which is before the subprime hit and It is cheaper to buy equity assets. It will be required to input the term, interest rate and deposit amount.

Inflation as independent variable (X_4) Inflation is measured by the consumer price index (CPI) is used as a proxy measure for real activity Hong Kong. The Consumer Price Index (CPI) measures the changes over time in the price level of consumer goods and services generally purchased by households. The year-on-year rate of change in the CPI is widely used as an indicator of the inflation affecting consumers issued by the Census and Statistics Department. The Consumer Price Indices (CPI) is compiled to reflect the impact of consumer price changes on households in different expenditure ranges. The CPI is compiled based on the expenditure patterns of households in the relatively low, medium and relatively high expenditure ranges. Taking into account the impact of price changes since the base period The Composite CPI is compiled based on the expenditure patterns of all these households taken together, Lala Rukh Hazrat Bilal Khursheed Ahmad Sangeen Khan (2011).

These developments will likely add to the demand for Hong Kong's exports of goods and services and it will likely benefit Hong Kong economy. European economies are getting out from the trough, reverting back to growth. Alo ng with the US's steady recovery, US unemployment rate gradually stripped down to 7% in November, 2013. Chin a's output growth is expected to maintain at around 7-8% this year. Japan seems successfully escaping from the negative inflation trap. The major uncertainty remains ho w fast the central banks around the world will raise their interest. On the whole, it would affect to Hong Kong's economic growth to lie on the inflation and explosion equity market volitional movement.

Money Supply M2 as independent variable (X_5) Money Supply is the aggregate amount of monetary assets available in a country at a specific time as a ccording to the Financial Times .

Money Supply M0 and M1, also known as narrow money, includes coins and notes in circulation and other assets t hat are easily convertible into cash McKinnon, J. G., Haug, A. A., & Michelis, L. (1999). Money Supply M2 includ es M1 plus short-term time deposits in banks. Money Supply M3 includes M2 plus longer-term time deposits. Money Supply includes M3 plus other deposits. And the term broad money is used to describe Money Supply M2, M3 or M4.

M2 = Cash + Demand Deposits + Savings Deposits.

M2 means M1 plus customers' savings and time deposits with licensed banks, plus negotiable certificates of deposit issued by licensed banks and held outside the monetary sector. As from June 2002, short-term exchan ge fund placements of less than one month are included under time deposits as part of the monetary aggregat es. The data series on time deposits and M2 had been using this revised definition since Apri 1997. In Hong Kong, money supply M2 increased or decreased to is reported by the Hong Kong Monetary Authority. Hong Kong Money Supply M2 includes M1 plus short-term time deposits in banks. Through multi-variable regress ion statistics analysis has been done that research findings indicate strong impact and relationship between in dependent and dependent variables, and the research hypothesis has been accepted. Parviz, Saeidi, Abolghase m ,Okhli (2012).

4. Analysis

To the definition for field character and assign variables to testing the hypothesis regarding the normality of stock returns and economic variables returns can be examined as below:

- Hang Seng Index as dependent variable - Y
- Local GDP as independent variable -X_1
- RMB exchange rate as independent variable –X_2
- 12 month Interest rate as independent variable –X_3
- inflation as independent variable –X_4
- M2 as independent variable –X_5

$$"\hat{y} = b_0 + b_1x_1 + b_2x_2 + b_3x_3 + b_4x_4 + b_5x_5 + \varepsilon"$$

$$\gamma = \beta_0 + \beta_1x_1 + \beta_2x_2 + \beta_3x_3 + \beta_4x_4 + \beta_5x_5 + \varepsilon$$

A simple way the check the strength of possible linearity is to look atthe correlation matrix. Correlation measures th e direction and strength of a linear relationship between two variables

If the relationship is known to be linear, or the observed pattern between the two variables appears to be linear, then the correlation coefficient provides areliable measure of the strength of the linear relationship. If the relationship is known to be nonlinear, or the observed pattern appears to be nonlinear, then the correlation coefficient is not usefu l, or at least questionable. A correlation greater than 0.8 is generally described as *strong*, whereas a correlation p ositive correlation;(Table -1)

Table 1 Correlation Coefficient

	HSI-Y	*M2-X_5*	*Inflation-X_4*	*Deposit int-X_3*	*Exchange-X_2*	*GPD (HK)-X_1*
HSI-Y	1.000					
M2-X_5	0.750	1.000				
Inflation-X_4	0.755	0.791	1.000			
Deposit interest-X_3	0.179	-0.262	0.088	1.000		
Exchange-X_2	0.690	0.977	0.759	-0.375	1.000	
GPD (HK)-X_1	0.835	0.932	0.857	-0.050	0.886	1.000

The Correlation Matrix in Table 1 provides some insights into which of the independent variables are related to Hang Seng Index of Dependent Y. The highest correlation with Hang Seng Index is for GDP (HK) (0.835) , inflation (0.755) and M2 (0.76) which of correlations were very high and positive - as the exchange rate and deposit interest is also do positively correlated with the hang Seng Index. As according to the high correlation X1 and the other independent variables that may have a problem estimating our coefficients. While there is highly correlated with one other independent variable – or multicollinearity - when X1 is highly correlated with a set of independent variables. There is a multicollinearity, it means we can't estimate the effect of X1 very well, That means the regression analysis does come with certain requirements and assumptions in order to effectively run the models and to make statistical inferences. More will be discussed about this under the assumptions of the multiple-regression. Long Run prediction of a Stock Market Price Index the issue of whether stock market returns are predictable is a very important.

A more precise test is to use the variance inflation factor (VIF) at Table 2. The value of *VIF* is found as fol low to the correlation between two independent variables is between -0.70 and 0.70 there likely is not a prob lem using both of the independent variables. The term R^2 refers to the coefficient of determination, where the selected independent variable is used as a dependent variable and the remaining independent variables are us ed as independent variables. IF a VIF is greater than 10 that has considered unsatisfactory, indicating that in dependent variable should be removed from the analysis. Multicollinearity exists when independent varia bles (X's) are correlated in variable inflation (0.755) and Money supply of M2 (0.76) which of correlations were very high and positive, Correlated independent variables make it difficult t o make inferences about the individual regression coefficients (slopes) and their individual effects on the depe ndent variable (Y). However, correlated independent variables do not affect a multiple regression equation's a bility to predict the dependent variable.

Table 2 Regression Result

Regression Statistics	
Multiple R	0.8414391
R Square	0.7080197
Adjusted R Square	0.6861212
Standard Error	2803.6672

Observations	44

ANOVA

	df	*SS*	*MS*	*F*	*Significance F*
Regression	3	762438455	254146152	32.331855	8.857E-11
Residual	40	314421989	7860549.7		
Total	43	1.077E+09			

VIF = $1/(1-R^2)=3.425$

The *VIF* value of 3.425 is less than the upper limit of 10. This indicates that the independent variable of Mo ney Supply(X_4) , inflation(X_4) and GPD (X_1) are not strongly correlated with another variables in mul tiple regression.

Table 3 Descriptive Statistics

	Hangseng-Y	*M2-X_5*	*Inflation-X_4*	*Deposit interest-X_3*	*Exchange-X_2*	*GPD (HK)-X_1*
Mean	17337.23	5581158.66	0.01	0.94	1.06	412,001.18
SE	754.43	250160.34	0.00	0.17	0.02	9,353.87
Median	17804.31	5750543	0.016	0.36	1.035075	416,306.50
Mode	#N/A	#N/A	0.013	0.15	0.945	#N/A
SD	5,004.32	1659375.952	0.026307611	1.099152734	0.112105781	62,046.55
Sample Var	25043266.14	2.75353E+12	0.00069209	1.208136734	0.012567706	3849774213
Kurtosis	0.882433552	1.092990583	0.583638963	0.457820018	1.576461307	0.938516831
Skewness	0.000402224	0.321777099	-0.280768538	1.109582977	0.262646395	-0.226793429
Range	19178.2	5509302	0.098	3.06	0.3085	228411
Minimum	8634.45	3440703	-0.037	0.04	0.9375	297913
Maximum	27812.65	8950005	0.061	3.1	1.246	526324
Sum	762838.16	245570981	0.653	41.55	46.67865	18128052
Count	44	44	44	44	44	44

The descriptive statistics for the variables in the model are given in Table 3. The dependent variable of average of the Hang Seng Index is 17,337, The coefficient of variation is indicating substantial variation. We want to see if the high variability in HSI index is a function of the independent variables. The other variables also show a lot of variability, and in most cases the mean is larger than the median indicating outliers and skew to the data. The exception is deposit interest rate and exchange rate, where there are low value pulling the mean below the media.

Using the multiple regression that as assumptions about the Error term ϵ and t he error is a random variable with mean of zero Phillips, P. C. B. and S. N. Durlauf (1986). The use of multiple re gression technique is to forecast stock price index.

The results show that unemployment rate, trade balance, consumer price index and money supply are all sign ificant in leading the stock price index. T.C.E. Cheng, Y.K. Lo, K.W. Ma (1990)

The values of ϵ are independent and the equation:

$$\gamma = \beta_0 + \beta_1 x_1 + \beta_2 x_2 + \beta_3 x_3 + \beta_4 x_4 + \beta_5 x_5 + \varepsilon$$

In multiple regression analysis, using cross section to multiple regression at five independent variables Yakov Amihud (2002) and lagging one quarter period to running the inference. It is often con cerned with the nature and significance of the relations between the explanatory variables and the response variable . What is the relative importance of the effects of the different independent variables . T he

magnitude of the effect of a given independent variable is on the dependent variables. Multiple-regression is a po pular technique for predicting and estimation stock return with the help of other variables that are likely to h ave a bearing on Stock index. The test through all the variables in the model and combination on 14 multiple regression equations and lagging one quarterly period of X_1 (GDP) inter-comparisons to inferences the correlation X independent and Y dependent variables are significant.

Combination of 14 mulitple- regression equations -X_1

$Y_1 = \beta_0 + X_1\beta_1 + X_2\beta_2 + X_3\beta_3 + X_4\beta_4 + X_5\beta_5 + \varepsilon$
$Y_1 = \beta_0 + X_1\beta_1 + X_2\beta_2 + X_3\beta_3 + X_5\beta_5 + \varepsilon$
$Y_1 = \beta_0 + X_1\beta_1 + X_3\beta_3 + X_4\beta_4 + X_5\beta_5 + \varepsilon$
$Y_1 = \beta_0 + X_1\beta_1 + X_2\beta_2 + X_4\beta_4 + X_5\beta_5 + \varepsilon$
$Y_1 = \beta_0 + X_1\beta_1 + X_2\beta_2 + X_3\beta_3 + X_4\beta_4 + \varepsilon$
$Y_1 = \beta_0 + X_1\beta_1 + X_4\beta_4 + X_5\beta_5 + \varepsilon$
$Y_1 = \beta_0 + X_1\beta_1 + X_3\beta_3 + X_4\beta_4 + \varepsilon$
$Y_1 = \beta_0 + X_1\beta_1 + X_3\beta_3 + X_5\beta_5 + \varepsilon$
$Y_1 = \beta_0 + X_1\beta_1 + X_2\beta_2 + X_3\beta_3 + \varepsilon$
$Y_1 = \beta_0 + X_1\beta_1 + X_2\beta_2 + X_5\beta_5 + \varepsilon$
$Y_1 = \beta_0 + X_1\beta_1 + X_5\beta_5 + \varepsilon$
$Y_1 = \beta_0 + X_1\beta_1 + X_4\beta_4 + \varepsilon$
$Y_1 = \beta_0 + X_1\beta_1 + X_3\beta_3 + \varepsilon$
$Y_1 = \beta_0 + X_1\beta_1 + X_2\beta_2 + \varepsilon$

To point out (Table 4) Hang Seng index as Y dependent variable , GDP as X_1 independent variable ; X_2 exchange rate of RMB independent variable ; deposit interest rate as X_3 independent variable , inflation as X_4 independent variable; money supply as X_5 independent variable The test hull hypothes is use the equation $Y_1 = \beta_0 + X_1\beta_1 + X_2\beta_2 + X_3\beta_3 + X_4\beta_4 + X_5\beta_5 + \varepsilon$ to estimated (H_0) – there is no effect of GPD (Hong Kong -Local) on stock return in Hong Kong stock market.

Table 4 ANOVA Result

$Y_1 = \beta_0 + X_1\beta_1 + X_2\beta_2 + X_3\beta_3 + X_4\beta_4 + X_5\beta_5 + \varepsilon$

Regression Statistics	
Multiple R	0.866546798
R Square	0.750903354
Adjusted R Square	0.718127479
Standard Error	2656.879477
Observations	44

ANOVA

	df	*SS*	*MS*	*F*	*Significance F*
Regression	5	808618119	161723624	22.9102	1.55253E-10
Residual	38	268242325	7059008.6		
Total	43	1076860444			

	Coefficients	*Standard Error*	*t Stat*	*P-value*
Intercept	-13092.71744	17445.5889	-0.7504887	0.45758
M2-X_5	0.000285994	0.00156376	0.1828889	0.85586
Inflation-X_4	2208.987155	32422.2146	0.0681319	0.94604
Deposit interest-X_3	1314.042232	579.204232	2.2687027	0.02905
Exchange-X_2	6514.819055	21514.519	0.3028104	0.76369
GPD (HK)-X_1	0.050118018	0.02327216	2.1535607	0.03768

The figures on five independent variables (X_1 , X_2 , X_3 , X_4 , and X_5) and α = .05 that the p-value = 0.000 < .05 , as we infer to that the regression model is a significantly good fit . there is only a zero possibility of getting a correlation this high multiple R (0.86)assuming that the null hypothesis is true.

Note that the p-values for all the coefficients with the exception of the coefficient for GDP and deposit interest rates are bigger than

.05. This means that we cannot reject the hypothesis that they are zero (and so can be eliminated from the model). This is also confirmed from the fact that 0 lies in the interval between the lower 95% and upper 95% (in this investigation on the 95% confidence interval) for each of these coefficients.

The capital *R* squared is 0.75 that it is written as because it behaves like the square of a correlation coefficient. It can range from 0 to 1. A value near 0 indicates little association between the set of independent variables and the dependent variable. A value near 1 means a strong association. To interpretation R squared because of is a value between 0 and 1 it is easy to interpret, compare, and understand.

The F-test in multiple regression tests to see if at least one of the independent variables significantly contributes to helping to understand the dependent variable. The overall the signification F, P<0.05(Table-5).

T -statistic for each coefficient to test the null hypothesis that the corresponding coefficient is zero against the alternative that it is different from zero, given the other predictors in the model in the table shown note that t Stat = Estimate/Standard E. For the *t*-statistic for the intercept is - 0.75 the *p*-value and for the F statistic of the hypotheses test that the corresponding coefficient is equal to zero or not. In table 5 , the *p*-value of the F-statistic for X_1 is 0.03768 smaller than 0.05, so this term is significant at the 5% significance level given the terms in the model.

R-squared 0.75 and Adjusted R-squared 0.718 for coefficient of determination and adjusted coefficient of determination, respectively the R-squared value suggests that the model explains approximately 75% of the variability in the response variable Hang Seng Index. From the ANOVA table Degree of freedom (5,38)the F-test statistic of F is 22.9102 with p-value of 0.000. Since the p-value is less than 0.05 we do reject the null hypothesis that the regression parameters are zero at significance level 0.05 that has the parameters are jointly statistically significant at significance level 0.05.

The regression analysis is given in Table 5 below. We can note that R2 for the model increased to 0.75, reflecting that the inclusion of the quarter Hang Seng Index and GDP variables has increased the fit of the model over the simple trend analysis. If we look at the coefficients we can see that there is still a significant trend in the model (t-stat = 22.91 and p < .05).Conversely, p-value as a larger (insignificant) suggests that changes in the predictor are not associated with changes in the response that which indicates that it is not statistically significant.

This is an implicated situation for the researchers and academicians inviting them to investigate the inference of economic growth in the stock market development. More specifically the interrelationship of economic variables and stock market and stock returns were influenced directly or indirectly by a number of different economic factors. Financial information and macro economic variables could predict a notable portion of stock returns.

The interpretation of four variables is relatively the same in a multiple regression as in it in simple regression, except the regression estimate of the coefficients takes into account the other independent variables in the model. With four variables and the combination of 4 equations (as refer to the below equations) . It need to interpret the coefficients in relation to the equations of reference categories and shown out the output summary tables.

The equations of number 2, 3,4, 5

2 $Y_1 = \beta_0 + X_1 \beta_1 + X_2 \beta_2 + X_3 \beta_3 + X_5 \beta_5 + \varepsilon$

3 $Y_1 = \beta_0 + X_1 \beta_1 + X_3 \beta_3 + X_4 \beta_4 + X_5 \beta_5 + \varepsilon$

4 $Y_1 = \beta_0 + X_1 \beta_1 + X_2 \beta_2 + X_4 \beta_4 + X_5 \beta_5 + \varepsilon$

5 $Y_1 = \beta_0 + X_1 \beta_1 + X_2 \beta_2 + X_3 \beta_3 + X_4 \beta_4 + \varepsilon$

Table 5 Cross Section on 4 Variables- Summary Factors

$Y_1 = \beta_0 + X_1 \beta_1 + X_2 \beta_2 + X_3 \beta_3 + X_5 \beta_5 + \epsilon$						
	Coefficients	*Standard Error*	*t Stat*	*P-value*	*F*	*Sig. F*
Intercept	-13648.310	15224.308	-0.896	0.375	29.387	0.000
M2-X_5	0.000	0.002	0.177	0.861		
Deposit interest-X_3	1328.996	529.126	2.512	0.016		
Exchange rate-	6913.455	20437.739	0.338	0.737		

X_2						
GPD (HK)-X_1	0.051	0.021	2.381	0.022		
$Y_1 = \beta_0 + X_1 \beta_1 + X_3 \beta_3 + X_4 \beta_4 + X_5 \beta_5 + \epsilon$						
	Coefficients	*Standard Error*	*t Stat*	*P-value*	*F*	*Sig F*
Intercept	-8122.774	5844.353	-1.390	0.172	29.297	0.000
M2-X_5	0.001	0.001	0.822	0.416		
Inflation-X_4	4878.966	30834.770	0.158	0.875		
Deposit interest-X_3	1215.205	472.872	2.570	0.014		
GPD (HK)-X_1	0.050	0.023	2.162	0.037		
$Y_1 = \beta_0 + X_1 \beta_1 + X_2 \beta_2 + X_4 \beta_4 + X_5 \beta_5 + \epsilon$						
	Coefficients	*Standard Error*	*t Stat*	*P-value*	*F*	*Sig. F*
Intercept	6836.045	15853.825	0.431	0.669	24.722	0.000
M2-X_5	0.001	0.002	0.631	0.531		
Inflation-X_4	30081.858	31559.253	0.953	0.346		
Exchange rate-X_2	-20991.238	18694.078	-1.123	0.268		
GPD (HK)-X_1	0.065	0.024	2.750	0.009		
$Y_1 = \beta_0 + X_1 \beta_1 + X_2 \beta_2 + X_3 \beta_3 + X_4 \beta + \epsilon$						
	Coefficients	*Standard Error*	*t Stat*	*P-value*	*F*	*Sig. F*
Intercept	-15915.132	8034.258	-1.981	0.055	29.357	0.000
Inflation-X_4	1279.259	31621.915	0.040	0.968		
Deposit interest-X_3	1335.846	559.734	2.387	0.022		
Exchange rate-X_2	9828.836	11453.922	0.858	0.396		
GPD (HK)-X_1	0.052	0.020	2.647	0.012		

5. Results

The lagging one quarterly GDP a past value of X_{0-1} is used as a predictor as well. A relationship of t his type might be: Here X_1 is GPD in the current quarter and the lagged variables of X_{0-1} *is* repre sent lagging GDP and grouping the other independent variables to test the Coefficient significance , The regressions output of most interest is the following table of coefficients and associated output at Table 6.

Table 6 Regression, Coefficients and Associated Output

Lagging one quarter period

$Y_{0-1} = \beta_{0-0} + X_{0-1} \beta_{0-1} + X_{0-2} \beta_{0-2} + X_{0-3} \beta_{0-3} + X_{0-4} \beta_{0-4} + X_{0-5} \beta_{0-5} + \epsilon$

SUMMARY OUTPUT

Regression Statistics	
Multiple R	0.860075562
R Square	0.739729972
Adjusted R Square	0.704558346
Standard Error	2715.012339

Observations	43

ANOVA

	df	*SS*	*MS*	*F*	*Significance F*
Regression	5	775165429.3	155033086	21.0320098	6.61119E-10
Residual	37	272737804.1	7371292		
Total	42	1047903233			

	Coefficients	*Standard Error*	*t Stat*	*P-value*	*Lower 95%*
Intercept	-8854.341182	18193.35893	-0.4866798	0.62935581	-45717.58765
M2-X_5	0.000702981	0.001716733	0.40948777	0.68454277	-0.00277545
Inflation-X_4	13471.42788	31737.22885	0.42446768	0.67368285	-50834.30551
Deposit interest-X_3	1278.522963	601.2582448	2.12641236	0.04020356	60.25804825
Exchange-X_2	3477.108087	23024.75638	0.15101606	0.8807834	-43175.47938
GPD (HK) lag-X_{0-1}	0.041243333	0.021908997	1.88248384	0.06765229	-0.003148512

Table 7 Summary interesting results on the hybrid variables on the equations

	Lagging mulitle regression - lagging one period quarter by X_{0-1}	R Square	t Stat for X_{0-1}	P-value- X_{0-1}	F
1.1	$Y_{0-1}=\beta_{0-0}+X_{0-1}\beta_{0-1}+X_{0-2}\beta_{0-2}+X_{0-3}\beta_{0-3}+X_{0-4}\beta_{0-4}+X_{0-5}\beta_{0-5}+\varepsilon$	0.740	1.882	0.068	21.032
2.1	$Y_{0-1}=\beta_{0-0}+X_{0-1}\beta_{0-1}+X_{0-2}\beta_{0-2}+X_{0-4}\beta_{0-4}+X_{0-5}\beta_{0-5}+\varepsilon$	0.708	2.538	0.015	23.026
3.1	$Y_{0-1}=\beta_{0-0}+X_{0-1}\beta_{0-1}+X_{0-3}\beta_{0-3}+X_{0-4}\beta_{0-4}+X_{0-5}\beta_{0-5}+\varepsilon$	0.740	1.901	0.065	26.978
4.1	$Y_{0-1}=\beta_{0-0}+X_{0-1}\beta_{0-1}+X_{0-2}\beta_{0-2}+X_{0-3}\beta_{0-3}+X_{0-5}\beta_{0-5}+\varepsilon$	0.738	2.039	0.048	26.824
5.1	$Y_{0-1}=\beta_{0-0}+X_{0-1}\beta_{0-1}+X_{0-2}\beta_{0-2}+X_{0-3}\beta_{0-3}+X_{0-4}\beta_{0-4}+\varepsilon$	0.739	2.434	0.020	26.836
6.1	$Y_{0-1}=\beta_{0-0}+X_{0-1}\beta_{0-1}+X_{0-4}\beta_{0-4}+X_{0-5}\beta_{0-5}+\varepsilon$	0.697	3.096	0.004	29.940
7.1	$Y_{0-1}=\beta_{0-0}+X_{0-1}\beta_{0-1}+X_{0-3}\beta_{0-3}+X_{0-5}\beta_{0-5}+\varepsilon$	0.738	2.053	0.047	36.622
8.1	$Y_{0-1}=\beta_{0-0}+X_{0-1}\beta_{0-1}+X_{0-2}\beta_{0-2}+X_{0-5}\beta_{0-5}+\varepsilon$	0.693	3.296	0.002	29.390
9.1	$Y_{0-1}=\beta_{0-0}+X_{0-1}\beta_{0-1}+X_{0-3}\beta_{0-3}+X_{0-4}\beta_{0-4}+\varepsilon$	0.732	4.724	0.000	35.474
10.1	$Y_{0-1}=\beta_{0-0}+X_{0-1}\beta_{0-1}+X_{0-2}\beta_{0-2}+X_{0-3}\beta_{0-3}+\varepsilon$	0.737	2.625	0.012	36.494
11	$Y_{0-1}=\beta_{0-0}+X_{0-1}\beta_{0-1}+X_{0-5}\beta_{0-5}+\varepsilon$	0.682	3.992	0.000	42.965
12.1	$Y_{0-1}=\beta_{0-0}+X_{0-1}\beta_{0-1}+X_{0-4}\beta_{0-4}+\varepsilon$	0.694	4.146	0.000	45.420
13.1	$Y_{0-1}=\beta_{0-0}+X_{0-1}\beta_{0-1}+X_{0-3}\beta_{0-3}+\varepsilon$	0.727	10.018	0.000	53.140
14.1	$Y_{0-1}=\beta_{0-0}+X_{0-1}\beta_{0-1}+X_{0-2}\beta_{0-2}+\varepsilon$	0.687	5.364	0.000	43.862

From table 7, It is regarding to the summary interesting table the output of ANOVA the R squared is ex ceed 0.68 and the entire the independent variables X is good fit to Y and it also see that coefficients are significant

All models applied at stock return of Hang Seng index have produced significant results on GDP whereas most of the models are insignificant for Money supply, inflation, exchange rate of RMB . It is also evident from the values of R2 and F-statistics that stock returns of the variable of GDP is more responsive to changes in economic variables than other independent variables. The terms are statistically significant for most of this variable X_1 that demonstrates the time varying characteristics of stock returns volatility of different firms in the industries. Therefore conditional volatility of stock returns is a function of both the estimates of lagged square residuals and lag variances.

6. Conclusion

Apply the Multiple regression analysis that involves having more than one independent variable in the model. This allows us to estimate more sophisticated models with many explanatory variables influencing a single dependent variable. Multiple regression also allows us to estimate the relationship of each independent variable to the dependent variable while controlling for the effects of the other independent variables in the model. The overall testing for overall significance for the F test, reject H_0 , if p –value < 0.05 or F > Fα . This is a very powerful feature of regression because we can estimate the unique effect of each variable. Multiple regression still uses the property of Least Squares to estimate the regression function, Test statistics, F=MSR/ MSE ,testing for significance. Multiple regression requires that the dependent variable is measured on a continuous level, but it has great flexibility for the independent variables. It can be measured as continuous, ordinal, or categorical as represented by variables. There are other requirements in multiple regression - equal number of observations for each variable in the model; limits on the number of independent variables in the model; independent variables cannot be too highly correlated with each other; and assumptions about the error terms. Overall, regression is fairly robust and violations of some of the assumptions about error terms may cause minor problems or they can be managed by transformations of the data or strategies. The estimated regression equations put out the summary of R square if around 70%, and P –value is smaller than < 0.05,

Significance test of all coefficients in the regression model, In this case with what level of confidence, in the regression model is significantly different from zero. At this level of confidence, the variance "due to regression" MSR is statistically different from the variance "due to error" MSE, F < F α =0.05/2 . It means that of variables (X_1 , X_2 , …, X_5) to the simplest model (dependent variable y is just a constant) is a statistically significant improvement of the fit. Thus, at the confidence level upper or lower 95% .

Finally the determine is a statistically significant improvement of the fit. It can be used to test the null hypothesis that when looking at the means of several groups, it can also be used in regression. In the case of means, the null hypothesis means that knowing the group membership provides no extra information about *y*. In the regression, the corresponding null hypothesis would be that knowing *x* provides information about *y*. If we were to guess the same *y* value for every *x*, that would mean that the regression line that it had a slope. Therefore, the null hypothesis is significance different from zero.

Hong Kong is the world's third global financial centre according to Global Financial Center Index. Hong Kong has performed well in people, business environment, market access, infrastructure and general compe titiveness that 5 key factors as advantage area to attractive investors, ranking third in each Hong Kong w as ranked the freest economy in the Index of Economic Freedom by the Heritage Foundation. The import ant implication is that major crisis events can influence the relationship among stock markets the USA bei ng a large economy of the world, Tho Nguyen (2011) , an important trading partner and major supplier of capital to Asian region. Sowmya Dhanaraj , Arun Kumar Gopalaswamy (2013). Stock return volatility i n Hong Kong and stocks to be significantly higher than their HSI counterpart, while the correlations betw een H-shares stay relatively lower than that of HSI stocks from the constituent stocks of Hang Seng Inde x (HSI) and Hang Seng China Enterprises Ying-Foon Chow, James T.K. Lam, Hinson S. Yeung (2009). T he stock market is an interesting but risky channel of investment ,Patrick Kuok Kun Chu 2008. Hence, in vestors always try to predict the trends of stock market to spot the abnormal benefits and aversion to risk s.

Hong Kong stock market has expanded a lot of years for the rapid development of institutional investors. The convergence of annual turnover rate to that of major stock markets.Daily patterns are present in the times series of securities prices. Daily variation, capital market efficiency and predicting stock returns for the Hong Kong Jeffrey E. Jarrett , Zhen Zhen Sun(2007). When investors concerning with the relationship between macroeconomic indicators and stock market, investors might forecast how financial market changes on GDP production indicators fluctuate.

On the other hand, Hong Kong Macroeconomic Forecast is based on research conducted by the quarterly move ment for the Hong Kong economics and business strategy at Hong Kong business activities. It aims to provide the community with timely information useful for tracking the short-term fluctuations of the economy. The high frequency forecasting system was originally developed in collaboratio n that is now a research programme area of the Hong Kong stock market.

As from the finding there is effect of GPD (Hong Kong -local) on stock return in Hong Kong stock mar ket through money supply, interest rate, inflation, exchange rate of RMB. The testing infer the relationship movement with stock return and GDP . The robust economic would be predicted stock return. Pesaran, M.H. and Timmermann, A. (1995).
A macroeconomic of GDP Hong Kong forecasts to equity market for investors are helped by good sound o n
stock market trends are influenced by growth trends and related cycles. The most so called 'leading' indicators do r un ahead of stock markets; they move in tandem with or lagging p e r i o d o f G D P . The macroeconomic news flow can still be negative when stock markets have already reversed and are trending hi gher. Economic researchers should include massive moves of major equity indexes in their economic forecast and i t can be useful forecasting recession especially.

There are several feasible reasons contributing to the economy o f
the undulation, Hong Kong respectively, discouraging foreign visits. Tourism, one of the four pillar industries of Hong Kong, was indeed adversely affected. According to the above statistic, the contribution of tourism to local Gross Domestic Product (GDP).The objective is to strengthen trade and investment cooperation b etween Mainland China and Hong Kong and promote joint development of the two sides, through the implementation of the following measures: progressively reduce or eliminate tariffs and non-tariff barriers on substantially all the trade in goods between the two sides; progressively achieve liberalization of trade in services through reduction or elimination of all discriminatory measures promote trade and investment facilitation mutual recognition of professional qualifications in sectors like engineering, accounting, insurance, securities etc. between the Mainland and Hong Kong. We examined the impact of domestic of macr oeconomic forecasts based on the fundamental sources and the stock market trends are influence has a sig nificant effect on Hong Kong GDP movement.

Hong Kong economic with china are also eased concerns on the growth prospect of economy from enco uraging economic statistics and equities market Chao shin, Chiao, Weifeng hung , Chun yao (2010). It c aught up later in the quarter after the control of the government with a mandate to scale up quantitative easing to reflation the economy. Choudhry, T. (1996). Hong Kong's stock exchange is in discussions with bourses in mainland China that they allows mainland Chinese to access directly for the first time the Ho ng Kong stock market. Hong Kong investors could also participate in the fast-growing onshore about allo wing investors to trade shares on each other's platforms, in a move that could significantly widen access for Chinese investors to Hong Kong equities markets.

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