Improving Bank management Under Macro economic Context - Case of ACB Bank in Vietnam

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Abstract: Vietnam experienced the year 2015 with low CPI as of 0.6%. It is the time to suggest solutions to improve bank management and leadership in the country in a changing macro economic context. This paper evaluate bank risks in famous risk model under impacts of both macro internal and external variables during 2 special periods: pre-Low (L) inflation time 2011-2015and post-L time 2015-2020 in the country. Therefore, in our paper, we aims to measure and evaluate how much effects in the market risk of one of big listed Vietnam commercial bank, Asia Commercial Bank (ACB) during the 2 special periods with semiannual data. We use synthesis statistics methods, and dialectical materialism method, combined with econometric model with 9 macro variables, and figure out that lending rate and risk free rate has positive impacts with bank risk. It implies that increase in lending rate, together with decrease in Rf will increase market risk. Then, we will suggest recommendations for improving bank management capabilities and relevant government agencies. Our recommendation can be used for reference in many other developing markets.

JEL classification numbers: M21, G12, G30, E58, E62

Keywords: market risk management, beta CAPM, macro effects, low inflation, banking industry, Vietnam, policy

INTRODUCTION

ACB is founding early and reached big market share since the day it established. Their board of management keep on business targets and manage safe business operation and reduce risks. They pay attention much to capture new business chances, new markets,

Daft (1986) presented us that good management requires sound principles and facts.

Whereas Inyang (2008) opined that management theories will provide basis for management practices, and vice versa, management practices will help to reinforce theories.

He also said that people that research on theories and with practices need , together, to improve our understanding. (Inyang, 2008:124-125).

Macro policy makers will need to look at risk management in banking industry and impacts of macro factors on market risk in order to adjust macro policies.

This study will calculate and figure out not only inflation but other macro factors, both internal and external, such as GDP growth, risk free rate, lending rate, SP500, trade balance and exchange rate, etc. affecting the market risk level during the low inflation time (2015-2020).

BODY OF MANUSCRIPT
Research Issues
The scope of this study are:

Issue 1: What are impacts of internal macro variables such as inflation, GDP growth, VNIndex, risk free rate,…on market risk of ACB?

Issue 2: Evaluating impacts of external macro variables such as balance of trade, exchange rate and S&P500 on market risk of ACB measured by Beta CAPM

LITERATURE REVIEW

Fama, Eugene F., and French, Kenneth R., (2004) also found out that not only beta market, but also beta with market capitalization will affect stock return.

Dimitrov (2006) observed that between debt ratio or leverage and returns of stock (risk adjusted) have negative relationship.

Umar (2011) said that companies with high leverage will have better corporate governance. Chen et all (2013) gave evidence showing that in Lehman Brothers case, depending too much on short term financing and not enough collateral will present high risk exposure.

During the financial crisis 2007-2009 in Viet Nam and global financial markets, high inflation causing high lending rates have created risks for many industries such as banking, medicine and the whole economy. Mohamad et all (2014) presented results showing that in banking operation, between risk and return, banks need to better select a trade off. Wang et all (2014) showed us that when institutional investors invest in longer period in firms, companies receive abnormal profits.

Then, Gunarathna (2016) mentioned that between firm size and financial risk, there is negative relationship.

Last but not least, Hami (2017) presented us that between inflation and depth of finance in Iran, there is negative relationship.

METHODOLOGY

All stock data is available from Vietnam stock exchange market (HOSE and HNX) during the low inflation period 2015-2020 and China-US commerce war, which we use to estimate systemic risk results. We perform , with formulas of traditional beta market and comparison, both fundamental data analysis and financial techniques.

Analysis of the effects of 9 macro variables on market risk of listed commercial bank, ACB. Weekly data collected from 2015-2020 for ACB stock price to measure Beta and other macro data from reliable sources such as the General Statistics Office and commercial banks. Beta CAPM is a function with 9 macro variables (x1: GDP growth rate (g), x2: Risk-free rate Rf (i), x3: Loan interest rate (r), x4: Exchange rate (ex_rate), x5: S&P 500, x6: VNIndex, x7 : trade balance, x8: industrial production index, x9: CPI). We use OLS regression.

MAIN RESULTS

General Data Analysis

First we look at the below figure, we find out during pre-L inflation time CPI and Beta have negative correlation, but during post-L inflation time, they have positive correlation.

Left column: 2011-2015 (pre-L inflation)
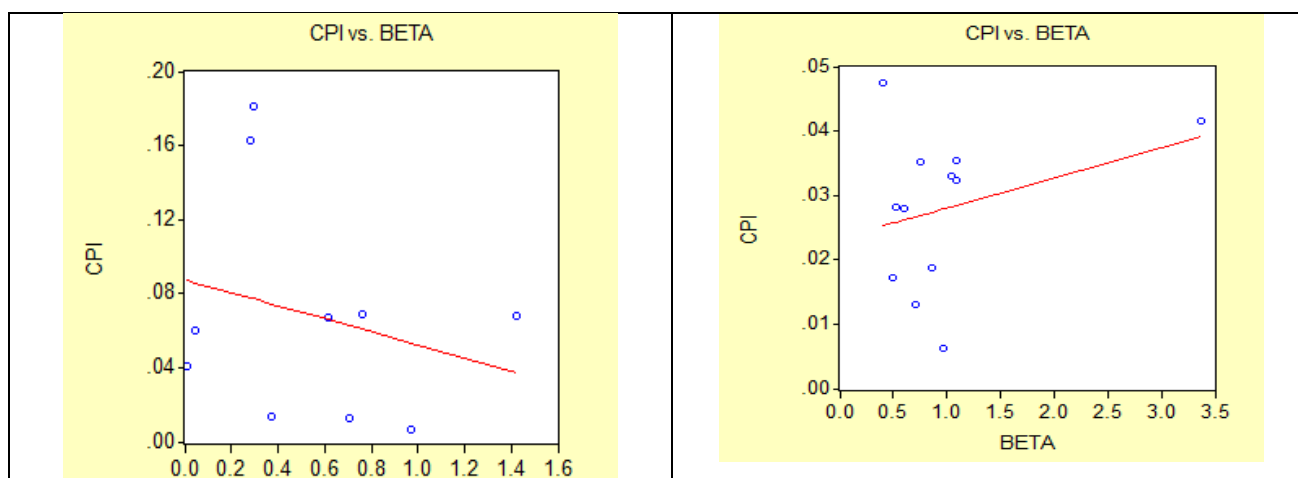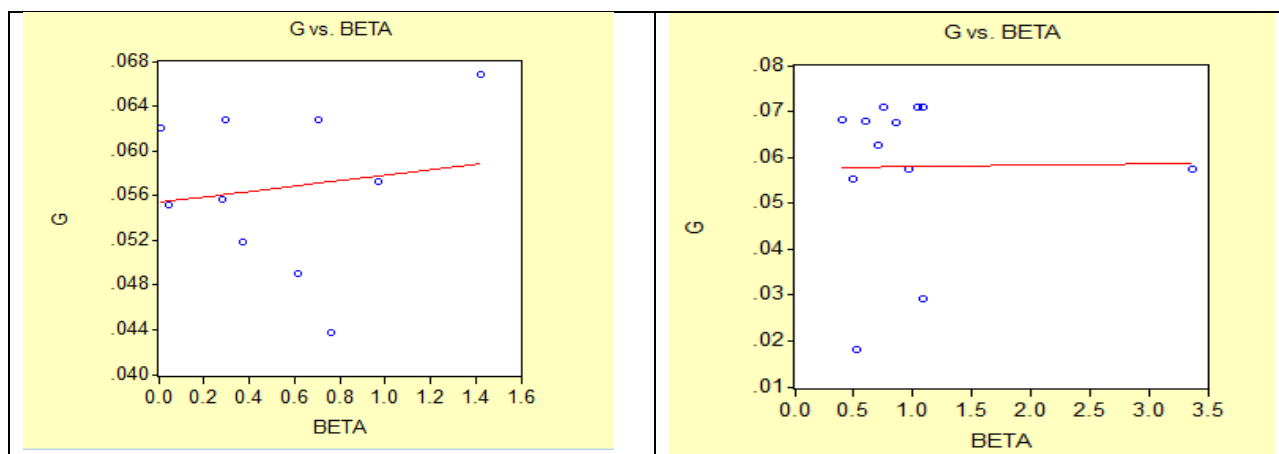
Right column: 2015-2020 (post-L inflation)
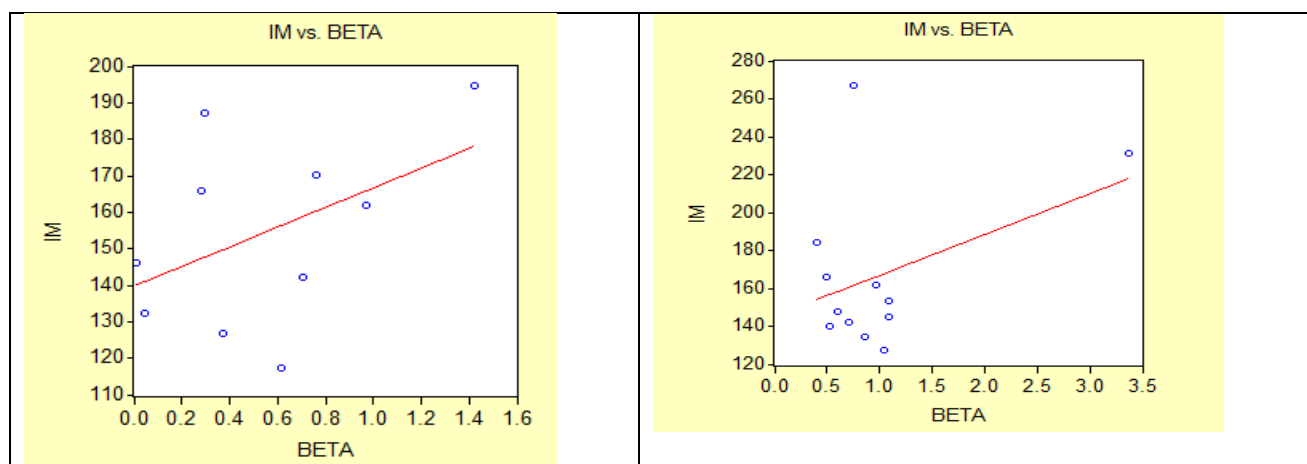

Fig.1: Beta ACB vs CPI

Second we look at the below figure, we find out during pre-L inflation time Beta and GDP growth have positive correlation, and also during post-L inflation time, they have positive correlation with smaller slope.
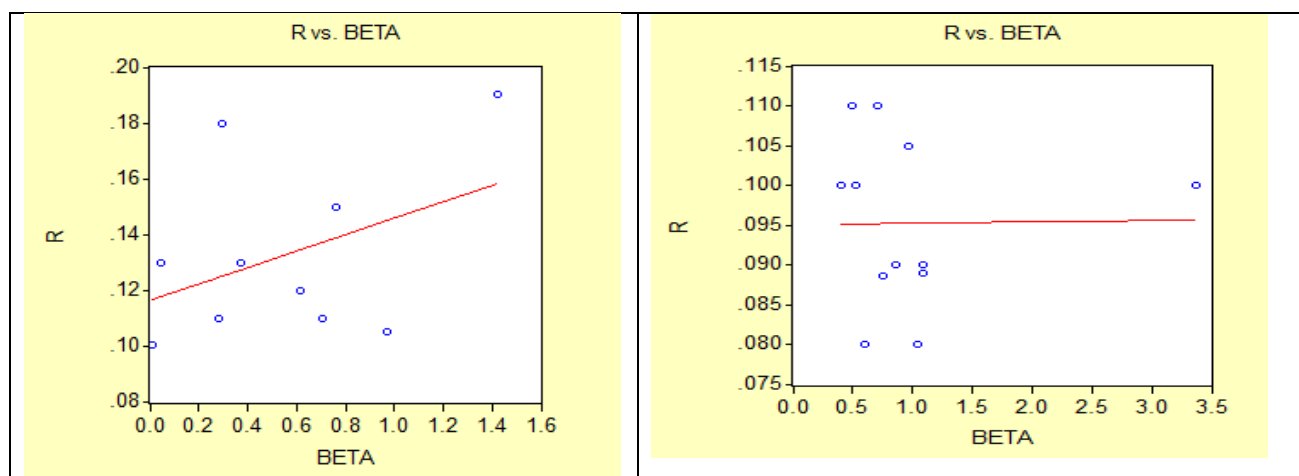
Fig.2: Beta vs GDP growth

Third we look at the below figure, we find out during pre-L inflation time Beta and Industrial production have positive correlation, and also during post-L inflation time, they have positive correlation with less dispersed values.

Fig.3: Beta vs Industrial production

Fourth we look at the below figure, we find out during pre-L inflation time Beta and lending rate have positive correlation, and also during post-L inflation time, they have positive correlation with smaller slope.

Fig.4: Beta vs Lending rate

Fifth we look at the below figure, we find out during pre-L inflation time Beta and Rf have negative correlation, but during post-L inflation time, they have positive correlation with smaller slope.

Fig.5: Beta vs Rf

Sixth we look at the below figure, we find out during pre-L inflation time Beta and VNIndex have negative correlation, but during post-L inflation time, they have positive correlation.

Fig.6: Beta vs VNIndex
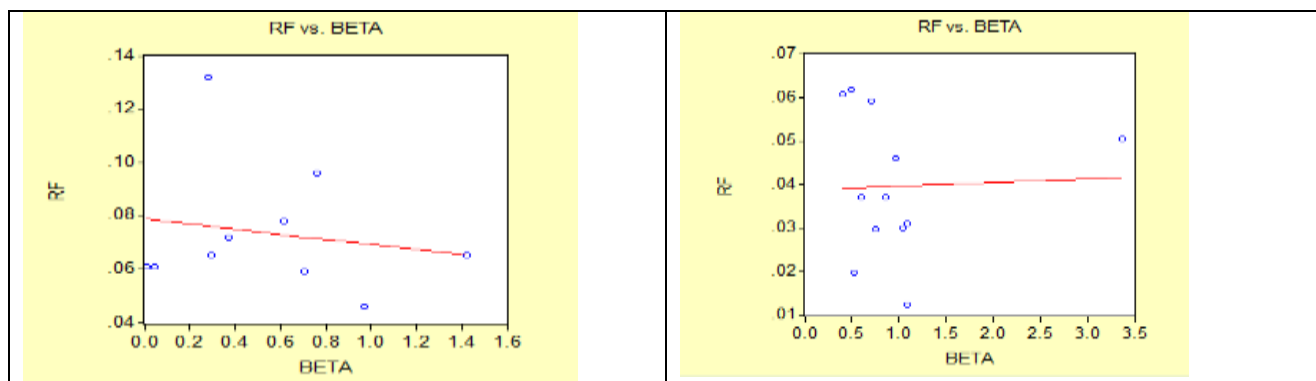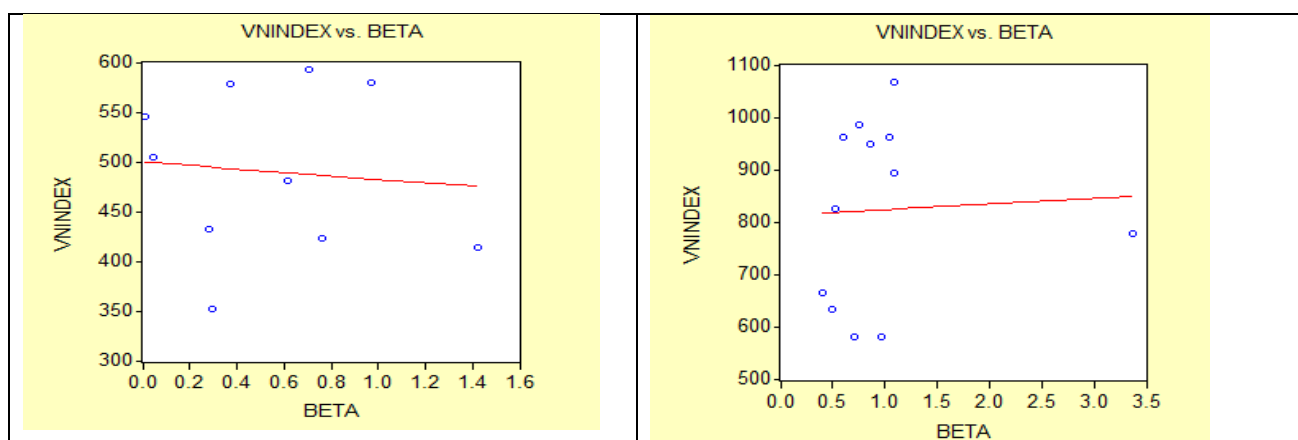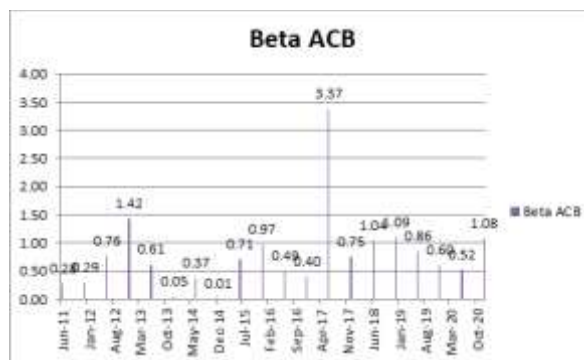

Chart 1: ACB market risk volatility

As we see: beta of ACB reached highest value in June 2017 and lowest value in 2011.

3.2 Empirical Research Findings and Discussion

Using OLS regression from Eviews, we have regression results:

Dependent Variable: BETA
Method: Least Squares
Date: 01/21/21   Time: 08:54
Sample: 1 10
Included observations: 10

Variable	Coefficient	Std. Error	t-Statistic	Prob.
EX_RATE	0.000166	0.000171	0.971844	0.3687
TRADEBALANCE	0.000810	0.000324	2.498345	0.0466
SP500	0.000175	0.000456	0.383647	0.7145
C	-3.200826	3.548844	-0.901935	0.4018

R-squared	0.518682	Mean dependent var		0.547246
Adjusted R-squared	0.278022	S.D. dependent var		0.438163
S.E. of regression	0.372304	Akaike info criterion		1.150963
Sum squared resid	0.831662	Schwarz criterion		1.271997
Log likelihood	-1.754814	F-statistic		2.155254
Durbin-Watson stat	1.065242	Prob(F-statistic)		0.194489

Fig.7: External impacts on Beta CAPM – Case ACB – period 2011-2015

Dependent Variable: BETA
Method: Least Squares
Date: 01/21/21   Time: 08:56
Sample: 1 10
Included observations: 10

Variable	Coefficient	Std. Error	t-Statistic	Prob.
CPI	-9.690667	8.083099	-1.198880	0.3166
G	9.200055	35.93995	0.255984	0.8145
IM	0.008109	0.010479	0.773840	0.4954
R	2.331096	11.38549	0.204743	0.8509
RF	5.886715	10.32150	0.570335	0.6084
VNINDEX	-0.003377	0.008094	-0.417196	0.7046
C	0.347837	5.563316	0.062523	0.9541

R-squared	0.652682	Mean dependent var		0.547246
Adjusted R-squared	-0.041955	S.D. dependent var		0.438163
S.E. of regression	0.447260	Akaike info criterion		1.424676
Sum squared resid	0.600126	Schwarz criterion		1.636485
Log likelihood	-0.123378	F-statistic		0.939601
Durbin-Watson stat	1.918561	Prob(F-statistic)		0.568573

Fig.8: Internal impacts on Beta CAPM – Case ACB – period 2011-2015

Dependent Variable: BETA
Method: Least Squares
Date: 01/21/21   Time: 09:14
Sample: 1 12
Included observations: 12

Variable	Coefficient	Std. Error	t-Statistic	Prob.
EX_RATE	6.92E-05	0.000874	0.079194	0.9388
SP500	0.000467	0.001142	0.408715	0.6935
TRADEBALANCE	-0.001108	0.001602	-0.691729	0.5087
C	-1.830087	18.52985	-0.098764	0.9238

R-squared	0.060994	Mean dependent var		0.991003
Adjusted R-squared	-0.291133	S.D. dependent var		0.787493
S.E. of regression	0.894813	Akaike info criterion		2.876798
Sum squared resid	6.405523	Schwarz criterion		3.038433
Log likelihood	-13.26079	F-statistic		0.173216
Durbin-Watson stat	2.795383	Prob(F-statistic)		0.911532

Fig.9a: External impacts on Beta CAPM – Case ACB – period 2015-2020

Dependent Variable: BETA
Method: Least Squares
Date: 01/21/21   Time: 09:14
Sample: 1 12
Included observations: 12

Variable	Coefficient	Std. Error	t-Statistic	Prob.
CPI	10.45023	36.96717	0.282689	0.7887
G	-6.140810	42.82825	-0.143382	0.8916
IM	0.006135	0.010169	0.603255	0.5727
R	1.322645	111.5067	0.011862	0.9910
RF	9.240391	58.40149	0.158222	0.8805
VNINDEX	0.000666	0.005988	0.111154	0.9158
C	-1.006930	14.85311	-0.067793	0.9486

R-squared	0.194049	Mean dependent var		0.991003
Adjusted R-squared	-0.773093	S.D. dependent var		0.787493
S.E. of regression	1.048606	Akaike info criterion		3.223999
Sum squared resid	5.497878	Schwarz criterion		3.506861
Log likelihood	-12.34400	F-statistic		0.200642
Durbin-Watson stat	3.077094	Prob(F-statistic)		0.962099

Fig.9: Internal impacts on Beta CAPM – Case ACB – period 2015-2020

DISCUSSION FOR FURTHER RESEARCHES

We find out: Lending rate, Rf and VNIndex have positive correlation with market risk in both pre-L and post-L inflation periods.

On the other hand, CPI and Beta have positive correlation during post-L inflation time but they have negative correlation during pre-L inflation period.

Regarding external factors, we recognize trade balance and beta have negative correlation during post-L inflation time, but positive correlation during pre-L inflation time.

CONCLUSION AND POLICY SUGGESTION

Modern bank management needs bank leaders to consider macro economic concepts, factors and their impacts on bank business operation.

As shown from the above regression model and equation, Goverment and Ministry of Finance need to control lending rate, reduce Rf, and CPI for lower market risk.

Our model also shows that other macro factors such as exchange rate and SP500 will have positive correlation with market risk.

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