

# STRATEGIES IN ESTABLISHING RETURN FROM INVESTING COMMON STOCKS

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## Abstract

According to investing behavior of Thai retail investors in SET, it was found that, they usually made investing decisions willingly based on unclarified security information. The results from these behaviors showed that, they oftentimes made loss or constantly investing opposite to market trend. Therefore, this research assists to be the tool in creating investing strategies to conform to the market changes and to relate with risk taking abilities of individual investors by studying Security Beta ( $\beta$ ), stock beta, to form up investing strategies. Investing strategies can be divided into two types including: offensive strategies and defensive strategies respectively. Based on the research findings from 231 stocks in 28 sectors, offensive strategy means to look for overall returns higher than market by investing in security beta higher than 1 and defensive strategy means only to gain the closest returns to the market by investing in security beta closed to 1. However, it was found that the factors to be considered in adopting each strategy are current market trend and investors' risk taking ability.

**Keywords:** beta coefficient, stock beta, Security Beta ( $\beta$ )

2016 GBSE Journal

## Introduction

Establishing return to capital can be achieved in several ways, for instance, investing in real estate like home, land, and building, etc. which can generate returns in the form of renting out properties like home, building, and office. Apart from this it was found that another way of investing capital is financial investment or investing in financial products, such as common stock, security index, debt security, life insurance, even derivative, etc. It can be said that for financial investment or investing in various forms of financial products, investors must have knowledge and understanding related to characteristics of securities to determine or design strategies to establish desired return. From stock market research titled "Perspective of Thai retail investors towards securities trading behaviours" in order to understand what is related to securities trading behaviours of retail investors, it was found that the main trading turnover was ranked the highest with group of retail investors, then

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foreign investors, and institutional investors respectively. From which the retail investor group can be divided to be minor retail investors and major retail investors. Both groups trade via market brokers or online. Comparing the accounts percentage, it was found that minor retail investors invest and trade averagely 100,000 to 1,000,000 THB per month, which counts for 43% of all trading accounts. At present a number of minor retail investors confront the difficulty of loss from securities trading.

Furthermore, Bontaeng (2005) studied investing behaviour of retail investors in Stock Exchange of Thailand (SET). In order to apply the research result to be learning basics in recommendations for minor retail investor's upcoming investing to achieve the highest efficiency as targeted. The interesting research conclusion was that most investors have small size of investing portfolio meaning minor investors have short period of holding securities and they make self-assertion on the basis of unclarification of security data. Therefore, the reflection from this behaviour consistently suffered loss from investing or always invested opposite to market trend.

Currently Thailand Securities Institute (TSI) under SET promotes online study room, online media, and various training courses to learn capital and investing knowledge. As well as Securities Exchange Commission (SEC) has measures to prevent investors with survey of Risk Profile of each investor before entering into security investing. However, there was no requirement that each investor must study the investing curriculum before they can enter into security market to invest. In case of aggressive market fluctuation, minor retail investors also have opportunity to suffer loss.

## **Review of the Literature**

Nontapat (2009) studied the relationship average rate of return among the sectorial index by using historical trading index data. The results were divided in two groups; the higher market return and the lower market return. The higher market return group consist of Energy & Utilities sector and Information & Communication Technology sector. The lower market return group consist of banking sector, Property Development sector, and Construction Materials.

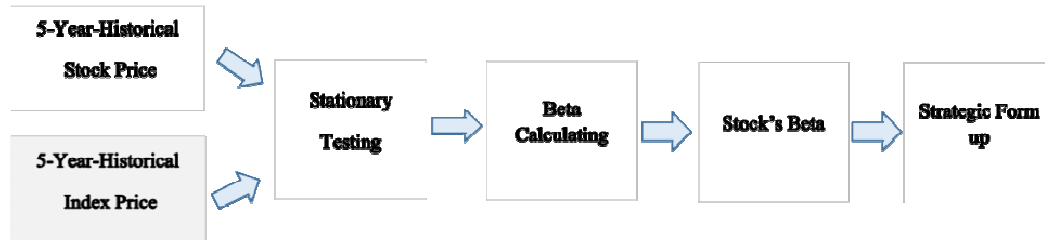
Paratbhomkul (2010) studied the stock evaluation of 50 stocks by applying capital asset pricing model; CAPM. The results showed that EGCO was the highest beta and PTTCH was the lowest beta. The stock correlation is positive, which 22 stocks beta were higher than 1.

Rakariyatam (2011) studied the relationship between economics factor and 8 sectorial index, the result showed that relationship was difference in each sector; some sector could not be explained by same economics factor (insignificant), some sectors were positive correlation with the economics factor but opposite from other sectors.

Kongsawatkiat (2013) studied the risk and return of Construction Material by applying CAPM. The results showed that there were 5 stocks; GEN, TASC0, TPIPL, KWH and SCC made a greater return than market and the rest was positive beta

Sirikulpatana (2014) studied the analysis of return and risk on the media & publishing Service Sector. The results showed that there was only 1 stock; NMG, can made a return greater than market

This study would assist to be the tool in designing investing strategy to comply with market changes and ability level risk taking. It was studied how the overall market return ( $R_m$ ) affects stock return by measuring value of beta coefficient ( $\beta$ ), in order to generate upcoming investing strategy as showing in the following flow chart.



## Research Methodology

The study methods can be divided into four steps accordingly.

### *Step 1 Data preparation and stationary testing*

The researcher studied the beta of common stock in SET by rate of return of each stock in eight industries which can be divided into 28 business sectors. Stock with the highest market capitalization as the first sample together with other stocks with higher market capitalization were selected to reach overall market capitalization at least 75% in such business sector as sampling totally 231 stocks.

### *Step 2 Security beta ( $\beta$ ) calculation*

In calculating the security beta, the closing price of common stock and closing price of SET index was applied. The rate of return was calculated in the formula as following

$$\text{Rate of Return, } R_{it} = \frac{P_t - P_{t-1}}{P_{t-1}}$$

Having calculated rate of return of each stock ( $R_{it}$ ) and market ( $R_m$ ), both was set to be variables where rate of return of each stock is variable Y and rate of return of market is variable X. Then both variables were put into *Stationary Test*. The researcher applied Unit Root Test in EViews program applying Dickey-Fuller. After qualifying to be stationary, both variables were applied to calculate beta of stock return by Linear Regression, comparing with SET index rate of return. It can be described as the following.

$$R_{it} = \alpha_i + \beta_i R_{mt} + U_i$$

Where,

$R_{it}$  is rate of return of investing securities  
 $R_{mt}$  is overall market rate of return  
 $\beta_i$  is coefficient correlation (or sensitivity) between securities return ratio when comparing with overall market  
 $U_i$  is error term

It was test whether stock beta has statistical significance or not by significance testing. The hypothesis was established as following.

$$\begin{aligned} H_0 & : \beta_i = \beta_0 \\ H_1 & : \beta_i \neq \beta_0 \end{aligned}$$

$$t^* = \frac{(\hat{\beta}_j - \beta_0)}{se(\hat{\beta}_j)}$$

In result analysis we could see that P-value comparing with  $\alpha$ . If P-value is lower than  $\alpha$ , it could be concluded that there is statistical significance.

### **Step 3 Categorizing stocks based on beta ( $\beta$ )**

The beta calculated in step 2 was grouped and analyzed the significance which can be divided into 2 groups, including group 1 Beta lower than 1 and group 2 Beta higher than 1 respectively. *Group A Beta lower than 1*; It means that this stock has low sensitivity than market, for instance, when the overall market return was increased by 20%, the return of this stock could be increased less than 20%. In terms of beta in minus value, it represented the opposite position versus market, for instance, if the market return was increased by 20%, the return of this stock would be decreased less than 20% contrarily. *Group B Beta higher than 1*; It means that this security has high sensitivity than market, for instance, when the overall market return was increased by 20%, the return of this stock could be increased more than 20%. In case the beta in minus value, it showed the opposite position versus market, for instance, if the market return was increased by 20%, the return of this stock would be decreased more than 20% contrarily.

### **Step 4 Forming investing Strategies**

It is the last step to generate investing strategy from research result, which can be divided into: 1. Offensive strategy to establish returns higher than the market, by choosing security with beta higher than 1 into investing portfolio and analyzing alongside overall market trend; 2. Defensive strategy to establish return close to the market, by analyzing alongside overall market trend.

## **Result**

### *Data preparation and stationary testing*

No.	Return	Daily - return		No.	Return	Daily - return	
		Stationary	Non-stationary			Stationary	Non-stationary
1	SET INDEX	√		117	SMPC	√	
2	STA	√		118	TFI	√	
3	GFPT	√		119	TMD	√	
4	UVAN	√		120	CEN	√	
5	TLUXE	√		121	GJS	√	
6	EE	√		122	INOX	√	
7	CPF	√		123	LHK	√	
8	MINT	√		124	MAX	√	
9	TU	√		125	MCS	√	
10	TF	√		126	MILL	√	
11	TVO	√		127	SMIT	√	
12	PB	√		128	SSI	√	
13	SSC	√		129	SSSC	√	
14	KSL	√		130	TGPRO	√	
15	OISHI	√		131	THE	√	
16	SNP	√		132	TMT	√	
17	SAUCE	√		133	TSTH	√	
18	PRG	√		134	SCC	√	
19	PR	√		135	SCCC	√	
20	TIPCO	√		136	CK	√	
21	PM	√		137	CNT	√	
22	SST	√		138	CPNRF	√	
23	SFP	√		139	CTARAF	√	

No.	Return	Daily - return		No.	Return	Daily - return	
		Stationary	Non-stationary			Stationary	Non-stationary
24	MALEE	√		140	FUTRUEPF	√	
25	CFRESH	√		141	GOLDPF	√	
26	LST	√		142	ITD	√	
27	HTC	√		143	JCP	√	
28	SSF	√		144	LUXF	√	
29	TWFP	√		145	MIPF	√	
30	SORKON	√		146	MJLF	√	
31	ABC	√		147	MNIT	√	
32	LCC	√		148	MNIT2	√	
33	LTX	√		149	MNRF	√	
34	SABINA	√		150	PREB	√	
35	SUC	√		151	PYLON	√	
36	TR	√		152	QHOP	√	
37	TNL	√		153	QHPF	√	
38	TTL	√		154	SBPF	√	
39	WACOAL	√		155	SPF	√	
40	AJD	√		156	SSPF	√	
41	KYE	√		157	STEC	√	
42	MODERN	√		158	STPI	√	
43	SIAM	√		159	TCIF	√	
44	TSR	√		160	TFUND	√	
45	DSGT	√		161	TIF1	√	
46	S&J	√		162	TLOGIS	√	
47	TOG	√		163	TRC	√	
48	BANPU	√		164	TTCL	√	
49	BCP	√		165	TU-PF	√	
50	EGCO	√		166	AMATA	√	
51	GOLW	√		167	AP	√	
52	IRPC	√		168	BLAND	√	
53	PTT	√		169	CGD	√	
54	PTTEP	√		170	CPN	√	
55	RATCH	√		171	GLAND	√	
56	TOP	√		172	GOLD	√	
57	TTW	√		173	HEMRAJ	√	
58	PDI	√		174	LH	√	
59	KTB	√		175	LPN	√	
60	BBL	√		176	MBK		√
61	KBANK	√		177	PS	√	
62	SCB	√		178	QH	√	
63	KTC	√		179	ROJNA	√	
64	AEONTS	√		180	S	√	
65	GL	√		181	SC	√	
66	MBKET	√		182	SIRI	√	
67	ASP	√		183	SPALI	√	
68	KGI	√		184	U	√	
69	ASK	√		185	UV	√	
70	THANI	√		186	DELTA	√	
71	CNS	√		187	KCE	√	
72	KT	√		188	HANA	√	
73	KCAR	√		189	ADVANC	√	
74	PL	√		190	INTUCH	√	
75	ML	√		191	TRUE	√	
76	ZMICO	√		192	DTAC	√	
77	FSS	√		193	CPALL	√	
78	TNITY	√		194	MAKRO	√	
79	IFS	√		195	BIGC	√	
80	BFIT	√		196	HMPRO	√	

No.	Return	Daily - return		No.	Return	Daily - return	
		Stationary	Non-stationary			Stationary	Non-stationary
81	ECL	√		197	BDMS	√	
82	PE	√		198	BH	√	
83	GBX	√		199	BEC	√	
84	AMANAH	√		200	MAJOR	√	
85	BLA	√		201	WORK	√	
86	BKI	√		202	RS	√	
87	THRE	√		203	GRAMMY	√	
88	TIP	√		204	MCOT	√	
89	AH	√		205	NMG	√	
90	GYT	√		206	LIVE	√	
91	HFT	√		207	EPCO	√	
92	IHL	√		208	POST	√	
93	IRC	√		209	AQUA	√	
94	SAT	√		210	TKS	√	
95	SPG	√		211	MACO	√	
96	STANLY	√		212	AMARIN	√	
97	TRU	√		213	SE-ED	√	
98	TSC	√		214	MPIC	√	
99	CRANE	√		215	WAVE	√	
100	CTW	√		216	TBSP	√	
101	KKC	√		217	AS	√	
102	PK	√		218	TH	√	
103	SNC	√		219	MATI	√	
104	UTP	√		220	BWG	√	
105	IVL	√		221	GENCO	√	
106	PATO	√		222	CENTEL	√	
107	TCB	√		223	ERW	√	
108	TCCC	√		224	SHANG	√	
109	TPC	√		225	DTC	√	
110	VNT	√		226	LRH	√	
111	WG	√		227	RAND	√	
112	AJ	√		228	AOT	√	
113	ALUCON	√		229	BTS	√	
114	CSC	√		230	BMCL	√	
115	PTL	√		231	BECL	√	
116	SITHAI	√		232	THAI	√	

Table 1 stationary testing result

From the step 1 *data preparation and stationary testing* we concluded the result the result as above. By Unit Root Test, it was found that only one variable was nonstationary (Daily MBK). It's because par value was split which was caused the daily return to jump – out.

#### *Categorizing stocks based on beta ( $\beta$ )*

By regression process, after securities beta (totally 231 betas from 28 business sectors) were calculated, we got three highest and lowest value betas totally 195 betas which could divide stocks into two groups according to beta value: group A stocks with beta lower than 1, and group B stocks with beta higher than 1. The results were represented as the following table 2 and 3.

Group A Stocks with beta coefficient lower than 1; Represented with three highest value or three lowest value	
<i>three highest value</i>	<i>three lowest value</i>
Agribusiness	
GFPT(0.615471), TLUXE(0.483226), VAN(0.32715)	UVAN(0.32715), TLUXE(0.483226), VAN(0.32715)
Food & Beverage	
CPF(0.921874), HTC(0.907418), SST(0.839834)	TF(0.117897), PRG(0.190749), SAUCE, (0.219891)

<b>Group A</b> Stocks with beta coefficient lower than 1; Represented with three highest value or three lowest value	
<i>three highest value</i>	<i>three lowest value</i>
Fashion	
ABC(0.419373), TR (0.445078), SUC(0.263972)	WACOAL(0.00945), LCC(0.0997), SABINA(0.116493)
Home & Office Products	
KYE(0.442294), Modern(0.366299)	Modern(0.366299), KYE(0.442294)
Personal Products & Pharmaceuticals	
DSGT(0.570015), TOG(0.443678), S&J,(0.302701)	S&J(0.302701), TOG(0.443678), DSGT(0.570015)
Energy & Utilities	
GOLW(0.848362),TTW(0.482607), ATCH(0.365759)	EGCO(0.360357), RATCH(0.365759), TTW(0.482607)
Mining	
PDI(0.761037)	PDI(0.761037)
Finance & Securities	
BLA(0.876378), THRE(0.623693), TIP(0.470675)	BKI(0.318727), TIP(0.470675), THRE(0.623693)
Automotive	
SAT(0.895852), TRU(0.888162), AH(0.774235)	GYT(0.168007), SPG(0.258711), IRC(0.335878)
Industrial Materials & Machinery	
CTW(0.903749), SNC(0.695026), CRANE(0.673128)	PK(0.110611), CRANE(0.673128), SNC(0.695026)
Paper & Printing Materials	
UTP(0.873289)	UTP(0.873289)
Petrochemicals & Chemicals	
VNT(0.931834), TCCC(0.536039), TPC(0.482688)	WG(0.213703), PATO(0.393237), TCB(0.406441)
Packaging	
SITHAI(0.786877), CSC(0.480942), TMD(0.340765)	ALUCON(0.274626), TMD(0.340765), CSC(0.480942)
Steel	
CEN(0.83106), MCX(0.812806), SSI(0.8068)	GJS(0.293542), INOX(0.306778), MILL(0.384166)
Construction Materials	
SCCC(0.74086)	SCCC(0.74086)
Property Fund & REITs	
STPI(0.877133), PREB(0.809907), PYLON(0.780672)	MNRF(0.083409), GOLDPF(0.158362), UXF(0.27665)
Property Development	
LPN(0.959645), HEMRAJ(0.941503), S(0.928202)	GLAND(0.727183),ROJNA(0.81762), GOLD(0.88348)
Electronic Components	
KCE(0.912916), DELTA(0.721024), HANA(0.535757)	HANA(0.535757), DELTA(0.721024), KCE(0.912916)
Commerce	
BIGC(0.952319),CPALL(0.861875), AKRO(0.628322)	MAKRO(0.628322),CPALL(0.86187), BIGC(0.95231)
Health Care Services	
BDMS(0.8445), BH(0.781242)	BH(0.781242), BDMS(0.8445)
Media & Publishing	
BEC(0.981564),TKS(0.929484),MAJOR(0.82667)	POST(0.19354),MATI(0.25399), AMARIN(0.36145)
Professional Services	
BWG(0.920472), GENCO(0.861591)	GENCO(0.861591), BWG(0.920472)
Tourism & Leisure	
ERW(0.978285),LRH(0.540916),DTC(0.276593)	SHANG(0.253997), DTC(0.276593), LRH(0.540916)
Transportation & Logistics	
BMCL(0.89861), BTS(0.792232), BECL(0.550105)	BECL(0.550105), BMCL(0.89861), BTS(0.792232)

Table 2 Group A Stocks with beta coefficient lower than 1

<b>Group B</b> securities with beta coefficient higher than 1; Represented with three highest value or three lowest value	
<i>Three highest value</i>	<i>Three lowest value</i>
Agribusiness	
STA(1.169359), EE(1.14788)	EE(1.14788), STA(1.169359)
Food & Beverage	
TIPCO(1.117545), MINT(1.111515)	MINT(1.111515), TIPCO(1.117545)
Home & Office Products	
AJD(1.533034), TSR(1.372071)	TSR(1.372071), AJD(1.533034)
Energy & Utilities	
IRPC(1.410978), TOP(1.229393), PTT(1.147423)	BCP(1.082427), PTTEP(1.09011), PTT(1.147423)
Banking	

KTB(1.363915), SCB(1.242995), KBANK(1.241356)	BBL(1.053603), KBANK(1.241356), SCB(1.242995)
Finance & Securities	
KGI(1.250086), ASP(1.221821), KTC(1.182863)	THANI(1.135334), PE(1.173716), KTC(1.182863)
Industrial Materials & Machinery	
KKC(1.00109)	KKC(1.00109)
Petrochemicals & Chemicals	
IVL(1.619093)	IVL(1.619093)
Packaging	
TFI(1.35789), AJ(1.16537), PTL(1.089233)	PTL(1.089233), AJ(1.16537), TFI(1.35789)
Steel	
TGPRO(1.434109), MAX(1.052883)	MAX(1.052883), TGPRO(1.434109)
Construction Services	
CK(1.350891), CNT(1.125226)	CNT(1.125226), CK(1.350891)
Property Fund & REITs	
ITD(1.697735), STEC(1.380896), TRC(1.301692)	TTCL(1.113908), TRC(1.301692), STEC(1.380896)
Property Development	
PS(1.381182), UV(1.37091), QH(1.366751)	SPALI(1.024374), CGD(1.058966), CPN(1.119274)
Information & Communication Technology	
TRUE(1.458666)	TRUE(1.458666)
Commerce	
HMPRO(1.045881)	HMPRO(1.045881)
Media & Publishing	
LIVE(1.223086), NMG(1.121306), WORK(1.027955)	RS(1.011707), TH(1.01186), WORK(1.027955)
Tourism & Leisure	
CENTEL(1.193404), RAND(1.01186)	RAND(1.01186), CENTEL(1.193404)
Transportation & Logistics	
THAI(1.220002), AOT(1.09329)	AOT(1.09329), THAI(1.220002)

Table 3 Group B Stocks with beta coefficient higher than 1

Based on this study, group A the highest beta value was from the Media & Publishing sector BEC(0.981564) which was different from the study of Nontapat (2009). However, this study showed that mostly the high-value beta came from the same industrial for instance Property Development sector which contains three high value betas; LPN(0.959645), HEMRAJ(0.941503), S(0.928202). The lowest beta in group A is from fashion sector WACOAL(0.00945). Moreover, we found that Agribusiness Fashion and Automotive business sector represented by the UVAN(0.32715), TLUXE(0.483226), VAN(0.32715), TF(0.11789), PRG(0.1907), SAUCE(0.21989), WACOAL(0.0094), LCC(0.0997) LCC(0.0997), SABINA(0.116493) had small impact from the market fluctuation.

In case of group B, the beta coefficient is greater than 1, the highest beta value is from the Property Fund & REITs ITD(1.697735) which is different from historical study. The lowest beta is from Industrial Materials & Machinery business sector KKC(1.00109). Finally, based on this research paper we could rank three top sectors by the highest value of betas including *Property Fund & REITs* followed by *Petrochemicals & Chemicals* and *Home & Office Products* respectively. The three lowest sectors ranked by the lowest value of beta is Industrial Materials & Machinery followed by Media & Publishing and Food & Beverage respectively.

## Conclusion

Strategies to establish stock investing return can be divided into two categories, including offensive strategy and defensive strategy respectively, where offensive strategy is the investment with return higher than overall market return and defensive strategy is the investment with the return closest to the market return. Which strategy to consider or apply depends on the factors to be analyzed together, including real-time market conditions and abilities of risk taking. This can be described into the following situation.



### ***Situation 1 Risk Lovers in Bull Market***

Risk lovers in Bull Market can apply offensive strategy by distributing investments into various business sectors which have beta coefficient higher than 1, the higher the better. Because beta value tells stock return changes sensitivity when comparing with overall market, such as, if investing in securities RAND with beta at 1.974262, it means if the overall market return changes 1, the invest return of investing in RAND will averagely change to be 1.974262 times of market return.

### ***Situation 2 Risk Lovers in Bear Market***

Risk lovers in bear market can carry out offensive strategy similarly. If the investing portfolio has stocks with beta higher than 1, investors should sell. If investors have no such stock, they should implement Short Borrowing and Lending (SBL) method by borrowing properties to sell in advance to establish return in some way.

### ***Situation 3 Risk Averter in Bull Market***

The risk averter in bull market can practice defensive strategy by investing in stocks with beta coefficient close to 1 to establish returns close the SET index or overall market where the risk is not relatively high.

### ***Situation 4 Risk Averter in Bear Market***

The risk averter in bear market can carry out defensive strategy by selling stocks with beta higher than 1 out of investing portfolio, or if necessary, it is recommended to choose beta close to 0, or not affected by market. Or if possible, it is recommended to choose beta in minus which has contrary change with market trend or to reach selling contract of such stock in advance to prevent risk.

## **Acknowledgements**

I would like to express my sincere thanks to my faculty of Business Administration for a great opportunity to do this research. In addition, thanks to my best friend Mr. Non Pinngern for giving me an advice in using excel technique. Finally, I gratefully acknowledge my family for all their support throughout the period of this research.

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