

# Asset Allocation

## Risk-Return-Sharp Ratio

27 พฤษภาคม 2560



พ.ศ. ๒๕๕๐ - ๒๕๖๐  
กองทุนบำเหน็จบำนาญข้าราชการ

# Asset Allocation

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- การจัดสรรเงินลงทุน หรือ Asset Allocation คือ การกระจายการลงทุนในสินทรัพย์หลายประเภท เพื่อให้ได้ผลตอบแทนดังที่คาดหวัง ในระดับความเสี่ยงที่ต่ำที่สุด
- การทำ Asset Allocation มี 2 กรณี คือ ระยะยาว (Strategic Asset Allocation) และระยะสั้น (Tactical Asset Allocation)
- SAA คือ การวางพอร์ตโดยคำนึงถึงเป้าหมายการลงทุนระยะยาว ซึ่งคำนึงถึงข้อจำกัดที่มี
- TAA คือ การปรับพอร์ตตามวงจรเศรษฐกิจ เพื่อหวังผลตอบแทนระยะสั้นจากราคาตลาดที่เปลี่ยนแปลงไปจากราคาสมดุลง



# Return vs. Risk

1. บอนด์ หรือ ตราสารหนี้  
(Fixed income)

2. หุ้น หรือ ตราสารทุน  
(Equities)

3. อสังหาริมทรัพย์  
(Properties, Real estate)

Return vs. Risk

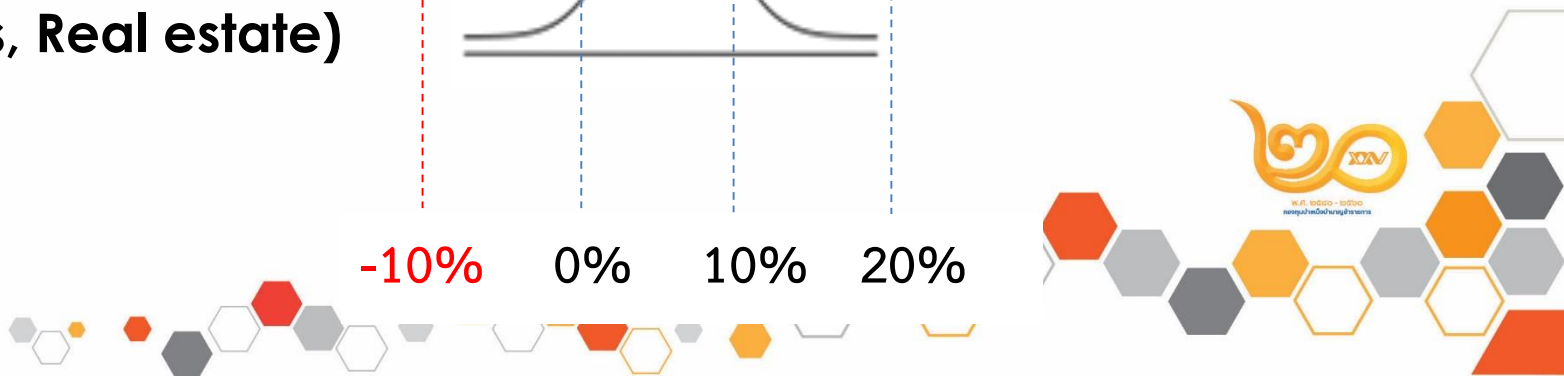
Sharp ratio

ต่ำ

สูง

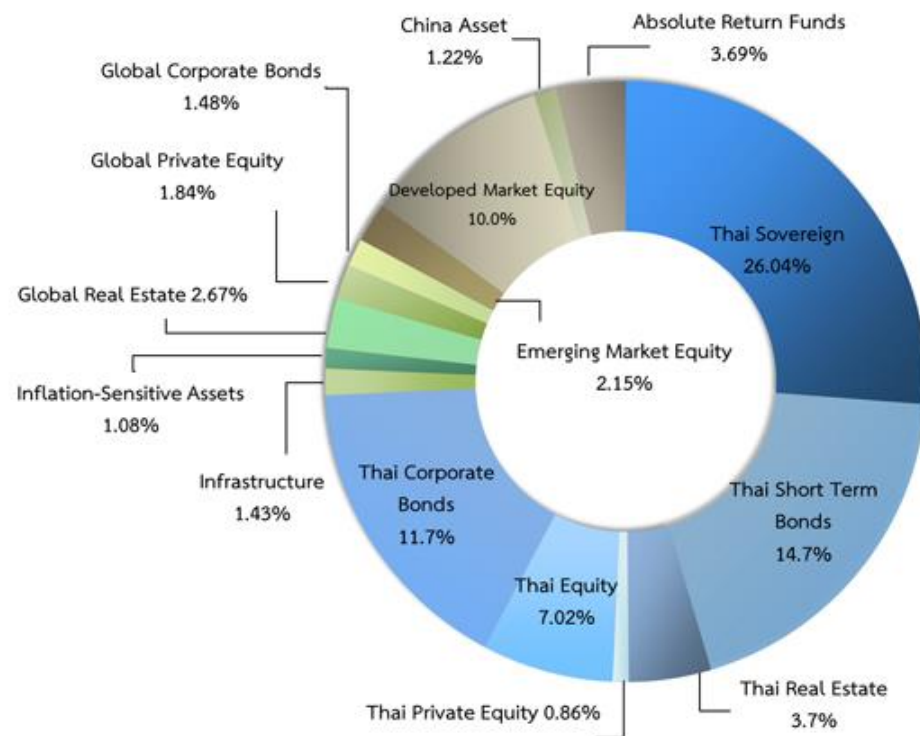
กลาง

-10% 0% 10% 20%



# Asset Classes and Asset Roles

Asset Roles Asset Classes	Weight (%)	
	SAA	TAA
<b>1) Safety Assets</b>	<b>44.00</b>	<b>41.75</b>
Thai Government Bonds	39.00	24.00
Global Government Bond	0.00	0.00
Thai Short-term Bond	5.00	17.75
<b>2) Diversifiers</b>	<b>20.00</b>	<b>22.65</b>
Thai Corporate Bonds	6.00	16.50
Global Corporate Bonds	7.00	1.50
EM Bonds	5.00	0.00
China Bonds	0.00	0.65
Absolute Return Funds	2.00	4.00
<b>3) Inflation Sensitive</b>	<b>12.00</b>	<b>13.00</b>
Thai Real Estate	5.00	4.50
Commodities	1.50	1.00
Global Real Estate	3.50	3.00
Infrastructure	2.00	2.50
Inflation-Linked Bonds		
Thai ILB	0.00	1.50
US TIPS	0.00	0.50
<b>4) Growth Assets</b>	<b>24.00</b>	<b>22.60</b>
Thai Equities	6.00	8.50
DM Equities	8.00	8.50
EM Equities	4.00	2.00
China Equities	2.00	0.60
Thai Private Equities	2.00	1.00
Global Private Equities	2.00	2.00
Long biased / Short Equity	0.00	0.00
<b>GRAND TOTAL</b>	<b>100.00</b>	<b>100.00</b>



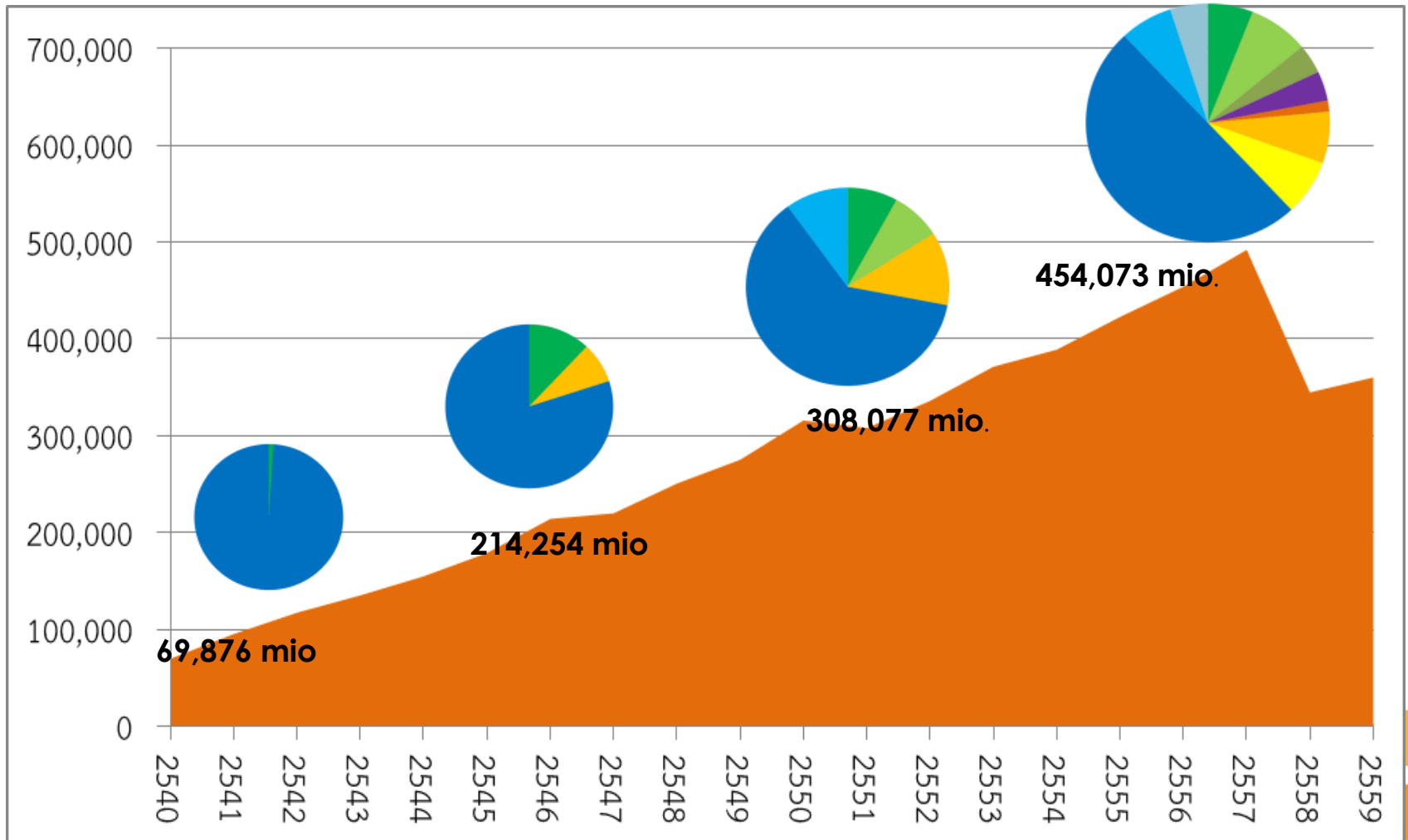
Re: Asset Allocation as of 31 Dec 16

## Asset Roles vs Classes

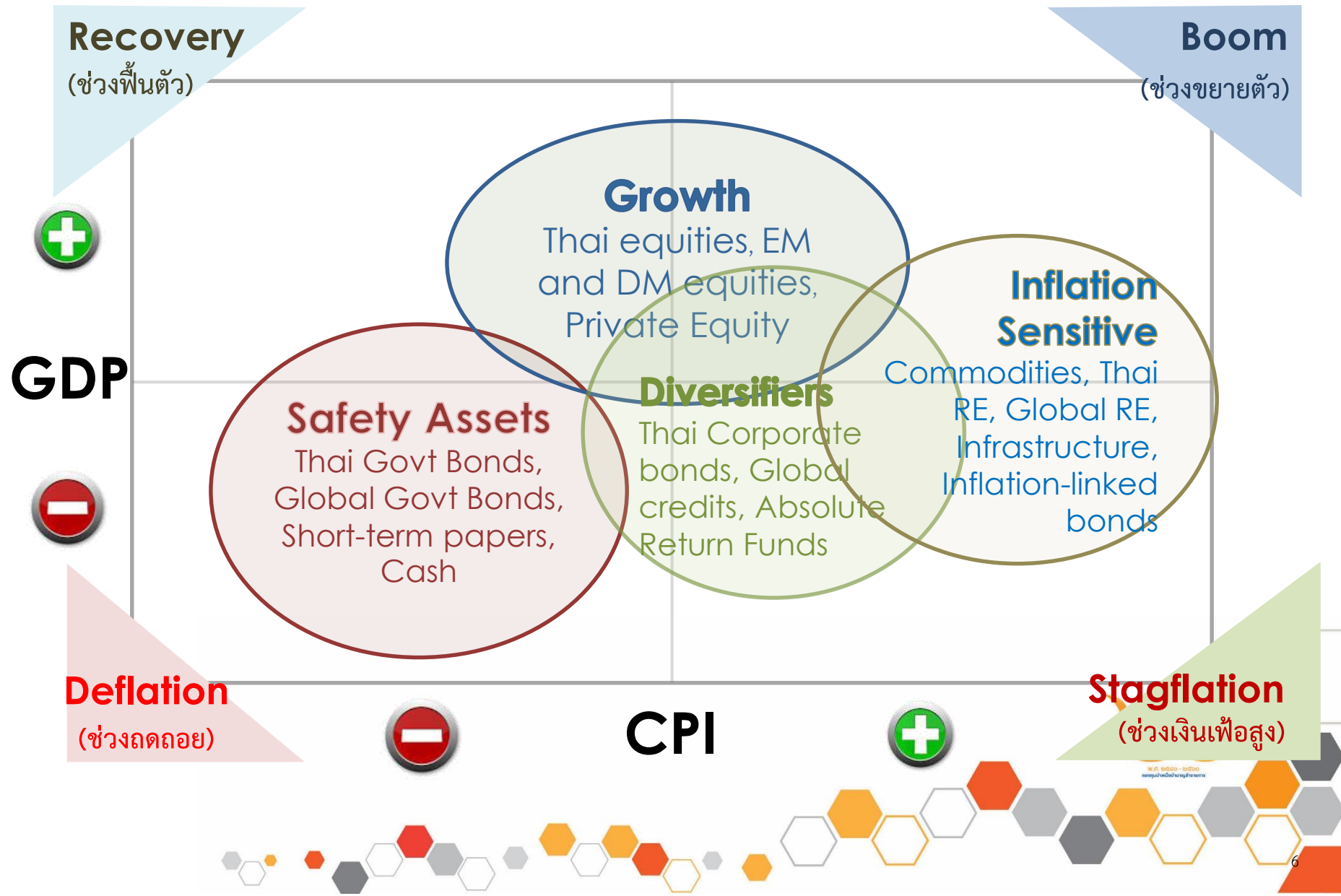
- Asset Roles : Economic Cycle
- Asset Classes :

# Inv. Management Development at GPF

20ปี ที่ผ่านมากบข.จัดสรรการลงทุนสู่หลักทรัพย์หลายประเภท เพื่อผลตอบแทนที่ดี และความผันผวนที่ต่ำลง



# Each asset class performs differently



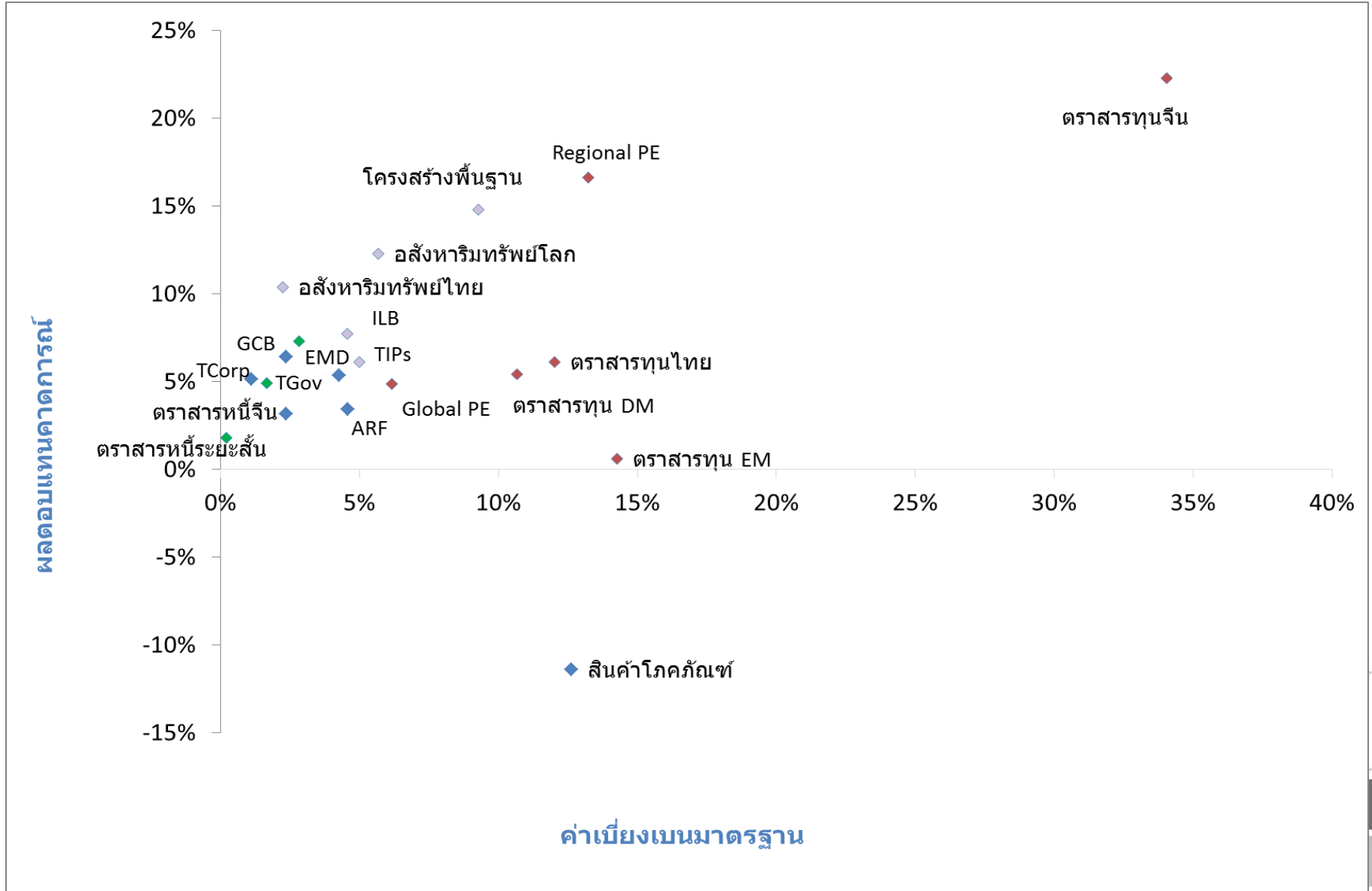


# Why TAA? : Asset classes' returns

1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
S&P 500 Growth	S&P 500 Growth	S&P 500 Growth	S&P 500 Growth	MSCI Emerging Markets	Russell 2000 Value	Russell 2000 Value	Barclays Agg	MSCI Emerging Markets	MSCI Emerging Markets	MSCI Emerging Markets	MSCI Emerging Markets	MSCI Emerging Markets	Barclays Agg	MSCI Emerging Markets	Russell 2000 Growth	Barclays Agg	MSCI Emerging Markets	Russell 2000 Growth	S&P 500 Growth
38.13%	23.97%	36.52%	42.16%	88.42%	22.83%	14.02%	10.26%	38.28%	29.98%	34.54%	32.69%	39.76%	5.24%	79.02%	28.09%	7.84%	18.63%	43.30%	14.89%
S&P 500	S&P 500	S&P 500	S&P 500	Russell 2000 Growth	Barclays Agg	Barclays Agg	Barclays Corp High Yield	Russell 2000 Growth	Russell 2000 Value	MSCI EAFE	MSCI EAFE	MSCI EAFE	Barclays Corp High Yield	Barclays Corp High Yield	Russell 2000	Barclays Corp High Yield	Russell 2000 Value	Russell 2000	S&P 500
37.58%	22.96%	33.36%	28.58%	43.09%	11.63%	8.43%	-1.41%	48.54%	22.28%	13.54%	26.34%	11.17%	-26.16%	58.21%	26.85%	4.98%	18.05%	38.52%	13.69%
S&P 500 Value	S&P 500 Value	Russell 2000 Value	MSCI EAFE	S&P 500 Growth	S&P 500 Value	Barclays Corp High Yield	MSCI Emerging Markets	Russell 2000	MSCI EAFE	S&P 500 Value	Russell 2000 Value	S&P 500 Growth	Russell 2000 Value	Russell 2000 Growth	Russell 2000 Value	S&P 500 Growth	S&P 500 Value	Russell 2000 Value	S&P 500 Value
36.99%	22.00%	31.78%	20.00%	28.24%	6.08%	5.28%	-8.66%	47.28%	20.25%	5.82%	23.48%	9.13%	-28.92%	34.47%	24.90%	4.65%	17.68%	34.52%	12.38%
Russell 2000 Growth	Russell 2000 Value	S&P 500 Value	S&P 500 Value	MSCI EAFE	Russell 2000	Russell 2000	Russell 2000 Value	Russell 2000 Value	Russell 2000	S&P 500	S&P 500	Russell 2000 Growth	Russell 2000	MSCI EAFE	MSCI Emerging Markets	S&P 500	MSCI EAFE	S&P 500 Growth	Barclays Agg
31.84%	21.37%	29.98%	14.89%	26.96%	-3.02%	2.49%	-11.43%	46.03%	18.33%	4.91%	20.81%	7.05%	-33.79%	31.78%	19.20%	2.11%	17.32%	32.75%	5.97%
Russell 2000	Russell 2000	Russell 2000	Barclays Agg	Russell 2000	Barclays Corp High Yield	MSCI Emerging Markets	MSCI EAFE	MSCI EAFE	S&P 500 Value	Russell 2000 Value	Russell 2000	Barclays Agg	S&P 500 Growth	S&P 500 Growth	Barclays Corp High Yield	S&P 500 Value	Russell 2000	S&P 500	Russell 2000 Growth
28.45%	16.49%	22.36%	8.70%	21.26%	-6.68%	-2.37%	-15.94%	38.69%	16.71%	4.71%	18.37%	6.97%	-34.92%	31.57%	15.12%	-0.48%	16.35%	32.39%	5.80%
Russell 2000 Value	Barclays Corp High Yield	Russell 2000 Growth	Barclays Corp High Yield	S&P 500	S&P 500	Russell 2000 Growth	Russell 2000	S&P 500 Value	Russell 2000 Growth	Russell 2000	S&P 500	S&P 500	S&P 500	Russell 2000	S&P 500 Value	Russell 2000 Growth	S&P 500	S&P 500 Value	Russell 2000
28.78%	11.35%	12.95%	1.87%	21.04%	-9.11%	-9.23%	-20.46%	31.79%	14.31%	4.55%	15.76%	5.49%	-37.00%	27.17%	15.10%	-2.91%	16.00%	31.99%	4.89%
Barclays Corp High Yield	Russell 2000 Growth	Barclays Corp High Yield	Russell 2000 Growth	S&P 500 Value	MSCI EAFE	S&P 500 Value	S&P 500 Value	Barclays Corp High Yield	Barclays Corp High Yield	Russell 2000 Growth	Russell 2000 Growth	S&P 500 Value	Russell 2000 Growth	S&P 500	S&P 500	Russell 2000	Barclays Corp High Yield	MSCI EAFE	Russell 2000 Value
19.18%	11.28%	12.78%	1.23%	12.73%	-14.17%	-11.71%	-20.85%	28.97%	11.13%	4.15%	13.39%	1.99%	-38.54%	26.47%	15.06%	-4.18%	15.81%	22.78%	4.22%
Barclays Agg	MSCI EAFE	Barclays Agg	Russell 2000	Barclays Corp High Yield	S&P 500 Growth	S&P 500	S&P 500	S&P 500	S&P 500	S&P 500 Growth	Barclays Corp High Yield	Barclays Corp High Yield	S&P 500 Value	S&P 500 Value	S&P 500 Growth	Russell 2000 Value	S&P 500 Growth	Barclays Corp High Yield	Barclays Corp High Yield
16.46%	6.05%	9.64%	-2.55%	2.39%	-22.08%	-11.89%	-22.10%	28.88%	10.88%	4.00%	11.85%	1.87%	-39.22%	21.17%	15.05%	-6.00%	14.61%	7.44%	2.45%
MSCI EAFE	MSCI Emerging Markets	MSCI EAFE	Russell 2000 Value	Barclays Agg	Russell 2000 Growth	S&P 500 Growth	S&P 500 Growth	S&P 500 Growth	S&P 500 Growth	Barclays Corp High Yield	S&P 500 Growth	Russell 2000	MSCI EAFE	Russell 2000 Value	MSCI EAFE	MSCI EAFE	Russell 2000 Growth	Barclays Agg	MSCI Emerging Markets
11.21%	8.93%	1.78%	-6.46%	-0.82%	-21.43%	-12.73%	-23.59%	25.68%	6.13%	2.74%	11.01%	-1.57%	-43.38%	20.58%	7.75%	-12.14%	14.99%	-2.02%	-1.82%
MSCI Emerging Markets	Barclays Agg	MSCI Emerging Markets	MSCI Emerging Markets	Russell 2000 Value	MSCI Emerging Markets	MSCI EAFE	Russell 2000 Growth	Barclays Agg	Barclays Agg	Barclays Agg	Barclays Agg	Russell 2000 Value	MSCI Emerging Markets	Barclays Agg	Barclays Agg	MSCI Emerging Markets	Barclays Agg	MSCI Emerging Markets	MSCI EAFE
-8.21%	3.64%	-11.59%	-25.34%	-1.49%	-30.61%	-21.44%	-30.26%	4.10%	4.34%	2.43%	4.33%	-8.78%	-53.18%	5.93%	6.54%	-18.17%	4.21%	-2.27%	-4.90%

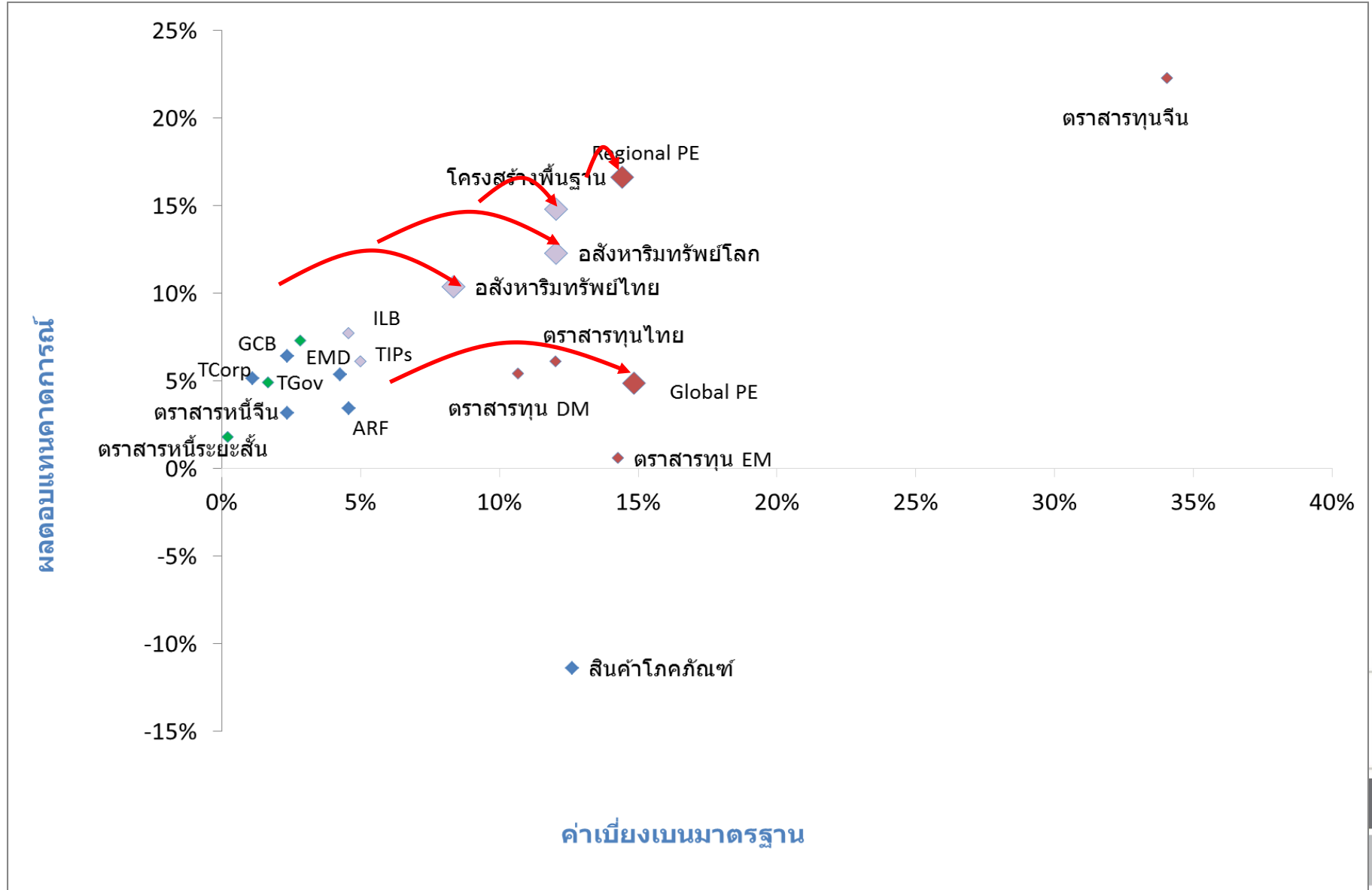
- Economic crisis often lasts 5-7 years. It offers opportunities in Medium-term SAA.
- Market events (political events, government policies) leads to short-term volatilities and price distortion that could be captured by TAA process.

# Medium-term Return and Risk Assumptions

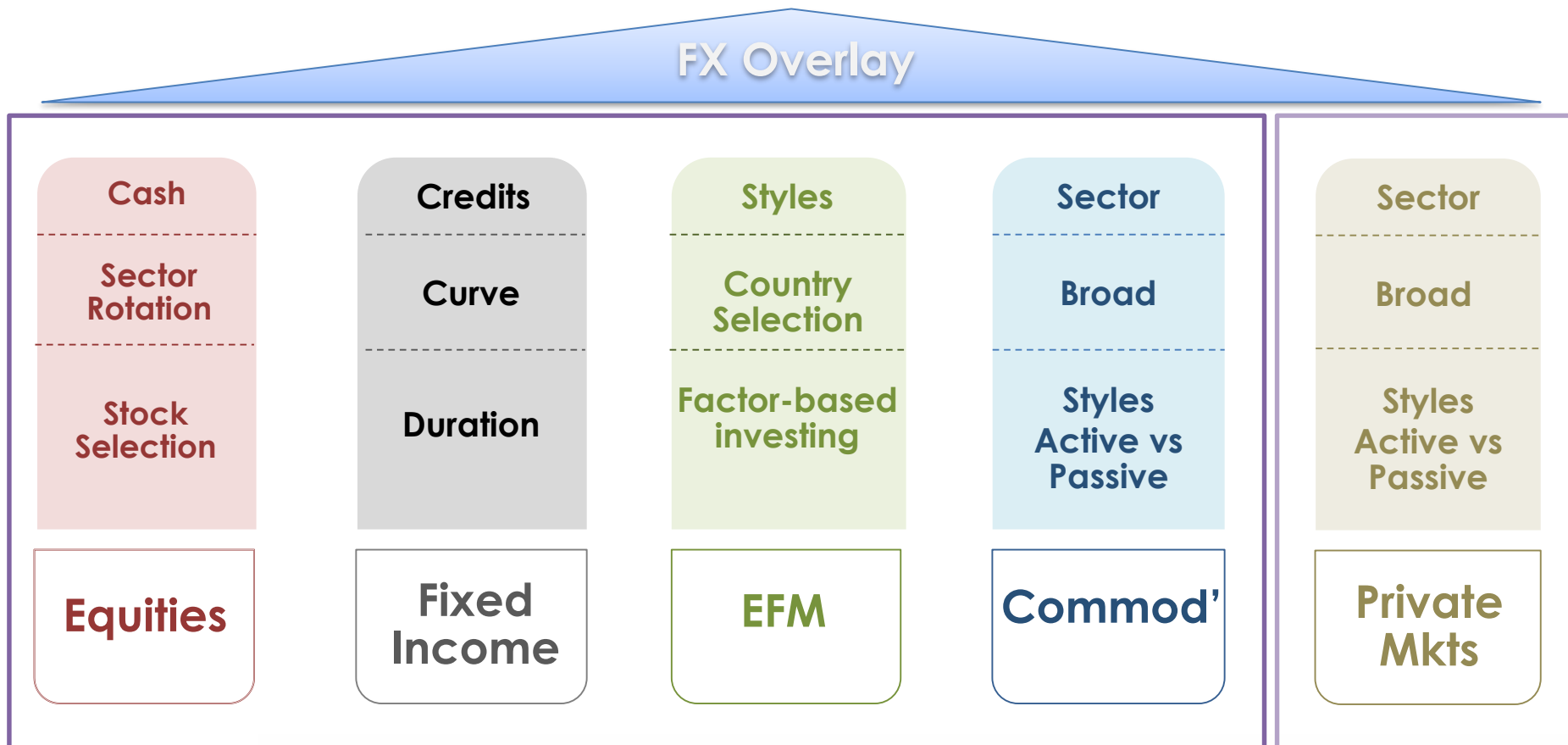




# Medium-term Returns & Risk Assumptions



# TAA Process : Sources of ALPHA

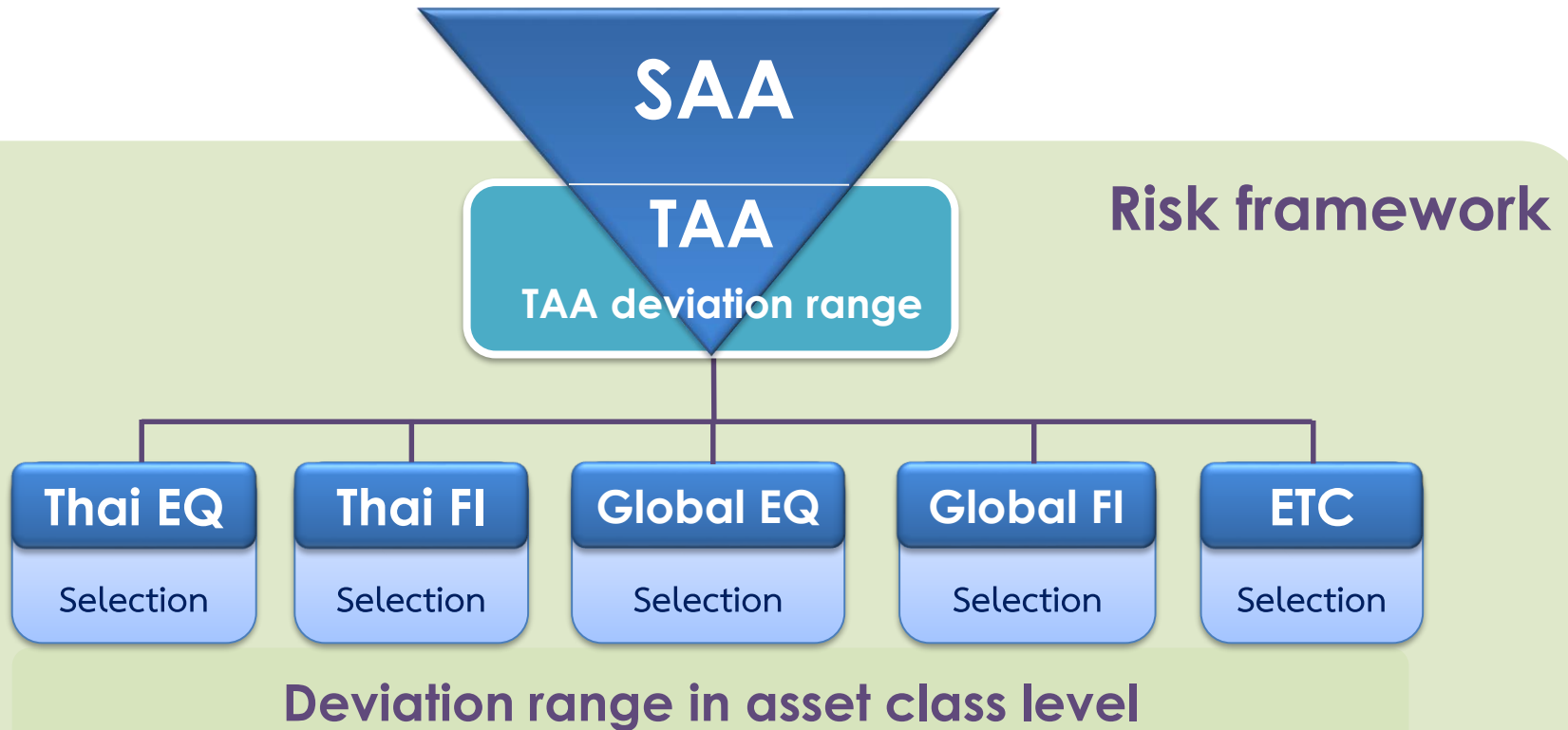


- Styles [Size, Momentum, Factor investing, MIN Vol]
- Setting Tracking error
- Bets : Strategic vs. Tactical
- Equilibrium vs Expected return



# Risk Management is embedded into the plan

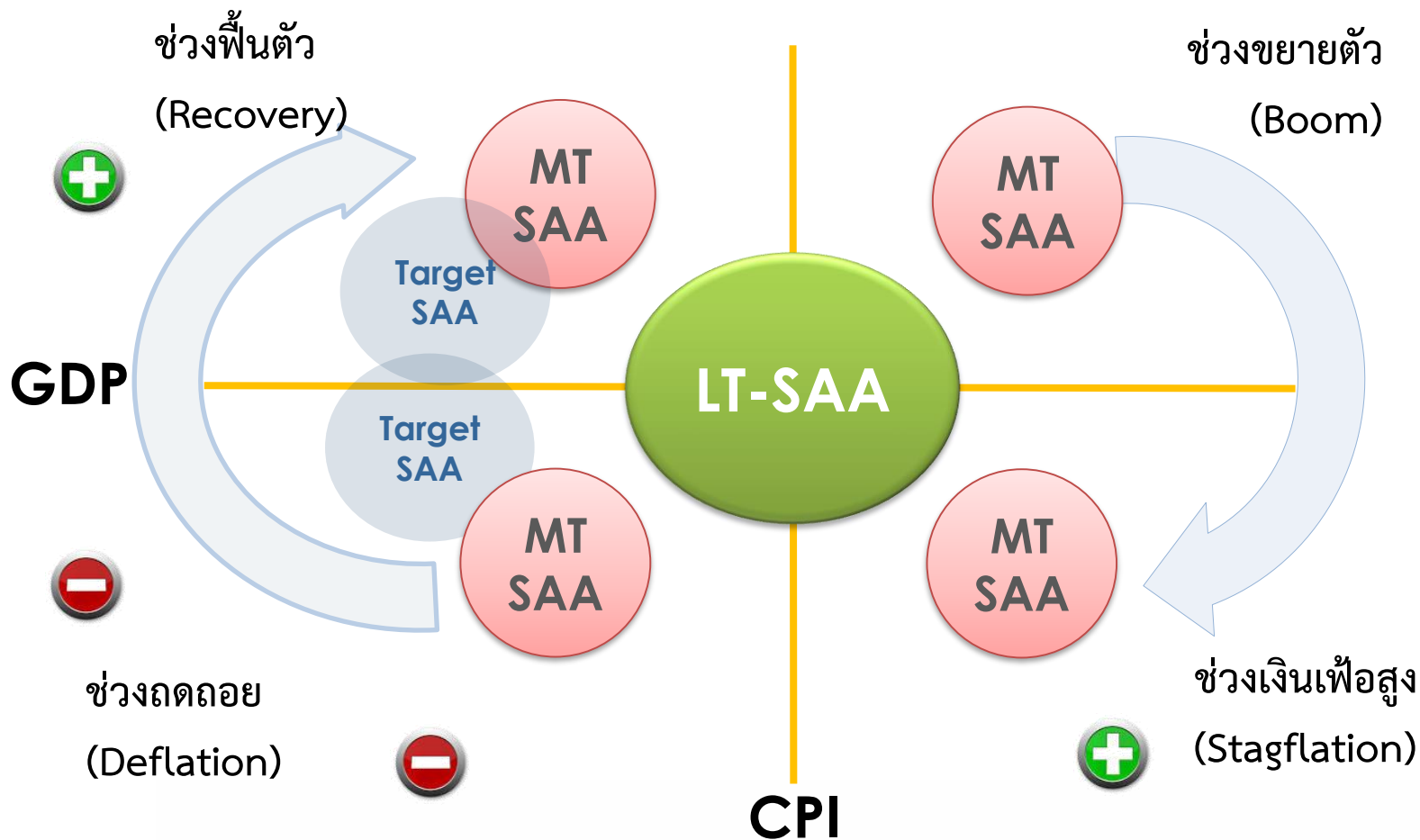
- TAA is done under risk budgeting framework. Risk contribution is assigned to each asset class and asset role level.



- $VaR = \text{Total Risk}$ ,  $\text{Tracking Error (T/E)} = \text{Relative risk}$
- The given deviation range shall be in line with T/E limits.

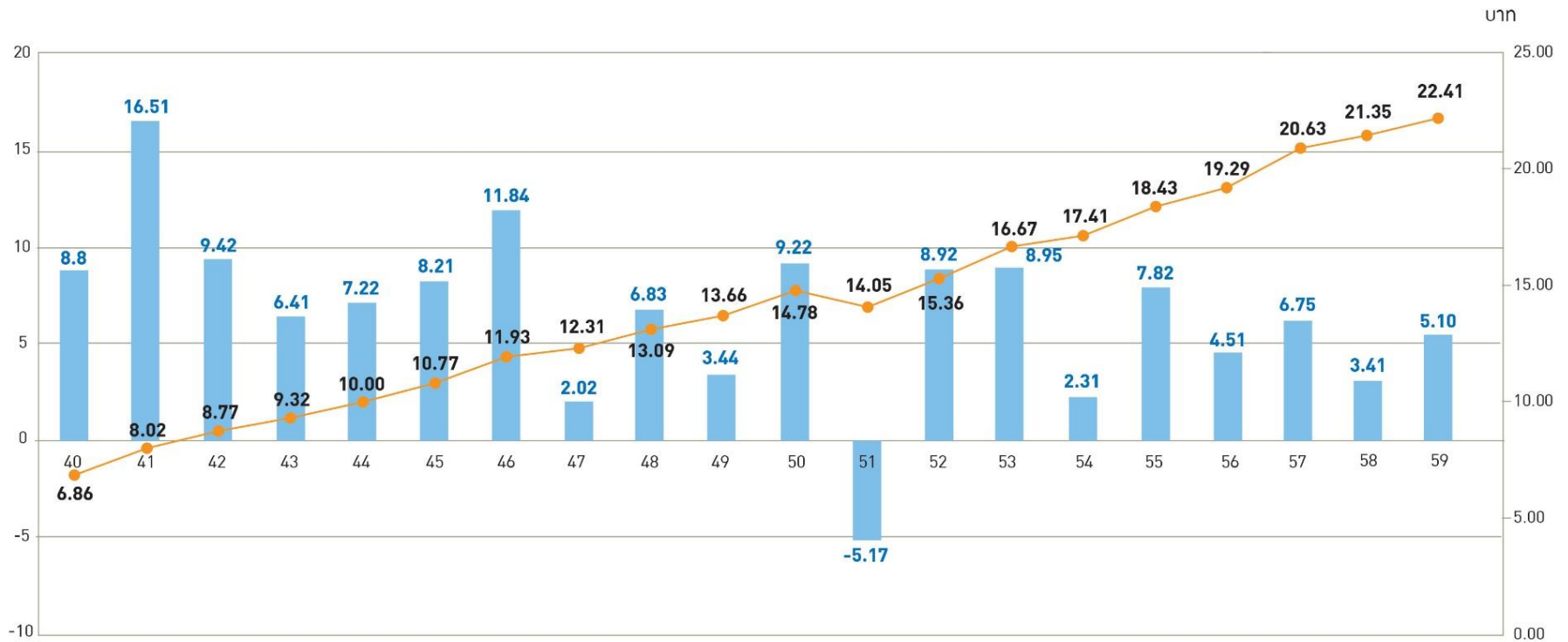


# Tactically repositioning towards MT target



- Long-term SAA is structured and aimed in delivering sustainable long-term target returns.
- “Yearly SAA” or TAA is opted such that a portfolio is in line with changes in each economic cycles **MT-SAA**.

# ผลตอบแทนการลงทุน กบข. (ณ สิ้นปี 2559)



■ ผลตอบแทนการลงทุน (% ต่อปี)     
 ● มูลค่าต่อหน่วยลงทุน (NAV per unit)

หมายเหตุ : มูลค่าต่อหน่วยในกราฟข้างต้นเกิดจากการปิดเศษทศนิยม (ณ 30 ธันวาคม 2559)





Thank you



พ.ศ. ๒๕๕๐ - ๒๕๖๐  
กองทุนบำเหน็จบำนาญข้าราชการ