

# Strong ALM and Risk Management - a competitive advantage

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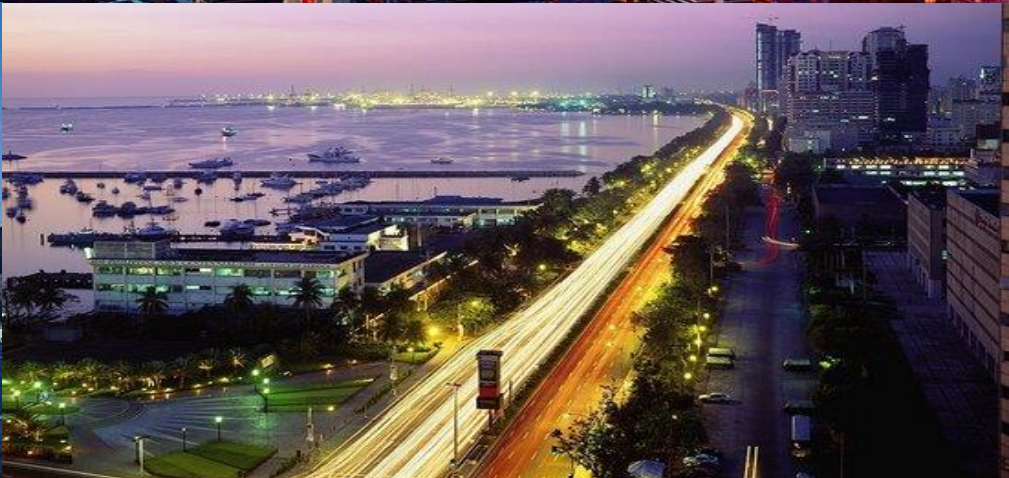
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# Agenda

- ALM fundamentals
- Competitive advantage
- Philippines ALM
- Closing thoughts
- Q&A



**Magandang umaga  
sa inyong lahat !**

# Why ALM and a strong risk management framework are important

Can give companies a competitive advantage...

...and help prevent company failure.

**Confederation Life seized by regulators in Canada**

August 13, 1994 | By New York Times News Service



**Insurance Company Failure Prompts Investor Concern**



ELNY



**Two insurers put under government receivership**



幸福人壽  
Singfor Life

**WIDENING DEFICITS:** The Insurance Stabilization Fund aims to find buyers for Global Life and Singfor Life in six to nine months via public auctions, the FSC said

**Equitable's life is over**



Dilemma for 650,000 customers

Equitable Life

**Major Japanese Life Insurer Fails**

*Economy: Chiyoda Mutual files for bankruptcy prote consumer confidence.*

October 10, 2000 | MIKI SHIMOGORI | REUTERS



# Question

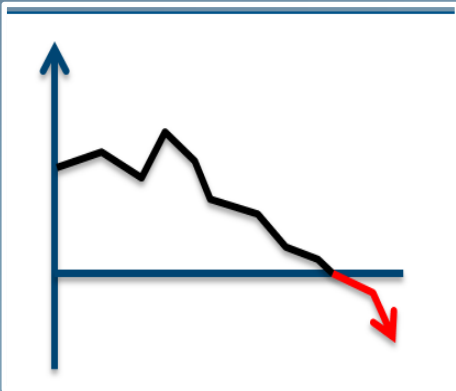
When you close your eyes and think about ALM, which words best describe your thoughts?

A	A costly distraction
B	A regulatory compliance exercise
C	Critical to reduce risk of failure
D	Potential for competitive advantage

# ALM fundamentals

# What is ALM?

- Consideration of how assets and liabilities behave together
- Risk management tool, primarily for market and liquidity risks
- Can help increase stability of financial metrics and/or quantify risks to those metrics



Solvency



Profits

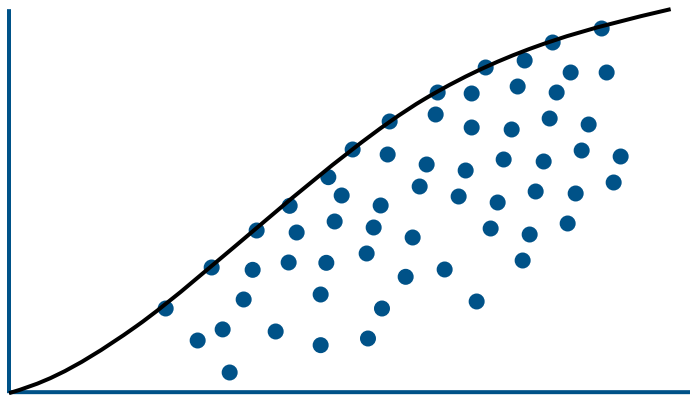


Liquidity

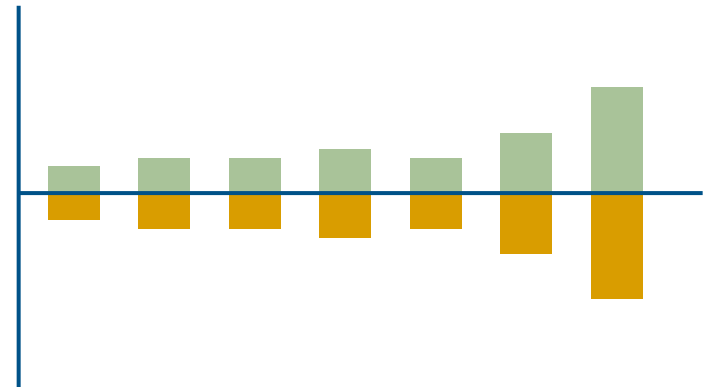
# ALM techniques

- ALM is a fundamental aspect of business management, not just a single specific process
- Various techniques exist, but we can typically split them into two types:

## Matching / hedging



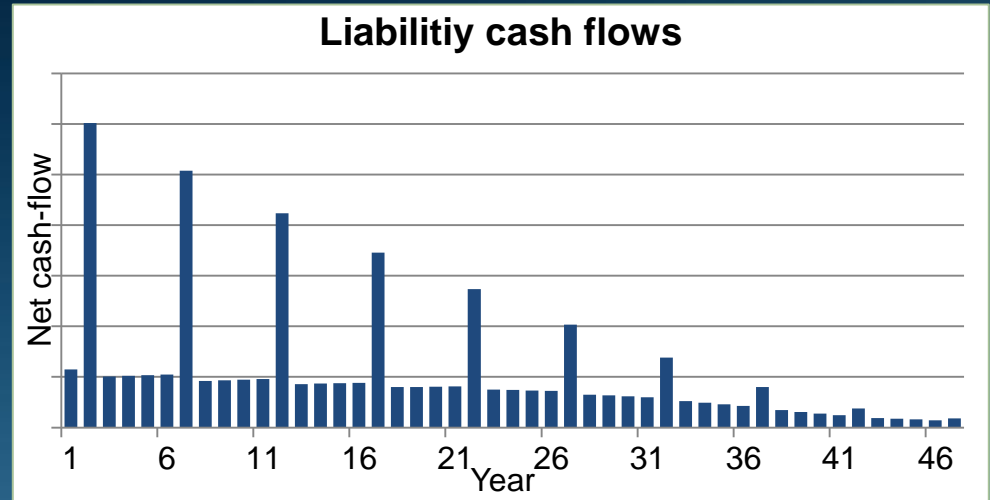
## Optimisation





# Matching in the Philippines

- Let's look at some simple examples based on an existing Philippines product:
  - Anticipated whole life plan
  - Pay premiums for first 5 years
  - Cash payment every five years and sum-assured paid on death
  - Policy is in-force and beyond payment term (now in policy year 9)



- Liability duration is 9.6 years, so match with a 9.6 year ZCB?
- Sensitivity of present value of cash-flows to interest rates:

i	-1.5%	-0.75%	-0.25%	-0.1%	Central	+0.1%	+0.25%	+0.75%	+1.5%
Assets	54,583	50,961	48,964	48,036	47,602	47,173	46,538	44,487	41,595
Liabs.	55,009	51,057	48,704	48,037	47,602	47,175	46,547	44,565	41,880
Net	(426)	(96)	(10)	(2)	0	(2)	(9)	(79)	(285)

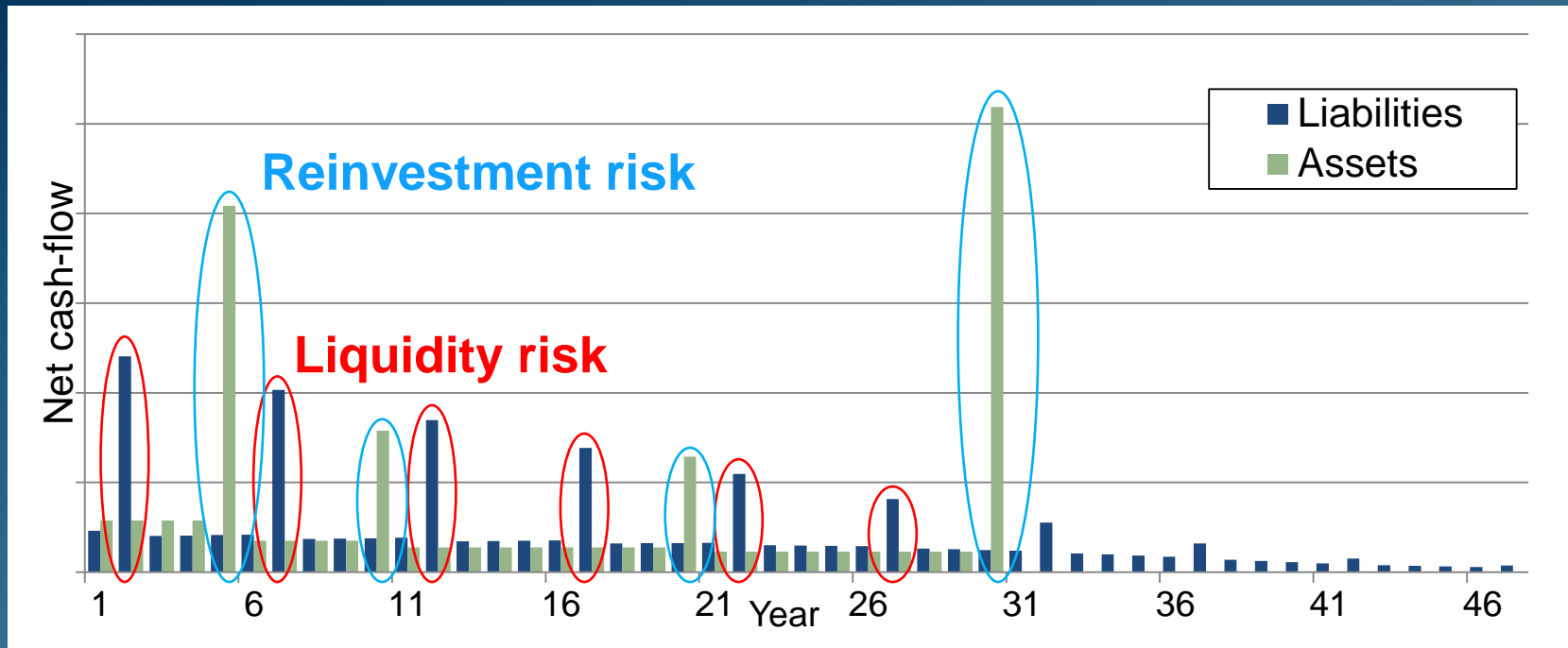
# Duration and convexity matching

Asset portfolio:

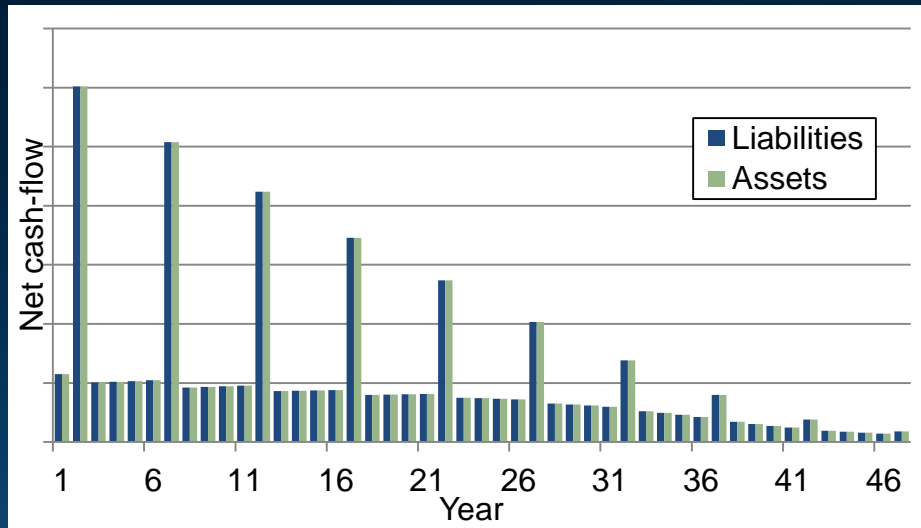
	Bond 1	Bond 2	Bond 3	Bond 4
Term	5	10	20	30
Coupon	6.4%	6.0%	4.7%	4.6%
Weight	0.33	0.11	0.09	0.46

PV of cash-flows:

	i	-1%	Central	+1%
Assets		51,545	46,788	42,784
Liabs.		51,545	46,788	42,784
Net		0	0	0



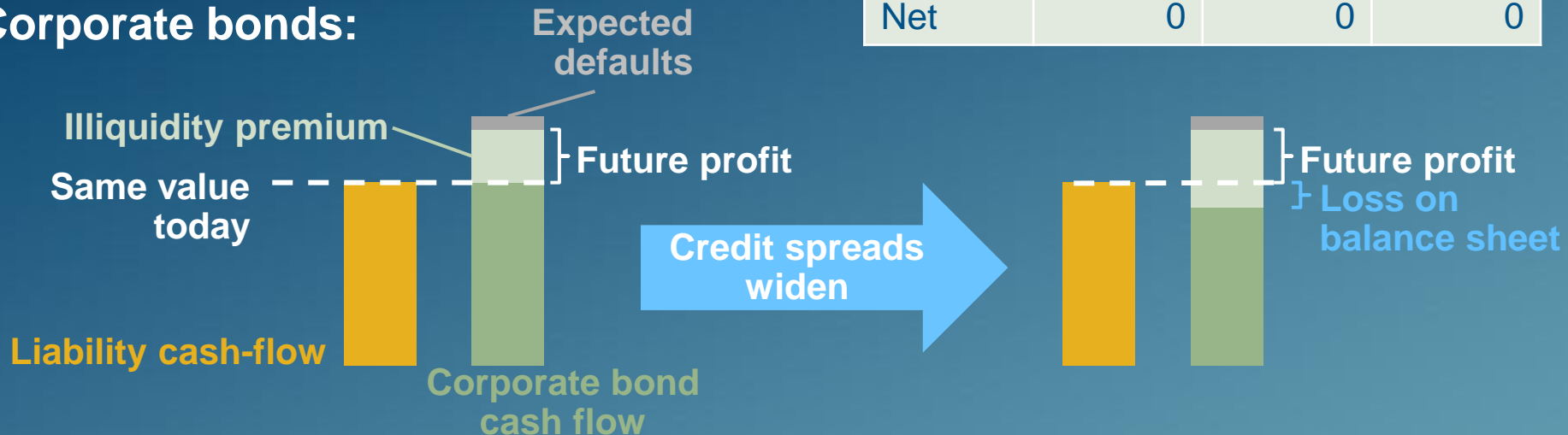
# Cash-flow matching in Philippines (1)



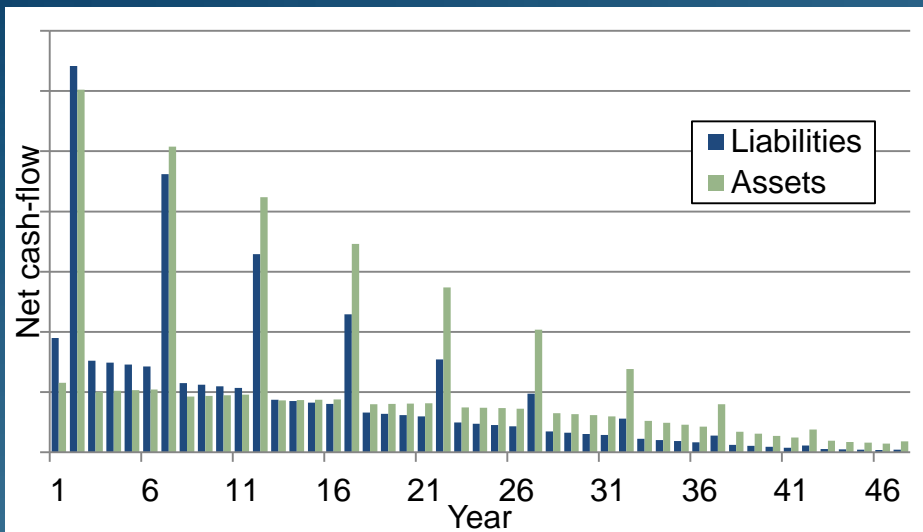
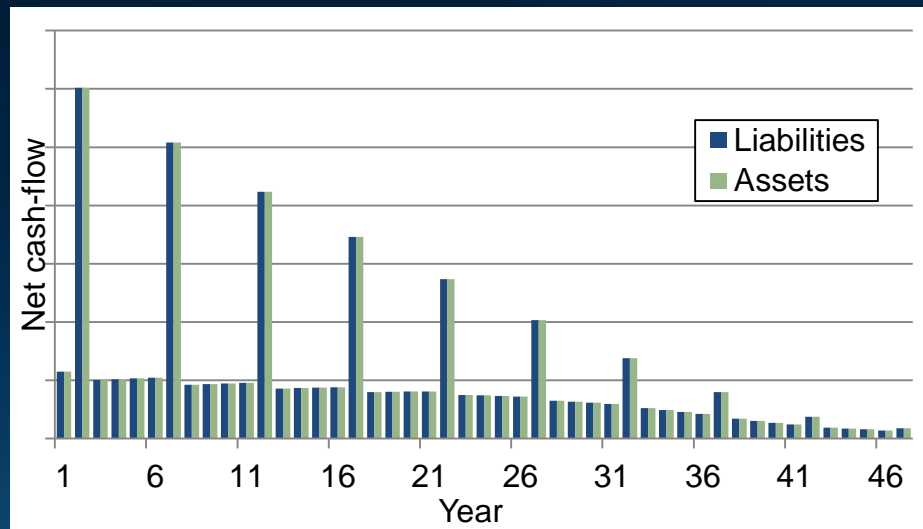
- Anticipated whole life plan
  - In-force, beyond last premium
  - Perfectly matched position
- PV of cash-flows:

i	-1%	Central	+1%
Assets	51,545	46,788	42,784
Liabs.	51,545	46,788	42,784
Net	0	0	0

## Corporate bonds:



# Cash-flow matching in Philippines(2)



- Anticipated whole life plan
- Perfectly matched position

PV of cash-flows:

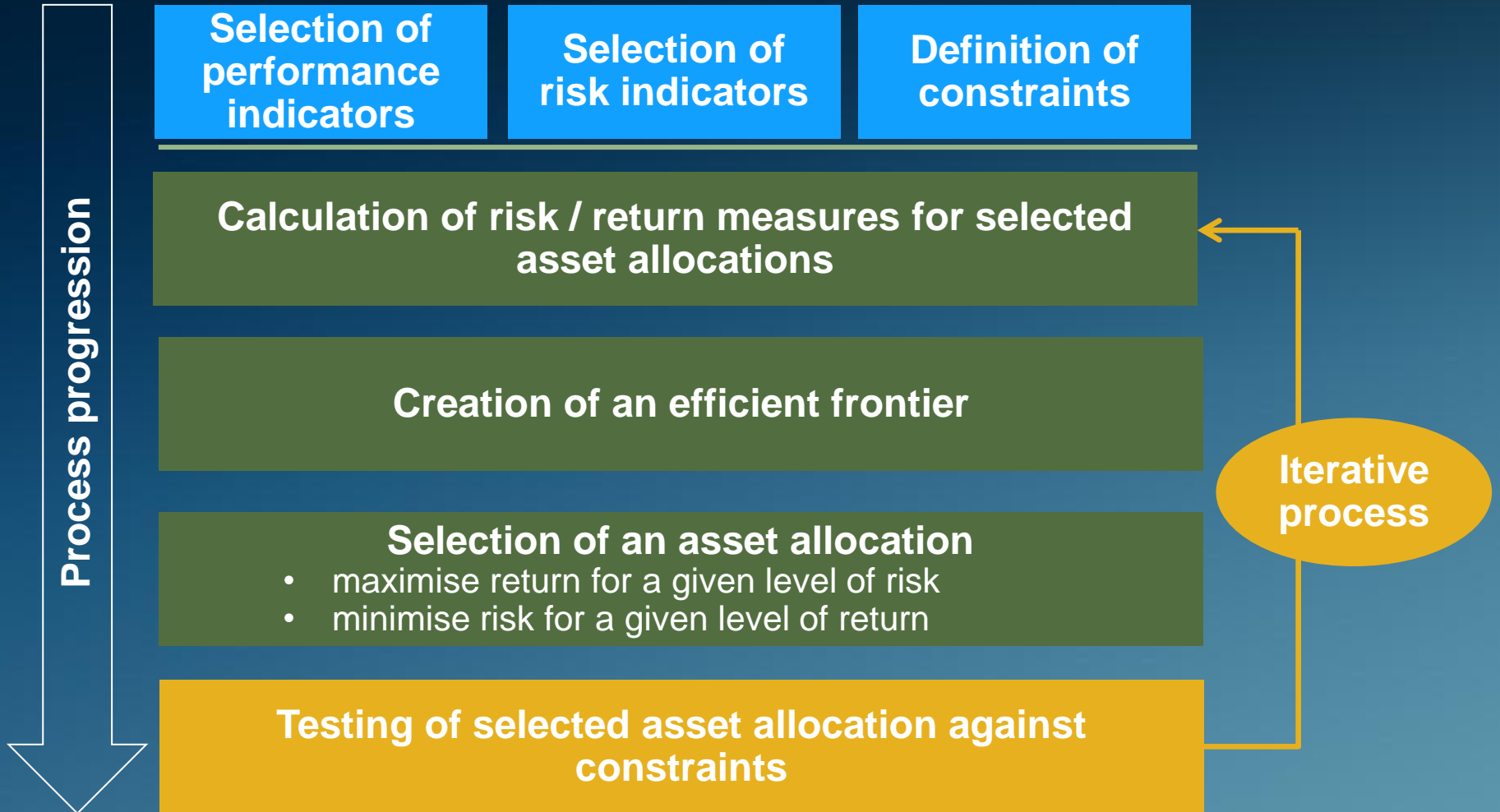
i	-1%	Central	+1%
Assets	51,545	46,788	42,784
Liabs.	51,545	46,788	42,784
Net	0	0	0

- Increase lapse rates from 3% to 6%

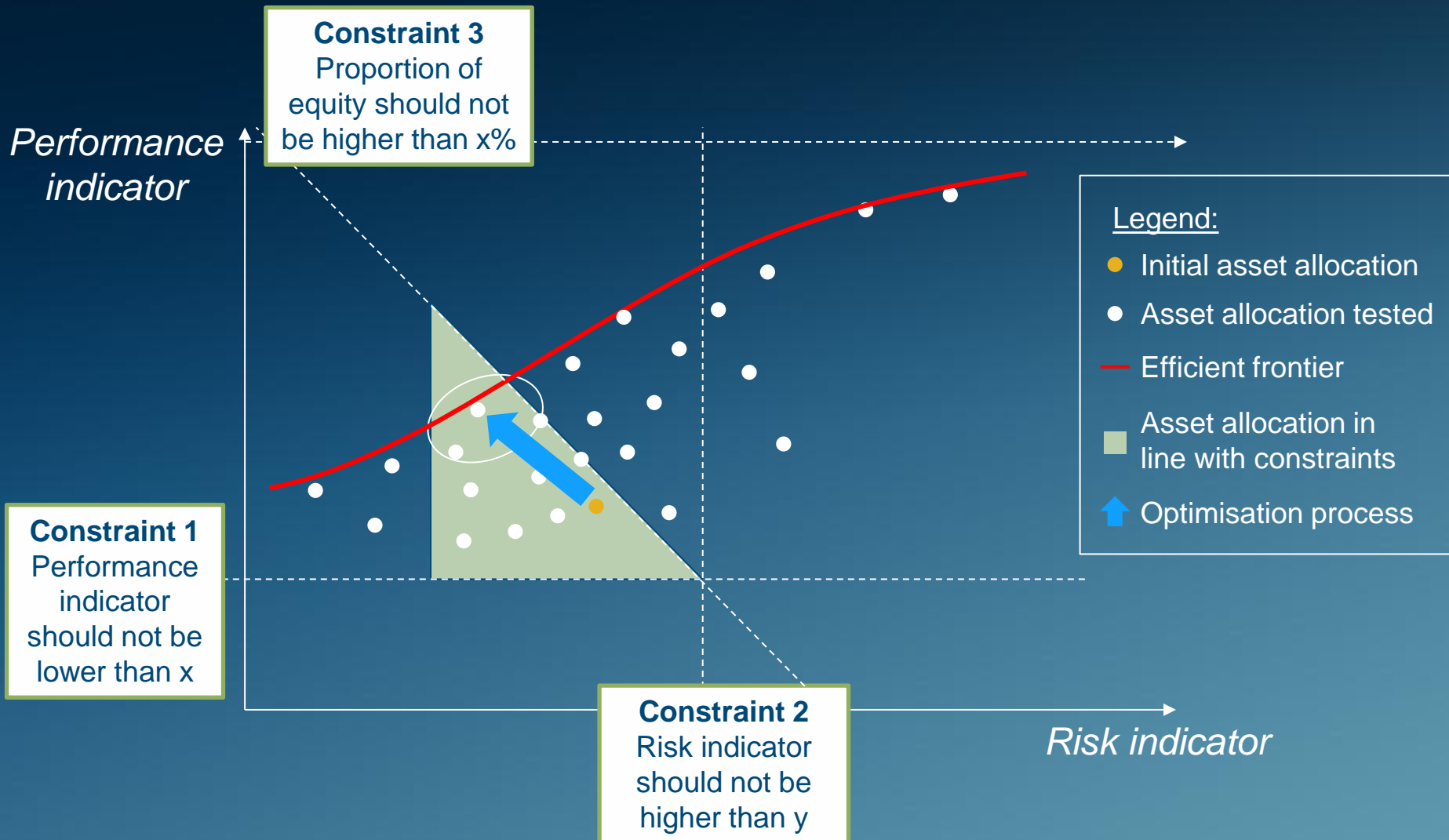
PV of cash-flows:

i	-1%	Central	+1%
Assets	51,545	46,788	42,784
Liabs.	50,496	46,788	43,572
Net	1,049	0	-789

# Optimisation



# Optimisation – Efficient frontier



# Risk management framework

## *Risk budgeting*

- Determine a metric to quantify risk (could be contribution to capital requirement)
- Identify the different risks that business is exposed to
- Can see how much of the total risk budget is being used by different risk types
- Company may have different tolerances to different risks

Risk	Capital required
Market	$X_1$
Liquidity	$X_2$
Credit	$X_3$
Policyholder behaviour	$X_4$
Default	$X_5$
Insurance	$X_6$
Expense	$X_7$
Group	$X_8$
Operational	$X_9$
<b>Total</b>	<b><math>X_T</math></b>

Risks covered by ALM

# Competitive advantage



# Tangible competitive advantages



Stability

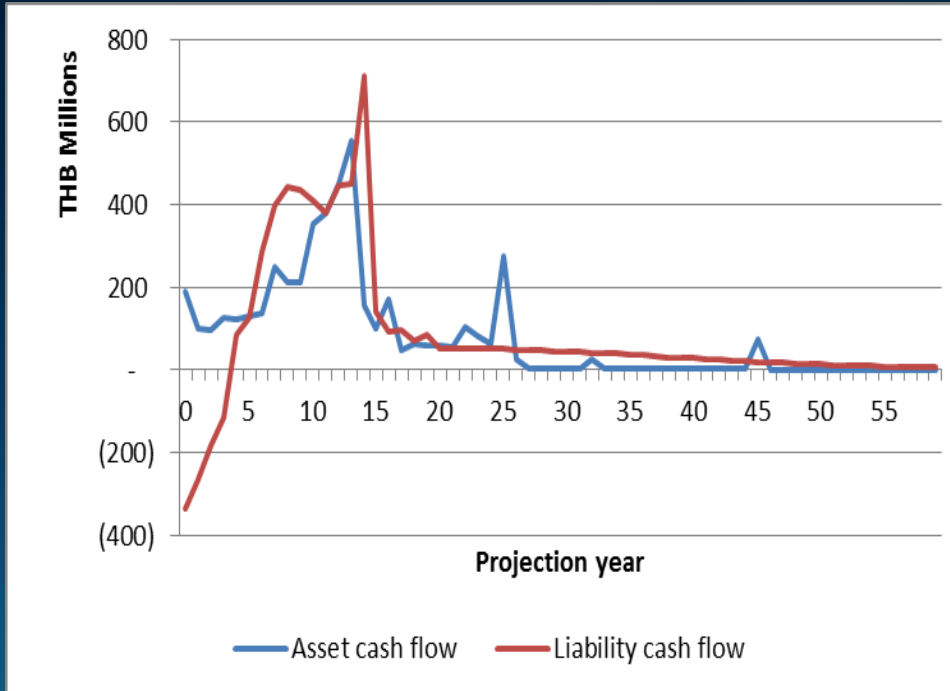


Efficiency



Performance

# Market risk (ALM) in Thailand



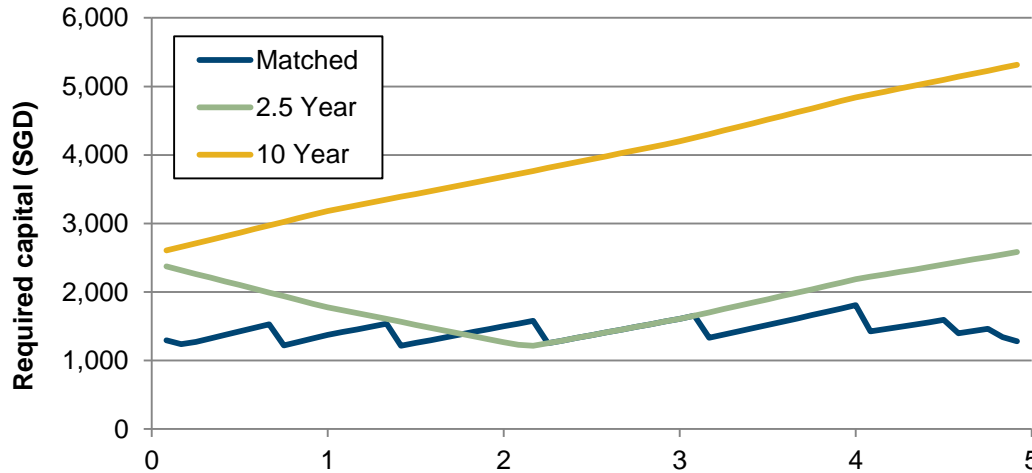
- Large tranche of endowments sold with maturity in 15 years
- Cash-flow mismatch :
  - Insufficient asset cash-flows to meet expected liability outgo in 15 years
  - projected solvency ratio close to statutory minimum within 5 years
- Stability actions taken:
  - restructured assets to better match liability outgo
  - enhanced ALM reporting / governance
- Outcome:
  - large reduction in interest rate risk / market risk
  - boost in solvency ratio / alleviate need for capital injection

Within 5 years	Before asset restructure	After asset restructure
Interest rate risk	Interest rate risk reduced by 45% - 60% after restructure	
Total market risk	Total market risk reduces by 40% - 55% after restructure	
Solvency ratio	140% - 200%	300% - 350%

# Capital efficiency in Singapore



**Effect of asset term on required capital**



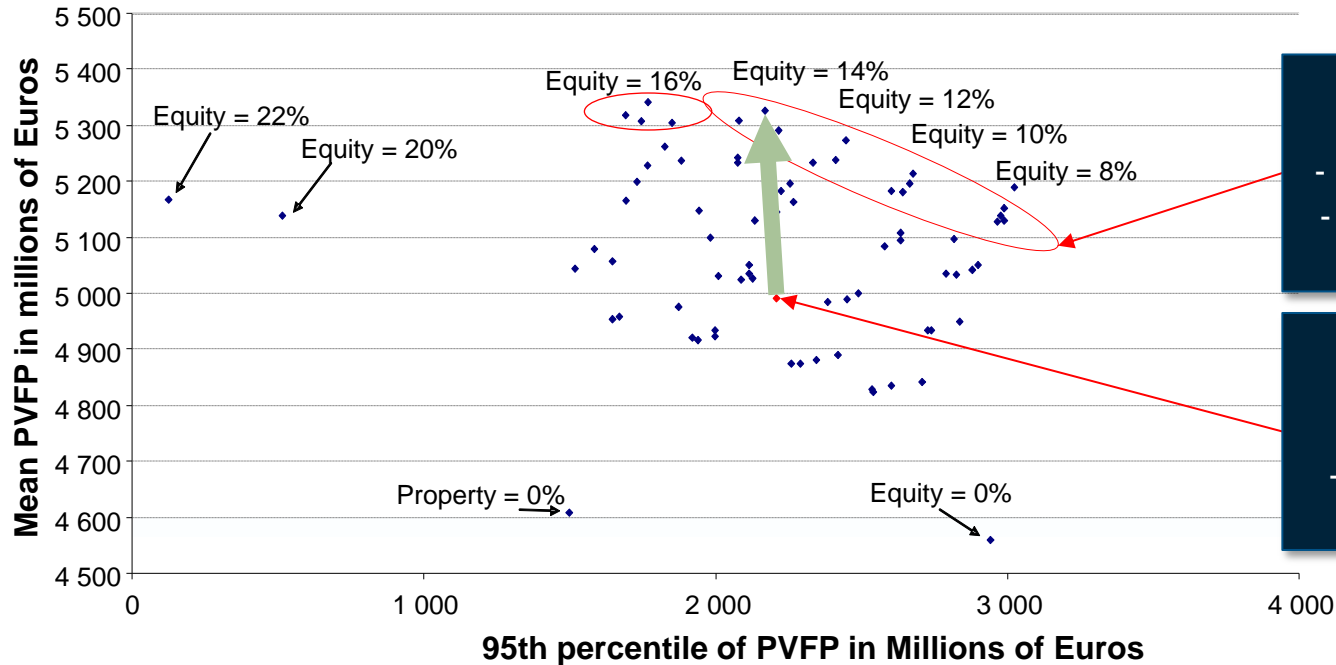
- Example for 5-year single premium endowment policy
- Backing assets assumed to be corporate bonds:
  - a. 5-year bond bought and held to maturity
  - b. Constant 2.5-year bond
  - c. Constant 10-year bond

## Effect on profit margins

Assets	Before CoC	After CoC
Matched	44%	37%
2.5 Years	44%	35%
10 Years	44%	25%

- Margins based on PVFP as percentage of APE
- RDR of 8%

# Portfolio optimisation in Hong Kong



## Optimal allocation:

- Equity = 8-16%
- Fixed rate bonds = 63-71%
- Floating rate bonds = 10%
- Property = 11%

## Initial allocation:

- Equity = 12%
- Fixed rate bonds = 77%
- Floating rate bonds = 5%
- Property = 6%

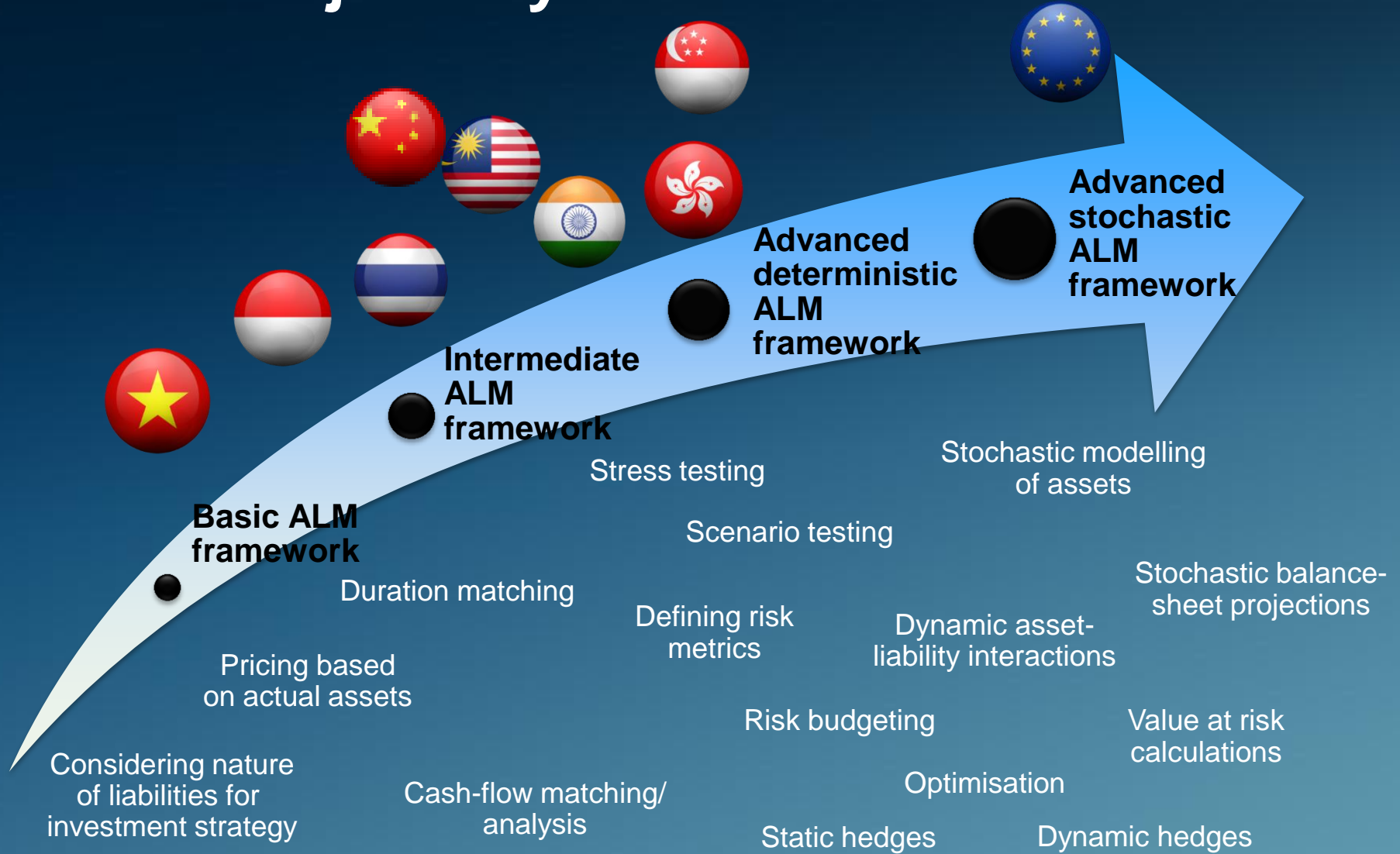
	Current	New Target
Equities	12%	14%
Property	6%	11%
Floating rate bonds	5%	10%
Fixed rate bonds	77%	65%

- Increase in expected profits with only a minor increase in risk

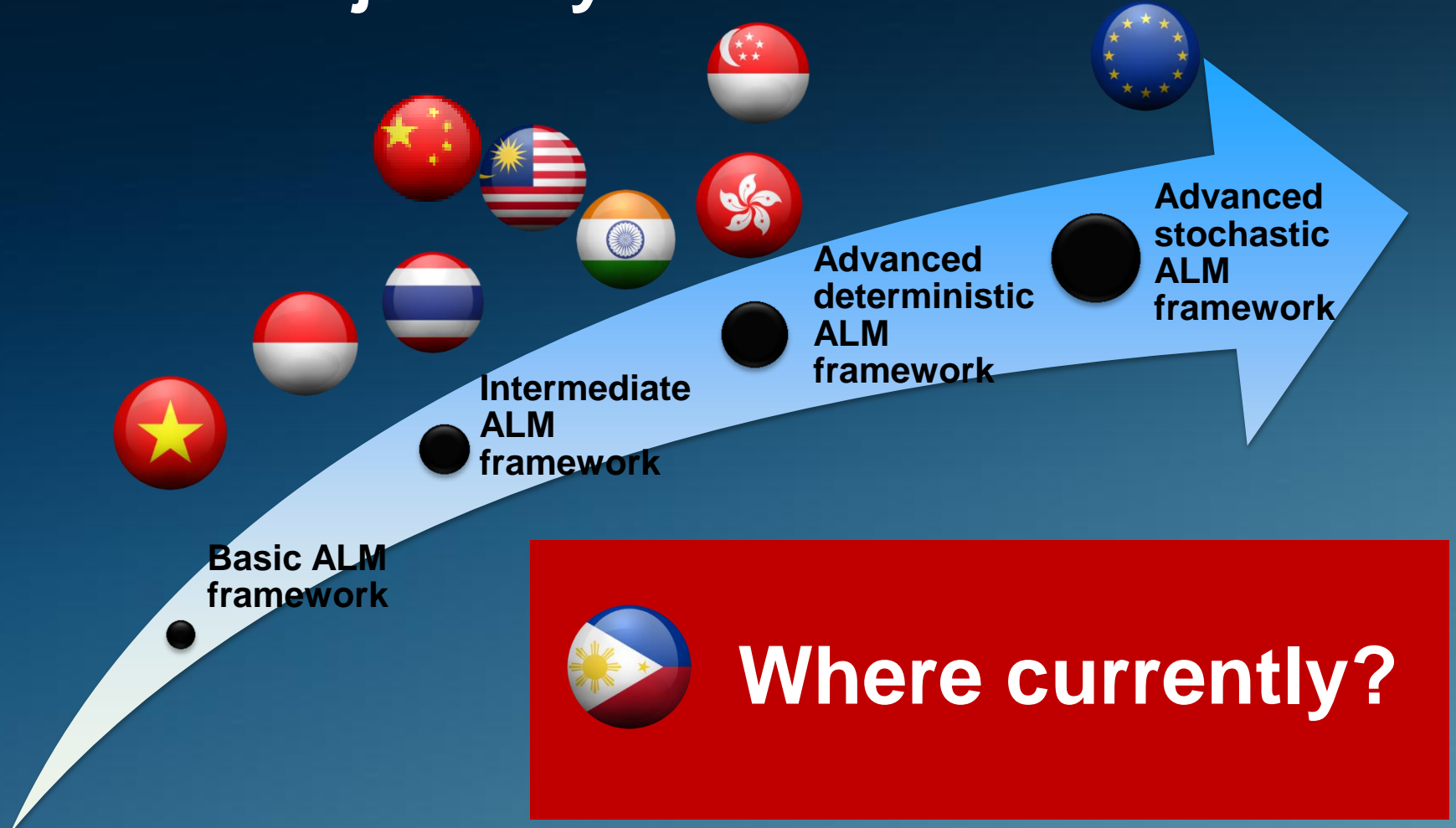


**P**hilippines  
**A**sset  
**L**iability  
**M**anagement

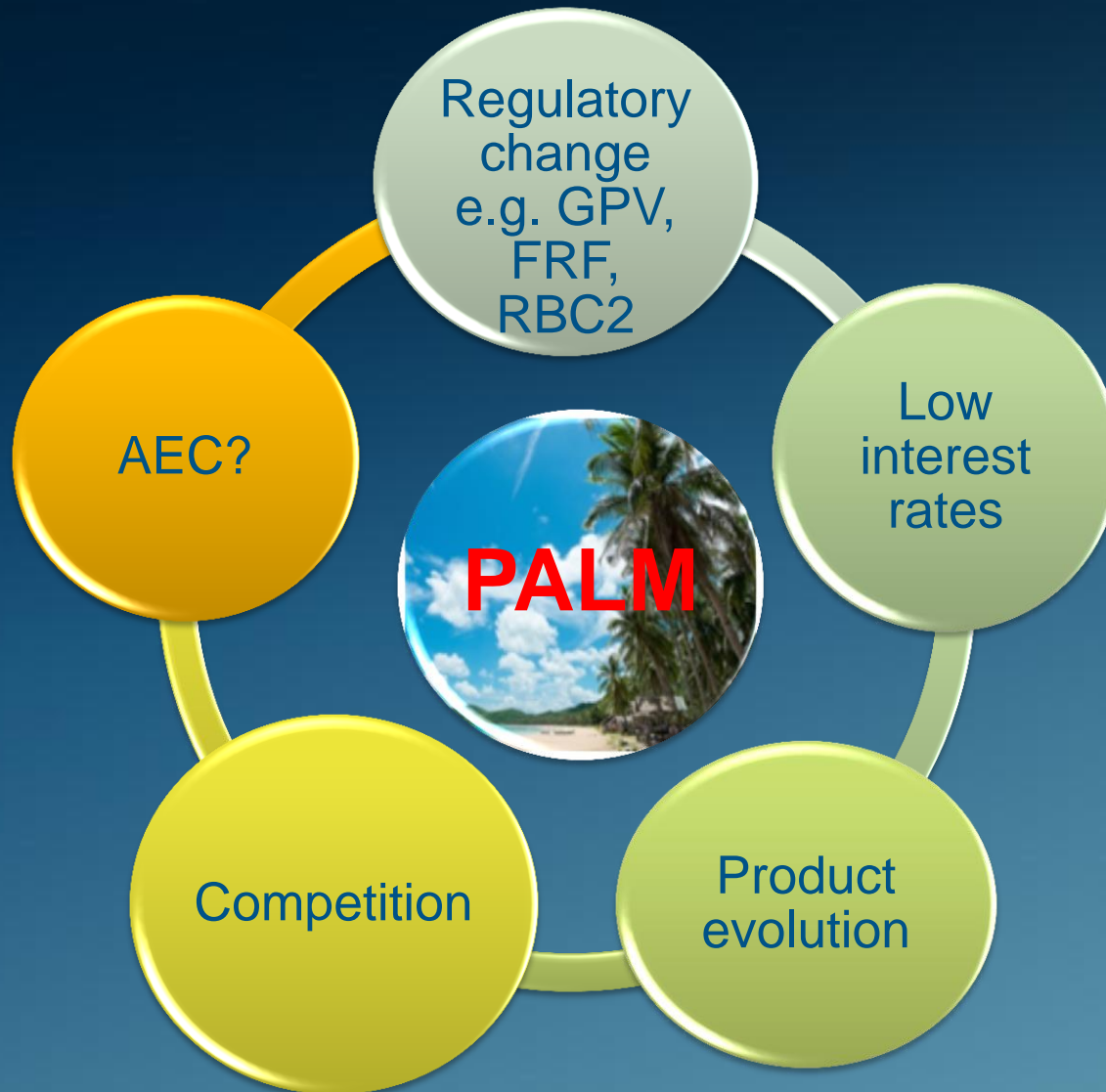
# The ALM journey



# The ALM journey



# Drivers for change





# Challenges

Implementation capabilities

Asset availability

Legacies and silos

Management buy-in

Embedding into DNA



# Closing thoughts

Can you afford not to have good ALM as a core management discipline ?

Tangible competitive advantage possible by being ahead of the pack

Some powerful drivers of change in the Philippines.....

.....but challenges

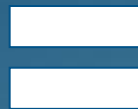
Where are you positioned currently?

How fast do you want to move up the curve?.....And how best to do it?



Structured  
approach built on  
solid foundations

TLC



Success!

# Q & A

# Contact details

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