



กรุงเทพประกันภัย

Pricing in a nutshell

Actuarial Department : November 12, 2015

Outline

Regulatory boundary

1. OIC premium

Depending on product type, OIC prescribes following factors:

- Maximum Mortality rate
- Minimum Discount rate
- Maximum Expense loading
- etc

In addition, OIC has rules for some special or new-to-market product.

Maximum & Minimum allowable premium



2. BLA premium (Adjusted OIC premium)

- Market feasibility (Premium level, Benefit)
- Profitability measure (VNB, Profit margin)
- Risk measure (Cost of capital)
- Capital measure (RBC CAR ratio)



3. Approval process

Approved by Top Management
Approved by Board of director
Approved by OIC

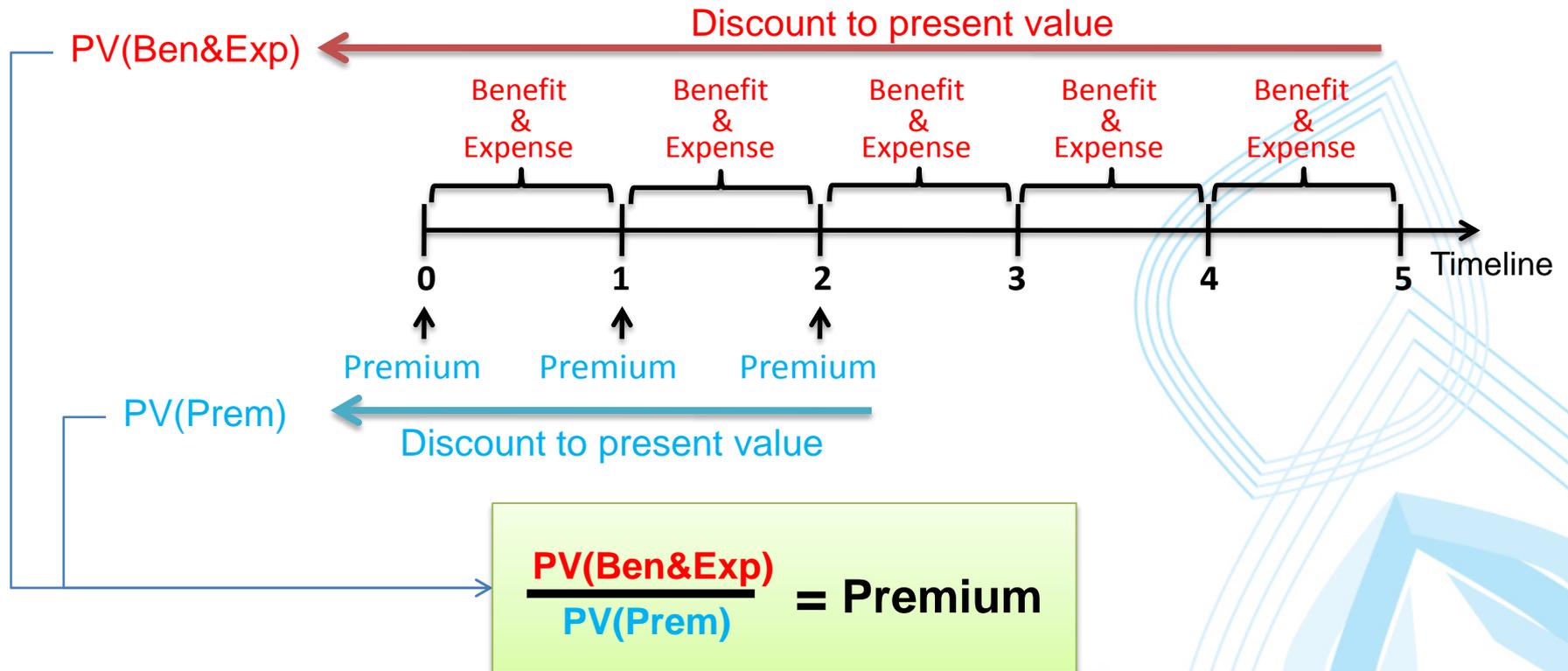


Launch!

1. OIC premium Methodology

OIC assumptions

OIC prescribes key pricing assumptions: maximum mortality rate, maximum expense loading, minimum discount rate



1. OIC premium

Ingredients of OIC premium

Assumptions

Mortality rate

Different mortality table
Example: TMO51, etc

MAX

Discount rate

Minimum at 2% for all products

MIN

Expense loading

Depends on type of products

MAX

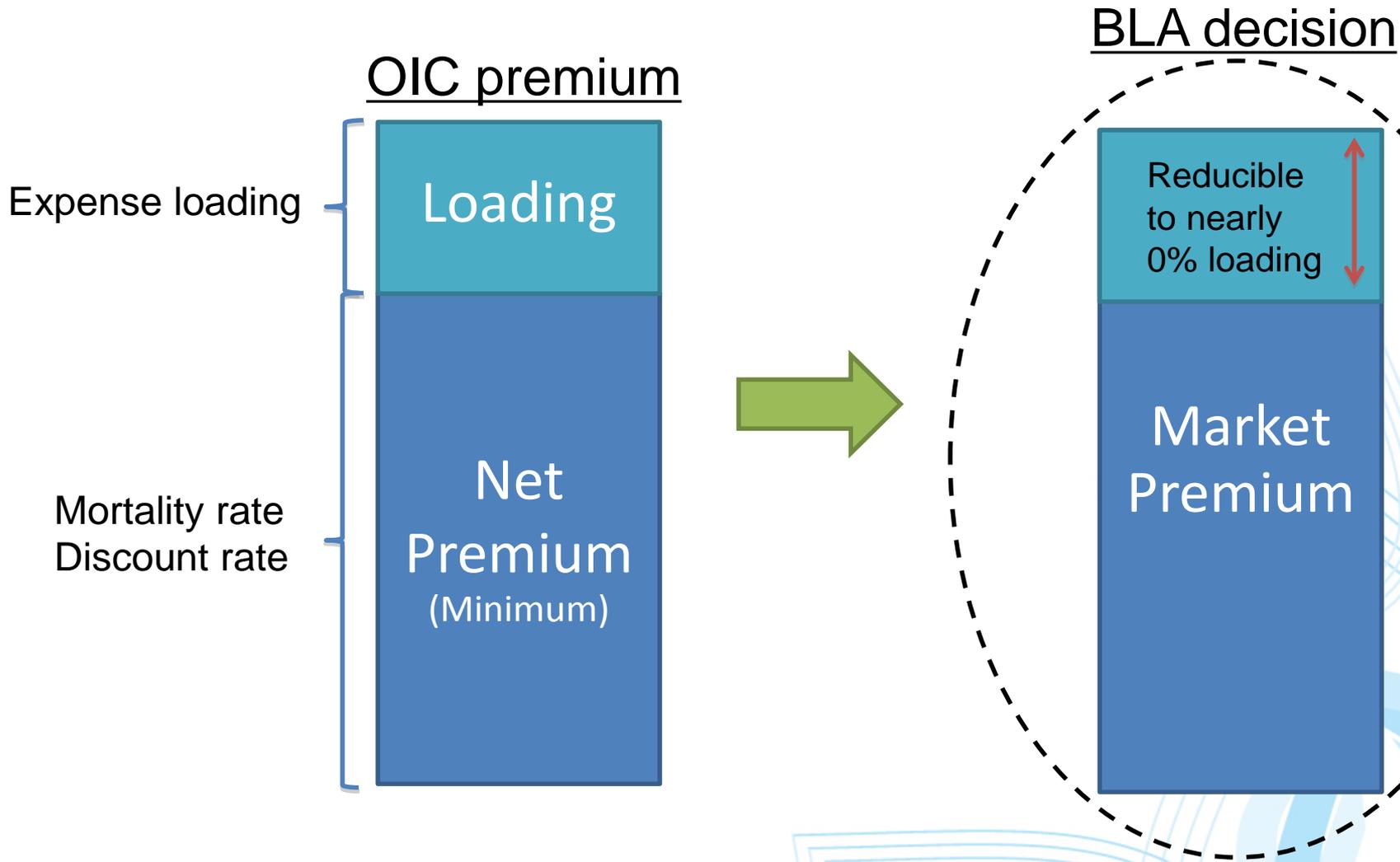
OIC premium
(maximum)

Other requirements

- **Maximum surrender charge** varies by coverage period, premium paying period, issue age ranging from 0% (SP) to 50% (WL) on 1st year lapse
- **Minimum death benefit** for some kinds of products
- **Workflows** for new operation or innovative products such as online product workflow, script telemarketing
- etc

1. OIC premium

Flexibility for premium setting



1. OIC premium

Summary of regulatory requirements

- OIC premium is based on industry experiences but the market premium is based on BLA experiences
- BLA experiences are generally better than industry experiences for example our mortality rate is lower than the OIC mortality rate
- Therefore, our market premium contains significant profit margin inside

2. BLA Premium

From OIC premium to Market premium

From previous slides, we have ceiling and floor premium (OIC premium) which are based on industry average assumptions



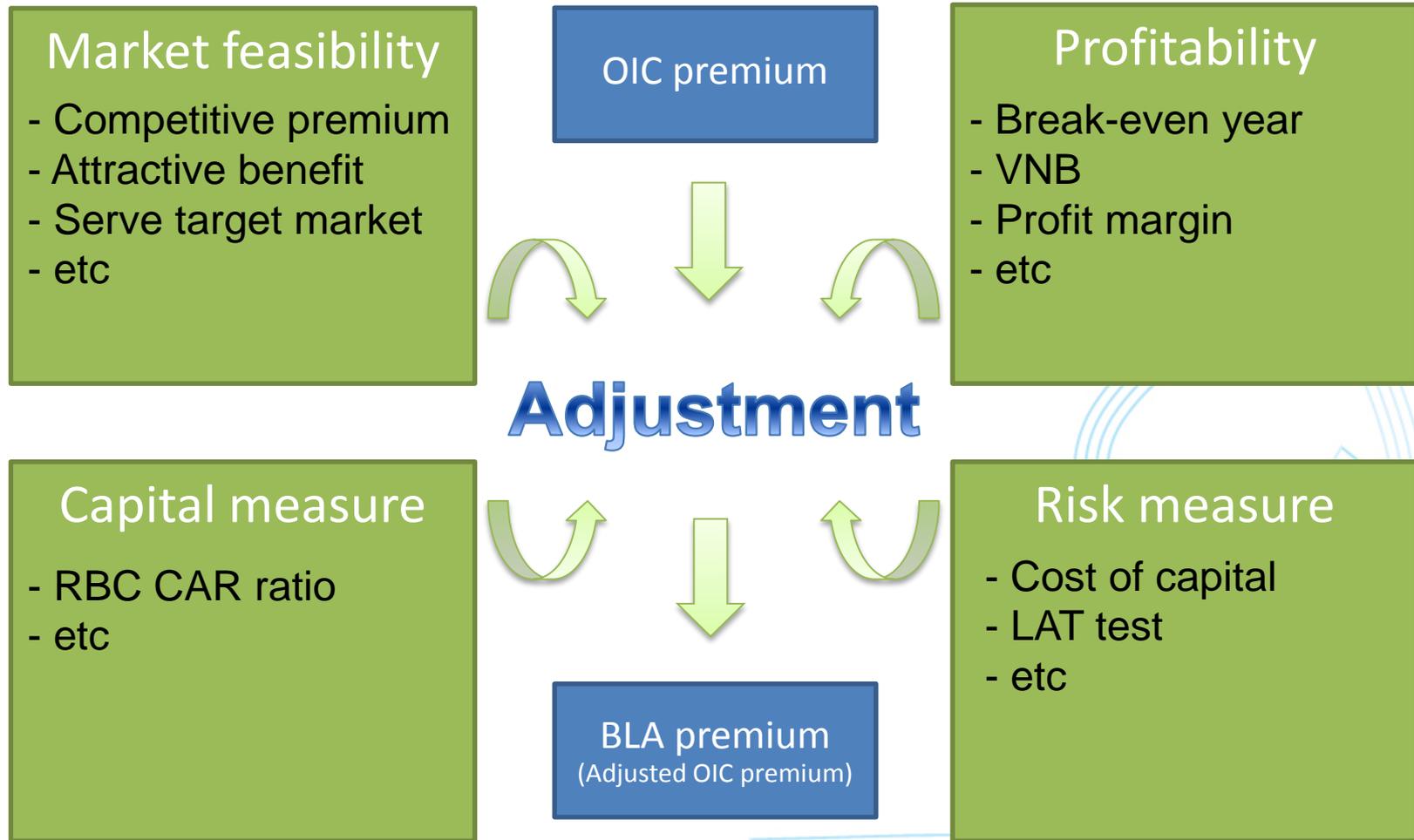
We then apply BLA assumptions and perform profit testing to find the hurdle rate that BLA can accept



Consequently, we consult with marketing team whether these features with this premium level is competitive in the market or not. If it is not, we have to go back through the profit testing again until the most favorable result is reached. That final premium is called Market premium.

2. BLA Premium

Product development consideration



2. BLA Premium

Profitability measures – Net Profit Cash flow

Net Profit Cash flow

Premium + Investment income ← Inflow
- Expected benefit payout - Expected Expenses - Taxes ← Outflow

For illustrative only

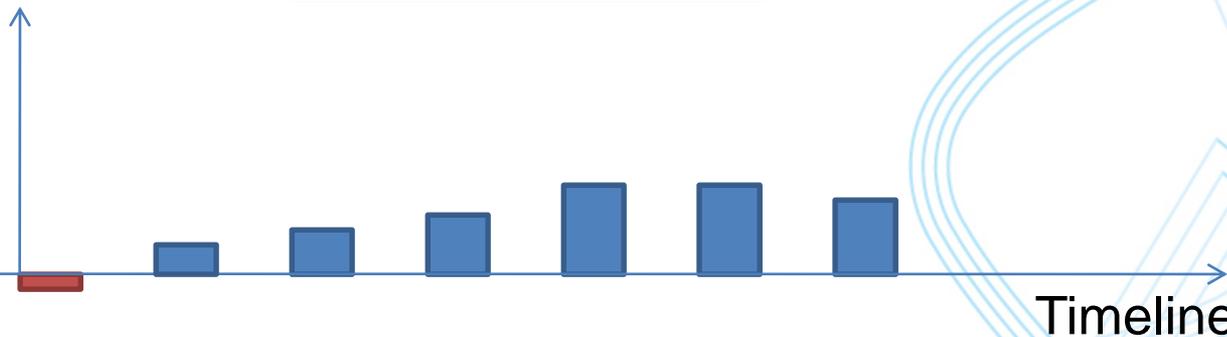
Net Profit Cash flow

Issue date

+ Premium
+ Investment income



- Death Benefit
- Survival Benefit
- Surrender Benefit
- Maturity Benefit
- Commission
- Expenses
- Increase in reserve
- Taxes
- ...



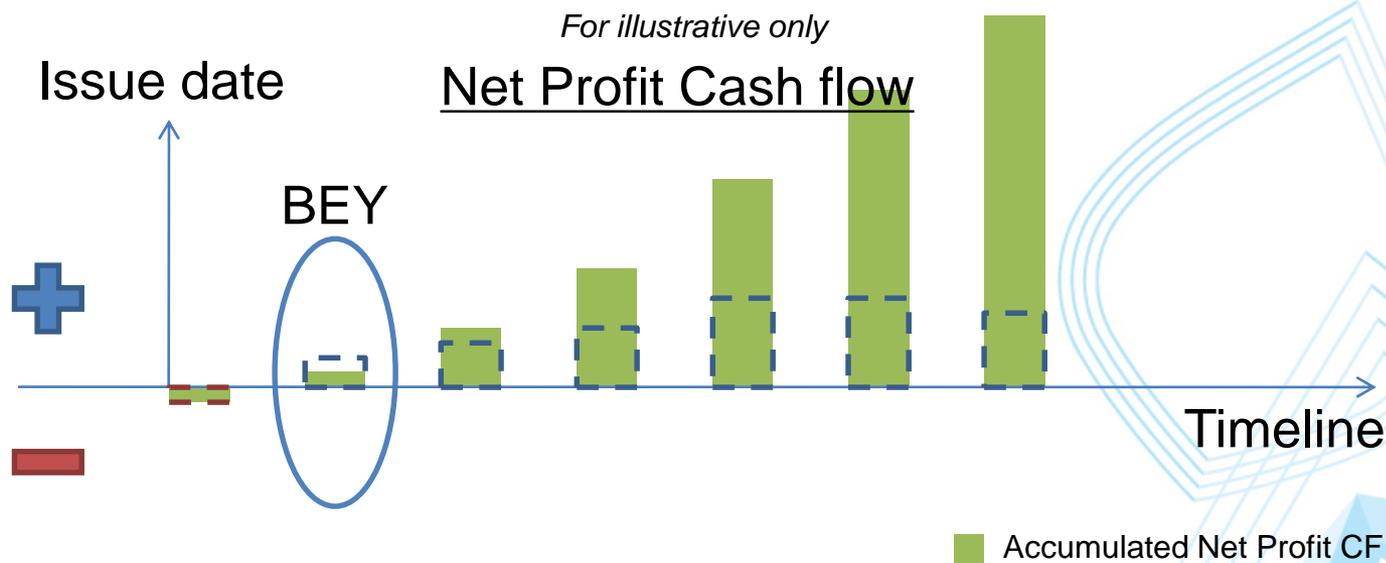
*All Cash flow are based on BLA assumptions

2. BLA Premium

Profitability measures - BEY

Break-even year (BEY)

The first year where the accumulated profit CF becomes positive.

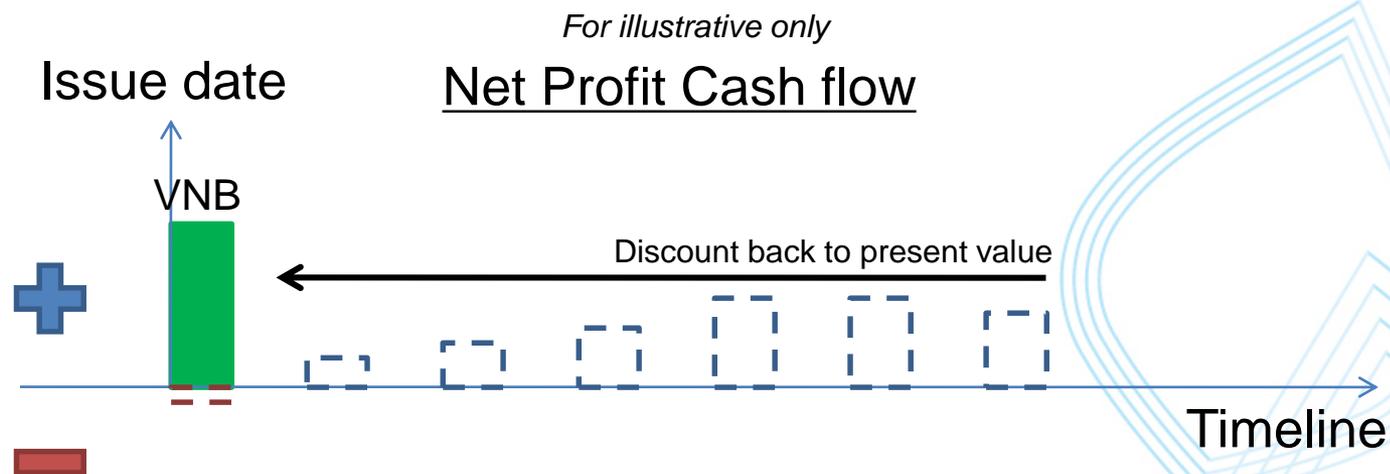


2. BLA Premium

Profitability measures - VNB

Value of New Business (VNB)

Economic values of profits emerge from new business net of cost of supporting capital [PV(new business profit) - PV(cost of capital)]

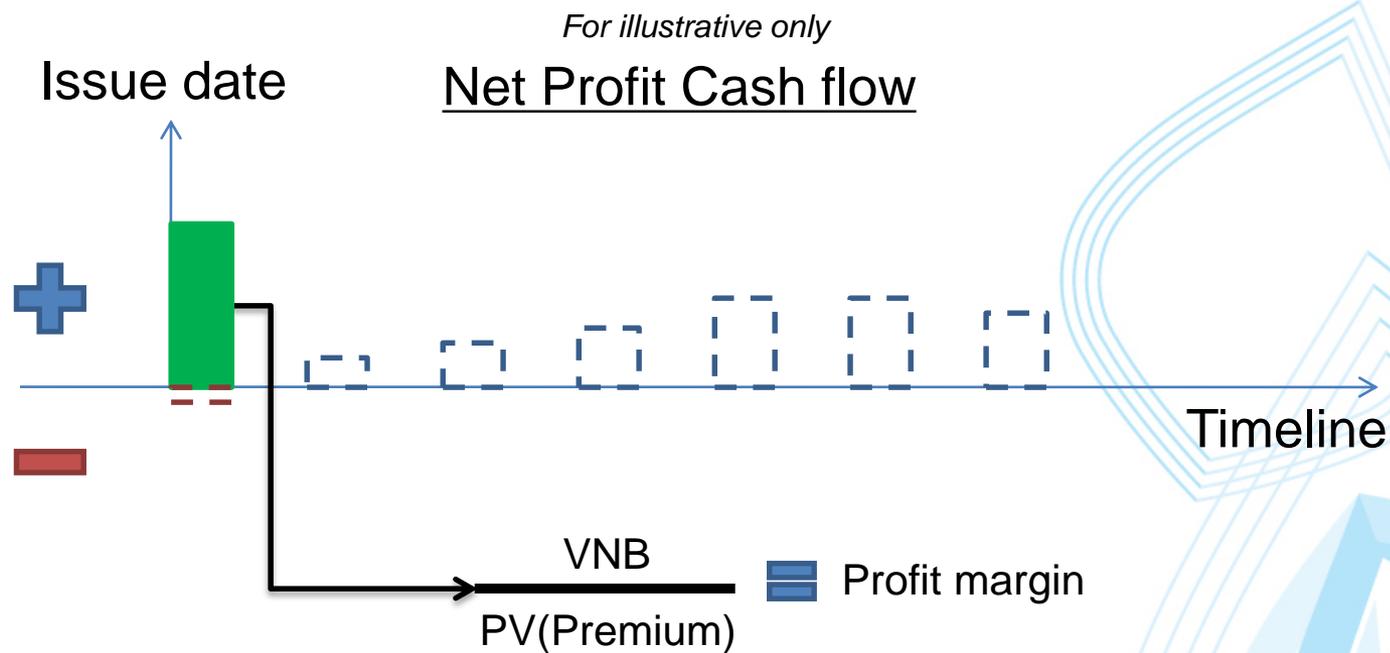


2. BLA Premium

Profitability measures - Profit margin

Profit Margin

Compare profit with premium. Profit margin = $VNB/PV(\text{Premium})$



2. BLA Premium

Sensitivity test

Alter key actuarial assumptions

- Investment return
- Mortality
- Lapse
- Expense
- ...

Sensitivity test



Observe effects on profit measures
(VNB, CAR, etc)

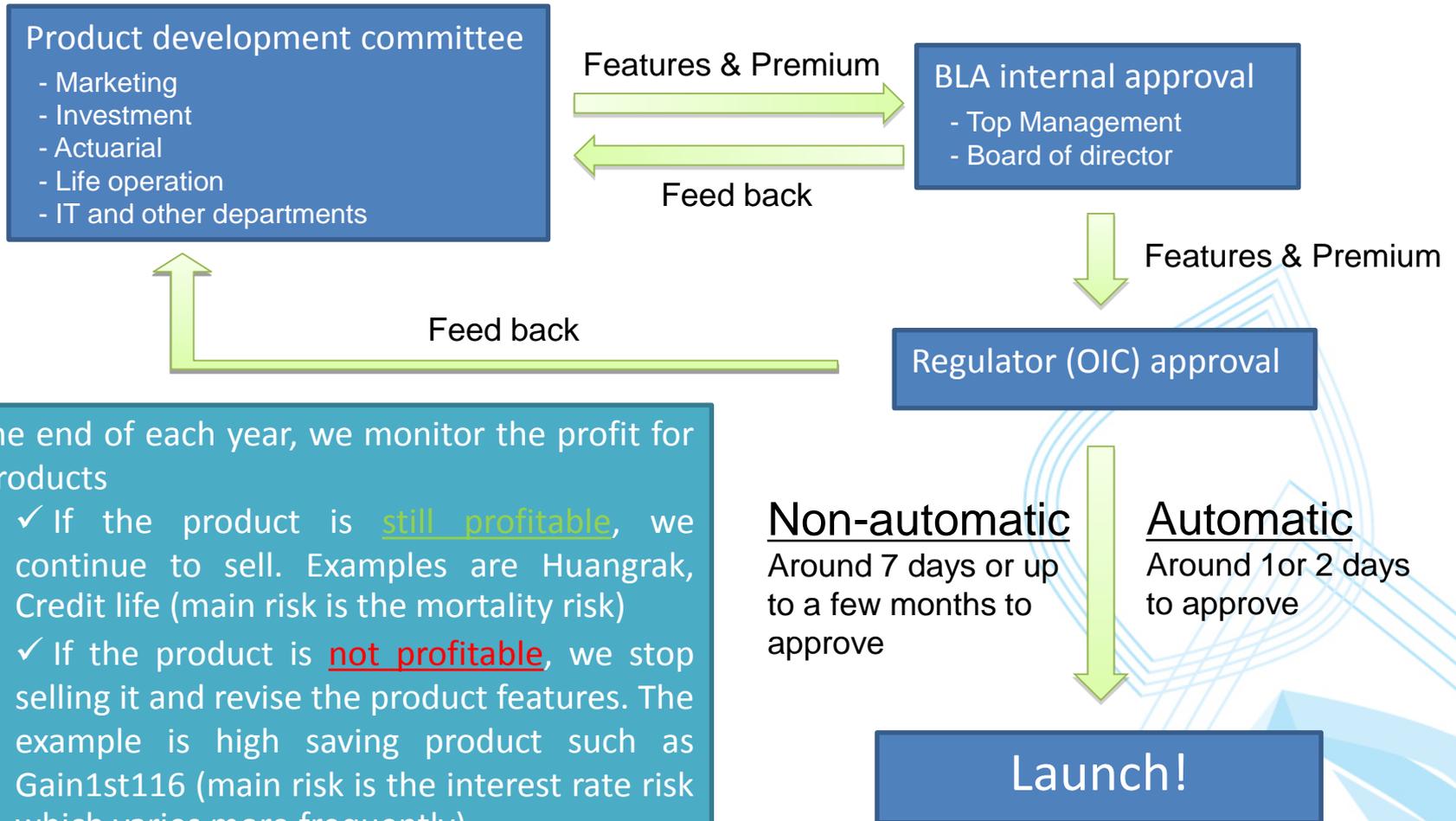
Examples

- Decrease Return to 3.75%
- Increase Mortality 20%
- Increase Lapse 10%
- Increase Expense 10%
- ...

Examples

- VNB decreases too much so we need to revise the features
- CAR is still under control so we can approve this product
- ...

3. Approval process



At the end of each year, we monitor the profit for all products

- ✓ If the product is still profitable, we continue to sell. Examples are Huangrak, Credit life (main risk is the mortality risk)
- ✓ If the product is not profitable, we stop selling it and revise the product features. The example is high saving product such as Gain1st116 (main risk is the interest rate risk which varies more frequently)

Questions & Answers

Questions & Answers

ขอบคุณ
THANK YOU





กรุงเทพมหานคร
ชีวิตที่มีความสุขมากกว่า