

FN241

Risk Management and Insurance
Insurance Industry and Operations

Sakkakom Maneenop

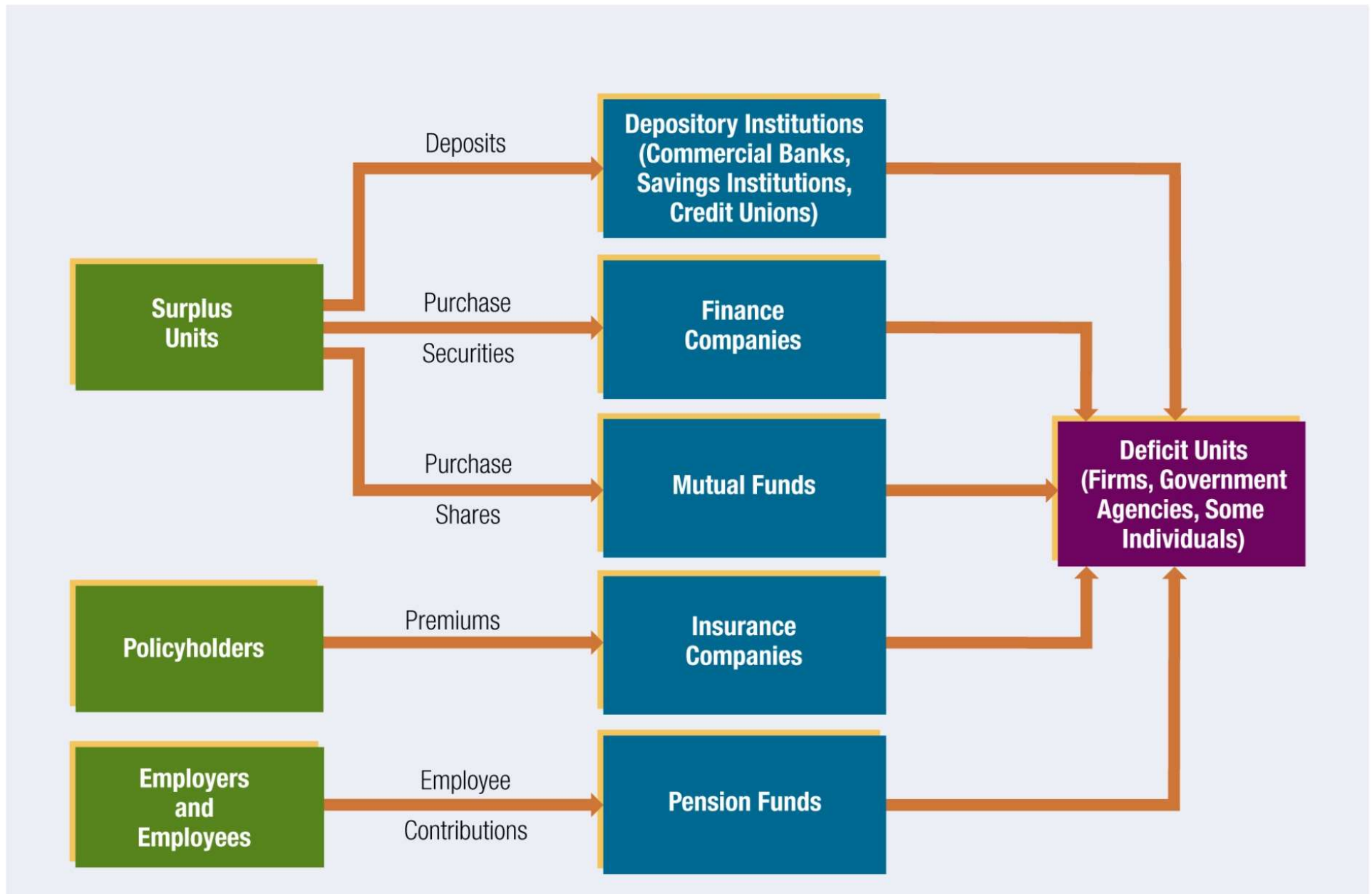
Primary Assets and Liabilities of Financial Institutions

Type of Intermediary	Primary Liabilities (Sources of Funds)	Primary Assets (Uses of Funds)
Depository institutions (banks)		
Commercial banks	Deposits	Business and consumer loans, mortgages, U.S. government securities, and municipal bonds
Savings and loan associations	Deposits	Mortgages
Mutual savings banks	Deposits	Mortgages
Credit unions	Deposits	Consumer loans
Contractual savings institutions		
Life insurance companies	Premiums from policies	Corporate bonds and mortgages
Fire and casualty insurance companies	Premiums from policies	Municipal bonds, corporate bonds and stock, and U.S. government securities
Pension funds, government retirement funds	Employer and employee contributions	Corporate bonds and stock
Investment intermediaries		
Finance companies	Commercial paper, stocks, bonds	Consumer and business loans
Mutual funds	Shares	Stocks, bonds
Money market mutual funds	Shares	Money market instruments

Source: Mishkin Table 2.1

Source: Federal Reserve Flow of Funds Accounts: www.federalreserve.gov/releases/Z1/.

Comparison of Roles among Financial Institutions



Principal Financial Intermediaries and Value of Their Assets

Type of Intermediary	Value of Assets (\$ billions, end of year)			
	1990	2000	2010	2015
Depository institutions (banks)				
Commercial banks, savings and loans, and mutual savings banks	4,779	7,687	15,580	17,368
Credit unions	215	441	912	1,146
Contractual savings institutions				
Life insurance companies	1,367	3,136	5,176	6,350
Fire and casualty insurance companies	533	862	1,242	1,591
Pension funds (private)	1,629	4,355	4,527	8,517
State and local government retirement funds	737	2,293	2,661	5,641
Investment intermediaries				
Finance companies	610	1,140	1,439	1,474
Mutual funds	654	4,435	7,935	12,843
Money market mutual funds	498	1,812	2,755	2,716

Number and Asset Size of Thai Major Financial Institutions

Types of financial institutions	2018 Q3 ^P	
	Number	% of total assets of financial institutions
Depository corporations		
Commercial banks	30	45.52
Specialized financial institutions (SFIs)	6	15.28
Savings cooperatives ^{1/}	1,419	6.77
Finance companies	2	0.06
Money market mutual funds (MMFs)	37	0.56
Other financial corporations		
Mutual funds (excluding MMFs)	1,376	11.15
Insurance companies	83	9.03
Leasing companies	851	1.93
Credit card, personal loan and nano finance companies under regulation ^{3/4/}	39	2.38
Provident funds	380	2.67
Government pension fund	1	2.02
Asset management companies	52	0.71
Securities companies	47	0.95
Agricultural cooperatives ^{2/}	3,426	0.60
Pawnshops	660	0.22
Non-depository specialized financial institutions ^{5/}	2	0.15

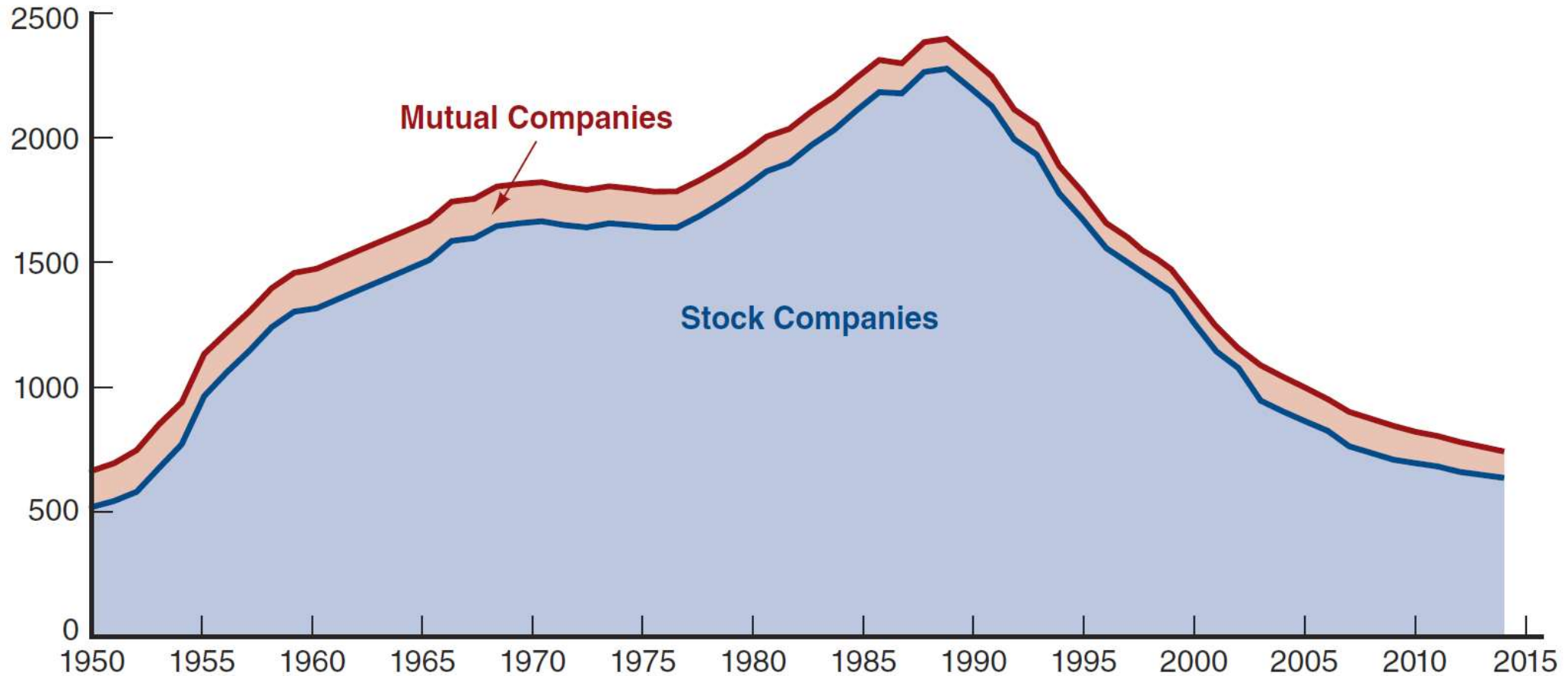
Source: Bank of Thailand

Overview of Private Insurance in the Financial Services Industry

- Changes in the financial services industry include:
 - Consolidation means that the number of firms has declined due to mergers and acquisitions
 - Convergence means that financial institutions now sell a wide variety of financial products that earlier were outside their core business area

Number of Life Insurance Companies in the US, 1950–2014

Number of
Life Insurance
Companies



Top 10 U.S. Life/Health Insurance Groups by Revenues, 2013 (in thousands of \$)

<i>Rank</i>	<i>Group/Company</i>	<i>Direct Premiums Written¹</i>	<i>Market Share²</i>
1	MetLife Inc.	\$85,001,696	14.9%
2	Prudential Financial Inc.	41,407,447	7.3
3	Jackson National Life Group	25,728,116	4.5
4	AEGON	24,499,916	4.3
5	Lincoln National Corp.	24,274,104	4.3
6	New York Life Insurance Group	24,223,396	4.3
7	American International Group	21,698,620	3.8
8	Voya Financial Inc.	20,228,599	3.6
9	Manulife Financial Corp.	19,263,216	3.4
10	Principal Financial Group Inc.	18,909,416	3.3

¹Includes life insurance, annuity considerations, deposit-type contract funds and other considerations; excludes accident and health insurance. Before reinsurance transactions.

²Based on U.S. total, includes territories.

Data are from: SNL Financial LC.

Source: *The Insurance Fact Book, 2015*, p. 15. Insurance Information Institute. Reprinted with permission.

23 Life Insurance Players in Thailand



บริษัทของคนหัวคิดทันสมัย



Market Share Ranking @1-@5



Market Share Ranking @6-@10



ACE Life Assurance

Market Share Ranking @11-@15

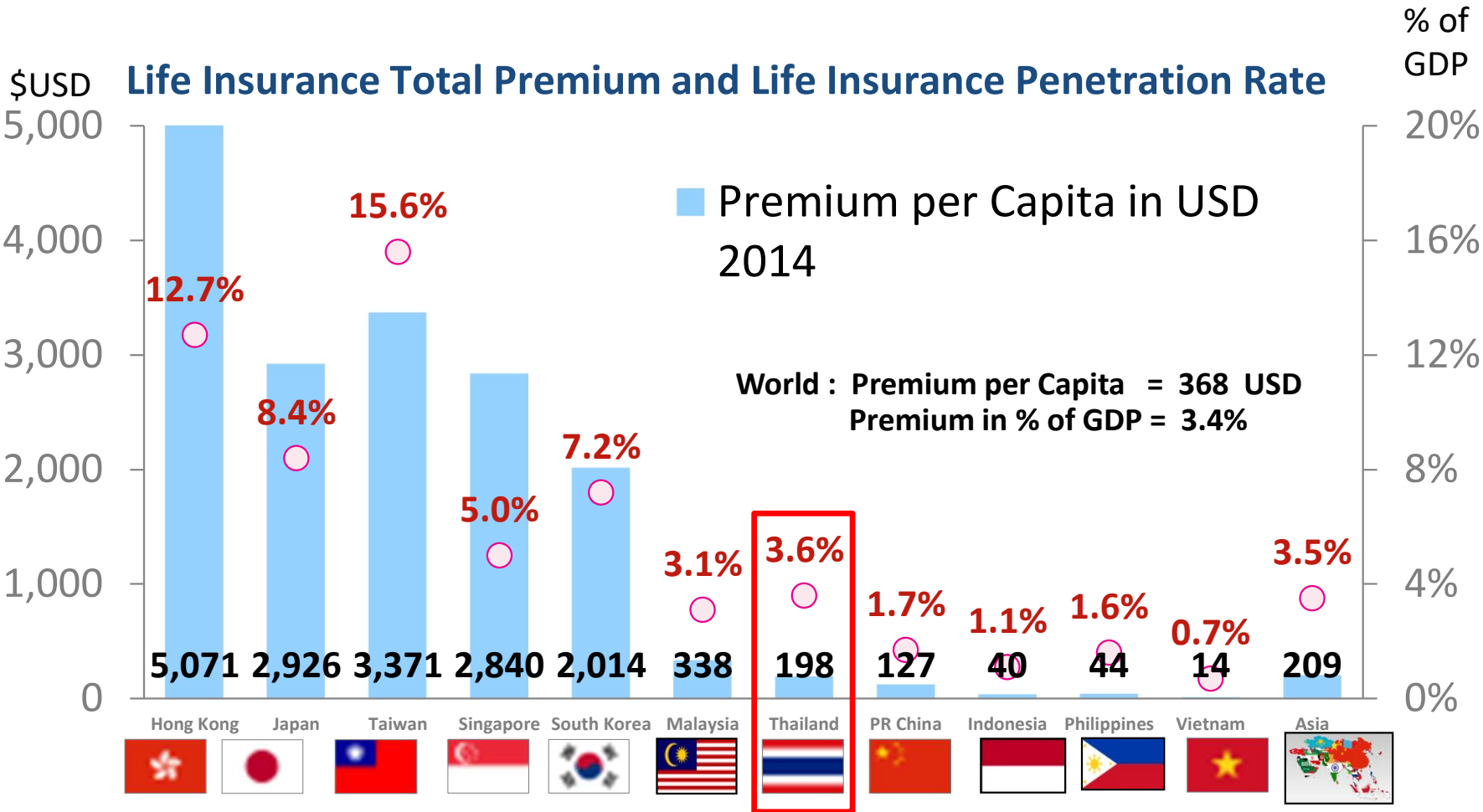


Market Share Ranking @16-@20



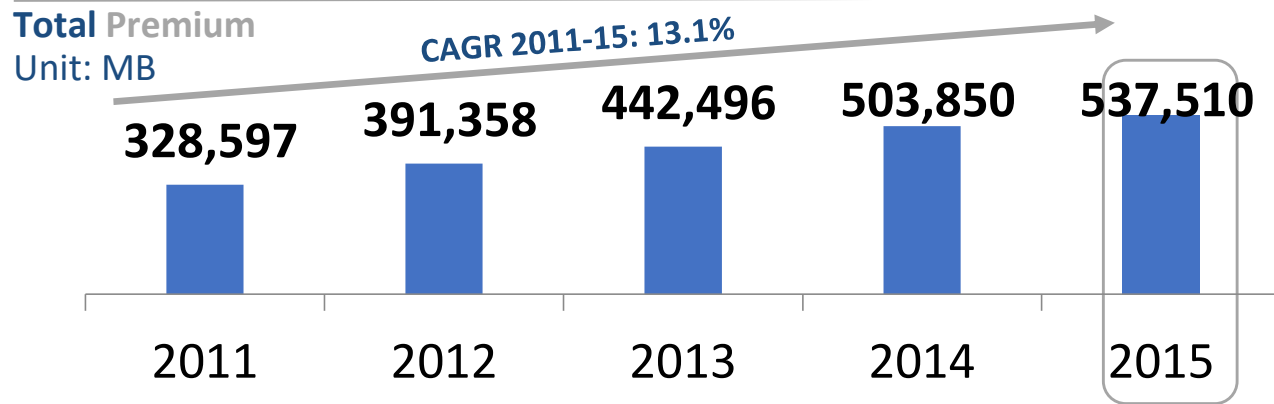
Market Share Ranking @21-@23

Thailand has lower life insurance penetration rate compared to peer countries



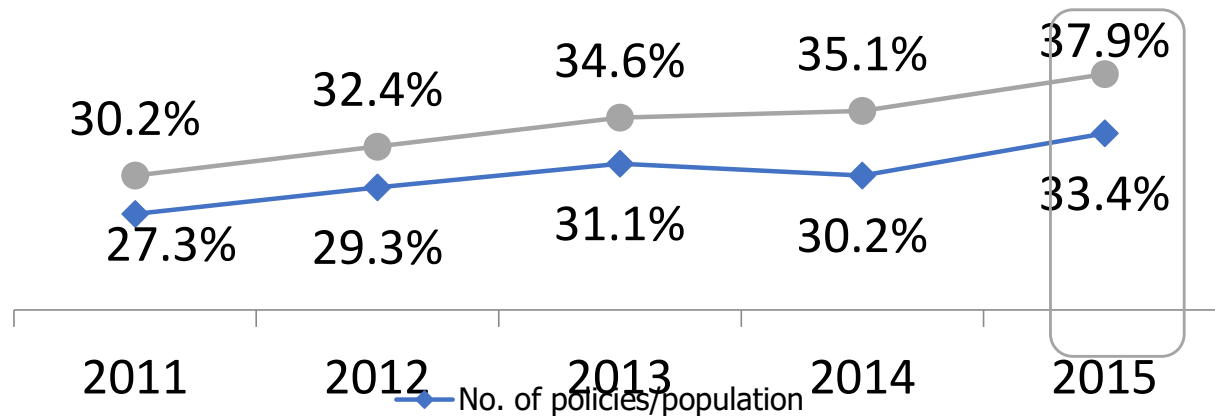
Source: SwissRe Sigma No.4 / 2015

Life insurance in Thailand: Low penetration rate with high growth potential



- Total written premium grew continuously during the last 5 years at 13.1% CAGR

Life Insurance Penetration Rate



- Life insurance industry is expected to grow continuously due to currently low penetration rate

Top 10 U.S. Property/ Casualty Companies by Revenues, 2013 (in thousands of \$)

<i>Rank</i>	<i>Group/Company</i>	<i>Direct Premiums Written¹</i>	<i>Market Share²</i>
1	State Farm Mutual Automobile Insurance	\$55,994,246	10.3%
2	Liberty Mutual	28,906,283	5.3
3	Allstate Corp.	27,583,581	5.1
4	American International Group	23,169,106	4.2
5	Travelers Companies Inc.	22,842,941	4.2
6	Berkshire Hathaway Inc.	18,284,148	3.4
7	Farmers Insurance Group of Companies ³	18,079,537	3.3
8	National wide Mutual Group	17,802,678	3.3
9	Progressive Corp.	17,562,610	3.2
10	USAA Insurance Group	14,562,012	2.7

¹Below reinsurance transactions, includes state funds.

²Based on U.S. total, includes territories.

³Data for Farmers Insurance Group of Companies and Zurich Financial Group (which owns Farmers' management company) are reported separately by SNL Financial.










Data are from: SNL Financial LC.

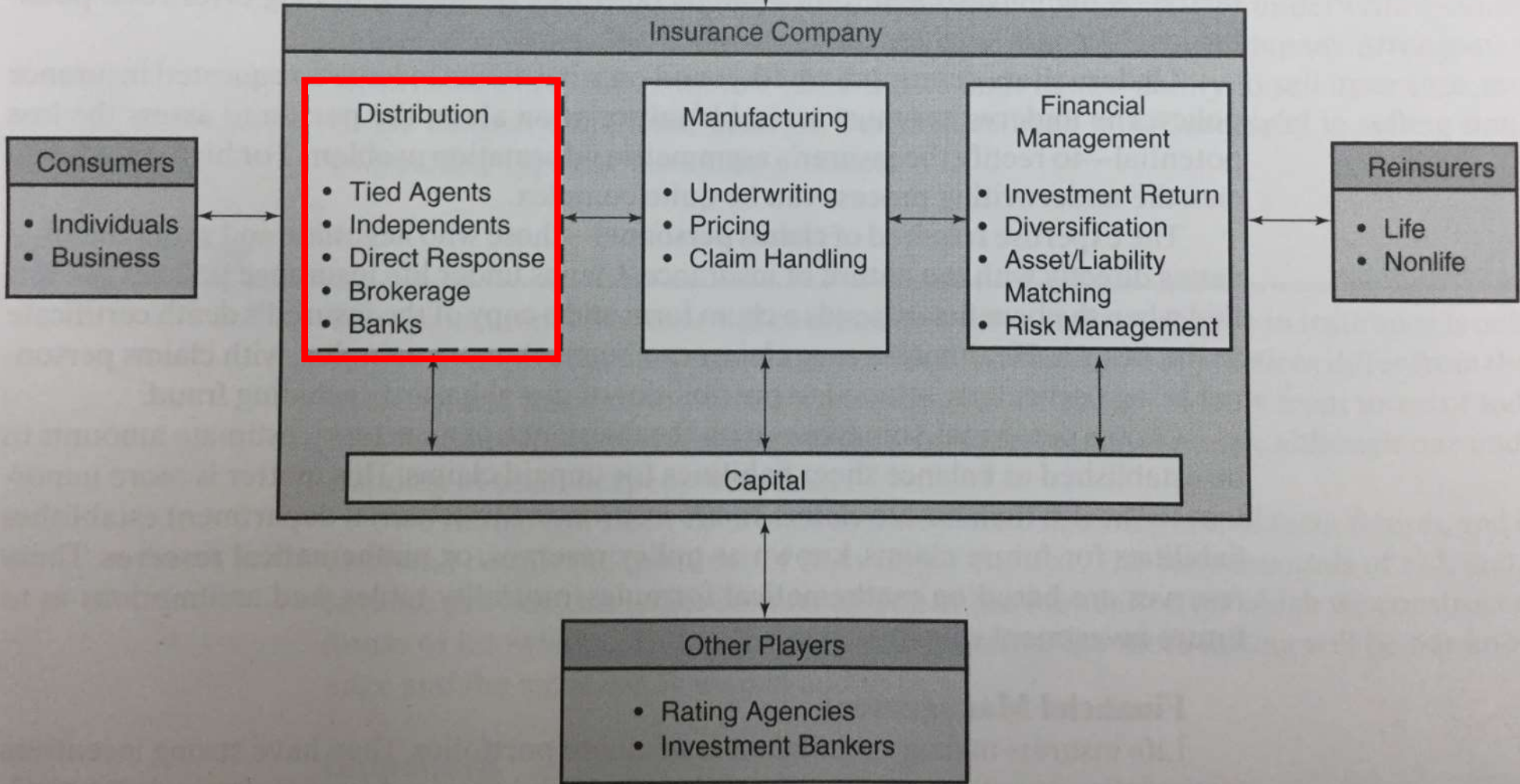
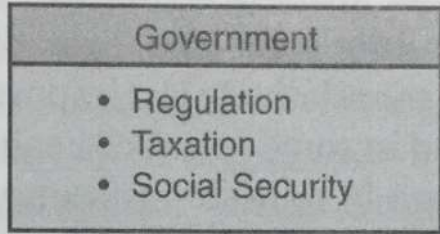
SOURCE: *The Insurance Fact Book, 2015*, p. 15. Insurance Information Institute. Reprinted with permission.

Large-size Thai non-life companies have 65% market share in 2015 (12 Companies)









Company	2015			
	Direct Premium (1,000 THB)	Market Share (%)		Rank
		Overall	Large size	
VIRIYAH INSURANCE	32,418,583	15.49	23.80	1
DHIPAYA INSURANCE	22,628,978	10.81	16.62	2
BANGKOK INSURANCE	15,295,768	7.31	11.23	3
MUANG THAI INSURANCE	11,097,331	5.30	8.15	4
SYNMUNKONG INSURANCE	9,927,382	4.74	7.29	5
THE SAFETY INSURANCE	9,002,723	4.30	6.61	6
TOKIO MARINE INSURANCE	7,542,351	3.60	5.54	7
SOUTHEAST INSURANCE	6,118,548	2.92	4.49	8
THANACHART INSURANCE	6,088,337	2.91	4.47	9
LMG INSURANCE	5,717,185	2.73	4.20	10
SAMAGGI INSURANCE	5,322,424	2.54	3.91	11
MITSUI SUMITOMO INSURANCE	5,031,737	2.40	3.69	12
Total	136,191,347	65.08	100.00	

Growth in Thai Non-Life Insurance Premium In 2015

Lines of Business		Direct Premiums	
		2014 Million Baht (%YoY)	2015 Million Baht (%YoY)
	Motor	117,927	120,424 (2.12%) ↑
	Fire	11,061	10,485 (-5.21%) ↓
	Marine	5,304	5,343 (0.74%) ↑
	Miscellaneous	71,076	73,027 (2.74%) ↑
	Industrial All Risks	25,934	25,750 (-0.71%) ↓
	Public Liability	1,944	2,007 (3.21%) ↑
	Engineering	3,003	2,897 (-3.51%) ↓
	Personal Accident	24,714	26,308 (6.45%) ↑
	Health	7,051	7,563 (7.26%) ↑
	Others	8,430	8,502 (0.86%) ↑
	Total	205,368	209,279 (1.90%) ↑

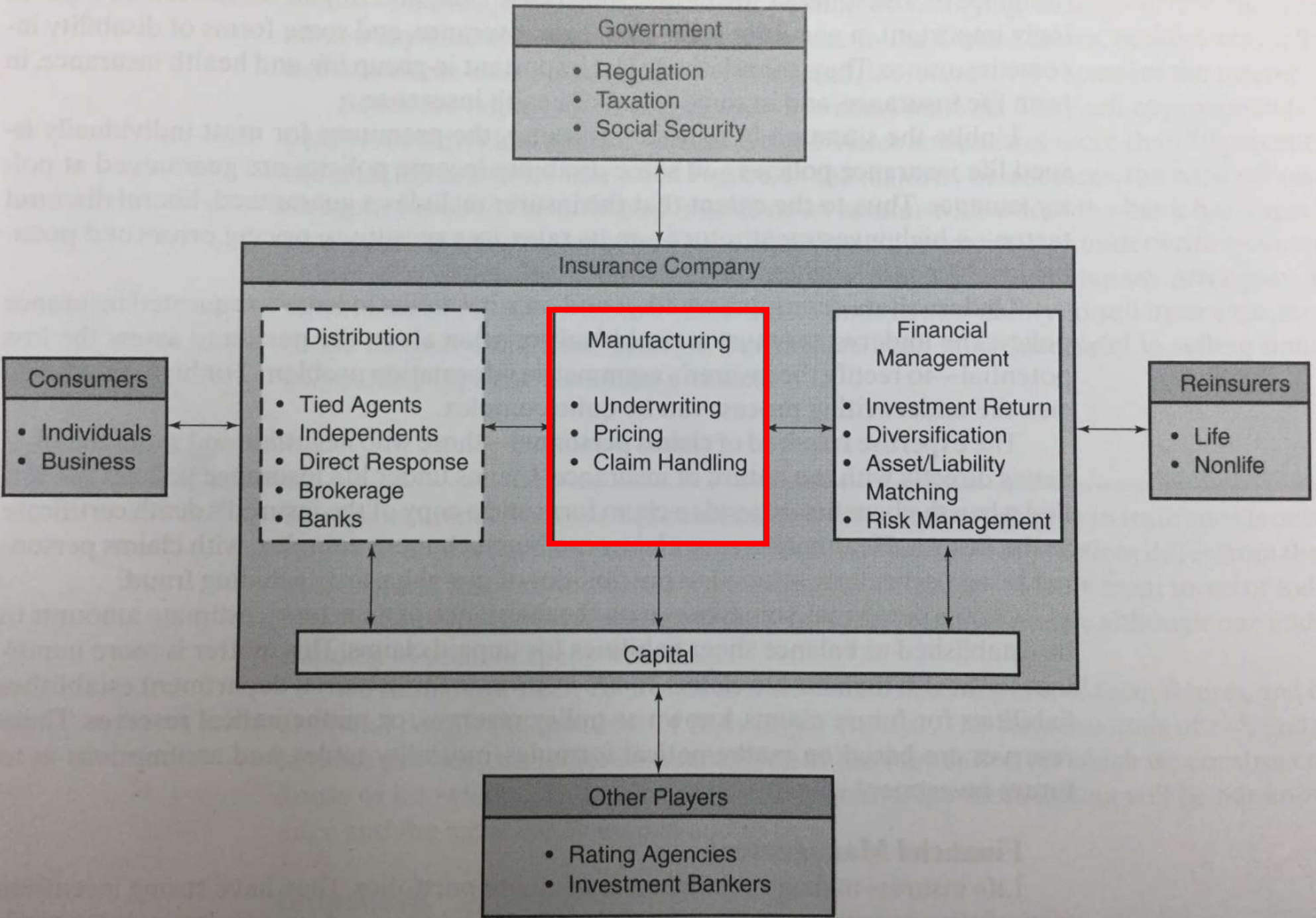


Thailand Life Insurance Market Shares by Distribution Channels

No.	Players	New Business Premium	Total Premium
1	 AIA	72% Agent, 22% Bancassurance, 4% DM, 3% Others	91% Agent, 5% Bancassurance, 2% DM, 2% Others
2	 MTL	18% Agent, 79% Bancassurance, 1% DM, 2% Others	21% Agent, 75% Bancassurance, 1% DM, 3% Others
3	 TLI	55% Agent, 30% Bancassurance, 1% DM, 15% Others	75% Agent, 19% Bancassurance, 5% DM, 1% Others
4	 SCB Life Assurance	6% Agent, 94% Bancassurance, 0% DM, 0% Others	7% Agent, 90% Bancassurance, 0% DM, 3% Others
5	 KTAL	30% Agent, 55% Bancassurance, 0% DM, 15% Others	37% Agent, 58% Bancassurance, 0% DM, 5% Others
6	 BLA	17% Agent, 74% Bancassurance, 0% DM, 9% Others	24% Agent, 71% Bancassurance, 0% DM, 5% Others
7	 Allianz AYUDHYA	24% Agent, 40% Bancassurance, 18% DM, 18% Others	41% Agent, 31% Bancassurance, 16% DM, 12% Others
8	 PLT	3% Agent, 92% Bancassurance, 4% DM, 1% Others	4% Agent, 87% Bancassurance, 8% DM, 1% Others
9	 FWD	15% Agent, 74% Bancassurance, 4% DM, 8% Others	25% Agent, 67% Bancassurance, 4% DM, 4% Others
10	 OLIC	84% Agent, 12% Bancassurance, 0% DM, 4% Others	89% Agent, 7% Bancassurance, 0% DM, 3% Others
Industry		31% Agent, 60% Bancassurance, 3% DM, 7% Others	45% Agent, 48% Bancassurance, 3% DM, 5% Others

■ Agent ■ Bancassurance ■ DM ■ Others

Source: The Thai Life Assurance Association (1Q2016)



Rating and Ratemaking

- Ratemaking refers to the pricing of insurance and the calculation of insurance premiums
 - A rate is the price per unit of insurance
 - An exposure unit is the unit of measurement used in insurance pricing

$$\textit{premium} = \textit{rate} * \textit{exposure units}$$

Rating and Ratemaking

- Ratemaking refers to the pricing of insurance and the calculation of insurance premiums
 - Total premiums charged must be *adequate* for paying all claims and expenses during the policy period
 - Rates and premiums are determined by an *actuary*, using the company's past loss experience and industry statistics
 - Actuaries also *determine the adequacy of loss reserves*, allocate expenses, and compile statistics for company management and state regulatory officials

Underwriting

- Underwriting refers to the process of selecting, classifying, and pricing applicants for insurance
- The basic principles of underwriting include:
 - Attain an underwriting profit
 - Select prospective insureds according to the company's U/W standards
 - Reduce *adverse selection* against the insurer
 - Provide equity among the policyholders
 - One group of policyholders should not unduly subsidize another group

Underwriting

- After reviewing the information, the underwriter can:
 - *Accept* and recommend that the policy be issued
 - *Accept subject to restrictions or modifications*, e.g. another policy offering, deductible, or higher insurance premium rate
 - *Reject* the application
- Many insurers now use computerized U/W for certain personal lines of insurance that can be standardized

Underwriting Considerations

- Other factors considered in U/W:
 - Rate adequacy
 - Non-life insurers are more willing to U/W new business if rates are considered adequate
 - If not, U/W requires a more conservative approach
 - Availability of reinsurance – results in more liberal U/W
 - Whether policy can or should be cancelled or renewed
 - In life insurance, policies are not cancellable
 - In non-life insurance, most policies can be cancelled → if loss experience is unfavorable, the insurer may cancel or not renew the policy

Claim Settlement

- The **objectives** of claims settlement include:
 - Verification of a covered loss
 - Fair and prompt payment of claims
 - Personal assistance to the insured

Steps in Claim Settlement

1) The claim process begins with a *notice of loss*, typically immediately or as soon as possible after a loss has occurred.

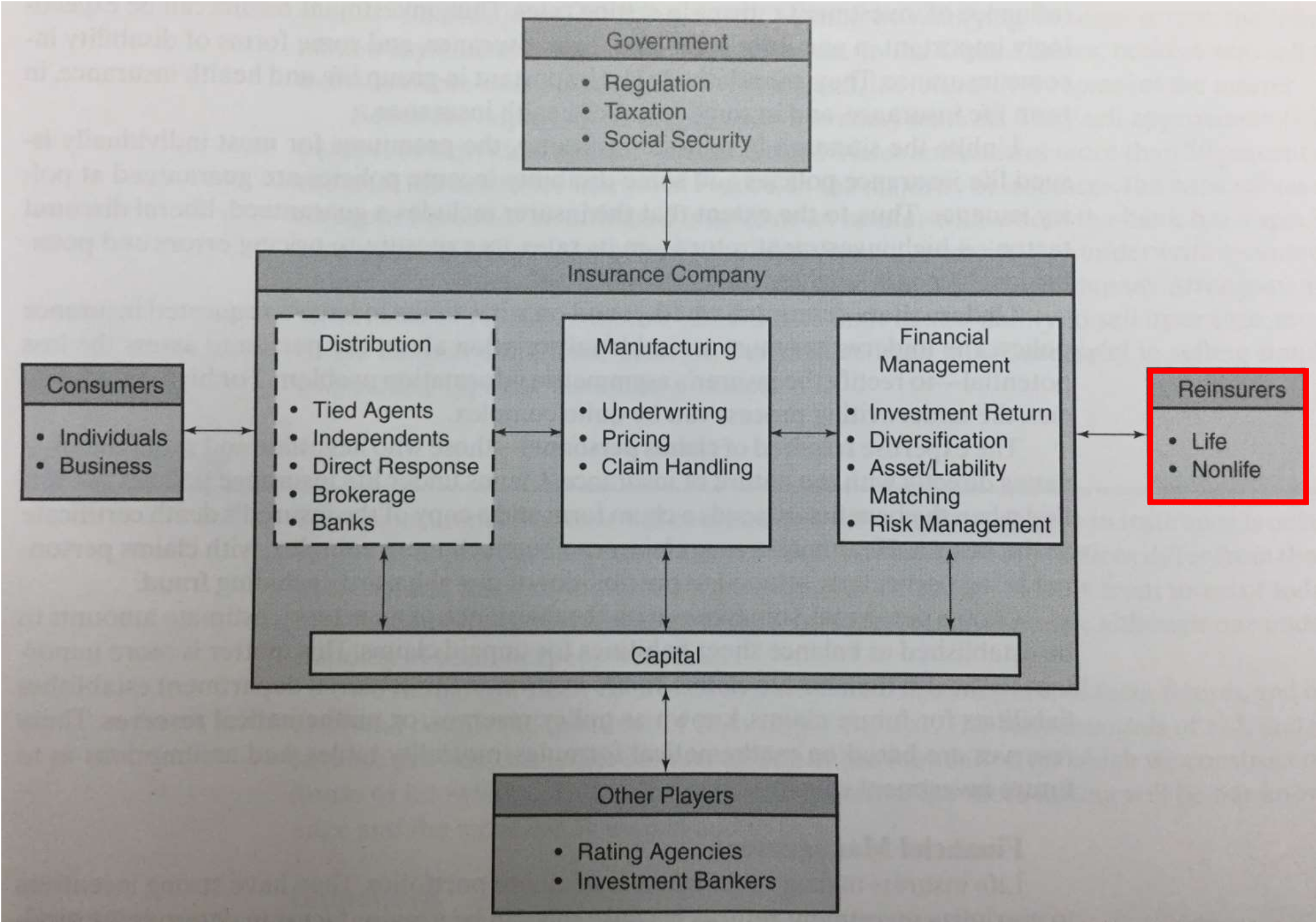
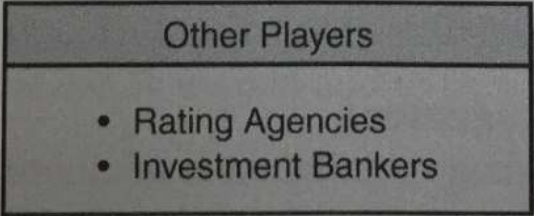
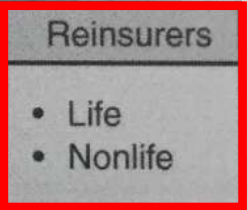
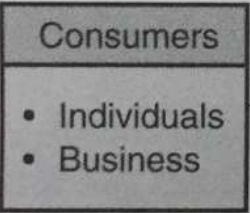
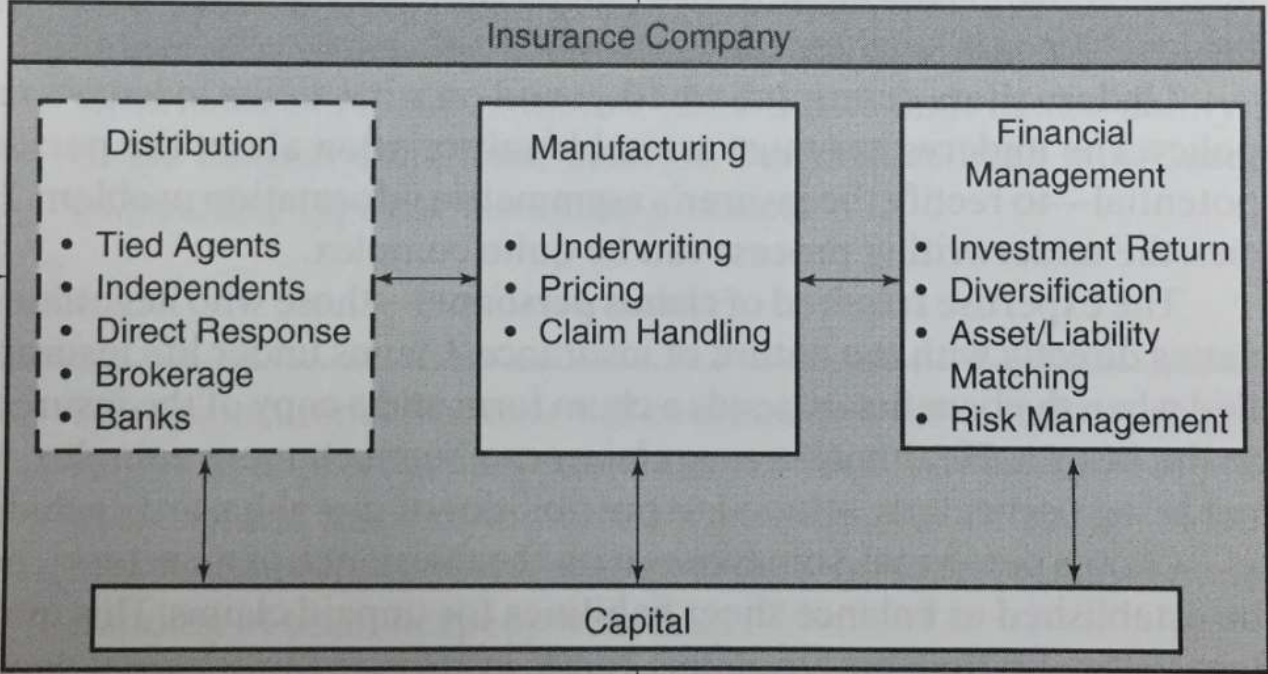
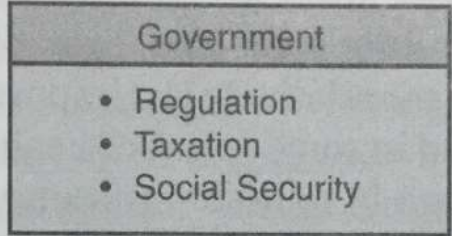
2) Next, the claim is *investigated*

- An adjustor must determine that a covered loss has occurred and determine the amount of the loss

3) The adjustor may require *a proof of loss* before the claim is paid

4) The adjustor decides if the *claim should be paid or denied*

- Policy provisions address how disputes may be resolved



Reinsurance

- Reinsurance is an arrangement by which the primary insurer that initially writes the insurance transfers to another insurer part or all of the potential losses associated with such insurance
 - The primary insurer is the ceding company
 - The insurer that accepts the insurance from the ceding company is the reinsurer
 - The retention limit is the amount of insurance retained by the ceding company
 - The amount of insurance ceded to the reinsurer is known as a cession

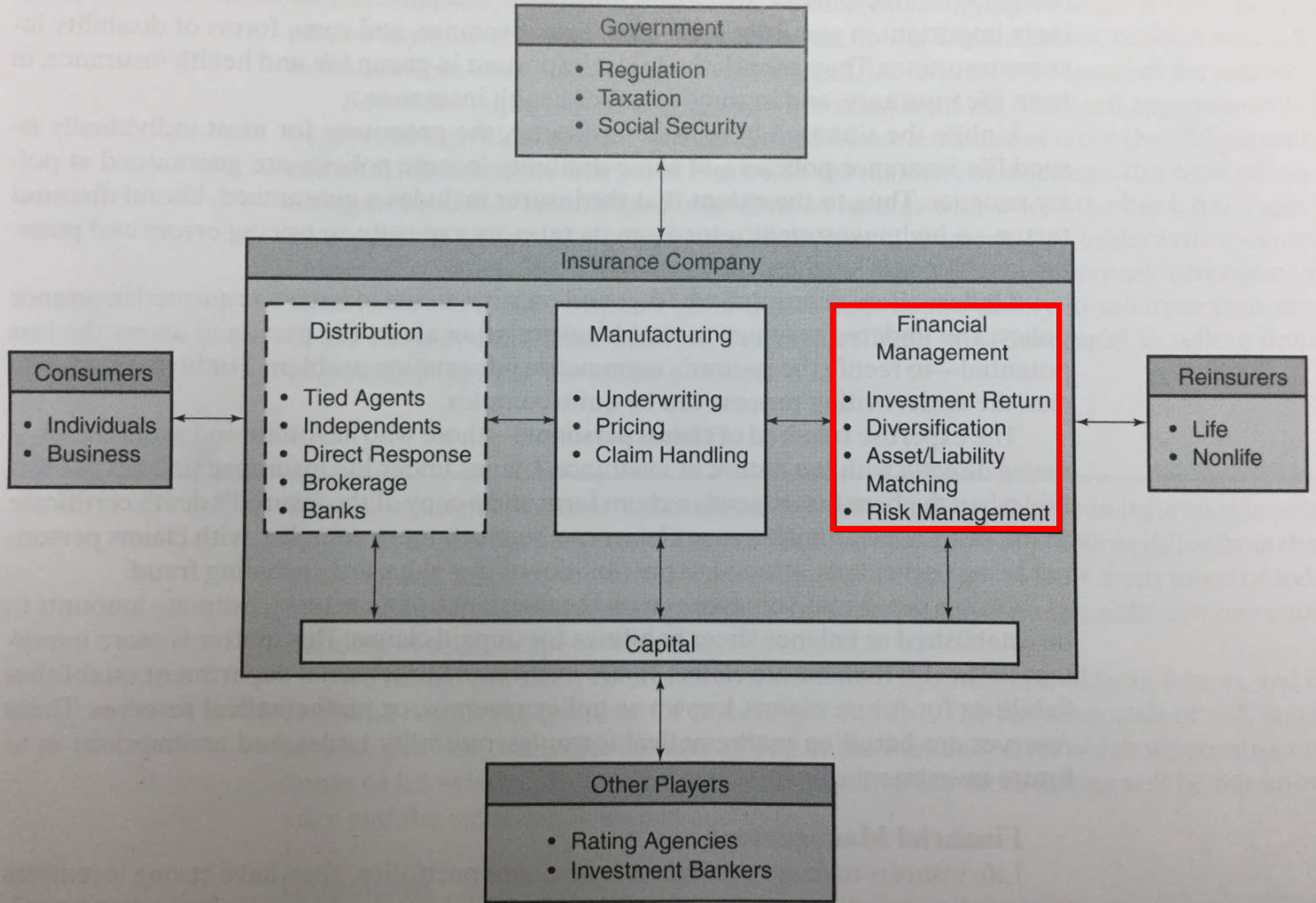
Reinsurance

- Reinsurance is used to:
 - Increase underwriting capacity
 - Stabilize profits
 - Reduce the unearned premium reserve, which represents the unearned portion of gross premiums on all outstanding policies at the time of valuation
 - Provide protection against a catastrophic loss
 - Retire from business or from a line of insurance or territory
 - Obtain U/W advice on a line for which the insurer has little experience

Alternatives to Reinsurance

Use of capital markets

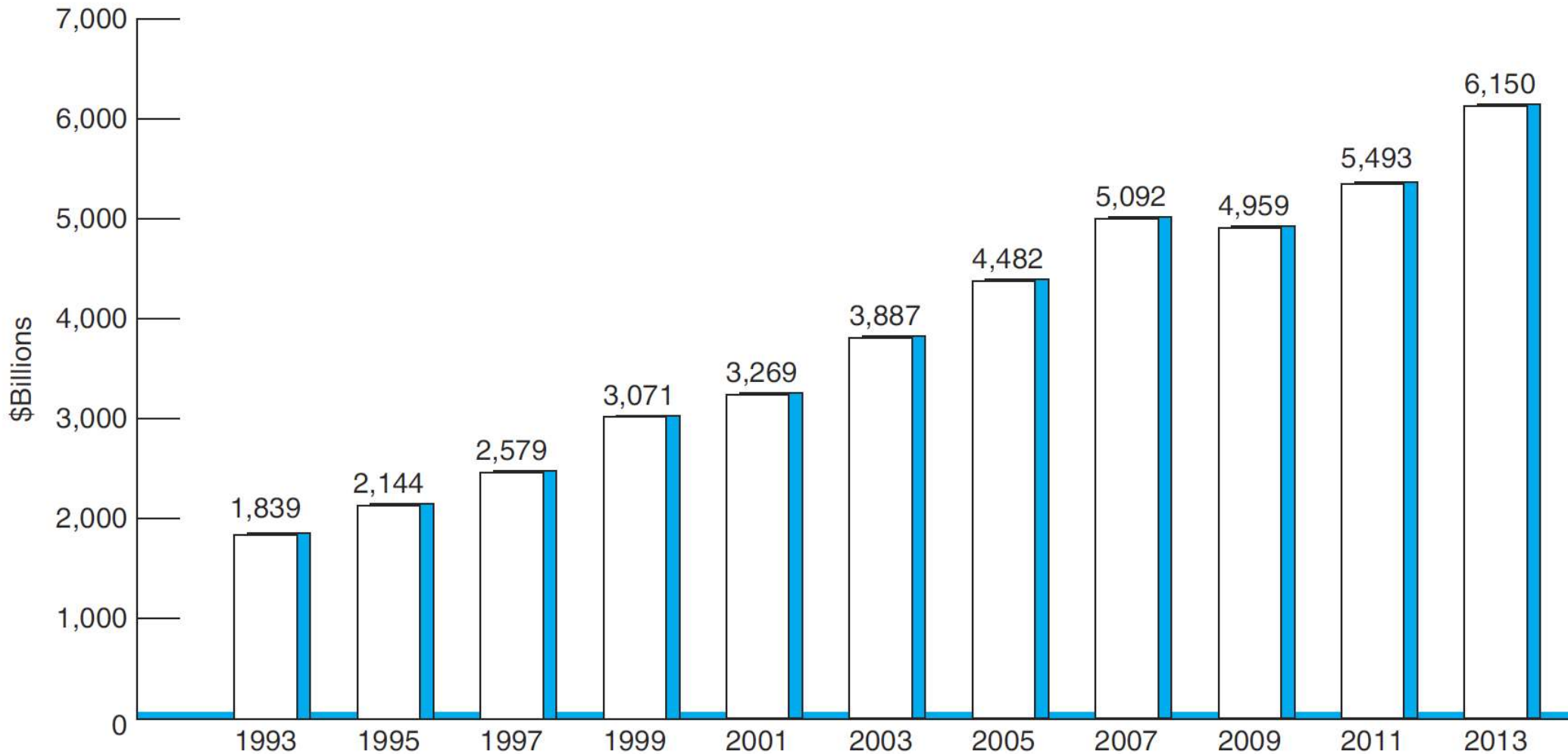
- Securitization of risk means that an insurable risk is transferred to the capital markets through the creation of a financial instrument, such as a catastrophe bond or futures contract
- Catastrophe bonds are corporate bonds that permit the issuer of the bond to skip or reduce the interest payments if a catastrophic loss occurs
 - Cat bonds are growing in importance and are now considered by many to be a standard supplement to traditional reinsurance



Investments

- Because premiums are paid in advance, they can be invested until needed to pay claims and expenses
- Investment income is extremely important in reducing the cost of insurance to policyowners and offsetting unfavorable U/W experiences
- Life insurance contracts are long-term; thus, safety of principal is a primary consideration
- In contrast to life insurance, non-life insurance contracts are short-term in nature, and claim payments can vary widely depending on catastrophic losses, inflation, medical costs, etc.

Growth of Life Insurers' Assets



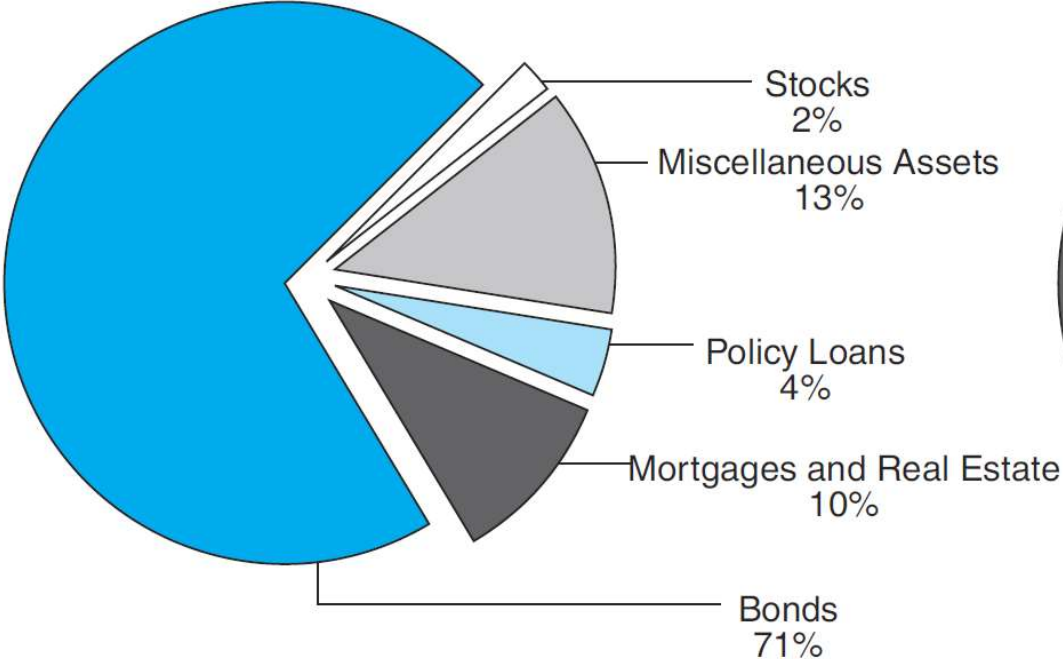
NOTES: Data are from ACLI tabulations of National Association of Insurance Commissioners (NAIC), used by permission.

NOTES: NAIC does not endorse any analysis or conclusions based on use of its data. Data represent U.S. life insurers and, as of 2003, fraternal benefit societies.

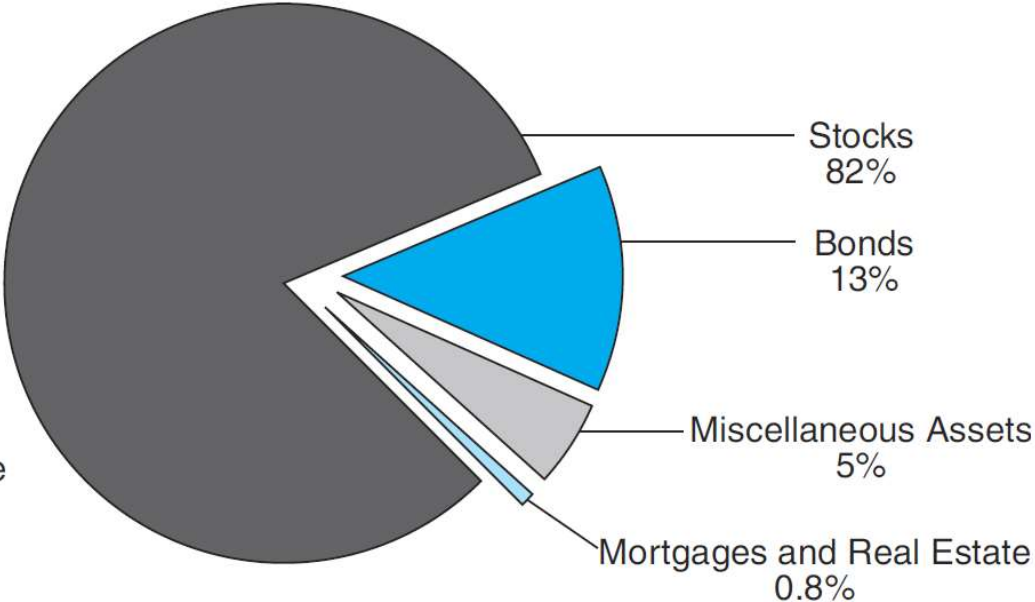
SOURCE: American Council of Life Insurers, *Life Insurers Fact Book*, 2014, Figure 2.1. Reprinted with permission.

Asset Distribution of Life Insurers in 2013

General Account

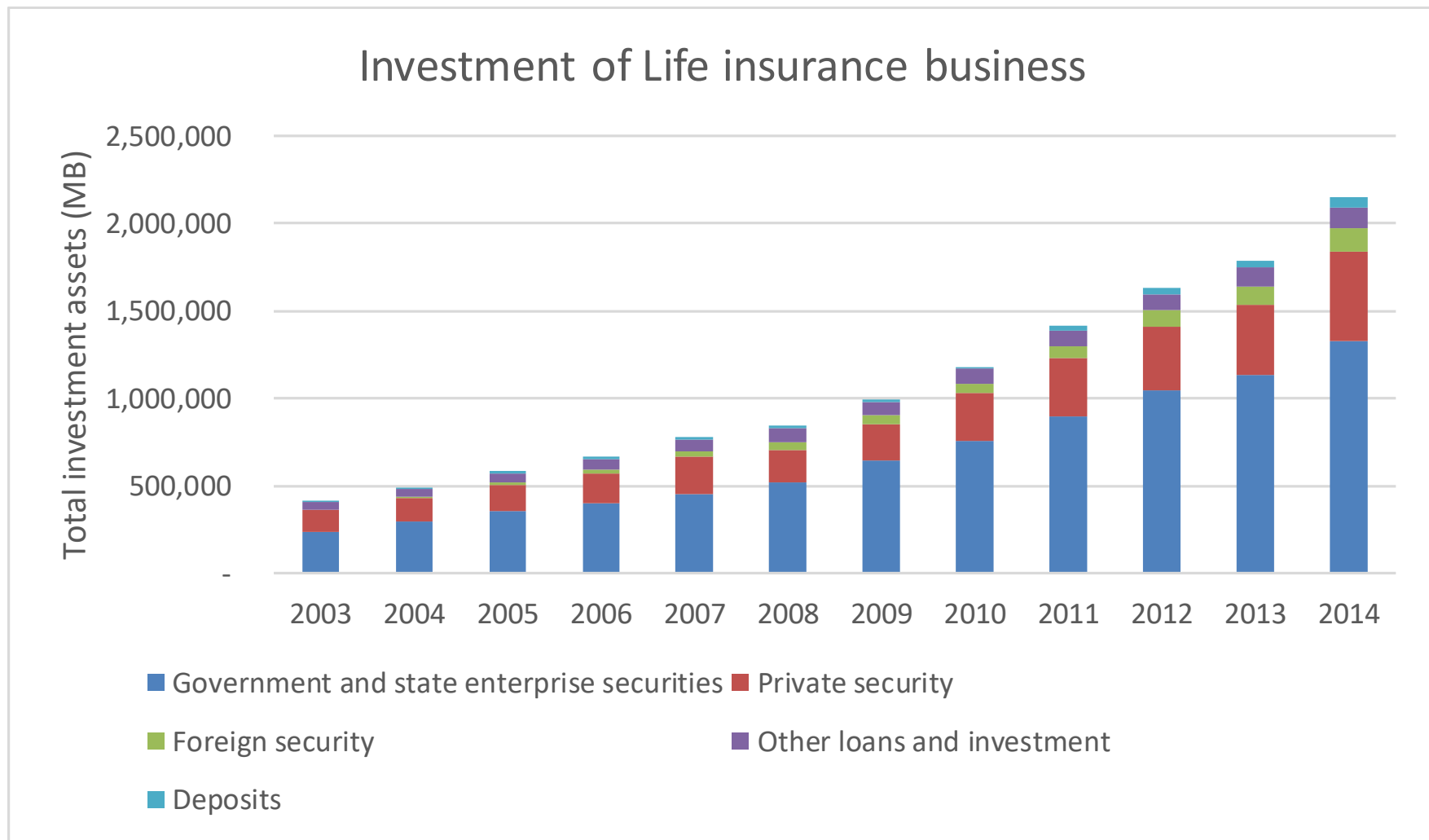


Separate Account

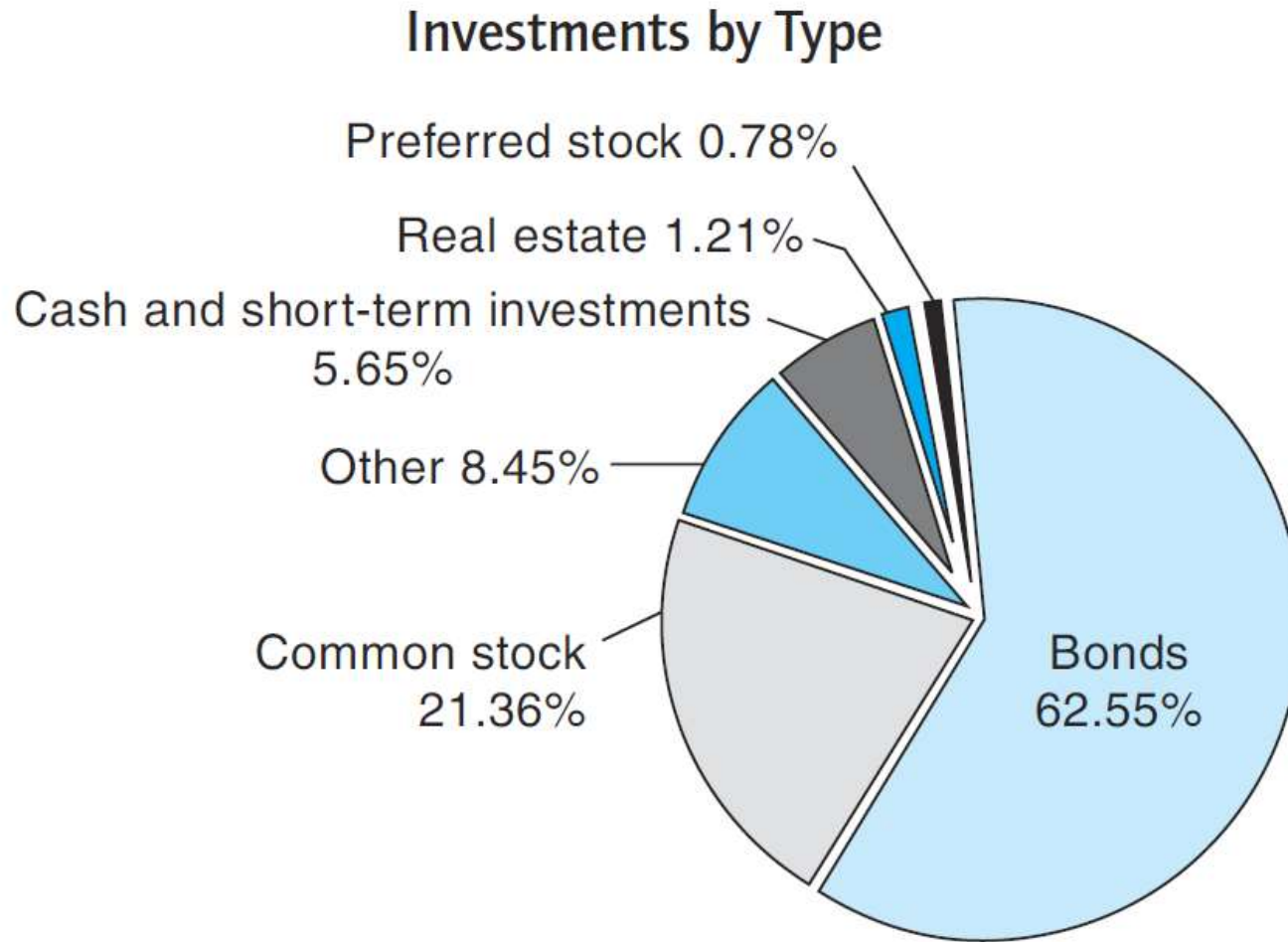


Source: RM Exhibit 6.3

Life insurance in Thailand as source of investment funds



Investments, P&C Insurers, 2013



Notes: Data are from SNL Financial LC. Cash and invested net admitted assets, as of December 31, 2013.

Source: *The Insurance Fact Book, 2015*, p. 15. Insurance Information Institute.

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Other Insurance Company Functions

- Information systems are extremely important in the daily operations of insurers.
 - Computers are widely used in many areas, including policy processing, simulation studies, market analysis, and policyholder services
- The accounting department prepares financial statements and develops budgets
- In the legal department, attorneys are used in advanced underwriting and estate planning
- Non-life insurers also provide many loss control services, e.g. alarm systems, fire prevention, occupational safety and health, etc.