Financial Game 3:

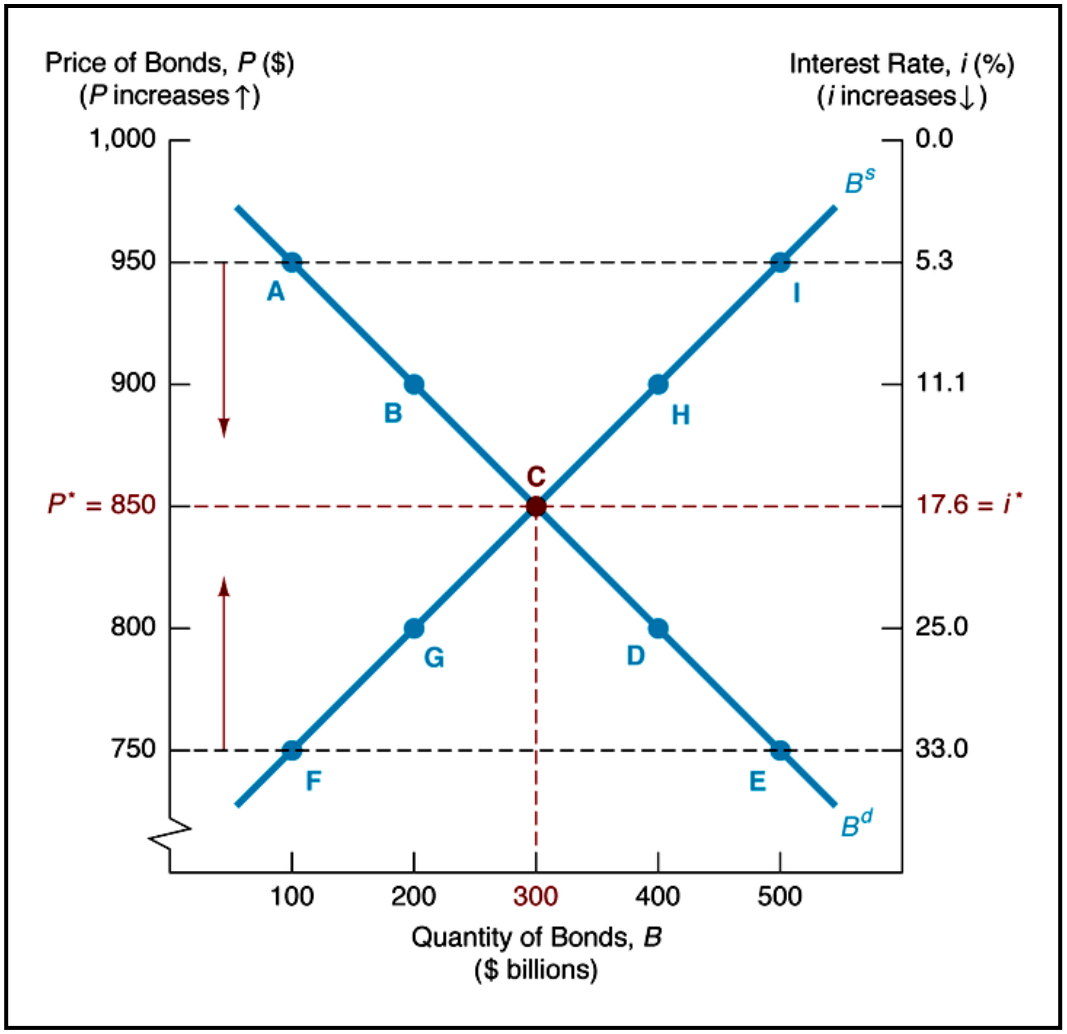
Explanation

Financial Game 3

Strong Commercial Bank

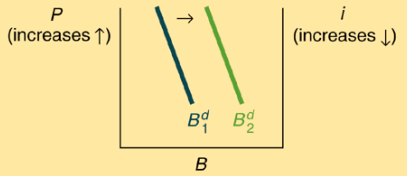
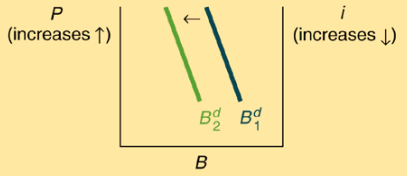
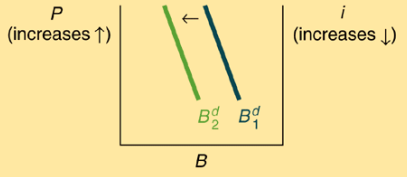
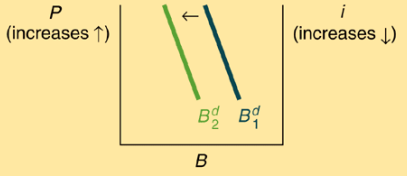
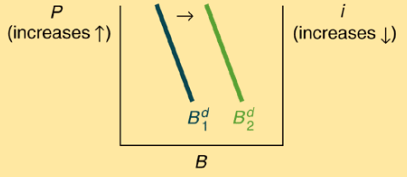
- Part I: Each group is required to predict the interest rate next year.
- Part II: Pick one commercial bank in Thailand, figure out relevant assets and liabilities, and make recommendations to the bank.

Part I: Predicting interest rate movement



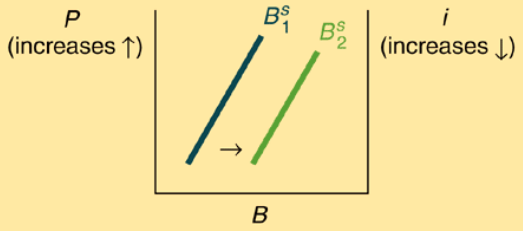
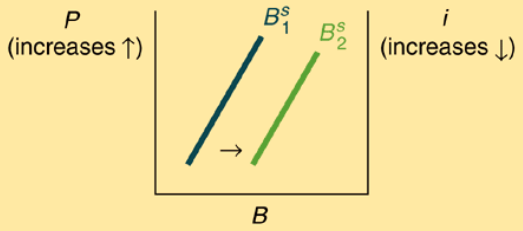
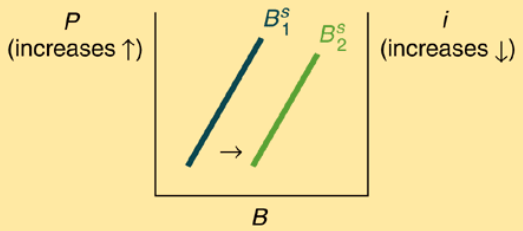
Factors that shift demand curve for bonds

SUMMARY **Table 2 Factors That Shift the Demand Curve for Bonds**

Variable	Change in Variable	Change in Quantity Demanded	Shift in Demand Curve
Wealth	↑	↑	
Expected interest rate	↑	↓	
Expected inflation	↑	↓	
Riskiness of bonds relative to other assets	↑	↓	
Liquidity of bonds relative to other assets	↑	↑	

Note: *P* and *i* increase in opposite directions: *P* on the left vertical axis increases as we go up the axis, while *i* on the right vertical axis increases as we go down the axis. Only increases in the variables are shown. The effect of decreases in the variables on the change in demand would be the opposite of those indicated in the remaining columns.

SUMMARY **Table 3 Factors That Shift the Supply of Bonds**

Variable	Change in Variable	Change in Quantity Supplied	Shift in Supply Curve
Profitability of investments	↑	↑	
Expected inflation	↑	↑	
Government deficit	↑	↑	

Note: *P* and *i* increase in opposite directions: *P* on the left vertical axis increases as we go up the axis, while *i* on the right vertical axis increases as we go down the axis. Only increases in the variables are shown. The effect of decreases in the variables on the change in supply would be the opposite of those indicated in the remaining columns.

Factors that shift supply curve for bonds

Factors affecting Thai interest rates

- Edited minutes of the Monetary Policy Committee meeting:
- https://www.bot.or.th/English/MonetaryPolicy/EconomicConditions/PressRelease/Pages/default.aspx

Part II: Interest rate risks

First National Bank

Assets		**Liabilities**	
Rate-sensitive assets	$20 m	Rate-sensitive liabilities	$50 m
Variable-rate loans		Variable-rate CDs	
Short-term securities		MMDAs	
Fixed-rate assets	$80 m	Fixed-rate liabilities	$50 m
Reserves		Checkable deposits	
Long-term bonds		Savings deposits	
Long-term securities		Long-term CDs	
		Equity capital	

Managing Interest-Rate Risk

Gap Analysis

GAP = rate-sensitive assets – rate-sensitive liabilities
= \$20 – \$50 = –\$30 million

When $i \uparrow$ 5%:

1. Income on assets = + \$1 million
   (= 5% × \$20m)
2. Costs of liabilities = +\$2.5 million
   (= 5% × \$50m)
3. Δ Profits = \$1m – \$2.5m = –\$1.5m
   = 5% × (\$20m – \$50m) = 5% × (GAP)
   Δ Profits = $\Delta\, i \times GAP$

Managing Interest-Rate Risk

Duration Analysis

$$\% \Delta \text{ value} \cong -(\% \text{ point } \Delta\, i) \times (DUR)$$

Example: $i \uparrow$ 5%, duration of bank assets = 3 years, duration of liabilities = 2 years;

$$\% \Delta \text{ assets} = -5\% \times 3 = -15\%$$

$$\% \Delta \text{ liabilities} = -5\% \times 2 = -10\%$$

If total assets = \$100 million and total liabilities = \$90 million, then assets ↓ \$15 million, liabilities ↓ \$9 million, and bank's net worth ↓ by \$6 million

Strategies to Manage Interest-rate Risk

1. Rearrange balance-sheet
2. Interest-rate swap
3. Hedge with financial futures

KBANK, Annual Report 2013

(Million Baht)

	Consolidated							
	2013							
	Immediate Repricing	Less than 6 Months	6 Months to 1 Year	Over 1 Year to 5 Years	Over 5 Years	Non-interest Bearing	Stop Accrued	Total
Financial Assets								
Cash	-	-	-	-	-	40,610	-	40,610
Interbank and money market items	9,334	181,410	4,851	50	-	7,784	-	203,429
Investments	-	24,285	162,289	149,966	135,896	17,015	688	490,139
Loans to customers	887,429	156,069	25,641	84,927	116,979	88,891	79,042	1,438,978
Accrued interest receivables	-	-	-	-	-	2,928	-	2,928
Other assets	10,165	-	-	-	-	15,138	-	25,303
Total Financial Assets	906,928	361,764	192,781	234,943	252,875	172,366	79,730	2,201,387
Financial Liabilities								
Deposits	894,321	343,070	181,404	22,145	-	88,895	-	1,529,835
Interbank and money market items	2,979	152,003	3,519	35	-	8,867	-	167,403
Liabilities payable on demand	-	-	-	-	-	21,798	-	21,798
Financial liabilities designated at fair value through profit or loss	-	389	-	-	-	-	-	389
Debts issued and borrowings	-	18,630	21	23,140	29,727	-	-	71,518
Other liabilities	5,724	-	-	-	-	6,102	-	11,826
Total Financial Liabilities	903,024	514,092	184,944	45,320	29,727	125,662	-	1,802,769
Items recognised on the statements of financial position	3,904	(152,328)	7,837	189,623	223,148	46,704	79,730	398,618

Financial risk management

- Credit risk
- Market risk
  - Interest rate risk
  - Foreign exchange rate risk
  - Equity and commodity price risk
  - Credit derivatives price risk
- Liquidity risk (Maturity mismatch)
- Operational risk management

Report Content

- Part I:
  - Factors affecting interest rates
  - Analysis of interest rates movement
- Part II:
  - Bank introduction
  - Bank's balance sheet
  - An assessment of interest rate risk
  - Your recommendations
  - Brief comments on other risks

Report

- 8 pages with complete data
- Electronic file (every group) submitting to s.pawin@gmail.com
- Presentation file (for group 6 - 10) submitting to s.pawin@gmail.com

- Due date of report submission: 26 Apr 16