General Principles of Bank Management 18P570 Lecture 2.2.

Petar Stankov

petar.stankov@cerge-ei.cz

13 Apr. 2010

Outline

- What Does a Bank Manager Do?
 - Liquidity Management
 - Asset Management
 - Liability Management
 - Capital Adequacy Management

The bank manager cares about:

• Having enough cash to pay depositors (Liquidity Management)

- Having enough cash to pay depositors (Liquidity Management)
- Having low risk of default on the bank's assets (Asset Management)

- Having enough cash to pay depositors (Liquidity Management)
- Having low risk of default on the bank's assets (Asset Management)
- Acquiring funds at low cost (Liability Management)

- Having enough cash to pay depositors (Liquidity Management)
- Having low risk of default on the bank's assets (Asset Management)
- Acquiring funds at low cost (Liability Management)
- Managing the bank own capital (Capital Adequacy Management)

What happens in the bank when depositors start to withdraw money?

What happens in the bank when depositors start to withdraw money? Let the initial balance sheet be:

Assets		Liabilities	
Reserves	\$20 million	Deposits	\$100 million
Loans	\$80 million	Bank capital	\$ 10 million
Securities	\$10 million	•	

What happens in the bank when depositors start to withdraw money? Let the initial balance sheet be:

Assets		Liabilities	
Reserves	\$20 million	Deposits	\$100 million
Loans	\$80 million	Bank capital	\$ 10 million
Securities	\$10 million		

Now let depositors withdraw 10 mln.

What happens in the bank when depositors start to withdraw money? Let the initial balance sheet be:

Assets		Liabilities	
Reserves	\$20 million	Deposits	\$100 million
Loans	\$80 million	Bank capital	\$ 10 million
Securities	\$10 million		

Now let depositors withdraw 10 mln.

Assets		Liabilities	
Reserves	\$10 million	Deposits	\$90 million
Loans	\$80 million	Bank capital	\$10 million
Securities	\$10 million	*	

What happens in the bank when depositors start to withdraw money? Let the initial balance sheet be:

Assets		Liabilities	
Reserves	\$20 million	Deposits	\$100 million
Loans	\$80 million	Bank capital	\$ 10 million
Securities	\$10 million		

Now let depositors withdraw 10 mln.

Assets		Liabilities	
Reserves	\$10 million	Deposits	\$90 million
Loans	\$80 million	Bank capital	\$10 million
Securities	\$10 million	*	

If reserves are enough, deposit withdrawals cannot change much within the bank.

What happens if the bank does not hold enough excess reserves?

What happens if the bank does not hold enough excess reserves? Let the initial balance sheet be:

Assets		Liabilities	
Reserves	\$10 million	Deposits	\$100 million
Loans	\$90 million	Bank capital	\$ 10 million
Securities	\$10 million		

What happens if the bank does not hold enough excess reserves? Let the initial balance sheet be:

I	Assets	Liabil	ities
Reserves	\$10 million	Deposits	\$100 million
Loans	\$90 million	Bank capital	\$ 10 million
Securities	\$10 million	5	

Now let depositors withdraw 10 mln.

What happens if the bank does not hold enough excess reserves? Let the initial balance sheet be:

Assets		Liabilities	
Reserves	\$10 million	Deposits	\$100 million
Loans	\$90 million	Bank capital	\$ 10 million
Securities	\$10 million		

Now let depositors withdraw 10 mln.

Assets		Liabilities	
Reserves	\$ 0	Deposits	\$90 million
Loans	\$90 million	Bank capital	\$10 million
Securities	\$10 million	*	

What happens if the bank does not hold enough excess reserves? Let the initial balance sheet be:

A	Assets	Liabil	ities
Reserves	\$10 million	Deposits	\$100 million
Loans	\$90 million	Bank capital	\$ 10 million
Securities	\$10 million		

Now let depositors withdraw 10 mln.

Assets		Liabilities	
Reserves	\$ 0	Deposits	\$90 million
Loans	\$90 million	Bank capital	\$10 million
Securities	\$10 million		

If reserves are NOT enough, the bank has several options:

Consequences of insufficient reserves

Consequences of insufficient reserves

What can the bank do when it does not have enough reserves?

Borrow from other commercial banks or corporations

Consequences of insufficient reserves

- Borrow from other commercial banks or corporations
- Borrow from the central bank

Consequences of insufficient reserves

- Borrow from other commercial banks or corporations
- Borrow from the central bank
- Sell some securities

Consequences of insufficient reserves

- Borrow from other commercial banks or corporations
- Borrow from the central bank
- Sell some securities
- Reduce loans
 - not renewing the contract for loan
 - sell the loan to another financial institution

Consequences of insufficient reserves

What can the bank do when it does not have enough reserves?

- Borrow from other commercial banks or corporations
- Borrow from the central bank
- Sell some securities
- Reduce loans
 - not renewing the contract for loan
 - sell the loan to another financial institution

Excess reserves are an insurance for the bank

Asset Management

How to get the most of the bank assets with the least risk?

- Borrow to firms and people with low risk of default
- Try to set a competitive interest rate on loans
- Our Purchase securities with low risk and high return (?)
- Oiversify
- Hold luquid securities to meet reserve requirements easily

Liability Management

How to make the most out of the bank liabilities?

- O Borrow to other banks at the federal funds market
- Issue new instruments: CoD
- Invest the newly aquired funds using asset management

Why a bank banager needs to manage the bank's capital?

- Because the regulators say so (Capital Adequacy Ratios)
- 2 Because it affects the owners' return on investment
- Because having enough capital prevents going out of business

Preventing Failure

Let's have two banks: High Capital and Low Capital.

Preventing Failure

Let's have two banks: High Capital and Low Capital. Let the initial balance sheet be:

HIGH CAPITAL BANK				LOW CAPITAL BANK				
Assets		Liabilities		Assets		Liabilities		
Reserves Loans	\$10 million \$90 million	Deposits Bank	\$90 million \$10 million	Reserves Loans	\$10 million \$90 million	Deposits Bank	\$96 millior \$ 4 millior	
Louis	ψου militori	capital	ore miner	Louis	ψου million	capital	ψ i iiiiiii	

Preventing Failure

Let's have two banks: High Capital and Low Capital. Let the initial balance sheet be:

HIGH CAPITAL BANK				LOW CAPITAL BANK				
Assets		Liabilities		Assets		Liabilities		
Reserves Loans	\$10 million \$90 million	Deposits Bank capital	\$90 million \$10 million	Reserves Loans	\$10 million \$90 million	Deposits Bank capital	\$96 million \$ 4 million	

Now let them both have bad credits of 5 mln.

Preventing Failure

Let's have two banks: High Capital and Low Capital. Let the initial balance sheet be:

Assets Liabilities	
rves \$10 million Deposits \$96 m ns \$90 million Bank \$4 m	
ıs	\$90 million Bank \$4 r

Now let them both have bad credits of 5 mln.

HIGH CAPITAL BANK				LOW CAPITAL BANK				
1	Assets	Lia	bilities	А	ssets	Lia	bilities	
Reserves Loans	\$10 million \$85 million	Deposits Bank capital	\$90 million \$ 5 million	Reserves Loans	\$10 million \$85 million	Deposits Bank capital	\$96 million -\$ 1 million	

Preventing Failure

Let's have two banks: High Capital and Low Capital. Let the initial balance sheet be:

HIGH CAPITAL BANK				LOW CAPITAL BANK				
1	Assets	Lia	bilities	А	ssets	Liał	oilities	
Reserves Loans	\$10 million \$90 million	Deposits Bank	\$90 million \$10 million	Reserves Loans	\$10 million \$90 million	Deposits Bank	\$96 million \$ 4 million	
		capital				capital		

Now let them both have bad credits of 5 mln.

HIGH CAPITAL BANK			LOW CAPITAL BANK				
1	Assets	Lia	bilities	А	ssets	Lia	bilities
Reserves Loans	\$10 million \$85 million	Deposits Bank capital	\$90 million \$ 5 million	Reserves Loans	\$10 million \$85 million	Deposits Bank capital	\$96 million -\$ 1 million

If own capital goes negative, the bank has to go bankrupt.

Satisfying the Bank Owners

Two basic measures of bank profitability:

Satisfying the Bank Owners

Two basic measures of bank profitability:

Return on Assets (ROA)

$$ROA = \frac{Profit after tax}{Assets}$$

Return on Equity (ROE)

$$ROE = \frac{Profit after tax}{Equity capital}$$

Satisfying the Bank Owners

Two basic measures of bank profitability:

Return on Assets (ROA)

$$ROA = \frac{Profit after tax}{Assets}$$

Return on Equity (ROE)

$$ROE = \frac{Profit after tax}{Equity capital}$$

Let's extend the formula for ROE:

$$\mathsf{ROE} = \frac{\mathsf{Profit\ after\ tax}}{\mathsf{Equity\ capital}} = \frac{\mathsf{Profit\ after\ tax}}{\mathsf{Assets}} \cdot \frac{\mathsf{Assets}}{\mathsf{Equity\ capital}}$$

Define Equity Multiplier (EM) = $\frac{Assets}{Equity \ capital}$. Therefore:

How do the bank owners make money?

$$ROE = ROA \cdot EM$$

Satisfying the Bank Owners

Two basic measures of bank profitability:

Return on Assets (ROA)

$$ROA = \frac{Profit after tax}{Assets}$$

Return on Equity (ROE)

$$ROE = \frac{Profit \ after \ tax}{Equity \ capital}$$

Let's extend the formula for ROE:

$$\mathsf{ROE} = \frac{\mathsf{Profit\ after\ tax}}{\mathsf{Equity\ capital}} = \frac{\mathsf{Profit\ after\ tax}}{\mathsf{Assets}} \cdot \frac{\mathsf{Assets}}{\mathsf{Equity\ capital}}$$

Define Equity Multiplier (EM) = $\frac{Assets}{Equity \ capital}$. Therefore:

How do the bank owners make money?

$$ROE = ROA \cdot EM$$

Who loves the bank manager more? Why?

Satisfying the Bank Owners

Two basic measures of bank profitability:

Return on Assets (ROA)

$$ROA = \frac{Profit after tax}{Assets}$$

Return on Equity (ROE)

$$ROE = \frac{Profit after tax}{Equity capital}$$

Let's extend the formula for ROE:

$$\mathsf{ROE} = \frac{\mathsf{Profit\ after\ tax}}{\mathsf{Equity\ capital}} = \frac{\mathsf{Profit\ after\ tax}}{\mathsf{Assets}} \cdot \frac{\mathsf{Assets}}{\mathsf{Equity\ capital}}$$

Define Equity Multiplier (EM) = $\frac{Assets}{Equity \ capital}$. Therefore:

How do the bank owners make money?

$$ROE = ROA \cdot EM$$

Who loves the bank manager more? Why?
High level of capital is, *ceteris paribus*, bad for the owners.

Satisfying the Regulators

Banks desire to hold less capital to satisfy the owners (Why owners are happier when the bank has less capital? Can you show it using formulas and data from 2 different balance sheets?).

Satisfying the Regulators

Banks desire to hold less capital to satisfy the owners (Why owners are happier when the bank has less capital? Can you show it using formulas and data from 2 different balance sheets?).

But less capital is bad for the bank in case of large withdrawals. It can go bankrupt.

Satisfying the Regulators

Banks desire to hold less capital to satisfy the owners (Why owners are happier when the bank has less capital? Can you show it using formulas and data from 2 different balance sheets?).

But less capital is bad for the bank in case of large withdrawals. It can go bankrupt.

Therefore, the regulators step in and set the **capital requirements**: **BASEL II agreement**.