Lecture 9: Off balance sheet activity and securitisation

In Lectures 9 and 10 we are applying the analysis of the course to specific topics. Although on-balance-sheet lending remains a key part of banks' activities, there has been an increasing focus over the past two decades on so-called off-balance-sheet activities, such as loan commitments, contingent and securitized claims. In this lecture we will focus on reasons for growth of these various activities, examine why they are suitable for banks, and outline some of the risks and difficulties that they pose for regulators.

Definition of OBS
Transactions not appearing on balance sheet
Types: option and non-option

Reasons for growth in OBS
Increased volatility, giving rise to demand for risk management by companies
Banks’ scope for tailoring financial instruments
Banks’ interest in saving capital and avoiding reserve requirements
Reduced competitiveness in traditional activities
Some government assistance, such as the US government sponsorship of the securitized mortgage market (to allow risks to be diversified where banks were confined to one area)

Off balance sheet items

Item classification	Item
Option like contingent claims	Loan commitments
	Options
	Standby letters of credit
Non option contingent claims	Interest rate swaps
	Forex transactions with future settlement
	Futures and forwards

Loan commitments

Definition – promise to lend to a prespecified amount to a customer on prespecified terms for a prespecified time period
Usage (business lines, backups for CP and NIFs)
Forms of interest rate insurance
Material adverse change (MAC) clause, giving banks discretion

Supply and demand side explanations for growth of commitments

Supply: Regulatory taxes, contractual discretion, demand forecasting

Demand: risk sharing, moral hazard, liquidity guarantees from other creditors, protection against credit rationing, reduced market incompleteness

Pricing of commitments - options
Why commitments differ from options

$$V_0(T, M) = \sum_{s \in S} F\pi(s, T)\left\{1 - \left[P_T^M(s) \times \sqrt[\frac{12}{M}]{1 + i_c}\right]\right\}$$

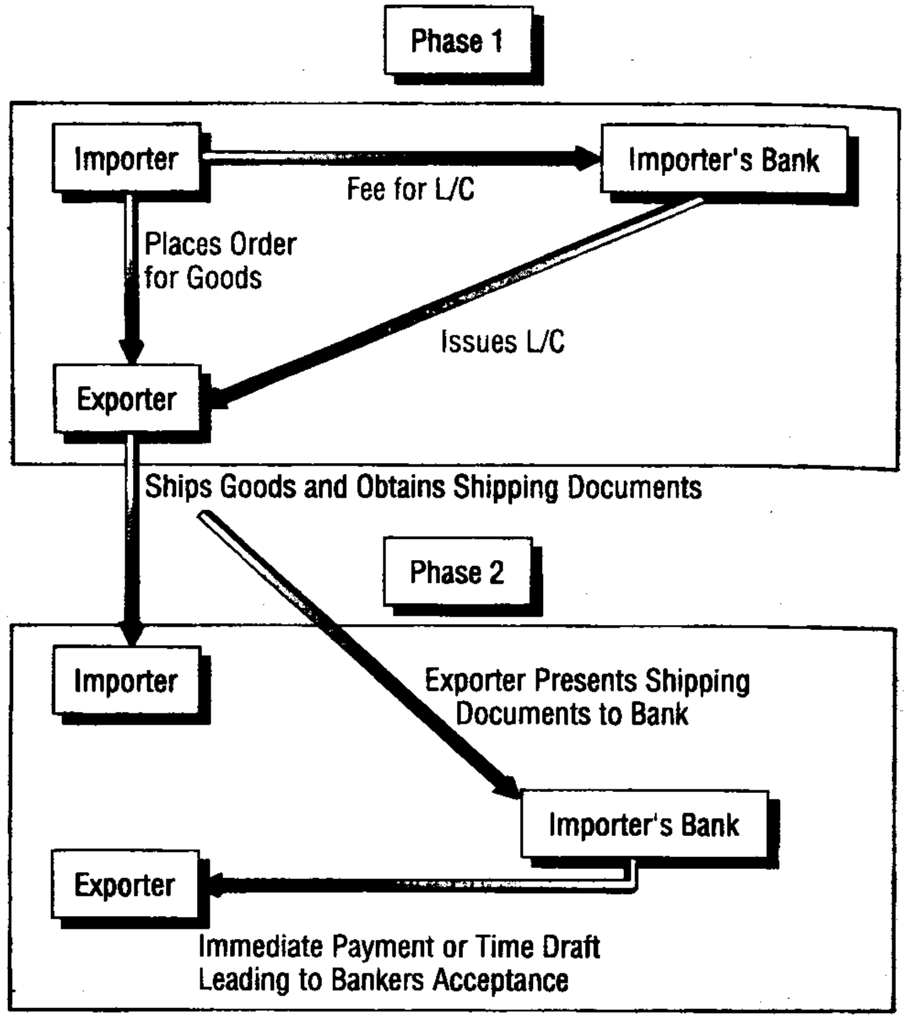
Effects on monetary policy

Letters of credit

Used to facilitate trade where bank guarantees payment to exporter on receipt of shipping documents

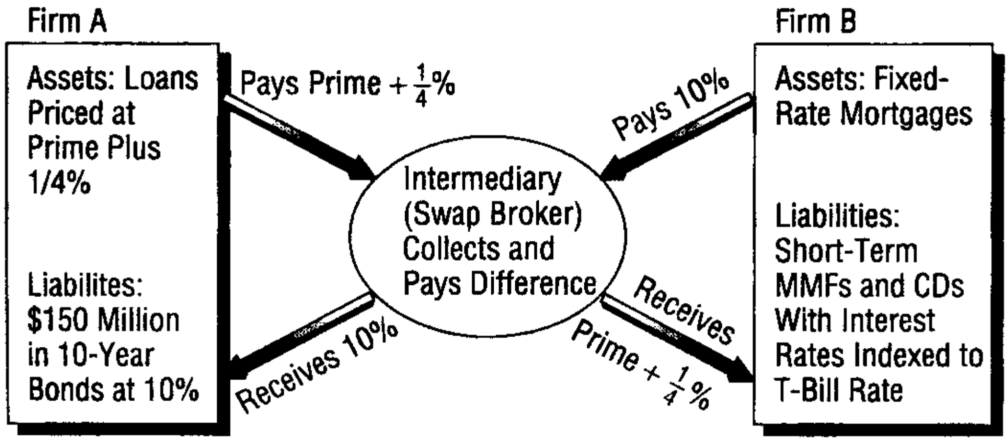
Performance guarantees - but also option characteristics.

Operation of a letter of credit



Swaps

Definition – agreement between two parties to exchange exposure to a specific risk
Size of swap markets
Basic structure



Basic idea - profit from differing comparative advantages of borrowers in different markets.
Variety of swaps
Advantages as a hedging instrument

Innovation – credit derivatives

Credit Derivatives

Seller of credit default swap agrees to compensate other party if a company or sovereign experiences a “credit event” in return for a premium
Unlike insurance, payment does not depend on losses by buyer, hence can be traded, use to hedge, speculate, etc.
Can also be based on risk of a portfolio of borrowers (portfolio CDS)
May be combined with securitisations (collateralised debt obligations) for portfolios of bonds or even loans to give gradation of credit risk to buyers
Market doubling in size each year - $1 trillion covered, 1000 “names”
Regulators treat as guarantees (buyer), loan (seller)
Systemic benefit to diffuse credit risk – but may weaken monitoring, complicate restructuring

Risks in contingent claims

Risks in commitments - lending at low margins, to risky customers, funding commitments in low liquidity periods
Risks in LCs- credit, documentation and political risk
Risks in swaps - interest rate and legal risks
Regulatory issues - capital adequacy and accounting

Securitisation

Definition – combining loans of similar characteristics, creating credit-enhanced claims against the cash flow of the portfolio and selling claims to investors
Types – mortgages most common but many other “commoditised” loans

Reasons for growth:

- Possibility to decompose loan function (origination and servicing but not funding)
- Liquidity
- Special features of the US - government sponsorship
- Benefits in large monetary area

Why do banks undertake packaging?

Key is management of interest rate risk
Increased liquidity (also due to credit enhancement, claim prioritisation)
Focus on fee earning - screening, servicing, monitoring
Avoid “adverse selection” cost of funding new loans
Avoiding “intermediation taxes” such as reserve requirements

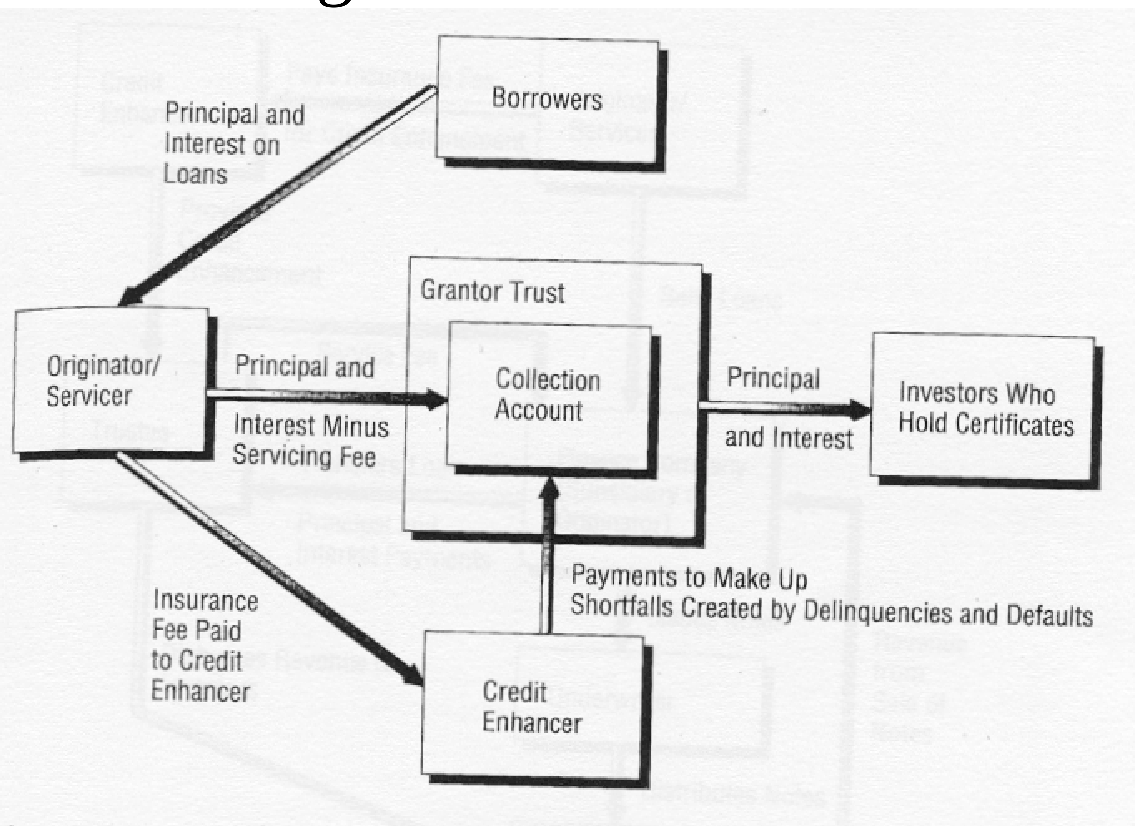
For investor: reduced incompleteness

Recourse, risk sharing

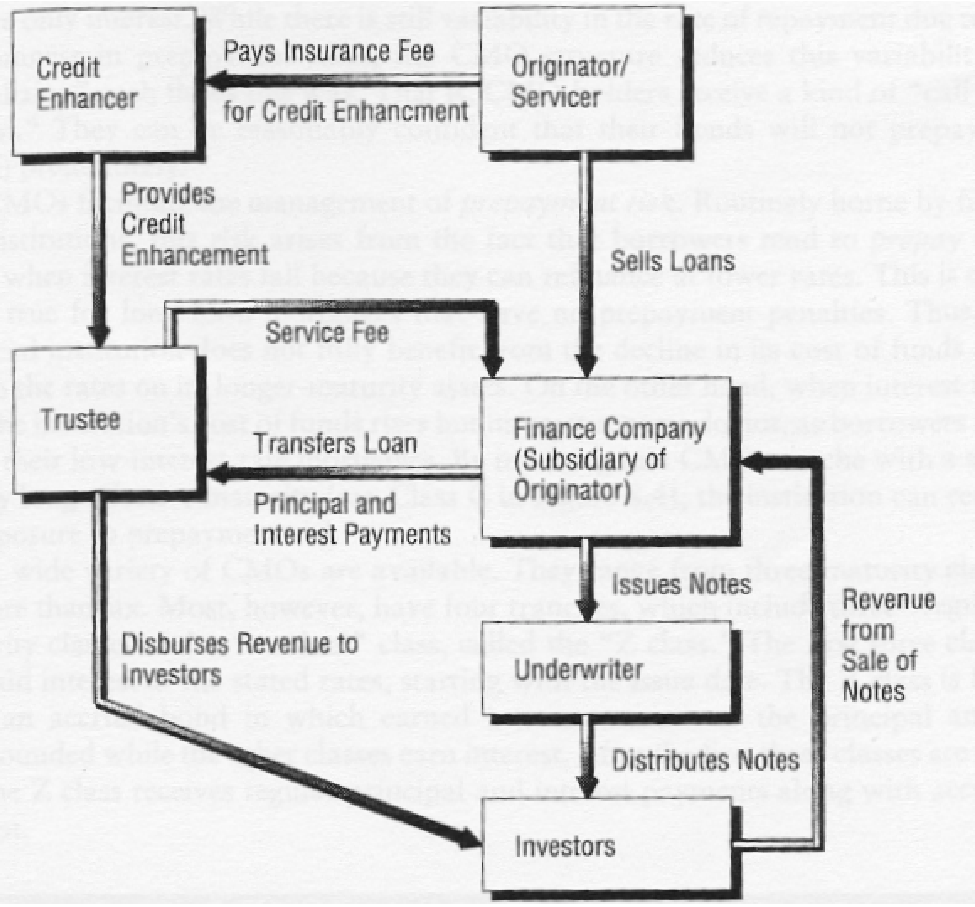
Types of securitisation

Distinguish pass-throughs, asset backed and pay throughs (e.g. concerning ownership of assets, security classes)
Innovations - STRIPS and ABCP (CP backed by corporate assets such as receivables)

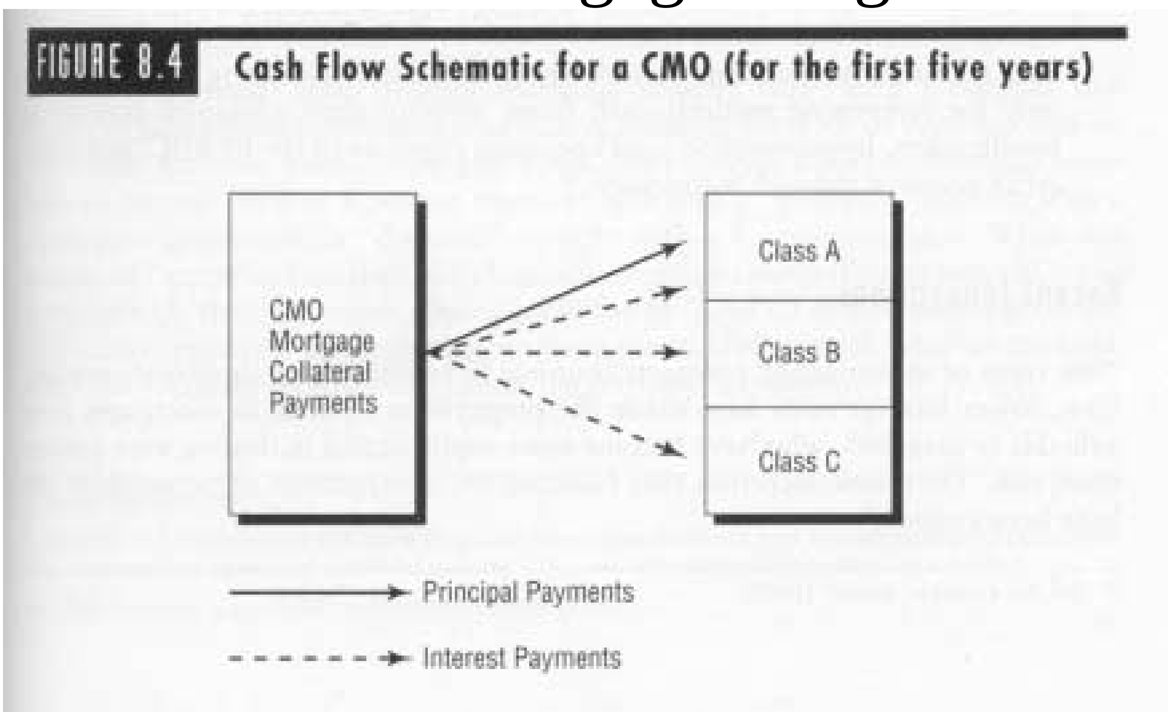
Pass-through securitisation



Asset backed securitisation

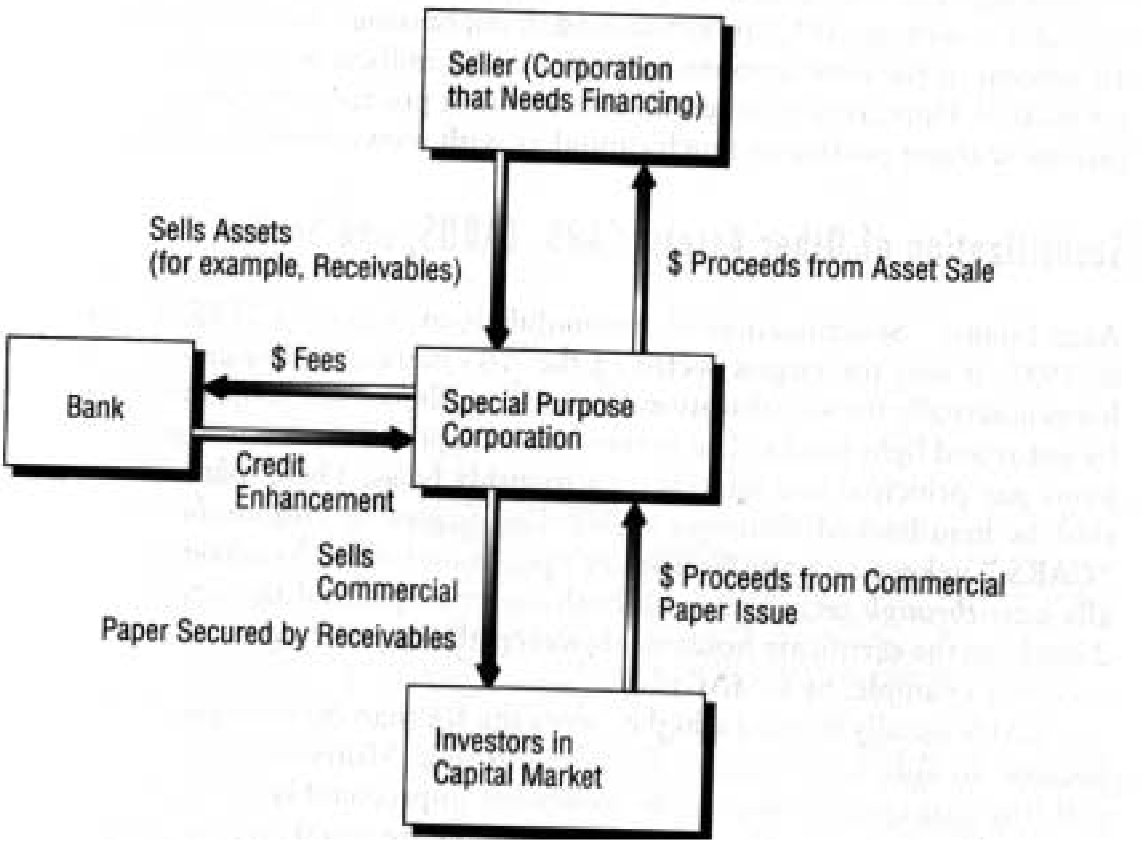


Collateralised mortgage obligation



Asset backed commercial paper

FIGURE 8.5 **A Typical ABCP Program**



Limits to securitisation

Lack of standardisation

Private information

Moral hazard (originator has less incentive to monitor, unless have recourse or credit enhancement)

Small company loans not yet generally securitised – needs excessive enhancement

Consequence may be deterioration of banks' remaining loan books

Regulatory and accounting issues raised

Dealing with recourse, especially where implicit

Some realised risks from OBS activities

Metalgesellschaft
- Derivatives and oil price
- Private company less skilled than financial institutions

UK swaps market
- Legal risks highlighted, UK local authority trading in swaps declared illegal

Barings
- Use of stock index futures by rogue trader to leverage exposure to Japanese equities

Bond market reversal of 1994
- Losses incurred on options