THE UNIVERSITY OF WESTERN AUSTRALIA
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UWA BUSINESS SCHOOL

FINA3304 BANKING: THEORY AND PRACTICE (BTP)

LECTURE & TUTORIAL NOTES
(WEEKS 6-12)

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Tutorial Number: 19
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Tute #6: (WEEK 7)

A. Textbook Topic 7

Q2 What are the 2 reasons why liquidity risk arises? How does the liquidity risk arising from the liability side of the balance sheet differ from liquidity risk arising from the asset side of the balance sheet? What is meant by "fire-sale prices"?

Liquidity risk:

- The risk where an ADI has a shortage of liquidity. It arises for liability-side reason and asset-side reason.

Liability side:

- Depositors and other claimholders decide to cash in their financial claims immediately. When this happen, the FI needs to borrow additional funds or sell asset to meet the withdrawal. However, FIs tend to minimize their holdings of cash reserves as they pay no interest. Most FIs invest in less liquid and/or longer maturity asset and so face the threat of fire sale prices should they be required to liquidate those assets in place of insufficient cash.

Asset side:

- Borrowers decide to use the loan commitment facilities provided by the ADI. When this happens, the FI must fund the loan on the balance sheet immediately; this creates a demand for liquidity.
- From transactions that result in transfer of cash to some other asset risk that transaction cannot happen at quoted market prices due to size. Not being able to transfer an illiquid asset to cash due to size.

Fire-sale prices: (more related to the asset side)

- The price received for an asset that has to be liquidated immediately.
- This would threaten the solvency of the FIs as the holder must accept losses at very large discounts from face value. If this is to continue, DI would sooner or later unable to meet depositors' cash demands.

Q17 What is a bank run? What are some possible withrdrawal shocks that could initiate a bank run? What feature of the demand deposit contract provides deposit withdrawal momentum that can result in a bank run?

Bank run:

- A sudden and unexpected increase in deposit withdrawals from a DI that could eventually force a bank into insolvency. It may occur due to:
    - Concerns about a DI's solvency relative to other Dis

- Failure of a related DI leading to heightened depositor concerns (contagion effect)
- Sudden changes in investors preferences to non-bank financial assets relative to deposits.
- Crisis

Demand Deposits

- Demand deposits contracts are first come-first served contracts in the sense that a depositor's place in line determines the amount he/she will be able to withdraw from a DI.
- This encourages other DI's depositors to join the line immediately when they observe a sudden increase in the lines at their DI even if they have no need to finance their consumption needs.
- From the bank's perspective, they have to give deposit without depositors' notification.

B. Textbook Topic 8

Q7 Outline the main features of exchange of settlement accounts (ESA) and identify the safety valves used by the RBA to assists DIs to maintain their ESA.

- Clearing accounts that each banks holds with RBA to allow settlement of payments (interbank payments) as they arise.
- Not allowed to be overdrawn. ES funds at minimum level as buffer against intra-day payments plus funds that maybe needed to settle after interbank market has closed. Buffer agreed in advance with RBA @ cash rate but surplus is at cash rate minus 25 basis points (discount- this what bank need to manage). You do get penalised if you do hold an abundant level of funds.
- Transaction require the use of same-day fund (cleared funds)
- Bank must actively manage their liquidity to assure access to adequate funds.
- Outline importance of ESA:
    - Must always be in Credit
    - Rate of account is 25 basis point below cash rate
- Real Time Gross Settlement (RTGS): Banks settle all high-value payments in real time across their ESA
- Deferred Net Settlement (DNS): Used for high volume low value transactions.
- Liquidity facilities:
    - Intraday facilities: allow access to funds at zero interest rate but allow institutions to meet payment in advance of clearing.
    - Overnight facility
    - Committed liquidity facility

Q18 What is a contagious run? What are some of the potentially serious adverse social welfare effects of a contagious run? Do all types of FIs face the same risk of contagious run?

- Contagious Run: An unjustified panic condition in which liability holders (depositors) withdraw funds from an FI without first determining whether institution is at risk.
- Adverse effect:
    - Level of savings, system liquidity
    - Wealth transfer
    - Supply of credit
    - Control of money supply
- Depository institution and insurance company usually face higher risk.
    - Example (Insurance Companies): insurer suffers a large loss therefore the policy holder fears their assets no longer covered. Therefore they would cancel policy or withdraw cash value. Run therefore insurer must do a fire-sale.

C. Additional Questions

Q1) The new Basel III introduced the first ever global liquidity and funding standards. Do a research on the new liquidity and funding standards and provide a brief outline of these standards.

- Liquidity funding standards:
    - Liquidity coverage Ratio (LCR) – determined by composition or maturity of balance sheet. Measured over 30 days. Hold high quality liquid assets sufficient to withstand a 30 days period of stress.
        - Look at liabilities that run off in 30 days
        - Stability of depositors.
    - Net stable Funding Ratio (NSFR) – encourages banks to hold more stable long run funding sources against less liquid assets which helps avoid maturity transformation risk.
        - Formula: Available stable funding / required stable funding. Available stable funding portion of funding structure reliable over 1 year.
- Australian Solution:
    - APRA recently announced only Commonwealth Government Securities (CGS) and semis meet
    - BCBS criteria for liquid asset under the LCR.
    - BCBS has acknowledged the problem and accepted APRA-RBA solution
    - No Australian solution deemed necessary for NSFR.
- Liquidity impact
    - Large ADIs more impacted than smaller ADIs; HQLA ADIs largely unaffected.
    - The shortfall of available liquid assets is significant; some possibility that more assets could meet liquidity tests as corporate bond market develops, but cannot guarantee it.

Q2 The following information relates to the balance sheet accounts of the Federal Bank of Australia as at 30/6/2013. What is the bank's (a) liquidity gap, (b) liquidity ratio and (c) non-core funds dependence ratio?

Balance Sheet Account	**2013 ($ mil)**	**Additional information**	**2013 ($ mil)**
Cash (A)	10	Investment security maturity:	
Due from other FIs (A)	40	< 1 year	50
Trading Securities (A)	90	>1 year	150
Investment securities (A)	200	Loans: < 1 year	250
Loans (A)	1,000	> 1 year	750
Fixed Assets (A)	160	Deposits: on call	400
Due to other FIs (L)	50	<1 year	100
Deposits (L)	900	>1 year	400
Bonds (L)	200	Bonds etc:	
Retained Profit (OE)	50	< 1year	60
Equity (OE)	300	> 1 year	140

(a) Liquidity Ratio = $\frac{Liquid\ asset}{Total\ Asset}$

$= \frac{10+40+90+50+250}{10+40+90+200+1000+160}$

= **29.3%**

(b) Liquidity Gap = Liquid asset – non-core liability (current liability)

= 440 – (50+500+60)

= **- $170 mil (short fall – unable to meet liquidity needs**)

(c) NCFD = $\frac{non-core\ liability-liquid\ asset}{Long-term\ earning\ asset}$

$= \frac{610-440}{150+750}$

= **18.9%**