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Deloitte Touche Tohmatsu

Ceskoslovenska Obchodni Banka, A.S.

Liability Management

Delivery Order No. 31

Contract No. EUR-0014-I-00-1056-00
Eastern Europe Enterprise Restructuring and Privatization Project

USAID
U.S. Agency for International Development
EUR/RME

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December 19, 1994

Mr. Lawrence Camp
USAID ENI/PER/EP
320 21st Street, NW
Washington, DC 20523

Re: Contract No. EUR-0014-I-00-1056-00, Delivery Order No. 31, CSOB Report on Liability Management

Dear Lawrence:

In accordance with Article IV of the above Delivery Order, we are providing you with four copies of the report prepared by Clive Grumball on Liability Management. As you know Mr. Grumball is working on Function A: Improvement of Treasury Function on Delivery Order No. 31. This report examines the nature and extent of any liquidity risk currently being carried by the bank and makes recommendations to management regarding the issues raised.

If you have any questions regarding this report, please call Adrienne Brombaugh at (202) 879-5650.

Sincerely,

Lizann Prosser
Senior Manager

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1. Overview.

CSOB management recognises that effective management of the bank's liquidity risk is crucial and necessitates a prudential approach to both domestic and foreign currency liquidity needs. In particular it is conscious of the obligations placed on it by the Ceska Narodni Banka [CNB] as outlined in Article 3 of its Provision on Liquidity Rules pursuant to Article 15 of Act No 21/1992 of the Collection of Laws on Banks - to ensure " .... the diversification of funding sources from the viewpoint of maturity, banking instruments and clientele ....".

The bank is aware that a large percentage of its liabilities are drawn from the inter-bank market and is investigating alternative, more diversified, sources of funding. The domestic retail deposit market has been suggested as a target source of funding and CSOB is considering a strategy to aggressively market for such deposits with a view to reducing the level of funds it takes from the inter-bank markets.

In theory this strategy has considerable merits. It offers the potential to fund by straightforward deposit taking and/or the issuance of a range of banking instruments to a clientele that may not be quite so price sensitive as the wholesale markets.

However, there may be fundamental factors that exist within the current business profile of the bank that will have direct implications for the immediate viability of such a strategy. In particular it is essential that the strategy will not create liquidity risk.

For this reason, before it decides on a course of action, it is necessary for CSOB senior management to know:

- the nature and extent of any liquidity risk currently being carried by the bank;
- the nature and extent of an apparent concentration of funding from the inter-bank markets;
- the likely impact of a significant switch from inter-bank funding to retail funding;
- any other related issues;

2. The Purpose of this Paper.

This paper sets out the findings of an investigation to establish these four factors and makes a number of recommendations to management regarding the issues raised.

3. Findings.

3.1. The Nature and Extent of the Liquidity Risk Currently Being Carried by the Bank.

- Despite the recent domestic bond issue and international syndicated loan, CSOB is still carrying a liquidity risk which may extend to CZK 3.5 billion in the period

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"Sight to 1 Month". **This period is considered to be critical in any liquidity crisis.**

- Of the alternatives considered to eliminate this liquidity risk, the cheapest and [possibly] easiest to implement is for CSOB to negotiate committed stand-by facilities in both CZK and convertible foreign currencies. It is also highly relevant to the way in which the liquidity risk is actually created within the bank.

- The current inadequacies of the bank's reporting systems ensures that it is virtually impossible for management to identify, measure and control liquidity risk - or to direct its strategic efforts in this area.

3.2. The Nature and Extent of any Dependency on the Inter-bank Markets as a Funding Source.

- CSOB draws over 40% of its funding from the inter-bank markets: this might be regarded as being extensive. However, inter-bank funding accounts for nearly 70% of the bank's funding with a maturity exceeding three months but only 11% of funding with a maturity of less than one month.

3.3. The Likely Impact of a Significant Switch from Inter-bank Funding to Retail Funding.

- Analysis of the existing deposit base suggests that it will be extremely difficult to merely substitute retail deposits for inter-bank funding for comparable maturities.

  For this reason if the bank pursues a strategy for no other reason than to switch from inter-bank to retail sources of funding it is probable that it will significantly increase the liquidity risk being carried.

  To avoid creating liquidity risk any reduction in the level of inter-bank funding as a percentage of total funding must be matched by other funding with a maturity at least equal to that which it is replacing. Alternatively there must be either:

  a) an appropriate reduction in the bank's balance sheet and corresponding reduction in inter-bank funding. [NB - This alternative still requires an appropriate maturity structure of the residual liabilities.]

  or

  b) a significant increase in the balance sheet funded entirely from non-bank sources. [NB - This alternative will require an appropriate matching of maturities of new assets and liabilities.]

3.4. Other Related Issues.

- Retail deposits may in practice be a more expensive source of funding compared with wholesale deposits.

- There are serious deficiencies in IBIS that render the effective management control of the **current** business virtually impossible to achieve. Any extension of a branch network to tap further retail business will serve only to exacerbate the present situation, particularly since this will almost certainly result in a substantial increase in deal volumes by virtue of the nature of retail business.

4. Recommendations.

- The bank should take immediate action to eliminate the current liquidity risk.

- The bank should postpone any thoughts it has regarding aggressively marketing for retail deposits until:

  - it has completed a full cost/benefit exercise.

  - it has totally eliminated the current systems deficiencies.

- In addition to further long term bond issues similar to the recent three year deal, the bank should consider issuing longer-term subordinated floating rate debt to non-bank domestic institutions in preference to a full scale effort to attract retail deposits.

Diversification of Funding.

1. Overview.

CSOB management recognises that effective management of the bank's liquidity risk is crucial and necessitates a prudential approach to both domestic and foreign currency liquidity needs. In particular it is conscious of the obligations placed on it by the Ceska Narodni Banka [CNB] as outlined in Article 3 of its Provision on Liquidity Rules pursuant to Article 15 of Act No 21/1992 of the Collection of Laws on Banks.

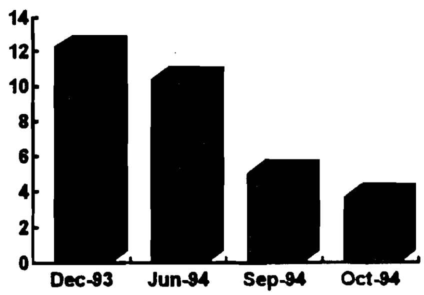
It is the policy of the bank to:

- maintain an appropriate match of liabilities and assets carried by the bank
- obtain longer term funding
- reduce its reliance on the inter-bank market.

Two notable successes have already been achieved in the area of longer term funding. In August the bank successfully raised CZK 6 billion by way of a bond issue. This was followed by the recent completion of a syndicated loan which raised USD 50 million. Both the bond issue and the syndicated loan were heavily over-subscribed which augers well for the future.

This issue and loan have resulted in a significant reduction in, but not the complete elimination of, the liquidity risk carried by the bank. This is discussed in para 3.1 below and demonstrated in Fig.1.

Fig 1. Liquidity Risk - CZK billions



However, whilst the success of the bond issue and loan demonstrates that the bank should continue to be able to attract longer term funding, it may still face difficulties in meeting its objectives in full.

- The domestic money market is still relatively new and is dominated by one or two banks which control a large percentage of the deposit base. Indeed, 45% of the bond issue was subscribed for by domestic banks.

- The bank has no rating from an international credit rating agency. This will adversely affect pricing and the ready availability of funds in the international markets, particularly if other Czech banks decide to follow CSOB's lead.

- The bank's reporting systems do not provide reports which meet management's needs.

2. Purpose of this Paper.

The purpose of this paper is to:

- Identify the nature and extent of any liquidity risk being carried by CSOB.

- Consider solutions to eliminate liquidity risk carried by the bank.

- Identify the nature and extent of inter-bank funding.

- Consider the viability of a strategy to aggressively market for domestic retail deposits compared to other sources of funding to ensure " .... the diversification of funding sources from the viewpoint of maturity, banking instruments and clientele ...." [Article 3 Para [b] CNB Provision on Liquidity Rules for Banks.

Any other related issues will be discussed as they arise.

3. Identification of the Nature and Extent of any Liquidity Risk being Carried by CSOB.

3.1. Assumptions Made.

3.1.1. Mitigating Factors Impacting The Bank's Current Funding Requirement.

There are two notable factors which may be affecting the bank's funding requirement.

- Reported assets totalling some CZK 20 billion relate to the Collections Unit.
- Reported assets totalling some CZK 12 billion relate to the Bank of Bohemia.

It can be argued that these are temporary elements of the bank's balance sheet and, therefore, should be taken out of the liquidity equation. If this argument is accepted, then the percentage of inter-bank borrowing will drop to around 25% of total funding when these items mature on the assumption that inter-bank funding accounts for CZK 24 billion [= 75%] of the overall funding for these assets.

However, for the purpose of this paper it is assumed that the bank will replace these assets since it is believed that the bank is not actively seeking to reduce its balance sheet from present levels. For this reason, this paper assumes that the current funding associated with these assets will be regarded as an ongoing need.

3.1.2. Discrepancies Between Asset and Liability Amounts for Non-Convertible Foreign Currencies and CZK.

It should be noted that there is a significant discrepancy between asset and liability totals in the non-convertible foreign currency and CZK profiles respectively [Appendices C and D]. However for the purpose of this paper it is assumed that:

- non-convertible foreign currency assets are being funded by CZK, either as provisions or as FX related activity.

and that as a result

- the total liquidity shortfall is split almost equally between the domestic and convertible foreign currency elements of the balance sheet. The shortfall takes the form of committed stand-by facilities in the case of CZK and physical lending in the case of convertible foreign currency.

3.2. Measuring Liquidity Risk Carried by CSOB.

As stated in para 1 above, management faces a major problem which results from the current inadequacies of its reporting systems.

Unless this problem is resolved, it will be virtually impossible for management to identify the areas of need and, subsequently, to direct its strategic efforts to address these.

IBIS can produce a number of reports which relate to liquidity. However, a recent survey of reports showed that most of these are unusable as they are currently configured in CSOB. As a direct consequence of this, management has to rely solely on the liquidity report submitted **quarterly** to the CNB to assess the liquidity risk being carried by the bank. However, the information contained in the CNB report still needs to be re-formatted to produce a report which meets the bank's own specific liquidity risk management needs rather than those of the CNB - which has different priorities to CSOB.

Appendices A to D provide examples of the format required.

3.3. Analysis of the Liquidity Profiles per Appendices A to D.

Despite the recent bond issue and loan the liquidity risk currently being run by CSOB is still real, although it has been substantially reduced from the risk which existed at the end of June. Appendix A shows that at the end of September there was a visible risk [i.e. excluding stand-by facilities] of some CZK 2.2 billion -approx 1.4 % of the reported totals. The syndicated loan will have reduced this to below CZK 1 billion.

However, in practice, the risk is somewhat greater since committed but undrawn stand-by facilities must also be included. Once these are taken into full account the risk probably still exceeds CZK 3.5 billion.

3.4. Strategies to eliminate reported liquidity mismatches for the time period "Sight to 1 Month".

Before contemplating any change in the balance of its funding sources, it is submitted that CSOB's first priority must be to ensure that it is fully liquid in both domestic and non-domestic currencies during the most critical period of any potential full scale liquidity crisis. This necessitates maintaining a "Cumulative Liquidity Gap" of zero in each of the categories "Sight to 1 Week" and "1 Week to 1 Month".
The liquidity mismatches will be considered under two headings:

- Convertible Foreign Currency Borrowings
    - Where a visible liquidity mis-match is reported.
- Domestic Currency Borrowings [which includes non-convertible currency].
    - Where there is only a small net liquidity mis-match, but where it is assumed that committed stand-by facilities impact CSOB's liquidity profile.

3.4.1. Convertible Foreign Currency Borrowings.

Three possible options will be compared to eliminate the reported liquidity mismatch for the time period "Sight to 1 Month":

- To switch funding categories.
- To increase the Balance Sheet.
- To obtain a stand-by facility.

3.4.1.1. Switch Funding Categories.

The first option to be considered is to pursuade lenders of demand, 2 day notice, 7 day notice, and 1 month notice funds to extend and maintain the maturity of their money to [say] 40 days notice. [i.e. such that it is always outside the 1 month date].

This will have the following cost implications.

Following the syndicated loan the amount which needs to be switched is approximately CZK 0.75 billion equivalent.

Assume:

- Current Cost to borrow these funds "on demand". 2.00%
- Estimated Cost to borrow these funds on "40 days notice" 5.00%

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Bottom line impact = CZK 0.75 bn * 3% per annum

Bottom line impact = CZK 22,500,000

LESS savings achieved by a reduction in the level of mandatory reserves the bank is required to maintain with the CNB.

Assume funding of reserves = 8.00% per annum.

Savings = CZK 0.75 bn * [12% - 4%] * 8%

Savings = CZK 4,800,000

Total bottom line impact = CZK 22,500,000 - CZK 4,800,000

Total bottom line impact = CZK 17,700,000.

3.4.1.2. Increase the Balance Sheet.

Another option available is borrow longer term funds [preferably as capital or quasi capital - e.g. subordinated debt] and buy high quality liquid assets. To avoid incurring interest rate risk the assets acquired would match the interest rate period of the liability taken. The liability would be recorded at maturity whilst the asset would be recorded at "Sight" [subject to any relevant discount].

The amount which needs to be borrowed and invested is approximately CZK 0.75 billion equivalent.

Assume:

- Estimated Cost to borrow these funds. PRIBOR + 75 bp
- Estimated Return from on-lending these funds. PRIBOR - 10 bp

The estimated cost above is based on the pricing of the recent syndicated loan.

Bottom line impact = CZK 0.75 bn * 0.85% per annum

Bottom line impact = CZK 6,375,000

PLUS cost to maintain a higher level of mandatory reserves that the bank is required to maintain with CNB.

Assume funding of reserves = 8.00% per annum.

Cost = CZK 0.75 bn * 4% * 8%

Cost = CZK 2,400,000

Total bottom line impact = CZK 6,375,000 + CZK 2,400,000

Total bottom line impact = CZK 8,775,000.

3.4.1.3. Obtain a Committed Stand-by Facility.

Assume.

- Amount required CZK 0.75 billion.
- Fee payable 40 basis points per annum.

Bottom line impact = CZK 0.75 billion * 0.40%

Bottom line impact = CZK 3,000,000.

3.4.1.4. Summary Comparison of Estimated Cost to Correct Mis-match.

Switch Maturities.	CZK 17,700,000
Increase Balance Sheet	CZK 8,775,000
Obtain Stand-by	CZK 3,000,000

3.4.2. CZK and Non-Convertible Foreign Currency Borrowings.

As with convertible foreign currencies three possible options will be compared to eliminate the reported liquidity mismatch for the time period "Sight to 1 Month":

- To switch funding categories.
- To increase the Balance Sheet.
- To obtain a stand-by facility.

3.4.2.1. Switch Funding Categories.

The amount that would need to be switched is approximately CZK 3.0 billion equivalent.

Assume:

- Current Cost to borrow these funds "on demand". 2.00%
- Estimated Cost to borrow these funds on "40 days notice" 8.00%

Bottom line impact = CZK 3.0 bn * 6% per annum

Bottom line impact = CZK 180,000,000

LESS savings achieved by a reduction in the level of mandatory reserves the bank is required to maintain with the CNB.

Assume funding of reserves = 8.00% per annum.

Savings = CZK 3.0 bn * [12% - 4%] * 8%

Savings = CZK 19,200,000

Total bottom line impact = CZK 180,000,000 - CZK 19,200,000

Total bottom line impact = CZK 160,800,000.

3.4.2.2. Increase the Balance Sheet.

As before, another option available is borrow longer term funds [preferably as capital or quasi capital - e.g. subordinated debt] and buy high quality liquid assets. To avoid incurring interest rate risk the assets acquired would match the interest rate period of the liability taken. The liability would be recorded at maturity whilst the asset would be recorded at "Sight" [subject to any relevant discount].
The amount which needs to be borrowed and invested is approximately CZK 3.0 billion equivalent.

Assume:

- Estimated Cost to borrow these funds. PRIBOR + 75 bp
- Estimated Return from on-lending these funds. PRIBOR - 10 bp

For the purpose of this exercise the above cost of funds is based on the terms of the syndicated loan, albeit this was made in USD.

Bottom line impact = CZK 3.0 bn * 0.85% per annum

Bottom line impact = CZK 25,500,000

PLUS cost to maintain a higher level of mandatory reserves that the bank is required to maintain with CNB.

Assume funding of reserves = 8.00% per annum.

Cost = CZK 3.0 bn * 4% * 8%

Cost = CZK 9,600,000

Total bottom line impact = CZK 25,500,000 + CZK 9,600,000

Total bottom line impact = CZK 35,100,000.

3.4.2.3. Obtain a Committed Stand-by Facility.

Assume.

- Amount required CZK 3.0 billion.
- Fee payable 40 basis points per annum.

Bottom line impact = CZK 3.0 billion * 0.40%

Bottom line impact = CZK 12,000,000.

3.4.2.4. Summary Comparison of Estimated Cost to Correct Mis-match.

Switch Maturities.	CZK 160,800,000
Increase Balance Sheet	CZK 35,100,000
Obtain Stand-by	CZK 12,000,000

3.4.3. Summary Comparison of Estimated Cost to Correct all Mis-matches by Using Each of the Three Methods Demonstrated.

Switch Maturities.	CZK 178,500,000
Increase the Balance Sheet	CZK 43,875,000
Obtain a Stand-by	CZK 15,000,000

4. Identification of the Nature and Extent of any Dependency on the Inter-Bank Market.

4.1. Liability Analysis per Appendices A to D.

The analysis of the consolidated profile [Appendix A] confirms that CSOB has a significant dependency on the interbank market for its funding [approx. 43%]. It also indicates that this level is consistent across the various elements of the consolidated funding base.

However, the analysis also indicates that inter-bank borrowing provides the only real source of funding for maturities greater than 1 month.

- **Inter-bank funding accounts for nearly 70% of the bank's funding with a maturity exceeding three months but only 11% of funding with a maturity of less than one month.**

This is further borne out by the bond issue where 45% of the issue was subscribed for by banks, whilst the loan was provided in its entirety by banks. Thus it would seem that if CSOB management carries through with its policy to reduce the level of inter-bank funding dependency it may well create a far more serious problem for the bank as a whole.

This problem will arise because, unless replacement funding has comparable maturities, the bank will simply exacerbate any liquidity risk in the shorter maturity liquidity profile categories.

5. To develop a strategy to diversify the Bank's funding sources which takes full account of all the related issues.

Once it has eliminated the liquidity risk outlined in para 3.3. above, CSOB must consider the implications of a switch away from inter-bank funding to other sources.

5.1. Options.

Two options will be considered:

- Maintain Balance Sheet Footings and Switch Funding Sources.
- Increase the Balance Sheet Footings.

5.1.1 Maintain Balance Sheet Footings and Switch Funding Sources.

Assume target inter-bank dependency = 25% maximum.

Let y be the amount needed to switch from inter-bank to other funding to achieve the required target dependency of 25%.
Given

- Level of inter-bank funding [30 Sep] CZK 46,801.00 million
- Total funding [30 Sep] CZK 108,026.85 million

$$\frac{46{,}801.00 - y}{108{,}026.85} = \frac{25}{100}$$

$$4{,}680{,}100 - 100\,y = 2{,}700{,}671.25$$

$$100y = 1{,}979{,}428.75$$

$$y = \text{CZK}19{,}794.29 \text{ million}$$

- ❑ **It will be necessary to switch approx. CZK 19.8 billion from inter-bank to other funding to achieve a reduction in the percentage share of interbank funding from 43% to 25%. Additionally, the maturity of the replacement monies must at least match the maturity of the original funding.**

5.1.1.1. Cost implications.

In theory these will be zero since the exercise merely represents a change of lender.

5.1.2. Increase the Balance Sheet Footings.

Let y be the additional amount of "other" funding that will need to be borrowed to achieve the required target dependency of 25%.

Given that as at 30 Sep:

- Level of inter-bank funding CZK 46,801.00 million
- Total funding CZK 108,026.85 million

$$\frac{46{,}801.00}{108{,}026.85 + y} = \frac{25}{100}$$

$$4{,}680{,}100 = 2{,}700{,}671.25 + 25y$$

$$25y = 1{,}979{,}428.75$$

$$y = \text{CZK } 79{,}177.15 \text{ million}$$

- ☐ **It will be necessary to borrow approx. CZK 79 billion from non -inter-bank sources to achieve a reduction in the percentage share of interbank funding from 43% to 25%. This represents an increase of more than 50% in the bank's balance sheet footings.**

5.1.2.1. Cost Implications.

In theory this exercise will have no direct cost implications since it is assumed that the money raised will be utilised in profitable on-lending. However, the maturities of on-lending would need to mirror that of the liabilities and clearly there are significant capital implications for the bank in pursuing this option.

Pursuing this option must be regarded as a long-term exercise and one which would need to be carefully analysed.

6. Strategies to Achieve Objective to Reduce Dependency on the Inter-bank Markets.

There are three possible strategies available to CSOB:

- Tap the Domestic Retail Market.
- Tap the Domestic Wholesale Market.
- Tap the International Market.

6.1. Tapping the Domestic Retail Market.

Theoretically, this option provides the best option from a cost basis point of view. However, before going on to discuss this option, consider the following "think point".

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THINK POINT.

It is calculated that it costs 150 units to process each deal ticket.

Would you prefer to deal:

- **100 times to borrow 1 million units for a period of 1 day at 2.00%**

or

- **Once only to borrow 100 million units for a period of 1 day at 7.30%?**

The theory is that a branch network can be created which collects a vast pool of free or near free deposits from the public at large by way of current accounts or similar. The practical realities are demonstrated by the Think Point.

- To borrow 100 million units at 2% by way of 100 transactions results in a repayment of principal plus interest after one day of:

100,000,000 * [1 + 2 / 100 * 1 / 365] = 100,005,479.45

The cost to process is:

100 * 150 = 15,000 units.

Total Cost of Deposit Exercise = 100,005,479.45 + 15,000

Total Cost of Deposit Exercise = 100,020,479.45

- To borrow 100 million units at 7.3% by way of 1 transaction results in a repayment of principal plus interest after one day of:

100,000,000 * [1 + 7.3 / 100 * 1 / 365] = 100,020,000.00

The cost to process is:

1 * 150 = 150 units.

Total Cost of Deposit Exercise = 100,020,000 + 150

Total Cost of Deposit Exercise = 100,020,150.00

Clearly the Wholesale borrowing in this simple example is cheaper in real terms than the Retail borrowing - despite the 5.30% difference in the interest rate paid.

This example is intended to show that, often, retail deposits may not be as "cheap" in reality as they appear at first instance. It is important, therefore, that CSOB is fully aware of the likely true cost of acquiring a retail deposit base before actively pursuing one.

The processing costs used in the example were not taken from "thin air". They are based on the findings of detailed surveys known to have been carried out in four UK banks. These showed that the average cost of processing deals ranged between $150 and $200 per transaction. Whilst it is accepted that current labour/processing costs may be lower in the Czech Republic than in the UK, it is possible that the average amounts available on individual retail accounts will also be somewhat lower.

For example, an IBIS report which was investigated recently contained 3,219 pages of data. Each page contained approx. 66 account balances but few of these exceeded CZK 25,000 in amount. This is borne out by an analysis of the number of non-bank accounts maintained in CSOB.

At the end of September there were 224,887 non-bank accounts maintained at the bank. These amounted to a total amount of CZK 51.2 billion [i.e. an average balance of CZK 227,700 approx.] and accounted for approximately 47% of deposits taken.

Based on this information it is possible to carry out a very basic cost analysis as follows:

If it is assumed that 47%

- of the bank's workforce and related costs [salaries and employees benefits]

and

- of general operating costs

are apportioned to this business then:

- Average number of employees utilised = 1,488
- Average number of accounts per employee = 151
- Average balance "allocated" per employee = CZK 34.4 million
- Average salary and operating costs per employee= CZK 628,950

Therefore:

- ☐ **Average margin required to support each employee = 1.82% [Assuming no credit write-offs.]**

If it is assumed that there are an average of 50 movements across each account each year then the average cost per account move can be estimated as follows:

Average cost = CZK [1,488 * 628,950] / [224,887 * 50]

❑ **Average cost = CZK 83**

However, given an inflation rate of 12.5%, costs double in 7 years: income may not. Arguably, this could easily lead to costs not dissimilar to those discussed in the Think Point - 150 units per deal.

6.1.1. Control.

A significant retail deposit base has other implications which must also be addressed, not the least of which is how the bank proposes to control this business.

There are serious deficiencies in IBIS which render the effective management control of the **current** business virtually impossible to achieve. As a result the bank is undoubtedly carrying significant risks in all forms that could have a material impact on its profitability. Any extension of the branch network to tap further retail business, or the increase in deal volumes which will surely result by virtue of the nature of retail business, will serve only to exacerbate the present situation.

6.1.2. Entering a "Non-natural" Market.

One of the potential problems to be faced by the bank if it expands into retail banking is that this is not a natural business of the bank - the great strength of the bank is its expertise in the wholesale markets of trade finance and foreign exchange. Arguably, therefore the bank should consider exploiting the retail market from the point of view of its strengths rather than to create something whose purpose [i.e. diversification of funding] might be better served by other means.

For example, perhaps one way of building a form of retail deposit base might be to use the Cekobanka-Chequepoint network as a means to distribute CSOB Travellers Cheques, particularly with the advent of a freely convertible Crown. CSOB would have the use of the proceeds of sales of travellers cheques until they were cashed. In addition it would earn commission and a dealing spread on each transaction.

NB - American Express boasts a huge float of free funds from this type of business - a large part of which is never reclaimed for a variety of reasons - together with a vast amount of highly profitable foreign exchange activity.

6.2. Tapping the Domestic Wholesale Market.

One of the problems to be faced by CSOB in tapping retail deposits is to pursuade sufficient depositors to place their money for longer maturities. Experience suggests that this will never be easy unless virtually all the cost "benefit" which may be associated with these deposits is foregone. Perhaps, therefore, the better option is to continue to access the domestic wholesale market rather than the domestic retail market.

CSOB has recently tapped longer-term domestic funds with the issue of CZK 6 billion of bonds in August. In so doing it was able to attract funds at 11.125% for 3 years fixed [cf with 13.75% approx which it is currently paying for somewhat smaller amounts]. The bank might also consider issuing sub-ordinated debt to the domestic pension funds, life assurance companies, etc. Issues in this form funds raised would count as Tier 2 capital [up to 50% of which would count as core capital] and any interest rate risk would be more or less neutralised.

There may well be cost implications resulting from raising sub-ordinated debt since potential holders may well want a rate premium for providing a form of capital, particularly if it in any way affects their own capital adequacy ratios. In practice, however, this cost should be set against the ability to "gear up" on the funds raised.

6.2.1. Control.

Whilst the systems deficiencies already mentioned may still exist, there may not be the same control implications for this activity, provided it is centred and monitored in Praha.

6.3. Tapping the International Wholesale Market.

It was seen in para 3.4.1. above that despite the recent success in the international syndicated loans market CSOB still has a need to increase its longer maturity convertible foreign currency borrowings, in the absence of obtaining a stand-by facility, if it is to become fully liquid in the category "Sight to 1 Month". The amount required to achieve this is CZK 0.75 billion equivalent approx.

It is to be hoped that the bank's reputation and the high regard with which the Czech Republic itself is held will combine to ensure that the international wholesale markets will continue to be be an important source of new funding.

In this respect it will obviously help if CSOB ultimately obtains a credit rating from one of the international rating agencies. Apart from anything else this should help to reduce the cost of acquiring long-term funding and/or increase its availability.

In the meantime the bank might consider an expansion of its branch network in the international wholesale, rather than domestic retail markets. In so doing it will be able to capitalise on its strengths and the international relationships it has developed over the years. At the very least it might consider branches in Frankfurt and London.

6.3.1. Control.

6.3.1.1. Funding from Praha.

Whilst the systems deficiencies already mentioned may still exist, there may not be the same control implications for this activity, provided it is centred and monitored in Praha.

6.3.1.2. Expanding the CSOB Branch Network Internationally.

As will be the case in the event of an expansion by the bank into significant domestic retail banking activity, there is the very real issue of how the bank proposes to control an international branch network.

Management will still need to address the current deficiencies in the bank's reporting systems and operating procedures which render the effective management control of the current business virtually impossible to achieve before implementing a strategy to create an international branch network to access the international wholesale deposit markets.

APPENDIX A.

Analysis of the Consolidated Liquidity Profile.

1. Data Source.

The data contained in each table is taken from *Report D - Consolidated ÇZK + Foreign Convertible Currencies + Foreign Non-Convertible Currencies - Prehled Sketencne [Zbytkove] Splatnosti Aktiv a Pasiv ke dni 30 Zari 1994* submitted to CNB.

Fig 1 - Analysis of Assets.

Category	Sight to 1 week	1 week to 1 month	1 month to 3 months	3 months to 6 months	> 6 months	Unspecified	Classified Assets
Cash	4,571.00						
Central Banks	3,715.20						
Treasury Bills	9,930.00						
Banks	11,468.00	1,295.60	10993.00	1,701.40	2,830.50		
Clients	249.20	3,765.80	2,909.60	543.40	37,709.40	2,660.30	38,260.20
Securities	7,299.72				568.28	1,922.70	
Other Assets						6,115.40	
Part'p'tions						2,023.50	
Fixed Assets						2,294.30	

"Liquid" securities [e.g. T-Bills] have been allocated to the category "Sight to 1 Week" in accordance with the proposal in the paper *"Risk Management and the Control of Risk in Ceskoslovenska Obchodni Banka AS - Section 4 - Liquidity Risk"* submitted to the management of CSOB.

Fig 2 - Analysis of Liabilities.

Category	Sight to 1 week	1 week to 1 month	1 month to 3 months	3 months to 6 months	> 6 months	Unspecified
Central Banks	34.70	53.90	140.30	61.70		396.10
Banks	3,946.90	1,164.40	5,631.40	5,604.00	30,454.30	
Clients	31,975.90	6,649.20	5,349.10	1,929.60	5,171.20	107.10
Securities Issued	176.00	469.35	154.60	40.20	8,192.50	324.40
Capital						5,105.00
Others						39,694.80

Fig 3 - Liquidity Profile.

Category	Sight to 1 week	1 week to 1 month	1 month to 3 months	3 months to 6 months	> 6 months
Assets Maturing	37,233.12	5,061.40	13,902.60	2,244.80	94,384.58
Liabilities Maturing	36,133.50	8,336.85	11,275.40	7,635.50	89,445.40
Cuimulative Assets Mat	37,233.12	42,294.52	56,197.12	58,441.92	152,826.50
Cumulative Liabs Mat	36,133.50	44,470.35	55,745.75	63,381.10	152,826.50
Cumulative Gap	1,099.62	(2,175.83)	451.37	(4,939.18)	0
Ratio of cum Ass/Liabs	103%	95%	101%	92%	100%
Limit	100%	100%	60%	60%	N/A
Excess	0	2,175.83	0	0	0

This Liquidity Profile report shown is broadly similar to that which would be needed to implement the proposed liquidity limit structure for CSOB, which is in the process of being submitted to ALCO.

3.2. Analysis of Liquidity Risk.

It is clear from the above Liquidity Profile [Fig 3] that CSOB is exposed in the category "1 Week to 1 Month" - **which is a critical periods for any possible liquidity squeeze** - to the extent of CZK 2.20 billion approximately.

This represents around 1.4% of the bank's total footings.

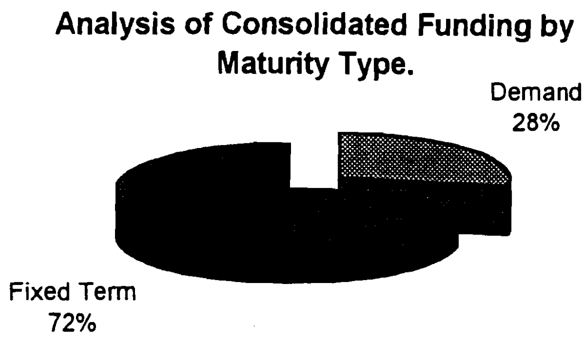
However, this risk is further compounded since the bank has granted committed - but as yet undrawn - facilities to customers [CZK 2.8 billion at 31 December 1993]. Thus the total risk to the bank during the critical period of any possible liquidity squeeze is likely to be around CZK 5 billion.

3.2. Analysis of Liabilities.

3.2.1. Analysis of Liabilities by Maturity Type

The following chart illustrates the breakdown of the reported liabilites - excluding those under the category "Others" and the bank's capital.

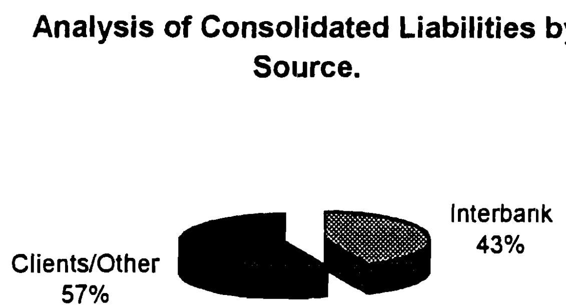
Fig 4.



3.2.1. Analysis of Liabilities by Source.

The following chart illustrates the breakdown of the reported liabilites excluding those under the category "Others" and the bank's capital.

Fig 5.



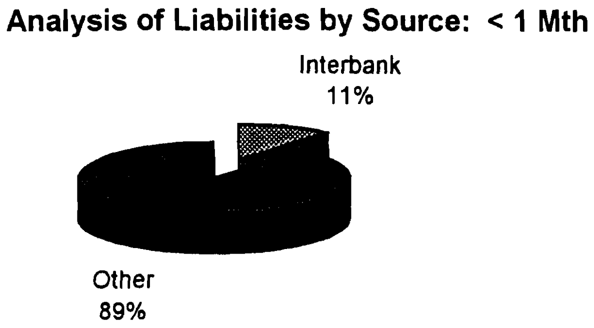
It is clear that CSOB has a heavy reliance on inter-bank funding [CZK 46.8 billion out of total borrowings CZK 108 billion].

3.2.2. Analysis of Liabilities by Source by Maturity Type.

The following two charts illustrate the concentration of funding source by maturity type.

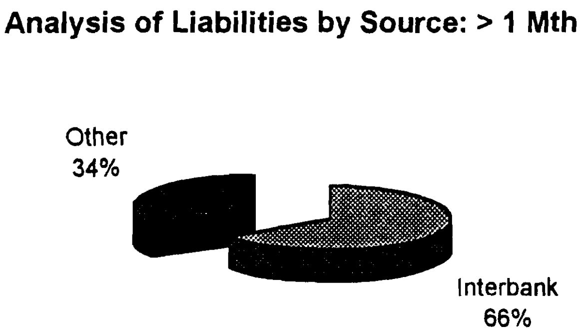
26

Fig 6.



It should be noted that of the total of client funding repayable within 7 days [CZK 32.0 billion] approximately 90% appears to be "on demand".

Fig 7.



From these charts it would appear that interbank funding is the only real source of longer maturity borrowing.

Interbank borrowing accounts for CZK 41.7 billion out of a total of CZK 63.6 billion with a maturity > 1 month. In particular, it accounts for CZK 36.1 billion out of total borrowings of CZK 52.3 billion with a maturity longer than 3 months

3.2.3. Analysis of Source by Maturity.

The following two charts illustrate the spread of funding source by maturity.

Fig 8.

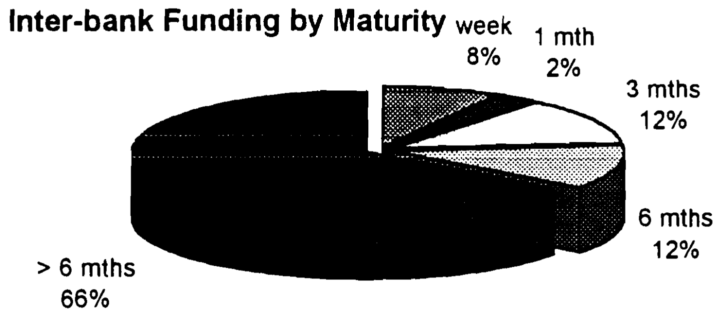
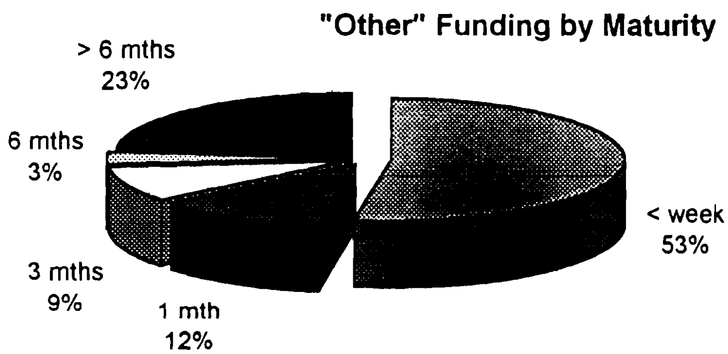

Inter-bank Funding by Maturity
week
8%
1 mth
2%
3 mths
12%
6 mths
12%
> 6 mths
66%

Fig 9.


"Other" Funding by Maturity
> 6 mths
23%
6 mths
3%
< week
53%
3 mths
9%
1 mth
12%

APPENDIX B.

Convertible Foreign Currency Liquidity Profile.

1. Data Source.

The data contained in each table is taken from *Report D - Consolidated CZK + Foreign Convertible Currencies + Foreign Non-Convertible Currencies - Prehled Sketencne [Zbytkove] Splatnosti Aktiv a Pasiv ke dni 30 Zari 1994* submitted to CNB.

Fig 1 - Analysis of Assets in Convertible Foreign Currencies.

Category	Sight to 1 week	1 week to 1 month	1 month to 3 months	3 months to 6 months	> 6 months	Unspecified	Classified Assets
Cash	2,794.60						
Banks	7,755.30	365.60	575.30	0	1,532.10		
Clients	245.30	1,812.70	2,409.00	214.90	5,037.00	242.50	11,118.80
Securities	1,308.50				145.40	565.40	
Other Assets						1,497.30	
Part'p'tions						297.60	

"Liquid" securities [e.g. T-Bills] have been allocated to the category "Sight to 1 Week" in accordance with the proposal in the paper *"Risk Management and the Control of Risk in Ceskoslovenska Obchodni Banka AS - Section 4 - Liquidity Risk"* submitted to the management of CSOB.

Fig 2 - Analysis of Liabilities in Convertible Foreign Currencies.

Category	Sight to 1 week	1 week to 1 month	1 month to 3 months	3 months to 6 months	> 6 months	Unspecified
Central Banks	11.50					
Banks	1,955.20	264.50	1,025.50	1,254.00	12,493.20	
Clients	9,964.90	4,056.70	1,950.00	711.80	629.40	24.70
Securities Issued	68.00	0	0	0	78.60	0
Others						4,245.30

Fig 3 - Liquidity Profile for Convertible Foreign Currencies.

Category	Sight to 1 week	1 week to 1 month	1 month to 3 months	3 months to 6 months	> 6 months
Assets Maturing	12,103.90	2,178.30	2,984.30	214.90	20,436.10
Liabilities Maturing	11,999.60	4,321.20	2,975.50	1,965.80	17,471.20
Cumulative Assets Mat	12,103.90	14,282.20	17,266.50	17,481.40	37,917.50
Cumulative Liabs Mat	11,999.60	16,320.80	19,296.30	21,262.10	38,733.30
Cumulative Gap	104.30	(2,038.60)	(2,029.80)	(3,780.70)	(815.80)
Ratio of cum Ass/Liabs	101%	88%	89%	82	98%
Limit	100%	100%	60%	60%	N/A
Excess	0	2,038.60	0	0	0

This Liquidity Profile report shown is broadly similar to that which would be needed to implement the proposed liquidity limit structure for CSOB, which is in the process of being submitted to ALCO.

2. Analysis of Liquidity Risk.

It is clear from the above Liquidity Profile that CSOB is exposed in the category "1 Week to 1 Month" **- which is a critical period for any possible liquidity squeeze -** extending to CZK 2.00 billion approximately.

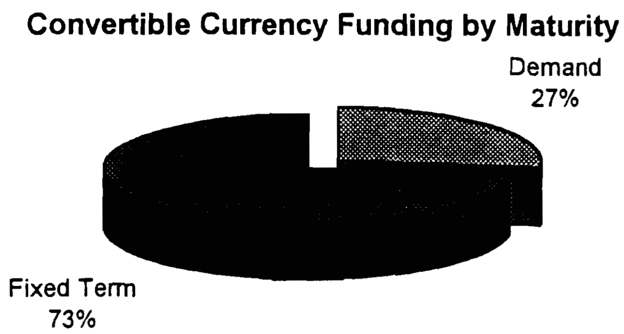
This represents around 5% of the bank's footings in convertible foreign currencies and, as such, represents a significant risk in this category.

3. Analysis of Liabilities.

3.1. Analysis of Liabilities by Maturity Type

The following chart illustrates the breakdown of the reported liabilites - excluding those under the category "Others" and the bank's capital.

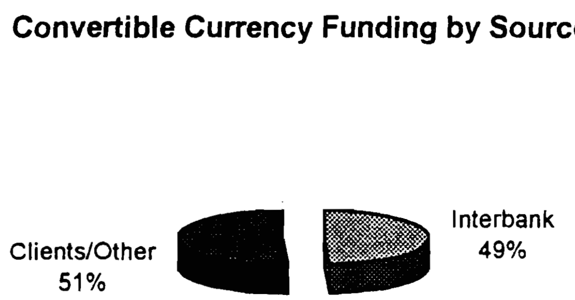
Fig 4.



3.2.1. Analysis of Liabilities by Source.

The following chart illustrates the breakdown of the reported liabilites excluding those under the category "Others" and the bank's capital.

Fig 5.



It is clear that CSOB has a heavy reliance on inter-bank funding [CZK 17.0 billion out of total borrowings CZK 34.5 billion].

3.2.2. Analysis of Liabilities by Source by Maturity Type.

The following two charts illustrate the concentration of funding source by maturity type.

Fig 6.

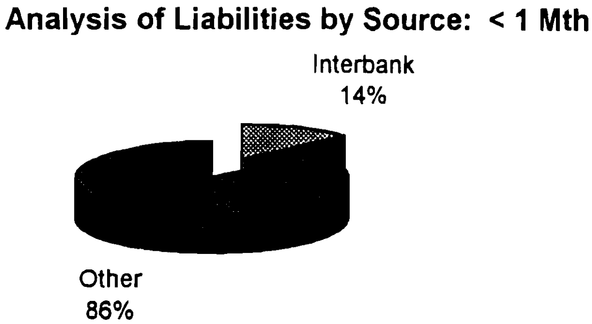
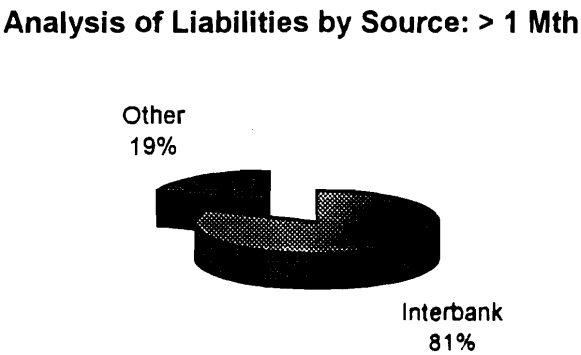


Fig 7.



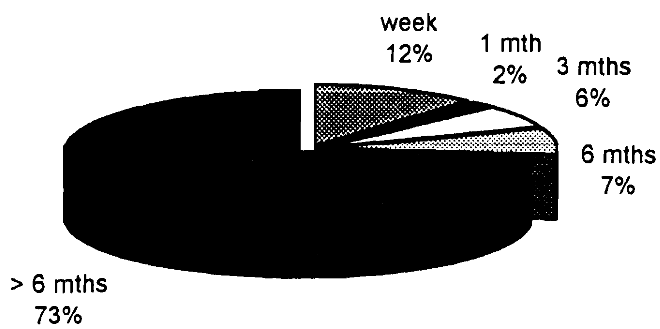
From these charts, it would appear that interbank funding is the only real source of longer maturity borrowing. In particular it accounts for CZK 13.75 billion out of total borrowings of CZK 15.2 billion with a maturity longer than 3 months- i.e. more than 90% of this category.

By comparison of the total of client monies taken [CZK 17.5 billion], more than 80% is repayable within 1 month [CZK 14.1 billion].

3.2.3. Analysis of Source by Maturity.

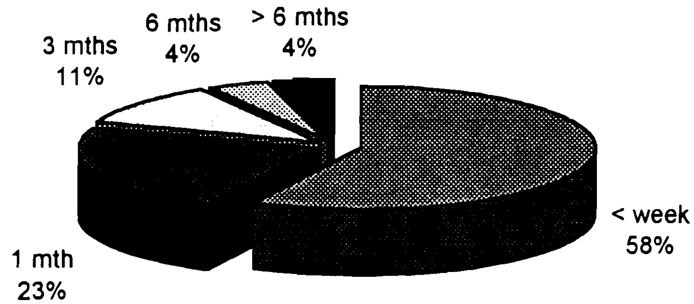
The following two charts illustrate the spread of funding source by maturity.

Fig 8.



Inter-bank Funding by Maturity

Fig 9.



"Other" Funding by Maturity

APPENDIX C.

Analysis of the Non-Convertible Foreign Currency Liquidity Profile.

1. Data Source.

The data contained in each table is taken from *Report D - Consolidated CZK + Foreign Convertible Currencies + Foreign Non-Convertible Currencies - Prehled Sketencne [Zbytkove] Splatnosti Aktiv a Pasiv ke dni 30 Zari 1994* submitted to CNB.

Fig 1 - Analysis of Assets in Non-Convertible Foreign Currencies.

Category	Sight to 1 week	1 week to 1 month	1 month to 3 months	3 months to 6 months	> 6 months	Unspecified	Unclass
Cash	155.00						
Central Banks	28.50						
Banks	17.30				617.20		
Clients	0	944.10	291.00	160.10	7,839.50	919.10	2,228.20
Securities	1,839.15				204.35	63.70	
Other Assets						592.10	
Part'p'tions						2.50	
Fixed Assets						131.50	

"Liquid" securities [e.g. T-Bills] have been allocated to the category "Sight to 1 Week" in accordance with the proposal in the paper *"Risk Management and the Control of Risk in Ceskoslovenska Obchodni Banka AS - Section 4 - Liquidity Risk"* submitted to the management of CSOB.

Fig 2- Analysis of Liabilities in Non-Convertible Foreign Currencies.

Category	Sight to 1 week	1 week to 1 month	1 month to 3 months	3 months to 6 months	> 6 months	Unspecified
Central Banks	9.20	51.10	113.60	50.00		
Banks	634.70	85.30	255.90	0	3,194.10	
Clients	3,955.90	560.30	257.30	36.10	42.50	17.00
Securities Issued		0.05	137.00	0.90	167.70	
Others						990.90

Fig 3 - Liquidity Profile for Non-Convertible Foreign Currencies.

Category	Sight to 1 week	1 week to 1 month	1 month to 3 months	3 months to 6 months	> 6 months
Assets Maturing	2,039.95	944.10	291.00	160.10	12,598.85
Liabilities Maturing	4,599.80	696.75	763.80	87.00	4,412.20
Cuimulative Assets Mat	2,039.95	2,984.05	3,275.05	3,435.15	16,034.00
Cumulative Liabs Mat	4,599.80	5,296.55	6,060.35	6,147.35	10,559.55
Cumulative Gap	(2,559.85)	(2,312.50)	(2,785.30)	(2,712.20)	5,474.45
Ratio of cum Ass/Liabs	44%	56%	54%	56%	152%
Limit	100%	100%	60%	60%	N/A
Excess	2,559.85	2,312.50	361.16	253.26	0

This Liquidity Profile report shown is broadly similar to that which would be needed to implement the proposed liquidity limit structure for CSOB, which is in the process of being submitted to ALCO.

2. Analysis of Liquidity Risk.

It is clear from the above Liquidity Profile that CSOB is exposed in all categories, and in particular in the categories "Sight to 1 Week" and "1 Week to 1 Month" - **which are the critical periods for any possible liquidity squeeze** - extending to CZK 2.60 billion approximately.

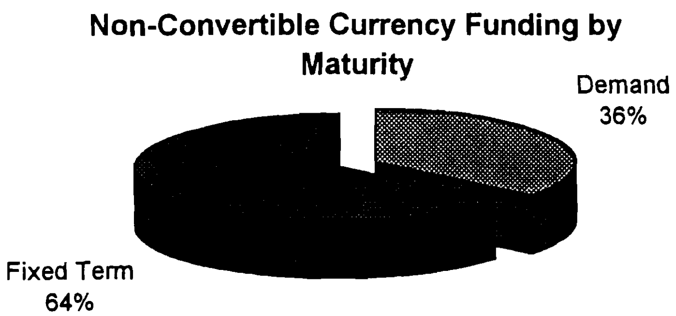
This represents around 16% of the bank's footings in non-convertible foreign currencies and, as such, represents a significant risk in this category.

3. Analysis of Liabilities.

3.1. Analysis of Liabilities by Maturity Type

The following chart illustrates the breakdown of the reported liabilites - excluding those under the category "Others" and the bank's capital.

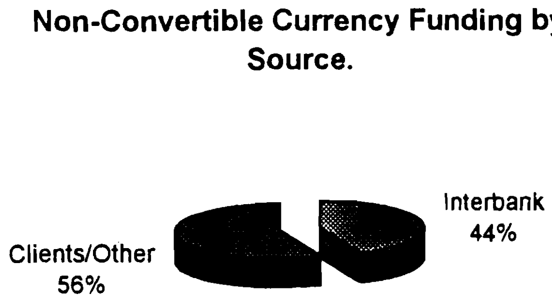
Fig 4.



3.2.1. Analysis of Liabilities by Source.

The following chart illustrates the breakdown of the reported liabilites excluding those under the category "Others" and the bank's capital.

Fig 5.



It is clear that CSOB has a heavy reliance on inter-bank funding [CZK 4.2 billion out of total borrowings CZK 9.6 billion].

3.2.2. Analysis of Liabilities by Source by Maturity Type.

The following two charts illustrate the concentration of funding source by maturity type.

Fig 6.

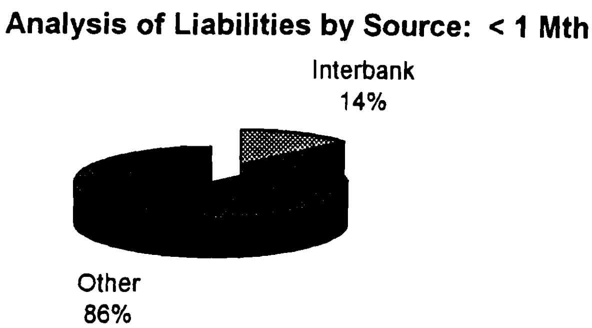
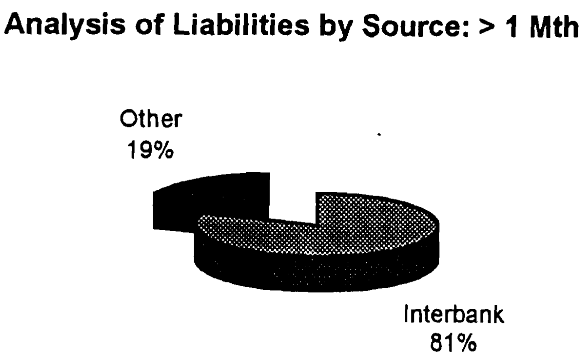


Fig 7.



From these charts, it would appear that interbank funding is the only real source of longer maturity borrowing. In particular accounts for CZK 3.2 billion out of total borrowings of CZK 3.5 billion with a maturity longer than 3 months- approx 90% of this category.

3.2.3. Analysis of Source by Maturity.

The following two charts illustrate the spread of funding source by maturity.

Fig 8.

Inter-bank Funding by Maturity

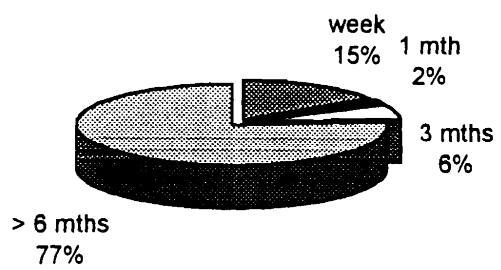
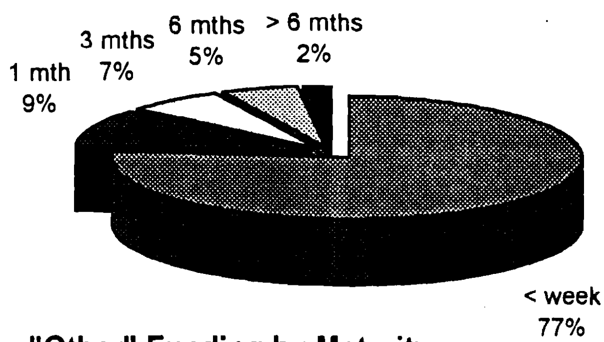


Fig 9.



"Other" Funding by Maturity

APPENDIX D.

Analysis of the CZK Liquidity Profile.

1. Data Source.

The data contained in each table is taken from *Report D - Consolidated CZK + Foreign Convertible Currencies + Foreign Non-Convertible Currencies - Prehled Sketencne [Zbytkove] Splatnosti Aktiv a Pasiv ke dni 30 Zari 1994* submitted to CNB.

Fig 1 - Analysis of Assets in CZK.

Category	Sight to 1 week	1 week to 1 month	1 month to 3 months	3 months to 6 months	> 6 months	Unspecified	Classified
Cash	1,621.40						
Central Banks	3,686.70						
Treasury Bills	9,930.00						
Banks	3,695.40	930.00	10,417.70	1,701.40	680.90		24,913.20
Clients	3.70	1,009.00	209.60	168.40	24,832.50	1,498.70	0
Securities	4,152.07				218.53	1,293.60	0
Other Assets						4,026.00	
Part'p'tions						1,723.40	
Fixed Assets						2,162.80	

"Liquid" securities [e.g. T-Bills] have been allocated to the category "Sight to 1 Week" in accordance with the proposal in the paper *"Risk Management and the Control of Risk in Ceskoslovenska Obchodni Banka AS - Section 4 - Liquidity Risk"* submitted to the management of CSOB.

Fig 2 - Analysis of Liabilities in CZK.

Category	Sight to 1 week	1 week to 1 month	1 month to 3 months	3 months to 6 months	> 6 months	Unspecified
Central Banks	14.00	2.80	26.70	11.70	0	396.10
Banks	1,357.00	814.60	4,350.00	4,350.00	14,767.00	
Clients	18,055.10	2,032.20	3,141.80	1,181.70	4,499.30	65.40
Securities Issued	108.00	469.30	17.60	39.30	7,946.20	324.10
Capital						5,105.00
Others						34,458.60

Fig 3 - CZK Liquidity Profile.

Category	Sight to 1 week	1 week to 1 month	1 month to 3 months	3 months to 6 months	> 6 months
Assets Maturing	23,089.27	1,939.00	10,627.30	1,869.80	61,349.63
Liabilities Maturing	19,534.10	3,318.90	7,536.10	5,582.70	67,562.00
Culmulative Assets Mat	23,089.27	25,028.27	35,655.57	37,525.37	98,875.00
Cumulative Liabs Mat	19,534.10	22,053.00	30,389.10	35,971.80	103,533.80
Cumulative Gap	3,555.17	2175.27	5,266.47	1,553.57	-4,658.80
Ratio of cum Ass/Liabs	118%	110%	117%	104%	96%
Limit	100%	100%	60%	60%	N/A
Excess	0	0	0	0	N/A

This Liquidity Profile report shown is broadly similar to that which would be needed to implement the proposed liquidity limit structure for CSOB, which is in the process of being submitted to ALCO.

2. Analysis of Liquidity Risk.

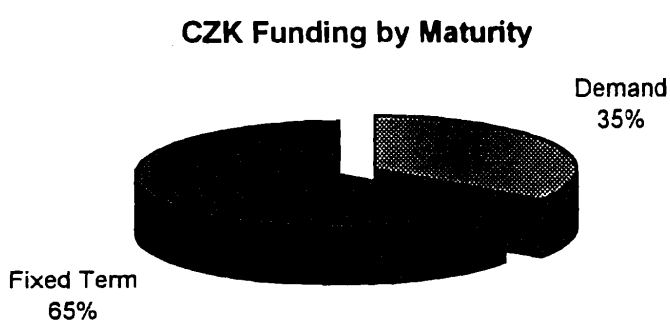
It is clear from the above Liquidity Profile that CSOB has no visible exposure.

3. Analysis of Liabilities.

3.1. Analysis of Liabilities by Maturity Type

The following chart illustrates the breakdown of the reported liabilites - excluding those under the category "Others" and the bank's capital.

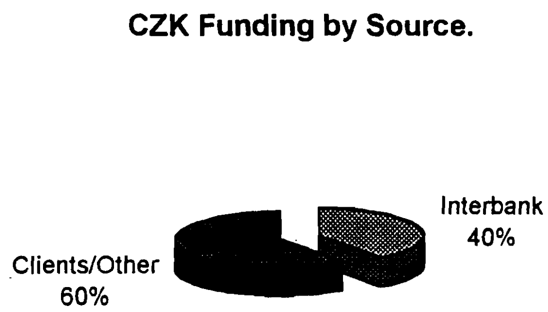
Fig 4.



3.2.1. Analysis of Liabilities by Source.

The following chart illustrates the breakdown of the reported liabilites excluding those under the category "Others" and the bank's capital.

Fig 5.



It is clear that CSOB has a heavy reliance on inter-bank funding [CZK 25.6 billion out of total borrowings CZK 64 billion].

3.2.2. Analysis of Liabilities by Source by Maturity Type.

The following two charts illustrate the concentration of funding source by maturity type.

Fig 6.

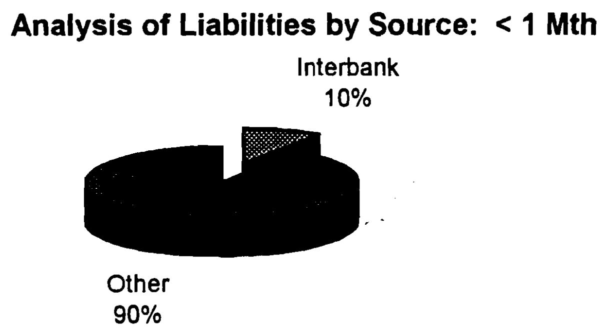
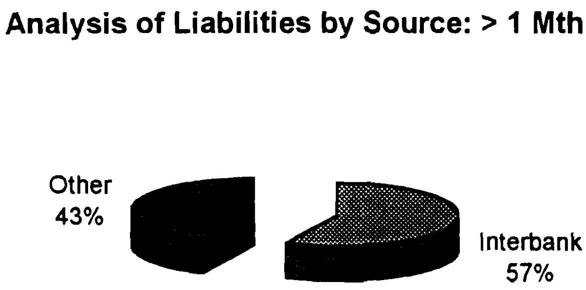


Fig 7.



From this chart, it would appear that, despite the recent bond issue, interbank funding is still the pre-dominant source of longer maturity borrowing. However, the balance has been redressed somewhat [June figures show interbank funding accounted for 62% of funds taken with a maturity longer than 1 months].

3.2.3. Analysis of Source by Maturity.

The following two charts illustrate the spread of funding source by maturity.

Fig 8.

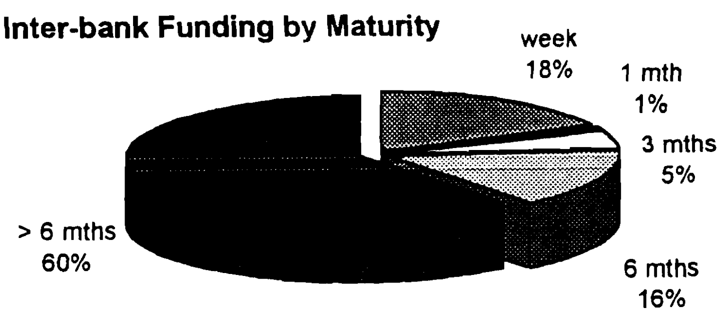
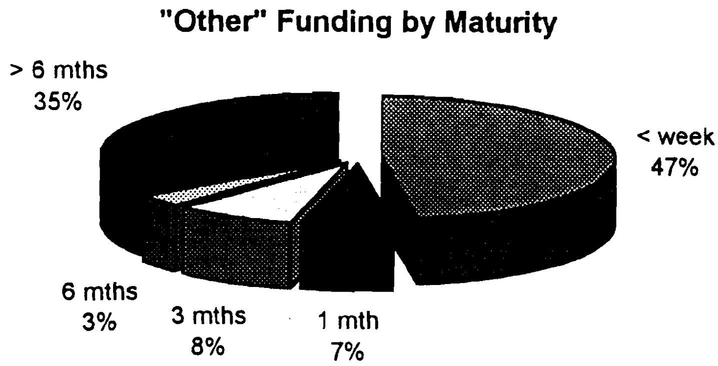


Fig 9.


"Other" Funding by Maturity
> 6 mths
35%
< week
47%
6 mths
3%
3 mths
8%
1 mth
7%