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To: Members of the Executive Board

From: The Secretary

Subject: **Turkey—Sixth and Seventh Reviews Under the Stand-By Arrangement—Foreign Exchange Exposures in the Banking Sector**

The attached paper on foreign exchange exposures in the banking sector provides supplementary information to the paper on the sixth and seventh reviews under the Stand-By Arrangement for Turkey (EBS/01/69, 5/7/01), which is tentatively scheduled for discussion on Tuesday, May 15, 2001. At the time of circulation of this paper to the Board, the Secretary's Department has received a communication from the authorities of Turkey indicating that they do not consent to the Fund's publication of this supplementary paper.

Questions may be referred to Mr. Hoelscher (ext. 37046).

Unless the Documents Section (ext. 36760) is otherwise notified, the document will be transmitted, in accordance with the procedures approved by the Executive Board and with the appropriate deletions, to the WTO Secretariat; and to the European Commission and the Islamic Development Bank, following its consideration by the Executive Board.

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INTERNATIONAL MONETARY FUND

TURKEY

**Sixth and Seventh Reviews Under the Stand-By Arrangement—
Foreign Exchange Exposures in the Banking Sector**

Prepared by Warren Coats (MAE)

Approved by Stefan Ingves

May 10, 2001

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TURKEY: FOREIGN EXCHANGE EXPOSURES IN THE BANKING SECTOR[1]

Executive Summary

1. **At the end of December 2000, private Turkish banks (i.e., excluding banks taken over by the Savings Deposit Insurance Fund—SDIF) reported net foreign exchange liabilities of US$1.4 billion, which was 12 percent of their capital.** When consolidated with financial subsidiaries, their net open positions were US$1.7 billion or 12 percent of their capital. This exposure on average is well under the 20 percent of capital limit permitted by Turkish regulations. A small number of individual banks have been out of compliance with this regulation from time to time, but appropriate measures have been taken to correct the problem in all instances. More recently, following the floating of the Turkish Lira (TL), banks have closed their open position down to US$0.4 billion (5 percent of capital).

2. **Because the financial incentive to be short in foreign exchange is so strong, many in the market and financial press have questioned the accuracy of these data**, which are based on daily average exposures reported weekly by banks to the Banking Regulation and Supervision Agency (BRSA). Putting aside frequent misunderstandings of what the data say, such as failing to include off balance sheet hedges, there is some suspicion that the reported data do not reflect the true positions of many banks. A frequently heard claim, for example, is that many forward purchases of foreign exchange (especially those from related non-financial companies, which are therefore not included in the consolidation), are not genuine or sound and thus do not really protect the bank from exchange rate risk.

3. **The BRSA Sworn Bank Auditors (SBAs) refute these claims.**[2] Three MAE missions examined the issue of foreign exchange exposures. The missions found that the SBAst conduct frequent and thorough on-site examinations and are convinced that banks report their exposures in accordance with regulations. At the same time, many banks claim

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[1] Prepared by Warren Coats (MAE) and Peter Phelan (U.K. Financial Services Agency, retired). The report was reviewed by the Banking Regulation and Supervision Agency, which agreed with its findings.

[2] The SBAs are the well-qualified, on-site bank examiners of the BRSA. Quoting from the Banking Law: "Assistant sworn bank auditors shall be appointed from among candidates who have received a graduate degree in relevant fields and has successfully passed a competitive examination. Those who have worked as an assistant sworn bank auditor for at least three years shall be appointed a sworn bank auditor by virtue of a resolution adopted by the Board with affirmative votes of minimum five members after they have successfully passed the proficiency examination." (Competition for acceptance to the SBAs is high, and they enjoy a reputation with the pubic for high competence and honesty.)

structures that are not specifically covered by the reporting requirement. Banks claim that they have actual foreign exchange exposures in excess of the prudential limits and that they have profited from these exposures (because of the high interest rates on TL assets compared to the rates on foreign exchange liabilities) even when taking account of the losses from the recent devaluation. Again, the SBAs refute these claims. In fact, with regard to the 13 commercial banks taken over by the SDIF in the last few years, 9 of them used such financial structures. However, the structures were detected by the SBA before these banks were taken over and they failed primarily for other reasons. No further structures where found in the audits of these banks after their takeover. This increases the mission's confidence that the SBAs find reporting abuses in banks when they exist.

4. **Three important questions need to be answered:** (a) what are banks' foreign currency exposures and are they excessive?; (b) have banks suffered financially from their foreign exchange exposures, whatever they actually are?; and (c) is the regulatory regime adequate?

5. **With regard to the first question, it seems unlikely that banks' foreign currency exposures are dramatically different than reported by them to the BRSA/Central Bank of Turkey** (CBT) and are certainly substantially less than those reported by the press and foreign bank analysts. Except for the SDIF banks, the reported exposures are reasonable given the risks and expected return. Nonetheless, some banks insist that they have larger exposures than they report. While supervision seems good, those banks that are determined to hide larger exposures are probably able to do so—at least for a while.

6. **With regard to the second question, the large interest rate spread between foreign currency liabilities and TL assets implies that banks made money on average from their exposures even after deducting the devaluation losses experienced so far, no matter what size their exposure.** By late April the TL/U.S. dollar rate had depreciated by almost 45 percent. Whether banks' exposures will prove profitable in the end depends on what the real depreciation ultimately is in relation to the interest rate spreads that were gained.

7. **With regard to the third question, it would be a supervisory concern if regulations were inadequate and poorly monitored.** But regulations and supervision are adequate. A new market risk regulation, which becomes effective January 1, 2002, provides an appropriate and adequate tool for containing and monitoring foreign exchange exposures in relation to capital. The risk of non-performance of a forward foreign exchange purchase or calling a foreign currency guarantee is a credit risk. These risks should be limited by the over all credit exposure to individual or related counterparties.

8. **The mission recommended that:** (a) the BRSA refute market claims that exposures are larger than reported and provide information on an ongoing basis to clarify the situation; (b) review and improve accounting and reporting standards, especially with regard to off balance sheet items; (c) the government temporarily take a larger share of the foreign currency risk by issuing more foreign currency (or indexed) debt so that banks can reduce

theirs without undue pressure on the exchange rate; (d) the 20 percent of capital limit be waived for banks with adequate risk-management systems that adopt the capital charge required under the new market risk regulation in line with best international practices; and (e) the implementation of the new regulation be brought forward on a voluntary, bank-by-bank basis.

I. INTRODUCTION

9. Because the interest differential between foreign currencies and TL has been so large (in relation to the announced rate of depreciation), questions have been raised as to whether banks (and perhaps also the wider economy) have exposed themselves to an excessive amount of exchange rate risk and whether their exposure has resulted in serious loss of capital from the recent devaluation. There is a market perception that banks are significantly overexposed and have incurred heavy losses as a result. The validity of this perception has very immediate implications for the condition of the banking sector following the floating of the TL in February and the policies needed to deal with it.

10. An MAE mission investigated this question in visits to Turkey in February and March (with further follow up in April). Over the two visits, the mission met with BRSA officials, in particular the SBAs, and six commercial banks (large, small, and foreign). More generally, the mission was also concerned whether existing regulations are adequate and whether foreign currency exposures imply a major vulnerability for the banking system.

11. After summarizing the regulatory framework, the Section III examines the data on foreign exchange exposures submitted by banks to the CBT and the BRSA. It then examines misunderstandings and claims in the market with regard to the size of these exposures. Section III provides the mission's assessment of the answers to these questions and Section IV sets out its recommendations.

II. SIZE AND REGULATION OF OPEN POSITIONS

A. Regulatory Framework

12. Prudential regulations limit banks' exposures to exchange rate risk to 20 percent of their capital (i.e., the excess of foreign currency liabilities over foreign currency assets, both on and off the balance sheet, must be less than 20 percent of capital). This limit applies to each bank individually (including its branches abroad) and when its balance sheet is consolidated with the assets and liabilities of its financial subsidiaries. There is also an older style regulation on the ratio of foreign exchange assets and liabilities (see Table 1).[3]

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[3] It should be noted that prudential regulations prior to the establishment of the BRSA in August 2000 were issued by the Treasury in its capacity as supervisory authority for banks.

13. In addition to these regulations, the CBT, in cooperation with the BRSA, sent a letter to all banks in October 2000 stating the criteria that would be followed in disqualifying forward purchases of foreign exchange when calculating banks' net open position. These included non-market terms for the contracts. Supervisors are empowered to require the unwinding of any illegitimate transaction and the recalculation of the open position. If this creates a violation of the limit, the appropriate penalties are exacted. The BRSA can also take further action against a bank if there seems to be an endemic problem. This procedure has been followed fully in Turkey since the creation of the BRSA, but as noted below, less than 1 percent of banks' foreign currency assets have been disqualified.

14. These regulations will be replaced on January 1, 2002, by the new regulation on capital charges for market risk that was issued at end-January 2001. The new regulation, which also covers foreign exchange risks, is comprehensive and in line with the recommendations of the Basel Committee for Banking Supervision.

Table 1. Turkey: Current Foreign Exchange Regulations

Regulation	Issued	Ratio	Penalty for non-compliance	Reporting
1. Communiqué on the "Consolidated NFX/Capital base" standard ratio	CBT and Treasury issued Dec 21, 1999, effective June 1, 2000	Net Foreign Exchange Position < 20% of capital base, on a consolidated basis.	Banks to increase capital, within 6 months, to a point where the ratio is met	Monthly (based on end month)
2. Communiqué on "Total NFX/Capital Base"	CBT and Treasury issued and effective Aug 29, 1998	Net Foreign Exchange Position < 20% of capital base, on a solo basis.	100% of the excess position to be held at CBT as non-interest-bearing demand deposits	Weekly (based on daily average)
3. Circular on Management of Foreign Exchange Positions	CBT issued August 5, 2000, effective September 1, 2000	(1) Liquid FX Assets > 10% of liquid FX liabilities (2) 80% < FX Assets/FX Liabilities <110% (3) 75% < FX Assets/FX Liabilities < 115% for convertible currencies	On the excess position, 1.5 times CBT rediscount ratio for short-term credits. CBT can apply different ratios to different banks or group of banks.	Weekly

Sources: BRSA and CBT

B. Reported Exposures

15. On December 30, 2000, Turkish banks reported U.S.$105 billion in foreign currency assets and U.S.$110 billion in foreign currency liabilities for a net exposure of US$5.4 billion. Excluding SDIF banks, the net exposure was US$1.4 billion (Table2)[4] This

[4] Unless stated otherwise, the banking sector will refer to banks other than SDIF banks. SDIF banks have both a large foreign currency exposure and negative net worth, thereby distorting (continued...)

was 12 percent of these banks' capital, well within the prudential limits. On a consolidated basis, these banks' net open position was US$1.7 billion, or 12 percent of capital. At the same time, three banks were out of compliance with the prudential limits on a solo basis and eight banks were out of compliance on a consolidated basis. In the latter group, one is a state bank, four are small investment banks, and three are private commercial banks. In the previous month these three commercial banks had been in compliance with the regulation.

16. On March 16, 2001, following the floating of the TL, the latest date for which data are available on a solo basis, non-SDIF Turkish banks reported US$78.9 billion in foreign currency assets and US$79.4 billion in foreign currency liabilities for a net exposure of US$ 0.4 billion. This was 5 percent of capital. Thus, since the floating of the TL, banks have significantly closed their foreign currency exposures.

17. Data on foreign exchange exposures are carefully checked by the SBAs, the on-site examination teams of the BRSA. They are confident that the data reported by banks are broadly correct, and banks have confirmed that, from their perspective, returns are completed accurately and in accordance with the regulations.

C. Hidden Exposures

18. Despite the figures reported above, there is a perception by many in the market that bank foreign exchange exposures are significantly larger than reported. To some extent, this perception results from various misunderstandings that the authorities have failed to correct. Some have focused **on the net on-balance sheet open position of the entire banking system.** The end December 2000 exposure measured in this way was U.S.$18 billion, with capital of U.S.$11.4 billion. However, the entire banking system includes the banks that have failed and been taken over by the SDIF. These banks generally have large negative net worth and large foreign currency exposures that the SDIF has been slow to correct; nonetheless, all such exposures are guaranteed by the government. A more meaningful measure of the exposure risk to the banking sector (though not of the potential cost to the government), therefore, is obtained by excluding the SDIF banks. The end-December 2000 net on-balance sheet open position of the banking system excluding the SDIF banks was US$13.7 billion, with capital of US$12.1 billion.[5]

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the picture if aggregated with other banks. Their losses are guaranteed and paid for by the Treasury/SDIF. State-owned banks are included. As they do not do a large foreign currency business and comply with the limits, including or excluding them does not materially change the picture.

[5] Most of the SDIF banks were recapitalized in December. As a result, their positive net worth was restored until interest rate increases reduced the value of the government securities that they received.

Table 2. Turkey: Net Foreign Exchange Position of Banks
(In billion US dollars, as of end-December 2000)

	Banking system	Banking system excl. SDIF banks
On a solo basis		
FX assets	104.7	99.2
FX liabilities	110.1	100.6
Net FX position	-5.4	-1.4
Net FX position (%) capital	-48.2	-11.7
On a consolidated basis 1/		
Net FX position	-5.7	-1.7
Net FX position (%) capital	-43.0	-12.4
Memorandum Items (as of end-October)		
Forward FX purchase contracts	40.4	
o/w: with related parties	11.0	
Forward FX selling contracts	33.5	
o/w: with related parties	10.4	
Net FX forward contracts	7.0	
o/w: with related parties	0.6	

Source: BRSA.

1/ Data are based on solo positions of banks that report on a solo basis and on consolidated positions of banks that report on a consolidated basis. All banks with financial subsidiaries or affiliates report on a consolidated basis.

19. These figures, however, exclude foreign currency indexed assets and liabilities and off-balance sheet hedges. The indexed and off balance sheet items are quite properly included in the prudential limits on foreign currency exposures. Thus, the more comprehensive measure of exposures reported to the CBT and the BRSA for end-December 2000 for the entire banking system amounted to US$5.4 billion, or 48 percent of capital. For the banking system excluding SDIF banks it was US$1.4 billion, or 12 percent of capital, which is the more appropriate measure of the system's exposure.[6]

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[6] In January 2001, banks entered into US$27 billion in forward foreign currency sales and US$36 billion in forward foreign currency purchases. The net forward purchases of US$9 billion, contributed to the cover for what would otherwise have been net foreign currency liabilities of US$11 billion.

Forward contracts and their quality

20. Market analysts have not accepted the validity of such off-balance sheet hedges. Attention has particularly been directed to the suspicion that some amount of the off balance sheet forward purchases of foreign exchange have not resulted from commercial needs of bank customers to hedge, but rather have been entered into at banks' initiative for the purpose of covering an otherwise excessive exposure. Such contracts would not be fulfilled if the counterparties were unable to provide the foreign exchange. Normally, forward contracts are provided by banks for their customers wishing to hedge the exchange risk of expected foreign currency receipts or expenditures. Thus, they are able to fulfill the contract out of foreign currency receipts and would not be affected by changes in the exchange rate.

21. Some of these forward contracts are with non-financial firms within the same group as the bank, and questions have been raised whether these contracts were made at arms length with normal market terms and meeting normal market conditions, i.e., whether they were "fake." The mission investigated these concerns in several ways. The BRSA requires banks to report information on all forward contracts, including the counterparties. These data show that forward purchase contracts with related parties account for about 27 percent of all such contracts as of the end of October 2000. However, the SBAs have found that virtually all forward contracts with related parties are genuine. They have disallowed a negligible number of all foreign exchange forward contracts (less than 1 percent during one year) from their exposure calculations.

22. There are perhaps sometimes misunderstandings of terminology. Market participants often refer to "fake" transactions, to refer to foreign exchange transactions that are purely speculative, i.e., not directly linked to an underlying trade or investment transaction, or designed to hide an exposure (see the next section). Speculative forward contracts are not "fake", per se. A genuine forward contract may be with a counterparty that is speculating rather than hedging a currency position. This is normal behavior and poses no particular risk to the bank if the counterparty is creditworthy (able to sustain the possible losses and fulfill the contract).[7] Thus, the issue of the forward foreign currency contracts should properly be seen as one of counterparty risk and whether banks have properly evaluated and limited that risk.

23. The SBAs carry out a detailed analysis of banks' counterparty credit risk. They check that appropriate analysis has been undertaken by the bank, that relevant limits are in place, including ones for off-balance sheet exposures in foreign exchange, and that exposures are in

[7] In the London foreign exchange market, for example, transactions consist primarily of such speculative deals. In 1998, out of a daily turnover of US$637 billion on the London market, at most 7 percent were with non-financial counterparties (*Central Bank Survey of Foreign Exchange and Derivatives Market Activity, 1998*, Bank for International Settlements, May 1999).

accordance with such limits. Limits for foreign exchange exposures are typically calculated at a percentage of face value. The SBAs have found no examples in the last year of banks undertaking foreign exchange business without proper analysis and/or outside duly authorized limits. They are thus confident that, although "friendly" deals of the kind postulated cannot be completely ruled out (see below), they do not occur to any important extent, either as to numbers or amounts.

24. "Fake" would be an appropriate term to use only in cases where, at the outset, it was manifestly impossible for the counterparty to fulfill its side of the bargain, or there was no intention of doing so. The first point would be picked up by the SBAs, who review counterparty credit analysis as mentioned above. The second is more difficult to assess, particularly at the outset, but should be revealed on maturity of the deal. The SBAs should pick up unexplained failures to pay on the part of counterparties that are not appropriately dealt with by the bank concerned. The SBAs are confident that such deals are extremely limited in number. The mission accepts this view.

"Fake" reporting and window dressing

25. Banks could enter into "fictitious" hedges, e.g., by doing a hedging transaction (such as a forward contract) with a friendly counterparty just before a reporting date, and unwinding the transaction shortly thereafter. According to the SBAs, this does occur from time to time, but regulations forbid it and, indeed, since the open position has to be maintained within limits on a daily basis (albeit that reports are weekly for solo banks) there would be no point in such transactions.[8] Window-dressing transactions for external presentation purposes are another matter, but would still be caught by the regulations if they were breached, e.g. by being cancelled prematurely. The SBAs claim considerable experience in detecting such deals, which are of declining significance.

26. Banks might also attempt to hide their exposures in branches or subsidiaries abroad. The position and activities of branches are, of course, consolidated with the rest of the bank in its weekly report of daily data. It is true that Turkey does not have Memoranda of Understanding with other banking centers that would enable the SBAs to examine individual files there. The SBAs refer specifically to the Cayman Islands in this connection. However, Turkish banks have to report consolidated data to the supervisors in Turkey (i.e., data that are inclusive of branches and subsidiaries in other centers) which are checked against the banks' books in Turkey. Such checks have revealed nothing untoward. Moreover, such offshore activity represents a relatively small part of Turkish banks' balance sheets, and information on significant counterparties should be available in accounting records in Turkey. Again, the SBAs are confident that it is not possible for banks to hide meaningful activity from them in this way.

[8] On the other hand, the monthly consolidated report is based on the data from the last day of the month only and could thus give rise to month-end window-dressing behavior.

27. Returns on the open position are submitted by banks weekly on a solo basis and monthly on a consolidated basis[9], to both the CBT and BSRA. They are cross checked, with discrepancies being explored with the relevant bank, and are also checked by the SBAs as part of their regular examinations. These regular examinations take place at least once a year, are comprehensive, and are carried out by a professionally trained staff, using a modified CAMELS framework. While errors and omissions undoubtedly occur (as is the case everywhere) the mission believes that systematic and extensive misreporting would not escape the authorities' attention on a regular and ongoing basis.

28. At the request of the mission, the SBAs reviewed their bank examination reports for the year 2000. In that year, as usual, all banks were visited. From this review, it was ascertained that:

- Fewer than 1 percent of total deals by volume were excluded by the SBAs from the calculation of the banks' open positions on the basis that they breached regulations or the CBT's directive on acceptable forward foreign exchange contracts.
- Three banks were found to be in breach of the open position limit as a result of the adjustments to the calculations. This is in addition to those banks that reported open position breaches in their normal reporting.
- No examples were found of deals undertaken that were not in conformity with counterparty limits, including limits for connected parties, nor any that lacked proper commercial justification.

29. During each examination, the SBAs looked at a significant sample of all transactions. In the foreign exchange area in 2000, the examinations covered at least 50 to 60 percent of the deals by volume and counterparty. For banks in difficulty, most of the deals were examined.

30. An examination of a foreign exchange deal by the SBAs entails checking that dealing and accounting records are proper, and that deals conform with dealing and counterparty limits in force, have an underlying commercial validity, are in conformity with regulations and CBT guidelines, and are properly included in returns to the regulatory authorities. Some more limited sampling is undertaken to ensure that deals are done at market rates.

31. The SBAs are confident that banks' reporting is generally of a high standard and the figures produced fairly reflect the underlying reality.

[9] Means consolidation of financial companies within the banking group.

Friendly counterparties and structures

32. Nonetheless, many banks claim that their exposures do significantly exceed the 20 percent limit. A number of Turkish banks visited by the mission in February (before the TL was floated) and in mid March (after the floating) stated that their foreign exchange exposures significantly exceeded the 20 percent limit. These banks insisted that they were typical of other private banks in this regard.[10]

33. While these banks report correctly what they are asked to report to the BRSA/CBT, they claim that it is easy for them to find structures that are not covered in the regulations, which therefore do not need to be reported. Some examples of such structures were described to the mission to illustrate the possibilities.

- *Special structures provided by London investment banks.* The London bank might book a TL loan to a Turkish bank but shift all of the TL exposure back to the Turkish banks and will thus be willing to offer the loan on the equivalent of U.S. dollar terms. Such an arrangement, in economic terms, is really a dollar exposure.

- *Structures designed with domestic counterparties.* The Turkish bank can borrow TL from a domestic company with the economic features of a dollar loan. Again the bank has an open position (and the high return, and risk, that can generally be earned from it), but records matching TL assets and liabilities.

- *The consolidated reporting requirements enable banks to circumvent the open position limit.* Banks have to report their *solo* open position on daily average basis, but *consolidated* positions of the financial group need only be reported as of the end of the month. Thus, for all but that reporting day, banks can, quite legitimately, lay off some of their open positions with other members of the group. This is in addition to any positions maintained with non-financial related parties, mentioned above.

34. The SBAs maintain that these structures would be detected in their examinations and that they have not found them in significant numbers. This conclusion is strengthened by the findings in the 13 banks that have been taken over by the SDIF in recent years, in which on-site examinations by the SBAs have been undertaken. In 9 of these banks, financial structures designed to hide foreign currency exposures were found and corrected. All such discoveries were made before the banks were taken over by the SDIF. After they were taken over, further intensive examinations by the SBAs, with the full support and assistance of the new SDIF

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[10] The conflicting claims of some banks and the SBAs pose a dilemma for the mission. The SBAs had an incentive to present their work to the mission in its best light. The banks had an incentive to overstate their exposure in order to gain the mission's support for their request to the Treasury to swap foreign exchange or TL government securities as an easy way to reduce their exposure.

appointed managements, have found no additional cases where there was any deliberate or material misreporting of foreign exchange exposures. Special structures to hide foreign currency exposures no longer existed in these banks.

III. Mission Assessment

A. Actual Exposures

35. Turkey has satisfactory foreign currency exposure regulations and extensive and appropriate reporting requirements.[11] When taking all exposures (on-and-off balance sheet) into account, as is appropriate, for all banks other than SDIF banks, the average exposure of the system is well within the 20 percent of capital limit on both a solo and a consolidated basis. The few banks that have occasionally exceeded the limit in the past year (generally because of low capital) have been dealt with through supervisory measures in a satisfactory manner.

36. Market analysts often quote much larger exposures, well in excess of the limits. These estimates fail to include the off-balance sheet hedges and/or include SDIF banks. More careful analysts have avoided these mistakes but still questioned the soundness of some of the off balance sheet hedges, in particular the forward purchases of foreign exchange (sometime from parties related to the bank).

37. The SBAs routinely conduct very professional and comprehensive on-site examinations of these hedges and other foreign currency activities of banks. They have not found any material evidence that would support the doubts raised about off-balance sheet hedges. More generally, their examinations confirm the general accuracy of banks' reported data and the conclusion that banks' exposures are what they report them to be. The evidence from banks taken over by the SDIF also supports this conclusion.

38. Some banks do maintain that they use special structures that do not need to be reported to maintain exposures that are larger than the limit. Thus the evidence contains some contradictory elements. The mission is prepared to believe that some banks are able to hide the full extent of their exposures, and the financial incentive to do so is not in question. Given the lack of hard evidence and the confidence of the SBAs that they would be able detect such structures, the mission tends to discount bank claims of large exposures. These claims in any event would suggest exposures much smaller than those generally claimed by the financial press.

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[11] While existing regulations are satisfactory, they are being replaced soon by more modern and effective regulations (see section C below).

B. Implications for Bank Capital

39. Have banks lost money on their foreign currency exposures as a result of the recent devaluation? An assessment requires combining the past gain in interest income from net short positions with the recent loss from devaluation. A short position (no matter how large) would only require a TL/U.S. dollar interest rate spread of 40–50 percent for one year to generate an income sufficient to cover the devaluation losses incurred in February/March 2001. This compares with the 70 percent actual spread in January 2001 and over 90 percent in April 2001. During the February crisis, overnight TL interest rates where temporarily several thousands of a percent (uncompounded) and some banks with excess TL liquidity claim to have recouped the foreign exchange short position losses from the devaluation within a week. In addition, the extent to which any losses on speculative forward contracts may be converted into credits that eventually go bad cannot be known for some time. In addition, some amount of foreign exchange and foreign exchange indexed credits may become non-performing over the next year or two. More generally, NPLs are also likely to rise as a result of the high interest rates and economic slowdown. It is not possible to estimate the relevant interest rate spread (adjusted for the exchange rate change) leading up to the losses from the February devaluation, but it is not obvious that most banks have lost money by being short when taking both factors into account.

40. The mission's assessment is that most banks did not incur significant net losses as a result of the devaluation of some 40–50 percent experienced so far. However, any increases in bank capital over the past year have been significantly reversed by the devaluation in most banks. Many banks have now become undercapitalized, more as a result of interest rate losses on their maturity mismatch than from open foreign currency positions.

41. Have banks' foreign currency exposures put too much capital at risk? The reward from short positions has been large for some years, but if too much capital is at risk it can still be lost if a devaluation is large enough (relative to the expected real return). The extent of the devaluation cannot be known in advance. However, the exchange rate has already overshot its purchasing power parity level so that a large further devaluation seems unlikely. The banks that claimed to have larger than permitted exposures maintained that their foreign exchange positions are based on a proper assessment of the risks and rewards involved. While the better-run banks may well have managed their foreign exchange risks appropriately, this may not be the case for all banks.

42. With a floating exchange rate the risk of a given exposure has increased. Against this, the still high interest rate differentials between foreign currency and TL make open positions potentially very profitable. Thus banks could continue to absorb quite a lot of additional risk. In the existing environment banks may be expected to reduce but not eliminate their open positions, as in fact they have done. Open positions in banks can only be reduced in the short run at the expense of CBT international reserves or by getting the real sector of the economy or the government to accept a larger share of the exposure.

C. Policy Implications

43. Foreign exchange exposures in the banking sector are large for the normal circumstances Turkey seeks to achieve. Under such circumstances greatly reduced interest rate spreads and modest exchange rate volatility would change the risk return relationship and should cause properly run banks to reduce their exposures on their own accord.

44. Until normality has returned, the weakened banking system must rebuild its capital base. At the moment, short foreign currency positions represent one of the few ways in which the banking system can earn a profit from which to rebuild capital. Moreover, an over-hasty closing of open positions could risk an overshooting of the exchange rate, whether this is forced by the regulators, or chosen by banks who become increasingly nervous of the risk they are running, notwithstanding the rewards.

45. The market risk regulation adopted by the BRSA earlier this year, which goes into effect January 1, 2002, will introduce a very important improvement in the regulatory environment. It is thorough and comprehensive, and brings Turkish regulation in this area in line with best international practice. It will place the onus on banks to define and monitor the risks they take and to assign capital to cover them. Banks will have no scope to hide behind technicalities of foreign currency exposure limits and reporting requirements. There is, therefore, less scope for banks to hide their true exposures. Furthermore, because they will be able to have open positions if properly capitalized, they may be more willing to reveal their true position (if they were able to hide it before).

IV. Recommendations

46. Resolving the general macroeconomic problems of Turkey (high inflation and high fiscal deficits) will help resolve any problems that might exist with regard to banks' foreign exchange exposures by removing the financial incentive for large exposures. Further consolidation of the banking sector through mergers of viable banks and takeovers and liquidations of non-viable banks, will also improve banks' risk management and increase the profitability of "normal" banking. All of these will lead banks to reduce their reliance on short foreign currency positions as a source of income. For the moment, it is desirable to proceed cautiously and to avoid extreme action. Specific recommendations include the following:

47. **Provide more information to the public in a transparent way.** Misinformation about foreign exchange exposures has gone uncorrected by the BRSA. Thus the public and market analysis have become more inclined to believe that these exposures are a larger problem than do the authorities or the mission. The BRSA needs to make a large and sustained effort to improve its provision of information to the public about its policies and banking sector developments.

48. **Introduce the market risk regime ahead of schedule on a voluntary basis.** The new market risk regime is due to come into effect on January 1, 2002, and the relevant

regulation has already been published. Given that the new regulation will soon come into force and that many banks have already started preparations to meet its requirements, it appears unnecessary to streamline, temporarily, the current regulations, despite the fact that they may appear unduly complex.

49. **Given banks' claims that they have already been deciding on their own risk appetite in foreign exchange rather than aligning themselves with the regulation, there would be merit in allowing banks that wished to do so to adopt the new market risk regime ahead of schedule.** Many banks have already introduced systems and managerial arrangements for the new rules, and there would, in these circumstances, seem to be no point in waiting. For such banks the implementation might be brought forward on a voluntary, bank-by-bank basis. In exchange for the early adoption of the market risk approach, banks would be freed from the existing regulations in this area. Greater transparency should result.

50. **Include forward foreign exchange contracts in the credit exposure limits.** The primary concern and potential weakness in the prudential regime concerns the counterparty credit risk implicit in speculative forward purchases or sales of foreign currency. This exposure (weighted by the probability of a large devaluation) should be included in the over all exposure limits to individual counterparts (including related parties). At present it is not. In order to add these exposures to the credit limit regulation, the Banking Law will need to amended to change the definition of credit.

51. **Improve accounting and reporting standards.** Banks have claimed that they have been able to avoid the regulations in ways that stood up to intensive scrutiny by the SBAs. A working party composed of representatives of the banks, the SBAs and the accounting profession to review reporting arrangements and recommend improvements would be the most appropriate way to achieve real improvements in the future. In addition, the monthly consolidated report to the CBT/BRSA, which is based on the end of month position, should be based on the average of the daily positions.