

Swap transactions as a financial tool, their recognition as international accounting standard 39 and display in financial statements

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Abstract

Developments in international financial markets concern both developed countries and developing countries closely. The transactions of institutions arising from commercial activities display a more complex and more risky state in line with international economic developments. The globalization trend in the world economy, the extreme fluctuations in currencies, interests and product prices have rendered closely following up the developments in financial tools mandatory. Taking advantage of derivative financial tools which increase the revenue of assets by taking future risks into consideration, impact a decrease in debt costs and has the purpose of transferring risks are of vital importance with respect to the successful management of companies. At the present time in which international commerce, free market economy and globalization has gained in importance, one of the derivative products used in risk management and have a wide implementation area is swap transactions. Swap transactions can be expressed as a financial transaction including the exchange of interest, foreign currency or both between two or more parties. Swap transactions in particular are used for purposes such as protection against risks due to interest rates and exchange rates, ensuring low cost financing, changing the debt structure and entering different markets. In this study, the generally defined characteristics of swap transactions, which have an important standing within financial risk management and have been rapidly developing in the world in recent years and their recognition according to the International Accounting Standard 39 concerning the recognition of swap transactions, which has in particular termed the study have been focused on. In the framework of the standard, interest swap and foreign currency swap implementation study were included with respect to the matter.

Keywords: Derivative Instruments, Financial Risk, Hedge Accounting, Swap

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1. Introduction

In the economic system, flows of money between countries arise from international commerce and capital transactions. After World War II, exchange rates determining international payments have been managed by the Bretton Woods system under the auspices of IMF (Pirinçci, 2000:1). With the collapse of the Bretton Woods system fluctuations in exchange rates and interest rates have started to occur in the 1970s. Against this situation, serious risks have started to occur for enterprises and banks working in the international field (Chambers, 2007:1). Therefore in order to protect themselves from these fluctuations in exchange rates and fluctuations in interest rates and yield gains, financial circles have developed very important financial techniques in the last twenty years. With the rapid increase in financial risks methods which are not sufficiently flexible and have higher costs, known as traditional risk management techniques such as the significant amounts of provisions made, the diversification of exports and imports, export insurance implemented according to government policies have been replaced by contemporary risk

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management techniques. As a result of these developments, derivative products have started to be used in order to contribute to the continuation of stability in markets by adding depth to financial markets at the macro level, while implementing an effective risk management policy by minimizing risks due to the uncertainty about the future at the enterprise level (Kaygusuzoğlu, 2011: 138-139). Against the variability risk of exchange rates exchange future markets (1972), currency swaps (1981), currency options have started to be used (1982); future markets (1973), interest swaps (1982) and interest options have been used against the variability risk in interest rates (1982); future markets, commodity swaps (1986) and commodity options (1986) have started to be used against the variability risk in commodity prices (Norman, 1998:23-24). Consequently, modern risk management techniques which are more advantageous compared to traditional methods have caused significant developments in risk management with less costs and more flexible opportunities in use. These techniques which have accelerated in pace after 1980 and have shown great development in a short period of time have become preponderant in the international money and capital markets (Norman, 1998:1). Although many techniques have been developed in order to eliminate risks, swap agreement, which were started to be used in order to overcome exchange regime restrictions in England during the 1970s, have been the most widely recognized and most rapidly developing one among these techniques (Türkkan, 1998:1). Swap agreements have initially gotten by on parallel and mutual credits and have reached very complex structured today. In course of time, the intensification in the swap market had materialized at a higher extent than expected (Pirinçi, 2000:2). The reason therefore is however that swap transactions can respond to demands where other financing methods are insufficient. (Kabakçı, Taner, 1993:67-68).

2. Financial Risk Management

Financial risk nowadays does not only determine the profitability of companies but also whether they can continue their presence. Unexpected changes in exchange rates, interest rates and commodity prices may form unignorable risks. Having the most developed production technology, finding the cheapest labour force or having established the best marketing system is no longer sufficient for enterprises (Müminoğlu, 1994:7). In cases where financial risks are not well managed, enterprises facing such risks may become involve in a failure. In order to speak of developing and changing conditions have shown that assuming risks by itself is not enough for speaking of a successful venture, has shown that real success is possible with good risk management and such understanding has turned into a slogan with the expression “Don’t assume risk, manage it” (Sayılğan, 1995:323). Financial risk management includes a dynamic process as regards the discovery of suitable risk avoidance techniques such as associating the financial decisions takes with variables such as exchange rates, interests and prices; the revision of suitable solutions at the appropriate time and continuously, the adoption of new measures when necessary and the implementation thereof (Pirinçi, 2000:4). In short, financial risk management encompasses the efforts to avoid financial risk and their elimination.

2.1. Some of the Financial Risk Types

In this study, as a requirement of our subject matter, risks arising out of unexpected changes in exchange rates and interest rates are taken up from amongst many risk elements affecting companies.

2.1.1. Exchange Rate Risk

Currency risk can be defined as the changes an unexpected change in exchange rates causes in incomes and expenses of the environment or its cash flows in general (Norman, 1998:23-24). In other words, currency risk expresses unexpected changes in financial values exposed to the impact of currency.

2.1.2. Interest Rate Risk

Interest rate risk emerges when there is a nonconformity between financial assets and liabilities on a term or interest rate basis or when its floating rate liabilities generate an uncertainty in future cash flows. Interest rate risk is influential on a company basis both in active and passive structures (Pirinçi, 2000:9). While interest rate changes affect the active proceeds of the company on the one hand, it also changes the cost structure of its passive liabilities on the other

3. Financial Tools and the Notion of Swap

According to the International Accounting Standard 32 financial tools are defined as “agreements causing an increase in the financial assets of an enterprise and the financial debts or equities of another enterprise”. Financial tools include both basic financial tools such as loan stock, receivables, and derivative products such as forward, futures, currency swap and financial options. Derivative products are agreements made between two parties. In these agreements one party agrees to make a cash payment to the other party at any date or at certain dates, against which it receives a

financial tool, commodity or another specie from the other party (Türkkan, 1998:4-5). Derivative products have emerged as a result of the demand for products which will eliminate or minimize the risks enterprises face. Derivative products initially emerging on the market are forward, swap, futures and option agreements (Selvi, 2000:6). Derivative products may affect the risks incurred by enterprises. By using derivative products, it is possible to get rid of unwanted risks, or even redirect the risk being incurred.

A swap agreement, is a swap transaction essentially based on David Richardo's comparative advantages theory, whereby parties can decrease loan costs by exchanging interest or currency (Tenker, 1999:376). In other words, swap agreements is the implementation of comparative advantages in foreign trade in financial markets. In a swap agreement real debts are not exchanged and both parties pay their debts at due dates. Exchange is being made over a presumptive principal. (Sevilengül, 1999:279) After the explanations made on swap agreements, we can say that swap agreements have three important functions. Accordingly swap transactions;

- Integrate different capital markets,
- Provide enterprises the opportunity to take advantage of the differences markets display in institutional and structural terms,
- Ensure flexibility in risk management.

The most important development in swap transactions has occurred with the influence of the World Bank. The World Bank had started a series of currency (money) swap programs from August 1981 till end 1983. The most well-known among these is the swap agreement made between the World Bank and IBM Company through the Saloman Brother Company. Although the World Bank wished to find funds in Swiss Francs and Deutsche Marks, obtained loans from American markets where it could obtain cheaper funds as compared to European markets and was better recognized and gave these loans to the IBM company; then performed swap transactions by taking the money yielded from Swiss Francs Deutsche Mark bills issued by the IBM company. According to the explanation it made in its 1983 annual financial report, the World Bank currency (money) swap agreements have decreased the bank's borrowing cost from %10 to %8,9 in average. The success of this program caused the rapid development of currency swap markets (Pirinçi, 2000:13). Currency swaps were followed in the same year by the first interest swap made between Citibank and Continental Illinois. In the following years pursuant to this transaction which can be considered to be a turning point interest swaps have attracted much more attention and reached a more wide spread area of use compared to currency swaps (Türkkan, 1998:22). Looking at the world swap market; % 90 of the transactions are formed by interest swap agreements, while the % 10 portion is formed by money swap agreements. Swap transactions initially performed only between Central Banks have later come to be a method adopted by commercial banks, multinational enterprises and public entities (Kabakçı, Taner, 1993:67).

In general there are two basic reasons for undertaking swap transactions. One of these reasons is economic while the other is risk management. In more exact words parties undertake swap undertakings to benefit from markets they normally can't access and obtain funds from, decrease resource costs, increase the efficiency of interests or manage interest rate risk, currency rate risk and the liquidity risk.

3.1. Swap Types

Swaps have various types in international markets. However, we can gather swaps in four different groups in terms of structures. These are interest swaps, currency swaps, asset swaps and currency swaps. Other types of swap agreements however are comprised of different variations or compositions of currency and interest swaps. Since the currency and interest swap practices will be included in the study, these two swap types have been explained.

3.1.1. Interest Swaps

The foundations of interest swap are formed by the exchange of payments due to debts in equal amount but with different interest conditions belonging to two companies with different credit ratings. In this transaction, only interest payments change hand and principals are not exchanged (Kıyılar, 1998:84). In other words, in interest swap transactions, parties make the interests they undertake to pay subject to exchange and not the principals they are indebted towards markets from which they have obtained loans. Principals are exchanged in a representative manner, and a reach exchange therein is not the case. In such case, parties pay interest in place of one another to markets they have obtained credits from (Kaynak, 1999:51). The greatest difference distinguishing interest swap from money swap is the above mentioned fact that in interest swap the principal is exchanged neither initially nor by the end of the term.

The exchange of the principal is of a representative nature, in which case the risk is only the case for interest payments (Selvi, 2000:26). The fact that merely the interest payments are included in the risk has ensured that interest swap is more widely recognized in international markets compared to money swap.

Thanks to the interest swap, parties transfer their competitive advantages to one another. Thereby, both parties get the possibility to indebt with more attractive interest rates. The most important excuse for the spread of interest swaps is obtain a lower borrowing cost by means of parties using each other's relative advantages in different markets.

3.1.2. Currency Swaps

Currency swap is the exchange of different money movements in equal amounts but of different currencies at the due date over the original currencies and with a certain exchange calculation previously agreed upon (Kurtay, 1997:18). In other words currency swap is the exchange of loan debts obtained in different currencies. There are mainly two reasons for undertaking currency swap: The first reason is the lack of loans in the required currency and the availability of loans in another currency and the swapping thereof into the desired currency. The second reason is the aim of paying lower interests. For this purpose loans are obtained not in the required currency but another currency with a lower interest and swapped into the desired currency (Kıyılar, 1998:89). Moreover, contrary to interest swap interests, principals are also exchanged between parties in money swap transactions.

Three basic phases are the case in currency swaps;

- The exchange of principals between the parties over exchange rates agreed upon,
- The periodical exchange of interest payments,
- The mutual return of principals by the end of the agreement.

4. The Recognition of Swap Transactions according to International Accounting Standards 39

IASC's standard no. 39 is for the "Recognition and Appreciation of Financial Tools". The purpose of this standard is to set forth the necessary principles for the recognition, appreciation and explanation of the relevant information on financial tools in the enterprises' financial statements. When we look into the scope of this standard; while bonds, equities, loans granted, trade receivables, trade liabilities, *interest rate swaps*, *currency swaps*, forward agreements and option agreements are within the scope of the standard; subsidiary partnerships, ventures, financial leasing transactions, long term assets and insurance agreements are not within the scope of the standard.

The International Accounting Standard 39 foresees that financial assets be classified according to their purposes as of the date on which they were bought and their appreciation by different methods according to this classification. According to IAS 39, financial assets can be classified in four main groupings;

- Financial assets for marketing purposes: These are comprised of assets obtained with a profit purpose in short term price changes generally by the sale thereof.
- Marketable securities to be held until maturity: Financial assets of a certain term, which can and is intended to be held are within this group.
- Loans and receivables due to the transactions of the entity: Financial assets in this group are basically comprised of extended loans.
- Marketable financial assets: All financial assets which are not classified in other three groups are included in this group.

According to Article 14 of the International Accounting Standard 39 all financial assets and liabilities including derivative products are included in the balance. The first residuary outlay in the balance sheet is the cost value. The cost value is comprised of the fair value of the amount received or paid to obtain the said asset or liability. Pursuant appreciations are made by taking the principles stated in the standard into consideration.

International Accounting Standard 39 divides financial transactions into Hedge (Risk protection) transactions and non-hedge transactions. By this standard, hedge transactions are divided into three as;

- Hedge transactions in fair values,
- Hedge transactions in cash flows and
- Hedge transactions in investments in foreign companies.

According to the International Accounting Standard 39 enterprises may, in order to protect themselves from risks, implement “Risk Protection Accounting” in case they meet the “Risk Protection Accounting” for derivative products they are party to (IAS-39, m.71). The basic purpose of the “Risk Protection Accounting” technique; with the reflection of the gains and losses, which arise as a result of the changes occurring in the fair value of the risk protection tool, in the income statement, synchronization between the period or periods during which the gains or losses to arise as a result of the risk protected item’s fair value will be reflected in the income statement is ensured. In other words, it is ensuring the reflection of appreciation values of derivative products picked up with the purpose of avoiding risks on the income statement in whichever period the appreciation results of the risk protected item will be reflected on the income statement. What is expected as a result however is that the loss caused by the risk can be covered with the gains of the derivative product agreement one has become party to with the purpose of risk protection (Tenker, 2004, 81). Seen from this point of view, failure to implement “Risk Protection Accounting” may cause the reporting of gains or losses concerning risk protected item and protection tool in the income statement at different times and the fluctuation of profits by terms (Hernandez, 2003, 82). The fluctuation of profits by periods however may overshadow the risk protection strategy of the enterprise and cause serious problems to arise in taxational terms (Kawaller, 2002). The implementation of the “Risk Protection Accounting” however can prevent such fluctuation to a large extent.

If we were to have a brief look into the Recognition of Hedge Transactions’ Recognition according to the International Accounting Standard 39:

According to Article 39 of IAS 39 the recognition of fair value hedge transactions;

- Hedge tool derivative product is shown with its fair value,
- Hedged item is also shown with its fair value,
- The gain and loss incurred is shown in the income statement.

According to Article 95 of IAS 39, the Recognition of Hedge Transactions in Cash Flows;

- Hedge tool derivative product is shown with its fair value,
- The gain and loss incurred is shown in the equities.

The recognition of hedge transactions in the net investments in foreign companies and the recognition of hedge transactions in cash flows are performed in similar ways.

Table: 1. Appreciation Measures for Derivative Product Agreements and the Reporting of Gains and Losses Obtained as a Result of Appreciation in Financial Statements

The Purpose of becoming Party to a Derivative Product Agreement	Appreciation Measure	Appreciation Gain and Loss
I- With Risk Protection Purpose		
A- Protection against the risk of change in the fair value	Fair Value	Cited in the current income statement .
B- Protection against the risk of change in the cash flow	Fair Value	<u>Effective Part</u> : is deferred and followed up on the balance equities . <u>Ineffective Part</u> : cited in the current income statement .
C- Protection of net investment abroad against currency risk	Fair Value	<u>Effective Part</u> : is deferred and followed up on in the balance equities . <u>Ineffective Part</u> : is cited in the current income statement .
II- With Marketing Purposes (Speculative)	Fair Value	Cited in the current income statement .

In the remaining part of this study, sample implementations are included to render the recognition of swap agreements and their display in financial statements more understandable. As explained in the study, ‘Risk Protection Accounting’ is implemented in the recognition of swap agreements. Within the framework of risk protection accounting in

practices, currency swap agreement has been taken up within the scope of the protection of fair value, while interest swap agreement has been taken up within the scope of the hedge transaction in cash flows.

4.1. Protection of the fair value; recognition of the currency swap agreement

Enterprise A exporting to Germany and active in Turkey plans a 5.000.000 Euros construction activity to get rid of intermediary costs and delivering the commodities directly by eliminating the intermediaries in Germany. Therefore enterprise A has researched the credit conditions and yielded the below results;

- %11 annually for 5.000.000 Euros
- % 35 annually for 9.000.000 Turkish Liras

Although the company, assessing credit conditions, wishes to borrow in Turkish Liras, decides to take Euros. Company A will receive the loan on 01 January 2012.

Another communication company active in Germany however wishes to access the communications market in Turkey and participate in the privatization of Turkish Telecommunications. For this purpose the company need a source of approximately 9.000.000 Turkish Liras. Considering that a great part of the company income is in Euros, obtaining Euro based loans is thought to be more advantageous. The loan rates extended to the German company are as follows;

- % 16 annually for 5.000.000 Euros
- % 30 annually for 9.000.000 Turkish Liras

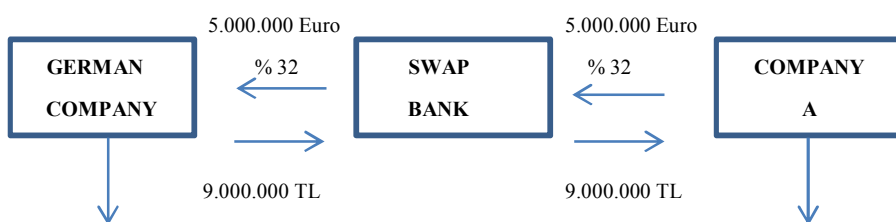
The German company, assessing credit conditions, has decided to obtain credit it Turkish Liras although it wishes to borrow in Euros. The company will receive the credit on 01 January 2012.

In order to protect itself against exchange rate risks and find cheaper sources, company A has, as a result of research made, contacted the German company through the swap bank. They have signed a two year term swap agreement on 24 December 2011 in order to decrease resource costs. According to this agreement, enterprise A and the German company will both exchange principals and interest payments on 01 January 2012 for the sources they need. With such a swap agreement, enterprise A will both obtain the Turkish Liras it needs and protect itself against changes in exchange rates by paying interest expenses in Turkish Liras, which form a great part of its revenue. The communications company too will get the Euros it needs, will be able to make interest payments with the revenue it yields in Germany, its main activity field, and at the same time protect itself against the fluctuations in the exchange rates.

According to the swap agreement made, company A obtaining loans over Euro will give 5.000.000 Euros to the German company and receive.000.000Turkish Liras from the German company. While company A pays %32 interest rate for 9.000.000 Turkish Liras as a result of this change, it will receive % 14 interest from the German company. While %13 of the %14 interest paid to the German company is given to company A; a rate of % 1 will be paid in as bank yield due to its intermediary activity. Within the term of the swap agreement, the Euro/ Turkish Lira rate is as follows.

- 1 Euro = 1.8 TL on 24 December 2011
- 1 Euro = 1.805 TL on 01 January 2012
- 1 Euro = 1.82 TL on 31 December 2012
- 1 Euro = 1.85 TL on 31 December 2013

Table: 2. Currency Swap between Company A and the German Company



% 30

% 14

% 13

% 11

Accounting records of enterprise A, active in Turkey, according to International Accounting Standard 39;

24/12/11		
RIGHT TO OBTAIN SWAP TL	9.000.000	→ Reported in the balance assets.
SWAP EURO LIABILITY	9.000.000	→ Reported in the balance passives.

Recording swap agreement into balance accounts.

5.000.000 Euro * 1.8 = 9.000.000 TL.

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Recording of the right to obtain TL due on 01 January 2012, the liability to grant Euros. While pursuant to this recording the right to obtain Turkish Liras in fixed in the balance assets until the date of exchange and the liability to grant Euros in the passives will be corrected according to the increases/ decreases in the value of Euros. The recording of the two undertakings made is written into the *balance* items instead of off-balance sheets, as stated in IAS 39, as soon as the transaction is performed.

24/12/11		
RIGHT TO OBTAIN SWAP EURO	9.000.000	→ Reported in the balance assets.
SWAP TL LIABILITY	9.000.000	→ Reported in the balance passives.

Recording swap agreement into balance accounts.

5.000.000 Euro * 1.8 = 9.000.000 TL.

...../...../.....

Recording of the right to obtain Euros and the liability to grant Turkish Liras on 01 January 2014. While pursuant to this recording the liability to grant TL remains in the balance passive until the exchange date, the right to receive Euros written into the assets will be corrected according to the increase/ decrease in values.

31/12/11		
SWAP LIABILITY VALUE		
LOSS ON EXCHANGE	25.000	→ Reported in the income statement.
SWAP EURO LIABILITY	25.000	

Recording of year-end swap agreement appraisal.

5.000.000 Euro * (1.805 – 1.8) = 25.000 TL.

...../...../.....

As a result of the appreciation made by year end; the value of the liability to grant Euros undertaken for 01 January 2012 has increased due to the increase in the value of Euro from 1.8 to 1.805. The loss occurring due to the transaction performed being the protection of the fair value has been reflected in the current net profit/ loss account and in turn the Euro liability has increased.

31/12/11		
RIGHT TO OBTAIN SWAP EURO	25.000	
(RECEIVABLE)		
SWAP VALUE INCREASE PROFIT	25.000	→ Reported in the income statement
(EXCHANGE PROFIT)		

Recording of the year-end swap agreement appreciation.

5.000.000 Euro * (1.805 – 1.8) = 25.000 TL.

...../...../.....

As a result of the appreciation made by the year-end; the value of the right to obtain Euros undertaken for 01 January 2014 due to the rise of the value in Euro from 1.8 to 1.805. The profit incurred due to the transaction performed being the protection of the fair value has been reflected in the current net profit/ loss account and in turn the right to obtain Euros has been increased.

	01/01/12
CASH ACCOUNT	9.025.000
(EURO)	
BANK CREDITS ACCOUNT	9.025.000
(EURO)	

Obtainment of bank credits.

$5.000.000 * 1.805 = 9.025.000$ TL.

...../...../.....

The obtainment of 5.000.000 Euros on 01 January 2012. Since 1Euro = 1.805 TL on 01 January 2012; $5.000.000 \text{ Euro} * 1.805 \text{ TL} = 9.025.000\text{TL}$.

	01/01/12
CASH ACCOUNT	9.000.000
(TL)	
SWAP EURO LIABILITY	25.000
CASH	9.025.000
(EURO)	

Exchange of principals.

$5.000.000 \text{ Euro} * 1.805 = 9.025.000$ TL.

...../...../.....

The performance of the right to obtain TL and the obligation to grant Euros as undertaken on 01 January 2012. The difference due to the right to obtain Turkish Liras remaining fixed and the increase in the liability to grant Euros, is eliminated by the writing off Swap Euro Liability as debts. This difference has arisen during the appreciation of the swap agreement on 31 December 2011 and at that date Liability Value Increase Loss has been reflected in the *income statement*.

	01/01/12
SWAP EURO LIABILITY	9.000.000
RIGH TO OBTAIN SWAP TL	9.000.000

Settlement of the right to obtain TL and grant Euros.

.../.../...

Pursuant to the performance of undertakings on 01 January 2012, the settlement of commitment accountings of the right to obtain Swap TL and Swap EURO Liability written off to the *balance*.

	31/12/12
INTEREST EXPENSE ACCOUNT	1.001.000
CASH ACCOUNT	1.001.000

Payment of the bank credit interest.

5.000.000 Euro * % 11 = 550.000 Euro

550.000 Euro * 1.82 = 1.001.000 TL.

.../.../...

Recording the % 11 interest enterprise A pays in exchange of the 5.000.000 Euro it has received from the bank. Since 1Euro = 1.82 TL; 5.000.000 * % 11 = 550.000 Euro, 550.000 Euro * 1.82 TL = 1.001.000 TL.

	31/12/12
CASH ACCOUNT	1.183.000
SWAP INTEREST INCOME ACCOUNT	1.183.000

Interest obtained from Swap Bank as per agreement.

Reported in the income statement.

5.000.000 Euro * %13 = 650.000 Euro

650.000 Euro * 1.82 = 1.183.000 TL.

.../.../...

Recording of the % 13 interest received for 5.000.000 Euros given to the Swap Bank as per swap agreement. Since 1Euro = 1.82 TL; 5.000.000 * % 13 =650.000 Euro, 650.000 Euro * 1.82 TL = 1.183.000 TL.

	31/12/12
SWAP INTEREST EXPENSES	2.880.000
CASH ACCOUNT	2.880.000

Interest paid to the swap bank as per agreement.

9.000.000 TL * % 32 = 2.880.000 TL.

.../.../...

Recording of the %32 interest for the 9.000.000 TL obtained from the swap bank as per swap agreement. 9.000.000 TL * % 32 = 2.880.000 TL.

	31/12/12
FINANCING EXPENSES ACCOUNT	75.000
BANK CREDITS ACCOUNT	75.000

Year end appreciation of the bank credit debt.

5.000.000 Euro * (1.82 – 1.805) = 75.000 TL.

.../.../...

As a result of the year end appreciation; writing off the increase in the value of the 5.000.000 Euros credit as a result of the increase in the value of Euro from 1.805 to 1.82 as a financing expense. $5.000.000 \text{ Euro} * 0.015 (1.82 \text{ TL} - 1.805\text{TL}) = 75.000 \text{ TL}$

31/12/12	
RIGHT TO OBTAIN SWAP EURO	75.000
SWAP VALUE INCREASE PROFIT (EXCHANGE PROFIT)	75.000
Year end appreciation of the swap agreement.	Reported in the income statement.
$5.000.000 \text{ Euro} * (1.82 - 1.805) = 75.000 \text{ TL.}$	

As a result of the year end appreciation; The value of the right to obtain Euros undertaken for 01 January 2014 has increased due to the increase in the value of Euro from 1.805 to 1.82. Since the transaction performed is the protection of the fair value the profit accrued has been reflected on the current net profit/ loss account and in turn the right to obtain Euros has been increased.

31/12/13	
INTEREST EXPENSES ACCOUNT	1.017.500
CASH ACCOUNT	1.017.500
Payment of the bank credit interest.	
$5.000.000 \text{ Euro} * \% 11 = 550.000 \text{ Euro}$	
$550.000 \text{ Euro} * 1.85 = 1.017.500 \text{ TL.}$	

The recording of the % 11 interest against the 5.000.000 Euros enterprise A has obtained from the bank. Since 1Euro = 1.85 TL; $5.000.000 * \% 11 = 550.000 \text{ Euro}$, $550.000 \text{ Euro} * 1.85 \text{ TL} = 1.017.500 \text{ TL.}$

31/12/13	
CASH ACCOUNT	1.202.500
SWAP INTEREST INCOME ACCOUNT	1.202.500
Interest obtained from the swap bank as per agreement.	Reported in the income statement.
$5.000.000 \text{ Euro} * \% 13 = 650.000 \text{ Euro}$	
$650.000 \text{ Euro} * 1.85 = 1.202.500 \text{ TL.}$	

Recording of the % 13 interest obtained for the 5.000.000 Euros granted to the swap bank as per swap agreement. Since 1Euro = 1.85 TL; $5.000.000 * \% 13 = 650.000 \text{ Euro}$, $650.000 \text{ Euro} * 1.85 \text{ TL} = 1.202.500 \text{ TL.}$

31/12/13	
SWAP INTEREST EXPENSE ACCOUNT	2.880.000
CASH ACCOUNT	2.880.000
Interest paid to swap bank as per agreement.	Reported in the income statement.
$9.000.000 \text{ TL} * \% 32 = 2.880.000 \text{ TL.}$	

...../...../.....

Recording of the % 32 interest paid for the 9.000.000 TL obtained from the swap bank as per swap agreement.
 $9.000.000 \text{ TL} * \% 32 = 2.880.000 \text{ TL}$.

31/12/13	
FINANCING EXPENSES ACCOUNT	150.000
BANK CREDITS ACCOUNT	150.000

Year end appreciation of the bank credit debt.

$5.000.000 \text{ Euro} * (1.85 - 1.82) = 150.000 \text{ TL}$.

...../...../.....

As a result of the year end appreciation, writing off the increase in the value of the 5.000.000 Euros credits obtained from the bank due to the increase of the value of Euro from 1.82 to 1.85 as a financing expense. $5.000.000 \text{ Euro} * 0.03 (1.85 \text{ TL} - 1.82 \text{ TL}) = 150.000 \text{ TL}$

31/12/13	
RIGHT TO OBTAIN SWAP EURO	150.000
SWAP VALUE INCREASE PROFIT	150.000
(EXCHANGE PROFIT)	

Year end appreciation of the swap agreement.

$5.000.000 \text{ Euro} * (1.85 - 1.82) = 150.000 \text{ TL}$.

Reported in the income statement.

...../...../.....

As a result of the year end appreciation; the value of the right to obtain Euros undertaken for 01 January 2014 has increased due to the increase in the value of Euro from 1.82 to 1.85. Since the transaction performed is the protection of the fair value the profit accrued has been reflected on the current net dividend/ loss account and in turn the right to obtain Euros has been increased.

01/01/14	
BANK CREDITS ACCOUNT	9.250.000
(EURO)	
CASH ACCOUNT	9.250.000
(EURO)	

Settlement of the bank credit debt.

$5.000.000 \text{ Euro} * 1.85 = 9.250.000 \text{ TL}$.

...../...../.....

Recording of the settlement of the 5.000.000 Euros credit obtained from the bank since it is due on 01 January 2014. 1 Euro = 1.85 TL, $5.000.000 \text{ Euro} * 1.85 = 9.250.000 \text{ TL}$.

01/01/14	
CASH ACCOUNT	9.250.000
(EURO)	
CASH	9.000.000
(TL)	
RIGHT TO OBTAIN SWAP EURO	250.000

Collection of Euro receivable, payment of TL liability.

5.000.000 Euro * 1.85 = 9.250.000 TL.

Performance of the right to obtain Euros and the liability to grant TL undertaken for 01 January 2014. The difference due to the right to grant TL remaining fixed and increase in the right to obtain Euros has been eliminated by writing off the right to obtain swap Euros as receivables. This difference has arisen during the year end appreciation of the swap agreements and has been reflected on the *income statement* during those dates with the swap value increase profit account.

01/01/14	
SWAP TL LIABILITY	9.000.000
RIGHT TO OBTAIN SWAP EURO	9.000.000

Settlement of Euro obtainment and TL payment liability.

Pursuant to the performance of the undertakings on 01 January 2014, recording of the commitment accounting of the right to obtain swap EURO and granting Swap TL as written off to the balance.

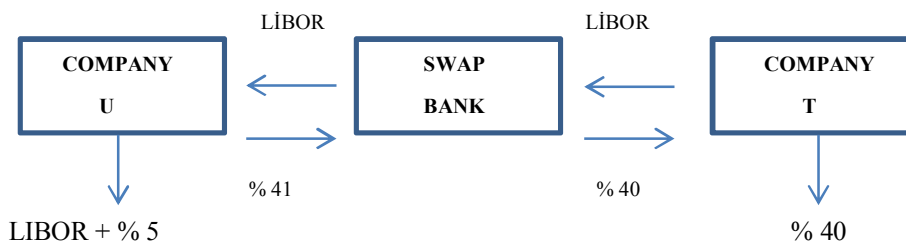
4.2. Protection of cash flow; Recognition of interest swap agreement

During a period in which investments have started to increase, there is the need for a 3.000.000 TL source for a new production facility by company U undertaking production in Turkey. Company U, which originally wishes to borrow with fixed interest is facing problems with finding fixed interest credits since its ratings are low. The company found the % 50 interest at fixed rate very expensive and on 01 January 12 agreed to obtain a 3.000.000 TL amount in credits with a two year term and annual London Interbank Offered Rate + % 5 variable interest. However the company is looking for alternative means for protecting itself.

Again during the same period, a tourism company T with a high rating, agreed to obtain a 3.000.000 TL bank loan with a two year term and % 40 fixed interest on 01 January 2012 to buy new touristic facilities. In order to protect itself against the negative changes in interests, company T wishes to convert its % 40 interest credit debt into variable interest.

Companies U and T, uninformed of one another, have therefore applied to swap bank to minimize their risks. The swap bank, assessing the standing of both companies intermediated between the two companies and ensured the conclusion of a swap agreement between U and T on 24 December 2011. While company U will pay the swap bank an annual fixed interest at % 41 in exchange of this agreement as of 01 January 2012, it will receive a variable interest at the London Interbank Offered Rate from the swap bank. Company T will also pay the swap bank a variable interest at the London Interbank Offered Rate and receive % 40 fixed interest in exchange. In light of these information, the swap agreement will be as follows.

Table: 3. Interest swap between companies U and T



LIBOR rates have been specified in a representative manner and are as follows;

24/12/2011 % 37.85

01/01/2012 % 38

31/12/2012 % 40

31/12/2013 % 42

Accounting records of enterprise U as per International Accounting Standard 39;

24/12/11	
FINANCIAL ASSETS	3.000.000
(RIGHT TO OBTAIN TL)	
FIANCIAL LIABILITIES	3.000.000
(LIABILITY FOR GRANTING TL)	

Recording of the representative change in the principal in to the *balance* account.

.../.../...

Recording of the representative principal exchange to be performed on 01 January 2012 into the balance accounts. The recording of the two undertakings made is written in the balance items instead of off-balance sheets as soon as the transaction was undertaken as stated in IAS 39.

24/12/11	
FINANCIAL ASSETS	3.000.000
(RIGHT TO OBTAIN TL)	
FINANCIAL LIABILITIES	3.000.000
(LIABILITY FOR GRANTING TL)	

Recording of the representative change in the principal in the *balance* account.

.../.../...

Recording of the undertaking in the representative return of principals on 01 January 2014 into balance accounts.

31/12/11	
INTEREST SWAP APPRECIATION ACCOUNT	4.500
SWAP EARNING FUND	4.500

Reporting in the balance assets.

Reported in the balance equities.

Year end appreciation of interest swap.

$3.000.000 \text{ TL} * (0.38 - 0.3785) = 4.500 \text{ TL}$

.../.../...

Recording of the earning enterprise U obtained by the swap agreement as a result of the increase in LIBOR. As will be remembered, enterprise U, by signing the swap agreement, had converted its variable debt into fixed interest. By signing the swap agreement, enterprise U wished to protect itself against interest changes and has accomplished this. Swap earning fund is an account opened under the equity group. According to the risk protection accounting; the earnings/ losses of the part of the cash flow risk protection tools specified effectively, are followed up on in the equities group. The interest swap appreciation account however is an interim account opened to balance earnings and losses due to interest swap. This account being a balance account, it represents an increase in assets when overdrawn and represents a decrease in assets when a credit balance is paid.

01/01/12

CASH ACCOUNT	3.000.000
BANK CREDIT ACCOUNT	3.000.000

Obtainment of bank credits.

_____/_____/_____

_____/01/01/12_____

FINANCIAL LIABILITIES	3.000.000
(LIABILITY TO GRANT TL)	

FINANCIAL ASSETS	3.000.000
------------------	-----------

(RIGHT TO OBTAIN TL)

Exchange of principals at the beginning of the swap agreement.

_____/_____/_____

Start of the implementation of the swap agreement on 01 January 2012. In other words; settlement of the undertaking in the representative principal exchange in balance accounts due to the exchange of interests.

_____/31/12/12_____

INTEREST EXPENSES ACCOUNT	1.350.000
CASH ACCOUNT	1.350.000

Payment of the bank credit interest.

$3.000.000 \text{ TL} * \% 45 (\text{LIBOR} + \% 5) = 1.350.000 \text{ TL}$

_____/_____/_____

Payment of the credit interest the enterprise had obtained from the bank by the end of the term . Since LIBOR was % 40 on 31 December 2012; $3.000.000 \text{ TL} * \% 45 (\text{LIBOR} + \% 5) = 1.350.000 \text{ TL}$.

_____/31/12/12_____

SWAP INTEREST EXPENSE ACCOUNT	1.230.000	→	Reported in the income statement.
CASH ACCOUNT	1.230.000		

Interest paid to the swap bank as per swap agreement.

$3.000.000 \text{ TL} * \% 41 = 1.230.000 \text{ TL}$

_____/_____/_____

Recording of the % 41 interest payable to the swap bank as per swap agreement. $3.000.000 \text{ TL} * \% 41 = 1.230.000 \text{ TL}$.

_____/31/12/12_____

CASH ACCOUNT.	1.200.000		
SWAP INTEREST INCOME ACCOUNT	1.200.000	→	Reported in the income statement.

Interest obtained from the swap bank as per swap agreement.

$3.000.000 \text{ TL} * \% 40 (\text{LIBOR}) = 1.200.000 \text{ TL}$

_____/_____/_____

Recording of the interest obtained from the swap bank at the LIBOR rate as per swap agreement. $3.000.000 \text{ TL} * \% 40 (\text{LIBOR}) = 1.200.000 \text{ TL}$.

31/12/12	
INTEREST SWAP APPRECIATION ACCOUNT	60.000
SWAP EARNING FUND	60.000

Swap agreements' year end appreciation.

$$3.000.000 \text{ TL} * (\% 40 - \% 38) = 60.000 \text{ TL}$$

...../.....

Recording of enterprise U's gain due to the increase in LIBOR as a result of the swap agreement's year end appreciation. Since cash flow risk protection tool is implemented and therefore the gain yielded is gathered within the equity group; interest swap appreciation account is indebteded proportional to gains. Since LIBOR has risen from %38 to %40, by signing a swap agreement enterprise U ensures an advantage in the amount of $3.000.000 \text{ TL} * \%0.02 (0.40 - 0.38) = 60.000 \text{ TL}$.

31/12/13	
INTEREST EXPENSES ACCOUNT	1.410.000
CASH ACCOUNT	1.410.000

Payment of the bank credit interest.

$$3.000.000 \text{ TL} * \% 47 (\text{LIBOR} + \% 5) = 1.410.000 \text{ TL}$$

.../.../...

Payment of the interest for the credit the enterprise had received from the bank by the end of the term. $3.000.000 \text{ TL} * \% 47 (\text{LIBOR} + \% 5) = 1.410.000 \text{ TL}$.

31/12/13	
SWAP INTEREST EXPENSES ACCOUNT	1.230.000
CASH ACCOUNT	1.230.000

Interest paid to the swap bank as per swap agreement.

$$3.000.000 \text{ TL} * \% 41 = 1.230.000 \text{ TL}$$

.../.../...

Recording of the % 41 interest to the swap bank as per swap agreement. $3.000.000 \text{ TL} * \% 41 = 1.230.000 \text{ TL}$.

31/12/13	
CASH ACCOUNT	1.260.000
SWAP INTEREST EARNING ACCOUNT	1.260.000

Interest obtained from the swap bank as per swap agreement.

$$3.000.000 \text{ TL} * \% 42 (\text{LIBOR}) = 1.260.000 \text{ TL}$$

.../.../...

Recording of interest obtained from the swap bank at the LIBOR rate as per swap agreement. $3.000.000 \text{ TL} * \% 42 (\text{LIBOR}) = 1.260.000 \text{ TL}$.

31/12/13	
INTEREST SWAP APPRECIATION ACCOUNT	60.000
SWAP EARNING FUND	60.000

Swap agreements year end appreciation.

$$3.000.000 \text{ TL} * (\% 42 - \% 40) = 60.000 \text{ TL}$$

...../...../.....

Recording of the earning yielded by enterprise U due to the increase in LIBOR as a result of swap agreement's year end appreciation. While the earning yielded in the equity group due to the implementation of cash flow risk protection management; interest swap appreciation account has been charged proportional to the earnings. Since the LIBOR rate increased from % 40 to % 42, enterprise U, by signing the swap agreement, gained an advantage in the amount of $3.000.000\text{TL} * \%0.02 (0.42-0.40)= 60.000 \text{ TL}$.

...../...../.....	
01/01/14	
BANK CREDITS ACCOUNT	3.000.000
CASH ACCOUNT	2.875.500
INTEREST SWAP APPRECIATION ACCOUNT	124.500

Settlement of the bank credit.

...../...../.....

The recording made concerns the settlement of the credit obtained from the bank. Within this record, the amount obtained by the enterprise by entering a swap agreement, present in the balance assets and withheld in the interest swap appreciation account is deducted from the credit cost.

...../...../.....	
01/01/14	
FINANCIAL LIABILITIES	3.000.000
(LIABILITY FOR GRANTING TL)	
FINANCIAL ASSETS	3.000.000
(RIGHT TO OBTAIN TL)	

Representative exchange of principal with the termination of the swap agreement.

...../...../.....

Transfer of representative principal undertakings due to the termination of the swap agreement on 01 January 2014. By this record, the representative principal commitment accounting written into the balance sheet is settled.

...../...../.....	
01/01/14	
SWAP EARNING FUND	124.500
DERIVATIVE AGREEMENT EARNINGS	124.500
	
Reported in the income statement.	

The transfer of earnings withheld in equities into nominal accounts.

...../...../.....

Recording of the transfer of the amount withheld in equities in conformity with the protection of cash flow into the nominal accounts on the date of swap agreement's termination. With this recording, earnings obtained from the swap transaction and deferred in the equities group for the swap term are transferred to the current earning/ loss accounts.

5. Conclusion

As customs barriers are removed and commerce becomes globalized enterprises have seen that competition no longer is merely made by the quality of commodities and cheap labour and that finding cheaper funds, managing currency

and interest rate risk are also elements comprising competition. Swap transactions, which is one of the developed financial techniques, function as a bridge between markets comprising different currencies and instruments. Thanks to this function swap agreements are those which can manage risks, ensure low cost funds, change the structure of debts and perform functions such as arbitrage, accessing different markets and the like. There are no standards regulated with respect to these transactions at the phase of swap agreements' recognition. However, there are issued standards no 32 and 39 prepared by IASC on the recognition of derivative products and shedding light on the problems encountered in the recognition of swap transactions. The appreciation of IAS 32 swap transactions, determination of earnings or losses and their recording do not solve the accounting problems concerning the writing down of these instruments but merely set forth how swap transactions will be shown in financial statements. IAS 39 however is for the recognition and appreciation of financial tools. With IAS 39, a different dimension has been added to the recognition of derivative products which by now have been recognized as off-balance assets and shown in off balance sheets. This standard has stated that all financial assets and passives including derivative products, must be reflected on the balance-sheet. In accounting standard IAS 39, specified by IASC on the recognition of swap agreements, a differentiation is made by the purpose enterprises become party to these agreements. Within the framework of the standard, enterprises may become party to these agreements either for risk protection or for speculation purposes. Enterprises, which become party to agreements for risk protection purposes, shall apply risk protection accounting to these agreements. It is stated that in case there is a protection relation specified between the risk protection tool within the scope of IAS 39 and the relevant risk protection item, provisions on the risk protection accounting will be used for the recognition of gains and losses. Accordingly; in case the swap agreement entails the criteria stated in the standard related to the matter, it will be recognized within the scope of the risk protection accounting.

In case a swap agreement aiming at the protection of a fair value entails the conditions required for the protection accounting practice throughout the accounting term, such protection is recognized by the association of gains and losses, arising from the re-appreciation of the protection tool over fair value, with the income statement. In case a swap agreement aiming at the protection of cash flow provides for the conditions necessary for the protection accounting practice throughout the accounting term, such protection is recognized and carried on to financial statements by the association of gains and losses of the protection tool directly with equities. Protection of net investments in foreign companies however are recognized in a way similar protections. In case the swap agreement is made for speculative purposes, gains and losses to be calculated with respect to the swap agreement as a result of appreciation are recognized by being transferred to the nominal accounts of the term in which the appreciation transaction has been made. The use of swap transactions for speculative purposes is not a frequently encountered situation. Swap transactions are general used for risk protection purposes. When we look at the explanations made on risk protection accounting; we see that the most important difference between fair value protection and cash flow protection is the deferred income/ loss notion. Within this framework, in case enterprises become party to swap agreements with the purpose of protecting their present receivables or debts from risks, swap agreement is subjected to appreciation over the current exchange rate on the balance date and the calculated agreements gains or losses are carried on to the nominal accounts of the activity term during which appreciation is made. In case they become party to a swap agreement in order to protect enterprises' certain currency commitment from risks, the swap agreement is subjected to appreciation over the current exchange rate on the balance date and the calculated agreement gains and losses are deferred until the risk protected commitment is performed. Deferred agreement earnings or losses are reflected on the value of the undertaking while entering the risk protected undertaking.

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