Financial instruments for the development of the transport industry

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Abstract. The article analyzes the principles of using financial instruments established by International Financial Reporting Standards. It is shown that financial instruments have common approaches to the preparation of accounting financial statements according to both Russian and international standards. The features of using derivative financial instruments, which can be both instruments and objects of accounting in transport organizations, are disclosed. The main method that takes into account compensation for losses on existing assets and liabilities and income from concluded transactions with derivative financial instruments is analyzed. We consider hedge transactions in which the cash flows of hedging instruments and hedge operations are accounted for simultaneously and reflect the principle of accounting for hedging relationships. The conditions for performing operations with derivative financial instruments and accounting options for hedge transactions are analyzed. The rules for accounting for derivative financial instruments when hedging fair value and cash flows are disclosed. Examples of fair value hedging and future cash flows are provided. The article describes the indicators of asset recognition and criteria for derecognition of an asset. The new requirements of IFRS 9 for derecognition of an asset are analyzed and examples of their use are provided.

1. Introduction

Hedging is a specific type of activity involving the use of futures and other derivative contracts within a particular system.

One of the modern applied definitions of hedging is presented in the Federal Reserve Bank of Chicago handbook, according to which, hedging is a technique used to achieve the desired level of risk, whereby an organization concludes a transaction (hedge), the price of which negatively correlates with the price of the assets or liabilities currently held by the organization. The purpose of implementing the methodology is to compensate for losses on the reverse side of the hedge (i.e., losses on already existing assets and liabilities) by the income of its main party, i.e., income from concluded hedging transactions [1].

Similar interpretations can be found in the economic literature [1, 2]. Hedging is the opening of transactions in one market to compensate for the impact of price risks of equal but opposite position in another market. Hedging transactions are transactions made to offset the possible risks associated with the organization of commercial activities.

A hedging transaction always corresponds to a transaction concluded in the ordinary course of business, being a kind of its replacement. For proper correlation, contracts should be identical not only in their subject matter but also in their duration.
2. Methods
The methodological basis included the dialectical method as a general approach to scientific cognition of the studied subject. The research was conducted using the scientific apparatus of management accounting, standardized methods of assessment, and analysis of different data (methods of comparison and system analysis, grouping, and index analysis).

3. Results
In the majority of cases, the recognition of the financial results (cash flows) attributable to the hedged risk associated with the hedging instrument and the hedged transaction does not coincide. For example, the organization plans to purchase an asset for foreign currency in the future. In this case, there is a risk of an adverse change in the foreign currency exchange rates at which it will be necessary to purchase such foreign currency to settle the proposed purchase at a rate higher than planned. If an organization, to minimize such risks (i.e. to hedge them), concludes a forward contract to purchase foreign currency at a fixed exchange rate with a settlement date close to the estimated settlement date of the planned transaction to acquire the asset, such forward contract may be considered as a hedging instrument [3-6].

The rate of foreign currency is fixed with the help of forward to make a planned purchase of some asset for foreign currency. However, if these transactions are considered in accordance with the general procedure, from the moment of conclusion of a forward contract until its execution, it will be accounted for at fair value and form the financial result (profit or loss), while cash flows under the hedged transaction will arise later, immediately at the moment of payment for the asset being purchased. The impact on the financial result will arise even later, for example, in subsequent periods during the period of its operation in the course of depreciation (if the purchased asset is the main source).

Thus, there is a clear accounting imbalance, which is manifested in profit bursts in some periods and losses (expenses) in others. When it comes to significant transactions, such an imbalance can have a significant impact on financial statements and mislead interested users about the results of the construction company activities. Special rules for hedge accounting are designed to eliminate such an imbalance.

The main principle of hedge accounting is to simultaneously account for the financial results (and/or cash flows) attributable to the hedged risk and attributable to the hedging instrument and hedged transaction. Since the hedging instrument and hedged operation react to the hedged risk in a proportionate but oppositely directed manner, the corresponding financial results (and/or cash flows) compensate each other, as a result of which, there are no bursts or failures in profits and losses [7].

Criteria for the effectiveness of the hedging process:
1) the hedge rate determined for a given hedging relationship reflects the correlation between:
   a) the quantitative volume of the hedged object, actually hedged by the credit institution,
   b) the quantitative volume of the hedging instrument actually used to hedge the specified quantitative volume of the hedged object;
2) there is an economic correlation between the hedged object and the hedging instrument;
3) credit risk does not have a prevailing effect on value change caused by the specified economic interrelation.

Hedge accounting is a right, not an obligation of the company.

Hedging instruments include:
1. derivative assessed at fair value through profit or loss (futures, forward, swap, option), except for certain categories of options granted;
2. a non-derivative financial liability assessed at fair value through profit or loss, other than one classified at fair value through profit or loss, in which case the amount of change in fair value attributable to changes in credit risk is presented in other comprehensive income;
3. the currency risk component of a non-derivative financial asset or liability other than an equity instrument for which a credit institution has chosen to reflect changes in fair value in other comprehensive income (only in the case of currency risk hedges).
At the discretion of the organization, only contracts concluded with an external party (i.e., external to the group or individual entity for which the financial statements are prepared) may be designated as hedging instruments for hedge accounting purposes.

*Fair value hedging.*

The result of the hedge change:

- Income — on capital reserve in OCI (other comprehensive income), loss from hedge — on PLS (profit and loss statement).

The statement of financial position (SFP) recognizes either an effective hedge asset or an ineffective hedge liability.

**Example**

The hedging object: a highly probable transaction predicted by the company.

Company A uses aluminium in its production activities. The company plans to purchase 200 kg of aluminium on 31.12.2020.

The company is satisfied with the current price of aluminium — 100 ₽ per 1 kg.

On 01.01.2020 the company concludes a futures contract to acquire 200 kg of aluminium at 100 ₽ per 1 kg on 31.12.2020.

**On 30.06.2020 (1st half of the year)**

The price of aluminium increased to 110 ₽ per kg.

1. D-t (debit) 97 "Asset (under futures contract)" 2,000
2. C-t (credit) 83 "OCI reserve as hedge income" 2,000

**On 31.12.2020 (2nd half of the year)**

The price of aluminium remained 110 ₽ per 1 kg. The futures were sold on 31.12.2020 at the price of 100 ₽ per kg.

1. Realization of the futures contract:
   1. D-t 51 "Money" 2,000
   2. C-t 97 "Asset (under futures contract)" 2,000

2. Acquisition of 200 kg of aluminium at the market price of 110 ₽ per 1 kg:
   1. D-t 20 "Inventories" 22,000
   2. C-t 60 "Payments to suppliers" 22,000

1. Exclusion of hedge result from the price of the product
   1. D-t 83 "Reserve in OCI as reverse of hedge income" 2,000
   2. C-t 20 "Reserves" 2,000

As a result, as of 31.12.2020, reserves are reflected at the price of 100 ₽ per 1 kg. The effectiveness of the hedge is 100%.

*Hedging of future cash flows.*

The result of changes in the fair value of both the object and the hedge is reflected in PLS in correspondence with the balance sheet accounts.

**Example**

The hedging object: currency risk on the credit.

On 01.01.2020 the company "A" took a credit of $ 1 million from the bank (rate on 01.01.2020 = 70 ₽ for $ 1).

The credit repayment date is 31.12.2020. The agreement provides for a floating market interest rate. Since the company's functional currency is roubles, the taken credit is subject to currency risk.

The company hedges the loan against currency risk by purchasing the "call" option on 01.01.2020. The option gives the right on 31.12.2020 to buy $ 1 million at the rate of 70 ₽ for $ 1.

The price of the option is 5 million ₽.

**On 01.01.2020:**

1. Acquisition of credit:
   1. D-t 51 "Money" 70 million ₽
   2. C-t 66 "Bank credit" 70 million ₽
2. Acquisition of a hedging instrument (option):

D-t 97 "Hedge" 5 million ₽
C-t 51 "Money" 5 million ₽

On 30.06.2020 (1st half year)

The exchange rate rose to 80 ₽ for $ 1 and the option price rose to 8 million ₽.
The hedged object and the hedging instrument are being revalued.

1. Revaluation of the credit:
   D-t 91 "PLS" 10 million ₽ (80 million ₽ — 70 million ₽)
   C-t 66 "Bank credit" 10 million ₽

2. Revaluation of the hedging instrument:
   D-t 97 "option hedge" 3 million ₽ (8 million ₽ — 5 million ₽)
   C-t 91 "PLS" 3 million ₽

On 31.12.2020 (2nd half year)

The exchange rate remained at 80 ₽ for $ 1. The option to purchase at 70 ₽ for $ 1 was realized with
the offset of the option at 10 ₽ /$ 1 (to be received from the bank), which brought the company profit of
2 million ₽ (10 million ₽ — 5 million ₽ — 3 million ₽).

1. Offset of option realization:
   D-t 66 "Bank credit" 10 million ₽
   C-t 97 "Hedge option" 8 million ₽
   C-t 91 "PLS" 2 million ₽

2. Repayment of the credit:
   D-t 66 "Bank credit" 70 million ₽ (with offset of option exercise D-t 66 10 million ₽)
   C-t 51 "Cash" 70 million ₽ ($ 1 million purchase at 70 ₽ for $ 1)

Hedging brought the company profit to the account 91 "PLS" — 5 million ₽ (10 million ₽ — 3
million ₽ — 2 million ₽)

IFRS 39 hedge accounting

To apply hedge accounting, all of the following conditions must be fulfilled:
At the beginning of the hedging, the transaction must be documented (prospective performance
assessment).
Efficiency can be reliably measured (the method of efficiency check should be specified in the
documentation).
For each reporting date, the hedging operation should be effective in the range of 80-125%
(retrospective assessment).
In cash flow hedging, the expected transaction is estimated to be probable.
Hedging of net positions in financial assets and financial liabilities, as well as in aggregate objects,
is NOT permitted.
It is NOT permitted to hedge the risk components of nonfinancial objects.
Definition of hedging objects
The hedged object is a source of change risk of fair value or future cash flows for the company:

- the asset or liability recognised in the balance sheet;
- an asset or liability not recognised in the balance sheet under a concluded contract (firm agreement);
- a highly probable forecast transaction;
- net investment in foreign subdivisions;
- risk components of non-financial objects;
- net positions of financial assets/liabilities;
- aggregated objects.

IFRS 9 hedge accounting.
At the beginning of the hedge, documentation is prepared, including a description of the company's risk management strategy and objectives, the hedging instrument and object, the risk under hedging, and the method for measuring effectiveness.

New requirements of IFRS 9:
1) link hedging to risk management practices;
2) the standard does not require a quantitative assessment of the effectiveness of a hedge, and in certain circumstances, a qualitative assessment is sufficient;
3) though the standard does not exclude performing calculations to account for the effects of hedging (hedge inefficiencies are still attributed to the PLS and effectiveness to OCI).

The organization should not cancel a hedging relationship that:
- a) continue to fulfil the risk management objective from which they were originally defined;
- b) continue to fulfil all other qualifying criteria of the hedging company.

The criterion for derecognition of an asset is one of the conditions:
1) rights to receive cash flows from the financial asset expire (the contract has expired, all contractual conditions have been met, the debt has been forgiven);
2) rights to receive cash flows from a financial asset are transferred. The seller accepts the obligation to transfer the funds received by them and related to the sold asset to the buyer and transfers significant risks and benefits;

Example

According to the cession agreement, the company sells its accounts receivable. It has no obligation in case its clients do not pay off the debt to the new creditor. However, by contract, any money received by the organization from the sold accounts receivable must be transferred to the buyer with interest for temporary use. The sold accounts receivable are removed from the balance.

3) control over a financial asset is transferred, but significant risks and benefits are neither transferred nor retained;

Example

Fair value buyback.
Company A owns 10,000 listed shares. It transfers its shares to the bank on the following conditions:
A compensation of $ 20,000, in addition, company A has an option to buy shares from the bank.

Buyback — at market value (outside the control of company A).
The asset is to be derecognized.
4) control is not lost (secured loan).

Example

Buyback at a fixed price.
Company A owns 10,000 shares. The transfer of shares to the bank was made on conditions:
Compensation of $ 20,000, in addition, option to buy shares from the bank for $ 25,000 in 3 years.

Company A should not derecognize the asset.
5) The company maintains partial control over the financial asset but transfers significant risks and rewards. The asset continues to be recognised in the SFP to the extent that the company continues to accept some of the risks and rewards.

Example

Accounts receivable were sold on conditions:
If the customer does not repay the debt, the seller assumes 10% of the amount owed. The recognition of 90% of the accounts receivable is terminated.

Recognition of the 10% participation will be reflected in the SFP until the customer pays the full amount.

If the derecognition conditions are not fulfilled, the assets remain in the SFP. The transaction is reflected as a collateralized loan.

Derecognition of financial liabilities according to IAS 39
A financial liability is discharged when paid off, cancelled, or terminated.
Cancellation also means the substitution for another liability.
When replacing a financial liability, profit or loss is immediately recognised FULLY in PLS.
When restructuring debt, the profit or loss arising from the adjustment to the carrying amount of the liability is depreciated over the remaining term of the liability. The distinction is based on the materiality of the differences in the terms of the liability. Terms are significantly different if the discounted value of the net cash flow under the new terms of the liability differs by at least 10% from the original debt.

*Derecognition of financial liabilities by the new version of IFRS 9.*

- Recognition is terminated when the current liability is discharged.
- Recognition is terminated if there is a significant change in the terms/nature of the contract (for example, the currency in which the obligation is denominated) or changes in cash flows (time of their receipt, the amount of money).

4. Conclusion

Thus, hedge accounting implies the fulfillment of certain conditions, namely:

a) the availability of qualifying instruments and hedging objects;

b) the availability of formalized solutions to determine the hedging relationship and the prepared documentation relating to it, specifying the hedging instrument, the hedged object, a description of the nature of the hedged risk, and how the organization will assess if the relationship fulfils the requirements for hedge effectiveness (including the analysis of sources of hedge ineffectiveness and approaches to determining the hedge rate), as well as a documented objective for risk management and a hedging strategy.

In conclusion, it should be noted that the optimization of hedging mechanisms, effective management of hedging processes, and its accounting in conditions of an unstable economy and fierce competition will allow the enterprise to carry out financial and economic activities effectively. The above-mentioned issues are particularly relevant and require further research.

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