

Information support of integrated corporate structures

S Kolchugin^{1*}

¹ Novosibirsk State University of Economics and Management, 56 Kamenskaya str.,
Novosibirsk 630099 Russia

E-mail: s.kolchugin@rambler.ru

Abstract. The article considers the methodological issues of creating the consolidated accounting, which allows to realize the information needs of integrated corporate structures, especially those operating in trans-border regions. The article derives the fundamental identity of the consolidated accounting and proposes a system of formal consolidation adjustments.

Keywords: integrated corporate structures, accounting methodology, consolidation adjustments, fundamental identity

1. Introduction

According to the analysis of the largest companies of the Russian Federation conducted by the “Expert” Analytical Center, a total of four hundred companies own more than 43% of the total volume of sales of the national economy, or 73,327 billion rubles, according to the results of 2017 [1]. Moreover, the first ten largest companies have 16% of the total volume of sales or 27,315 billion rubles [1].

The “Gazprom” PJSC (6,524 billion rubles), “Lukoil” PJSC NK (5,475 billion rubles), “Rosneft” PJSC NK (5,030 billion rubles), “Sberbank” PJSC (2,840 billion rubles), “Russian Railways” JSC (1,697 billion rubles), “ICS 5 Finance” LLC (X5 Retail Group) (1,295 billion rubles), “Bank VTB” PJSC (1,185 billion rubles), “Surgutneftegaz” PJSC (1,175 billion rubles), “Magnit” PJSC (1 143 billion rubles.), and “Russian Networks” PJSC (948 billion rubles) are among the ten largest companies of the Russian Federation in terms of sales [1].

The organizational structure of the largest companies of the Russian Federation includes a significant number of subsidiaries, affiliates and associates. For example, the composition of “Gazprom” PJSC includes 220 subsidiaries and affiliates, the composition of the “Lukoil” PJSC NK is 59 subsidiaries and affiliates, the composition of the “Rosneft” PJSC NK is 112 subsidiaries and affiliates, as of early December 2017.

Thus, it can be stated that the economy of the Russian Federation includes a significant share of organizations engaged in financial and economic activities through subsidiaries and affiliates. Organizations with an extensive integrated structure, which includes subsidiaries and affiliates, have at least 43% of the total output of the Russian companies.

Various types and forms of economic integration exist. It is advisable to introduce the definition of “integrated corporate structures” for their conceptual definition. Integrated corporate structures are the associations of economic entities in all the variety of types and forms of integration in order to extract economic benefits.

The presence of integrated corporate structures in the country's economy actualizes the problem of information support for the financial and economic activities of these economic entities. The fact is that

the classical accounting methodology, focused on the needs of a separate enterprise, is not applicable to integrated corporate structures that include dozens and even hundreds of legally separate organizations.

2. Materials and Methods

We will analyze the existing accounting methodology, focused on the information needs of integrated corporate structures.

Today, the procedure for preparing consolidated financial statements is governed by the following regulations: IFRS 3 “Business Combinations”, IFRS 10 “Consolidated Financial Statements,” and IFRS 12 “Disclosure of Information on Participation in Other Organizations”. We will look at consolidation procedures using a consolidated statement of financial position as an example.

Consolidation of the financial statements of the parent and subsidiary consists of the following main procedures:

1. Calculating the net asset value of a subsidiary on the received date control;
2. Calculating the value of the acquired goodwill subsidiary;
3. Calculating the value of non-controlling interest in the assets of a subsidiary;
4. Calculating the financial result of an integrated corporate structure;
5. Calculating the revaluation reserve of the integrated corporate structure;
6. Excluding the value of the investment in the subsidiary from the statement of financial position of the parent organization;
7. Drawing up a consolidated statement of financial position line by line, adding assets of liabilities of the parent organization with similar items of its subsidiary organization.

The peculiarity of the modern consolidation process is that during consolidation, consolidation procedures are outside the accounting methodology. Accounting objects, such as “goodwill,” “non-controlling interest in a subsidiary’s assets,” “financial result of a group of companies,” “revaluation reserve of a group of companies”, exclusion of the “value of investment in a subsidiary,” are recorded in the consolidated financial statements without full use of traditional accounting methods (documentation, inventory, valuation, costing, accounts, double entry, reporting and balance sheet). Moreover, the considered objects of consolidated accounting are not reflected in the fundamental equation of the digraphic methodology of accounting.

One of the most well-known fundamental equations of accounting is the following:

$$A = O + K \quad (1)$$

where A is an asset, O stands for liabilities, and K is a company’s capital.

The considered identity leads to the equality of the asset, liabilities and capital of a separate company. The considered objects of accounting characteristic of consolidated accounting are absent in such a company.

The absence of the fundamental identity of consolidated accounting makes it impossible to create the full-fledged consolidated accounting as the basis for information support of integrated corporate structures.

It is well known that when forming a consolidated statement of financial position, individual reports on the financial position of the parent and subsidiaries are consolidated. As noted above, the consolidation procedure involves the line-by-line merging of items in the statement of financial position of the parent and subsidiaries with the introduction of consolidation adjustments. As in individual reports on the financial position of the parent and subsidiaries, as well as in the consolidated statement of financial position of the integrated corporate structure, the fundamental equality of accounting is observed, then consolidation adjustments should form an independent identity, which is the identity of consolidation accounting adjustments.

We will consider the consolidation of the financial statements of the parent and subsidiary companies.

For instance, the fundamental equation of the parent company's accounting has the following form:

$$Amk = Omk + Kmk \quad (2)$$

where Amk is the parent company's asset, Omk is the parent company's liabilities, and Kmk is the parent company's capital.

The fundamental accounting equation of a subsidiary is:

$$Adk = Odk + Kdk \quad (3)$$

where Adk is a subsidiary's asset, Odk is a subsidiary's liabilities, and Kdk is a subsidiary's capital.

Then, when consolidating the financial statements of the parent and subsidiary, the fundamental equation of accounting will be as follows:

$$Amk + Adk \pm Ka = Omk + Odk + Kmk + Kdk \pm Kn \quad (4)$$

where, Ka stands for adjustments to the asset of the consolidated statement of financial position, Kn implies adjustments to the liabilities side of the consolidated statement of financial position. And:

$$\pm Ka = \pm Kn \quad (5)$$

In other words, the value of the consolidation adjustments carried out in the asset of the consolidated statement of financial position must necessarily be equal to the value of the consolidation adjustment carried out in the liability of the consolidated statement of financial position. Otherwise, the consolidated statement of financial position will be unbalanced.

We will decompose the consolidation adjustments reflected in the assets and liabilities of the consolidated statement of financial position, for which we introduce the following symbolic signs:

- Idk – investments in subsidiary (affiliated) company;
- DR – goodwill;
- Kdk – subsidiary capital;
- ND – non-controlling interest in a subsidiary's assets;
- $FRmk$ – financial result of the parent company;
- $FRdk$ – subsidiary financial result;
- RP – revaluation reserve related to integrated corporate structure.

We can notice that some accounting items are related to an asset, and others are to the liabilities side of the consolidated statement of financial position (Table 1).

Table 1. Objects of the consolidated accounting reflected in the consolidated statement of financial position after consolidation adjustments.

Type of economic assets (Asset)	Source of economic resources (Liability)
Goodwill	Uncontrolled interest in subsidiary assets
	Revaluation reserve related to integrated corporate structure
Investments in a subsidiary (affiliated) company (excluded)	Share capital of the subsidiary (excluded)
	Financial result of the parent company (excluded)
	Financial result of the subsidiary (excluded)

Based on Table 1, we can derive a fundamental identity for the consolidated accounting objects reflected in the consolidated statement of financial position after the consolidation adjustments:

$$DR - Idk = ND + RP - FRmk - FRdk - Kdk \quad (6)$$

Then, the fundamental identity of consolidated accounting will be as follows:

$$Amk + Adk + DR - Idk = Omk + Odk + Kmk + DN + RP + FRiks - FRmk - ARdk \quad (7)$$

where $FRiks$ is the financial result of an integrated corporate structure.

Moreover, the intragroup turnover should be excluded from the assets and liabilities of the consolidated statement of financial position.

Thus, the fundamental identity of consolidated accounting described by formula (7) underlies the consolidated accounting of corporate integrated structures.

3. Results

Based on the derived fundamental identity of consolidated accounting (7), we can offer the following list of formal consolidation adjustments in the double entry system.

1. Reflection of business reputation (goodwill) resulting from the acquisition of a subsidiary.
Debit "Goodwill" / Credit "Financial investments" in the amount of reflected goodwill.
2. The reflection of the uncontrolled interest in the assets of a subsidiary.
*Debit "Authorized capital" (subsidiary) / Credit "Minority share" in the amount of authorized capital attributable to the minority share and
Debit "Retained earnings (uncovered loss)", "Reserves", etc. / Credit "Minority share" in the amount of retained earnings (uncovered loss), the amount of reserves, etc. arising from the date of acquisition of control over the subsidiary to the date of preparing the consolidated financial statements of the integrated corporate structure.*
3. Reversal to exclude the value of the investment in the subsidiary and the amount of the authorized capital of the subsidiary.
Debit "Investment in a subsidiary company" / Credit "Authorized capital of a subsidiary company" cancellation for the amount of investment in a subsidiary company (amount of authorized capital of a subsidiary company).

The proposed formal consolidation adjustments make it possible to reflect all the objects of consolidated accounting in the double entry system and proceed to the construction of a full-fledged consolidated accounting system.

4. Discussion

The system of consolidated accounting, which allows to generate information about the financial and economic activities of corporate integrated structures, includes the following three stages:

- Making a consolidated journal of business operations (combining the facts of the economic life of the parent and affiliated companies);
- Making formal consolidation adjustments as described above;
- Conducting consolidation adjustments on the merits, namely the exclusion of intra-group turnover between the parent and affiliated companies.

The first stage is exclusively a technical procedure for combining the business operations of the parent and affiliated companies in a consolidated business operations journal. The second stage was discussed in detail above. The third stage is an independent methodological problem of consolidated accounting, which requires separate consideration. At the same time, the literature describes approaches to conducting consolidation adjustments on the merits [2, 3].

5. Conclusion

Summing up the research, we will focus on the key positions.

In today's economic realities, especially in the conditions of trans-border regions, the integrated corporate structures are crucial for the economy of the Russian Federation. The integrated corporate structures are understood as associations of economic entities in all the variety of types and forms of

integration in order to gain economic benefits. A characteristic feature of these structures is that they include a significant number of companies that are solely independent legal entities.

The classical accounting methodology is based on the principle of an economic unit, according to which “an enterprise as an economic unit is isolated from the personal interests of the owners and other investors of capital” [4, p. 84-89]. The presence of this principle makes it impossible to apply the existing accounting methodology to corporate integrated structures and actualizes the problem of developing a consolidated accounting methodology.

The study revealed the fundamental identity of consolidated accounting, which is the basis of the developed methodology, and proposed a system of formal consolidation adjustments.

References

- [1] Ermak S, and Zayakin S 2017 *Expert-400. Rating of the largest Russian companies by the end of 2017*
Available at: <http://www.acexpert.ru/analytics/ratings/ekspert-400-reyting-krupneyshih-kompaniy-rossii-po.html> (Accessed 10 03 2019)
- [2] Needles B, Powers M, and Crosson S 2011 *Principles of Accounting* (Cengage Learning)
- [3] Moonitz M 1944 *The Entity theory of consolidated statements* (American Accounting Association)
- [4] Paton W 1922 *Accounting Theory* (New York, NY: Ronald Press)