

# Tax Indicators as a Tool for Assessing the Financial Stability of a Budget Educational Institution

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## Abstract

The article studies the effect of the changes in legislation on the financial stability of higher education institutions. Changes in the procedure of property tax calculation in the current tax year significantly increase the tax burden of higher education institutions, which may result in much lower solvency ratio and hamper the universities' activities aimed at the formation of social, cultural, scientific and innovative environments of the regions. This, in turn, will affect their financial stability. The aim of the present research is to analyse the level of financial stability of universities after the changes in the property tax laws. The economic analysis is performed by means of approved calculation methods and is based on the case study of a Voronezh Region university.

## Keywords

tax indicators; property tax; land tax; financial stability; educational institution

## 1 Introduction

In the current year, the analysis of the effect of the increase in property and land tax rates on the financial stability of universities is especially important, as its results can be used for the management of cash flows and financial results, and justify the suggested

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methods of optimisation of tax burden. This is due to the fact, that since 1 January 2018, the range of taxable property has become much wider as a result of changes in the book value of real property which is now calculated using the cadastral value. There were also some changes concerning tax exemptions on movable property purchased after 1 January 2013. Moreover, regional and local tax authorities offer different land tax exemptions depending on the level of the budget institution.

A large number of studies have been performed by leading Russian researchers on the issues of taxation of non-profit organisations, the procedure of property and land tax calculation, and property tax exemptions. However, none of these articles use empirical data to describe possible changes in the financial stability of a university caused by the increase in the land and property tax rates connected with the new accounting rules and elimination of movable property tax exemption on the federal level.

## 2 Assessment of the Financial Stability of a Budget Educational Institution

Let us consider the following case. The financial position of FSBEI HE “Voronezh State University” is characterised by the use of funds obtained from various financial sources, as well as the use of assets.

Tables 1 and 2 demonstrate the structure and dynamics of the assets of VSU according to the balance sheet statistics.

*Table 1.* VSU assets dynamics in 2017 (according to the data from the balance sheet), thousand roubles

Asset items	As of the beginning of 2017	As of the end of 2017	Absolute change	Growth ratio, %
<b>I. Non-financial assets, thousand roubles</b>				
1. Net book value of fixed assets	1,528,457.6	1,489,980.0	-38,477.6	97.4
2. Net book value of intangible assets	192.2	119.8	-72.4	62.3
3. Non-produced assets	2,893,393.6	3,989,388.2	+1,095,994.6	137.9
4. Material inventories	28,414.8	31,894.2	+3,479.4	112.2
5. Investments in non-financial assets	58,421.6	60,767.1	+2,345.5	104.0
6. Total non-financial assets	4,508,879.8	5,572,149.3	+1,063,269.5	123.6

*Source:* Compiled by the author based on the Annual Report FSBEI HE “Voronezh State University” 2017.

Table 2. VSU asset structure in 2017 (according to the data from the balance sheet)

Indicator	Percentage %		Change (+, -)
	as of the beginning of 2017	as of the end of 2017	
1. Non-financial assets – total	99.2	95.98	-3.22
including:			
net book value of fixed assets	33.6	25.67	-7.93
non-produced assets	63.7	68.72	+5.02
material assets	0.6	0.55	-0.05
investments in non-financial assets (capital investments)	1.3	1.04	-0.26
2. Financial assets – total	0.8	4.02	+3.22
including:			
cash and cash equivalents	0.4	3.56	+3.16
settlements with debtors	0.4	0.46	+0.06
3. Total Assets	100.0	100.0	-

Source: Compiled by the author based on the Annual Report FSBEI HE "Voronezh State University" 2017.

In 2017, the aggregate value of assets, including the ones assigned by the founder on the basis of operational management account, increased significantly by 1,260,653.3 thousand roubles (27.74%), and by the end of the reporting period amounted to 5,805,237.2 thousand roubles. The dynamics in VSU assets is explained by an increase in the cadastral value of non-produced assets (of 1,095,994.6 thousand roubles or 37.9%) and an increase of 197,383.8 thousand roubles (or 6.5 times) in the most mobile part of VSU assets – financial assets (monetary funds and accounts receivable).

As of the end of 2017, the largest percentage in VSU's asset structure were the non-produced assets (land) (68.7%) and fixed assets (25.6%). A decrease in the residual value of fixed assets and an increase in financial assets in the reporting period led to a decrease in the percentage of non-financial assets from 99.2 to 95.9%.

In 2017, an increase in the sources of VSU assets formation of 1,260,653.3 thousand roubles (27.7%) was against the background of an increase in the liabilities to the founder regarding the property assigned to the university on the basis of operational management account (land, real estate, and most valuable assets). It resulted from an increase in the cadastral value of non-produced assets due to a large-scale revaluation of land assigned to the university on the basis of operational management account.

Also, there has been a decrease in the liabilities to the creditors of 103,557.5 thousand roubles (27.9%) resulting from a decrease in accounts payable and a closed off line of a credit.

In the assessment of financial stability, there is a special emphasis on determining the coverage of the fixed assets and other non-current assets, which have the greatest percentage in the properties of the university, by long-term sources of financing. Such sources include liabilities to the founder and internal funds in the form of the financial result (from operating activities, accrual of depreciation, and provisions for future

liabilities). As of the beginning of 2017, this indicator amounted to 93.2%. At the end of the reporting period, there is a significant increase in the long-term sources of financing (by 6.76%) due to the increase in the costs of non-current assets and improvement of financial results.

*Table 3.* Coverage of the fixed assets and other non-current assets by long-term sources of financing

Indicator	As of the beginning of 2017	As of the end of 2017	Absolute change (+, -)
A	1	2	3
1. Net book value of fixed assets, thousand roubles	1,528,457.6	1,489,980.0	-38,477.6
2. Net value of intangible assets, thousand roubles	192.2	119.8	-72.4
3. Balance value of non-produced assets, thousand roubles	2,893,393.6	3,989,388.2	+1,095,994.6
4. Investments in the non-financial assets, thousand roubles	58,421.6	60,767.1	+2,345.5
5. Total non-current assets (Art. 1 + Art. 2 + Art. 3 + Art. 4), thousand roubles	4,480,465.0	5,540,255.1	+1,059,790.1
6. Liabilities to the founder, thousand roubles	4,208,646.9	5,308,079.4	+1,099,432.5
7. Financial results (internal funds), thousand roubles	(34,875.6)	229,902.6	+264,778.2
8. Total value of the sources of non-current asset formation (Art. 6 + Art. 7), thousand roubles	4,173,771.3	5,537,982.0	+1,364,210.7
9. Ratio of the coverage of the fixed assets by long-term sources of financing, % (Art. 8 + Art. 5)	93.2	99.96	+6.76

*Source:* Compiled by the author based on the Annual Report FSBEI HE "Voronezh State University" 2017.

A decrease in the accounts payable and positive financial result in 2017 led to the improvement of financial stability of the university. In the reporting period, the equity to total assets ratio became positive and increased by 0.56 points.

Table 4. Analysis of VSU's financial stability

Indicator	As of the beginning of 2017	As of the end of 2017	Absolute change (+, -)
A	1	2	3
<b>I. Initial values for analysis, thousand roubles</b>			
1. Liabilities to the creditors	370,812.6	267,255.1	-103,557.5
2. Financial results (internal funds)	(34,875.6)	229,902.6	+264,778.2
3. Total value of the sources of financing for the university's activities (excluding liabilities to the founder)	335,937.0	497,157.7	+161,220.7
<b>II. Financial stability index</b>			
4. Equity to total assets ratio (the share of equity capital (financial result) in the total value of sources of financing for university activities)	(0.10)	0.46	+0.56
5. Dependency ratio (share of liabilities in the total value of sources of financing for university activities)	1.10	0.54	-0.56

Source: Compiled by the author based on the Annual Report FSBEI HE "Voronezh State University" 2017.

In the assessment of financial stability, there is a special emphasis on determining the coverage of the fixed assets and other non-current assets (see Table 5), which have the greatest percentage in the properties of the university, by long-term sources of financing. Such sources include liabilities to the founder and internal funds in the form of the financial result (from operating activities, accrual of depreciation, and provisions for future liabilities).

Table 5. Coverage of the fixed assets and other non-current assets by long-term sources of financing

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A	1	2	3
1. Net book value of fixed assets, thousand roubles	1,528,457.6	1,489,980.0	-38,477.6
2. Net value of intangible assets, thousand roubles	192.2	119.8	-72.4
3. Balance value of non-produced assets, thousand roubles	2,893,393.6	3,989,388.2	+1,095,994.6
4. Investments in the non-financial assets, thousand roubles	58,421.6	60,767.1	+2,345.5
5. Total non-current assets, thousand roubles (Art. 1 + Art. 2 + Art. 3 + Art. 4)	4,480,465.0	5,540,255.1	+1,059,790.1
6. Liabilities to the founder, thousand roubles	4,208,646.9	5,308,079.4	+1,099,432.5
7. Financial results (internal funds), thousand roubles	(34,875.6)	229,902.6	+264,778.2
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Source: Compiled by the author based on the Annual Report FSBEI HE "Voronezh State University" 2017.

As of the beginning of 2017, this indicator amounted to 93.2%. At the end of the reporting period, there is a significant increase in the long-term sources of financing (by 6.76%) due to the increase in the costs of non-current assets and improvement of financial results.

### **3 Tax Indicators as a Tool for Assessing Financial Stability**

In this part we will consider the problems faced by educational institutions when calculating land and property taxes based on a case study of a Voronezh Region university. We will also provide data supporting the suggested tools for optimisation of the tax burden, namely the specification in the provisions of the current tax legislation.

Thus, there is a Decree of the Voronezh Duma No. 162-II dated 07.10.2005 (edited 28.06.2017) *On the Introduction of the Land Tax in Voronezh* acting together with the *Regulations on the Calculation of Payment of the Land Tax in Voronezh*. According to Art. 5 (4) of this decree, state autonomous, budget, and public institutions of the Voronezh Region are entitled to a 50% exempt of the land tax on the land used for educational, medical, social, and cultural facilities (with the exception of parts of the land where the said facilities serve other purposes). This statement is rather ambiguous as to whether the exemption is applicable to federal state autonomous, budget, and public institutions which own land in the Voronezh Region.

We strongly believe, that in order to ensure fair tax exemption conditions for budget institutions of various levels, an amendment should be made to the Decree of the Voronezh Duma No. 162-II dated 07.10.2005 *On the Introduction of the Land Tax in Voronezh*. This amendment should provide 50% land tax exemption to state educational institutions registered and functioning in the Voronezh Region regarding the land used for educational, medical, social, and cultural facilities (with the exception of parts of the land where the said facilities serve other purposes). If such an amendment is approved, the university's land tax burden will decrease by 15.3 million roubles.

The difficulties connected with the calculation of property tax result from the fact, that since 1 January 2018, the range of the university's taxable property has become much wider (see Table 6), due to the following factors.

1. Changes in the book value of real property which is now calculated using the cadastral value.
2. Changes concerning tax exemptions on movable property purchased after 1 January 2013.

Table 6. Dynamics of VSU's property tax rate due to the expanded range of taxable property since 1 January 2018

Taxable property	Property tax			
	According to the tax statement, million roubles	After the changes in the tax legislation, million roubles	Change (+; -), million roubles	Growth ratio, %
A	1	2	3	4
University's taxable property, including:	19.1	51.2	+32.1	268
taxable property in the Voronezh Region	19.1	51.0	+31.9	267
taxable property in the Lipetsk Region	0.01	0.25	+0.24	3,083

Source: Compiled by the author based on the Annual Report FSBEI HE "Voronezh State University" 2017.

Changes in the book value of real property calculated using the cadastral value resulted from the coming into force of a new Federal Accounting Standard for State Institutions "Fixed Assets" (Order of the Ministry of Finance of the Russian Federation No. 257n dated 31.12.2016). According to this standard, as of 1 January 2018, the cadastral value is considered to be the net book value of taxable property. Using the data from the 9-month tax statement, we calculated the tax base as if the standard "Fixed Assets" had been enacted on 1 January 2017. The results demonstrate that in this case, the property tax rate would have been much higher, as the residual value, according to the accounting standard, would have been the cadastral value of the real property object.

As to the problems concerning the property tax, caused by changes in the character of tax exemptions on movable property purchased after 1 January 2013, let us consider the following rules and regulations. The Federal Law No. 335-FL dated 27.11.2017 *On Amending the Tax Code of the Russian Federation* eliminates the tax exemption for the above property with the final decision being made by regional authorities. If the exemption is eliminated, the tax rate on movable property purchased after 1 January 2013, should not exceed 1.1%. This means that if the Voronezh Regional Duma decides to eliminate the exemption, the property tax rate per 9 months of 2017 for VSU will rise from zero to 2.6 million roubles. We can thus say that the forthcoming changes in the taxation policy will have a negative effect on the financial stability of higher education institutions.

## 4 Conclusion

Tax rates will significantly influence the financial stability of VSU. Therefore, tax indicators are among the most important factors of financial stability and may result in lower financial solvency ratio of the university.

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