

Hrvoje Perčević\*  
Marina Ercegović\*\*

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## **DO THE EFFECTS OF THE FAIR VALUE CONCEPT APPLIANCE AND CORRESPONDING DEFERRED TAXES STRONGLY AFFECT THE COMPANY'S FINANCIAL POSITION AND PERFORMANCE? – EVIDENCE FROM CROATIAN COMPANIES FROM REAL SECTOR**

*This paper aims to identify the impact of the effects of the fair value concept application and corresponding deferred taxes on the financial position and performance of the large Croatian companies from the real sector in the period from 2010 to 2019. The impact of the effects of the fair value concept application and corresponding deferred taxes on companies' financial position and performance is analysed using the descriptive statistical methods and multiple linear regression. Based on the results of regression analysis, it could not be confirmed that the changes in fair value and corresponding deferred taxes have a statistically significant effect on the financial position of the large Croatian companies in the real sector. The results of regression analysis also indicated that the changes in fair value recognized in the income statement have a statistically significant effect on the financial performance of the large Croatian companies from the real sector while the corresponding deferred taxes do not have. Therefore, the results of this research suggest that by applying the concept of fair value, the management of the large Croatian companies in the real sector can significantly affect the*

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\* H. Perčević, Ph.D., Full Professor, Faculty of Economics and Business, University of Zagreb (e-mail: [hpercevic@efzg.hr](mailto:hpercevic@efzg.hr)).

\*\* M. Ercegović, Ph.D., Assistant Professor, Faculty of Economics and Business, University of Zagreb (e-mail: [mmicin@efzg.hr](mailto:mmicin@efzg.hr)). The paper was received on 06.07.2021. It was accepted for publication on 03.04.2022.

*financial performance of the company, but not the financial position of the company. Furthermore, deferred taxes associated with the effects of the fair value concept application do not significantly affect the financial position and performance of the large Croatian companies from the real sector.*

**Keywords:** *fair value concept, deferred taxes, financial performance, financial position*

## 1. INTRODUCTION

Contemporary International Financial Reporting Standards (IFRSs) as well as United States' Generally Accepted Accounting Principles (US GAAP) have imposed the fair value concept as the dominant concept of assets' and liabilities' subsequent measurement for the purpose of companies' financial reporting. Many stakeholders and financial statement users consider the fair value concept more appropriate than the historical cost concept for financial reporting purposes due to the fact that assets and liabilities are, using the fair value concept, measured and presented in financial statements at their actual market values or recoverable amounts.

According to the current Accounting Law in Croatia, large companies and public interest entities must apply IFRSs for financial reporting purposes, while micro, small and medium- sized companies, not defined as public interest entities, prepare financial statements according to Croatian Financial Reporting Standards (CFRSs). Since CFRSs are mainly based on IFRSs, CFRSs, similarly to IFRSs, require the application of the fair value concept for subsequent measurement of certain types of assets and liabilities and enable it to the majority of other assets.

The application of the fair value concept creates effects on the company's financial position and performance as well as on corporate profit tax liability of corresponding accounting period and, also, creates deferred taxes. The main objective of this paper is to explore the interdependence between the effects of applying the fair value concept, corresponding deferred taxes and financial position and performance in the Croatian companies from the real sector in the period from 2010 to 2019. The purpose of this paper is to identify whether the effects of the fair value concept appliance and corresponding deferred taxes affect the financial position and performance of the Croatian companies from the real sector in the research period from 2010 to 2019. For the purpose of achieving research objectives, two hypotheses are set up:

H1: Application of the fair value concept effects and corresponding deferred taxes affect the financial position of large Croatian companies from the real sector.

H2: Application of the fair value concept effects and corresponding deferred taxes affect the financial performance of large Croatian companies from the real sector.

These hypotheses are set up on the basis of conducted literature review that follows in the paper and tested using the descriptive statistical methods and multiple linear regression analysis on the sample of 327 Croatian large companies from real sector.

## 2. THEORETICAL FRAMEWORK AND LITERATURE REVIEW

### 2.1. *Effects of THE fair value concept appliance*

IFRSs have imposed the fair value concept as a modern concept of subsequent measurement of assets and liabilities. The key Standard regarding the fair value measurement is the International Financial Reporting Standard 13 *Fair Value Measurements* (IFRS 13) which defines fair value, sets out a framework for measuring fair value and prescribes disclosures about fair value measurements. IFRS 13 does not prescribe which assets and liabilities should be measured at fair value; it applies when another Standard requires or permits the fair value measurements or disclosures about the fair value measurements (and measurements based on fair value, such as fair value less costs to sell) for particular asset or liability. Furthermore, IFRS 13 sets out a general definition of fair value “as the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date” (IFRS 13, 2011). The fair value is, therefore, defined as an exit market price that would be obtained between unrelated market participants when acquiring an asset or transferring a liability on current market conditions on active principal or most advantageous market (IFRS 13, 2011).

IFRS 13 defines three widely used fair value measurement techniques and these are: market approach, income approach and cost approach (IFRS 13, 2011). Market approach is based on observable market inputs such as quoted market prices for an identical asset or liability on active or inactive markets, quoted market prices for a similar asset or liability and other observable market parameters and information, whereat quoted market prices for identical asset or liability are considered as level 1 inputs (the most reliable inputs for fair value measurement) while all other market inputs are considered as level 2 inputs. The fair value determined on the basis of current quoted market prices for an identical asset or liability on

active markets using the market approach is considered as the most reliable fair value measurement. Income approach is based on expected future cash flows or income which would be generated from an asset for which the fair value is determined in future periods or expected future cash flows that would be paid in order to transfer a liability for which the fair value is determined. Cost approach is based on cost that would be required in order to acquire a replacement asset of similar characteristics or amount that would be paid in order to transfer a liability of similar characteristics (Gulin and Perčević, 2013; IFRS 13, 2011). Inputs used in income and cost approach are unobservable nonmarket parameters and information and these inputs are considered as level 3 inputs in fair value measurement (IFRS 13, 2011). Therefore, the fair value assessed on the basis of income and cost approach is the least reliable fair value measurement. Although the fair value concept is mainly referred to the subsequent measurement of assets and liabilities, this concept can be used at an initial measurement also. In most cases, the fair value at the initial measurement is equal to the cost, so the cost concept and the fair value concept usually give the identical value of assets and liabilities at initial measurement. The main differences between the cost and the fair value concept arise at subsequent measurement of assets and liabilities in the conditions of economic expansion when market prices are constantly increasing from one reporting period to another. In the conditions of economic depression, when market prices are constantly decreasing from one reporting period to another, the cost concept and the fair value concept can give the identical value of assets and liabilities at subsequent measurement due to the fact that the cost concept requires the impairment (value adjustment) if there are evidences that indicate that the value of an asset is below its cost (IAS 36, 2001). According to that, the cost concept and the fair value concept give different values of assets and liabilities at subsequent measurement only in the conditions of economic expansion when market prices are constantly increasing from one reporting period to another.

Other IFRSs prescribe the mandatory use or permit the use of the fair value concept for measuring particular assets and liabilities. The categories of assets and liabilities for which IFRSs prescribe the mandatory use of the fair value concept at the subsequent measurement are following: (a) financial assets at the fair value through profit or loss; (b) financial assets at the fair value through other comprehensive income; (c) biological assets (but only if the fair value can be reliably assessed, otherwise, biological assets are measured at cost); and (d) financial liabilities at the fair value through profit or loss. On the other side, IFRSs permit the application of the fair value concept at the subsequent measurement for following categories of assets: (a) intangibles; (b) properties, plant and equipment; (c) investment property; (d) the right of use assets; (d) mineral resources; and investment in subsidiaries, associates and joint ventures.

When applying the fair value concept, effects of the fair value concept appliance (changes in the fair values between two reporting dates) can be recognized either in profit or loss or in other comprehensive income (equity). The following table summarizes the way the fair value measurement effects are recognized in accounting and financial statement for each category of assets and liabilities according to IFRSs.

*Table 1.*

**RECOGNITION OF FAIR VALUE MEASUREMENT EFFECTS  
IN FINANCIAL STATEMENTS ACCORDING TO IFRSS**

<b>Asset or liability</b>	<b>Recognition of fair value measurement effects</b>	<b>Impact of fair value measurement effects on financial position and performance</b>
Financial asset at fair value through profit or loss Financial liabilities at fair value through profit or loss Investment properties Biological assets <sup>3</sup>	Profit or loss	Impact on financial position and financial performance
Financial asset at fair value through other comprehensive income	Other comprehensive income / equity	Impact on financial position
Intangibles Properties, plant and equipment The right of use assets Mineral resources	Increase in fair value is recognized in other comprehensive income / equity <sup>1</sup> Decrease in fair value is recognized in profit or loss <sup>2</sup>	Impact on financial position  Impact on financial position and performance
Investment in subsidiaries, associates and joint ventures	Profit or loss or other comprehensive income	Impact on financial position and performance or impact on financial position

Source: Authors' systematization according to IFRSs that are available on <https://www.ifrs.org/issued-standards/list-of-standards/> (accessed 17. August 2018)

<sup>1</sup> Alternatively, the increase in fair value is recognized in profit or loss if the fair value decrease was recognized in profit or loss in past periods.

<sup>2</sup> Alternatively, the decrease in fair value is recognized in other comprehensive income (equity) if the fair value increase was recognized in other comprehensive income (equity) in past periods.

<sup>3</sup> Biological assets are subsequently measured at fair value less cost of sales, only if fair value can be reliably assessed. Otherwise, biological assets are measured at cost.

As it can be seen from the table 1, the fair value measurement effects have a direct impact on the financial position and financial performance of a company in the case when these effects are recognized in profit or loss, but if these effects are recognized in other comprehensive income then these effects only have an impact on company's financial position.

According to the current Accounting Law in Croatia micro, small and medium companies that are not defined as public interest, entities apply the Croatian Financial Reporting Standards (CFRSs) when preparing their financial statements. Since CFRSs are mainly based on IFRSs, there are no significant differences about the application of the fair value concept to assets and liabilities, subsequent measurement and the recognition of fair value measurement effects on financial statements. In comparison to IFRSs, CFRSs do not permit the subsequent measurement of investments in subsidiaries, associates and joint ventures at the fair value, but at the cost (CFRS 2, 2016).

## *2.2. Deferred taxes arising from the fair value concept application*

The fair value measurement effects, whether recognized in profit or loss or in other comprehensive income, can influence the corporate profit taxes. When the fair value measurement effects are recognized in profit and loss for financial reporting purposes and are also included in corporate profit tax base in the same period, then the fair value measurement effects affect the corporate profit tax liability of a current period, not creating deferred taxes. If the fair value measurement effects are recognized in profit or loss for financial reporting purposes but are not included in the corporate profit tax base in the same period, then these effects create temporary differences and corresponding deferred taxes. Besides, temporary differences and corresponding deferred taxes also occur when the fair value measurement effects are recognized in other comprehensive income (equity).

There are two basic temporary differences between the accounting profit and the corporate profit tax base and two types of corresponding deferred taxes arising from the fair value concept application and these are: (a) deductible temporary differences resulting in deferred tax assets and (b) taxable temporary differences resulting in deferred tax liability (IAS 12, 2016). Deductible temporary differences occur in the two cases: (a) when the decrease in the fair value of a certain asset or the increase of a certain liability between two reporting periods is recognized in profit or loss (as an expense) for financial reporting purposes but is not included in corporate profit tax base of the same period and (b) when the decrease in the fair value of a certain asset or the increase of a certain liability between two reporting

periods is recognized in other comprehensive income. Tax effects of deductible temporary differences are recognized as deferred tax assets in the company's financial statements (IAS 12, 2016). Taxable temporary differences occur: (a) when the increase in the fair value of a certain asset or the decrease of a certain liability between two reporting periods is recognized in profit or loss (as a revenue) for financial reporting purposes but is not included in corporate profit tax base of the same period and (b) when the increase in the fair value of a certain asset or the decrease of a certain liability between two reporting periods is recognized in other comprehensive income. Tax effects of the taxable temporary differences are recognized as deferred tax liabilities in the company's financial statements (IAS 12, 2016).

According to the current IFRSs and CFRSs applied in Croatia, the following fair value measurement effects can be identified: (a) revenues and expenses from the changes in the fair value of financial assets and liabilities at the fair value through profit or loss, biological assets and investment properties, (b) the fair value reserves from the changes in the fair value of financial assets at the fair value through other comprehensive income (financial assets available for sale), (c) revalorization reserves from the changes in fair value of intangibles, properties, plant and equipment, mineral reserves and right of use assets and (d) impairment of intangibles, properties, plant and equipment and inventories. All these fair value measurement effects, except revenues from the changes in the fair values, are temporary differences whose tax effects need to be recognized in financial statement as deferred taxes.

Temporary differences and corresponding deferred taxes arising from the fair value measurement effects according to the existing Corporate Profit Tax Act and Corporate Profit Tax Ordinance in Croatia are systematically presented in the following table 2.

Table 2.

THE IMPACT OF FAIR VALUE MEASUREMENT EFFECTS ON  
 CORPORATE PROFIT TAX BASE AND LIABILITY IN CROATIA

<b>Asset / liability</b>	<b>Recognition of fair value measurement effects in financial statements</b>	<b>Temporary difference</b>	<b>Deferred Tax</b>
Financial assets at fair value through profit or loss	Increase in fair value recognized as a revenue	N/A	N/A
Investment properties	Decrease in fair value recognized as an expense	Deductible temporary difference	Deferred tax assets
Biological assets			
Intangibles	Increase in fair value recognized in other comprehensive income (equity)	Taxable temporary difference	Deferred tax liability
Properties, plant and equipment	Decrease in fair value recognized as an expense	Deductible temporary difference (if not recognized for tax purposes)	Deferred tax assets (if not recognized for tax purposes)
The right of use assets			
Mineral resources			
Financial assets at fair value through other comprehensive income	Increase in fair value recognized in other comprehensive income (equity)	Taxable temporary difference	Deferred tax liability
	Decrease in fair value recognized in other comprehensive income (equity)	Deductible temporary difference	Deferred tax assets
Financial liabilities at fair value through profit or loss	Increase in fair value recognized as an expense	Deductible temporary difference	Deferred tax assets
	Decrease in fair value recognized as a revenue	N/A	N/A

Source: Autors' systematization according to Corporate Profit Tax Act (Official Gazette, 2017) and Corporate Profit Tax Ordinance in Croatia (Official Gazette, 2018)



As it can be seen from the previous table, deferred tax assets arising from the fair value measurement effects occur in the following circumstances: (a) when the decrease in the fair value of financial assets at the fair value through profit or loss, investment properties and biological assets is recognized as an expense in profit or loss; (b) when the decrease of financial assets at the fair value through other comprehensive income is recognized in other comprehensive income; (c) when the decrease in the fair value of intangibles, properties, plant and equipment, mineral resources and right of use assets is recognized as an expense in profit or loss and that expense is not recognized for tax purposes and (d) when the increase in the fair value of financial liabilities at the fair value through profit or loss is recognized as an expense in profit or loss. On the other hand, deferred tax liabilities arising from the fair value measurement effects occur in cases when the increase in the fair value of intangible, propertied, plant and equipment, mineral resources, the right of use assets and financial assets at the fair value through other comprehensive income is recognized in other comprehensive income (Corporate Profit Tax Act, 2017; Corporate Profit Tax Ordinance, 2018).

### ***2.3. Results of previous researches regarding the fair value concept and deferred taxes***

#### *2.3.1. Results of previous researches on the fair value concept*

The implementation of the fair value concept and its consequences on financial reporting as well as its advantages and disadvantages in comparison to the historical cost concept and its role in the recent financial crises are the most common contemporary matters of researches among accounting academics and researches from the field of financial accounting and reporting.

The development of the fair value concept for financial reporting of, primarily, listed companies is seen as the result of the process of globalization and international economic integration (Barlev and Haddad, 2003) as well as the result of a global process of neoliberalisation and financialization of political and economic systems (Zhang, Andrew and Rudkin, 2012). The main purpose of the fair value concept is to provide users of financial statements with up-to-date fair or market values of assets, liabilities and owners' equity. But in the same time, the fair value concept brings a change in a management philosophy and in the strategy of company's management. The new management philosophy is, under the fair value concept, aimed to maintain and increase the value of a shareholder's equity and, in order to achieve that, it combines value maintenance, profitability and efficiency

while in the same time the new management strategy utilizes the new techniques of hedging in risk management which is an integral part of business management (Barlev and Haddad, 2003). Therefore, the fair value concept becomes the main managerial instrument for maintaining and increasing a shareholder's value.

Many researches compared the fair value concept and historical cost concept emphasising the advantages and disadvantages of both concepts. Proponents of the fair value concept consider the fair value concept superior to the historical cost concept because it reflects the current market situation and conditions while the historical cost concept is based on the past. Besides, the fair value concept provides the users of financial statements with more current financial information and visibility in comparison to the historical cost accounting, but the impact of the fair value concept on the balance sheet and income statement is extremely due to the potential volatility of the method (Jajjairam, 2013). Power (2010) identified that the proponents of the fair value have institutional support and strength over the opponents of the fair value (Power, 2010). On the other hand, Rashad Abdel Khalik (2011) states that investors need both types of information, historical cost and fair value, in order to properly evaluate stewardship, because they need information about resources the management has sacrificed to obtain that fair value (Rashad Abdel Khalik, 2011). Danbolt and Rees (2008) compared the historical cost and the fair value accounting in the British real estate and investment fund industries in the period from 1993 to 2002 and found out that the fair value income was considerably more value relevant than the historic cost income (Danbolt and Rees, 2008). Nelson (1996), on the other hand, on the sample of the 200 largest U.S. bank holding companies, concluded that the fair value measures for investment securities, loans, deposits, long-term debt and off-balance sheet financial instruments were not incrementally value relevant to the book value and the financial statement proxies for future profitability (Nelson, 1996).

There are many researches regarding the application of the fair value concept and its impact on the quality of the financial statements. The fair value concept is mostly used in banks and insurance companies in order to measure financial assets and liabilities mainly due to the IFRS' requirements. The research conducted among listed companies in UK and Australia showed that, in most of the listed companies, the fair value concept is not optionally used in measuring intangibles, plants and equipment and investment properties (Cairns et. al., 2011;). Other researches, like the one conducted among Spanish insurance companies as well as the one conducted among listed companies in Nigeria, indicated that, although the numbers in financial statements changed considerably under the fair value concept, there are no differences of the overall assessment of the companies with regard to efficiency and profitability under the historical cost concept and the fair value concept (Rodriguez-Perez et. al., 2011; Amaefule et. al., 2018).

The application of the fair value concept affects the quality of the financial statements. Novalija Islambegović and Delić (2021) identified that the application of the accounting concept of the fair value positively affects the quality of financial statements of business entities in Bosnia and Herzegovina (Novalija Islambegović and Delić, 2021). Elfaki and Hammad (2015) identified “a positive relationship between the application of fair value and reliability of accounting information” in their study on a group of companies listed on the Khartoum Stock Exchange (Elfaki and Hammad, 2015). The research conducted by the companies and banks in eastern European countries suggests that the companies and banks with an increased exposure to the fair value accounting in financial reporting have lower level of aggregate earnings quality because they will more often estimate the fair values by using valuation techniques (i.e. mark-to-model) than the companies and banks in market developed countries, due to the lack of market data (Šodan, 2015). The analysis of the application of the fair value concept in the banks shows “that fair value accounting practices in banks create reserves in economic booms improving financial performance and deteriorate created reserves in economic downturns causing financial crises” (Jayasekara, Perera and Ajward, 2018). These researches indicate that the application of the fair value concept affects the company’s financial performance.

There were also many researches that were exploring the role of the fair value concept in financial crises in 2008. The majority of the researches indicate that the fair value concept did not contribute to the financial crises in the major way (Laux and Leutz, 2010) and that the fair value is the messenger of the crises not the cause (Andre et. al., 2009) so there is no reason for its suspension nor the significant modification of accounting standards because there aren’t any credible alternatives to the standards currently in force” and the suspension or modification of the fair value concept will cause the negative impact that would result from the loss of data presently supplied by the financial reporting in compliance with these standards (Veron, 2008). But there are also meanings that the fair value concept is not just a messenger of the crises because it has contributed to the acceleration of the financial sector (Magnan, 2009).

Previous researches on the application of the fair value concept in the Croatian companies from the real sector showed that the fair value concept is mainly applied in measuring land, properties, plant and equipment, biological assets and financial instruments, although, its application is not widely used (Perčević, Hladika, Valenta, 2020). Furthermore, previous researches also indicated that the application of the fair value concept in the Croatian companies from the real sector does not have a significant impact on the corporate profit tax liability but does have an impact on deferred taxes (Gulin, Perčević and Ercegović, 2020). The research in this paper aims to contribute to the results of the previous researches by determining whether the effects of applying the fair value concept and corresponding de-

ferred taxes affect the financial position and performance of the large companies from the real sector in Croatia.

### *2.3.2. Results of previous researches on deferred taxes*

The application of the fair value concept causes effects on corporate profit tax and creates deferred taxes. The current financial reporting standards applied in Croatia (IFRSs and CFRSs) require recognition and measurement of deferred taxes in financial statements because deferred taxes provide the users of financial statements with potential future tax effects on accounting profits. Deferred taxes can have an impact on the financial position and performance, especially in those companies which operate in international markets. So, recognition, measurement and disclosure of deferred taxes became the significant matter of researches among accounting academics and professionals.

Amir, Kirschenheiter and Willard (1997) examined the value relevance of deferred tax components disclosed according to the statement of financial accounting standard 109 in USA on the sample of Fortune 500 firms over 1992-1994. They found out that separating deferred taxes into components provides value relevant information for the users of financial statements, particularly investors (Amir, Kirschenheiter and Willard, 1997).

Žarova (2010) examined the impact of THE International Accounting Standard 12 Income Taxes (IAS 12) on deferred taxes regulation in the Czech Republic. She has concluded that the IAS 12 implementation into the Czech accounting system is partial and incomplete due to the different law presumptions between the Czech accounting rules and those under which are IFRS developed (Žarova, 2010).

Colley et. al. (2012) examined accounting for deferred taxes by illustrating the financial consequences of using the flow-through (where tax expense is equal to the statutory tax liability) approach in comparison to the asset-liability method of accounting for deferred taxes. In their paper, they have computed the change in the debt-to-equity ratios of thousands of USA companies for the 2004-2010 period when net deferred tax balances are eliminated and corresponding adjustments are made in the total liability and stockholders equity balances. They have concluded that “the flow-through method of accounting for taxes results in significant decreases in the debt-to-equity ratio for most firms, improving their financial position” (Colley et. al., 2012).

Vučković-Milutinović and Lukić (2013) provided the analysis of deferred taxes in business environment in Serbia. They assessed the quality of deferred taxes

disclosures in the financial statements of Serbian companies on a sample of large companies in Serbia in 2009 and 2010. Results of their research indicated that the positions of deferred taxes were not considered as important for the evaluation of companies' performances in Serbia and according to that deferred taxes were not a subject of more detailed analysis (Vučković-Milutinović and Lukić, 2013).

Purina (2016) analysed deferred taxes in the biggest Czech and Russian companies preparing their financial statements according to the International Financial Reporting Standards. He has identified the differences between Czech and Russian companies in taxpayers' strategies and deferred tax indicators related to tax legislative, while characteristics in the field of financial reporting were mainly comparable due to the effective standardization of accounting data made by the International Financial Reporting Standards (Purin, 2016).

Anić-Antić, Idžojtić and Sesar (2018) analysed the impact of the effects of temporary differences in the fair and objective financial reporting in the Republic of Croatia according to the existing tax regulations. In their paper, they illustrated the examples of temporary differences and corresponding deferred taxes which may appear in financial statements of the Croatian companies. They also illustrated that the effects of the fair value appliance arising from the subsequent measurement of assets and liabilities result in the recognition of deferred taxes (Anić-Antić, Idžojtić and Sesar, 2018). Furthermore, the previous research conducted among large and medium-sized companies from the real sector in Croatia indicated that the effects of the fair value concept affect the deferred taxes (Gulin, Perčević and Ercegović, 2020).

The results of the previous above-mentioned researches suggest that the information about deferred taxes is relevant and useful for users of financial statement (Amir, Kirschenheiter and Willard, 1997; Purina, 2016) and that deferred taxes have an impact on the financial position and performance, particularly on debt-to-equity ratio (Colley et. al., 2012). The results of previous researches on deferred taxes in Croatia suggest that the application of the fair value concept in subsequent measurement of assets and liabilities results in the recognition of deferred taxes as well as that the effects of fair value affect the deferred taxes in the Croatian companies from the real sector. On the basis of the results of these previous researches, the research in this paper aims to further explore whether the effects of the fair value and corresponding deferred taxes affect the financial position and performance of the large companies from the real sector in Croatia (Anić-Antić, Idžojtić and Sesar, 2018; Gulin, Perčević and Ercegović, 2020).

### 3. RESEARCH METHODOLOGY AND RESULTS

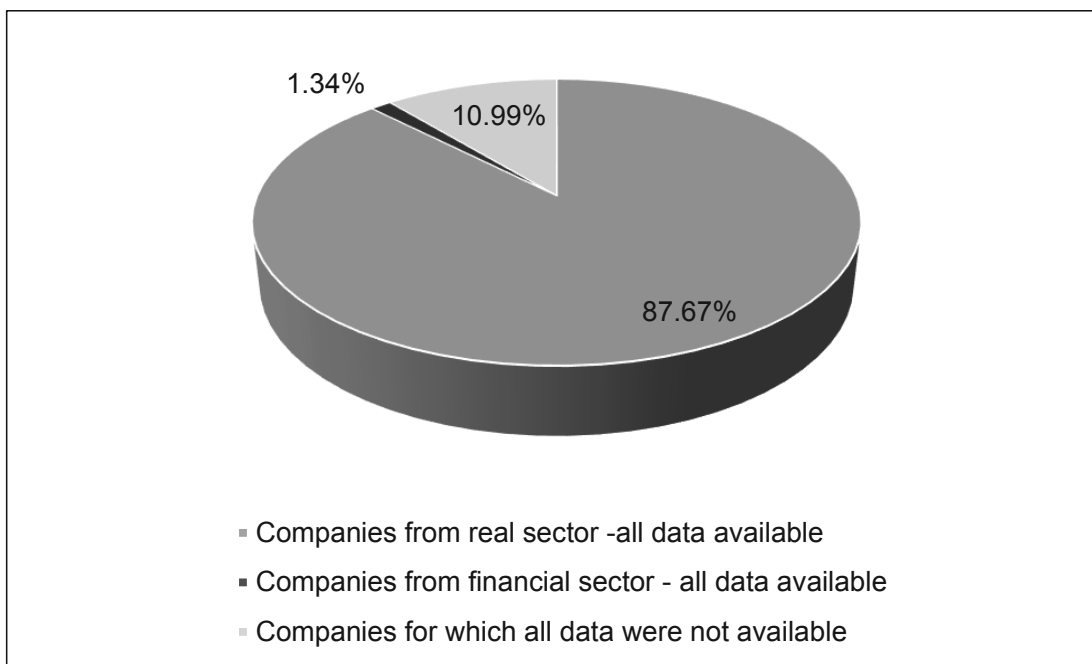
#### 3.1. *Sample analysis*

In this paper, in order to analyse the effects of applying the fair value concept and deferred taxes on the financial position and the financial performance, the large companies from the real sector in Croatia were considered. The research period is 10 years; data taken are referring to the period from the year 2010 to the year 2019. There are 373 large Croatian companies that submitted their financial statements in the Register of financial statements held by the Financial Agency in Croatia.

While designing a research sample, all the companies for which data from the financial statements were not available for the entire research period were eliminated. There were 41 of those companies, so there were 332 companies left for which all large data were available for all 10 years. Given that only the large companies from the real sector are considered in this research, 5 more companies with all the available data were eliminated, since those companies engage in financial activities. According to this, analysis is conducted for 327 companies (87,67% of all Croatian large companies), i.e. 87,67% of those companies are from the real sector and all data are available for the research period (Graph 1). Therefore, there were 3.270 firm-year observations for each variable.

*Graph 1.*

## SAMPLE ANALYSIS



Source: Authors

Total observations for each variable were then separated into two groups, the one that included the companies for the periods in which there were no fair value effects on the analyzed variables, and the other group included the companies for the periods in which the fair value changes were reported.

### ***3.2. Research methodology***

Since the main objective of this paper is to identify the effects of the fair value concept application and corresponding deferred taxes on the company's financial position and performance on the case of the large Croatian companies from the real sector in the period from 2010 to 2019, 10 variables from the publicly available financial statements were chosen. The financial statements from which variables were chosen are: Balance sheet (BS), Income statement (IS) and Statement of other comprehensive income (OCI). Variables are divided in 4 groups as follows:

A. Variables that reflect effects of the fair value changes:

- Revaluation reserves (including reserves of the fair value) – BS
- Impairment of long-term assets except financial asset – IS
- Unrealized gains (revenues) of financial asset – IS
- Unrealized losses (expense) of financial asset – IS
- Changes in revaluation reserves from longer term tangible and intangible assets -OCI
- Profit or loss on the basis of subsequent valuation of financial assets available for sale – OCI

B. Variables that present deferred taxes:

- Deferred tax asset – BS
- Deferred tax liability -BS

C. Variable that presents financial position:

- Total assets – BS

D. Variable that present financial performance:

- Net profit or loss – IS

For the purpose of achieving research objectives, two hypotheses are set up:

H1: Application of the fair value concept effects and corresponding deferred taxes affect the financial position of the large Croatian companies from the real sector.

H2: Application of the fair value concept effects and corresponding deferred taxes affect the financial performance of the large Croatian companies from the real sector.

In order to analyze whether the effects of the fair value concept application and corresponding deferred taxes affect the company's financial position and performance in the large Croatian companies from the real sector for the period of 10 years (2010 to 2019), two models of multiple linear regression were created and tested. The models were set based on the previous literature research and descriptive statistics. Out of a total observation for each variable, two groups were formed, the one in which were companies for periods in which there were no fair value effects on the analyzed variables, and the other group were companies for periods in which they reported fair value changes. Among 3270 firm-year observations, there were 1.552 observations where there are no changes in the fair value in the



observed period, and 1.718 observations with reported changes in the fair value. Data were summarized by years and a descriptive analysis was taken to analyze the financial position and the financial performance of each group. The results are in tables below where table 3 presents the descriptive statistics for the group of observations where there are no changes in the fair values, while table 4 presents the descriptive statistics for the group of observations where changes in the fair values were reported in one or more variables analyzed over the 10-year period.

*Table 3.*

DESCRIPTIVE STATISTICS FOR GROUP WITHOUT FAIR VALUE  
EFFECTS

	<b>Total Assets</b>	<b>Total Revenues</b>	<b>Net Profit or Loss</b>
Mean	200.886.151.944	94.603.677.548	4.079.345.403
Standard Error	6.814.907.953	3.210.425.135	430.029.197
Median	198.065.060.806	90.947.527.743	4.112.216.684
Standard Deviation	21.550.631.176	10.152.255.684	1.359.871.722
Q1	180.576.615.774	85.577.295.794	3.339.287.955
Q3	221.918.622.545	104.409.696.476	4.800.774.901

Source: Authors

*Table 4.*

DESCRIPTIVE STATISTICS FOR GROUP WITH FAIR VALUE EFFECTS  
REPORTED

	<b>Total Assets</b>	<b>Total Revenues</b>	<b>Net Profit or Loss</b>
Mean	274.786.152.186	152.960.737.423	5.925.040.670
Standard Error	5.730.919.746	4.714.081.696	755.700.019
Median	268.058.237.465	155.857.988.498	6.106.477.792
Standard Deviation	18.122.759.484	14.907.235.236	2.389.733.288
Q1	261.993.825.699	147.513.813.319	4.806.946.167
Q3	287.682.955.774	158.821.981.542	6.977.774.353

Source: Authors

By comparing the descriptive analysis of the two groups of data, it was analyzed whether there are differences in the financial position and the financial performance between these two groups. If the average value is observed (*Mean*), it is visible that the total assets, total income and net profit or loss are higher in the group that shows changes in the fair value. Given that there is a large standard deviation in both groups of data, these are widely dispersed data. Both the Median and the Quartiles (*Q1* and *Q3*) were also analyzed, and according to those values, they are also higher for the group with fair values reported. So, the results of the descriptive analysis indicate that the group that presents the fair value effects in the financial statements, has a higher Mean, Median and Quartiles values of the total assets, total income and net profit or loss in comparison to the group that does not present the fair value effects in the financial statements i.e. the group that presents the fair value effects in the financial statements has the better financial position and performance than the one that does not present these effects. Based on the results of descriptive analysis, the paper further investigates whether the effects of the fair value appliance and corresponding deferred taxes affect the financial position and performance of companies applying the concept of fair value or companies that have presented the effects of applying the concept of fair value in their financial statements.

### 3.3. Research results

Based on the analyzed literature as well as the conducted descriptive analysis, two models were set up for the multiple regression analysis. Since the data are grouped into two groups, multiple linear regression will be performed based on the group data reporting changes in the fair value, based on the summarized data for all companies for one year. In that way, it will be analyzed whether the fair value concept and deferred taxes affect the financial position and financial performance. Two equations of multiple regressions are set:

- a)  $\text{Total Asset} = \beta_0 + \beta_1 * \text{Revaluation Reserves (X1)} + \beta_2 * \text{Deferred tax assets (X2)} + \beta_3 * \text{Deferred tax liabilities (X3)} + \beta_4 * \text{Impairment of long-term assets (X4)} + \beta_5 * \text{Unrealized gains of financial asset (X5)} + \beta_6 * \text{Unrealized loss of financial asset (X6)} + \beta_7 * \text{Changes in revaluation reserves (OCI) (X7)} + \beta_8 * \text{Profit or loss on the basis of subsequent valuation of financial assets available for sale (OCI) (X8)} + \varepsilon$
- b)  $\text{Net Profit or Loss} = \beta_0 + \beta_1 * \text{Impairment of long-term assets (X1)} + \beta_2 * \text{Unrealized gains of financial asset (X2)} + \beta_3 * \text{Unrealized loss of financial asset (X3)} + \beta_4 * \text{Deferred tax assets (X4)} + \beta_5 * \text{Deferred tax liabilities (X5)} + \varepsilon$

The first equation is set in order to determine whether the fair value concept effects and corresponding deferred taxes affect the financial position while the second equation is set in order to determine whether the fair value concept effects and corresponding deferred taxes affect the financial performance of companies from the real sector in Croatia. In the first equation it is assumed that the effects of the fair value application and corresponding deferred taxes presented in the financial statements affect the value of the total assets in the large Croatian companies from the real sector. Therefore, total assets in the regression model are defined as a dependent variable, while the effects of the fair value concept application and corresponding deferred taxes are defined as independent variables. In this equation all the effects of the fair value concept application are included, those that are directly presented in the balance sheet (the statement of financial position – X1) as well as those presented in the income statement (X4, X5, X6) and in the statement of other comprehensive income (X7, X8), because all of these effects directly or indirectly affect the financial position. Deferred taxes arising from the effects of the fair value application are directly presented in the balance sheet, therefore they are included in the first equation. The constant coefficient ( $\beta_0$ ) in the first equation represents the value of the total assets derived from accounting policies and transaction other than from the application of the fair value concept.

The second equation assumes that the effects of the fair value concept application presented in the income statement and corresponding deferred taxes affect the net profit or loss of the large Croatian companies from the real sector. Therefore, net profit or loss is, in the regression model, defined as a dependent variable, while the effects of the fair value concept application presented in the income statement and corresponding deferred taxes are defined as independent variables. In this equation, only the effects of the fair value application presented in the income statement are included since these effects affect the financial performance. The effects of the fair value application presented in the income statement result in the recognition of deferred taxes (Gulin, Perčević and Ercegović, 2020). Therefore, corresponding deferred taxes are also included in the second equation. The constant coefficient ( $\beta_0$ ) in the second quotation represents the net profit or loss generated from accounting policies and transactions other than from the application of the fair value concept.

Multiple regression analysis is used in order to determine the value of the regression parameters in the abovementioned quotations and their significance with respect to their impact on the financial position (total assets) and financial performance (net profit or loss) of the large Croatian companies from the real sector in the period from 2010 to 2019.

*3.3.1. The interdependence between the effects of the fair value concept appliance, corresponding deferred taxes and company's financial position*

Table 5 presents the first multiple linear regression model which is set to test hypothesis H1 which claims that the effects of the application of the fair value concept and corresponding deferred taxes affect the financial position of the large Croatian companies from the real sector. In this model, dependent variable is Total Assets as a measure of the financial position, while independent variables present positions in the financial statements that reflect the fair value concept application and corresponding deferred taxes such as: Revaluation Reserves (X1), Deferred tax assets (X2), Deferred tax liabilities (X3), Impairment of long-term assets (X4), Unrealized gains of financial asset (X5), Unrealized loss of financial asset (X6), Changes in revaluation reserves (OCI) (X7) and Profit or loss on the basis of subsequent valuation of financial assets available for sale (OCI). Regression analysis is performed with SPSS. The results of the regression analysis for the first equation are presented in the table 5.

Table 5.

## MULTIPLE LINEAR REGRESSION FOR TOTAL ASSET MODEL

Model Summary <sup>b</sup>								
Model	R Square	Std. Error of the Estimate	Change Statistics					Durbin-Watson
			R Square Change	F Change	df1	df2	Sig. F Change	
1	,807	23905586742,528	,807	,522	8	1	,796	2,912

a. Predictors: (Constant), OCI\_FAAFS, UnrealLoss, Reserves, DTA, UnrealGains, OCI\_Reserves, ImparmLTA, DTL

b. Dependent Variable: TotalAssets

ANOVA <sup>a</sup>						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	2.384.432.624.346.500.000.000	8	298.054.078.043.313.000.000	,522	,796b
	Residual	571.477.077.504.549.000.000	1	571.477.077.504.549.000.000		
	Total	2.955.909.701.851.050.000.000	9			

a. Dependent Variable: TotalAssets

b. Predictors: (Constant), OCI\_FAAFS, UnrealLoss, Reserves, DTA, UnrealGains, OCI\_Reserves, ImparmLTA, DTL

Coefficients							
Model		Unstandardized Coefficients		t	Sig.	Collinearity Statistics	
		B	Std. Error			Tolerance	VIF
1	(Constant)	288.468.173.490,59	181.963.841.561,06	1,585	,358		
	X1	1,993	45,798	,044	,972	,056	17,890
	X2	20,000	35,126	,569	,670	,041	24,678
	X3	-71,529	223,176	-,321	,803	,044	22,594
	X4	1,517	20,166	,075	,952	,141	7,096
	X5	-18,167	92,959	-,195	,877	,260	3,852
	X6	6,375	42,019	,152	,904	,340	2,942
	X7	23,824	46,619	,511	,699	,298	3,360
	X8	98,316	99,022	,993	,502	,558	1,791

According to the results of the regression analysis, the estimated coefficients for the first equation are as follows:

$$\begin{aligned} \text{Total Asset} = & 288.468.173.490,59 + 1,993 * \text{Revaluation Reserves (X1)} \\ & + 20,000 * \text{Deferred tax assets (X2)} - 71,529 * \text{Deferred tax liabilities (X3)} + \\ & 1,517 * \text{Impairment of long-term assets (X4)} - 18,167 * \text{Unrealized gains of financial} \\ & \text{asset (X5)} + 6,375 * \text{Unrealized loss of financial asset (X6)} + 23,824 * \text{Changes in} \\ & \text{revaluation reserves (OCI) (X7)} + 98,316 * \text{Profit or loss on the basis of subsequent} \\ & \text{valuation of financial assets available for sale (OCI) (X8)} + \varepsilon \end{aligned}$$

Coefficient of a multiple determination (*R Square*) shows the proportion of the dependent variable dispersion that can be explained by the independent variable. In this model, its value is 80,7%, which means that 80,7% of variance of the dependent variable can be explained by the independent variables. This is also observable from the ANOVA table by comparing the sum of squares of variances explained by the regression with the total sum of squares. Durbin-Watson statistic is 2,912 which indicate negative autocorrelation and that is the first limitation of this model. Besides that, according to the ANOVA,  $F(8,1) = 0,522$ , p value is greater than 0,5 which indicates that this model is not statistically significant. As for the coefficients in model, for each of them (from X1 to X8), p value is greater than 0,05 which means that none of them is statistically significant in the model. Moreover, the values of the VIF and tolerance for the first three coefficients (X1, X2, X3) indicate that these three coefficients are highly collinear with the other variables in the model, so this regression model suffers from multicollinearity problem. Altogether, this model is not as good as expected. Therefore, based on the analysis conducted, there is no evidence that the fair value effects and corresponding deferred taxes affect the total assets so the first hypothesis (H1) cannot be confirmed.

The results of the regression analysis indicate that the effects of the fair value concept application and corresponding deferred taxes do not affect the financial position of the large Croatian companies from the real sector in the period from 2010 to 2019. There are two main arguments why the results of the regression analysis indicate that the effects of applying the fair value concept and corresponding deferred taxes do not affect the the financial position of the large Croatian companies from the real sector. First, when calculating the share of the effects of applying the fair value concept and corresponding deferred taxes in the total assets, it is evident that their share in the total assets is not significant. More concretely, the share of revaluation reserves in the total assets is 2,49%, the share of the impairment of long-term assets is 0,50%, the share of unrealized gains of financial assets is 0,06%, the share of unrealized losses of the financial assets is 0,15%, the share of changes in revaluation reserves is 0,13% and the share of profit or loss of the financial assets available for sale is 0,02% while the share of deferred tax assets is 1% and deferred tax liability is 0,50%. The proportion of all of these variables in the total assets is very

small so these variables cannot significantly affect the financial position of the large Croatian companies from the real sector. Second, there were no significant changes in prices during the research period and therefore no changes in the fair value determined on the basis of market prices could be significant. According to the Croatian National Bank, the average annual inflation rate of consumer prices in the research period from 2010 to 2019 circled from 1,1% in 2010 to 0,8% in 2019 (the lowest annual rate was -1,1% in 2016 and the highest was 3,4% in 2012) (Croatian National Bank, 2022). Due to that, the effects of applying the fair value concept in the large Croatian companies from the real sector could not affect their financial position. But it would be interesting to conduct and repeat this research in the period when there would be a significant increase of prices. When there are no significant inflation tendencies in the national economy, financial statements under the fair value concept and under the historical cost concept do not significantly differ. In these circumstances the effects of applying the fair value concept cannot affect the financial position. The results of this research are consistent with the results of previous researches conducted among Spanish insurance companies (Rodriguez-Perez et al., 2011) and listed companies in Nigeria (Amaefule et al., 2018) that showed no differences of the overall assessment of the companies with regard to efficiency and profitability under the historical cost concept and the fair value concept. The results of the regression analysis rely on the results of previous researches on the appliance of the fair value concept in the Croatian companies which indicated that the fair value concept is not used for all types of assets and liabilities in the Croatian companies but mainly for measuring land, investment properties and financial assets (Perčević, Hladika and Valenta, 2020). Since the concept of the fair value does not apply to all assets and liabilities, then not all effects of applying the fair value concept are recognized in the financial statements and that fact also contributed to the results of this research. Besides, the results of the previous research showed that the effects of applying the fair value concept result in the recognition of deferred taxes (Gulin, Perčević and Ercegović, 2020; Anić-Antić, Idžojtić and Sesar, 2018), but the results of the regression analysis in this paper do not confirm that deferred taxes arising from applying the fair value concept affect the financial position of the large Croatian companies from the real sector, mainly due to the fact that these variables do not take the significant share in the total assets.

### *3.3.2. The interdependence between the effects of the fair value concept appliance and corresponding deferred taxes and company's financial performance*

Table 6 presents second multiple linear regression model which is set to test hypothesis H2 that claims that the effects of the application of the fair value con-

cept and corresponding deferred taxes affect the financial performance of the large Croatian companies from the real sector. In this model, dependent variable is Net Profit or Loss as a measure of financial performance, while independent variables present positions in the financial statements that reflect the fair value concept application and corresponding deferred taxes: Impairment of long-term assets (X1), Unrealized gains of financial asset (X2), Unrealized loss of financial asset (X3), Deferred tax assets (X4) and Deferred tax liabilities (X5).

Table 6.

MULTIPLE LINEAR REGRESSION FOR NET PROFIT OR LOSS MODEL

Model Summary <sup>b</sup>								
Model	R Square	Std. Error of the Estimate	Change Statistics					Durbin-Watson
			R Square Change	F Change	df1	df2	Sig. F Change	
1	,924	990306100,158	,924	9,682	5	4	,024	1,938

a. Predictors: (Constant), DTL, ImparmLTA, UnrealGains, UnrealLoss, DTA

b. Dependent Variable: Profit\_Loss

ANOVA <sup>a</sup>						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	47.474.602.001.211.200.000	5	9.494.920.400.242.230.000	9,682	,024 <sup>b</sup>
	Residual	3.922.824.688.039.600.000	4	980.706.172.009.901.000		
	Total	51.397.426.689.250.800.000	9			

a. Dependent Variable: Profit\_Loss

b. Predictors: (Constant), DTL, ImparmLTA, UnrealGains, UnrealLoss, DTA

Coefficients							
Model		Unstandardized Coefficients		t	Sig.	Collinearity Statistics	
		B	Std. Error			Tolerance	VIF
1	(Constant)	591.098.095,88	3.925.324.026,65	,151	,888		
	X1	-1,037	,374	-2,773	,050	,704	1,421
	X2	7,071	2,258	3,132	,035	,755	1,324
	X3	-3,106	1,441	-2,155	,097	,496	2,017
	X4	,544	,523	1,041	,356	,314	3,182
	X5	3,880	3,667	1,058	,350	,281	3,554



According to the results of the regression analysis, the estimated coefficients for the second equation are as follows:

$$\text{Net Profit or Loss} = 591.098.095,88 - 1,037* \text{ Impairment of long-term assets (X1)} + 7,071* \text{ Unrealized gains of financial asset (X2)} - 3,106* \text{ Unrealized loss of financial asset (X3)} + 0,544* \text{ Deferred tax assets (X4)} + 3,880* \text{ Deferred tax liabilities (X5)} + \varepsilon$$

In this model, there is a high value of R Square (0,924). Therefore in this model 92,4% variance of the dependent variable can be explained by the independent variables, which indicates that this is a good model. This is also observable from the ANOVA table by comparing the sum of squares of variances explained by the regression with the total sum of squares. Durbin-Watson statistic is 1,938 which is value near 2, and the value of 2 indicates that there is no autocorrelation in the model. As it can be seen in ANOVA,  $F(5,4) = 9,682$ , p value is 0,024 and is less than 0,05 which indicates that this model is statistically significant and based on that it can be concluded that independent variables of the model statistically significantly predict the dependent variable which is net profit or loss in this model.

Statistical significance of each of the independent variable is also tested. At the level of significance of 5%, the impairment of long-term assets and unrealized gains of financial asset are statistically significant while at the level of significance of 10%, unrealized loss of financial asset is also significant. Coefficients for the impairment of long-term assets (X1) and Unrealized loss of financial asset (X3) are negative which is correct, since their increase will have a negative impact on profit or loss of the company. Also, coefficient for unrealized gains of financial asset is positive which is also correct since those gains arising from an increase in fair value will have a positive impact on profit or loss. Deferred taxes are not significant in this model. The values of tolerance and VIF for all independent variables in the model indicate that there is no collinearity between these variables so, there is no problem with the multicollinearity in the model. All measures of model goodness indicate that the quality of the model is appropriate. The results of the regression analysis show that the impairment of long-term assets and unrealized gains and losses statistically significantly affect the profit or loss of the large Croatian companies from the real sector in the period from 2010 to 2019, but the corresponding deferred taxes associated with these effects do not have a statistically significant impact on profit or loss. So, on the basis of the results of the regression analysis the claim that the effects of the fair value concept recognized in the income statement affect the financial performance of companies from the real sector in Croatia in the period from 2010 to 2019 can be accepted, but the hypotheses that deferred taxes associated with these effects affect the financial performance cannot be accepted. Therefore, hypotheses H2 cannot be fully accepted.

The results of this research rely on the previous results on the application of the fair value concept in Croatian companies from the real sector (Perčević, Hladika and Valenta, 2020). The results of the previous research indicated that the fair value concept is mostly applied at subsequent measurement of long-term assets, investment properties and financial assets in Croatian companies from the real sector (Perčević Hladika and Valenta, 2020) and the results of this research point out that the effects of the fair value application associated with long-term assets (the impairment of long-term assets) and financial assets (unrealized gains and losses of financial assets) have a statistically significant impact on profit or loss of the large Croatian companies from the real sector. So, the results of these two researches are connected and consistent. Furthermore, in the majority of the large Croatian companies from the real sector long-term assets have a significant share in the total assets, so it is not surprising that the impairment of long-term assets has a significant impact on profit or loss of these companies. The impairment of long-term assets of the large Croatian companies from the real sectors is not primarily caused by a decrease in market prices, but also due to other factors (such as obsolescence of assets). The cause of the impairment of long-term assets in large Croatian companies from the real sector is beyond the scope of this research, but could be the matter of other potential future researches.

Regression analysis also indicated that unrealized gains and losses of financial assets have a statistically significant impact on profit or loss of the large Croatian companies from the real sector. Unrealized gains and losses of financial assets usually occur as a result of changes in interest rates and market prices of financial instruments. Since a large number of the large Croatian companies from the real sector have an investment in financial assets, it is not surprising that unrealized gains and losses associated with the change in the fair values of financial assets have a significant impact on their profit or loss. Moreover, the changes in market prices of financial instruments listed on Zagreb Stock Exchange are much more volatile than changes in market prices of other assets. So this is also one of the reasons for the significant impact of unrealized gains and losses of financial assets on net profit or loss of the large Croatian companies from the real sector.

The results of this regression analysis are consistent with the results of the previous similar researches on the impact of the fair value concept on the quality of the financial statements and financial performance. The research conducted among business entities in Bosnia and Herzegovina (Novalija Islambegović and Delić, 2021) as well as the one conducted on a group of companies listed on the Khartoum Stock Exchange (Elfaki and Hammad, 2015) indicated that the application of the fair value concept positively affects the quality of the financial statements and reliability of accounting information. Moreover, the results of the previous research conducted on the companies and banks in eastern European countries

(Šodan, 2015) as well as the one that analysed the application of the fair value concept in banks (Jayasekara, Perera and Ajward, 2018) suggested that the application of the fair value concept affect the company's financial performance. So, the results of this regression analysis are consistent with the results of these previous researches. Although the results of the previous research on the interdependence between the effects of the fair value concept application and deferred taxes indicated that the application of the fair value concept results in the recognition of corresponding deferred taxes (Gulin, Perčević and Ercegović, 2020; Anić-Antić, Idžojić and Sesar, 2018), the results of regression analysis in this research do not confirm that deferred taxes associated with the effects of the fair value concept application recognized in the income statement have a significant effect on the financial performance of the large companies from the real sector in Croatia. This could be due to the fact that most of the fair value concept effects recognized in the income statement do not result in the recognition of deferred taxes.

The results of this research can be considered as a preliminary, mainly due to the certain research limitations. The most important limitations of this research are following: (a) although the research sample included only large companies from the real sector in Croatia, the research sample is still heterogeneous since the companies in the sample are from different industries; (b) the companies included in the sample apply the fair value concept for certain categories of assets, not for all assets and liabilities, so different measurement concept may be applied for the same categories of assets and (c) the research was conducted in a period of stable economic conditions, i.e. in a period when there were no significant changes in prices. These limitations should be considered when interpreting the results of this research. Despite the limitations, the results of this research could help managers in business entities to understand better the implications of applying the fair value concept as well as its impact on entity's financial position and performance. The results of this research could also be interesting to scientific and academic audience, particularly in comparing the results of this research with the results of the similar researches in order to improve the understanding of the implications of applying the fair value concept.

The results of this research opened some new interesting questions regarding the application of the fair value concept that should be the matter of potential future researches. First of all, the future research will be focused on determining the reasons why the fair value concept is not widely applied in the Croatian companies. Furthermore, it would be interesting to investigate whether the concept of fair value affects the market share price of joint stock companies that apply the concept of fair value. These future researches will contribute to the existing results on the application of the fair value concept particularly in the Croatian business entities.

#### 4. CONCLUSION

There are two concepts applicable when measuring and presenting assets and liabilities in financial statements, the historical cost concept and the fair value concept. The fair value concept is considered to be more appropriate than the historical cost concept for assets' and liabilities' subsequent measurement and financial reporting purposes due to the fact that assets and liabilities are measured and presented in the financial statements at their actual market values or recoverable amounts. When companies apply the fair value concept, the effects of the changes in the fair value between two reporting dates are recognized in the financial statements and thus affect the financial position as well as the financial performance of a company. The application of the fair value concept also affects the corporate taxes in the form of deferred taxes. The main objective of this paper was to identify whether the effects of the fair value concept appliance and corresponding deferred taxes strongly affect the financial position and performance of the large Croatian companies from the real sector in the research period from the year 2010 to 2019. Data were divided into two groups, the one with reported changes in the fair value and other without reported changes in the fair value. According to the descriptive statistics, the group with the reported changes in the fair values had better financial position and financial performance expressed by Total Assets, Total Revenues and Net Profit or Loss analysing Mean values, Median and Quartiles. According to that and previous literature review, two hypotheses were set and according to them two multiple regression models were tested. In order to analyse whether the fair value changes and corresponding deferred taxes affect the financial position and financial performance, two multiple linear regression models were tested based on the group of data that reported changes in the fair value. Research results indicate that the first hypothesis (H1) *Application of the fair value concept effects and corresponding deferred taxes affect the financial position of the large Croatian companies from the real sector* cannot be confirmed. The second hypothesis (H2) *Application of the fair value concept effects and corresponding deferred taxes affect the financial performance of the large Croatian companies from the real sector* could be partially confirmed since the regression model that is set is statistically significant with statistically significant variables that expressed the changes in the fair value, while deferred taxes were not significant variables. Therefore, even though it could not be confirmed that the effects of the fair value concept application and deferred taxes affect the financial position, the effects of the fair value model application could describe changes in profit or loss of the company since they affect the financial performance of the company. So, on the basis of the results of regression analysis, there isn't enough evidence to support the claim that the fair value concept effects and corresponding deferred taxes affect the financial position, but there is enough evidence to support the claim that the fair value concept

effects recognized in the income statement affect the financial performance of the companies from the real sector in Croatia. Also, there isn't enough evidence to support the claim that deferred taxes associated with the effects of the fair value concept application recognized in the income statement affect the financial performance of the large companies from the real sector in Croatia. So, the results of the research suggest that the application of the fair value concept strongly affect the financial performance of the large companies from the real sector in Croatia, but does not strongly affect the financial position. Deferred taxes related to the effects of the fair value concept application do not strongly affect the financial position and performance of the large Croatian companies from the real sector. According to the research results, by applying the concept of fair value, the management of the large companies can significantly affect the company's financial performance, but not the company's financial position. When considering the results of the research, it is necessary to take into account the limitations of the research, the most important of which are the following: (a) although the research sample included only the large companies from the real sector in Croatia, the research sample is still heterogeneous since the companies in the sample are from different industries; (b) the companies included in the sample apply the fair value concept for certain categories of assets, not for all assets and liabilities, so different measurement concept may be applied for the same categories of assets and (c) the research was conducted in a period of stable economic conditions, i.e. in a period when there were no significant changes in prices. Despite the limitations, the results of this research contribute to the existing scientific knowledge on the application of the fair value concept and could be interesting to managers in business entities as well as to the scientific and academic audience. The future researches regarding the application of the fair value concept will be focused on determining the reasons why the fair value concept is not widely applied in the Croatian companies as well as on investigating whether the concept of fair value affects the market share price of joint stock companies that apply the concept of fair value.

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UTJEČU LI UČINCI PRIMJENE KONCEPTA FER VRIJEDNOSTI I PRIPADAJUĆI  
ODGOĐENI POREZI ZNAČAJNO NA FINANCIJSKI POLOŽAJ I USPJEŠNOST?  
– PRIMJER HRVATSKIH PODUZEĆA IZ REALNOG SEKTORA

Sažetak

Cilj ovog rada je identificirati utjecaj učinaka primjene koncepta fer vrijednosti i pripadajućih odgođenih poreza na financijski položaj i uspješnost velikih poduzeća u realnom sektoru u razdoblju od 2010. do 2019. u Republici Hrvatskoj. Utjecaj učinaka primjene koncepta fer vrijednosti i pripadajućih odgođenih poreza na financijski položaj i uspješnost poduzeća analizirana je deskriptivnim statističkim metodama i višestrukom linearnom regresijom. Na temelju rezultata regresijske analize, nije se moglo potvrditi da promjene fer vrijednosti i pripadajući odgođeni porezi imaju statistički značajan učinak na financijski položaj velikih hrvatskih poduzeća u realnom sektoru. Rezultati regresijske analize također su pokazali da promjene fer vrijednosti priznate u računu dobiti i gubitka imaju statistički značajan učinak na financijsku uspješnost velikih hrvatskih poduzeća u realnom sektoru, dok pripadajući odgođeni porezi nemaju. Stoga rezultati ovog istraživanja sugeriraju da primjenom koncepta fer vrijednosti, menadžment velikih hrvatskih poduzeća u realnom sektoru može značajno utjecati na financijsku uspješnost poduzeća, ali ne i na financijski položaj poduzeća. Nadalje, odgođeni porezi vezani uz učinke primjene koncepta fer vrijednosti ne utječu značajno na financijski položaj i uspješnost velikih hrvatskih poduzeća iz realnog sektora.

**Ključne riječi:** koncept fer vrijednosti, odgođeni porezi, financijska uspješnost, financijski položaj