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THE CORRELATION BETWEEN STATEMENT OF CASH FLOWS, IAS 7, AND EARNINGS PER SHARE, IAS 33: A CASE STUDY AT DAIMLER AG (MERCEDES-BENZ)

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Abstract: *The present paper aims to examine the relationship between cash flows from operating, investing, and financing activities from one side, and earnings per share from the other, for Daimler AG (Mercedes-Benz) – one of the largest and oldest multinational automotive corporations in the world. The paper is based on the analytical and descriptive approaches, and tests the hypotheses of the study using the annual reports for the period of 2010–2020. The analysis of data is performed using the IBM-SPSS 25 statistical program in addition to Microsoft Excel 2013. This study uses the techniques of descriptive and inferential statistics. Based on the results, this paper concludes that there is no relationship between net cash flows and earnings per share; there is also no statistically significant correlation between cash flow from investing and earnings per share. Regarding the net cash flow from operating and financing, there is a statistically significant relationship between this independent variable and earnings per share; at the same time, the correlation is positive for financing activities but negative for operating activities with earnings per share. Multinational automotive corporations such as Daimler AG (Mercedes-Benz) should show a link between cash flows and earnings per share when making decisions related to operating and investing activities because the relative difference between the statement of cash flows and earnings per share is important for external users, especially investors.*

Keywords: *statement of cash flows, IAS 7, earnings per share, IAS 33*

JEL Classification Codes: *M40, M41*

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Introduction

The start of interest in financial statements began with the establishment of large enterprises and the separation of the ownership of the entity from its management. The reasons for this are: management may use this information; it has to cover any shortcomings in performance; and it may also display misleading information to achieve illegal goals such as reducing taxes, not distributing profits to shareholders, or improving the company's financial position in front of target groups of lenders, creditors, or others. For these reasons, it is the duty of countries to regulate accounting disclosure by obligating enterprises to use internationally accepted accounting standards (Ball, 2006; Das & Zhang, 2003; Hung & Subramanyam, 2007).

The economies of developed countries depend on these major entities, so it is important to possess annual financial reports for each company. These financial reports must disclose specific and useful financial information, because the disclosure of excess information puts the entity in a weak position relative to its competitors. Likewise, insufficient disclosure will lead to a decrease in the level of credit reputation for investors and shareholders. Among these important financial reports, which are the subject of this study, is the statement of cash flows, the most important modern financial statement and one of the main requirements for large institutions that all investors look towards (Clinch et al., 2002).

The first attempts to find a statement of cash flows occurred when companies operating in the United States at the end of the 1950s took the initiative to present an accompanying analytical statement reflecting the developments that occurred in their funds through a comparison between two successive financial positions, and this comparison showed the elements of increase and decrease that occurred during the period.

Despite the novelty of the statement of cash flows compared to other financial statements, it has undergone remarkable development in the Financial Accounting Standards Board (FASB) since its inception in 1985 (Broome, 2004). The FASB confirmed that the statement of cash flows provides useful information about the operating, investing, and financing activities of the entity. It also provides information about cash receipts and payments, which helps in determining numerous factors such as the liquidity, flexibility, and profitability of the entity and the risks surrounding it (Farshadfar & Brimble, 2008).

Accounting for cash flows has occupied an important position at the academic and professional levels. The FASB established SFAS 95 in November 1987 regarding the preparation of the statement of cash flows (Vent et al., 1995). Since its issuance, this standard has been subject to support on the one hand, and strong criticism on the other. This standard obligated American joint-stock companies to issue the statement of cash flows instead of the statement of changes in the financial position, which was in use until this date, and is considered one of the earliest statements calling for publishing the statement of cash flows in the financial reports of entities, especially after the crisis that befell the American financial markets in 1987 and led to the collapse of the money and contract markets (Vent et al., 1995). The standard recommended that the cash flows in the statement be analyzed in discrete areas as cash flows from operating, investing, and financing activities, while allowing the entity to prepare the statement according to any of the direct or indirect methods.

IAS 7 was issued in 1992 by the International Accounting Standards Committee (IASC), and replaced the previous standard issued in 1987. This statement is presented as an integral part

of the audited financial statements included in the annual reports issued by joint-stock companies (Kent & Birt, 2020). Stock market development and recovery are some of the goals that countries seek to achieve.

For the management of the entity, stock return reflects the overall performance of the entity, and is therefore a measure of success or failure for it. As for investors, identifying the most important factors that control earnings per share is a source of important information and thus helps them make sound investment decisions (Atieh et al., 2020). The presence or absence of a relationship between the performance of shares in previous periods and their performance in later periods depends on many factors, such as the level of the market in which the shares are traded, their efficiency, as well as the degree of investment awareness of those who deal in them.

There are often questions asked about the extent to which the statement of cash flows provides useful information to its users. The statement of cash flows has occupied a large part of previous studies as a tool for presenting financial information in a detailed manner. The relationship between statements of cash flows and various financial indicators in all sectors have been considered, but there are no studies that have linked the pillars of statements of cash flows and earnings per share (EPS), creating an urgent need to conduct several studies that address the factors affecting earning per share. Therefore, this study aims to answer the following research question: Is there a correlation between the cash flows and earnings per share? In order to answer the study question, statistical methods are used in analyzing the data of the study. This study aims to contribute to improving financial reporting and financial analysis by providing a comprehensive picture that shows the extent of the relationship between the variables of the study, which will help each of the users of the financial statements, and in particular the stakeholders of Daimler AG (Mercedes-Benz), to understand the impact of any decision taken regarding the pillars of the statement of cash flows and the extent of their effect on earnings per share. The study is structured in the following way. The second part presents an overview of the previous studies that focused on the variables of this study. The third part is concerned with the data and the statistical methods used for this study. The final part presents the conclusion and future directions.

2. Literature review and hypothesis development

2.1 Statement of cash flows

The statement of cash flows is an analytical statement of the movement of cash changes that took place in the entity, whether increasing or decreasing, and that identifies the reasons for these changes, meaning that it is a depiction of the sum cash transactions (Bala, 2017). It is an annual statement prepared on a cash basis. Its summary is the change in cash and cash equivalents between the beginning and end of the period (Dechow et al., 1998). The statement of cash flows shows the cash impact of all the activities carried out by the entity during the financial period and the nature of this flow, whether it is a cash inflow or a cash outflow. The word cash has a broad concept, including cash and cash equivalents – short-term, highly liquid investments such as treasury bonds, commercial papers, and securities that are intended to achieve a temporary return on idle cash rather than holding it (Kousenidis, 2006).

Schipper (2005) observed that with the emergence of large markets for investments in stocks in the late 1920s, it was natural for the focus to shift to net income and earnings per share,

and with the high level of investment in securities, the interest of the financial community in measures prepared according to the accrual basis increased, considering that net income is the best way to predict future profits (Dechow et al., 1998). This interest began to decline because many successful entities made huge profits, yet they got out of the market because they lacked sufficient liquidity. Many studies also confirm the existence of large numbers of enterprises that went into bankruptcy, even though they were making good annual profits (Orpurt & Zang, 2009).

This is due to many reasons, including the fact that these enterprises depend on their financial statements – on the statement of profit or loss and the statement of changes in the financial position. Because these statements are considered on the basis of accrual and the profits resulting from the application of this basis in the presence of large enterprises with diverse and intertwined activities, it has become difficult to interpret their significance and use them as indicators of the cash flows of the entity (Erasmus, 2010). The entity may have a cash capacity that enables it to fulfill its obligations, but it may not generate profits. Therefore, the net profit figure achieved according to the accrual basis does not enable the availability of cash to pay investors' profits or stock dividends.

The controversy over the ineffectiveness of the statement of profits or loss began in 1975, and this controversy escalated with the increasing number of bankruptcies of entities in the United States of America (Gilchrist, 1995). The statements of profit or loss of these entities disclosed a high net income while they were facing a cash shortage as a result of their lack of cash, even though they were profit-making enterprises and had financial inflows based on traditional financial statements to measure profits (Atieh et al., 2020). Enterprises resort to this statement to enhance their image when comparing themselves with other enterprises or when comparing to themselves in previous years, using methods and policies of different accounting. For example, a firm can change the method of calculating depreciation to reduce the taxes to be paid, or to avoid some restrictions imposed by some countries on enterprises with very large profits, such as nationalization or participation in social burdens (Fletcher & Ulrich, 2010). Figure 1 shows how revenues and expenses can be adjusted to convert them from an accrual basis to a cash basis.

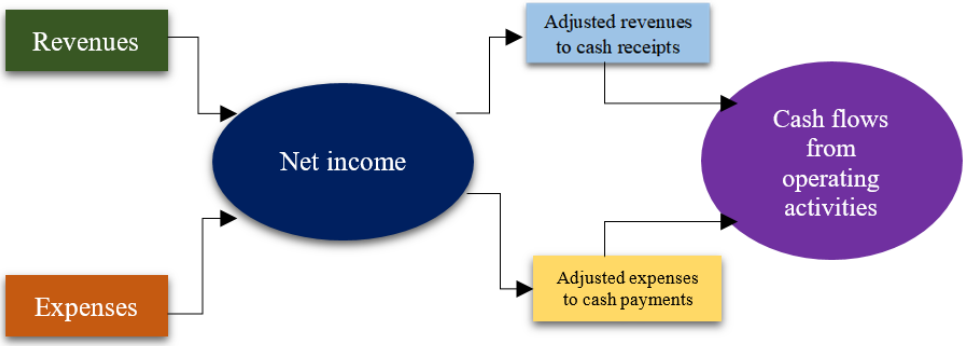

Figure 1. Changing from an accrual basis to a cash basis
Source: *Author's own work.*

Figure 1 shows that the statement of profit or loss prepared according to the accrual basis is one in which all revenues are added, whether these revenues are cash or not, and from which all expenses are subtracted, whether they are cash or non-cash expenses including depreciation and other non-cash expenses. When using the statement of cash flows, only all-cash operations are counted, whether from cash revenues or cash expenses, and the difference between them is calculated to find the net cash flows from operating activities (Farshadfar & Brimble, 2008). This gives several characteristics, the most important of which are: the statement of cash flows cannot be solely relied upon, and the statement of profit or loss cannot be neglected, but both are complementary to one another; and the statement of cash flows gives a clearer picture and is free from misleading information regarding the performance level of entities. Disclosure of cash flows statement information is used to indicate the quality of earnings information (Moonitz, 1956).

When a new entity is established and its operation begins, its main reliance is on activities that help it generate profits, so its focus is on cash flows from operating activities, and with continuity and development, it is directed towards investing activities by purchasing or acquiring long-term fixed assets for use in operational operations. These assets cost the enterprise huge amounts that may not be available to it as a new enterprise, so it resorts to borrowing from others or issuing new shares to cover its needs, i.e., cash flows from financing activities (De Villiers et al., 2003).

2.1.1 Cash flows from operating activities

Many books have dealt with cash flows, and the following is a presentation of the most important definitions that deal with cash flows from operating activities: cash flows from operating activities are cash flows resulting from the main operations of the entity from buying and selling goods and all normal operations that represent the operating cycle of the entity, or they are the main revenue-generating activities in the enterprise and other activities that are not considered investing or financing activities. As defined by (Hamshari, 2020), they are the financial facts and events that relate to the normal activity of the entity which it performs to make profits by practicing this activity. They are also defined by Francis (2010) as the flows related to the activities that enter into the determination of net income. Examples of these types of cash flows include cash collected from customers and cash paid to employees.

The most important elements addressed in the definitions of cash flows from operating activities firstly include all operations and major events in the entity that are carried out for the purpose of trading to achieve profits. Secondly, these flows are characterized by repetition and continuity. Third, they include all events that are not considered part of the cash flows from investing or financing activities (Orpurt & Zang, 2009).

To ensure the success of the entity, it must achieve cash inflows from operating activities higher than cash outflows from operating activities. Net cash flows from operating activities can be obtained by finding the difference between the cash inflows from operating activities and cash outflows from operating activities (Hamshari, 2020). Large positive cash flows resulting from operating are a good sign, and, in the long run, cash flows from operating activities should be the main source of cash in the enterprise. On the other hand, negative cash flows from operating activities indicate that profits are of poor quality and that in the future the entity will be unable to

grow and expand (Bowen et al., 1986; Ketz & Largay, 1987).

2.1.2 Cash flows from investing activities

Cash flows from investing activities are: activities related to acquiring or disposing of long-term assets in addition to other investments; the extent to which expenditures are paid on resources that are used to generate income and future cash flows; or the net cash flows resulting from the activities that an entity undertakes, established from the purchase and sale of fixed assets as well as investments in debt and ownership (stocks and bonds) for other enterprises. These types of cash flows include those associated with the acquisition or sale of productive assets used by the enterprise. Gilchrist (1995) defined them as all transactions related to the acquisition or disposal of non-current assets and the resulting cash flows. Fletcher and Ulrich (2010) considered cash flows from investing activities as those activities that include the acquisition and disposal of long-term assets such as real estate, machinery, equipment, debts, and equity instruments in other entities that do not fall within the description of cash equivalents, or that were acquired for the purpose of trading or dealing and include the sale and purchase of long-term assets. Thus, cash flows from investing are the operations related to obtaining or dispensing with non-current assets such as factories, long-term securities from shares and bonds, loans provided to other facilities and the process of collecting these loans (Bowen et al., 1986; Wilson, 1986). It is concluded that there are important elements in the definition of cash flows from investing activities: first, proving the acquisition process or dispensing with a fixed asset; and second, the acquisition process must be for the purpose of trading (Broome, 2004).

Determining cash flows from investing activities requires an analysis of the budget elements on the asset side that were not analyzed when determining cash flows from activities. These flows show the degree of expansion and growth of the entity and the amounts invested by the entity in: its business; equity investments in other facilities; and the disposal of non-current assets, by studying the items of fixed and long-term assets (Vent et al., 1995).

2.1.3 Cash flows from financing activities

Cash flows from financing activities are activities that result in changes in the size and components of capital ownership and the lending operations carried out by the enterprise, or the cash flows resulting from financing activities related to obtaining financing resources for assets, whether from loans or from issuing shares. Bala (2017) also defined them as cash flows directly related to the self-financing of the enterprise; for example, by issuing new shares or borrowing from banks. They are also considered a method of obtaining the necessary funds to cover the various activities carried out by the entity, whether from operational activities or capital activities. Thus, they are the operations related to obtaining loans from creditors or any transaction of the owners of the entity or shareholders. The general rule that distinguishes financing activities is that they are transactions related to borrowing, as well as transactions related to the owners of the establishment as a result of changing the capital by increase or decrease (Wilson, 1986). For this purpose, long-term liabilities and equity items from the balance sheet are studied.

Funding sources are obtained from one of the following two methods: first, financing by the owners of the establishment from the shareholders, which is represented in basic capital, reserves, and retained earnings; and second, through long-term loans, short-term loans, creditors,

and notes payable (Kousenidis, 2006).

There are two methods of presenting cash flows from operating activities: the direct method and the indirect method. The direct method is also called the profit and loss statement method (Kent & Birt, 2020; Krishnan, 2000), and is a method of showing the cash received and paid for operating activities according to the basic components of cash received and cash paid. This method is based on displaying the main groups of cash receipts, cash payments, and the arithmetic sum of the net cash flows from operating activities and attaching a statement or reconciliation memorandum of net income to arrive at the net cash flows from operating activities. Here, the components of cash inflows and outflows from operating activities are identified, such as cash receipts from sales and services rendered and receipts from customers, as well as cash payments for purchases and operating expenses and the payment of accounts payable (Goyal & Freeman, 2000).

One of the advantages of the direct method is that it enables the user to obtain a better assessment of the relationship between the net income or loss of the entity and its cash flows (Clinch et al., 2002). This method needs to restructure the statement of profit or loss and convert it to a cash basis. It also enables users of the statement of cash flows to understand how cash is generated from operating activities – such as depreciation, which is added in another way and would confuse users of the statement as it is a non-cash expense. By showing cash receipts and payments from operating activities, it provides the necessary information for the process of forecasting future cash flows, and this feature is not available when using the indirect method (Goyal & Freeman 2000). The direct method also provides more useful and appropriate information than the model prepared according to the indirect method, which is in line with the requirements of appropriate disclosure. Finally, the direct method serves the financial analyst in deriving more financial ratios and indicators by providing an abundance of operating activities of the entity (Cornell & Apostolou, 1992). One of the disadvantages of this method is that it does not disclose the separate items of cash inflows and outflows from operating activities; it discloses only cash received from operating activities. This method requires additional effort to prepare cash flows from operating activities, which may be a common reason for not considering it familiar to most entities (Krishnan, 2000).

The indirect method is also known as the profit or loss settlement method based on the effects of operations of a non-cash nature, deferred or accrued amounts for past or future operating cash receipts or payments, as well as items of income or expense related to investing or financing cash flows (Goyal & Freeman 2000; Kent & Birt, 2020). This method begins with the net profit generated from the statement of profit or loss; it is then adjusted by the items of income and expenses that do not contain cash flows, such as depreciation for fixed assets, to transfer the net profit number from the accrual basis to the cash basis by resuming all non-cash expenses again in net income, such as deferred income taxes and depreciation. Then, any other gains and losses incurred by the entity in various operations from selling a fixed asset or early repayment of a loan are subtracted, and the decrease of the change in current assets and the increase in current liabilities are also added, but the increase of the change in current assets and the decrease in current liabilities are subtracted. This means a positive correlation between cash flows and current liabilities and a negative correlation with current assets (Clinch et al., 2002).

One of the advantages of this method is that it is less expensive than the direct method. It

provides a link between the statement of cash flows, the statement of profits and losses, and the statement of financial position. Also, this method is based on a reconciliation of the net income of the enterprise and its cash flows from its operations (Klammer, 2018). On the other hand, there are criticisms of this method, the most important of which is that the indirect method is difficult to understand for beneficiaries because they are not able to access the cash flows from operations, and it does not disclose the details of the cash flows from operational activities (Cornell & Apostolou, 1992). The indirect method also does not explain receipts from customers, receipts from revenue, payments to suppliers and workers, payments for interest and taxes, and causes difficulty for users in understanding how to access cash flows from different operations. Although the accounting standards do not stipulate a specific method for preparing the statement of cash flows, the direct method is recommended by FASB and the International Accounting Standards Board (IASB). Nevertheless, the majority of entities use the indirect method.

2.1.4 Earnings per Share (EPS)

Profitability is the extent of a company's ability to achieve profit by following its operations within a certain period in a manner that ensures the least potential risk. It is disclosed via the explanation of the relationship between the investments that contribute to achieving profits and the profits that the company earned from its operating activities (Scott & Wier, 2000). Earnings per share is classified as one of the profitability indicators that is used for ease of comparison within previous periods, in addition to the comparison of earnings per share with competing companies in the same sector or industry. Earnings per share represents a comfort tool for investors to achieve rationalization in their future investment decisions, which affects the demand for shares (Balsam & Lipka, 1998). The earnings per share index or the share of the common stock from profits is the basic rule for some investors for evaluating a company and the profitability of the ordinary share. Therefore, it is mandatory that public shareholding companies disclose earnings per share because it is important in capital markets for investors. This was stipulated by the IASC, based on IAS 33, regarding the importance of presentation and disclosure.

IAS 33 added in its fourth paragraph that when consolidated financial statements and separate financial statements are prepared in accordance with IAS 27, the requirements for IAS 33 should be presented only on the basis of consolidated statements. An entity that elects to disclose earnings per share of earnings on the basis of its separate financial statements should present information about earnings per share only in terms of comprehensive income. The entity cannot present this information in the consolidated financial statements (BDO, 2014). IAS 33 requires calculating and presenting both earnings per share and diluted earnings per share, using profits or losses from the entity's continuing activity for all periods covered by the presented financial statements (IASB, 2003). If there are profits or losses from the discontinued activities of the entity, then the share of one stock from the discontinued activities must be presented either within the statement of profit or loss or within the notes attached to the financial statements.

IAS 33 also specified that earnings per share and diluted earnings per share should be accounted for even if the company makes losses (IASB, 2003). The earnings per share contain a financial indicator that includes financial information that is of paramount importance in relation to the assessment of the financial condition of the entity, and this information should be disclosed and should be circulated in the hands of all investors because of their necessity in

making investment decisions (Das & Zhang, 2003). IAS 33 added the differences between basic earnings per share and diluted earnings per share, as it was stated that earnings per share is the share of one ordinary share of the profits available to common stockholders. It is calculated by dividing the earnings available to common stockholders by the weighted average common stocks. The following equation is used for calculating basic earnings per share (BDO, 2014; IASB, 2003).

$$\text{EPS} = \frac{\text{Net Income} - \text{Preferred Dividends}}{\text{Weighted Average Shares Outstanding}} \tag{1}$$

In respect of common shareholders, diluted earnings per share is the worst-case scenario. Diluted EPS is used when there is compound capital that includes options to purchase the entity's common stock, securities (convertible bonds, options, preferred stocks, and warrants) convertible into common stock, and when these shares are taken into account in calculating the earnings per share (Ingersoll, 1977; Wiseman, 1990). The entity should apply the following equation to find the diluted EPS:

$$\textbf{\textit{Diluted EPS}} = \frac{\textbf{\textit{Net Income} - \textit{Preferred Dividends} + \textit{Paid out dilutive securities (PDS)}}}{\textbf{\textit{Weighted Average Shares Outstanding} + \textit{Conversion of dilutive securitites}}} \tag{2}$$

$$\begin{aligned}\textbf{\textit{DS}} = {} & \textbf{\textit{Preferred Dividends}}\ \textbf{(\textit{Not net of Tax})} \\ & + \textbf{\textit{Interest Exp}}\ \textbf{(\textit{Net of Tax})}\end{aligned} \tag{2.1}$$

Diluted EPS is calculated and published in case the entity has securities that are convertible into common shares, and earnings per share is calculated in this case assuming the conversion of these securities into ordinary shares. Thus, the conversion effect on profits (the numerator) and the number of shares (the denominator) are adjusted in the process of calculating the earnings per share (De Villiers et al., 2003; Huson et al., 2001).

In the event of a decrease in the earnings per share upon conversion from the basic earnings per share, the reduced earnings per share shall be considered. In this case, both the basic earnings per share and the diluted earnings per share shall be published. If the process of converting convertible securities leads to an increase in the earnings per share, it is ignored and therefore not included in the process of calculating the diluted earnings per share. Based on the above, the following hypotheses were developed:

H1: There is a correlation between cash flows and earnings per share.

Sub-Hypotheses:

H1.a: There is a correlation between cash flows from operating activities and earnings per share.

H1.b: There is a correlation between cash flows from investing activities and earnings per share.

H1.c: There is a correlation between cash flows from financing activities and earnings per share.

H1.d: There is a correlation between net cash flows and earnings per share.

3. Data and research methodology

This section deals with a description of the study method, identifies the study population and the sample that was selected, and reviews the methods that were relied upon in collecting and preparing data. It also includes the statistical treatments that were used in the application of this study. The study relied on the quantitative analytical method. To achieve the objectives of the study and test its hypotheses, data were collected through secondary sources based on books, literature, scientific journals, articles, university studies and various sources related to cash flows and earnings per share to cover the theoretical aspect of the study. Finally, the financial statements of Daimler AG (Mercedes-Benz) during the period of 2010–2020 were relied upon to cover the practical aspect of the study.

With regard to data analysis, IBM SPSS Statistics 25 was relied upon to calculate correlation and regression analysis to find the relationship between the independent variables – cash flows from operating, investing, and financing activities and net cash flows – and the dependent variable of earnings per share. Kolmogorov-Smirnov analysis was also performed to find out the type of data, establish whether it follows a normal distribution, and determine the use of parametric or non-parametric tests, because parametric tests require that the data have a normal distribution.

4. Empirical results and discussion

Based on analysis of the data in the following tables – describing the variables, the correlation between them, R square, Adj R square, and coefficients – we can determine the relationship between the cash flows from operating, investing, financing, and net cash flows and the earnings per share.

Table 1. Statement of Cash Flows and EPS for Daimler AG (2010–2020)

Year	Independent Variables				Dependent Variable
	CF from **Operating** Activities (millions of €)	CF from **Investing** Activities (millions of €)	CF from **Financing** Activities (millions of €)	**Net** Cash Flows (millions of €)	Earnings Per Share (EPS), **€**
2010	8,544	–313	–7,551	1,103	4.28
2011	–696	–6,537	5,842	–1,327	5.32
2012	–1,100	–8,864	11,506	1,420	5.71
2013	3,285	–6,829	3,855	57	6.40
2014	–1,274	–2,709	2,274	–1,386	6.51
2015	222	–9,722	9,631	269	7.87
2016	3,711	–14,666	12,009	1,045	7.97
2017	–1,652	–9,518	13,129	1,091	9.84
2018	343	–9,921	13,226	3,781	6.78

2019	7,888	−10,607	5,628	3,030	2.22
2020	22,332	−6,421	−10,747	4,165	3.39

Source: *Annual Reports from 2010 to 2020 for Daimler AG (Mercedes-Benz)*

Table 1 shows the cash flows from operating activities, cash flows from investing activities, cash flows from financing activities, net cash flows, and earnings per share for 11 years from 2010 to 2020 based on the annual reports of Daimler AG. From this table, the highest net cash flows were in 2020 and the lowest in 2014; the highest EPS was in 2017 and the lowest in 2019.

Table 2. Descriptive Statistics

Variables	Mean	Std. Deviation	*N*
Cash Flows from Operating Activities	3,782,090,909	712,2981,475	11
Cash Flows from Investing Activities	−7,827,909,091	3,920,485,721	11
Cash Flows from Financing Activities	5,345,636,364	8,128,191,340	11
Net Cash Flows	1,204,363,636	1,847,742,583	11
Earnings Per Share (EPS)	6.0	2.18	11

Source: *Authors' calculation.*

Table 2 shows the standard deviation, mean, and number of observations of variables in this paper. It can be seen that the standard deviation for earnings per share is €2.18 and the mean €6. Regarding the independent variable of CF from operating activities, the mean is €3.782 billion and the standard deviation €0.712 billion. For the second independent variable, CF from investing activities, the mean is €–7.827 billion and the standard deviation €3.92 billion. The standard deviation for the third independent variable, CF from financing activities, is €8.128 billion – higher than its mean of €5.345 billion. The last independent variable, net cash flows, has a mean of €1.204 billion and a standard deviation of €1.847. Table 3 shows the correlation between independent variables, the dependent variable (EPS), and net profits is -0.783, which means a strong negative correlation. Table 3 consists of the correlations between the variables of the study.

Table 3. Correlations

Variables	Earnings Per Share	CF from Operating Activities	CF from Investing Activities	CF from Financing Activities	Net Cash Flows
Earnings Per Share (EPS)	1				
Cash Flows from Operating Activities (CFOA)	–.65	1			
Cash Flows from Investing Activities (CFIA)	–.34	.17	1		
Cash Flows from Financing Activities (CFFA)	.65	–.79	–.71	1	
Net Cash Flows (NCF)	–.37	.61	–.30	–.14	1

Source: *Authors' calculation.*

Based on the above table, the correlation between cash flows from financing activities and EPS is .65, a moderate positive correlation. A moderate negative correlation between cash flows from operating activities and EPS is evidenced by a value of –.65. There is a low negative correlation of –.34 between cash flows from investing activities and EPS; at the same time, a low negative correlation between the last independent variable, net cash flows, and the dependent variable (EPS) is shown. On the other hand, the correlation between the independent variables with each other based on this table is –.79. A strong negative correlation between CF from operating activities and CF from financing activities is evidenced. At the same time, the correlation of .61 is moderately positive between operating activities and net cash flow, but a negligible correlation between operating activities and CF from investing activities is shown. The correlation between CF from investing activities and net cash flows is –.30, a low negative correlation that means less of an impact than CF from operation activities, but at the same time more than the –0.14 negligible correlation between financing activities and net cash flows.

Table 4. Adj R square

Model Summary[b]						
Variables	R Square	Adj R Square	Std. Error of the Estimate	Change Statistics		
				F Change	df1	df2
CFOA	.419	.355	1.75524	6.499	1	9
CFIA	.113	.014	2.16936	1.146	1	9
CFFA	.427	.363	1.74422	6.695	1	9
NCF	.139	.044	2.13706	1.455	1	9
b. Dependent Variable: Earnings Per Share (EPS)						

Source: *Authors' calculation.*

Table 4 involved calculating Adj R square between each independent variable and EPS separately based on simple linear regression. The Adj R square between CFOA rates EPS is .355, which means that 35.5% of the variance in EPS (Dependent Variable) is explained by the CFOA variable (Independent Variable). Adj R square between the CFIA rates and EPS is .014, which means that only 1.4% of the variance in the EPS (Dependent Variable) is explained by the CFIA (Independent Variable).

Adj R square between CFFA and EPS is .363, which means that 36.3% of the variance in the EPS (Dependent Variable) is explained by the CFFA (Independent Variable), and this ratio is the highest among the independent variables. Adj R square for the last independent variable is .044, which means that only 4.4% of the variance in the EPS (Dependent Variable) is explained by the NCF.

Table 5. *Coefficients for Earnings per Share Regressions.*

Coefficients[a]					
Model	Unstandardized Coefficients		Standardized Coefficients	*t*	Sig.
	B	Std. Error	Beta		
(Constant)	6.778	.606		11.189	.000
Cash Flows from **Operating** Activities (CFOA)	−1.987E-10	.000	−.648	−2.549	.031
a. Dependent Variable: Earnings Per Share (EPS)					

Source: *Authors' calculation.*

Table 5 shows the linear regression equation to predict the value of Y (Earnings per Share – the dependent variable) in a given value for X (Cash Flows from Operating Activities – the independent variable) with sig = 3.1%. Therefore, confidence >95%, which means that the significance level is less than 5% in this case (accept the alternative hypothesis and reject the null hypothesis).

$$EPS = \beta_0 + \beta_1 CFOA_i + e_i \quad (3)$$

$$EPS = 6.778 + (-1.987E\text{-}10)\ (CFOA) + e_i \quad (3.1)$$

Table 6. Coefficient

Coefficients[a]					
Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	4.560	1.518		3.004	.015
Cash Flows from **Investing** Activities (CFIA)	−1.873E-10	.000	−.336	−1.071	.312
a. Dependent Variable: Earnings Per Share (EPS)					

Source: *Authors' calculation.*

Table 6 shows the linear regression equation to predict the value of Y (Earnings per Share – the dependent variable) in a given value for X (Cash Flows from Investing Activities – the independent variable), with sig = 31.2%. Therefore, confidence <95%, which means that the significance level is more than 5% in this case (accept the null hypothesis and reject the alternative hypothesis).

$$EPS = \beta_0 + \beta_1 CFIA_i + e_i \quad (4)$$

$$EPS = 4.560 + (-1.873E\text{-}10)\ (CFIA) + e_i \quad (4.1)$$

Table 7. Coefficient

Coefficients[a]					
Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	5.088	.639		7.964	.000
Cash Flows from **Financing** Activities (CFFA)	1.756E-10	.000	.653	2.588	.029
a. Dependent Variable: Earnings Per Share (EPS)					

Source: *Authors' calculation.*

Table 7 shows the linear regression equation to predict the value of Y (Earnings per Share – the dependent variable) in a given value for X (Cash Flows from Financing Activities – the independent variable), with sig = 2.9%. Therefore, confidence >95%, which means that the significance level is less than 5% in this case (accept the alternative hypothesis and reject the null hypothesis).

$$EPS = \beta_0 + \beta_1 CFFA_i + e_i \quad (5)$$
$$EPS = 4.560 + (1.756E\text{-}10)\ (CFFA) + e_i \quad (5.1)$$

Table 8 shows the linear regression equation to predict the value of Y (Earnings per Share – Dependent Variable) in a given value for X (Net Cash Flows – the independent variable), with sig = 25.8%. Therefore, confidence <95%, which means that the significance level is more than 5% in this case (accept the null hypothesis and reject the alternative hypothesis).

$$EPS = \beta_0 + \beta_1 CFFA_i + e_i \quad (6)$$
$$EPS = 4.560 + (-4.412E\text{-}10)\ (NCF) + e_i \quad (6.1)$$

Table 8. Coefficient

Coefficients[a]					
Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	6.558	.781		8.402	.000
Net Cash Flows (NCF)	−4.412E-10	.000	−.373	−1.206	.258
a. Dependent Variable: Earnings Per Share (EPS)					

Source: *Authors' calculation.*

There is a difference between Table 9 and Table 4 regarding Adj R square between each independent variable and EPS separately based on simple linear regression. However, Table 8 involved Adj R square between all independent variables and EPS together based on multiple linear regression. The Adj R square between CFOA, CFIA, CFFA and NCF (independent variables) and EPS is 41.4%, which means that 41.4% of the variance in EPS (the dependent variable) is explained by the independent variables for this study.

Table 9. Coefficient

Model Summary[b]							
Model	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics			
				F Change	df1	df2	Sig. F Change
1	.648	.414	1.67284	2.766	4	6	.128
a. Predictors: (Constant): Cash Flows from Operating Activities, Cash Flows from Investing Activities, Cash Flows from Financing Activities, Net Cash Flows							
b. Dependent Variable: Earnings Per Share (EPS)							

Source: *Authors' calculation (2022).*

Table 10 shows the multiple linear regression equation to predict the value of Y (Earnings per Share – the dependent variable) in a given value for (CFOA, CFIA, CFFA and NCF – the independent variables). The significance level is >5% for all independent variables, which means that confidence is <95% in this case (accept the null hypothesis and reject the alternative hypothesis).

$$EPS = \beta 0 + \beta 1CFOAi + \beta 2CFIAi + \beta 3CFFAi + \beta 4NCFi + ei \quad (7)$$

Table 10. Coefficient

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	6.194	1.389		4.460	.004
CFOA	2.052E-9	.000	6.689	1.557	.171
CFIA	2.187E-9	.000	3.925	1.550	.172
CFFA	2.274E-9	.000	8.457	1.679	.144
NCF	−2.458E-9	.000	−2.078	−1.730	.134
a. Dependent Variable: Earnings Per Share (EPS)					

Source: *Authors' calculation.*

The above table shows the results of regression analysis. First, the coefficient of the cash flows from operating on the EPS is statistically significant and negative, indicating that *H1.a* is accepted empirically based on Table 5. This result offers empirical support for the findings of the few prior studies that found there is a statistically significant correlation between the cash flows from operating and EPS or earnings (Bowen et al., 1986; Farshadfar, 2008; Hamshari, 2020; Ketz & Largay 1987). Second, the coefficient of the cash flows from investing with the EPS is not statistically significant and is negative, leading to the rejection of *H1.b* according to Table 6. There are no studies that investigate this relationship between cash flows from investing activities and EPS, but in general most of the studies indicate that the traditional measures for cash flows including investing activities have a relationship with earnings (Bowen et al., 1986). Third, there is a statistically significant and positive correlation between cash flows from financing activities and EPS based on Table 7, indicating that *H1.c* is accepted empirically. The result that supports the findings of prior studies is that there is a statistical significance between cash flows in general and earnings (Bowen et al., 1986; Farshadfar, 2008). Fourth, based on Table 8 the correlation between net cash flows and EPS is statistically significant and negative, leading to the rejection of *H1.d*. Finally, multiple regression based on Table 10 shows that there is no statistically significant relationship between the pillars of the statement of cash flows and earnings per share (EPS). It may be that these results conflict with some studies that focused on earnings only rather than earnings per share. At the same time, these results provide an important indicator for decision makers relying on the data of a leading group (Daimler Ag) in the market that has a long history of success and financial stability.

5. Summary and conclusion

Based on the results of this study, multinational companies should pay more attention to the statement of cash flows as one of the financial statements used to provide a solid basis for the process of comparing the performance of an entity or for comparing the performance of the same entity in successive financial periods. There must also be consistency between the growth rate in net cash flows and the profitability ratios of the company, and one of the most important of these ratios for investors is earnings per share. Multinational companies must provide sufficient transparency when preparing financial statements, especially the statement of cash flows. When preparing cash flows from operating activities, it is preferable to use the direct method because it discloses each source of cash and how it was spent in operating activities. This is also recommended by IAS 7, as the direct method provides useful information in estimating future cash flows. It is possible to re-conduct such a study that shows the relationship between cash flows and earnings per share by comparing more than one company and different sectors to verify that relationship. Researchers can also direct their studies towards the importance of cash flow statement metrics in making investment decisions.

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