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MODEL OF ACCOUNTING ENGINEERING IN VIEW OF EARNINGS MANAGEMENT IN POLAND

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Abstract

The article introduces the theoretical foundations of the author's original concept of accounting engineering. We assume a theoretical premise whereby accounting engineering is understood as a system of accounting practice utilising differences in economic events resultant from the use of divergent accounting methods. Unlike, for instance, creative or praxeological accounting, accounting engineering is composed only, and under all circumstances, of lawful activities and adheres to the current regulations of the balance sheet law. The aim of the article is to construct a model of accounting engineering exploiting taking into account differences inherently present in variant accounting. These differences result in disparate financial results of identical economic events. Given the fact that regardless of which variant is used in accounting, all settlements are eventually equal to one another, a new class of differences emerges - the accounting engineering potential. It is transferred to subsequent reporting (balance sheet) periods. In the end, the profit "made" in a given period reduces the financial result of future periods. This effect is due to the "transfer" of costs from one period to another. Such actions may have sundry consequences and are especially dangerous whenever many individuals are concerned with the profit of a given company, e.g. on a stock exchange. The reverse may be observed when a company is privatised and its value is being intentionally reduced by a controlled recording of accounting provisions, depending on the degree to which they are justified. The reduction of a company's goodwill in Balcerowicz's model of no-tender privatisation allows to justify the low value of the purchased company. These are only some of many manifestations of variant accounting which accounting engineering employs. A theoretical model of the latter is presented in this article.

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Introduction

Using different accounting methods to affect financial reporting has been widely acknowledged by modern conceptions of earnings management for a long time. This approach has been recognized both theoretically, as a hypothetical possibility, and practically, in a form of accounting practice known as creative accounting.

The basic concern in any analysis of accounting engineering is to define this notion and, even more importantly, show it to be conceptually different from creative and praxeological accounting.

Accounting engineering is understood to comprise only lawful activities conforming to the current balance sheet law to the letter, which is what sets it apart form creative accounting. Accounting engineering is a method of managing company resources in such a way as to ensure that the effects of economic operations are in concordance with assumed goals. Thus, accounting engineering defines the degree of correlation between accounting operations and company

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management ("the managerial aspect of accounting"). In this last aspect, accounting engineering exploits the fact that accounting operations may be antedated. In the present article, we describe the mechanics behind this form of accounting practice.
Variant accounting is yet another term begging explanation. Variant accounting covers variant (alternative and optional)[2] solutions in the balance sheet law (also in Poland). Such solutions are characterized by different "vestigial" financial results of identical economic operations. This leeway given by the balance sheet law has some important consequences:

1. an accounting method may be used to control a company's current financial results. This particular "accounting instrument" plays a crucial role in accounting engineering,
2. the solution has considerable consequences, since the accounted value will remain the same, no matter which accounting method has been chosen. This follows from the fact that, regardless of the selected accounting method, each fixed asset will be amortized "down to zero" and each product will also be outlaid at sale or consumption "down to zero" in the books of warehouse management.

The above fact has important implications not only for current "operating" earnings management in a company, but also for its valuation in the future. If accounting engineering solutions were employed in a given reporting period to increase the financial result recorded in the balance sheet, costs would need to be transferred to the next period, e.g. by amortising the fixed assets with smaller current depreciation values (e.g. the declining method). As such, the financial result would, in future periods, be reduced by the amount of the values transferred from previous periods.
In the present article, we describe the mechanics behind accounting engineering.

Overview of research into the procedures of accounting engineering

Previous studies concerning the nature of accounting engineering as an accounting model have considered:

1. its relation to the theory of sciences in view of General Systems Theory,
2. analyses differentiating between accounting engineering and other models of accounting, such as creative and praxeological accounting (Michalczyk, 2011),
3. ethical implications for accountants using accounting engineering solutions,
4. legality (in terms of criminal, penal and fiscal law) of accounting engineering operations and the equivocal legal status of accounting fraud,
5. the degree to which it conforms with the balance sheet law,
6. using the procedures of regular accounting as a basis for accounting engineering activities,
7. detecting types of activity associated with accounting engineering using statistical analysis.

The theoretical framework for creative accounting and accounting engineering finds its roots in English and American research. Numerous studies have indentified instances of accounting practice encompassing so-called financial shenanigans with creative accounting. The analyses so far have assumed two directions: defining the goal and finding out how to attain it. Some classical studies in the field J. Briloff"s (1972), M. Schillit's (1993), R. Parker's (1995, p. 197 and nexts), J. Griffiths's (1986, 1995), or B. and J. Elliot's (2000) defined practical manifestations of creative accounting as early as in the 1970s. Although standards such as UK GAAP and US GAAP do not directly correlate with "continental accounting" based on IAS/IFRS – or the Balance Law and

[2] This distinction has been established in accordance with the following logic: 1/ „alternative" entails a choice between two possible variants, 2/ if there are more than two variants, the word „option" is used, 3/ every choice constitutes a variant.

KSR (Domestic Accounting Standards), which regulate accounting practice in Poland - they may at least be used to compare the research into accounting engineering in its various forms.
The definition of creative accounting is due to M. Schillit (1993, p.1), who applies this term to such instances of accounting practice whose overarching goal is to "distort the actual performance or financial situation of a company."
Here we perceive accounting engineering as the paradigm of the modern accounting practice. Accounting engineering integrates accounting theory with economic goals of company management. This relationship is that of mutual dependence, with company goals and pursuit thereof playing a dominant role. Accounting engineering is an instrument ("a catalyst") which makes it possible to evidence such financial results as are expected by the managing board.
The theoretical foundations of accounting engineering are a combination of the following:

1. *kuhn's post-constructivist anti-cumulativism* - to the extent to which it establishes a theoretical basis for observation and refutes the idea that science is merely a system for collecting knowledge,
2. *general systems theory* (in: Michalczyk, 2011) - its theory of sciences and the logic of argumentation based on the principles of causality,
3. *earnings management* - to the extent it combines accounting and company management,
4. *a*gency theory and the theory of transaction costs - as far as management and organizational sciences are concerned,
5. prospect theory - as far as defining key concepts used for describing, classifying and measuring values is concerned,
6. detailed accounting theory - as a basis for analysis within the *variant accounting* framework, as well as the analysis of earnings and outgoings flow,
7. the notions of *accountability* and *responsibility* - to determine who is responsible for the quality of information generated by means of variant accounting.

According to the concept of anti-cumulativism, it is possible to redefine the paradigm of accounting. A *conceptual neologism* is considered to be acceptable provided that it is justified by economic practice. General Systems Theory is one of the theoretical components allowing accounting engineering to define the correlation between accounting and the surrounding environment. The concept of earnings management constitutes "part" of an approach consistent with accounting engineering. Previous research into accounting engineering has shown that the subjects under study often behave in ways described in the theories of transaction costs, behavioural finance, and Prospect Theory (in: Michalczyk, 2011).
In light of the above, accounting engineering is no more unethical than the balance sheet law. The balance sheet law is a codified section of accounting theory and has been created by people specializing in the theoretical aspect of the field. And so, if accounting engineering were in any way *unethical*, it would be due to the *unethical character* of the codified accounting theory.

Notions of economic truth and economic facts in financial reporting following the concept of variant accounting

Truth, understood as a description of facts (including the economic performance of a company in a given reporting period), is a matter of ethics. Ethics, in turn, is a branch of philosophy. According to Emanuel Kant, it is the intention behind an action that determines its ethical value, regardless of what its effects may be. Friedrich Nietzsche, on the other hand, insisted that only actions are valuable, while noble intentions and effects are immaterial. The notion of truth is also reflected

in the law, customs underpinning a given economy, as well as in the attitudes of key economic players. If *accountability*, as Y. Ijiri (2004, p. IX) insists, refers to an account-giving relationship between two parties, it is extremely important that it be settled, or regulated, legally.

A. Kamela-Sowińska puts forward a thesis about a tripartite "descent" of creative accounting[3]. Her observations may be applied to accounting engineering as well. The human nature, legal regulations and the incompetence (and general laziness[4]) of some auditors (especially the ones employed in auditing firms[5]) all produce certain attitudes and types of activity herein classified as accounting engineering.

However, assuming that the premise about "human nature" is correct, it should become a matter of utmost importance to ensure the quality of the legal regulations "co-produced" by accounting theoreticians. This is because the said premise entails that people will exploit all legal loopholes and flaws to maximise their own profit. As a source of opinion and advice, accounting theory and accounting theorists play a crucial role in this field of knowledge.

Variant accounting stands in conflict with the *original* character of accounting understood as a system recording economic facts. Given their philosophical (ontological and semantic) and conceptual background, facts do not leave much room in terms of possibilities. So whenever a variant approach is used, its effects cannot be understood to describe facts. Yet another consequence is that variant accounting violates the basic (ethical) function of accounting, namely – to protect economic circulation. This function constitutes the raison d'être of accounting as such, and we refer to it on numerous occasions throughout the article. That this function has been neglected is thanks to accounting theorists. Variant accounting is a product of many generations of accounting theorists, and practicing accountants have had only minimal influence on its shape. In its entirety, the Polish balance sheet law lacks precision and opens way to many variant solutions, even if there occur discrepancies in the descriptions of the same economic event. Still, recording the performance of a business entity (its financial result) is considered to be the basic responsibility of accounting. Therefore, if we follow what Kamela-Sowińska proposes, we will need to introduce a component which would identify which approaches are consistent with accounting engineering. This component is realized in the fact that the legislators codifying theoretical models of accounting are ignorant of the ramifications of their actions.

This usually happens in a situation where various solutions are applied to economic events and processes of a single type so that different "numerical results" are achieved. Although the above scenario is preferred, the choice is ultimately up to the individual.

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[3] Also the definition of „creative accounting" proposed by Kamela-Sowińska corresponds to a considerable extent to accounting engineering.

[4] This is, among other things, due to the regulations set by professional standards – cf. *Professional norms for comptrollers*, KIBR, Warsaw, 2005. The 1st one of those norms allows comptrollers to choose and consider only those sections of the balance sheet that they deem to be significant. Because of this fact, and the rule that comptrollers should be changed at least every three years (especially in state-owned companies), comptrollers are usually not familiar with the specifics of the company they audit for the first time.

[5] Some interesting remarks on the quality of work of comptrollers and the relation between different auditing methods and work results W. Gabrusewicz's (2007, p. 98) The author refers to the research in the doctoral dissertation: M. Siekierczak, *Badanie wyrywkowe w rewizji finansowej a wiarygodnośc sprawozdań finansowych* (AE Poznań): „The tax office found that the largest number of mistakes were made [here: after the audit by certified comptrollers - LM] in those companies whose financial statements had been audited using the method of deliberate choice [i.e. the least time-consuming one] (*Ibidem*, p. 98). The author also notes that auditing was more defective when conducted by large auditing companies.

Attempts by theorists to pin the blame on practicing accountants for the effects of using the balance sheet law hark back to the Roman principle of *casu consulto*[6]. A similar tendency may be observed in "lumping" all actions of practicing accountants together under the umbrella term "accounting fraud".

Many concepts that are to be implemented in practice are typically based on solutions previously applied in other countries and outlined in studies presupposing an economic and social reality different from that of Poland. The more elements specific to a given economic and legal reality are embedded in a theoretical concept, the less justified it is to implement it domestically. Since legal systems and regulations differ from country to country, applying a theoretical framework found in one country to another is extremely inappropriate.

The ethics of accounting is closely associated with the notion of responsibility in business, as well. Responsibilities of a business derive from the obligations it has towards the social and natural environments[7]. This notion is rooted in the Ancient Roman law, which has been the cultural foundation of Europe and America. In the economy of today, this old custom shines through some aspects of the free market economy and is visible in the "capitalist approach." "Obligation" is a term characteristically associated with the notion of responsibility. Any obligation entails the existence of "a debt" and "a responsibility"[8].

Apart from its legal and cultural associations, the notion of responsibility has ethical overtones, too. Essentially, the ethics of a capitalist economy comes down to a "PR code of ethics." This is apparent in the fact that profit maximisation is *put before* (Friedman, 1979) the moral responsibility for the means used to achieve it.

Speaking of ethics in a capitalist economy is usually just a "marketing trick." Ethics can be subdivided into "normative ethics", "ethics of behaviour", and "ethics of actions." Capitalism is an attitude of economic cooperation which has at its center *an equation the result of which is zero.* In this equation, "someone's" profit causes "someone else's" loss - and the sum is always zero. The only exception to this rule is the synergetic effect achieved within some organizations. Whether "ethics of behaviour" or "ethics of action" exist in capitalism, particularly in its liberal form, is a largely disputable matter and a purely theoretical concern. As for "normative ethics", which has no connection to "ethics of behaviour" or "ethics of action", it is merely "empty talk." The notion of "capitalist ethics" has therefore no practical reflection in the capitalist economic reality since it is ideologically inconsistent with it. Speaking of "the ethics of capitalist liberalism in the economy" is internally contradictory. An inherent part of modern capitalism's dominance of profit over conscience (Michalczyk, 2011, p. 7-16) is globalism, in which all forms of totalitarianism – philosophical (antiquity), religious (the Middle Ages), artistic (Renaissance), scientific (Enlightenment), and, finally, political (19th -

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[6] Lat. : *accidentally, on purpose* – „to do something so that it looks like an accident."

[7] The category of social and natural environment has a wider scope that that of a company's economic environment. For example L. H. Radebaugh and S J. Gray (1995, p.44) distinguish twelve components of the environment which affect accounting systems in various countries. Namely: (1) the political system, (2) trade unions, (3) ownership of means of production, (4) financial markets, (5) culture, (6) the legal system, (7) the tax system, (8) actual and potential level of economic development, (9) religion, (10) inflation, (11) level of education regarding accounting and the balance sheet law, (12) social conditions.

[8] Historically and legally speaking, an *obligatio* initially entailed the debtor's personal liability (including *Lex Poetelia* which committed the debtor to temporary or permanent slavery for newly taken or unpaid loans), and - in a later time - property accountability. However, in ancient Rome the regulation was not always observed. An obligatio did not carry „liability" in the case of some natural obligations (i.e. the obligations resulting from personal citizenship of the debtor or that of his patron.) Still, even natural obligations could have certain consequences for the debtor when unfulfilled (imprisonment, usually death.) (in.: Rozwadowski, 1992, p. 143).

20th c.) - have been replaced by an economic totalitarianism. At the same time, certain notions are being redefined, and the Protestant idea of "business" starts to be identified with "ethical values" – once the process is complete, "capitalist ethics" will become a coherent notion. However, for the time being, a non-capitalist perspective which sees ethics as "a general kind of goodness" and business as "personal goodness" still predominates. In the liberalism of Milton, the two categories used to be synonymous, but it has not been until today, in the age of globalisation, that the philosophical association of "general interest" with "the sum of individual interests" has been actually applied in practice. One may liken the situation to that described in "Hacksley's law" which compares the world to a game of chess subject to Nature's rules, in which the opponent stays hidden, but it is always assumed that the game is played by the rules and generally fair. At the same time, our opponent will pay careful attention to each mistake we make and use them to achieve his own goals.

It is precisely in the sense of "capitalist responsibility", based on *the economic equation the result of which is zero*, that current accounting practice may and should be studied. Aside from claims that "all avarice is good" in its own right, a liberal notion perceiving as "acceptable" actions not directly forbidden by law is also prevalent (Kielecki, 2002, p. 11). These two assumptions, in addition to the balance sheet law, which lets variant accounting into the economic environment, lay ethical foundations for activities consistent with accounting engineering. The ethics rooted in the liberal premises of a capitalist economy states that what is in fact ethical is not the norms behind economic coexistence (preventing mutual harm), but whatever has not been prohibited by law. However, the law is not meant to shape ethical norms, but to prevent anomalous situations in everyday life or actions violating social and cultural taboos. Conceptually, violating a taboo is not exactly the same as violating an ethical norm. Apart from common law, which is largely based on the concept of "social revenge" (*lex talionis*), the law as such has therefore no direct connection to ethics. The law is not akin to the ethical notion of "justice", nor does it symbolise it. There is no connection between the liberal approach to the law and ethics, either.

Considering its ultimate purpose – financial reporting – accounting is part of business responsibility. In this respect, the notion of responsibility *entails* that its components be *enumerated*. This methodology reflects what the balance sheet law sees as preferable. Those preferable solutions are, in turn, conceived in the "ingenious" minds of the theorists who attempt to introduce variant accounting to the economic domain. It is also they who are to blame for the balance sheet law's poor construction in terms of *accountability* and *responsibility*. This follows from the fact that:

1. they have established how economic events and activities associated with business should be evaluated - this corresponds to the notion of responsibility (for one's actions),
2. the choice of method has been left to practicing accountants, which - given that the theorists see profit maximisation as the main motive behind all human actions - translates into the notion of accountability (for the effects of one's actions).

Accounting theorists are thus solely responsible for the effects of accounting actions which are legal in the light of the law, and any attempts to label *accounting engineering* as "accounting fraud" result from the *casu consulto* "approach".

External auditing plays an important part, too. Since comptrollers may be a considerable hindrance to creative accounting (accounting fraud), they should be recognised as an integral and crucial component of our country's economy. Accounting audit counteracts unlawful business activities and, by definition, serves to the best interest of the addressees of financial statements (if properly executed) by ensuring that the delivered information is reliable.

However, the verification of financial statements is limited to controlling the correct use of an accounting method, but does check whether proper "accounting thinking" takes place. Since companies are allowed to choose from a range of legally-acceptable variant accounting meth-

ods, which record identical economic events in different ways, the reliability of thus created financial statements is highly ambiguous.

This situation is, however, not attributable to accounting auditors and the quality of their work, but results from the way the Polish balance sheet regulations are constructed and the fact that there exist no mechanisms that would *detect* accounting engineering activities and *prevent* companies from using them. The creation of such mechanisms should become the primary goal of accounting and auditing in the nearest future. Accounting is a noble domain of knowledge with an immense influence on the economy, it plays a crucial role in verifying all types of economic activity and reviewing the efficiency of company management, and if the above goals are not met, it will continue to lose credibility. Achieving this goal, and not creating increasingly absurd variant accounting ideas, should become the focus of accounting. It is for the research in this field that academic degrees and titles should be given. And it will only be then that universities will turn back to the original function of accounting - *the protection of economic circulation*. And then the ideas of accounting theorists will no longer bring pitiful smiles on the faces of the pragmatic practicing accountants.

Whenever alternative solutions permitted by the balance sheet law are exploited in the *accounting engineering* "approach", its norms are used to "manipulate" the following:

1. the time at which costs and revenues are recorded in a financial statement, which affects the result displayed in the current reporting period, the period to follow, as well as the company's goodwill,
2. how balance data are identified and classified in the books, which affects the company's goodwill and future cost and revenue capitalizations.

This refers mainly to *costs roll-overs*. Therefore, companies are responsible not only to individual investors, creditors, lenders, and official institutions, but also to numerous contractors tied to them. Although speculators (so-called market operators and creditors/lenders) take the risks inherently present in capitalism, and directly proportional to prospective gains, domino effects leading to economic straits among contractors (including their bankruptcy) or the "new approach" to the providing of financial information to external bodies, mainly revenue offices, may be nationwide[9]. A socially-responsible accounting practice is, however, still the preserve of public finance. Besides, current regulations of the Polish law give us no reason to surmise that public responsibility of private business will be enforced otherwise than by external institutions (offices, ecologists, etc.). For this reason, the balance sheet plays a very important role in this respect. All the shortcomings of this law stem from the implementation of variant accounting solutions, the creation of which has become a means of "producing" new "scientists" and theorists of accounting.

Earnings management as a variant of accounting engineering

The process of controlling the way incomes and profits are characterised, known as *earnings management*[10], has been a subject of research in management and accounting since, at least, the 1970s. The majority of essential, classic works dealing with the scientific research into the

[9] This has also been observed in the U.S. and results in, e.g.: Sarbanes-Oxley Act in 2002 y., PCAOB (Public Company Accounting Oversight Bard). The appointment of former FBI director W.H. Webster as head of SEC is considered to be its sign.

[10] If taken literally, this corresponds to the Polish terms *zarządzanie zarobkami* and *zarządzanie dochodami*. However, in Polish studies both the terms are customarily reserved for other domains of research, and so we propose that earnings management be translated as „*zarządzanie kształtowaniem* (or *określaniem*) *dochodów i zysków*" (lit. „controlling the way incomes and profits are characterised"). We think that this translation reflects the semantic content of the English term better than the literal one.

matter encompass publications examining accounting practices in English-speaking countries (mainly the United States)[11].

In the 1970s, they were also defined as an opposite of "neutral" accounting evaluations of economic operations. At the same time, it is assumed that "neutral accounting" is a possible part of business activity. Simultaneously, "low motives" are posited as a motivation for "controlling the way incomes and profits are characterised", which K. Schipper defines as "private gain" (Schipper, 1989, p. 92). Similar observations have also been made by: P. Healy and J. Wahlen (1999)[12] or P. Dechow and D. J. Skinner (2000). They contributed to the formation of the concept of earnings management, as well. In Poland similar efforts have been made by: A. Jaruga, J. Fijałkowska, R. Papa and L. Ferreira (2004).

Each theory of earnings management has some common elements:

1. accepting possibilities resulting from the implementation of Agency Theory,
2. the maximisation of profits as a goal set before people managing a company by its stakeholder,
3. taking into consideration possibilities resulting from variant accounting solutions,
4. accepting the existence of "low motives" behind people's actions, which is the essence of the capitalist and protestant view of the economic reality.

Here the term "profit" is understood in its "general" sense. It refers to the net amount of the financial result which will be allocated according to the owners' will: the money may be distributed among stockholders, it may be added to the equity capital (e.g. reserve capital), or used to compensate losses from previous years. As we can see, in its widest sense, it is an equivalent of "net profit" (including taxes) in accounting. In this respect, one would also need to take into account the specifics of tax systems in particular countries as well as their correlation with accounting solutions.

Earnings management is used in order to influence present and potential (future) stakeholders of a company. According to the typology of *Principles for Business. The Caux Round Table* in 1994 y., the following should be included in this group: employees, owners and investors, contractors, clients, competitors, and national or local organizations. Research conducted so far have revealed that this is true as regards changes in the value of shares already listed, or to be listed, on the American stock exchange (in: Teoch at all, 1998, 1998, Hayn, 1995). It seems justified to presume that similar practices may also be observed in Polish listed companies, and not only as a result of their capitals being interlocked with foreign companies. They have not been included in the present article, however, since we consider IAS/IFRS regulations to be superior to our domestic balance law regulations, but their role as the *motivation* behind certain attitudes affects the accounting of other companies.

Prospect Theory, appropriately adjusted to fit the needs of accounting engineering, would take into account the relations with chosen elements of the economic environment of a company (Kahneman and Tversky, 1979) and a relativity-based approach. In these respects, they are accepted by the concept of accounting engineering.

However, unlike Prospect Theory and its derivative - the concept of behavioural finance[13], accounting engineering is essentially a mathematical approach.

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[11] For example: Hayn (1995); Burgstahler, Dichev (1997, p. 99-102). Those studies determined that at least 17% of researched subjects practiced earnings management, and the figure rose up to 40% when only the entities having „objective" economic problems were considered.

[12] They construct, among other things, a list of „personal goals" that people in charge of company management have.

[13] According to the concept of behavioural finance the negative experience of financial loss is perceived more strongly than the positive experience of profit of a comparable height (but, of course, with an opposite mathematical sign). What it means is that the function of profit perception is concave and of losses - convex. In greater detail in: (Burgstahler and Dichev, 1997; Degeorge at all, 1999; Kayn, 1995; Leuz at all, 2003).

What is more, the form prospect theory assumes within the framework of accounting engineering is slightly different. This alternation has to do with the connection between a company's accounting and its operational objectives. Those objectives are associated with the maximisation of profits per account balance for people managing the company and for the company itself. At first, the objectives are pursued by maximising personal income of the manager, which in turn influences his attitude in pursuing the economic goals of the company. The second group entails "increasing" the book value (and, indirectly, the market value) of the company.

Manipulating the moment of the *capitalization of costs* in accounting or *cost activation* takes place in operational management. In accounting, the capitalization of costs refers to transferring particular assets to the result of the current reporting period. Cost activation, on the other hand, is responsible for characterising costs as assets. Financially speaking, these two are deemed to be opposite, while in accounting, they are believed to be simply different, nonequivalent[14]. Maneuvering between these two is what accounting engineering is preoccupied with. However, within a longer period of time, particular elements of assets are completely settled. Even so, the "juggling" of costs and incomes may be done on a "permanent" basis.

As a result, accounting engineering, as an imperative of accounting operations, is primarily applicable to operative management. In the case of long-term management, accounting settlements of particular business assets or the company's liabilities will always be equal. In this case, using different accounting methods does not matter as far as differences in financial results or net balance sheet values are concerned. Fixed assets always reach, sooner or later, zero net value; running costs associated with the production or provision of services, including the value of sold products (deferred costs) are, in the long run, always equal to total costs, irrespectively of where and when they are recorded, etc.

At the same time, current differences appearing in the financial result are impermanent. They could become permanent only if the company *reconstructed* its assets and shifted equal sums between particular reporting periods. However, in a changeable capitalist economy, such an assumption (along with the rational basis for such actions) is questionable. Nevertheless, the influence of accounting methods on financial results may differ in particular periods and for that reason it needs to be under permanent control. Such control procedures would verify the influence of employed accounting methods on the current financial result of the company.

As regards accounting engineering operations, two groups of accounting methods may be distinguished. The first one calls for changes in the accounting policy, while the other requires no such alterations. While changes in the accounting policy of a company operating on the Polish market and based on the Polish balance sheet law must be included in the financial report as *additional information*, distinguishing, for instance, between amortisation (which has to have a constant value) and depreciation (which is a result of the economic operation of a particular fixed asset) allows the company to achieve a desirable (as seen by company management and company interests) net financial result.

The development of earnings management activities is a consequence of the following:

1. capital holders *hire* managers to manage their companies while they themselves give up direct and current control of the company,
2. the maximization of a company's profits and its goodwill are taken to testify to the quality of the managers' work, on which depend their remunerations and future employment in the company,

[14] E.g. current depreciation value of an asset does not have to be equal to its current amortisation value.

3. accounting (the provider of economic information about the company) is perceived as a mechanism which verifies the work performed by the managers.

Since the development of accounting led to the creation of *variant accounting* and since managers are allowed to choose their accounting staff as well as define the degree to which accounting is used in the companies they manage, a phenomenon whereby managers "assess themselves" came into being. In earnings management, it is in fact the managers, and not capital holders, who decide whether the company functions correctly or yields accounting losses. This is made possible by the "achievements" in and the "development" of accounting theory, by virtue of which variant accounting is created. At the same time, there exist no mechanisms that would verify financial reports by reducing them to the "lowest common denominator." This would be an alternative to the introduction of the *AE factor* to financial reporting (balance) of a company[15].

Variant accounting led to the creation of a phenomenon whereby a necessary condition for the maximisation of current profits (accumulated or allocated) does not have to be for the currently obtained profit to be maximised. At the root of this seemingly tautological relation is research methodology, that of the present study included. Eradicating this phenomenon (in all accounting systems) should become a future objective of accounting and accounting audit.

That being so, certain links between accounting engineering and practical aspects of company management may be singled out:

1. managing the amount of tax liabilities,
2. managing the amount of recorded balance profit or loss,
3. managing financial liquidity via generating information for main stakeholders of a company.

The basis for such actions may be found in the classic R. H. Coase's theory of transaction costs (Coase, 1937) and a theory which is in some respects compatible, and in others opposite, to the first one – the theory of agency[16].

Agency Theory is meant to signal uncertainties existing between an economic agent and its surroundings. It is a consequence of there being no mutual trust between the owner realizing, to the letter, strategic goals and individuals in charge of management, who are primarily interested in attaining current, operational goals (which constitute the basis for their assessment and reward). A group which is an exception to this consists of business owners who operate on the stock exchange and who are seen by the company as parasites, obviously only after their capital has been made available. The degree of distrust should be proportional to the *distance* that separates, within the company structure, the capital holder and production factors acquired by the company[17]. This *distance* corresponds to the number of people managing the capital in the *vertical structure* of the organization.

Regardless of whether there exists, within the company, a separation of management from ownership (according to the model proposed by Agency Theory), or whether this fact is of no import

[15] How the AE factor functions, *cf*. diagrams 1 and 2.

[16] These theories constitute opposite approaches to management in the economic reality of, for example, the USA. In the Polish environment, where directors who are capital holders and directors „from without" the company often „mix" within the same firm, the two concepts are complementary. In Poland, it is assumed that when a person creates a company, it is, in the first place, supposed to be his work place. This situation has its roots in the nature of the social insurance system and the tax law of Poland.

[17] This lack of trust is apparent in the creation of numerous corporate supervising bodies and organizations whose responsibility it is to control financial information generated by a company. It appears that Agency Theory's classic study (Berle and Means, 1932) is also very relevant as far as the birth of modern management is concerned. Modern management separates business risk (owners) from business management (managers). Certain degree of control is also given to members of either supervisory boards taken from the „outside" or external boards of directors (which is common in the U.S.) (in f. e.: Peasnell at all, 2005; Beasley, 1996; Dechov and Sloan, 1996; Fama and Jensen, 1983).

(as in the theory of transaction costs), *accounting engineering* is meant to maximise the profits for the benefit of the people managing the company. Accounting engineering is a mechanism designed to attain such goals. However, if management and ownership are not separated, the objectives of capital holders are pursued. Their objectives are synonymous with the strategic goals of the company. The objectives pursued by the management may be, in turn, different from those of capital holders. In accounting engineering, goals appointed by people managing an economic unit are considered to be of primary importance. It is them that the balance sheet law entitles to set the scope and character of the accounting policy of their company. Empirical research determined that the probability of using accounting engineering against a company is the greater, the more it reflects the assumptions of Agency Theory.

The *rationality of actions* and the fact that every person tries to maximise their profits may give rise to the following thesis: while agency relations within a given company create favourable conditions for earnings management phenomena, a direct involvement of the owner in company management reduces a tendency to "embellish" the company's financial results or its goodwill. In actual fact, the only recipients of reports for whom such "operations" may be performed are the institutions financing business or tax institutions. In the first case, an attempt is made to increase the balance profit. The second case, on the other hand, entails actions aiming to decrease the value of the financial result regarding these balance categories which concur with the current tax law. Is is then rational to *create* a loss, especially if it can be transferred to tax settlements. This may take place in those areas where solutions offered by the variant balance sheet law are accepted by the tax law. A situation in which tax losses recorded by a company in the past are settled constitutes the only exception. It is then a rational course of action to show at least such an amount of tax profit that can be completely "levelled out" by tax losses, deductible in a given year (reporting period), from previous years[18].

The above practices, *the juggling of profits and losses*, fall within the framework of accounting engineering. The idea of earnings management attaches little importance and legitimacy to the creation of a balance loss referred to a tax loss, which demonstrates that, in view of a company's financial liquidity, the idea does not offer an optimum solution. Furthermore, earnings management does not take into account the need to create a balance loss in order to facilitate the takeover of one company by another[19]. Therefore, accounting engineering attaches the same value to the maximisation of profits and the maximisation of both losses (the minimisation of profits) as well as the book value of a company. This takes place especially in connection with the implementation of settlement methods accepted by the tax law[20] or the reduction of value of state-owned companies to be privatized[21].

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[18] How tax losses should be settled differs from country to country. For instance, in Great Britain there are no time boundaries, in the U.S. tax losses have to be settled within 15 years, but, on the other hand, f. e. in France it has to be done within 3 years.

[19] Which is what commonly happens during the privatisation of state-owned companies in Poland. Also some private companies resort to it when building their own capital groups. E.g. this is what ABM Solid from Tarnów did when it took over a private company from Dębno and some state-owned companies from Bochnia and Dębica. The manoeuvre known as „forcing a loss" had been used in this case.

[20] Although adopting modified accounting methods to reduce taxable income is not unheard of in earnings management, such measures are „peripheral to the accounting solutions" advocated within the concept – with the exception f. e.: of J. M. Hand's study (1992).

[21] One of the consequences of reducing the book value of privatised state-owned companies is the creation of „a book profit" shortly after privatisation. This is usually a result of releasing provisions and other items of balance costs calculated prior to privatisation, in accordance with the regulations specified in the 8th article of the Polish accounting act. This phenomenon also substantiates the thesis concerning the purportedly greater economic efficacy and competitive power of privatised companies. Even if the thesis is indeed right, the claim that it is based solely on the balance data (e.g. disregarding changes in the company's environment) is unjustifiable.

The research described in the present article shows that "accounting manoeuvres" aiming to increase or decrease the financial result of a company are dependent on management style and on the degree to which those activities are permitted by domestic tax regulations. It therefore seems appropriate to contend that the final goal of accounting engineering is not the creation of a *virtual* financial result, but the maximization of the available net circulating capital. All mechanisms working to this end are based on the mechanisms of variant accounting. In short, the idea of *earnings management* is one of indirect variants of *accounting engineering* operations. In this respect, accounting engineering is a "conceptually" wider notion.

Although earnings management has been known to exist since, at least, the 1970s, the theorists of accounting not only have not attempted to remedy it, but even taken actions leading to the development of variant accounting. As a consequence, such well-known and - reputedly - thriving companies as, inter alia, Barrings Bank or Paramalat collapsed.

Research conducted by ACEF (*Association of Certifield Fraud Examiners*) has shown that approx. 25% of bankruptcies of companies are a direct corollary of employees' actions. In this group, the main, as regards its overall significance, category comprises actions classified as white-collar crimes. Those actions make use of, among other things, variant solutions allowed (accepted or even affirmed) in accounting practice or crossing the boundaries of its codified regulations. The latter element may be said to correspond to creative accounting, while the former - to accounting engineering (in: www.deloite-polska.com for day: 18.08.2011, also in.: Michalczyk, 2005, p. 86) associate the "financial value of frauds" with the post and position occupied by a particular employee in a company - the higher the post, the greater the value of losses resulting from irregular activities.

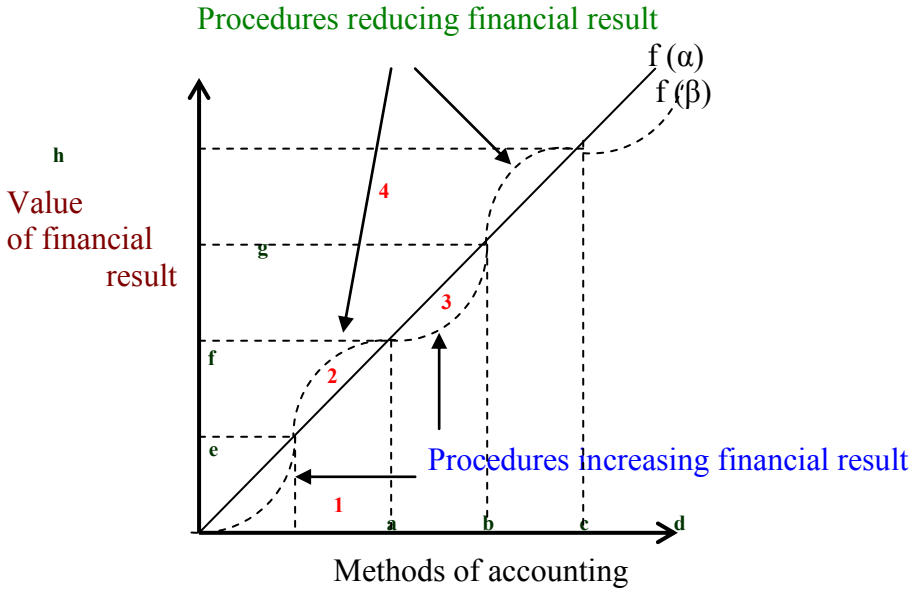
This relation may be accepted if the term "potentially incurred losses" is introduced, since without it, the approach presented by A. Hołda and W. Nowak (2003, p. 117-120) is an insubstantial allegation. It furthermore seems justified to claim that as long as the managing board, which has the influence on the choice of methods determining both financial results and the company's value, is rewarded for the visible results of those methods, there will always exist activities falling within the framework of accounting engineering or creative accounting. This follows from the fact that people who have a certain opportunity are interested to take it (motive). The scenario follows the pattern: *motive-opportunity-action*. Whether such activities are associated with accounting engineering or creative accounting depends on the combination of factors such as: the level of knowledge of accounting professionals and responsibility as volitional qualities possessed by individual employees in accounting and finance departments.

Similar observations were also made by international accounting organizations. It is reflected in the effort to create mechanisms enabling efficient corporate governance as well as separate systems of remunerations for individual members of the managing board. Nevertheless, especially the results of this second element appear to be foredoomed to failure. This is because such actions are inconsistent with the essence of private business, which makes its owns decisions concerning the costs of production factors (including labor), taking into consideration market and logistical relations. However, relating those actions solely to state-owned companies would have little significance given the fact that the position the sector occupies in a capitalist economy, in which the state is supported via direct economic activity, in weak *by definition*. The way "international committees" are composed is also questionable as such bodies consist mainly of theorists, while practicing accountants have little influence on the regulations determining the shape of the domestic balance sheet law.

Manipulating the financial result in accounting engineering

The financial result recorded via accounting engineering may be modified in a number of ways. In Graph 1 the financial result is represented as a function.

Graph 1: Function of financial result in accounting engineering



Source: Own studies

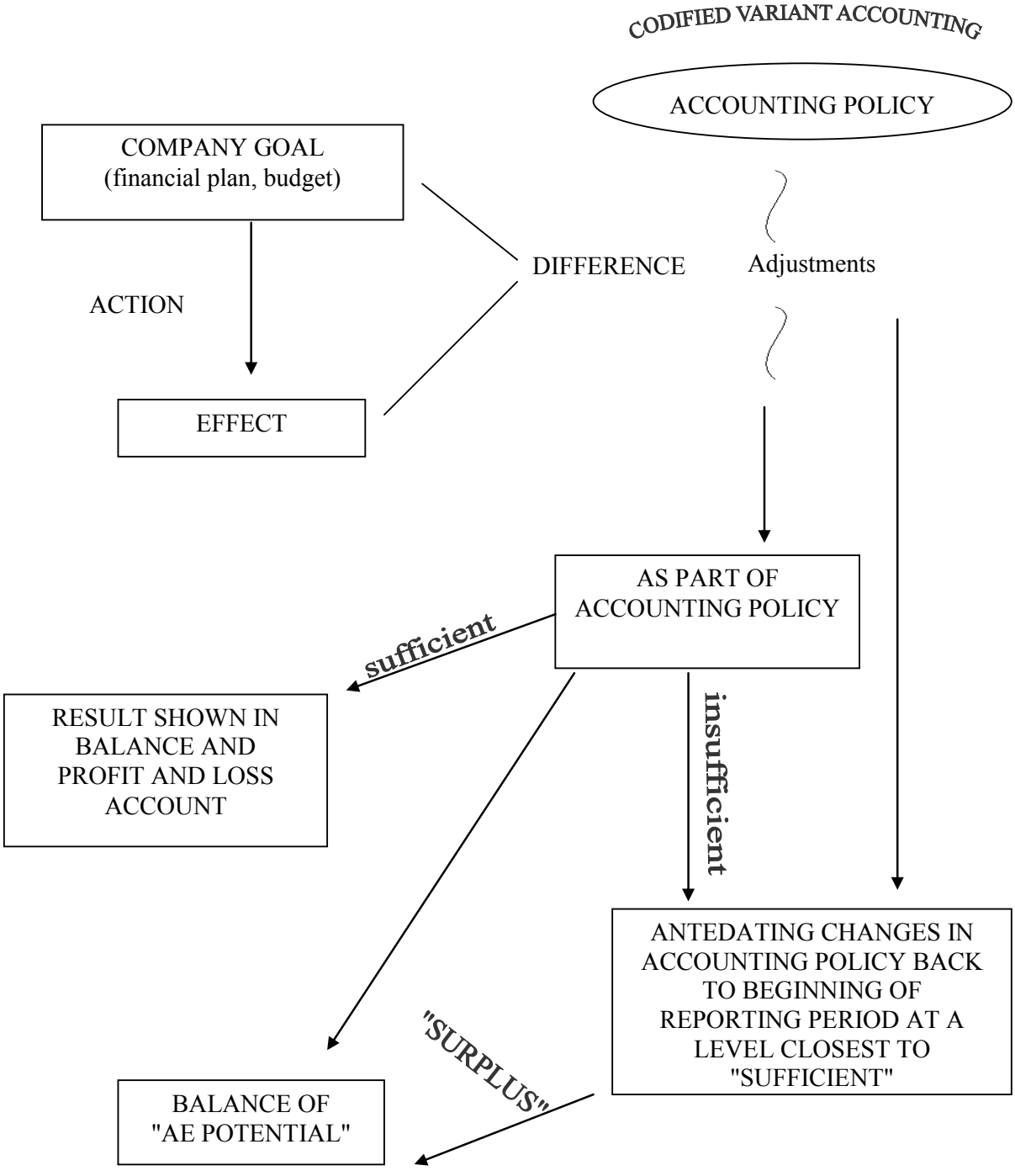
Where:
f (α) – goal function of a company
f (β) – actual activity function
1, 2, 3, 4,..., n – accounting engineering adjusting the financial result to company goals.
n – number of records in a company (P) with which codified variant accounting is used;
a→e; b→f; c→g; d→h – accounting methods (a, b, c, d) and their influence on individual components of the financial result (e, f, g, h).
Individual components are added up as relative values, respectively: |e| + |f| + |g| + |h|.
The financial result may then vary with respect to time and different reporting periods. Its temporary aspect is represented in Diagrams 1 and 2.
Beginning with the second year onward, accounting engineering subsumes the level of potential accounting engineering (pAE). Its remaining value from previous years is settled. The process may take one of the two forms:

1. "booster",
2. "inhibitor" (in: Michalczyk, 2011).

Whenever the managing board considers the ultimate financial result to be unsatisfactory, its value is suitably adjusted using the accounting engineering index.
Whether the value of the "pAE" index is positive or negative depends on the relation it bears to the company's current economic goals. Accounting engineering adjusts the financial result in such a way as to achieve a value closest to the target one. The overarching goal is to minimise the difference between the achieved and expected values. Since accounting engineering has to adhere to double-entry bookkeeping, surpluses or deficiencies (when recorded "inversely") are

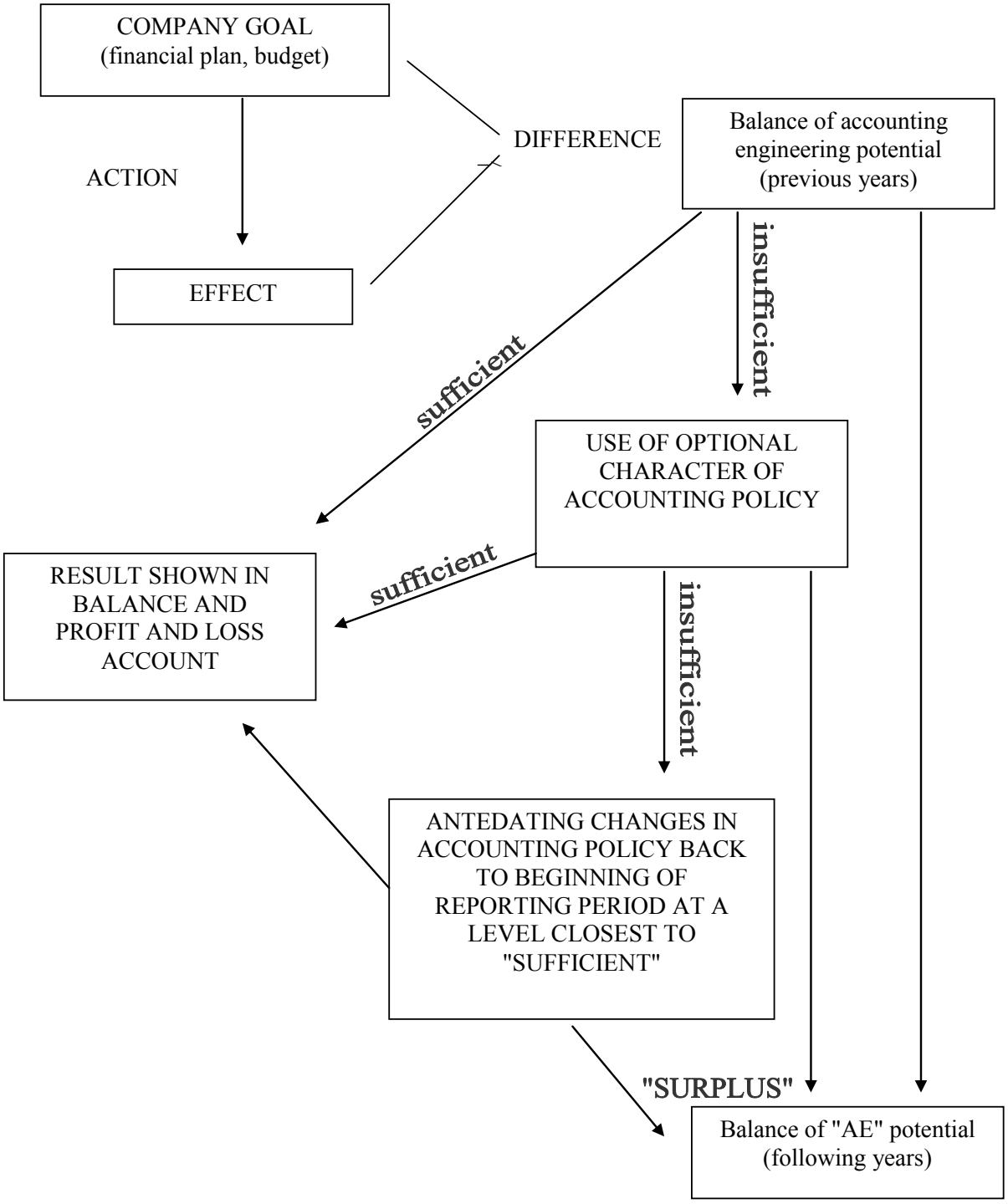
created. This amount corresponds to what we call the "pAE" value and is subject to settlement in later reporting periods.

Diagram 1: Influence of accounting engineering adjustments on the value of the financial result (first year)



Source: Own studies

Diagram 2: Influence of accounting engineering adjustments on the value of the financial result (following years)



Source: Own studies

Since the number of available variants is large but countable and finite, it is possible to find a set of accounting procedures best suited to particular company goals.

Conclusions

Accounting engineering - legally accepted manipulation of the financial result by interested parties - is a serious problem for the economy. By allowing for free adjustment of results, also regarding identical economic events, an employer concedes to manipulation of financial results, even in a situation in which it affects a wide circle of stakeholders, e.g. in listed companies. This is particularly relevant whenever a profit "created" in a given period yields losses in the future. Therefore, whether a company will continue to be economically efficient or not is highly uncertain, even if other factors shaping its financial result were (in a given analysis) assumed to be constant.

This fact also bears on future research into variant accounting and its influence on financial results. It seems that the only reasonable course of action is to reduce the influence of variant accounting, which is the source of the problem in a situation where the law allows for a free choice of accounting methods. Rejecting all "parasitic growths" and a rational blockage of new theoretical notions, as well as an effort to standardise accounting solutions, may remedy the problem of variant accounting, which is a serious threat to economic circulation, which should always be in the best interest of accounting. While achieving a "perfect degree of compatibility" of accounting systems is possible, albeit only in theory since each one of those systems has its own flaws, and a correctly executed standardization is illusory, it is feasible to reduce all accounting solutions to the "lowest common denominator." This is the course that accounting, as a field of knowledge aiming to protect economic circulation, should take. All other actions are an unproductive and, practically speaking, absurd waste of time. Since the funding for such "scientists" comes from Polish taxpayers' wallets, and their actions have a detrimental effect of the domestic economy, their endeavours should be branded as ethically reprehensible. It needs to be noted that such actions promote and encourage the use of legally-accepted, but otherwise unethical, economic mechanisms advocated by accounting engineering theorists.

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