How to evaluate business model

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Abstract

This paper deals with the theoretical elaboration of the method of evaluation of the benefits of business models. Its aim is to methodically design and describe the process of evaluating business models based on the analysis of the market value of the company calculated using the present value of future income. The result of this paper is a formula, which could be used for calculating the added value of a business model change.

JEL CODE: D46, G30

Keywords: Business model, revenue model, business model innovation, valuation

1. Introduction

The business model is defined as: *"A business model is a company's plan for how it will generate revenues and make a profit. It explains what products or services the business plans to manufacture and market, and how it plans to do so, including what expenses it will incur."* [1] According to the article by Johnson, Clayton and Henning, the design of the business model begins when designing the product itself. The company needs to realize what value it provides to customers (customer value proposition), how it can market it, what are the key resources it needs in order to provide value to customers, and what processes it needs [2]. The value provided is then based on the trading method.

Bill Ribaudo in his article recognizes four basic types of business according to their business model. They are asset builders, service providers, technology creators and network orchestrators [3]. Asset builders create or sell goods. Their business model is based on the price per piece billing. Service providers provide services. They charge an hourly rate for the services provided. Technology creators license their technology, and network orchestrators have their business model built on linking the demand and supply side through advanced technology [4]. By joining the chain, they offer an added value to both the supply and demand sides. They charge a fee for the interconnection of supply and demand. Examples of businesses using a network orchestrator are the card associations Visa, Uber, Airbnb, and Kiwi.com. As it is clear from Visa and Kiwi.com, it is not only a shared economy company. But these business models are just basic. Furthermore, business models can be divided based on the revenue model used. Revenue model is a subset of the business model. It is defined as: *"A revenue model refers to the specific modes in which a business model enables revenue generation."* [5]

Recently, there have been changes to business models that allow technological innovation. The Industry 4.0 Government Initiative states that: *"Business models of businesses are also undergoing major changes, where traditional ways of renting and selling are replacing forms of sharing. They are based on linking free capacity with demand by using peer-to-peer (P2P) transactions, allowing for growing demand for services without the need for new equipment."* [6] These changes are most visible in the technology sector. The first change was the emergence of open source software and its commercialization. As a rule, this software is provided free of charge[1]. Companies providing open source software commercialize its support or potentially make profit through user training. Another innovation, for example, is to provide a software license based on a regular monthly fee. Previously, a software license was purchased by a customer on a physical medium. Then came the internet sales. The latest innovation has been made possible by the expansion of cloud services that allow renting of the provided software. This business model is called SaaS (Software as a Service). Subscription products include Adobe Creative Cloud, Office 365, and Salesforce CRM. The music and film industry have gone through similar developments. First, the customer had to buy an entire music album on a physical medium (LP, MC, CD…). Eventually, Apple came with its iTunes allowing to purchase individual songs in digital form. The latest trend is streaming. The customer can rent access to the entire music catalog of services for a monthly fee. Among the providers of these services are, for example, Spotify, Deezer, Apple, and Netflix in the movie world. The gaming industry is another sector in which business models and revenue models are massively developing. Free to Play games are hugely

[1] Open Source Software is not necessarily provided free of charge.

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successful. It is based on the principle that the basic game is free, and the user buys various improvements for a fee [7]. However, these changes are mainly related to the revenue model. Traditional industries, such as car sales, have not been immune to the proliferation of the new ways of selling either.

The innovator in this field is Tesla, Inc. Tesla allows the owners of already sold cars to purchase various new features with software updates for a fee. For example, you can buy "Full Self Driving" for $ 7,000 after delivery [8]. With the expansion of automation and robotics getting more and more massive, the emergence of new business models in the industry can be assumed. The unresolved issue is how to evaluate the benefits of changing the business model. In author's opinion, an investment in the business model innovation should increase the company's market value as well as any other investment. This investment should therefore be assessed using investment evaluation methods. The problem with the business model is that it is highly intertwined with the nature of the company itself. Therefore, it is not possible to unambiguously evaluate the business model itself. In the following chapters, the author attempts to outline one of the possible ways to evaluate business model innovation.

2. Valuation of Business Models

The standard method of assessing the investment's benefits and directly determining the impact on the company's market value is to calculate its net present value (NPV). The result of this calculation is the amount by which the value of the company is raised (or reduced) when the investment is made. This is not possible with the business model because of its close links with the functioning of the company. For this reason, the basic business model should be determined first, which will serve as a standard for further calculation. It is necessary to define the value the customer provides in this scenario, the costs associated with providing the value to the customer and the revenue model. Based on this data, the financial plan of the company is then compiled. Consequently, the company can already be valued by one of the yield methods. The author recommends using a calculation based on Free Cash Flow, or EVA (Enterprise Value Added)[2]. Subsequently, a scenario with a modified business model should be compiled. Again, it is necessary to specify what value will be delivered to the customer, what resources are needed, what is the cost and the profit formula. The difference between the amended scenario and the baseline scenario can then be seen as an increased economic benefit of the business model. Of course, the Ceterum censeo principle should be followed as much as possible.

2.1. Data Input

The data sources for the business model simulation may be paid Bloomberg, Amadeus, or Capital IQ databases. Another alternatives include publicly available business register data, Edgar databases, and information services from world stock exchanges (Yahoo Finance, Google Finance, or Morningstar). The focus should be on companies that have already innovated their business model, but also companies that hold the prevailing ("standard") business model in the industry. It is important to find out the proportions in the reports. For instance, how much a company spends on R&D, intangible assets, etc.

2.2. Basic Business Model Plan

The basic business model (scenario) should be planned based on the data of companies that have not yet innovated their business. It should be the prevailing business model in the market. The revenue and market share plan may not correspond to the market situation in a particular market. However, the margin size should be proportional, which should be based on the market situation. The cost structure should be also corresponding. With regard to the amount of fixed assets, their wear and tear, and the investment in fixed assets, a plan based on depreciation and expected market growth can be recommended. Working capital and working capital investment should also match the market growth. Its planning should be based on the industry average turnover times or median turnover times. It is not recommended to adjust the turnover time. The discount rate should correspond to the industry on which the underlying business model is generated. There is no need to add a low liquidity surcharge and there is no need to add a size premium (micro-premium). The objective of valuing a given scenario is not to obtain the market value of the hypothetical business, but to establish a baseline value to which the results of other scenarios will apply.

2.3. Plan of modified business model

The modified business model plan should be based on the baseline scenario. Market growth and market share should be the same as for the underlying model. Modifications should be made in the area of margin size, cost and investment structure. Adjustments should be based on the data from companies which can be considered as “disruptors” within their respective sectors. For example, it may be Tesla, Inc. or John Deere. These companies have already modified their business model. The value they bring to their customers, the structure of their costs and the proportional size of the margin should be inspired by such companies. But it does not have to be only companies from the engineering sector. You can also plan your own business models taken from other sectors. But in this case, the business model needs to be more detailed. For example, how many professionals will be hired in order to implement the new business model, what their salary will be, what new technologies are needed, how much they cost, etc. Again, the data can be found in the annual stock mar-

[2] The calculation using FCF and EVA would be the same number, according to the valuation theory when tuning the capital structure.

ket reports. Especially those traded on the US stock exchanges, where companies have to publish standardized quarterly and annual reports (Form 10-Q and Form 10-K). The "Form 10-K" report, which is based on SEC regulation and is published on an annual basis, is an interesting source of information. The discount rate should be different from the baseline scenario. Another business model carries different risks and their quantification should be reflected in the discount rate. However, symmetry should be maintained at the level of discounts and premium. For example, if a base model does not work with a low liquidity and size premium, it should not be present here either. Another methodological problem is the financing of business model innovations. The question is whether the investment in the business model should be financed by equity or foreign capital. The author is inclined towards funding the innovations of business model primarily from company's own resources. In this case, the WACC-WARA analysis used to allocate the purchase price in IFRS can be invoked [9]. The business model can be considered as a part of intangible assets - Goodwill, which has the highest expected return. Therefore, it should be financed from its own resources. However, bank financing can also be used for some items. For example, to purchase supplies and machines that are needed to upgrade the business model.

3. Added Value

The business model added value is calculated as the difference between the baseline scenario (model) and the adjusted scenarios with the business model innovation. In particular, the output should be a relative contribution to the company's market value. This added value is calculated according to the formula:

$$AV = \frac{EV_{MS}}{EV_{BS}} - 1 \quad ,$$

AV Added value (%),
EV_{MS} Enterprise value base on modify scenario (Kč),
EV_{BS} Enterprise value base on basic scenario (Kč).

3. Discussion

The theoretical concept described can only be applied when a milder innovation of the business model is found. While a major change to the business model can also be planned and valued, the problem is with input data and their predictive value. The question is also the credibility of such a change in the business model. However, to calculate the benefits of a business model innovation within the limits of the company's current business, the above process is applicable.

4. Conclusion

A theoretical approach to evaluating the contribution of the business model was presented. Especially business model changes. The paper outlines the process of calculating the added value of a business model by valuing and comparing different scenarios with modified business models. The paper describes the process in which the business model is valued based on the basic scenario created from the prevailing business model on the market under review and the modified scenario based on the data of companies that have already innovated their business model. Then, the added value of the business model is calculated according to the formula. The theoretical approach described must be further verified via practical application, which should be the subject of further research by the author. Verification of the described procedure is the subject of further research within the project SGS19/106/OHK2/2T/12.

Acknowledgment

This contribution is financed by the grant SGS19/106/OHK2/2T/12.

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