



Shareholder value creation on deregulated transportation sector: Focus on North American railway freight



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ABSTRACT

In transportation sector implemented deregulation processes as well as increased free competition in the global scale have been key change drivers in recent decades. This research work analyzes in retrospective shareholder value creation in North American railway freight and peer group of four transportation companies from Europe and one from Asia. Research shows that North American, and particularly Canadian, railway freight companies own exceptional ability to increase shareholder value over time. From peer group companies Ryanair and Copenhagen airports have shown similar performance. In comparison all analyzed companies beat Dow Jones index as its starting year is 2000. However, index performs better, if it is enlarged to take into account decades long time period. As a caveat for analyzed well performing companies are occasionally occurred economic crisis times, which challenge ownership advances as declines have been rapid and significant.

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1. Introduction

Although the United States has a long history in industry-specific regulation, it was the first country to start the deregulation process in the 1970s. The first steps were taken in 1978, when the Airline Deregulation Act was launched. The Act withdrew price and entry restrictions, which had dominated the airline industry since 1938. (Lehn, 2002; Winston, 1993) Peltzman, Levine, and Noll (1989) noted that in the railway industry, the change of political direction towards deregulation was due to a large amount of railway undertaking bankruptcies in the early 1970s. This was taken as a sign that a settlement, which had been created in 1920 to support the system, was no longer available. Only two choices were available: Further nationalization or deregulation of freight rates. The railway industry chose deregulation, which came into legal force in 1980. (Peltzman et al., 1989) Deregulation was realized via two acts, the Railroad Revitalization and Regulatory Reform Act in 1976, and the Staggers Rail Act in 1980. These facilitated the limitations on mergers and acquisitions, and gave companies some degree of independence in services, pricing, and mergers and acquisitions. The Staggers Rail Act also provided the railway undertakings with more freedom to reject unprofitable routes and expanded the range of companies'

legitimate business strategies. The net effect was to allow more space for railways in order to be able to compete with road and barge transport. (Cramer, 2007; Eakin, Bozzo, Meitzen, & Schoech, 2010; Jahanshahi, 1998; Peltzman et al., 1989; Shi, Lim, & Chi, 2011; Smith & Grimm, 1987) Nonetheless, the Staggers Rail Act only partially deregulated the railway market. The Interstate Commerce Commission (ICC) preserved the right to set maximum rates or act, if a railway undertaking was noticed to misuse the market power or participate in anticompetitive behavior (Pettus, 2009). Once the transport industry had led the way in 1970s, a range of industries (for example banking, telecommunications and energy) were deregulated between the 1980s and 1990s. (Gong, 2006; Mahon & Murray, 1981; Winston, 1993) Although deregulation did cause some problems for the United States, generally the net benefits were better than expected (Niskanen, 1989). Therefore, the success of the United States deregulation experiments in several industries (banking, telecommunications and transportation) gained worldwide attention, and is noted as a driving force behind the deregulation waves in Japan and the European Union (Jansson, 2010; Winston, 1998).

North American railway freight undertakings are often seen as one group, homogeneous one, which is due to the fact that the deregulation and privatization taken place in 1980s and 1990s is noted to be the occasion for the results gained. This might have been the case in the first decade, but since dissimilarities between undertakings have become apparent. For example, Shi et al. (2011)

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highlighted that Burlington Northern Santa Fe (BNSF) was significantly better in efficiency and productivity development in 2002–2007 together with Grand Truck Corporation (subsidiary of Canadian National Railways) and CSX, if compared to the rest of Class 1 railway undertakings (especially Norfolk). However, it should be highlighted that railway freight sector in USA is success in deregulation and investment yield sense as compared to that of airlines – numerous bankruptcies have taken place in airline industry after deregulation year 1978 (Baik, Kwak, & Lee, 2011; Goetz & Vowles, 2009) and business model change to greatly favour low cost carriers (Homsombat, Zheng, & Fu, 2014; Pearce, 2012) have benefitted only few airlines in long-term such as Southwest. Investments in airlines within USA in general have therefore been extremely low yielding, or even complete disasters.

This research work concentrates on North American railway freight undertakings, which have been active in deregulated and privatized market environment for longer period of time. Therefore, undertakings are expected to gain higher sales, profitability and shareholder value. In general, studies confirm that deregulation in railway sector increases the demand for transportation (e.g. Hilmola, Ujvari, & Szekely, 2007). Furthermore, earlier researches have noted that cost structure and prices have declining development for a longer period of time (Boardman, Laurin, Moore, & Vining, 2012; Jensen & Stelling, 2007; Vogt, 2008). These circumstances should encourage demand in the sector, and make it profitable if compared to other transport modes, such as road and inland waterway. Naturally in North American case this good development has been fostered with the resolution that railway freight undertakings also own the infrastructure (Gomez-Ibanez & de Rus, 2006; Hilmola et al., 2007). This ownership structure has enabled mergers and acquisitions (M&A), which have modified and strengthened the demand for production with lower prices and costs even further (Cramer, 2007; Eakin et al., 2010; Miljkovic, 2001; Spsychalski & Swan, 2004). Such a sector which used to be highly regulated, infrastructure and investments (for example rail network) were large-scale and excessive, wherefore rationalization brings benefits for decades. Nonetheless, the market has drawn opinions (Mu & Dessouky, 2011) that rail network is too highly utilized, and change in management methods, or more investments, is needed. It also should be highlighted that based on macro-economic studies, US transportation sector is typically going to downturn earlier than other sectors and recovers from it later (Lahiri & Yao, 2006). So, economical and business challenges due to cycle lengths are greater, and should lead to less attractive environment for making profitable business and build shareholder value.

As a peer group for North American railway freight we use four European companies from deregulated transportation sector, and one railway passenger and freight transporter having well established operations in Asia. It would have been difficult or simply impossible to find stock market listed companies from railway freight sub-sector other than North America with long history as peer group benchmark. Deregulation processes have been much slower moving in elsewhere. In Europe air transportation was released for free competition in the late 90s (Starkie, 2012), but process with airports has been much slower paced and have proceeded hand in hand with low cost carrier volumes (basically Ryanair and EasyJet; Pitt, 2001; Starkie, 2012). Same applies to European railway sector, but main actions with free competition have actually happened after year 2000, with very few publicly listed companies.

This research is structured as follows: In the following Section 2 we analyze railway sector from the angle of deregulation process. We also illustrate revenue and profit development of selected ten companies of empirical part within period of eleven years. Despite several major economic crises taken place in this

period (dot.com crisis and 2008–2009 housing credit crunch), some companies, and particularly railway companies, seem to produce consistently profits. In turn air transports related companies are most sensitive to the crisis times. Section 3 illustrates used simulation method, simulation model and second hand data sources further. Empirical part follows in Section 4, where we analyze two main investment strategies, timing of share paybacks and risk (variation of yields). These analyzes are all accomplished for five large railway freight company shares and peer group of other transportation sector companies from recently deregulated sub-sectors. In Section 5 we discuss over the results of this study, and observations made during the simulation runs. It is illustrated, even with most robust railway stocks that increased daily variation (in both positive and negative directions) is the trigger of considerable downside risk, and valuations decline significantly over the several hundred days following this. Therefore, we speculate whether pure buy and never sell strategy combined with dividend invest back should be followed strictly. For the sake of strategy it would be wise to sell entire position or at least halt dividend investment back – investment back should be applied when situation settles (daily yield variation decreases). We conclude our work in Section 6, and provide further avenues for future studies in this area.

2. From efficiency to profitability in railway freight

Traditionally, railway transport sector has been evaluated from efficiency perspective. Especially assessments have concentrated on multidimensional approaches, including for example Data Envelopment Analysis (DEA). Such studies have mainly scrutinized European countries (e.g. Cantos, Pastor, & Serrano, 1999; De Jorge & Suarez, 2003; De Jorge-Moreno & Garcia-Cebrian, 1999; Hilmola, 2007; Yu & Lin, 2008), while in limited number of studies scope has been expanded to include e.g. Japanese companies among the European ones (e.g. Oum & Yu, 1994). Some research works have been studied in empirical analyzes, including for example India (George & Rangaraj, 2008), Switzerland (Cowie, 1999), and USA (Chapin & Schmidt, 1999). However, only few studies (Hilmola, 2009, 2009b; Yu, 2008) have conducted research works, which compare the position of African, Asian and American countries together with European counterparts. Yu (2008) stated in his research work, that the most efficient countries in railway transport (including both passenger and freight) come from Western Europe, following by Asian, East European and African countries. Hilmola (2009a) concentrated on efficiency in freight transport sector, and highlighted that only some countries dominate it globally, including such countries as Russia, China, USA and Canada (in ton-kilometers based efficiency models). When the railway freight sector is considered worldwide, it is rather hard to construe whether efficiency has improved. Some countries evolve and govern the sample, while countries like Africa and part of East Asia are lagging behind, which makes it hard to evaluate the improvement of entire sample. Globally, the situation in passenger transport sector is better, but sample is also dominated by few countries, like South Korea and Japan (Hilmola, 2009b). However, even privatized Japanese railway passenger transport system is net recipient of governmental support to ensure daily connectivity to different cities and regions (Jitsuzumi & Nakamura, 2010).

In general, market regulation has been criticized for misallocating resources. Backman (1981) noted that a connection exists between lower productivity and regulation. As a solution to poorly performing markets has been offered deregulation, because it can boost intensive competition by promoting new companies to the markets (Andersen, 1992). Competition is often noted to result in effective resource allocation, wherefore deregulation is regarded to decrease prices (Backman, 1981; Banister, 1990; Kay &

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