S. G. ANTON

ISSN 0543-5846
METABK 52(4) 518-520 (2013)
UDC – UDK 669.011.498:658.14:368.025.06=111

WHO MANAGES FINANCIAL RISK? AN EMPIRICAL EXAMINATION OF RISK MANAGEMENT PRACTICES IN THE ROMANIAN METALLURGICAL INDUSTRY

Received – Prispjelo: 2013-02-03
Accepted – Prihvaćeno: 2013-04-20
Preliminary Note – Prethodno priopćenje

The aim of the paper is to analyze risk management practice adopted by the Romanian metallurgical enterprises and to identify new tools for hedging price risk. Romanian metallurgical companies recognize the main risks that their businesses are facing: increased prices of raw materials and energy, foreign exchange risk, and lower (domestic) demand for company's products. Another important finding is that the perception of financial risks has improved in the last years and the companies started to use financial derivatives in order to hedge some financial risks. Nevertheless, Romanian metallurgical companies have proved to be reluctant to fully implement and adhere to sufficient risk management practices.

Key words: metallurgy, Romania, financial risk, risk management

INTRODUCTION

The volatility of commodity prices, exchange rates, or interest rates can have adverse effects on cash flows, net income, and shareholder value. In the last five years metallurgical companies were exposed to numerous risks: market risk (commodity price risk, currency risk, and interest rate risk), credit risk, regulatory risk, and liquidity risk. Among them, the volatile energy and raw material prices have a stronger influence on the activity and performance of many metallurgical companies.

Several authors reported that the volatility of commodities can be higher than other assets [1-3]. The annual volatility of precious and base metals ranged from 20 % to 30 %, higher than for stock markets [2]. The price risk of commodities can be more complex and volatile than that associated with other financial assets (interest rates and currencies) [3].

The aim of the paper is to shed light on financial risk management practice adopted by the Romanian metallurgical enterprises and to identify new tools available for hedging price risk. To the best of our knowledge, this is the only study in the literature that examines the development of financial risk management process in the metallurgical industry from a transition economy from Central and Eastern Europe. The results of this study can be useful for practitioners in the designing and use of financial risk hedging strategy.

Financial risk management has been defined as „the process by which financial risks are identified, assessed, measured, and managed in order to create economic value" [2]. Financial risk management has rapidly evolved over the past two decades and has become an indispensable function in many institutions from different area of activities. As expected, financial risk management has attracted much attention in the last two decades, becoming an important topic in the financial literature. However, there are relatively few papers that discuss the risk management practices adopted by the metallurgy enterprises. Some authors highlighted the features of risk analysis in the mining and metallurgical industries [4]. Other author has purposed a ERM framework for the Chinese iron and steel enterprises [5]. Finally, some studies analyzed the impact of hedging the commodity price using financial derivatives on the financing of the company [6].

Table 1 **Implementation of risk management processes within Romanian metallurgical companies**

Finding	Yes / % of total enterprises	No / % of total enterprises
The annual report includes information on financial risk management practices	65,38	34,62
At company level there is a risk management department	3,84	96,16
The company has a risk policy approved by the Board of Directors	57,69	42,31
The company is using financial derivatives for hedging financial risks	7,69	92,31

RISK MANAGEMENT PRACTICES ADOPTED BY THE ROMANIAN COMPANIES

A study of the annual reports of 26 Romanian metallurgical companies listed on the Bucharest Stock Exchange has been conducted in order to shed light on risk

S. G. Anton, „Al. I. Cuza" University of Iaşi, Faculty of Economics and Business Administration, Finance, Money and Public Administration Department, Iasi, Romania

management practices. According to the latest reports available for year 2011, the main risk factors to metallurgical companies were: increased prices of raw materials and energy, lower (domestic) demand for company's products, exchange rate instability, interest rate risk, difficult access to bank loans, and delayed payments from customers or partners.

Table 1 presents the main results of the study. From the analysis of the annual reports, it can be seen that 65,38 % of total enterprises offers information on financial risk management practices. Six companies from ten have a risk policy approved by the Board of Directors. Although Romanian metallurgical companies identify the main risks that can affect their operations, only 3,84 % of them have a risk management department.

The most commonly used financial instruments for risk management are the insurance contracts, followed by financial derivatives. Only two companies (or 7,69 % of total enterprises) reported the use of financial derivatives for risk management. Currency forwards and swaps have been used extensively by metallurgical companies in order to hedge exchange rate risk. The lack of liquidity in exchange traded currency derivatives markets hindered the use of these instruments in foreign exchange risk management. Only one company reported the use of London Metal Exchange (LME) swaps in order to protect against price risk.

Another important finding of our study is that large metallurgical companies (owned by foreign investors) have implemented better risk management measures as small and medium-sized metallurgical companies. One possible explanation for this situation is that large metallurgical company are export oriented, so they have to implement financial tools in order to hedge exchange rate risk.

The main reasons that hindered Romanian companies to fully implement a risk management process are: high hedging costs, lack of information/knowledge related to risk management practices and tools, managers consider that forecasting prices is not part of the company's area of expertise and shareholders should manage individual risks, and the company is unable to use quantitative methods (e.g. Value-at-Risk) to measure exposures to financial risks. Hedging costs include the personnel education/qualification and the implementation of internal control system needed for participating on the derivatives markets. The required margins and the minimum capital required are, on the same time, costs implied by the use of derivatives.

PRICE RISK MANAGEMENT TOOLS FOR THE STEEL INDUSTRY

In the last years both raw material and energy prices have increased substantially. Even if price risk affects inputs and outputs prices in the same time, the Romanian companies are not using financial derivatives to hedge price risk. Instead, they have used "variable cost contracts" with their customers or they have introduced surcharges. The offer for price risk management tools has developed considerably in the last years driven by the volatility of underlying assets.

Commodity price risk plays a dominant role in the metallurgical industry. Even if companies have the opportunities to manage the impact of price volatility in non-ferrous markets (aluminum, copper, nickel, and zinc) and precious metals (gold and silver) markets, there were a few possibilities to hedge price risk in ferrous markets. Considered to be the most important metal industry in terms of the value of the production, steel industry faces significant and growing price risk. Steel prices have been extremely volatile since 2004 as a result of supply and demand variations driven by emerging markets, economic cycle and regulatory framework.

Steel industry participants, from iron-ore miners to steel producers and consumers, can hedge price risk by using exchange-traded or OTC derivatives. Table 2 presents the risk management tools for hedging price risk in the iron and steel industry. Some exchanges have started to develop tools for price risk management since the volatility of steel prices has increased. London Metal Exchange (LME), the world's premier metal exchange, has introduced for trading in 2007 steel billet futures aimed to protect scrap processors, producers, rerollers, merchants and end-consumers against price risk. The Shanghai Futures Exchange (SHFE) launched two steel futures - reinforcing steel bar (rebar) and wire rod in March 2009. Currently, steel rebar futures is the most liquid steel derivative in the world. CME Group, the world's largest and most diverse derivatives market-

Table 2 **Risk Management Tools for Steel and Iron-Ore Price Risk in 2013**

No.	Financial instrument	Exchange/OTC Broker
1	Steel billet futures	London Metal Exchange
2	Steel rebar futures and steel wire rod futures	Shanghai Futures Exchange
3	Chinese Steel Rebar HRB400 Futures European Hot Rolled Coil, Ex-Works Ruhr Germany Futures HMS 80/20 Ferrous Scrap, CFR Turkey Futures Steel Billet, FOB Black Sea Futures U.S. Midwest #1 Busheling Ferrous Scrap Futures Iron Ore 62 % Fe, CFR China Futures and Options Iron Ore 62 % Fe, CFR North China Futures and Options US Steel Coil Futures and Options	CME Group
4	Steel Long Futures	National Commodity & Derivatives Exchange Ltd
5	Swaps on steel hot rolled coil (HRC), rebar, scrap and billet	Freight Investor Services (FIS)
6	14 steel swaps contracts (steel hot rolled coil, scrap, billet and rebar)	GFI Group
7	Steel swaps	London Commodity Brokers

place, offers a range of 8 futures and options on steel and iron-ore products.

Starting 2008, Deutsche Bank and Credit Suisse developed another price risk management tool: OTC iron-ore swap. This market has been boosted by

the launching of independent clearing services by SGX and LCH.Clearnet. Several brokers (Freight Investor Services, GFI Group and London Commodity Brokers) have started in the last two years to offer steel swaps.

For the most Romanian metallurgical companies, the functioning of a risk management system is important for their survival, since it affects their ability to continue their businesses. In the last five years derivatives markets proved to be very innovative in developing products to meet the needs of steel industry participants. The use of steel and iron-ore derivatives offers the opportunity to manage price risk, to stabilize cash flows and to mitigate price volatility. In order to attain above-mentioned aims and to avoid losses, the company must have a hedging strategy integrated in an ERM framework.

CONCLUSIONS

With increased global competition, the Romanian metallurgical industry faces a number of competitive risks and challenges. Improving the capacity to meet future challenges and risks requires implementation of effective risk management processes. The ability to manage financial risks represents a source of long-term competitive advantage and a way to increase shareholder value. The ongoing financial and economic crisis has highlighted the need for improved enterprise risk management procedures.

The paper has analyzed the risk perception and risk management practices adopted by the Romanian metallurgy industry. The main risks faced by Romanian SMEs in 2011 were commodity price risk, currency risk, and interest rate risk. Analyzing the information provided by the annual reports of 26 enterprises listed on BSE, it has been found that 57,69 % of the sample has a risk management policy approved by the board of directors. The use of derivatives as risk management tools is still limited even though various financial instruments are available for Romanian metallurgical companies. Among the factors which prevent the Romanian companies to manage risks are lack of risk management expertise and high cost of hedging.

REFERENCES

[1] H. Geman, S. Ohana, Mean-Reversion and Structural Breaks in Crude Oil, Copper, and Shipping in the Risk management in commodity markets: from shipping to agricultural and energy, H. Geman (ed.), John Wiley & Sons, Chichester, 2008, pp. 183-205.

[2] Ph. Jorion, Financial Risk Manager Handbook plus test bank: FRM Part I /Part II, 6th Edition, John Wiley & Sons, New Jersey, 2011, pp. 3 and 276.

[3] M. Al Janabi, Commodity price risk management: Valuation of large trading portfolios under adverse and illiquid market settings, Journal of Derivatives & Hedge Funds, 15 (2009) 1, 15-50.

[4] H. Simonsen, J. Perry, Risk identification, assessment and management in the mining and metallurgical industries, The South African Institute of Mining and Metallurgy, October–December (1999), 312-332.

[5] J. L. Zhang, Risks and Risk Management in Chinese Iron and Steel Enterprises, Advanced Materials Research, 201-203 (2011), 1061-1065.

[6] H. U. Buhl, S. Strauß, J. Wiesent, The impact of commodity price risk management on the profits of a company, Resources Policy, 36 (2011) 4, 346-353.

Note: The responsible translator for English language is Dorina Moisă from Faculty of Economics and Business Administration, „Al. I. Cuza" University of Iași, Romania