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# PRINCIPLES OF MANAGING CURRENCY RISKS BY MACEDONIAN COMPANIES

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**Abstract**

*Most investors will be familiar with the concept of currency exposure, with constantly changing exchange rates affecting the cost of investing in international securities. These same issues also affect companies that operate internationally. So what effect do currency fluctuations have on company profits, and what are they doing to insulate themselves? In this paper we examine this question. Firms can choose to manage their currency exposure through business practices. Having a truly international company can help with this as, theoretically, losses made when one currency falls will be recovered when another rises. Where contracts are concerned business can also set up clauses that reduce this exposure. In many cases this comes in the form of an agreement to protect the client and the company should exchange movements exceed the agreed-upon level. Some businesses also agree on setting all contracts in their core currency, protecting them from any exposure as they always are paid the same relative amount.*

**Key words:** *Hedging, Business, Currency exposure, Exchange rate.*

## 1. INTRODUCTION

In recent years, investments in international financial securities have grown significantly among individual and institutional investors. Broadening portfolios beyond domestic borders may help investors achieve greater diversification. Although the rapid growth in international investments reflects the benefits of geographic diversification, currency risk can counteract some of these advantages. Since foreign exchange rates can have a significant impact on returns, investors may be interested in hedging this risk where possible and appropriate. Investments in overseas instruments, such as stocks and bonds, can generate substantial returns and provide a greater degree of portfolio diversification, but they introduce an added risk, that of exchange rates. Since foreign exchange rates can have a significant impact on portfolio returns, investors should consider hedging this risk where appropriate. While hedging



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instruments such as currency futures, forwards and options have always been available, their relative complexity has hindered widespread adoption by the average investor.

## 2. THEORETICAL LITERATURE REVIEW

How does the exchange rate regime affect firms' incentives to hedge their exposure to currency risk? This question has been at the center of the debate over optimal exchange rate regimes in emerging markets since the financial crises of the 1990s exposed the perils of unhedged foreign currency debt. Yet there is no clear consensus among economists on whether the type (or degree of flexibility) of the exchange rate regime affects the corporate sector's incentives to take on foreign currency denominated liabilities or to insure against depreciation risk.

Two basic views exist in this respect. On the one hand, several authors have argued that pegged exchange rate regimes biases corporate borrowing towards foreign currency, due to an implicit exchange rate guarantee given by the government (Mishkin,1996; Goldstein and Turner, 2004). Under fixed or pegged regimes, the central bank keeps currency volatility within a pre-announced range, effectively underwriting currency risk (Dooley, 2000). Thus, firms borrow in dollars to benefit from the lower ex ante dollar interest rates, and expect the government to insure them from any potential loss in the event of a large devaluation. A second variant of this argument suggests that because of limited exchange rate volatility under fixed or tightly managed exchange rate regimes, borrowers appear to consider a steep devaluation a low-probability event, and therefore neglect or underestimate the exchange rate risk associated with borrowing in foreign currency. The fact that fixed/pegged exchange rates have played a role in every recent financial crisis since 1994, and that firms relied extensively on unhedged foreign currency financing in the years leading up to the crisis, is often used as strong evidence for these views (Dooley, 2000).

On the other hand, (Eichengreen and Hausmann (1999) and Eichengreen, Hausmann, and Panizza (2005) dispute this view. The authors suggest that at the root of currency mismatches lies the fundamental inability of emerging markets to borrow abroad in their own currency. Inevitably, this leads to an accumulation of foreign-currency denominated debt which firms are simply unable to hedge, even if they have the foresight or prudence to match the currency structure of their assets and liabilities. In addition, McKinnon and Pill (1999) argue that adopting a floating rate regime will actually exacerbate currency mismatches. Because the domestic interest rate risk premium is a direct function of the stability of the currency, exchange rate volatility associated with floating rates will increase domestic interest rates (and thus the incentives to borrow in foreign currency) and make financial hedging more expensive.

## 3. INTERNATIONAL FIRMS VS INTERNATIONAL CURRENCY

Companies with overseas branches, or those that trade internationally, are at the mercy of global currency



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fluctuations. As is the case with private investments, changes in conversion rates can wipe out profits or increase gains. When a firm has shareholders to report to, and the figures can run into millions, then it can have a serious impact on profits and losses. The rapidly changing currency landscape can have the potential to make businesses reluctant to set firms figures in contracts months before a deal takes place. If a US-based firms makes EUR 10 million, they can end up with much more or less than though depending on the movement of the EUR/USD exchange rate.

A study by SunGard Data Systems polled 275 US businesses of various sizes. It found that 59 per cent of those surveyed had seen a loss or gain of more than five per cent as a result of currency fluctuations in the previous year (Corden, W. Max, 2002). The majority of corporations are in the business of doing business, producing and manufacturing, not hedging currencies. A lot of companies were caught unawares by volatility. Also, looking at where the exposure lies of waiting for quarterly results to discover the impact of fluctuations was a better approach, although this study conceded that this is a stance more and more firms are taking.

## 4. ATTRACTIVENESS OF HEDGING AS AN EFFECTIVE RISK MANAGEMENT TOOL IN EUROPE

Commodity price volatility has always been with us and is the single biggest variable in forecasting EBIT for non-integrated independent exploration and production companies. The recent volatility in oil prices and the collapse of the North American gas price suggest strongly this is not going to change. Hedging using derivatives can dampen the impact of price movement on earnings and is a staple tool in the oil or gas company treasury arsenal, particularly for North American CFOs (Bordo et al., 2009).

The use of commodity derivatives can mitigate or remove oil or gas price uncertainty as one of the fundamental industry variables, a variable which in turn directly impacts liquidity, (the poor management of which is the biggest predictor of a small cap's impending mortality).

Like many useful tools, derivatives are a double-edged blade and their use either by CFOs or by bankers must be done cautiously with due respect to the risks both hidden and obvious. To quote Julius Caesar, "It is always the unseen dangers that are the most terrifying." There are many unseen dangers in the interaction between derivatives, the underlying reservoir, and the fiscal and commercial risks in upstream oil and gas endeavours.If used incorrectly, without a clear understanding of and regard for the interaction between the derivative product and its specific characteristics and the underlying reserve, production, timing and fiscal risks, derivatives can multiply losses in the case of reservoir-related production, under-performance.

Expanding internationally can be a great way to grow the business. Currency hedging isn't just for big companies. According to the U.S. Department of Commerce, small and medium-sized businesses account for 97.6 percent of all U.S. exporters and 97.1 percent of identified importers (Kamil, 2007). Experts are advising small businesses that import or export to the European Union to begin hedging (or consider it) (Berrospide et al., 2008). After all, if currency fluctuations could jeopardize company's cash flow,



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margins, or profitability. It's fairly critical that small businesses hedge."The important thing to think about here is that business owners in a dangerous environment need to focus on running their businesses. They don't need to be focused on worrying about the financial end of things. The currency volatility we're seeing is really taking that focus off and materially damaging the bottom line. Hedging takes the risk off the table. It allows the business to really budget around the funds that they're receiving or paying.

Entrepreneurs agree that hedging is something that's been on their mind lately. Johnnie Stoker, president and CEO of K2 Energy Solutions, a Henderson, Nevada-based company that makes and sells rechargeable battery systems for electric vehicles around the world, says that even though his company is not hedging right now, they're looking into it (Berkmen et al., 2010). The cost of setting it up and managing it compared to euro revenue is too high to be worth it for now. As they keep growing euro revenue, they will probably start a strategy. Kevin MacDonald, CEO of Black Mountain Systems, a software developer in San Diego that earned $4.4 million in 2010, says that the business isn't hedging at the moment, but if they were larger and more penetrated in the EU, would probably be very concerned (Aguiar, 2005). Schamotta, the market strategist, says that he's seen an explosion of interest over the last period in hedging and in risk management strategies. He expects this trend to continue saying that the euro is triggering volatility throughout the world. There's a cascading effect that's happening. Many businesses have a set exposure to the euro, and that can materially damage them. But they're able to offset that risk by protecting themselves in other areas of the world as well.

Paul Stafford, the director of Currency Risk Management, LLC, based in Missoula, Montana, agrees that even small companies—those that earn between two and three million dollars in foreign revenue—are finding currency hedging as an increasingly important part of their business plan (Brown et al., 2011). This means that it's very worthwhile for small businesses because they generally don't have the capital or staying power to absorb larger losses that might occasionally happen with foreign exchange. Some U.S. companies hedge currencies by doing international business in dollars, but experts say this shouldn't be the sole strategy (Burnside et al., 2010).

Forward contracts, the most common, and in many cases—practical—form of hedging, is a contractual obligation to buy from, or sell currency from a bank at a predetermined exchange rate (Magud et al., 2010). It's worth noting that this protects your company from adverse currency moves, it also prevents your company from cashing in on profit from any favorable moves as well. Forward prices are determined by an adjustment to the exchange rate made to spot (the current rate), and based on the difference between interest rates between the two currencies. In other words, between the euro and the dollar.

So, what is needed to know to start hedging?

Stafford lays out the three essential step to setting up hedging strategy.

Step 1: F*ind a bank that provides the hedging tools you need.*



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Step 2: *Figure out what kind of exposure you have. (If a significant percentage of your revenue comes from the euro, you're highly exposed to volatility.)*

Step 3: *Enlist someone—an expert or consultant in this area—that can offer unbiased information.*

Regarding these three steps maybe the third one is the most important part. A misquote of an interbank rate can double hedge costs. Any sort of disagreement in implied volatility can double options premiums. It's essential to have some sort of a third party that has access to interbank pricing, who can help to negotiate terms with the bank. There's another reason to consider hedging, too. It may help in beating out the competitors. When companies are able to take their exposure off the books and protect themselves against it, it can be a big boon to their efforts (Eichengreen and Hausmann, 1999). It's a huge competitive advantage for companies because many small businesses are just not that familiar with protecting themselves in this way.

## 5. EFFECTIVE RISK MANAGEMENT TOOLS FOR UPSTREAM COMPANIES:THE CASE OF CROATIA, SERBIA AND MACEDONIA

### 5.1. Serbia

In a modern business environment, there are high oscillations and threats from unforeseeable external shocks. It is of primary importance to choose an adequate method of payment that will provide, to the largest possible extent, security and/ or minimize occurrence of a risk event. To that end, financial derivatives which ensure security of receivables are becoming more important today. From the aspect of banking operations, development of modern financial products, including operations with financial derivatives, is of utmost importance.

**Table 1: Country datasheet – Serbia (Author's estimation.)**

| **Population: 7.120.666** | **2011** | **2012** | **2013** | **2014** |
|---|---|---|---|---|
| GDP (real, in mn eur) | 25.008 | 24.754 | 25.391 | 24.931 |
| GDP (nominal, in mn eur) | 33.424 | 31.683 | 34.263 | 33.059 |
| GDP per capita in eur | 3.457 | 3.439 | 3.544 | 3.497 |
| GDP per capita PPP | 10.355 | 10.300 | 10.616 | 10.474 |
| GDP growth | 1.4% | -1.0% | 2.6% | -1.8% |
| Remittances (in mn eur) | 1.751 | 2.154 | 2.234 | 3.660 |
| Remittances as % of GDP | 7.0% | 8.7% | 8.8% | 14.7% |
| Total investments (in mn eur) | 5.027 | 5.198 | 4.481 | 3.882 |
| Inevstments as % of GDP | 20.1% | 21.0% | 17.7% | 15.6% |

| **Top 10 companies** | |
|---|---|
| 1 | *NIS* |
| 2 | *JP EPS* |
| 3 | *Fiat Automobili Srbija* |
| 4 | *Telekom Srbija* |
| 5 | *Delhaize Serbia* |
| 6 | *EFT Investments* |
| 7 | *JP Srbijagas* |
| 8 | *Tarkett Backa Palanka* |
| 9 | *Mercator* |



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| | | | | |
|---|---|---|---|---|
| Foreign direct investments | 3.320 | 753 | 1.298 | 1.236 |
| Foreign direct invest.as % of GDP | 13.3% | 3.0% | 5.1% | 5.0% |
| Total import (in mn eur) | 16.487 | 16.992 | 17.782 | 18.096 |
| Total imports as % of GDP | 65.9% | 68.6% | 70.0% | 72.6% |
| Import to EU (in mn eur) | 9.016 | 9.659 | 9.927 | 10.373 |
| Import to EU as % of total import | 54.7% | 56.8% | 55.8% | 57.3% |
| Total export (in mn eur) | 11.145 | 11.469 | 13.937 | 14.451 |
| Total exports as % of GDP | 44.6% | 46.3% | 54.9% | 58.0% |
| Export to EU (in mn eur) | 5.111 | 5.053 | 6.588 | 7.110 |
| Export to EU as % of total export | 45.9% | 44.1% | 47.3% | 49.2% |

| | |
|---|---|
| 10 | *Idea Beograd* |

More intensive use of these instruments would contribute to long-term and more stable sources of funding for the optimization of matching the maturities of assets and liabilities. The results obtained in this research undeniably show that although currency forward contracts represent an instrument for hedging against FX risk, their use does not increase with higher volatility of foreign exchange rates. The main reason for such situation lies in the fact that forward contracts are conducted by large companies, that is, companies with developed risk management awareness. These companies use forward contracts on an ongoing basis, irrespective of the movements of the foreign exchange rate. Actually, they use these contracts subject to their own foreign currency ins and outs (i.e. liabilities). Consequently, for larger firms a business cycle is the most important determinant for the use of financial derivatives. Other firms still complain about the foreign exchange flexibility and expect the National Bank of Serbia to eliminate the risk of foreign Importance of forward contracts in the financial crisis, exchange rate changes, instead to hedge it through forward contracts.

Therefore, the higher foreign exchange rate volatility does not represent an important determinant of the demand for forward contracts for most companies in Serbia. The main reasons for the lack of use of forward contracts and other financial derivatives in Serbia are, first of all, the unclear regulatory framework and the consequent limitations only to hedging transactions due to the limited legal regulations, as well as inadequately developed companies` awareness of the necessity to hedge against risks. Other possible reasons that may explain why the economy insufficiently uses currency forwards as instruments for hedging against FX risks are neglecting the foreign exchange rate volatility, while ignoring risks and leaving it to the government and the National Bank of Serbia to stabilize the foreign exchange rate. It is true that the government and the National Bank of Serbia are responsible for establishing the macroeconomic environment that will allow stable conditions for doing business and, accordingly, they are responsible for systemic risk factors, including currency risk. Nevertheless, according to the present monetary policy, the main objective of the National Bank of Serbia is price stability (low and foreseeable inflation), not foreign exchange rate targeting (Zettelmeyer et al., 2010). Therefore, the reliance of local firms on the central bank and the state, in terms of the foreign exchange rate and risk elimination, is completely unjustified. Furthermore, underdeveloped entrepreneurial spirit



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and the lack of understanding of business risks, as well as inadequate education, are just some of the reasons why local companies do not use forward contracts (Goldstein, and Turner, 2004). Besides, it is a fact that many entrepreneurs have already hedged themselves, admittedly not by means of sophisticated instruments, but simply by building their selling prices on the exchange rate of RSD 115 to 120 for 1 euro. Moreover, an objective reason also lies in the fact that it is not possible to agree forward contracts with long maturities that would serve as hedging of long-term liabilities denominated in foreign currency in a company's balance sheet liabilities. The fact is that there are numerous advantages of financial derivatives as modern financial instruments. However, taking into consideration the risks that financial derivatives potentially entail due to the undefined legal norms and at the time of the global

### 5.2. Croatia

Regarding the intensity of influence of financial risks on the performance of the Croatian companies, the results have shown that the price risk has the highest influence among the Croatian companies.

**Table 2: Country data sheet- Croatia (Author's estimation.)**

| **Population: 4.238.400** | **2011** | **2012** | **2013** | **2014** |
|---|---|---|---|---|
| GDP (real, in mn eur) | 38.186 | 37.351 | 37.000 | 36.852 |
| GDP (nominal, in mn eur) | 48.100 | 42.811 | 41.961 | 47.132 |
| GDP per capita in eur | 8.921 | 8.752 | 8.694 | 8.699 |
| GDP per capita PPP | 16.944 | 16.624 | 16.513 | 16.523 |
| GDP growth | -0.3% | -2.2% | -0.9% | -0.4% |
| Remittances (in mn eur) | 1.042 | 1.050 | 1.085 | 1.255 |
| Remittances as % of GDP | 2.7% | 2.8% | 2.9% | 3.4% |
| Total investments (in mn eur) | 7.878 | 7.197 | 6.978 | 6.585 |
| Inevstments as % of GDP | 20.6% | 19.3% | 18.9% | 17.9% |
| Foreign direct investments | 1.147 | 1.070 | 735 | 2.876 |
| Foreign direct invest.as % of GDP | 3.0% | 2.9% | 2.0% | 7.8% |
| Total import (in mn eur) | 19.657 | 17.596 | 17.825 | 20.564 |
| Total imports as % of GDP | 51.5% | 47.1% | 48.2% | 55.8% |
| Import to EU (in mn eur) | 10.065 | 11.770 | 12.220 | 13.082 |
| Import to EU as % of total import | 51.2% | 66.9% | 68.6% | 63.6% |
| Total export (in mn eur) | 19.435 | 17.799 | 18.020 | 21.555 |
| Total exports as % of GDP | 50.9% | 47.7% | 48.7% | 58.5% |
| Export to EU (in mn eur) | 5.735 | 5.601 | 5.927 | 6.622 |
| Export to EU as % of total export | 29.5% | 31.5% | 32.9% | 30.7% |

| **Top 10 companies** | |
|---|---|
| 1 | *INA* |
| 2 | *KONZUM* |
| 3 | *Hrvatska Elektroprivreda* |
| 4 | *Zagrebacka Banka* |
| 5 | *HEP* |
| 6 | *Hrvatski Telekom* |
| 7 | *Petrol* |
| 8 | *Privredna Banka Zagreb* |
| 9 | *HEO-Production* |
| 10 | *PLIVA Hrvatska* |



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These findings could be explained by the fact that Croatia is small and open economy, which results in a high dependence on international trade. Croatian companies are more affected by currency risk. Finally, the interest-rate risk has been ranged as less important in comparison with commodity price and currency risks. The explanation of this result could be found in the fact that Croatian companies do not use debt capital heavily; therefore they are not highly exposed to the fluctuations of interest rates.

The survey's results have clearly indicated that Croatian non-financial companies manage financial risks primarily with simple risk management instruments such as natural hedging. In the case of derivatives use, forwards and swaps are by far the most important instruments. The Croatian companies use simple risk management instruments like managing assets and liabilities to a greater extent when managing price risk. Amongst the most important reasons why companies do not use derivatives, the Croatian financial managers have addressed the high costs of establishing and maintaining risk management programmes that exceed the benefits of it as the most important reason why they do not manage financial risks. Croatian managers claim that the insufficient and inadequate supply of risk management instruments offered by domestic financial industry is a very important reason why they do not use derivatives.

Croatian non-financial companies manage financial risks primarily with simple risk management instruments such as natural hedging, while in the case of derivatives usage, 'plain-vanilla' instruments like forwards and swaps are by far the most important instruments. However, exchange-traded derivatives and structured derivatives are more important in countries that have entered the Euro Zone as European financial market, together with derivative market as one of its segments, has developed significantly in recent years (Calomiris, 2007). Market for derivative instruments has introduced a broader assortment of new risk management products designed to help corporate managers handle financial risks. In addition to the development of exchange traded derivatives there has also been an increase in the volume of OTC derivatives introduced by commercial and investment banks (Foreign Exchange and Derivatives Market in 2004, BIS, 2005; Monetary and Economic Development, OTC derivatives Market Activity, BIS, 2000; 2002; 2005). A further growth and development of derivative markets will have an impact to the decrease of the transaction costs related to the use of derivative instruments what should make these instruments more available and feasible to a broader class of companies in different industries.

Regarding the risk management instruments that companies use in managing currency risk, it could be concluded that natural hedge like matching currency structure of assets and liabilities (e.g. debt in foreign currency) is the most important instrument in managing currency risk in both countries. In respect to the use of derivatives, the currency forward is the most important and frequently used instrument, followed by currency swap as the second most important derivative instrument. Other derivatives such as stock-exchange and OTC (over-the-counter) options are not important currency risk management instruments among the Croatian and Serbian companies. Interest rate risk in the Serbia as well as in the Croatian companies is hedged most frequently by natural hedge (e.g. matching maturity of assets and



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liabilities or combining debt with fixed and fluctuating interest-rates). Again, forward contract and swap are the most important derivative instruments in the risk management strategy, but in contrast to currency risk management, interest rate swap is more important than interest rate forward.

## 5.3. MACEDONIA

Refinancing risk is significant for Macedonia. It will need to repay large Eurobonds maturing in 2013 and 2015, as well as the PLL purchase (in 2014–16) and the bank loan guaranteed by the World Bank PBG (in 2016) . Market volatility has been high since the onset of the global crisis, due to external rather than domestic factors. This was evident in 2009, when the government issued a 3½-year Eurobond at a yield of 9⅞ percent, more than double the 4⅝ percent yield of the 10- year issuance in 2005, and in 2010 when it canceled a planned Eurobond issuance after market rates spiked in the run-up to the Greek program. In addition, domestic debt features a very short average maturity of just 6 months, and hence the need to roll over existing debt on average 2 times per year.

Macedonia's exposure to currency risk could gradually be reduced by increasing domestic non FX-indexed denar issuance. Currency exposure is considerable: all external debt is in FX, and almost half of outstanding domestic government debt is FX-linked (Table 1). Taken together, almost 90 percent of general government debt is hence denominated in or linked to foreign currency. Currency risk—defined as the (high) exposure multiplied by the (low) probability of a shock—may not appear to be high in light of the stability of the peg over the past 15 years. However, reducing it would add to policy flexibility in the event of unforeseen shocks in the future. Gradually increasing the share of domestic denar-denominated, non FX-linked debt would be a prudent strategy in this context, together with increasing the share of domestic debt in fiscal financing. These actions would also bring other benefits, including developing the domestic currency yield curve, improving the monetary policy transmission mechanism, and in general promoting greater use of denars in financial transactions.

Table 3 Percentage of foreign currency debt in domestic debt

Note:Domestic debt denominated in or linked to foreign exchange. Data for Macedonia includes structural bonds.

| | |
|---|---|
| Croatia | 53 |
| Macedonia | 51 |
| Bulgaria | 33 |
| Romania | 26 |
| Serbia | 13 |
| Ukraine | 4 |
| Hungary | 0 |



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| | |
|---|---|
| Moldova | 0 |

By developing and following a medium-term debt strategy along these lines, Macedonia can achieve the goal of minimizing medium-term costs subject to keeping risks within appropriate pre-set bounds. As described above, the government has taken the first initial steps toward renewed market development. Further gradual moves in this direction, guided by a comprehensive debt strategy, would bring the goal within reach. Achieving this goal would benefit the budget through lower interest expense and lower risks over the medium term. At the same time, developing a domestic yield curve would yield positive externalities for the real economy, as it would clearly establish a denar yield curve that can be used in pricing private sector loans and bonds.

Traditionally, Macedonia has had low fiscal deficits, ranging from –1% to +1%, but during the crisis in 2009 this grew initially to 2.5% then to 2.8% with our highest in 2012 at 3.8%. In 2013, due to the financial stimulus were at 3.5%. NBRM was able to mitigate successfully because Macedonian public debt was low at around 20% of GDP which afforded us room for expansion which we used during this crisis period.

**Table 4: Country data sheet- Macedonia (Author's estimation.)**

| **Population: 2.075.625** | **2011** | **2012** | **2013** | **2014** |
|---|---|---|---|---|
| GDP (real, in mn eur) | 6.415 | 6.386 | 6.556 | 6.803 |
| GDP (nominal, in mn eur) | 7.544 | 7.585 | 8.112 | 8.533 |
| GDP per capita in eur | 3.105 | 3.086 | 3.163 | 3.227 |
| GDP per capita PPP | 9.588 | 9.529 | 9.768 | 10.120 |
| GDP growth | 2.3% | -0.5% | 2.7% | 3.8% |
| Remittances (in mn eur) | 195 | 198 | 191 | 204 |
| Remittances as % of GDP | 3.0% | 3.1% | 2.9% | 3.0% |
| Total investments (in mn eur) | 1.668 | 1.845 | 1.868 | 2.082 |
| Inevstments as % of GDP | 26.0% | 28.9% | 28.5% | 30.6% |
| Foreign direct investments | 344 | 111 | 252 | 262 |
| Foreign direct invest.as % of GDP | 5.4% | 1.7% | 3.8% | 3.9% |
| Total import (in mn eur) | 5.053 | 5.071 | 4.983 | 5.485 |
| Total imports as % of GDP | 78.8% | 79.4% | 76.0% | 80.6% |
| Import to EU (in mn eur) | 3.038 | 3.372 | 3.397 | 3.821 |
| Import to EU as % of total import | 60.1% | 66.5% | 68.2% | 69.7% |
| Total export (in mn eur) | 3.215 | 3.124 | 3.235 | 3.723 |
| Total exports as % of GDP | 50.1% | 48.9% | 49.3% | 54.7% |
| Export to EU (in mn eur) | 2.281 | 2.110 | 2.386 | 3.025 |
| Export to EU as % of total export | 70.9% | 67.5% | 73.8% | 81.3% |

| **Top 10 companies** | |
|---|---|
| 1 | *Johnson Matthey* |
| 2 | *Okta AD* |
| 3 | *EVN Elektrostopanstvo na Makedonija AD* |
| 4 | *Makpetrol AD* |
| 5 | *Elektrani na Makedonija AD* |
| 6 | *Feni Industry AD* |
| 7 | *Makedonski Telekom AD* |
| 8 | *T-Mobile Makedonija AD* |
| 9 | *Lukoil Makedonija AD* |
| 10 | *Arcelormittal Skopje AD* |



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Apart from the macro-economy concerns, the crisis with the Euro as a currency helped boost confidence in Macedonian domestic currency [MKD denar]. This is because people naturally began to wonder what would happen with Europe; therefore, its primary currency. As a result, some people began to orient more towards the MKD. Macedonia, like most former Yugoslavian countries are highly Euro-rized, which means people save and use credits in Euros, with a 65% Euro to 35% MKD ratio. During the crisis and continuing today, the ratio of households and their propensity to save in MKD has elevated to 50%.

## 6. METHODOLOGY

The study involved a field survey conducted in July 2015, by applying a self-administered questionnaire which was distributed among the managers and employees in companies in Macedonia, Serbia and Croatia which are clients in Sparkasse bank. Respondents were asked to explain six question which were very important for us to determine and get the answers about using risk effective management tools or in another words to evaluate the most important factors for not using derivatives. We were interested to know is the cost of risk management greater than benefits, what are the financial reporting requirements for risk management activities, further respondents determined the lack of knowledge on financial derivatives by the company's management. Also to get the "picture" about using financial derivatives, we asked respondents about the difficulties in monitoring/measuring contract effectiveness as exposures to currency, interest rate or commodity price risk are not significant for them. We applied simple test by processing with the SPSS.

## 7. ANALYSIS, RESULTS AND DISCUSION

Companies in Croatia, Serbia and Macedonia reported that are not using (and are not going to use) financial derivatives for risk hedging indicated following reasons to explain the limited practice in the derivatives market:

- Costs of risk management are greater than benefits;
- Financial reporting requirements for risk management activities;
- Lack of knowledge on financial derivatives by the firm's management;
- Difficulties in monitoring/measuring contract effectiveness;
- Risk exposures are managed more efficiently by other means;
- Exposures to currency, interest rate, or commodity price risk are not significant.

Fig. 1 illustrates the most important factors for not using derivatives by the fraction of the surveyed firms



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reported that they are not using derivative financial instruments.

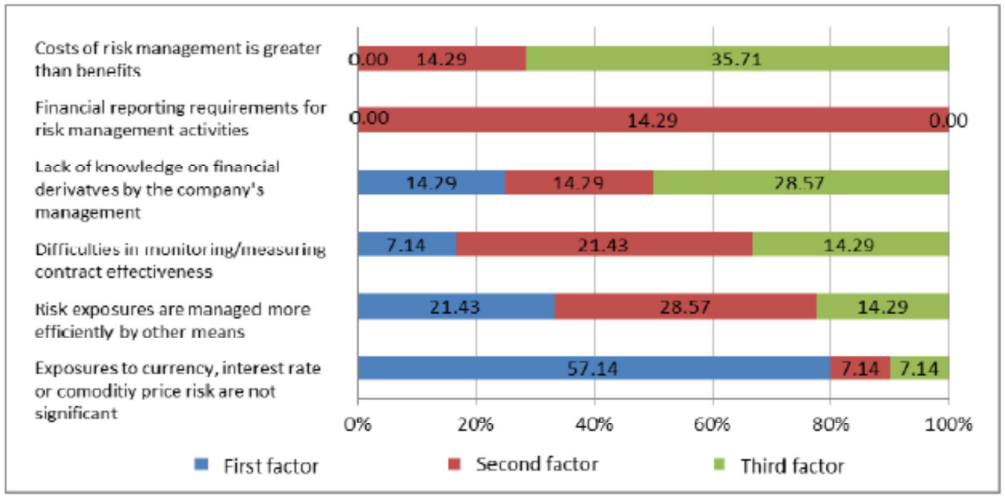


**Figure 1: The most important factors for not using derivatives**

From the figure above could be concluded that the biggest reason why companies not use derivatives is the non significant exposure to currency, interest rate or commodity price risk.

## 8. CONCLUSION

Organizations have to evaluate the risks of doing business on an international level. But it doesn't always work in their favour. For instance, McDonalds's saw sales in Europe increase in 2011, but the yearly profits were actually down as a result of a weakening euro. Another example of this at eBay, with CFO Bob Swan admitting that currency fluctuations will hit the bottom line by around therr points in 2012. Ralph Lauren reported that although currency changes have gone in its favour so far in 2012, they survived a turnaround in fortunes in 2013.

*What can firms do?*

As with private investors, business essentially have four options to counteract their currency exposure. The simplest approach is just to monitor the changes, and this can be the best option if companies do not think that they are at a particulary high risk from exchange rate fluctuations.

Another is to lock into an exchange rate for a fixed period of time by setting up a forward contract. If the exposure estimates are correct, this can be a beneficial approach. Some business will also purchase currency in advance if they know that they will be making big purchases and are concerned about volatility.

Third option is to hedge against this exposure via derivatives. Although this may be the most complicated option, it can be effective in limiting exposure to volatility. It can also give a clearer picture of how a company's overseas operations are really performing.



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Finally, firms can choose to manage their currency exposure through business practices. Having a truly international company can help with this as, theoretically, losses made when one currency falls will be recovered when another rises. Where contracts are concerned business can also set up clauses that reduce this exposure. In many cases this comes in the form of an agreement to protect the client and the company should exchange movements exceed the agreed-upon level. Some businesses also agree on setting all contracts in their core currency, protecting them from any exposure as they always be paid the same relative amount. Dealing with the currency exposure is all about managing risk, as fluctuations are by very nature unpredictable. However, while private investors only have their own savings to worry about if they fail to manage this risk appropriately, businesses face angry shareholders and a drop in share value – as well as a drop in profits.

In general, developing countries - the Balkan countries have a shortage of savings and they imported foreign savings. Companies tend to borrow in foreign currency-Euro which is particularly popular in Serbia and Croatia, due to the lower interest rates compared to interest rates on credits in national currency. Differences in interest rates are an indicator of expected future depreciation / appreciation currency in terms of fluctuating exchange rates. The currency risk can be hedged in two ways: if the company is a net exporter and lend in currency of the net exports, or in short-term loans, if agreed today a term exchange rate to repay the loan at the time of the mature. But, in the Western Balkans as we have seen from the above researches there is no developed market of term rates to use this tool.

Namely, as an instrument to mitigate foreign exchange risk can serve the following rule - if the company does not generate income in the same currency as the loan is, repayment capacity of the loan should not exceed 50-60 EBIT of the company. In the case of depreciation, the company has the capacity to back the loan.

So, those countries which are small and open (as Croatia, Serbia and Macedonia) have high indicator on protection of the EUR currency risk through their exports in Euros. These sectors can avoid currency risk by borrowing in Euros.

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