Effect of Macroeconomics Variables on Stock Market Returns for MILA's Stock Exchange Market: Colombia, Peru and Chile

Research Practise I | Final Presentation
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Is a program that integrates the stock exchange markets of Chile, Colombia and Peru.

- Founded In 2010.
- Give investors a greater supply of securities, issuers and also larger sources of funding.

The problem

Find the <u>proper</u> macroeconomics variables that explain MILA's stock exchange returns.

> Disappointing results in the past

Despite having a good economic justification, most of the variables are not statistically significant.

> Emerging markets

Most of the research already done, have been focused on develop markets (Gay, 2008).

Variables (Key factor)

- Petroleum Price (WTI Index)
- Industrial Production
- Treasury bonds
- Exchange rates
- S&P 500
- Gold Price

Move to

- Petroleum price expectation (WTI Index)
- US economy (S&P 500)
- Brasil stock exchange index
- Exchange rates
- Credit Default Swap

Time series regression analysis ARIMA model

Time scale: Monthly basis, february 2009: december 2015.

- All the variables have to be I(1).
- The errors are uncorrelated.
- The variance of the error is constant across observations.

Joint significance for exchange rate and the credit default swap.

The errors are uncorrelated.

Results

Table 1. Coefficients, variables in first difference.

	BOVESPA	CDS	S&P	F.OIL
R_COLOMBIA	0.2603 (0.005**)	-0.1075 (0.022**)	-0.341 (0.005**)	-0.514 (0.717)
R_CHILE	0.2971 (0.000**)	-0.0738 (0.054*)	-0.0642 (0.575)	-0.0744 (0.194)
R_PERU	0.3296 (0.021**)	-0.1585 (0.089*)	-0.0007 (0.998)	0.123 (0.13)

Robust standard errors in parenthesis. **$p<0.05$, *$p<0.10$

Analysis

With a 95% confidence level BOVESPA returns are significant and **positive**. Investors see both markets as complements and not as competition as it was believed.

CDS are significant for the 3 economies and in all three cases show a negative relationship. This is rational because if the perception of country risk increase foreign investment decrease.

The relationship between S&P500 and the three economies is **negative**, which means US is not a business partner it is a market where when prices are low investors prefer to move their invests to emerging economies, also happening otherwise.

Oil price expectations is not significant for any of the three countries, this because none of the three countries is clearly oil exporter.

Conclusions

- In contrast to other studies, CDS and BOVESPA returns are statistically significant.

- Colombia is the only country with a significant relationship with the Standard and Poor's 500 index, this happens because Peru's and Chile's commercial trade are highly influenced by China, meanwhile in Colombia, US is the first business partner.

- Further research on the topic is needed to determine what other factors influence the returns of MILA and analyze the implications of the market efficiency hypothesis developed by Fama (1970) and (1981).

Gay, Jr., Robert D. (2008) “Effect of Macroeconomic Variables On Stock Market Returns For Four Emerging Economies: Brazil, Russia, India and China.” International Business & Economics Research Journal.

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