“Analysis of the Possible Impacts of a Reclassification of MSCI Peru from Emerging Market to Frontier, and Proposals to Reduce such Probability”

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EXECUTIVE SUMMARY

On June 25, 2019, the Results of the MSCI 2019 Market Classification Review stated that, if the Peruvian Index lost one of its three components (minimum required number), a consultation would be published so as to reclassify MSCI Peru, from Emerging Market to Frontier Market. This study has two parts: The first aims to estimate the possible impacts of a reclassification of the MSCI Peru Index from Emerging to Frontier; the second part presents proposals to improve the Peruvian securities market which, in consequence, would help minimize the reclassification risk.

If we solely focus on numbers, the probability of a downgrade of the MSCI Peru Index is low in the short-term, given that the three current components exceed the requirements. However, there are high risks in the medium-term: (1) the possibility that some current component passes to MSCI USA (for example, the 2015 attempt regarding Southern Copper), while we do not have alternate shares in the local market; and (2) that the changes the Peruvian authorities and the Lima Stock Exchange ("BVL", for its acronym in Spanish) are promoting to improve liquidity and market structure do not obtain the expected results.

Due to the aforementioned high risk, it is important to assess which could be the impact of a potential downgrade. Theoretically, the main transmission cannel of a reclassification is the incorporation of a premium for frontier risk within the capital cost of companies, which would reduce their prices and multiple equilibria. Literature agrees that there are large negative effects in the short-term; nevertheless, there is no agreement on the long-term effect. Thus, we require a deeper analysis of a sample of countries that changed their statuses from Emerging to Frontier. Specifically, we mainly reviewed the cases of Argentina and Jordan. Same as the literature, these suggest strong impact in the short-term, but that however dilute in time (2-4 months), while considerably lower effects persist in the long-term.

While the Peruvian Index was not reclassified, we try to understand how much of the 2015 consultation has been incorporated in prices through the premium for frontier risk. Studied evidence shows that the bigger the surprise of the event, the greater its impact. Our conclusion is that, since 2015, there was a "wake-up effect" in investors that lead to a partial incorporation of frontier risk in prices, which reduces the impact of a potential reclassification in the long-term. That is to say, part of the damage is already done. The document includes a simulation of potential impacts of a greater incorporation of frontier risk at multiple level. However, in the short-term, the shock may be relevant. We estimate that, just for emerging passive funds, USD 1.9 billion could outflow (there is no public information on active funds). This would be just partially counteracted by the passive funds flow that follows the MSCI Frontier. The most affected security within the MSCI Peru Index would be Credicorp, due to the fact that it represents 70% of the Index. Additionally, we found that the incorporation of the frontier market premium factor is lower in securities locally traded; thus, effects may be bigger in these cases. This negative effect could be counteracted by more liquid local companies that are part of the MSCI Frontier Index, which would allow them to attract a new flow of investors—though lower to the previous, given the relative magnitude of both indexes.

Finally, we assessed potential impacts in all the other local variables, beyond price and multiple of securities. In order to do so, we considered the country risk, because it is one of the most relevant. The result was that, while the MSCI Peru Index has been gradually incorporating the premium for the risk of becoming frontier, the country risk has followed a decreasing trend. Apparently, investors correctly separate good macroeconomic fundamentals (mainly in relation to tax stability and a greater sustained growth capacity) from a securities market structure that does not allow elevating its liquidity. The other variable that could be affected for outflows in the short-term is exchange rate. Notwithstanding, in practice, it is hard to have a good estimation of what could be the foreign outflows. On the other hand, foreign investors tend to expose to Peru through the three securities that make up the MSCI Index. In the local market the percentage of invested foreigners in variable income is close to its minimum, even though they still represent over a third of the total. At microeconomic level, we see a relevant negative richness effect for the funds and agents who invest in local securities provided there was a devaluation of securities of local companies. Pension funds would be the most affected, due to their size. As per information of the BCRP (Spanish acronym for Peruvian Reserve Central Bank), from S/ 165,911 million managed by pension funds, around S/ 19 billion (11%) are invested in local companies' securities.

In the second part of the document, we focus on identifying the problems that may be affecting the role of the local stock exchange, thus generating low liquidity levels and market depth. Then, we note some recommendations for future deepening, in cases where possible. We focus on the development of the stock exchange, because the international and local experience demonstrates that MSCI changes are the result of a securities market trend, and not the other way around. This does not imply, as we will see in the first part of this report, that the MSCI may not generate a "wake-up effect" in investors.

The first problem to be addressed is the market structure that, by construction, generates a low liquidity level. Regarding supply, just 36% of the market capitalization of the main local shares remains as free float; regarding demand, pension funds maintain around 60% of such float. This worsens due to the fact that these investors may not relevantly rotate their local shares, because they could generate an impact on the market because of their size. We propose to disconnect the float through the gradual and partial delegation of shares with low liquidity, to specialized funds.

The second matter is the need to consolidate the four securities that are close to MSCI requirements: Ferreycorp, Inretail, Alicorp and Volcan. While BVL has encouraged market makers for these securities in order to boost their liquidity, it is important to increase the amount of such creators and provide them with enough balance to set up purchase and sale points in the secondary market. Once they have been provided with an appropriate balance of available securities, a mechanism similar to the one in sovereign bonds may be designed, so as to encourage competition among market makers for boosting liquidity. The incorporation of these four companies in this project is key to its success.

The third problem is the excessive importance of credits in the financing of companies. Empiric evidence suggests that, in some cases, the banking system is key to the capitals market, but an excessive size may inhibit its development. We propose to generate incentives needed in order to promote the development of specialized investment funds.

The fourth problem is the fact that companies that achieve a big size may migrate to more liquid stock exchanges, such as New York, looking for a greater amount and diversity of investors to finance them. For investors, this implies more liquidity and a lower shares trading cost. One way of preventing this, is enlarging the local stock exchange through integration processes with other countries, such as MILA. Nevertheless, in our review we explain why this initiative—more than a market integration—has been a market interconnection. Finally, we highlight the WAEMU[1] block that, in 2016, achieved an MSCI improvement in its group classification[2]. If

[1] Comprised by Benin, Burkina Faso, Ivory Coast, Guinea-Bissau, Mali, Niger, Senegal and Togo. They look for a "real" integration of tariffs and markets.
[2] Different to MILA, WAEMU is a customs and monetary union, which reduces transaction costs for investors,

integrated market is not the solution to enlarge the trading of local securities, then it is important to redefine the BVL's and stockbrokers' roles. The centralized market, in our opinion, must lead the development of new issuers and the consolidation of small and medium-size companies in the securities market. As they are small shares and are in the process of consolidation, it is expected that they offer returns with premiums that locate their expected returns above the biggest securities, or the ones quoted in New York. The creation of dedicated funds will be key to this function. This new stock exchange should attract foreign and local investors who look for high return investments in a low rates world, but without the restrictions of the private equity market.

In fifth place, we review the current situation of the securities market, where there is a high amount of listed issuers, but just a small percentage of them make transactions with a minimum frequency and volume. In the search of identifying the incentives that generate such situation, we found the tax benefits of being part of a centralized trading mechanism. On that regard, we propose to consider whether some minimum transactional requirement should be added, besides listing in a centralized mechanism, in order to maintain tax benefits and so as to remove distortion.

In sixth place, we remarked the need to pass a scheme that more strongly commits companies listed in the BVL to comply with good corporate governance practices. While Superintendence of the Securities Market has made progress on that matter, it cannot force the fulfillment of the Good Corporate Governance Code; therefore, it would be important to evaluate a law that forces the achievement of a higher standard for listed companies in this matter, that allows protecting retailers, providing information to analysts that allows attracting local and foreign capital—which would result in a higher and better financing source for companies that do achieve so. Additionally, it would also be important to align the standards on the Superintendence of the Securities Market ("SMV" for its acronym in Spanish) and the Superintendence of Banking, Insurance and Fund Pension Administrators ("SBS" for its acronym in Spanish).

In seventh place, we analyzed the experience of securities loans and short selling, remarking the need that foreign investors be considered in this type of project, because they have volume to trade with big local investors (AFP) and the experience of performing this kind of operations.

Finally, we addressed Quick Wins suggested by MSCI in several of its reports, which mainly aim to the development of a "real" DVP, the possibility of having omnibus accounts, increasing competition among brokers and leveling English to Spanish in information flows and regulatory documents.

starting by costs derivatives and risks derived from exchange rate.

PART I: Effects of the Reclassification[3,4]

Introduction

Since 2011, liquidity of the Peruvian securities market remained in very low level and with a decreasing trend. Initiatives to change the prevailing market structure, such as the creation of the Alternative Securities Market (MAV) for its acronym in Spanish, were still too recent (it was created in 2013), and their impact was not immediate. This situation sparked off in August 2015, with a consultation from MSCI indexes supplier, which proposed the reclassification of the Peruvian Index from Emerging to Frontier Market. The main reason was that the stock exchange of the country did no longer meet the required size and liquidity in order to maintain the Emerging status, and the decreasing trend of liquidity did not show improvement. Moreover, just three securities (minimum condition) met the investment criteria applicable to emerging markets: Credicorp, Southern Copper and Buenaventura. The situation became even more complicated as MSCI also consulted in that same document, the possibility that Southern Copper passed from the Peruvian to the USA Index. If that happened, we could potentially be left with just to securities that comply with liquidity criteria, that is to say, less than the requirement.

The immediate effect was an important devaluation of Peruvian securities. Fortunately, the MSCI finally announced that it had decided to maintain Peru within the Emerging Index, due to the efforts of Peruvian authorities and the BVL to improve liquidity of the securities market through several initiatives, such as tax exemptions to capital gains, reduction of trading costs for market makers, new regulations to improve securities loans and short selling, among others.

Notwithstanding, fear returned this year when, on June 25, 2019, the Results of the MSCI 2019 Market Classification Review warned that, if the Peruvian index lost one of its three components (minimum required number) a consultation would be published to reclassify MSCI Peru from Emerging to Frontier Market. Therefore, it is important to asses which could be the impact of a reclassification for the Peruvian market.

In order to meet this objective, first, we will review existing literature about the impact of a reclassification. Second, we will try to approach to what may happen with Peruvian securities in the event of a reclassification. For this second part, first we will review criteria applied by MSCI to define whether a country belongs to the Developed, Emerging or Frontier index. With these criteria and the size and liquidity numbers of Peruvian shares, we will assess the probability of a reclassification of the Peruvian index as well as ways of mitigating such probability. Then, in order to understand the transmission channels through which a reclassification devaluates shares, we will develop a model. This model will be used to empirically evaluate what happened in similar reclassification cases in other countries, and extract lessons. Subsequently, we will assess what could happen in Peru by developing several metrics that allow us to approach to the consequences of such event. Finally, we will assess other transmission channels towards Peruvian variables that may be affected by a reclassification.

[3] The study focuses in MSCI indexes supplier, given that it was the only one which information we could access. Nevertheless, MSCI is the most relevant indexes supplier, because it has over USD 14 billion shares that take it as reference, from which USD 1.8 billion are from emerging markets.

[4] Authors would like to thank the excellent assistance of Yehns Peláez in the preparation of this document. We would like to thank as well the comments from members of BVL, SBS, SMV and AFP that were part of the different presentations of this document. Needless to say, any mistake is exclusive responsibility of the authors.

Literature about the Impact of Reclassification

Literature on the effects of a change in securities' indexes in returns and volumes traded is broad for developed countries, especially for S&P USA Index; literature mostly follows the event study methodology. However, studies are not conclusive on the final long-term effect of changes in indexes. On one hand, we have the "slope down of the demand curve for stocks hypothesis" of Shleifer (1986), which states that the inclusion (deletion) of a security and the subsequent purchase (sale) by passive funds (indexed to its reference) will result in an increase (fall) in the price of securities. On the other hand, there is the "price pressure hypothesis" of Harris and Gurel (1985), which suggest that changes in indexes do not have a permanent effect on prices. More recently, Chen and others (2004) proposed the "awareness hypothesis" that, based on Merton's (1987) incomplete information model, suggests that a security added to S&P500 increases the investors' awareness about such security and reduces the shadow cost, therefore, the price of the security increases. However, there would not be a permanent effect in the case of deleting a security, given that the investor's awareness about such security does not immediately vanishes, which would result in asymmetry of effects.

Regarding the MSCI Global Index, Rajesh Chakrabarti, Huang, Jayaraman and Lee (2005) find that the inclusion of a security in the index generates an irregular increase in prices between the announcement and the execution date, and then partially reverses after the latter. Volumes traded significantly increase and stay in high levels. On their side, excluded shares face a fall in their prices. Thus, their results support the slope down of the demand curve for stocks hypothesis, though finds some evidence of the price pressure hypothesis.

It is expected that the result for an emerging country will be different to the extent that requirements in relation to the efficiency hypothesis are not met: there is less information and research about companies in this region, liquidity is scarce and sizes are smaller. Besides, in several cases, governments' policies regarding the openness of their markets or the free mobility of capitals may become a restriction for foreign investment. Thus, the effect of the aware investor may be more relevant. Unfortunately, there is not much academic literature for the emerging case.

Burcu Hacibedel & Jos Van Bommel (2007) studied the incorporation or exclusion of companies to/from the MSCI Emerging Index. They find evidence of positive (negative) and permanent impact in prices due to the inclusion (exclusion). Authors attribute this result to the "radar effect" (Merton 1987), which suggests that the more visible shares are, the more they attract (distant) investors, thus requiring less expected returns[5].

For their part, Saidi, N., A. Prasad, and V. Naik (2012) just analyze the effects of an improvement in the classification of countries, but focuses in a small number of countries from the Middle East and just analyzes the positive case of the reclassification (for our purposes, we need to evaluate the effects of a negative reclassification as well). Results show a positive impact on the announcement day, but negative on the day the reclassification is executed. Authors suggest that this result is consistent with the excessive amount of securities generated by speculative investors, who put pressure on prices before the reclassification takes place. On the other hand,

[5] In a more recent and specific study of the Taiwan Index, Chung-Wen Hung and Cheng- Yi Shiu (2016) also find that irregular returns are significantly positive (negative) for additions (exclusions). The positive effect lasts 60 days after the execution, while the negative lasts 40. This asymmetric effect is also true for volume. They remark the fact that foreign investors are the winners in additions, at the expense of individuals, and they only have small losses in the exclusion of shares.

in a more reflective way, they suggest that reclassifications are not relevant to the extent that they are a confirmation of changes in the fundamentals of markets. Therefore, what is relevant for the authors is to focus in the political, economic and financial reforms.

Terence C. Burnham, Gakidis and Wurgler (2017) is, to the best of our knowledge, the first systematic work about changes of countries classification that belong to Emerging Markets. Its reference is MSCI, given that it is the most relevant index for this group of countries. Authors find that, on average, reclassified markets overreact between the announcement and the execution date, but then the effect on prices is reversed in one year. Statistically, they cannot discard the possibility of total reversion. Moreover, they do not find significant changes in liquidity. Notwithstanding, the work does not analyze the consultation date, because they consider it does not have a clear investment implication for most of the indexes' replicators. Additionally, it does not correct irregular returns for relevant premiums such as frontier or emerging. These omissions, as we will see later on, will not allow the authors to understand whether the fact of not finding evidence of a permanent effect is because there effectively is none, or because markets impose or withdraw premiums in advance—given that information of the market structure and the fundamentals of the country used in reclassification is public, only short-term effects would remain.

Finally, Hung-Ling Chen, Cheng-Yi Shiu, and Hui-Shan Wei (2019), in a sample that includes developed and developing countries within the MSCI Index, find that additions have irregular positive effects that persist over 60 days after the execution date. On the other hand, eliminations have significant negative effects from their announcement to one day after the implementation, and then rapidly dissipate and reverse within 60 days after the execution. What is mostly of interest about this work is the asymmetry found between inclusions and eliminations of the Index, consistent with the "awareness hypothesis", found by Chen and others (2004) for S&P500. For our purposes, authors find that this hypothesis is more important for emerging. Additionally, the effect of the changes in the MSCI Index is higher in the last years, which is attributed to an increase of passive investors.

In the literature we reviewed, we found two practical problems that we need to overcome in this study in order to extract useful lessons for Peru. The first is to identify how much of the reclassification impact is already incorporated in prices, given that it might be the case that no effect is found because investors had already positioned themselves beforehand (even partially). In second place, it is important to consider not just the announcement and execution dates, but the moment of the consultation. This because the consultation may "wake-up" the investor about the possible change of status of a country because, even though information about the market fundamentals is public, agents may not incorporate them in prices. Additionally, this would help us solve the directionality that works about emerging markets do not empirically clarify: MSCI changes fundamentals, or fundamentals spark off MSCI. This is particularly relevant because, given the second case; it is likely that no significant statistically irregular impact would be found.

Summary: Literature about MSCI Reclassification to Emerging Countries

Papers about EM	Impact	Region
Burcu Hacibedel & Jos Van Bommel (2007)	There is permanent impact (EM securities level)	EM
Saidi, N., A. Prasad, and V. Naik (2012)	Just transitory impact	EM
Terence C. Burnham, Gakidis and Wurgler (2017)	Reverse in one year	EM
Hung-LingChen,Cheng-YiShiu,andHui-ShanWei (2019)	Reverse in time	EM+DM

Source: Our elaboration.

MSCI Classification Criteria

There are several indexes suppliers (MSCI, S&P, FTSE and Dow Jones) whose classification criteria differ. In this research, we solely focus on MSCI, because it is the only index that provided us with access to information. This supplier bases in three general criteria: (a) economic development; (b) size and liquidity; and (c) accessibility to market. In order to be classified as Emerging, MSCI mainly requires two of them: accessibility to market (openness to foreign investment, ease capital inflow and outflow, operational frame efficiency, availability of investment instruments and stability of institutional frame) and compliance with the minimum requirements of size and liquidity. To measure liquidity, MSCI uses the Annualized Traded Value Ratio (ATVR) which is a metric that considers volume traded in relation to adjusted free float, controlled by the number of days traded and extreme securities through median calculation. Finally, it is important to note that MSCI seeks to reflect visions and practices of the international community of investors, who are consulted when assessing the reclassification of a country.

Table 1.1 presents the classification structure used by MSCI, as well as the minimum criteria to be considered developed, emerging or frontier country as per the MSCI Global Investable Market Indexes Methodology from June 2019. Countries that are not classified within these three groups are known as “standalone”.

Table 1.1. MSCI Market Classification Structure

Criteria	Frontier	Emerging	Developed
A Economic Development			
A.1 Sustainability of economic development	No requirement	No requirement	Country GNI per capita 25% above the World Bank high income threshold* for 3 consecutive years
B Size and Liquidity Requirements			
B.1 Number of companies meeting the following Standard Index criteria	2	3	5
Company size (full market cap)**	USD 776 mm	USD 1,551 mm	USD 3,102 mm
Security size (float market cap)**	USD 61 mm	USD 776 mm	USD 1,551 mm
Security liquidity	2.5% ATVR	15% ATVR	20% ATVR
C Market Accessibility Criteria			
C.1 Openness to foreign ownership	At least some	Significant	Very high
C.2 Ease of capital inflows / outflows	At least partial	Good and tested	Very high
C.3 Competitive landscape	Modest	High	Very high
C.4 Availability of Investment Instrument	High	Modest	Unrestricted
C.5 Stability of the institutional framework	Modest		Very high

* High income threshold for 2018: GNI per capita of USD 12,056 (World Bank, Atlas method)

** Minimum in use for the May 2019 Semi-Annual Index Review, updated on a semi-annual basis

Source: MSCI Global Investable Market Indexes Methodology, June 2019
https://www.msci.com/index/methodology/latest/GIMI

Table 1.2 shows accessibility criteria assessed by MSCI, applied to countries of the emerging region of America and Europa, Middle East and Africa (EMEA), as per the MSCI Global Market Accessibility Review from June 2019.[6]

	America						EM EA						
	Argentina	Brazil	Chile	Colombia	Mexico	Peru	Czech Republic	Egypt	Greece	Hungary	Poland	Qatar	Russia
Openness to foreign ownership													
Investor qualification requirement	++	++	++	++	++	++	++	++	++	++	++	++	++
Foreign ownership limit (FOL) level	++	+	++	++	-/?	++	++	+	++	++	++	-/?	++
Foreign room level	++	++	++	++	++	++	++	++	++	++	++	++	++
Equal rights to foreign investors	+	-/?	+	+	-/?	+	+	+	++	+	+	+	+
Ease of capital inflows / outflows													
Capital Flow restriction level	++	++	+	+	++	++	++	+	++	++	++	++	++
Foreign Exchange market liberalization level	+	-/?	+	-/?	++	++	++	-/?	++	++	++	++	+
Efficiency of the operational framework													
Market entry													
Investor registration and account set up	+	-/?	-/?	-/?	+	+	+	+	++	++	++	+	-/?
Organization Market													
Market Regulations	+	+	+	+	++	+	+	+	++	+	+	++	+
Information flow	+	+	+	+	+	+	+	+	++	+	+	++	-/?
Market infrastructure													
Clearing and Settlement	-/?	-/?	++	+	++	-/?	+	+	+	++	+	+	-/?
Custody	++	++	++	+	++	++	++	++	++	++	++	+	++
Registry / Depository	++	++	++	++	++	++	++	++	++	+	+	++	+
Trading	+	++	++	+	++	+	++	+	++	++	++	++	+
Transferability	+	+	-/?	-/?	++	+	++	-/?	-/?	++	+	-/?	++
Stock lending	-/?	++	-/?	+	++	-/?	+	-/?	-/?	+	+	+	-/?
Short selling	-/?	++	-/?	+	+	-/?	+	-/?	-/?	+	+	-/?	-/?
Availability of Investment Instrument	-/?	-/?	++	++	++	++	++	++	++	++	++	++	++
Stability of institutional framework	-/?	+	++	-/?	+	+	++	-/?	++	++	++	+	-/?

++ No issues; + No major issues; -/?:Improvements needed / extent to be assessed

Source: MSCI Global Market Accessibility Review, June 2019. Available at: https://www.msci.com/documents/1296102/1330218/MSCI_Market_Accessibility_Review_Country_Comparison_2019.pdf/142b5a29-e385-2922-4f79-8d6f4a04a467

From Table 1.2 we may conclude that, even when Peru has a good evaluation in absolute and relative terms, there are pending tasks in the accessibility criteria. In Part II of the study, we will see in detail each of the accessibility criteria where MSCI sees improvement opportunities. These may be summarized in: (1) a better information flow, in particular using English so as to provide information to the market, both to companies and regulators; (2) improvements in liquidity and settlement through the availability of omnibus accounts and DVP improvement; increase of brokers' competitions to reduce trading costs and increase volumes; (3) the need of extended use of securities loans and Short Selling, key to increase liquidity and market depth.[7]

[6] Available at: https://www.msci.com/documents/1296102/1330218/MSCI_Global_Market_Accessibilty_Review_June_2019.pdf/511b8357-58a5-4992-3774-47f60baa1505

[7] Idem (MSCI Global Market Accessibility Review, June 2019).

Peru: History of Reclassification Attempts

In August 2015, MSCI opens a consultation proposing the reclassification of the Peruvian Index from Emerging to Frontier Market. The main reason was that the stock exchange of the country did no longer meet the required size and liquidity in order to maintain the Emerging status, and the decreasing trend of liquidity did not show improvement. Moreover, just three securities (minimum condition) met the investment criteria applicable to emerging markets: Credicorp, Southern Copper and Buenaventura.

The situation became even more complicated as MSCI also consulted in that same document, the possibility that Southern Copper passed from the Peruvian to the USA Index[8]. If that happened, we could potentially be left with just two securities that comply with liquidity criteria, that is to say, less than the requirement.

One month later, on September 30, 2015, MSCI decided to maintain Peru as Emerging and postpones its review to June 2016, when it reassures its decision of leaving Peru's status. This occurred, after the implementation of a public-private strategy that included a series of measures proposed by the Ministry of Economy and Finances to the Congress of the Republic, and others adopted by BVL and Cavali. Such strategy also included several informative road shows to investors and funds, many of who were going to vote at the consultation decision, as well as a continuous working agenda with MSCI.

In its decision, however, MSCI highlights that any reduction in the amount of investable shares would spark off the reclassification of Peru at any point of time. The positive side is that MSCI recognized the effort of the Peruvian authorities and BVL to improve the securities market's liquidity through several initiatives, such as: the implementation of tax exemptions to capital gains, the reduction of trading costs for market makers, the new regulations to improve securities loans and sales in short-term, the new regulations to allow the development of REIT in the market and the new trading platform that allows an earlier settlement of securities loans and algorithmic trading. Nevertheless, MSCI also recognized that such initiatives were at an initial phase and would have a measurable impact as time passed; therefore, they would make an assessment later on. Finally, the document stated that if Peruvian authorities and BVL failed to reverse the decreasing trend of liquidity, a reclassification could take place. It is important to note that, by June 2016, when Peru's reclassification was announced, it had already been announced that Southern Copper would remain in the Peruvian Index.

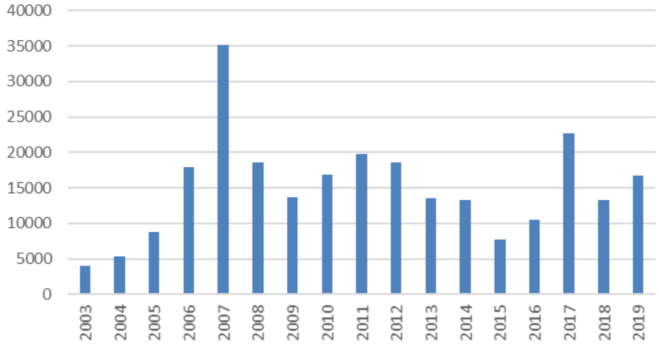
In May 2017, two more companies, Volcan and Graña y Montero, were included in MSCI's Global Small Cap Index[9] (companies with a market capitalization between USD 300 million and USD 2 billion). This increased the amount of securities investable in MSCI indexes, from three to five (though MSCI Peru still maintained three components). This was positively remarked in financial markets and even by the International Monetary Fund in its Section IV, 2018.

Figure 1.1 shows how liquidity, measured as volumes traded, has been recovering since 2015. Notwithstanding, a big part of this recovery has been thanks to the increase in securities' prices. In order to clean this effect, in Figure 1.2, we will use shares rotation, measured as ratio between volumes traded and market capitalization. By using this indicator, we will see recovery is less pronounced. Under any metric, however, it is evident that the decreasing trend of liquidity—which MSCI mentioned as one of the key criteria to decide Peru's change of status—was reversed.

[8] Southern Copper had been classified within MSCI Peru for historic and continuity reasons, given that most operations of its predecessor, Southern Peru, where in Peru and it was therefore associated to such market. However, as of the Consultation date, the company was already listed in the USA.

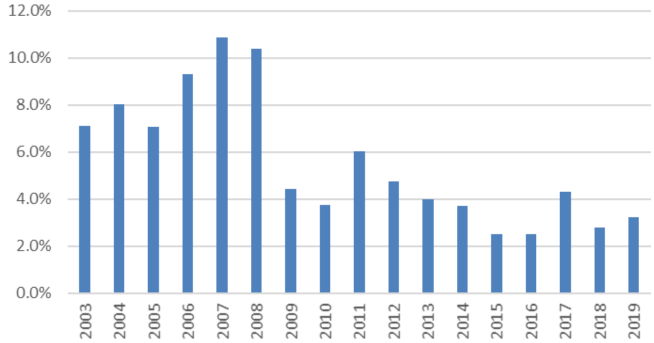
[9] Visit: https://app2.msci.com/eqb/gimi/smallcap/MSCI_May17_SCPublicList.pdf

Figure 1.1. Average Volume Traded



Source: Monthly data average of volume traded of variable income as per BCRP, multiplied by 12 to annualize. As of: May 2019.

Figure 1.2. Rotation of Shares (Volume over Market Capitalization)



Source: Monthly data average of volume traded of variable income as per BCRP, multiplied by 12 to annualize, then divided by market capitalization. As of: May 2019.

In 2019, the risk of been downgraded to Frontier increased in the investors' community, when, on May 13, MSCI decided to withdraw Volcan from the MSCI Small Cap Index[10], while Graña y Montero was no longer part of the indexes. Such decision has not been isolated, given that FTSE had already withdrawn Volcan from its FTSE Mid Cap, FTSE All World and FTSE All Cap indexes in February. Moreover, on June 2019, FTSE had reclassified Credicorp, from Peru to USA. These news have been partially counteracted with the announcement of Intercorp Financial Services Inc. (IFS) of making an Initial Public Offering ("OPI", for its acronym in Spanish) in the New York Stock Exchange, for approximately 9 million common shares, which would provide this security with more float and, therefore, increase its liquidity—but not liquidity of the local stock exchange, because investors could buy it abroad[11], where it is less expensive.

[10] Visit: https://app2.msci.com/eqb/gimi/smallcap/MSCI_May19_SCPublicList.pdf

[11] The list of shares listed abroad, such as Credicorp, Buenaventura and Southern, lead most of the liquidity to end up in New York. http://semanaeconomica.com/article/mercados-y-finanzas/mercado- de-valores/366527-bvl-en-riesgo-de-seguir-perdiendo-liquidez/.

Probability of Peru Reclassification to Frontier

On June 25, 2019, the Results of the MSCI 2019 Market Classification Review stated that, if the Peruvian Index lost one of its three components (minimum required number), a consultation would be published so as to reclassify MSCI Peru, from Emerging Market to Frontier Market. Theoretically, the probability seems low in the short-term, given the indications of the three current components. As we saw in previous sections, MSCI mainly requires three criteria: 15% liquidity measured by ATVR, market capitalization of USD 1,551 million and a free float of USD 776 million. As we may notice in Table 2.1, the three securities that make up MSCI Peru broadly exceed the minimum requirements.

Table 2.1.: MSCI Criteria and Peruvian Securities

Criteria	Metric	MSCI Requirement	Buenaventura	Credicorp	Southern Copper
Liquidity	ATVR	15%	142%	78%	268%
Size	Market Capitalization	1,551	4,229	18,258	268%
Size	Free Float	776	3,595	15,519	3,304

Source: Our elaboration.

However, there are two risks. On one hand, there is the possibility that MSCI decides to pass some of the three securities that compose the Peruvian Index, to the USA Index—as proposed to do with Southern Copper in the 2015 consultation. On that time, due to a matter of continuity and history of the Index, the security remained as part of MSCI Peru, but the risk of future change persisted. In the same context, the other precedent that increases the reclassification risk is the decision of FTSE (other supplier of indexes) on passing Credicorp from the Peruvian to the USA Index—difficult to understand, as nearly all operations of this financial group take place in Peru. The second risk is that changes that Peruvian authorities and BVL have been encouraging in order to improve market structure and liquidity do not obtain the expected results[12].

Mitigation of Reclassification Risks

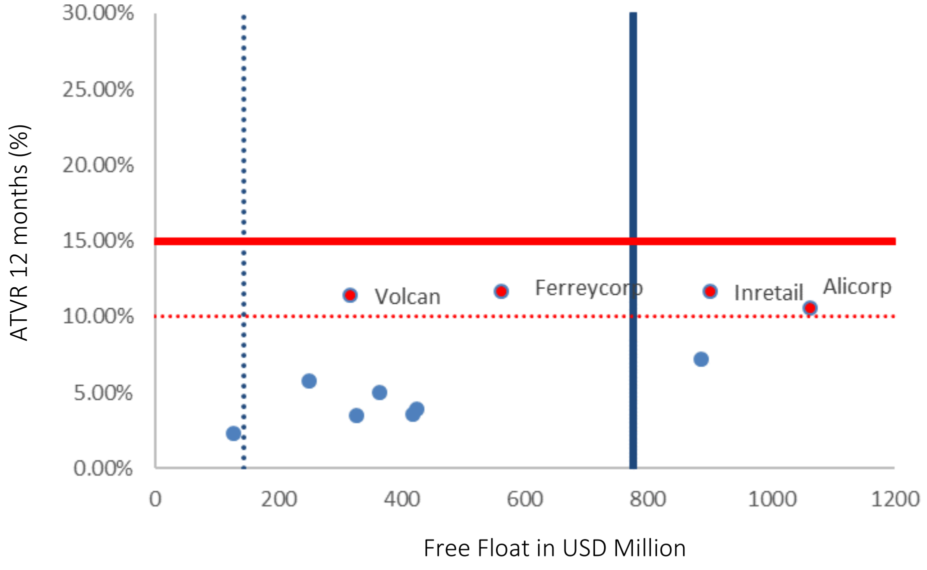
The risk that one of the three securities that compose the Peruvian Index passes to the USA Index may be mitigated by having more investable securities in MSCI indexes, as per MSCI Global Investable Market Indexes Methodology of June 2019:

"*If after the application of the index construction methodology, a Standard Index contains less than five securities in a Developed Market or three securities in an Emerging Market, then the largest securities by free float-adjusted market capitalization among the securities included in the Market Investable Equity Universe are added to the Standard Index in order to reach five constituents in that Developed Market or three in that Emerging Market*.[13]"

Unfortunately, when Volcan left the MSCI Small Cap Indexes in May, Peru had no substitute securities left within the indexes. In this situation, efforts must be focused on securities that are closer to meet the requirements that would allow them to be part of the MSCI Indexes. In the figure below, we have organized the companies of the Peruvian Select Index by criteria: free float and ATVR 12 months, excluding Credicorp, Buenaventura and Southern Copper, in order to focus on potential candidates. Additionally, the blue dotted vertical line is the minimum limit in order to be considered candidates to Small Cap (USD 145 million), while the thick blue vertical line is the minimum limit in order to be considered candidate to the Standard Index (USD 776 million). On the other hand, the thick red line is the liquidity limit measured by required ATVR.

[12] Additionally, the recent OPI of the Intercop Financial Services may be a share candidate to enter the index, if the new issuance may generate the float needed to provide it with the liquidity level required by index providers.
[13] Visit page 32 of https://www.msci.com/index/methodology/latest/GIMI

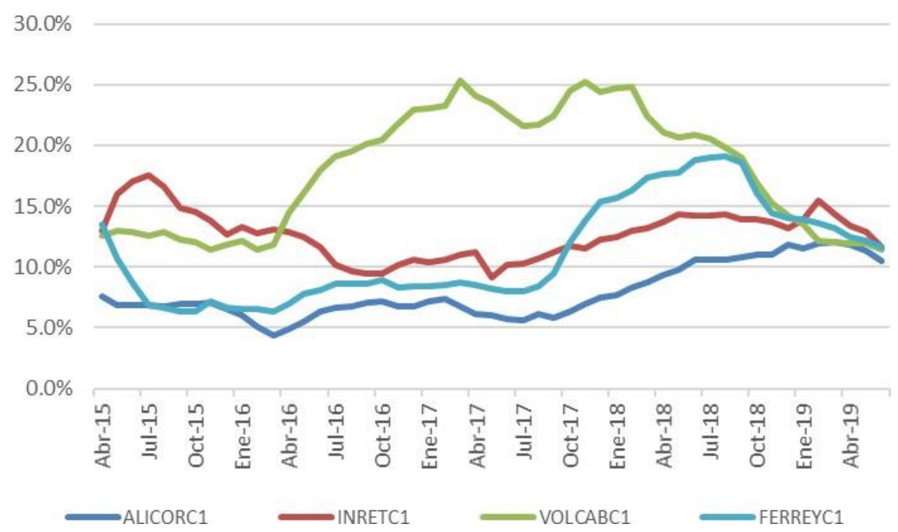
Figure 2.1.: ATVR 12 months vs. Free Float (USD Million) of Securities of the Select Index (without Credicorp, Southern Copper and Buenaventura)



Source: Lima Stock Exchange

From the figure above, we may conclude that securities such as Volcan and Ferreycorp are strong candidates to be included in Small Cap Indexes, while companies such as Alicorp and Inretail may even reach the Standard Index. In all cases, the free float requirement is met. The pending job is to increase liquidity, given that all four securities are below the required 15% ATVR. More important than the aforementioned, is to see the dynamic of the time series. Figure 2.2 shows that securities that can be candidate to be included in MSCI Indexes show a decreasing trend in their liquidity. Therefore, we reaffirm that our efforts should be focused in reverse the trend of this securities. In the second part of this document, we will address in detail the proposals to improve the current market's situation.

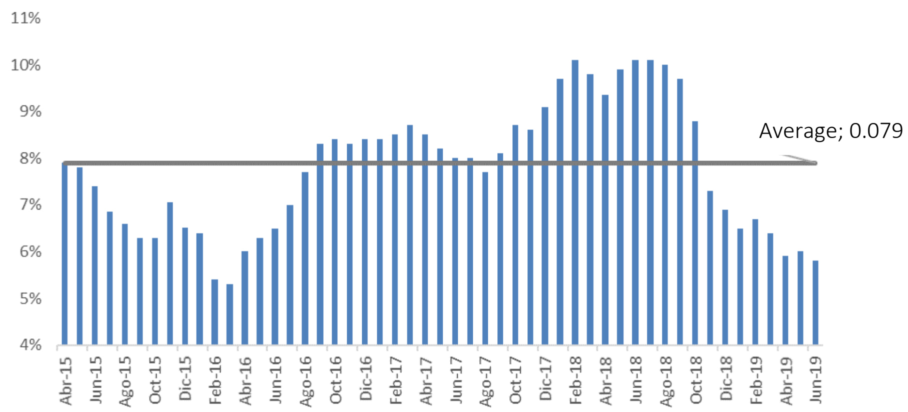
Figure 2.2.: Evolution of the AVTR 12 Months of Securities with Potential of Being Included in MSCI Indexes



Source: Lima Stock Exchange

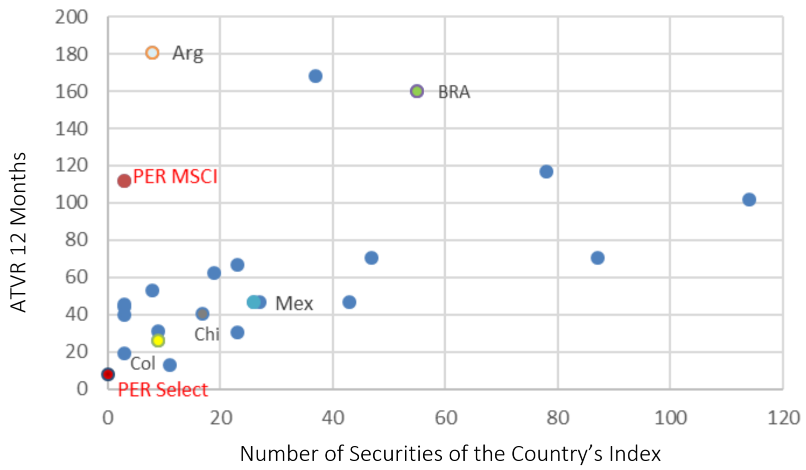
We may notice the same decreasing trend in the median of S&P/BVL Peru Select securities (excluding Credicorp, Buenaventura and Southern Copper). If we compare the median of this index, excluding the three MSCI securities, with the rest of emerging countries, we will be able to see there is a long way to go, despite the fact that the MSCI Peru Index is well positioned (Figure 2.4).

Figure 2.3: Median ATVR 12 Months of Peruvian Securities of the Select (Excluding Securities that belong to MSCI Peru)



Source: Lima Stock Exchange

Figure 2.4. Peru Select (Excluding Securities that belong to MSCI Peru) vs. Emerging Countries



Source: Information provided by the Lima Stock Exchange. China and Turkey are excluded for having extreme numbers that make the comparison of Peru with other countries more difficult to read.

But what would happen if the negative event happens and we become a Frontier Market? Would there be a relevant impact in the Peruvian capital market? Would this impact be transitory or permanent? How much of this event has already been discounted from prices? Would other variables also be impacted? Below, we will review the role model and, from it, we will present the work hypothesis in order to answer these questions. To compare hypothesis, we will use precedents of similar events in other developing countries, and analyze the Peruvian Index after 2015.

Hypothesis Definition and Model

The first step is to understand the transmission mechanism through which the reclassification of a country may impact its stock exchange. In order to do so, we will start from the Gordon traditional model, where the price of an asset is set by future dividends brought to present value by a discount rate equal to the required return (r), assuming a growth rate for dividends (g). In mathematical terms:

$$\boldsymbol{P = \frac{D_0(1+g)}{r-g}} \qquad (1)$$

P: price of the asset
D0: dividend in 0
r: required return
g: dividend growth rate

We will define the asset as the stock exchange of each studied country, which will be represented by the corresponding MSCI Index. In theory, the required return for countries that compose the Emerging Index is given by two factors: the equity risk premium (ERP) and emerging market risk premium (EMRP), found in equation 2. Betas represent the sensitivity of the country to the corresponding premium. If a market is frontier, then an additional premium must be added (Frontier Market Risk Premium, FMRP), equation 3.

$$r = r_f + \beta_1 ERP + \beta_2 EMRP + \varepsilon \qquad \text{Emerging countries} \qquad (2)$$
$$r = r_f + \beta_1 ERP + \beta_2 EMRP + \beta_3 FMRP + \varepsilon \qquad \text{Frontier countries} \qquad (3)$$

r_f: risk-free rate
ERP: Equity risk premium
$EMRP$: Emerging market risk premium
$FMRP$: Frontier market risk premium

As mentioned in Table 1.1 of the previous section, the emerging market risk premium in the MSCI case appears due to a mix of the following factors: (a) the absence of guarantee of economic development sustainability; (b) companies that compose the country's index have lower size and liquidity than companies categorized as developed; (c) it has accessibility criteria to significant markets, though not as high as to be developed (openness of ownership of companies to foreign people, ease of mobility of capital flows, efficiency of operational structure and stability of institutional structure).

The frontier risk premium appears when the size and volumes traded of the companies that compose the index fall below the emerging requirement, or when there are market accessibility restrictions (for example, prohibition of foreign participation on ownership of local companies, restriction of currency convertibility, deficient trading systems and settlement of operations, among others).

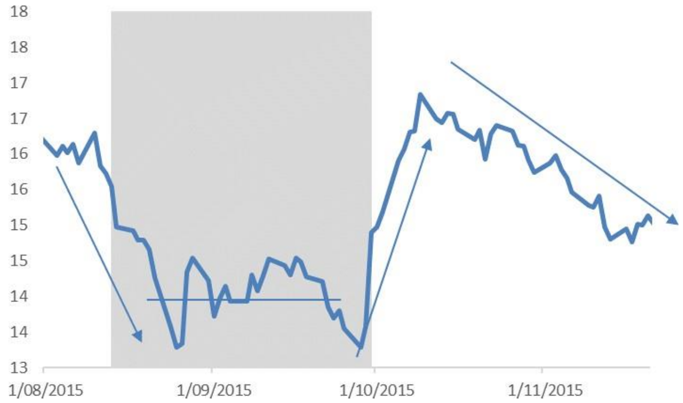
The model suggests that a deterioration of the securities market's situation that leads investors to incorporate a new risk premium would generate an increase in capital cost and, therefore, a reduction in multiples of affected companies (ceteris paribus the growth). To prove this, we just need to divide equation 1 by the earnings per security, and conveniently reorganize to obtain price/earnings ratio:

$$P/E = \frac{b(1+g)}{r-g} \tag{4}$$

P/E: Price-to-Earnings
b: proportion of earnings destined to dividend payments (Do/E)
E: earnings per share
r: required return
g: dividend growth rate

Therefore, adding the frontier risk premium increases the r required return, which increases the denominator on the right side of equation (4), given a growth rate, generating a fall in equilibrium price/earnings ratio. The figure below shows the behavior of the price/earnings multiple of MSCI Peru during 2015. The grey zone covers the period between the consultation and the announcement. You may see how after the consultation the multiple falls to a lower equilibrium and then recovers near to the announcement that Peru would remain as emerging. This allow us to illustrate what we saw in theory, but we have to consider that there are other variables in practice which are also simultaneously affecting the multiple—such as China's devaluation two days before the announcement. Thus, the work will clean the effects of any global or emerging shock of securities, in order to leave only idiosyncratic shocks to Peru.

Figure 2.5.: Price/Earnings Multiple of MSCI Peru between Consultation and Announcement in 2015



Source: Our elaboration. We just take the period of the first consultation and announcement of the result in 2015. In 2016, the elections period distorted the results.

Long-term Hypothesis

This model shows us that, if a country is Emerging and its classification is downgraded to Frontier, then an additional premium appears. This means that the return required to invest in such country is higher, given that now there is a greater risk to compensate. As a consequence, following equations (1) and (4), price and multiples have to be lower than before[14]. Therefore, there would be a permanent change in prices. The opposite would happen if there was an upgrade of classification, even though the symmetry of effects is not clear a priori, as we saw when reviewing literature. Nevertheless, agents may foresee this event, due to the fact that information is public, and that there is no permanent effect. Therefore, the following are hypothesis to be reviewed:

- 0 Long-term Hypothesis. Efficient Markets: No Change in Prices

[14] In the model, for explanation purposes, we assume that growth (g) is not affected; however, in practice, capital cost as well as cost, may vary.

Prices have already incorporated all the information about the status downgrade; therefore, there should not be a permanent change at prices level. After all, as mentioned by Terence C. Burnham, Gakidis and Wurgler (2017), the reclassification decision is taken by a committee which is not made up by investors, that does not try to assess investment merits, and that uses public information. Therefore, the reclassification would be just a formalization as a consequence of structural changes in the securities market.

- **1 Long-term hypothesis. Negative Long-term Effect (New Price Higher than Initial Price). "Wake-up Effect"**

  While the market's structural changes are evident, given the fact that information is public, the sentence of an index's supplier—as important as MSCI—may be a validating fact for different funds to "wake-up" and generate changes in their portfolios. This is particularly important in the last years, given the growing importance of passive funds (See Hung-Ling Chen, Cheng-Yi Shiu, and Hui-Shan Wei (2019)). Furthermore, in an uncertain environment, some agents may not be convinced that there will be a change in indexes despite structural changes; thus, they do not put themselves completely at that scenario.

It is important to note that, in the short-term, there will be an overreaction as a result of changes in net demand. If funds are mostly passive, this overreaction will happen around execution date; while, if active funds prevail, it will be around the announcement day.

In the following section, we will test these hypotheses based on the study of events, considering past cases of changes in classification of other developing securities market, as well as events that happened in Peru since 2015.

Methodology

The analysis is based on the methodology of study of events. In this report, the event to be studied is the exclusion or inclusion of a country in the MSCI EM Index, in order to infer possible consequences of Peru being reclassified from Emerging to Frontier. The event is defined in three dates: consultation, announcement and effective date. In each of them, we assess whether there are surprises from 5 days before (except at consultation) to 5 days after[15]. Incorporating the consultation is something different from what we find in literature, because our hypothesis aims to identify whether there is any "market wake-up" effect that incorporates the risk of changing status. That is to say, if fundamentals suggest a reclassification, do investors foresee or just evaluate the situation when MSCI makes the consultation and "wakes them up"? It is clear that it is hard to incorporate the 100% effect of an event in an uncertain environment, but if we are dealing with investors with aversion to risk, a percentage of it has to be incorporated. This will be a key question to analyze in the Peruvian case.

As per literature of event, we will follow these three steps:

[15] In technical terms, the literature of events seeks evaluating whether the behavior of an asset around the event's date is irregular. That is to say, it tests whether information made public is quickly and totally incorporated in prices. On that regard, it tests the semi-strong efficiency hypothesis. If markets are efficient, irregular returns (RA for its acronym in Spanish) should not be significantly different from zero.

- First, we specify the process that generates the return for a specific country, using equations (2) and (3)[16]. Then, with these equations and using data for a one-year estimation window, we find the parameters of the model, in other words, the sensitivity of the country to each risk factor.
- In the second step, we estimate irregular returns (RA) in the window of the event (consultation, announcement and effective), which is nothing more than the daily return of the index, less the suggested return for factors: $RA = r_{it} - E[r_{it}]$ that, for emerging and frontier countries, would be given by equations (5) and (6), respectively:

$$RA_{EM} = \; - [r_{it}] = r - [r_f + \beta_1 ERP + \beta_2 EMRP + \varepsilon] \qquad (5)$$
$$RA_{FR} = \; - [r_{it}] = r - [r_f + \beta_1 ERP + \beta_2 EMRP + \beta_3 FMRP + \varepsilon] \qquad (6)$$

- In the third step, we will analyze the evolution of irregular returns accumulated, assessing how they react between key dates and if they dilute in time.

Results: International Experience

In this section, we will analyze the evidence of the effects of reclassification in Emerging and Frontier countries. In Table 3.1, we may see all reclassification events of Emerging countries, since 2006[17]. In such table, there are three key dates: consultation, announcement and effective. It shows from where and to where the country changes and it presents a summary of the causes. It is important to remark that we have included the event of Peru, even though it did not spark off a classification downgrade, in order to put it in context with all other under-developed countries to be studied.

Table 3.1. Total Sample of MSCI Reclassification

Consultation	Announcement	Effective	Market	Former Index	New Index	Consultation Summary	Announcement Summary
Panel A. Downgrades							
15-Mar-2006	25-Apr-2006	31-May-06	Venezuela	MSCI EM	Standalone	Low liquidity, investment restriction, minimum weight in MSCI EM	Low liquidity, investment restriction
23-Jan-2008	18-June-2008	30-Nov-08	Jordan	MSCI EM	MSCI Frontier	Components below minimum size and liquidity requirements	Components below minimum size and liquidity requirements
There was not any	10-Dec-2008	31-Dec-08	Pakistan	MSCI EM	Standalone	--	Impairment of investment conditions
22-Jan-2009	18-Feb-2009	31-May-09	Argentina	MSCI EM	MSCI Frontier	Restrictions to foreign inflows and outflows	Restrictions to foreign inflows and outflows
10-Nov-2010	10-Feb-2011	11-May-11	Trinidad and Tobago	MSCI Frontier	Standalone	Liquidity impairment	Liquidity impairment
20-June-2012	11-June-2013	26-Nov-13	Morocco	MSCI EM	MSCI Frontier	Liquidity impairment, liquidity and size aligned with FM	Liquidity impairment, liquidity and size aligned with FM
20-June-2012	11-June-2013	26-Nov-13	Greece	MSCI DM	MSCI EM	Size requirement not aligned with DM, reduced accessibility to market	Reduced accessibility to market
21-Apr-2015	13-Aug-2015	31-Aug-15	Ukraine	MSCI Frontier	Standalone	Restrictions to foreign outflows	Restrictions to foreign outflows
13-Aug-2015	29-Set-2015	There was not any	Peru	MSCI EM	MSCI Frontier	Low liquidity and size, just three securities meet criterion.	Three securities meet criterion.
13-May-2016	11-Aug-2016	31-Aug-16	Bulgaria	MSCI Frontier	Standalone	Impairment of liquidity and size	Impairment of liquidity and size
Panel B. Upgrades							
18-Feb-2009	23-Mar-2009	29-May-09	Pakistan	Standalone	MSCI Frontier	Improvement in accessibility to stock exchange market, meet FM minimum criteria	Improve in investment conditions, does not meet EM criteria
There was not any	13-May-2009	29-May-09	Trinidad and Tobago	Standalone	MSCI Frontier	--	Meets liquidity requirements
22-July-2008	15-June-2009	11-May-10	Israel	MSCI EM	MSCI DM	Meets all requirements for DM	Meets all requirements for DM
There was not any	10-Feb-2010	11-May-10	Bangladesh	Standalone	MSCI Frontier	--	Reached minimum requirement of securities that meet criterion

[16] For estimation purposes, we use regression $r_i = \alpha_i + \beta_1 r_M + \beta_2 EMRP + \varepsilon$, where r_M is the market return S&P500, and $(1 - \beta_1)$. The same is done for the Frontier case.
[17] Pursuant to official documents of consultation and announcement of final decision issued by MSCI and available at www.msci.com.

20-June-2012	11-June-2013	30-May-14	Qatar	MSCI Frontier	MSCI EM	Potential operational improvements, limited foreign investability	Operational improvements, limited foreign investability
20-June-2012	11-June-2013	30-May-14	United Arab Emirates	MSCI Frontier	MSCI EM	Meets accessibility requirements, potential operational improvements	Meets accessibility requirements, operational improvements
9-June-2015	14-June-2016	30-May-17	Pakistan	MSCI Frontier	MSCI EM	Improvement in accessibility, size and liquidity	Improvement in accessibility, size and liquidity
12-May-2016	30-Nov-2016	1-Dec-16	WAEMU*	Standalone	MSCI Frontier	Meets minimum liquidity and size requirements	Meets minimum liquidity and size requirements
17-May-2017	20-June-2017	31-May-18	China A-shares	Standalone	MSCI EM	More accessibility to market	More accessibility to market
14-June-2016	20-June-2018	28-May-19	Argentina	MSCI Frontier	MSCI EM	Improvements in accessibility to market	Improvements in accessibility to market
20-June-2017	20-June-2018	28-May-19	Saudi Arabia	Standalone	MSCI EM	Operational improvements, more accessibility	Operational improvements, more accessibility

*West African Economic and Monetary Union: Benin, Burkina, Faso, Ivory Coast, Mali, Niger, Guinea-Bissau, Senegal and Togo
https://www.msci.com/documents/10199/239004/Research-Insight-The-Future-of-Emerging-Markets/13e0765f-9506-4011-2d6d-704346c1cc30
Source: MSCI www.msci.com

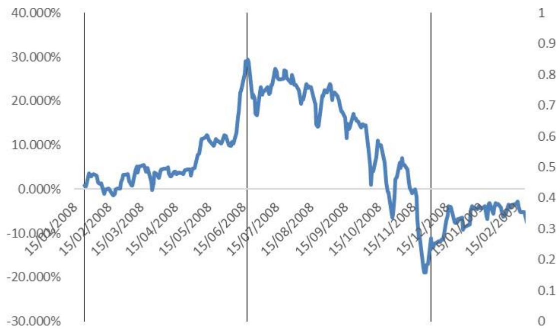
From countries shown in the table above, we will just consider those that have transited from MSCI Emerging and Frontier with enough information in order to make the evaluation, given that these are the most relevant for the Peruvian case. Countries that downgrade from Emerging to Frontier are Morocco 2013, Argentina 2009, Pakistan 2008 and Jordan 2008. From those four, Pakistan was highlighted for our purposes due to the fact that its sudden elimination from Emerging countries was linked to the imposition of a "floor rule", which totally distorted its valuation; therefore, it separated its stochastic process from risk factors processes and, besides, it is not related to reasons why Peru could change status. Similarly, Morocco will not either be taken into consideration, given that its trend to liquidity reduction since 2008, dissociated it from its risk factors, remaining only linked to its idiosyncratic factors. Details of both countries may be found in Appendix 1. With this, we stay with the cases of Argentina 2009 and Jordan 2008. It is important to note that, for the consistency of the evaluation process, we will subsequently evaluate the four countries that upgraded: Argentina 2019, Pakistan 2017, United Arab Emirates 2014 and Qatar 2014. Details of this analysis may also be found in Appendix 1.

Jordan – Downgrade

In June 2008, MSCI announces[18] (consultation had been in January) that Jordan did not meet the criteria of having three components with the required size and liquidity to be an Emerging Market.

The reaction of accumulated returns may be seen in the Jordan Figure, where, contrary to expected, accumulated returns grow nearly 30% between consultation and announcement date. This is because the market significantly incorporated in prices the possibility that Jordan became Frontier. As shown in the Jordan Table, as of the consultation, the sensitivity to Frontier Risk Premium was of 0.79 and statistically significant. Then, in the period between this date and the announcement, the parameter goes down to 0.44, even though it remains statistically significant. This suggests that the market was readjusting its prices, which might be associated to a reduction of the probability of being downgraded to Frontier.

Jordan Figure: Accumulated Irregular Returns



Note: The three vertical lines are the consultation, announcement and effective dates.

Source: Our elaboration.

Jordan Table: Sensitivity to Frontier Risk Premium

Sensitivity	Consultation	Announcement	Effective
Frontier	0.79	0.44	0.52
t	10.4	4.6	6.6

Source: Our elaboration

After the announcement confirmed the reduction of Jordan's status to Frontier, the market violently reacts and before the Lehman Brothers crisis, it had already lost all what it had accumulated up to the announcement. As of the execution date, the cumulative abnormal return since the consultation was of around -12%, a number that would turn into -4.3% in 60 days, as we can see in the table above.

[18] https://www.msci.com/documents/1296102/1333012/MSCI+announcement+-+Jun+18+2008.pdf/6a3ee3b9-eb96-46bb-ad3f-537064bfc7f3

Argentina-Downgrade

In January 2009, MSCI issued a consultation in which affirmed that Argentina had imposed restrictions for the inflow and outflow of foreign capital. This affects accessibility criteria and is not consistent with its Emerging status. Such change was a surprise. At the moment of the consultation, the Argentinean Index did not discount any Frontier Premium.

Between the consultation and the announcement, cumulative abnormal return dropped -6.2%. Between the announcement and the effective date, the index drops once again, a slightly over -20%, and generates an accumulated -25% as of that date.

Thereon, there is a recovery of cumulative abnormal return, which would reach consultation levels three months later; and announcement level, four months later. It is important to note that, as we may see in the Argentina Downgrade Figure, there were also other idiosyncratic events, such as the improvement of the country risk, which allowed a quick recovery of abnormal return.

Argentina Downgrade Figure: Cumulative abnormal return

Note: The three vertical lines are the consultation, announcement and effective dates.
Source: Our elaboration.

Lessons from the total sample

By reviewing what happened in the countries we studied, we may infer the following:

- According to intuition and literature, there is a negative (positive) effect in a downgrade (upgrade). These effects are very strong in the short-term, and they may have two digits. However, as time passes, this impact dilutes, remaining a much lower long-term effect. Particularly, in cases such as Jordan and Argentina, which are relevant in this case, effects were between -4% and 0%, reaching this numbers between 2 and 4 months after the effective date.
- The scale of the impact mostly depends on how much of the event has already been incorporated in the securities' prices. The review of experiences shows that, the more surprising the shock is, the greater the impact in the short and long-term. For example, in 2008, when Pakistan had good volumes traded, decided to surprisingly impose a floor for

securities' prices, which triggered an immediate downgrade of MSCI which led into a 50% index drop, between announcement and effective date. On the other side, the excessive negativity about Jordan in 2008 (perhaps discounting more than Frontier), lead to the fact that, days after the consultation, the cumulative abnormal return were positive. Thus, the importance of trying to understand how much of a shock may be discounted in prices when evaluating the impact of a reclassification.

- In the same context, it is important to analyze consultations as well as to understand the complete process of incorporation of the reclassification event in the prices. If we just consider the announcement, this might lead us to an error since the market may be acting in advance to the event (rightly or wrongly).
- The development of the securities loan market and short sales, as well as the DVP strengthening, is named in almost every MSCI document about countries that carried it out as a positive point for reclassification. Additionally, the effort of authorities to improve the situation is also important.
- In Emerging and Frontier countries, each country has its own dynamic and a very high charge of idiosyncratic shocks that contaminate the analysis. Therefore, we must understand in each of them what is beyond the process, rather than forcing them to fit or reduce them into a fixed analysis period of the short and long-term effect.
- Finally, beyond the sample of countries that are or were part of the Emerging Index, there is a case of countries that, when "truly" integrated, have been benefited by an improvement in their status by the MSCI. The WAEMU (West African Economic and Monetary Union) is a group of countries made up by Benin, Burkina Faso, Ivory Coast, Guinea-Bissau, Mali, Niger, Senegal and Togo that aim for a regional integration that includes the unification of tariffs and markets. In 2016, MSCI reclassified it as a group, from Standalone to Frontier.

Results: Peru 2015 and Onwards

Effects of the 2015 Peru Consultation on Reclassification and Current Situation

Before the consultation, the investors discounted in Peru just the securities' risk premium and emerging risk. The market did not see the Frontier Risk as something near, despite the fact that public information about the securities' market fundamentals showed a continuous impairment of liquidity as we saw in previous sections. This may be verified in Table 4.1, where Peruvian return sensitivity parameters to global and emerging securities' risk were significant, while the frontier risk factor was not. It is important to note that these results do not change if we consider the announcement date as reference date, rather than the consultation date.

Table 4.1. Sensitivity of the Peruvian Index to Consultation Factors

Consultation	Frontier	Emerging	S&P	Constant
Beta	-0.004	0.366	1.055	-0.001
Error Est.	0.107	0.114	0.117	0.001
R2/ Err.Reg	0.331	0.010		
Statistical s	0.089	3.268	8.796	
	Not Significant	Important	Important	

Source: Our elaboration

Note: The regression comprises one year before the consultation date (August 2015).

The fact that the market did not discount the possibility of a change of the emerging status in Peru may be related to the discussion in local and international financial media and economic which was focused mostly in good economic and financial results of the country, in comparison to the rest of the region, while the debt market was more and more one of the most attractive of the region, even in domestic currency. Notwithstanding, the reality of the securities market was different. Indications followed by MSCI showed signs of impairment: volumes traded measured by ATVR indication was dropping and positioned below the others of the region, while the universe of securities that meet the requirements of 15% ATVR, required from emerging countries, had passed from over 20% in 2012, to 10% in 2015 (see Figures 3.1 and 3.2).

Figure 3.1: ATVR to 12 Months

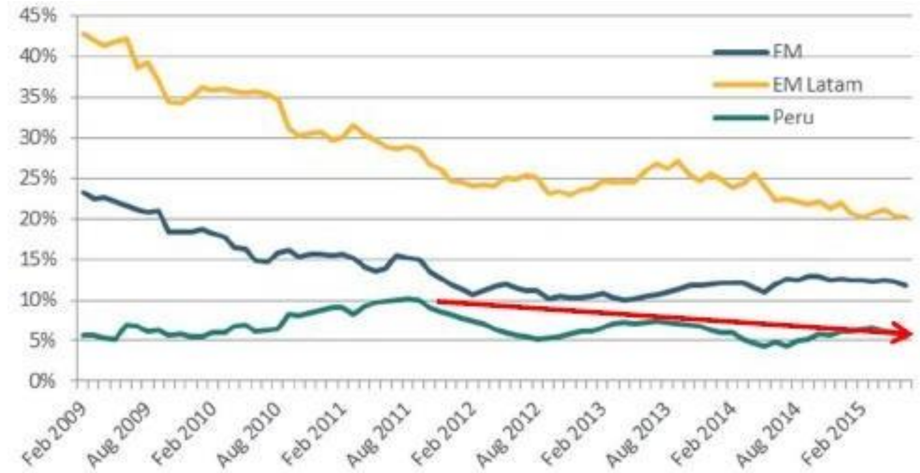
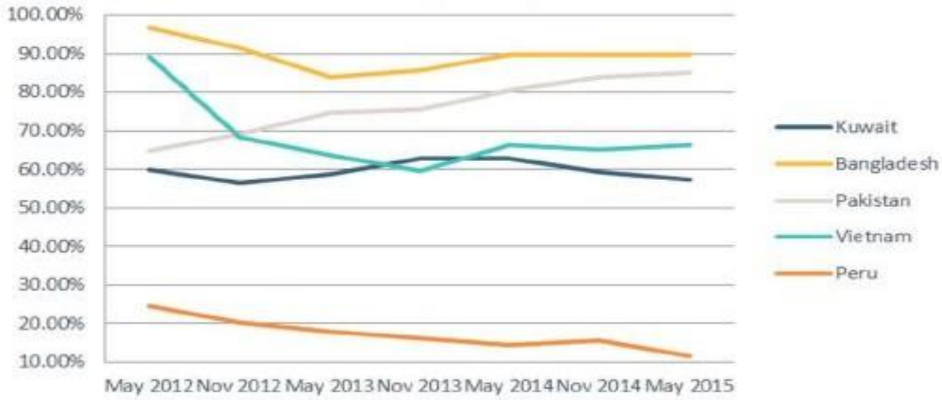


Figure 3.2: % of Securities that Meet the Emerging Requirement (ATVR=15%)



Source: April 2016 Consultation
https://www.msci.com/documents/1296102/2907491/Consultation+on+a+Market+Reclassification+Proposal+for+the+MSCI+Peru+Indexes/691d9a13-48cb-43f4-993b-e2b9f381a248

There was a disconnection between risks that the market discounted from the financing cost of Peruvian companies and the reality that MSCI had been following with concern. When, in August 14, 2015, MSCI consulted the investors about the possibility of passing Peru from Emerging to Frontier, the “wake-up effect” appears and the market reacts violently. In Figure 3.3 below, we may see how abnormal returns start to drop since the consultation to completely recover before the announcement. For the announcement and consultation in 2016, it is hard to make conclusions for months after February 2016 since there was a positive idiosyncratic shock to Peru in relation to that year’s elections, and the announcement that Southern Copper kept in the Peruvian index was before the announcement which anticipated a positive result.

Figure 3.3.: Irregular Returns in Peru

Source: Our elaboration

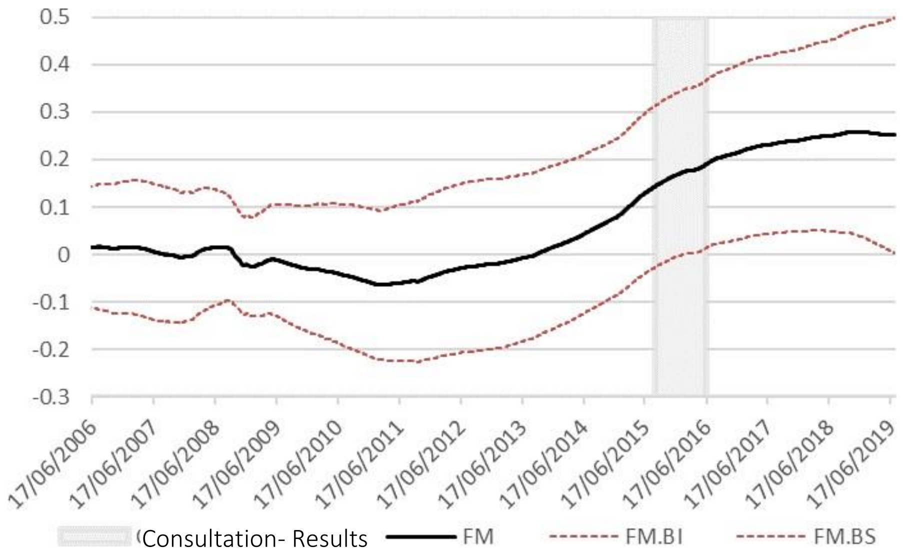
Different from emerging countries, which had a negative result after the consultation; Peru obtained a favorable result and remained in the Emerging Index. However, the “wake-up effect” was already activated. In other words, even if MSCI left Peru as an Emerging Country, the conditions of the securities market’s fundamentals that lead to the consultation remained vulnerable to reversions and there was an active threat that Southern Copper could pass to the USA Index, which would spark off the automatic pass of Peru to Frontier at any moment. Therefore, it is important to ask the following question: if there was a negative event and Peru passed to Frontier, would there be a permanent effect in the price of securities? In order to provide an answer, we must approximate to a measurement of how much the market has interiorized that Peru may be downgraded to Frontier Market. Thus, as in other experiences, the more interiorized is the possibility of becoming Frontier in the price, the lower the permanent effect on prices. So, we would just be left with the short-term flows’ effects. With that purpose, we will estimate, through the Kalman[19] filter, the dynamics of the sensitivity to Frontier risk factors after the consultation to date, as a way to approach to the pricing of this risk by investors.

Dynamics of the MSCI Peru Index sensitivity to the Frontier factor

Figure 3.4 shows the “wake-up effect” of the Frontier Risk in Peru. The thick black line is the sensitivity parameter dynamic of the MSCI Peru index to the premium for being a frontier, extracted using the Kalman filter. The red stitches are confidence bands at 95%. Thus, if any of the bands touches zero, then we could not reject the hypothesis that the frontier factor sensitivity is zero. The sensitivity dynamics of the frontier factor shows us that it was growing very slow before the consultation in 2015, but in a magnitude that made it statistically indistinguishable from zero. Therefore, the consultation was surprising and produced a large impact on Peruvian actions (Figure 3.3.). Then, between the dates of consultation and announcement, the frontier factor becomes significant. The important thing to note is that the analysis reveals that, despite the fact that MSCI did not change the status of Peru, the investors have incorporated in part the fact that the fundamentals of the local stock market are far from being optimal, mainly due to a low level of liquidity. Therefore, beyond what an index provider can announce, the market is more aware of the stock market situation.

[19] Kalman Filter (1960) has the advantage of simultaneously estimating parameters of the equation of required return, and the individual dynamics of the corresponding parameters to each of its factors, through maximum authenticity

Figure 3.4. Peru's sensitivity to the Frontier factor: the "wake-up effect"

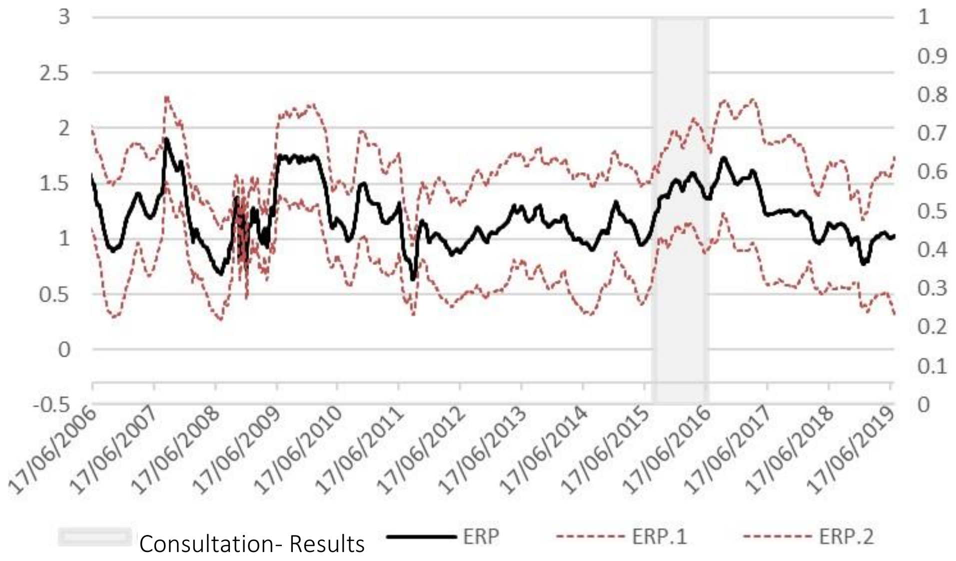


Source: Our elaboration
Note: the gray area covers from the first consultation in 2015 until the second announcement in 2016.

Dynamics of the MSCI Peru Index sensitivity to the Equity Risk Premium Factor

Regarding the sensitivity to the global equity factor (Equity Risk Premium, ERP), this has been reduced since the consultation's result was announced, returning the levels prior to that event.

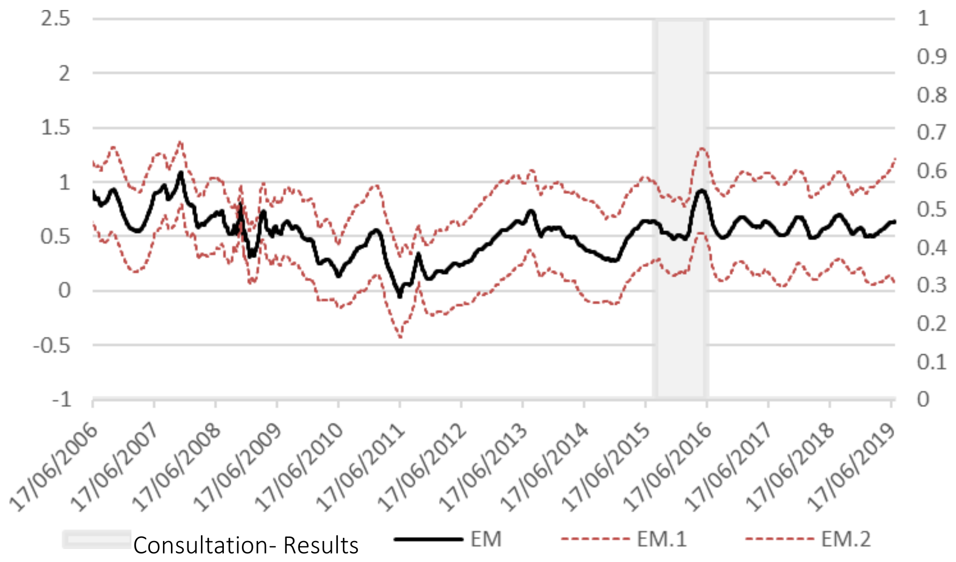
Figure 3.5. Peru's sensitivity to the Equity Risk premium factor



Dynamics of the MSCI Peru Index sensitivity to the emerging factor

Regarding the sensitivity to emerging factor, there are no significant changes, which confirms the fact that only the extra factor produced by the Frontier factor is being incorporated.

Figure 3.6. Peru's sensitivity to Emerging factor



However, Credicorp is over-represented in the MSCI EM index, which makes the results to be dominated by this stock. The situation is repeated with Southern Copper, a company that has a parameter of 0.24 regarding frontier risk[20], although significant only at 10%. This can be explained by the conjecture that a possible change in the status of Peru may represent a change from Southern to the US index.

Dynamics of the sensitivity of potential candidates to belong to MSCI Indexes

The shares that belong to the emerging index may show a different dynamic from the rest of the local market shares due to the "radar effect" (Merton 1987), which suggests that investors are more attracted when the shares are more visible. This would make them more connected to global risk factors, giving a further explanation about their return's behavior. On the other hand, the return of a distant share of foreign investors is usually more dominated by idiosyncratic factors than by global factors. This is corroborated in practice; risk factors explain better shares like Credicorp than a share like Alicorp.

As for the candidates to participate in the emerging indexes, Volcan, Ferreycorp and Alicorp show sensitivity to the frontier factor, although with a significance of 10%. However, Inretail does not show sensitivity to the frontier risk factor. The smaller the incorporation of the frontier risk in a share; it is expected a higher impact of a reclassification in the medium term. Nevertheless, this could be partially offset by the demand for investment funds that the MSCI Frontier Index have as a benchmark, as these shares do meet the requirements to be part of this index.

[20] A sample of two years is taken into consideration.

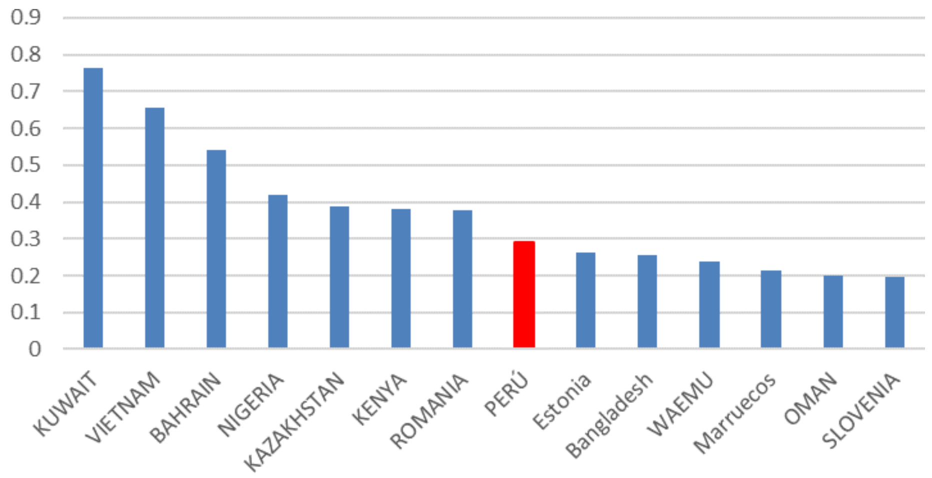
Table 4.2. Sensitivity of local securities with potential to be substitute in the MSCI Peru to Frontier Risk

	Beta Frontier	Significance
Alicorp	0.18	Significant to 10%
FERRE	0.24	Significant to 10%
INRETAIL	0.04	Not significant
VOLCAN	0.46	Significant to 10%

How Much More May a Higher Probability of Becoming Frontier Affect MSCI Peru?

This is a difficult question to answer to the extent that it is not easy to determine the equilibrium sensitivity of each factor; however, it is possible to find a range over which it can be located according to comparable countries. For this, sensitivities to the frontier factor of the countries belonging to the MSCI Frontier Market are estimated for the last two years (see Figure 4). On average, the sensitivity is 0.37 and the median is 0.33, values are slightly higher than the current parameter of Peru (0.29). The upper figure could be around 0.6 corresponding to Vietnam. Kuwait is set aside due to its weight in the index is close to one third and far from the second highest[21]. In addition, Kuwait is close to becoming emerging once certain requirements asked by MSCI[22] have been solved.

Figure 4. Frontier Premium Sensitivity: Peru vs. Frontier countries.



Note: the sample goes from 2008-2009, and only considers countries with significant parameters.

[21] See https://www.msci.com/documents/10199/f9354b32-04ac-4c7e-b76e-460848afe026

[22] See https://www.msci.com/documents/10199/238444/RESULTS_OF_MSCI_2019_ANNUAL_MARKET_CLASSIFICATION_REVIEW.pdf/f134c97c-73da-71c7-4b3c-d1f637c3eaee

Impact Simulation in Multiples of a Higher Premium Incorporation for Frontier Risk

To evaluate the potential impact of a greater (or lesser) incorporation of the border risk premium, we will start from the justified Price-to-Earnings Ratio (equilibrium) that we show in equation (4), but for convenience we repeat below:

$$\boldsymbol{P/E} = \frac{\boldsymbol{b(1+g)}}{\boldsymbol{r-g}} \tag{4}$$

P/E: price-to-Earnings
b: proportion of earnings destined to dividend payments (Do/E)
E: earnings per share
r: required return
g: dividend growth rate

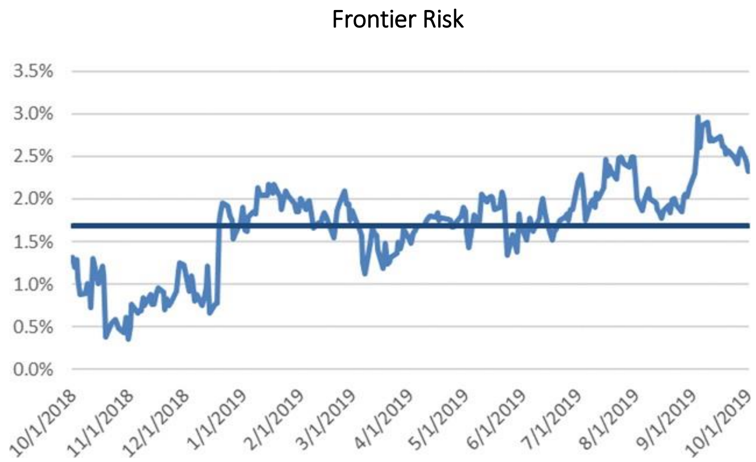
This theoretical model of Gordon has the advantage of its simplicity in order to have a movement approximation of the price-to earnings multiple (P / E) before a change in the required rate of return (r). Thus, if greater sensitivity is added to the frontier premium, then addend + $\beta 3FMRP$ would increase, causing a rise in the required return:

$$r = r_f + \beta_1 ERP + \beta_2 EMRP + \beta_3 FMRP + \varepsilon$$

Finally, this rise in the required return would produce a drop in the multiple of equation (4), if the other parameters are kept constant.

For the initial required return of MSCI Peru, we assume 9.3%, which represents a current beta for the frontier risk premium of only 0.25, in line with what was discussed in the previous regression[23]. On the other hand, we assume a growth (g) close to 4% (last year average). To perform the simulation exercise, the expected frontier risk premium (FMRP) is represented as the last year's average of the earning yield differential of emerging countries and the median of frontier countries described in Figure 4, resulting in a premium of 1.7%.

Figure 4.1. Frontier Risk Premium



[23] In addition, sensitivities of 1.0555 for global equity risk and 0.366 for the emerging premium are assumed, according to the regression explained above.

While the Gordon model used has the advantage of simplicity, it also has the disadvantage of the sensitivity of the results to the parameters. Therefore, the Table 4.3 will show the change in the multiple of the MSCI Peru before different levels of frontier premium and frontier risk sensitivity (beta). The baseline scenario (in bold) is the frontier premium of 1.7%.

Table 4.3. Changes in the price-to earnings multiple (PER) of the MSCI Peru Index subject to different levels of betas and frontier premium.

Scenario	Beta (t+1)	Frontier Premium					
		0.5%	1.0%	**1.7%**	2.0%	2.5%	3.0%
Frontier risk is eliminated (optimistic)	0.00	2.2%	4.5%	**7.9%**	9.4%	12.1%	14.9%
Remains the same as today (probability)	0.25	0.0%	0.0%	**0.0%**	0.0%	0.0%	0.0%
Increases 0.25 (probability)	0.50	-2.1%	-4.1%	**-6.7%**	-7.9%	-9.6%	-11.3%
Increases 0.45 (extreme)	0.70	-3.7%	-7.1%	**-11.5%**	-13.3%	-16.0%	-18.6%

Table 4.3 shows the optimistic scenario, if the frontier risk is eliminated (frontier beta=0) and the risk premium was 1.7%, then we could have a recovery of the MSCI Peru multiple of 7.9%. On the other hand, if the index begins to incorporate more the frontier risk and the sensitivity goes from 0.25 to 0.5, assuming a premium of 1.7%, then the model suggests a drop of -6.7%. These effects could be greater (or less) if the estimated premium is greater (less) than 1.7% of the baseline scenario.

Impact on Flows

In the short term, flows can have a relevant effect on prices, when an asset leaves or enters an index. Due to an absence of access to flow data, we have tried to make a very thick estimation that we detail below. Peru' weight in the emerging MSCI index is 0.43% and it is estimated that there are USD 438 billion that passively follow it, so the outflow of flows would be approximately USD 1.9 billion in this type of funds. This does not include the impact of active funds (which have more than USD 1 trillion of assets under management) that is more difficult to measure because: (1) their positions are private; (2) they may not have considered Peru due to its small size; or (3) if they have it, they can decide not to sell it given their conviction in the companies of the country. As for the inflows in case of a Frontier downgrade, presumably these are not much significant if we consider that Peru would become only 11.56% (if we consider the last inquiry) of an index that is only about 2% of the Emergent. That is, comparing neutral weights in both indexes, a change from Emergent to Frontier would imply a net exit.

As for companies, Credicorp has the highest weight in the index: 0.3%. This would lead to USD 1.27 billion outflows of passive funds. Southern Copper's outflow would be USD 252 million, unless it is listed on the US index. Finally, Buenaventura would have an outflow of USD 274 million. As for active funds, there is no public information about their portfolio's distribution of shares within Peru.

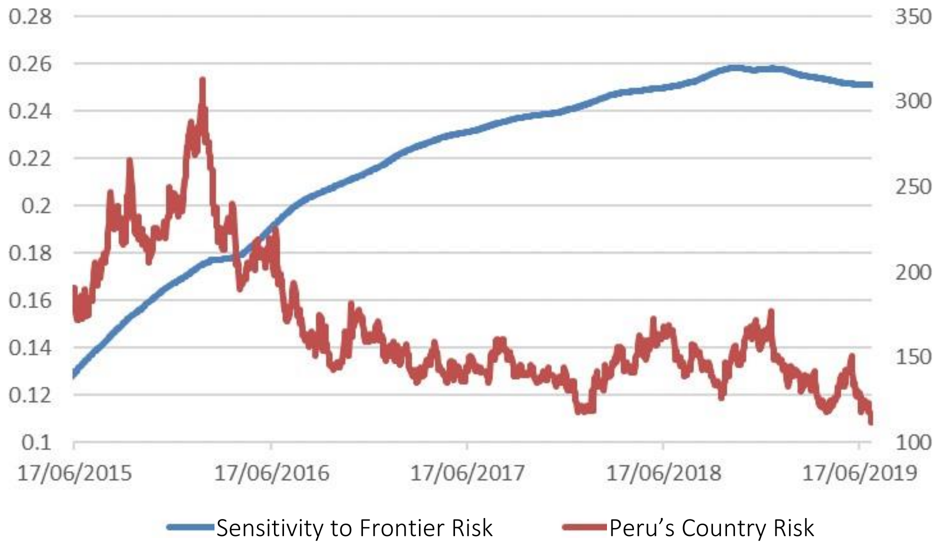
Beyond Shares' multiples: Effects on macroeconomic variables

From the previous sections, we can deduce that a downgrade from Emerging to Frontier implies adding an additional premium to the corporate capital cost, which would lead them to a depreciation, ending up trading at a lower multiple. We have seen that part of this effect could already have been partially incorporated into liquid stocks and more linked to global markets such as Credicorp, although much less or nothing to shares that are governed more by idiosyncratic factors such as Inretail.

Additional to the devaluation of corporate multiples, it is important to assess whether there could be an impact on other macroeconomic relevant variables as country risk or exchange rate.

Figure 5.1. reveals that while the MSCI Peru index has incorporated the Frontier factor over time, that is to say, sensitivity has been rising, the country risk on the contrary has continued a downward trend, even controlling the Latam risk factor. It is true that there are other factors that favor the compression of spreads such as the drop-in international interest rates, however, these factors also benefit developing stock markets.

Figure 5.1. Sensitivity to Frontier Risk Premium vs. Peru Country Risk



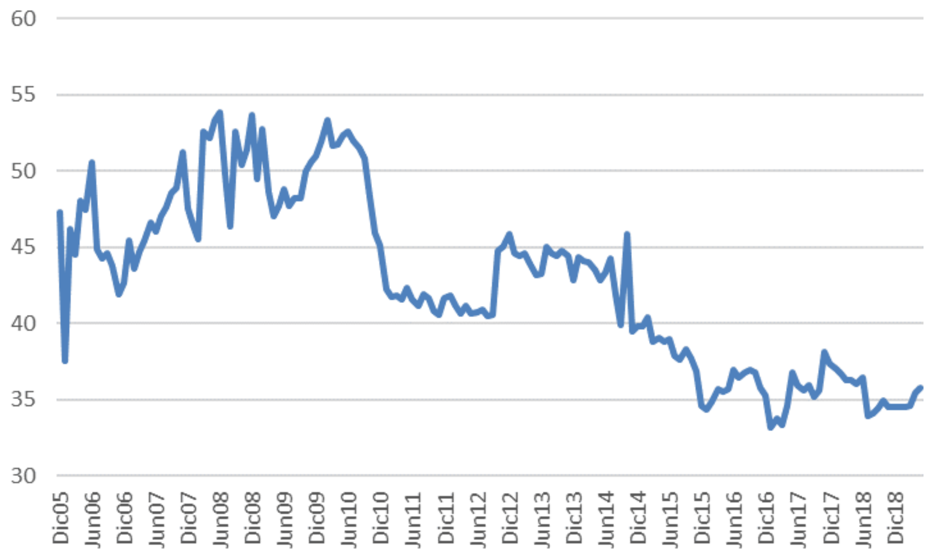
Source: Bloomberg data. Our elaboration

This result reflects the reasons why MSCI would continue keeping Peru as emerging or if it decides to change it to frontier. These reasons are not associated with macroeconomic fundamentals of the country, but with the capital market structure that does not allow raising liquidity levels. On the other hand, the country risk is directly associated with the macroeconomic fundamentals of the country, including its potential growth, fiscal and price stability, solvency, strength of financial and credit markets, and respect for investor rights. Furthermore, although flows usually move in unison when emerging risk aversion increases or decreases, the fixed-income funds portfolio managers are not the same as equities, so their decisions before “non systemic” events are independent.

Regarding exchange rate, the risk is that a change in the country status will trigger the sale of foreign investors whose benchmark is the Peruvian index or that they can only invest in countries with a minimum emerging level. In practice, it is difficult to know the exact number of foreign outflows due to limited access to holdings per company; However, Figure 5.2. shows that the percentage participation of non-residents added in equities has been reduced since the consultation date in 2015, being close to the minimum since the source used was registered. The exchange rate, between that period and the current one, has shown a significantly lower volatility than other currencies in the region, and the level of the exchange rate is very close to that existing in the consultation window. The episodes of volatility within this period have been marked by exogenous events to the stock market, whether they are from external or domestic sources.

We can conjecture that passive funds normally follow the emerging index that usually invests in Credicorp, Buenaventura and Southern Copper, which are mostly listed on the US Stock Exchange; and, as we saw before, they could already have discounted part of the effect. Later, in the "Impact on Flows" section we estimate the output of MSCI Peru.

Figure 5.2. Percentage participation of non-residents – Equity (percentage)



Source: Central Reserve Bank of Peru

Beyond Shares' Multiples: Effects on microeconomic variables

Another possible effect, which due to the characteristics of low penetration of shareholdings would be more microeconomic than macroeconomic in the Peruvian case, is in people's wealth and companies that invest in local shares directly or indirectly through mutual funds, investment and of pensions. Within this spectrum of agents, the most important are the AFPs since they control on average 60% of the free float of the main local companies. By maintaining the pension system large positions for the level of local liquidity, a change in status could devalue the component of Peruvian shares that they hold without these agents being able to download their portfolios positions significantly[24]. According to information from the BCRP of the S /. 165,911 million managed by pension funds, almost S /. 19 billion (11%) are invested in shares of local companies.

Table 5.1.AFPs Multifund Value

Fund Value (Millions of S/.)	165,911	**100%**
Local investment	87,340	53%
Local shares	18,965	11%
Others	68,375	41%
Foreign investment	78,572	47%

Source: BCRP Weekly Note No. 26 (August 22, 2019). Table 61.

[24] Moreover, if the AFPs try to liquidate their local shares or the market perceives it that way, the short-term impact of the change in status could be much greater due to a strong selling pressure.

PART II. Problems in the Peruvian Market Structure and Opportunities for improvement

In theory, the role of financial and capital markets in the economy is to facilitate capital mobilization and risk transfer. Empirical literature suggests that fulfilling this role adequately easies capital accumulation, allows improvements in productivity and efficient allocation of resources, as well as greater competition and innovation. However, for financial markets, particularly stock exchanges, to comply with the role of mobilizing surplus savings to companies with expansion plans to be financed, it is necessary to meet three criteria. First, to integrate investors with different time horizons, which means having a very liquid secondary market that allows the stock to be sold when the specific investment horizon is met at a low transaction cost. Second, we have transparency, produced after the demand of the stock exchanges to companies to open their information to investors. This reduces the costs that these agents would incur to find information, as well as reduces the problems of information asymmetry among those who manage the company, local investors and foreigners. Third, there is the protection of investors given that a stock market, as well as the infrastructure and the regulation that surrounds it, enable us to face or mitigate operational risks and compliance with agreements. Finally, the proper functioning of the market also depends on the incentive structure that allows minimizing the existence of participants excessively focused on the very short term, speculation or herd behavior, as they affect the creation of long-term value and hinder the capital's optimal allocation.

In this second part of the document we focus on identifying the problems that may affect the role of local stock exchanges mentioned in the previous paragraph and we point out some recommendations for future deepening, in the cases deemed feasible. While we address the opportunities for improvement identified by MSCI to avoid a potential reclassification to the frontier market, we prefer to focus on how to improve the Peruvian stock market instead of focusing only on what an index provider can point to. This is because international and local experience shows that MSCI changes are the result of a stock market trend and not the opposite. However, we must remember that as we saw in the first part of this report, MSCI decisions may have a "wake-up effect" or "radar" on investors.

Structural Problem of Market Depth and Liquidity: Floating concentration

The main problem of the local stock market is low liquidity and has a structural origin, both on the supply and demand side. On the supply side, according to BVL data, only 36% of the market capitalization of main local stocks remains as free float. On the demand side, AFPs keep about 60% of said float[25]. This is compounded because these investors cannot rotate their local shares in a relevant way, because due to their size they could have an impact on the market. This implies that relevant negotiations mainly focus between these investors or between them and the foreigners through packages that may have a cost for liquidity.

Consequently, for most small / retail investors, the availability of shares to be traded is quite limited. The consequence of this market structure is low liquidity. Opportunity for Improvement: decentralization of positions through gradual delegation of the portfolio.

One way to increase liquidity is by devolution of the free float that is mostly found in pension

[25] The following stocks are considered for calculations: ENGIEC1, ENGEPEC1, NEXAPEC1, ALICORC1, ENDISPC1, UNACEMC1, BBVAC1, IFS, VOLCANBC1, LUSURC1, CPACASC1, INRETC1, FERREYC1 and GRAMONC1.

funds these days. This could be achieved through a gradual and partial delegation of the portfolio to dedicated funds. We mean gradual because it involves increasing considerably the number of current investment funds dedicated to local shares, which implicitly requires the development of specialized human capital.

This process would bring benefits to pension funds to the extent that the number of relevant participants in the local market would be expanded, which could increase market liquidity. Second, it would mitigate the impact of a devaluation resulting from an exogenous shock, such as the reclassification event discussed in the first part of this report, as they would be smaller positions. Third, in the long term, with an environment of continuous pension fund growth without a consistent accompaniment of the foreign investment limit, it will be key to have a developed capital market that offers good investment opportunities, many of which are not accessible today by the size to AFPs. However, this means collaborating in its development today.

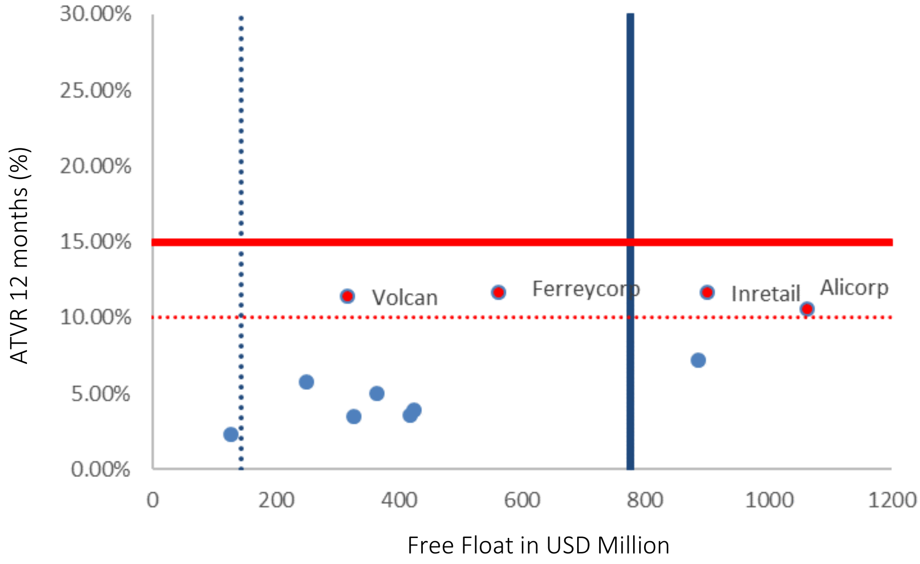
We believe that three requirements are key for this proposal to be successful. First, that the funds delegation is made on less liquid shares (not those found today in the MSCI Peru index). Second, the number of investment funds on which the portfolio will be delegated is large enough to create competition. In a very simple calculation, assuming the average trading volume of the stock market and the need to move 2% of the portfolio in one day, the minimum number of participants required was eight. To devolve the portfolios to a single fund can even make the problem worse. Third, the participation of the Superintendence of Banking, Insurance and AFPs (SBS) to establish the legal framework on which this project could be carried out.

Finally, in an environment with a less concentrated local stock market, it will be key for brokerage firms to have greater leadership in the connection between local investors and foreigners who need to negotiate large blocks. In this sense, the strengthening of the market makers' program will be fundamental.

Consolidation of Securities Candidate to be MSCI Substitutes

As mentioned in the first part of this document, the risk that any of the three stocks that constitute Peru index will pass to the US index can be relieve by having more invertible shares in the MSCI indices. Figure 6 shows that stocks such as Volcan and Ferreycorp are strength candidates to be included in the Small Cap indices, while companies such as Alicorp and Inretail could even reach the Standard index. In all cases, the requirement of free float is met, the task is in increasing liquidity, as the four shares are below the 15% of required ATVR and the recent dynamics is not encouraging.

Figure 6: 12-month ATVR vs. Free Float (USD Millions) of Selective Index shares (without Credicorp, Southern Copper and Buenaventura)



Source: Lima Stock Exchange

Opportunity for improvement: promotion of substitutes.

The stock market has currently boosted market makers for these securities with the aim of promoting their liquidity. Nevertheless, it is necessary to raise the number of these creators and provide them with a sufficient balance that allows them to put buying and selling points in the secondary market. Once equipped with an adequate balance of available shares, a similar mechanism to the existing in sovereign bonds that encourages competition between market makers to promote liquidity could be designed. The involvement of these four companies in this project is key to its success.

Problem in the Capital Market Structure: Excessive importance of Credits

The empirical literature finds that the most important factors that influence the development of the stock market include foreign direct investment, economic growth, infrastructure development, savings, inflation, trade openness, exchange rates, sector development banking and market liquidity[26]. However, excessive growth of the banking sector inhibits the development of the capital markets[27].

Opportunity for improvement: promotion of dedicated funds

Bank credit has dominated business financing in Peru; but recently there has been a (very) gradual development of the corporate debt market, starting with the launch of dedicated funds that seek to compete with credits. These funds managers mention the difficulty of moving from bank credits and commercial papers to the world of bonds. The size of Peruvian companies may be the main limitation, but it seems that it is already beginning to see demand for a new financing structure (size, terms, guarantees, etc.).

[26] For a literature's summary see Kunofiwa Tsaurai (2018).
[27] See Charles Amo Yartey (2008).

On the other hand, managers also mention that just passing from credit to bonds already represents a new challenge for financial managers and directories traditionally used to the convenience of bank credit. It is clear that moving to financing through shares is a more complex step and requires more time; so, it is necessary to start creating the conditions for its development as it has been done in the case of corporate debt. On the other hand, initiatives such as the Alternative Securities Market (MAV), allow new names to be incorporated into direct financing mechanisms.

Migration to other Stock Exchanges and Challenges in the Pacific Alliance integration

One of the trends of globalization has been the migration to larger and more developed stock exchanges, mainly within emerging markets, a fact that was already studied at the beginning of the century (See Stijn Claessens et al. (2002)). This is particularly important when companies acquire a size that justifies the issue outside, as was the case of Credicorp and more recently of IFS. The problem is that this leads to trading outside the local stock market. The main reason is the size and diversity of investors with whom they can finance in developed markets such as New York. This gives the additional benefit of greater liquidity which results in better price formation. A second reason, from our point of view, is the lower cost of trading stocks in the US. in comparison to Peru. While, in Peru, despite the effort of the BVL and Cavali to reduce costs, operating a local share implies a total payment of 0.134%, in the US. This cost is approximately five cents per share for a local institutional investor. Most of the local cost is the stockbroker companies (0.10%), whose financial situation is not the best due to, again, the low liquidity, generating a vicious circle. Therefore, as we will see at the end of this section, a redefinition of the roles of market agents will be necessary.

Within this global stock exchange competition, the Latin American Integrated Market (MILA) appeared as an interesting option to increase the joint liquidity of the markets that integrated it and attract foreign flows. As a block, Mexico, Chile, Colombia and Peru represented an economy size similar to Brazil, although with a lower level of negotiation. However, the volumes traded in the integrated market have been almost non-existent and far from the volumes traded in the countries themselves (See Table 6). Apparently, MILA did not integrate the securities markets of the four countries, but only interconnected them[28], so they act as four separate markets.

Table 6. Volume traded through MILA
(May 2011-June 2019)

USD Millions	Chile	Colombia	Mexico	Peru
Inside MILA System				
Operations performed by Chile		48	17.3	39.4
Operations performed by Colombia	8		0	2.4
Operations performed by México	48	7.6		7.9
Operations performed by Peru	343.3	86.6	0.268	
Amount traded in their stock exchange	302,765	180,397	1,065,021	33,752

Source: Stock exchanges from different countries.

[28] Even this is also debatable, there are traders of important institutions that rather operating via Bloomberg than with the BVL system.

Opportunity for improvement: Accelerate integration through a real commitment to move forward.

A recent OEAP report on the Roadmap for Financial Integration in the Pacific Alliance highlights three key factors for its real integration. First, the need for a common and simple tax framework which is complex and different between countries. In the short term this implies that the income obtained from countries of the block where the taxpayer is not a resident is governed by simple and uniform rules among the member countries, such as a flat and low rate for all. Considered in the abstract, if member countries converge to a harmonization and simplification of their respective regulatory and tax frameworks, including the interconnection between authorities of capital and tax markets, transaction costs for investors operating in these places would be reduced. In fact, at least in tax matters, tax codes regarding income taxation are quite different between countries, which make convergence of this nature very unlikely.

The second important factor is the exchange spread to invest in assets of the block countries. There are currently no exchange markets between countries, which is why it is necessary to use the dollar as an intermediary, which generates a double spread that reduces profitability and reduces the attractiveness of the investment. According to the report, the volumes of these transactions would be very low to cover the costs of operating these markets. In other words, the liquidation systems of the countries are not interconnected, increasing the counterparty risk of currency negotiations between countries. In fact, only Peru operates in dollars and local currency. Finally, the integration of the liquidation implies a close coordination and commitment on the part of the four central banks.

Third, it is a cross-border registration system with clear, simple and standardized processes for investors, issuers and others. In the long term, the search for a single jurisdiction can be added, but this already falls more in the field of longing rather than of possibility - from our point of view.

It is important to note that in the past countries that have been integrated have benefited from an improvement in their status by the MSCI. WAEMU29 (West African Economic and Monetary Union) is a group of countries made up of Benin, Burkina Faso, Ivory Coast, Guinea-Bissau, Mali, Niger, Senegal and Togo that are looking for a "real" regional integration that includes the unification of Rates and markets. In 2016 MSCI reclassified it from standalone to the Frontier. A common currency, however, is not an option in our case.

It is important to note that, in the past, countries that have integrated, have been benefited from an improvement in their status by the MSCI. The WAEMU[29] (West African Economic and Monetary Union) is a group of countries formed by Benin, Burkina Faso, Ivory Coast, Guinea-Bissau, Mali, Niger, Senegal and Togo that are looking for a "real" regional integration, including the unification of Rates and markets. In 2016 MSCI reclassified it from standalone to frontier. But, in our case, is not an option a common currency.

If an integrated market is not a solution to increase the scale for the negotiation of local shares, then it is necessary to redefine the roles of the BVL and the stockbroker companies (in addition to the funds dedicated to local companies that should be promoted). From our point of view, the centralized market should lead the development of new issuers and the consolidation of small and medium-sized companies in the stock market. As they are smaller shares and in the process of consolidation, they should offer returns with premiums that place their expected income above the largest or publicly traded shares in New York.

[29] http://www.uemoa.int/en/amended-treaty

This should attract foreign and local investors in search of investments with high returns in a world of low rates, but without the restrictions that the private equity[30] market implies. This is a development alternative that the BVL could explore.

Few incentives to encourage Liquidity of Own Shares in the Local Stock Market

The BVL registers more than 250 companies with listed values, however, just a minority percentage conduct transaction with a minimum frequency and volume. This fact denatures the objective of a centralized negotiation mechanism, which must be to broaden the base of potential investors to facilitate capital's incorporation; this is possible through the liquidity of the secondary market. If the vast majority of listed values do not operate under this logic, it implies that there are other incentives that induce them to list, but not trading. One of these incentives can be derived from the tax benefits of participating in a centralized negotiation mechanism (as opposed to not doing so).

Opportunity for improvement: to stimulate the increase in liquidity of the shares themselves

It is reasonable to consider whether any minimum traceability requirement should be added, in addition to being listed in a centralized mechanism, to maintain tax benefits to remove this distortion. Any decision of this type, of course, must have the necessary early warning and gradual mechanisms that allow for the adoption of corrective measures, aiming to give predictability to both the issuers themselves and investors.

In general, there is a review of the legal, regulatory and tax framework for companies listed in centralized negotiation mechanisms to identify where there could be perverse incentives that induce listing but not negotiation.

Commitment to Good Corporate Governance

Company's commitment to maintain a good corporate governance is key, so the stock market can fulfill the roles mentioned at the beginning of this second part of the document. However, in Peru, the theory could be far from the practice. The latest survey of the Superintendence of Securities Market (SMV) shows that on average only 63% of companies believe they meet the 88 questions on principles of good corporate governance[31].

Moreover, the flow of information is largely low for listed companies, which makes it difficult to analyze their value, discouraging their negotiation (it reduces liquidity). Also, maintaining independent directors is not a common practice. In the aforementioned survey from the SMV of 2017 and 2018, only 43% of the participating companies mentioned that one third of their directories were independent and only 24% responded that the special committees are chaired by this kind of directors.
The figure may be lower because the definition of independent may not be aligned with local

[30] Capital call, long period of frozen investment and non-public information (particularly relevant in emerging markets).
[31] See the complete survey: http://www.smv.gob.pe/Frm_RptGobiernoCorpAll?data=D26422E1700E88ABE1959663E80941AA2B336827F2

standards[32]. Despite this, the SMV made efforts in this line:

- First of all, we have Superintendence Resolution No. 00029-2018-SMV / 01, published on October 10, 2018, which regulates transactions between related companies, in the case of those that have shares registered in the stock market[33].
- Second, the Superintendence Resolution No. 00020-2019-SMV / 01, published on August 07, 2019, establishes that the companies regulated by the SMV (brokers, mutual funds, etc.) for the services that they lend to their clients must meet minimum standards of corporate governance. For this, mandatory rules are established to regulate the establishment of independent directors, the regulations and the director's operation, as well as management functions and the need to have a corporate website with established requirements[34].
- Third, SMV Resolution No. 016-2019-SMV / 01 of June 26, 2019, which states that although the adoption of good corporate governance practices expressed in the Code of Good Corporate Governance for Peruvian Companies is voluntary, companies that have securities registered in the Public Registry of the Stock Market (RPMV) have the obligation to inform the public and the SMV of their adherence to the "Guidelines for the Qualification of Independent Directors". If it adheres to it then, the company have to comply with these guidelines[35].

Opportunity for improvement: Going from recommendation to a greater commitment to comply with Good corporate governance if listing on the stock exchange is needed.

Legally, the SMV cannot force companies to meet the Corporate Good Governance Code. Therefore, it would be up to the investors to "discipline" the companies through continuous request so they comply with the aforementioned Code and, if not, the incorporation into the cost valuations of not maintaining good corporate governance. In practice, institutional investors repeat at each Shareholders' Meeting the need to comply with the Code of Good Corporate Governance, to which we find dissimilar answers such as doubting, for example, if independent directors really have a positive impact on the results of companies in Peru. It would be necessary to evaluate a law requiring to achieve a high standard of corporate governance for listed companies, allowing retailers to be protected and providing information to analysts that will attract local and foreign capital, which will result in a greater and better source of financing for the companies that achieve this.

It would also be important to align the standards on regulations of the SMV and the Superintendence of Banking, Insurance and AFPs (SBS), to strengthen the objectives.

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[32] For example, it is difficult to maintain that an independent director can last 15 years in that position within the company.

[33] Available at: http://www.smv.gob.pe/Frm_SIL_Detallev1.aspx?data=4F255AD5C4D95FEF5348E2A70CE8648971F80028B9C03886

[34] Available at: http://www.smv.gob.pe/Frm_SIL_Detallev1.aspx?data=C835FD9FB7C90C95AC4C9E064A04854B4B2FBC52DEF820C3#

[35] Available at: http://www.smv.gob.pe/sil/RSMV201900026003.pdf

Development of Securities Loans and Short Selling

Securities lending and short selling are concepts closely linked to the extent that the first facilitates the availability of paper to be able to close the second. The revised experience of other emerging countries places both concepts as an indicator that easies the increase in market liquidity and its access, as mentioned, for example, in frontier improvements to emerging countries in Saudi Arabia (2018) and Qatar (2013). In Peru, a new regulation was introduced in May 2015 to improve the securities lending model, mainly allowing the shares to be used as collateral. In addition, a new platform has been implemented to permit the liquidation of securities lending. MSCI highlights this initiative of Peruvian authorities and the BVL as one of the key criteria to keep Peru as emerging. However, the volumes traded and the number of operations is extremely low. In 2019, the number of securities lending and short selling operations was 1 and 3 respectively, while the volumes traded were USD 171 thousand and S /. 1.28 million respectively.

Table 7: Short selling

Year	Amount in S/	° Operation	Months
2019	1,383,575	5	Until August
2018	2,152,358	17	12
2017	1,591,561	18	12
2016	1,360,418	19	12
2015	36,069	5	Since September

Source: Lima Stock Exchange

Opportunity for improvement: include foreign investors (with the sufficient size to be relevant for pension funds) and broker companies that actively act as creators of this new market.

The first version of securities lending did not put emphasis on foreign investors, so it was doomed to fail for two reasons. First, the size between bidders (pension funds) and claimants (the rest of local investors) did not make it possible to create relevant transactions. Second, locally there is no short transaction culture. For this reason, in its 2019 review, the MSCI mentions that securities lending in Peru is only available for cash liquidity shares which are not being used[36].

The initiative in which the BVL is currently working it does involves foreign investors, it would be important to ensure that they have a sufficient size to negotiate with local pension funds and experience in these types of transactions. Notwithstanding, it will be fundamental that in this initial market the stockbroker companies work as market makers actively seeking international points to execute the transactions. A ranking system with penalties similar to the public debt market makers' program can help to this end. Besides, a commitment of the most important market participants to market development is necessary, since initially the operating load can be high for the impact it may have on returns.

[36] See MSCI Global Market Accessibility Review, June 2019. Available at: https://www.msci.com/documents/1296102/1330218/MSCI_Global_Market_Accessibilty_Review_June_2019.pdf/511b8357-58a5-4992-3774-47f60baa1505

Quick Wins and opportunities for improvement suggested by MSCI

Apart from the structural changes mentioned above, there are also opportunities for improvement in the accessibility criteria mentioned by MSCI[37] that might boost the market development and can be carried out cheaply.

The first four points are related to the need for the English language to be at the same level of Spanish in terms of the information flow of companies, the regulatory body and the BVL, as well as the documents required for operations. In this sense, these are the classic definition of "quick wins": with a low cost and possible to achieve them relatively quickly.

- The first is about equal rights for foreign investors. The MSCI affirms that the information is not always available in English.
- Accounting and Investor Registration. The MSCI states that registration is mandatory and the process is efficient. However, the documents must be delivered in Spanish.
- Market regulation: not all regulatory information is available in English.
- Information Flow: detailed information about the stocks is not always shown in English.

Opportunity for improvement suggested by MSCI

- Liquidation and compensation: make omnibus structures available. Also, for MSCI there is an absence of a real DVP system in the BVL, so it needs to be improved. CAVALI is currently working on an improvement of the DVP.
- Negotiation: limited level of competition between brokers, which can lead to high transaction costs. This is a difficult item to change in the short term because it also has to do with the low liquid and deep market structure. However, it deserves a cost evaluation and benefits of a potential commission reduction.
- Securities lending and short selling: this point is addressed above.

Box. Lessons from the development of Peruvian bond market: the importance of commitment of all market agents[38]

In 2002, Peruvian bond market in soles was practically non-existent and today S / .1 billion can be traded without problems in one day. Even so, at that time the history of hyperinflation and devaluation remained in the minds of investors who saw the dollar as the currency of value reserve and even, in many cases, exchange and unit of account.

At that time, it was unthinkable for investors to buy a bond in soles for more than one year and, by that period; they already had the Central Bank Deposit Certificates. This made the task of building a debt market in soles a titanic task, but it had to be undertaken because the public and private debt denominated mainly in dollars was a high risk for the country's stability, and the

[37] Ibid.

[38] This information is mainly taken from Villavicencio, July (2015) "Endeudándose con estrategia: ¿puede el sector público enseñar de finanzas al mundo privado?" (Strategically falling into debt: can the public sector teach finance to the private world?). Weekly Economic Magazine. February. The complete version is available at: http://semanaeconomica.com/invirtiendoconestrategia/2015/03/03/endeudandose-con-estrategia-puede-el-sector-publico-ensenarle-de-finanzas-al-mundo-privado/

monetary policy tool lacked power in an environment of high dollarization of agents.

From our point of view, the success of market development has three main factors: the real commitment of the principal market players (private and public), the ongoing discussion of those operating in the market, obtaining lessons from other experiences, and the creation of the Market Makers Program as a vehicle to foster liquidity in an emerging market. Then, the steps followed:

- First, an analysis was made of the urgency of the development of the debt market in Peruvian soles. This project was led by the Ministry of Economy and Finance with the participation of these leading state entities involved: Banco Central, SBS and CONASEV (SMV today).
- The analysis conclusions were presented to the majority shareholders of the leading market players, from whom a "real" commitment was obtained, making available to the project their main collaborators involved with the issue. In the end, this was a project in which everyone was going to benefit from the market growth.
- Then, local rounds of discussion were organized where problems and solutions could be identified. The task was to draw up a concrete list of agreements and tasks.
- Likewise, rounds were organized with international guests (from private and public sector) who had achieved the development of their debt market to draw lessons and discuss the possibilities of applying it in the local market.
- Being an incipient market, it was necessary that there were agents committed to the development of liquidity. This is how the Market makers Program was created; it contained a series of criteria that established benefits and obligations for its participants with the objective of increasing liquidity and market depth. A scoring system was used to motivate the competition, where those who did a good job were in the top position (which was a star for foreign and local clients) and the worst were removed from the program for one year.

Many of these lessons apply to the case of the development of the stock market, although there are important differences. To begin, the supply of the public debt market is constantly growing, generating a size high enough to attract foreign investors. On the other hand, the supply of shares in Peru does not grow continuously. Second, there is a positive international context for Peru's bonds, although not so much for its shares. The environment of international interest rates and the fiscal stability of Peru in relation to the emerging (and developed) region make Peruvian bonds highly desirable by local and foreign investors. On the other hand, since the Peruvian stock market is mostly mining, its appeal has been reduced after the change in China's growth strategy. Much of these differences are exogenous, although they can be minimized by encouraging the increase in the issuance of shares of companies that are in the evolution stage to do so.

The biggest difference, however, is the role of the public sector. In the case of the debt market, the treasury was the central actor on the supply side for the development of the yield curve that subsequently served as an anchor to the private sector's emissions. The issuer was the treasure. In return, the role required of the private sector was primarily to help generate and order the demand for instruments issued by the public sector. The development of a private debt market was not an objective, at least not a central or immediate one. The expected was that, in line with other experiences, it would derive from that of public debt as a yield curve (public) was consolidated.

The role of the State is thus limited to generating the appropriate regulatory conditions for the development of the stock market. The recommendations indicated above point in that direction. However, it is essential to point out that several of the shares on public land have already been adopted in recent years, following the 2015 consultation, and even the two years prior to the announcement of such consultation. Much of what remains to be done is in the field of private stakeholders. The efforts of the BVL and Cavali in recent years have been important. The big question is whether the other private participants, including issuers and potential issuers, brokers and market makers, are making the same commitment that at the time was shown in the formation of the public debt market.

A valuable lesson from the successful experience in the fixed income market is that specific objectives and actions must be set. In the case of the stock market, it is essential to strengthen the "substitute" shares, not only to reduce the likelihood of a downgrade on the part of index providers, but to serve as engines to produce liquidity, in turn, in other names. There should be a specific strategy, evidently with the will and active participation of the companies involved, to raise the free float and the ATVR of these names. This implies an ad hoc work agenda with InRetail and Alicorp, expecting that they may be part of the MSCI Peru; and with Ferreycorp and Volcan, so that they can integrate the Small Cap Peru, and eventually, the MSCI Peru. In the future, ideally it will be other names that will make this transition.

Conclusions

The report has two parts. The first seeks to estimate the possible impacts of a reclassification of the MSCI Peru index from emerging to frontier. The second part proposes initiatives to improve the Peruvian stock market, which, as a consequence, would help to minimize the risk of reclassification.

If we solely focus on numbers, the probability of a downgrade of the MSCI Peru Index is low in the short-term, given that the three current components exceed the requirements. However, there are high risks in the medium-term: (1) the possibility that some current component passes to MSCI USA (for example, the 2015 attempt regarding Southern Copper), while we do not have alternate shares in the local market; and (2) that the changes the Peruvian authorities and the Lima Stock Exchange (BVL) are promoting to improve liquidity and market structure do not obtain the expected results.

Due to the aforementioned high risk, it is important to assess which could be the impact of a potential downgrade. Theoretically, the main transmission channel of a reclassification is the incorporation of a premium for frontier risk within the capital cost of companies, which would reduce their prices and multiple equilibrium. Literature agrees that there are large negative effects in the short-term; nevertheless, there is no agreement on the long-term effect. Thus, we require a deeper analysis of a sample of countries that changed their statuses from Emerging to Frontier. Specifically, we mainly reviewed the cases of Argentina and Jordan. Same as the literature, these suggest strong impact in the short-term, but that however dilute in time (2-4 months), while considerably lower effects persist in the long-term.

While the Peruvian Index was not reclassified, we try to understand how much of the 2015 consultation has been incorporated in prices through the premium for frontier risk. Studied evidence shows that the bigger the surprise of the event, the greater its impact. Our conclusion is that, since 2015, there was a "wake-up effect" in investors that lead to a partial incorporation of frontier risk in prices, which reduces the impact of a potential reclassification in the long-term. That is to say, part of the damage is already done. The document includes a simulation of potential impacts of a greater incorporation of frontier risk at multiple levels. However, in the short-term, the shock may be relevant. We estimate that, just for emerging passive funds, USD 1.9 billion could outflow (there is no public information on active funds). This would be just partially counteracted by the flow of passive funds that follows the MSCI Frontier. The most affected security within the MSCI Peru Index would be Credicorp, due to the fact that it represents 70% of the Index. Additionally, we found that the incorporation of the frontier market premium factor is lower in securities locally traded; thus, effects may be bigger in these cases. This negative effect could be counteracted by more liquid local companies that are part of the MSCI Frontier Index, which would allow them to attract a new flow of investors—though lower to the previous, given the relative magnitude of both indexes.

Finally, we assessed potential impacts in all the other local variables, beyond price and multiple of securities. In order to do so, we considered the country risk, because it is one of the most relevant. The result was that, while the MSCI Peru Index has been gradually incorporating the premium for the risk of becoming frontier, the country risk has followed a decreasing trend. Apparently, investors correctly separate good macroeconomic fundamentals (mainly in relation to tax stability and a greater sustained growth capacity) from a securities market structure that does not allow elevating its liquidity. The other variable that could be affected for outflows in the shot-term is exchange rate. Notwithstanding, in practice, it is hard to have a good estimation of what could be the foreign outflows. On the other hand, foreign investors tend to expose to Peru through the three securities that make up the MSCI Index. In the local market the percentage of invested foreigners in variable income is closest to its minimum, even though they still represent over a third of the total. At the microeconomic level, if we see a negative wealth impact on the funds and agents that invest in local shares, mainly through the pension funds that maintain more than one tenth of the multi-fund in that asset class.

The second part of the document is focused on identifying the problems that may be affecting the role of the local stock exchange and, thus, generate low levels of liquidity and market depth. This is because international and local experience shows that MSCI changes are the result of a stock market trend, and not vice versa. This does not imply, as we saw in the first part of this report, that the MSCI cannot generate a "wake-up effect" on investors.

The first problem to be addressed was the market structure that, by construction, generates a low liquidity level. Regarding supply, just 36% of the market capitalization of the main local shares remains as free float; regarding demand, pension funds maintain around 60% of such float. This worsens due to the fact that these investors may not relevantly rotate their local shares, because they could generate an impact on the market because of their size. We propose to disconnect the float through the gradual and partial delegation of shares with low liquidity, to specialized funds.

The second matter is the need to strengthen the four shares that are close to the requirements demanded by the MSCI: Ferreycorp, Inretail, Alicorp and Volcan. Although the BVL has promoted market makers for these securities in order to boost their liquidity, it is necessary to increase the amount of such creators and provide them with a sufficient balance that allows them to put buying and selling points in the secondary market. Once provisioned with an adequate balance of available shares, a mechanism similar to the one in sovereign bonds could be designed to encourage competition between market makers to promote liquidity. The involvement of these four companies in this project is key to its success.

The third problem is the excessive importance of credits in the financing of companies. Empiric evidence suggests that, in some cases, the banking system is key to the capitals market, but an excessive size may inhibit its development. We propose to generate incentives needed in order to promote the development of specialized investment funds.

The fourth problem is the fact that companies that achieve a big size may migrate to more liquid stock exchanges, such as New York, looking for a greater amount and diversity of investors to finance them. For investors, this implies more liquidity and a lower shares trading cost. One way of preventing this, is enlarging the local stock exchange through integration processes with other countries, such as MILA. Nevertheless, in our review we explain why this initiative—more than a market integration—has been a market interconnection. Finally, we highlight the WAEMU block that, in 2016, achieved an MSCI improvement in its group classification. If integrated market is not the solution to enlarge the trading of local securities, then it is important to redefine the BVL's and stockbrokers' roles. The centralized market, in our opinion, must lead the development of new issuers and the consolidation of small and medium-size companies in the securities market. As they are small shares and are in the process of consolidation, it is to be expected that they offer returns with premiums that locate their expected returns above the biggest securities, or the ones quoted in New York. The creation of dedicated funds will be key to this function. This new stock exchange should attract foreign and local investors who look for high return investments in a low rates world, but without the restrictions of the private equity market.

In fifth place, we review the current situation of the securities market, where there is a high number of listed issuers, but just a small percentage of them make transactions with a minimum frequency and volume. In the search of identifying the incentives that generate such situation, we found the tax benefits of being part of a centralized trading mechanism. On that regard, we propose to consider whether some minimum transactional requirement should be added, besides listing in a centralized mechanism, in order to maintain tax benefits and so as to remove distortion.

In sixth place, we remarked the need to pass a scheme that more strongly commits companies listed in the BVL to comply with good corporate governance practices. While the Superintendence of the Securities Market has made progress on that matter, it cannot force the fulfilment of the Good Corporate Governance Code; therefore, it would be important to evaluate a law that forces the achievement of a higher standard in this matter for listed companies, that allows protecting retailers, providing information to analysts that allows attracting local and foreign capital—which would result in a higher and better financing source for companies that do achieve so. It would also be important to align the standards on the SMV regulations and the Superintendence of Banking, Insurance and AFPs (SBS).

In seventh place, we analyzed the experience of securities loans and short selling, remarking the need that foreign investors be considered in this type of project, because they have volume to trade with big local investors (AFP) and the experience of performing this type of operations.

Finally, we addressed Quick Wins suggested by MSCI in several of its reports, which mainly aim to the development of a "real" DVP, the possibility of having omnibus accounts, increasing competition among brokers and leveling English to Spanish in information flows and regulatory documents.

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Appendix

APPENDIX 1 – CASE STUDIES PER COUNTRY

Pakistan-Downgrade 2008

- On December 10, 2008, the MSCI announced that Pakistan would be degraded to Frontier with execution on the 31st of December. The sudden decision was due to the deterioration of investment conditions resulting from the imposition of a "floor rule" imposed in August of that year; this caused a paralysis in the stock market and a significant distortion of the portfolio's valuation by maintaining prices at artificial levels.
- The result was a collapsed index due to the magnitude of the surprise: there was no room to process (we did not find a query) and, unlike Jordan, it was not something predictable because its liquidity levels did not suggest a change in classification.
- This manipulation in Pakistan's stock market produced a distortion in the stochastic process that governed it, therefore, it was assumed that the movements of the MSCI index were 100% idiosyncratic to the country. It is worth to mention that the manipulation did not lead us to eliminate it from the sample, to the extent that the "floor rule" and other restrictions were removed the following year, allowing Pakistan to belong to frontier markets again. The case is that the elapsed time and the removal of restrictions would allow after one year that prices adjust to the true stochastic process even if we do not know it.
- Between the announcement and effective dates, the index dropped more than 50%, as prices had to be adjusted because they came from having a floor in the middle of the biggest global crisis since 1929. In this sense, we will not consider Pakistan into the average calculation because it does not fall under the current conditions of Peru.

Marruecos-Downgrade

- In June 2012, the MSCI issues a consultation in which it indicates that Morocco is more in line with the size and liquidity requirements of the Frontier Markets, highlighting the fact that it has only three components. Likewise, the announcement emphasizes the impossibility of reversing the decreasing trend in liquidity that began since 2008.
- The results show that this illiquidity of the market indicated by MSCI disconnected Morocco from risk factors. Then, we will assume that their movements are 100% idiosyncratic so we will directly take the index

Marruecos Downgrade Table: Regression Indicators

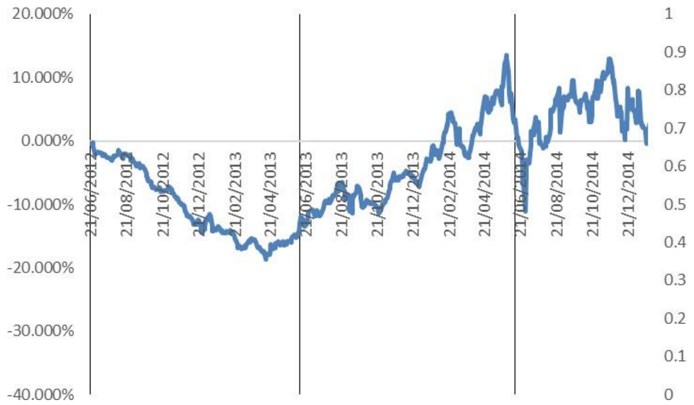
	Frontier	Emerging	S&P	Constant
Beta	0.125	0.188	0.181	-0.001
Error Est.	0.137	0.115	0.109	0.001
R2/ Err.Reg	0.021	0.009		
Statistics t	0.910	1.642	1.671	
	Non-Significant	Non-Significant	Non-Significant	

- From the consultation to the announcement, the index fell 15%. Between the announcement and the effective date there is almost no movement, although within the range there are falls and recoveries. The following three months after the effective date, it remained fluctuating at the same level as that date.

Qatar-Upgrade

- In June 2012, the MSCI issued a consultation in which highlights the potential operational and investment improvements for foreigners. These improvements were supported by the consulted investors who stand out the DVP system, this new mechanism that includes securities lending and the commitment to increase the percentage that foreigners may have in the ownership of local businesses.
- Between the dates of consultation and announcement, there is a movement of -15%, which is then more than recovered in the announcement-effective period where it rises 18.7%, making a cumulative consultation-effective of 3.5%.
- In the months following the effective date, there is a rise close to 10%, which then converges to the levels of the consultation, 6 months after the date referred. Although there is always more than 10% above the effective date.

Qatar Upgrade Figure: Cumulative Abnormal Return

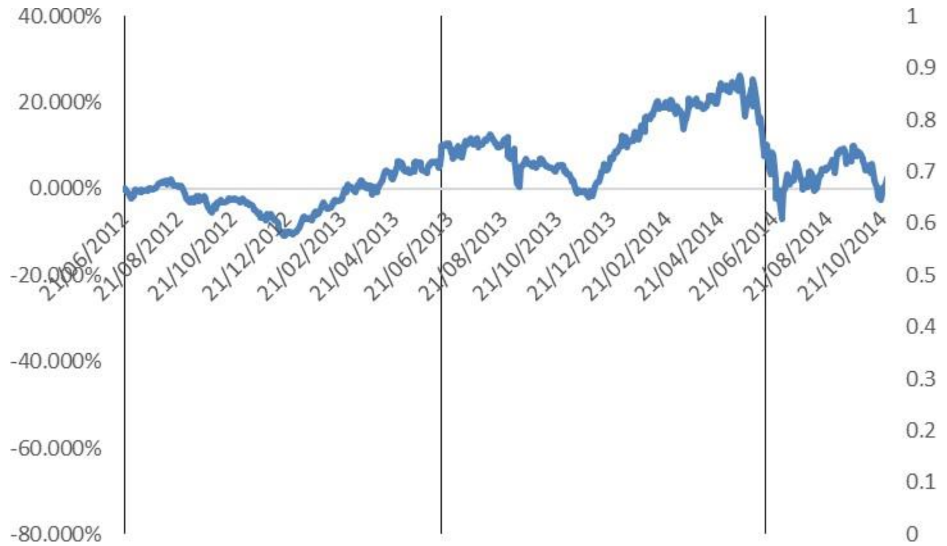


Note: The three vertical lines are the consultation, announcement and effective dates.

United Arab Emirates (UAE)-Upgrade

- In June 2012, the MSCI issued a consultation that will end in the improvement of the status from Frontier to Emerging. These reasons stand out: the improvements in the DVP system and a mechanism that would allow removing the requirements for foreign investors to operate with a dual account structure.
- Between the dates of consultation and announcement there is a movement of 8%, which is then more than recovered in the announcement-effective period by rising 2%, making a cumulative consultation-effective of 10.3%. This return is quickly diluted to the following month although it is recovered to leave the accumulated return fluctuating around 3%.

UAE Figure: Cumulative Abnormal Return

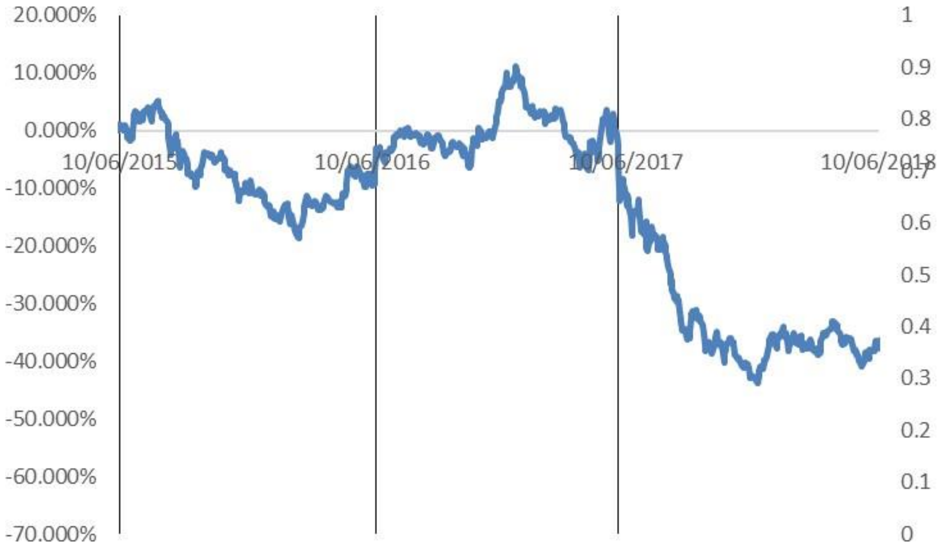


Note: The three vertical lines are the consultation, announcement and effective dates.

Pakistan-Upgrade

- After the downgrade in 2008, Pakistan became Frontier again in 2009. Subsequently, in 2015 a consultation was launched to propose that country as an emerging index, a proposition that was positively announced in 2016 and executed in 2017.
- Between the consultation and announcement dates, there is a -4.2% movement which is completely reversed three weeks before the effective date, where the abnormal returns become zero. Even days after, the accumulated abnormal returns reached 3.6% with respect to the consultation date and 8% with respect to the announcement date. Then, a continuous drop follows, which may be contaminated by other idiosyncratic factors.

Pakistan Figure: Cumulative Abnormal Return



Note: The three vertical lines are the consultation, announcement and effective dates.

Argentina-Upgrade

- After the downgrade in 2009, Argentina removed the restrictions on market accessibility (mandatory deposits, ceiling on repatriation, Central Bank approval for repatriation, among others). So, the first consultation in 2016 proposed Argentina as Emerging. Then, in 2017, a second consultation was made until the change was accepted in 2018. This is being implemented in 2019.
- Between the dates of consultation and announcement there is a movement of -28%, which is then more than recovered during the announcement-effective period where it rises 8.6%, making a cumulative consultation-effective of -22%. This negative return is diluted almost entirely one month later.
- Abnormal negative returns are due to two factors: (1) high sensitivity to risk factors and (2) since 2018, an increase of the Argentine idiosyncratic risk measured with country risk, which passed 400bps and was at its worst when was closed to reach 1000bps. It was the time when government measures created anxiety in the market, triggering large devaluations.
- The results of primary elections, which will probably be confirmed in the general elections in October, will almost certainly subordinate the performance of the stock market to political events, and therefore make it unlikely to do an analysis based on endogenous events to the stock market.

Argentina (Upgrade) Figure: Cumulative Abnormal Return and country risk

Note: The three vertical lines are the consultation, announcement and effective dates.