

Russell Research

By: Kyla Roberts¹, Russell Indexes

OCTOBER 2010

Good intentions, flawed implementation

To illustrate that not all methods of float adjustment are equally effective at representing investor opportunity, this analysis focuses on the Bolsa Mexicana de Valores (BMV) and specifically on its primary index, the Índice de Precios y Cotizaciones (IPC), as a case study of a float methodology that fails to improve index practices and reduce distortions. This paper argues that even after the float adjustment process has ended, many of the benefits of float adjustment have not materialized, due to lack of transparency and a float-adjustment practice known as “float banding.” The method results in nearly all securities in the index being overweighted relative to Russell’s assessments of their true float-adjusted market caps, causing visible differences between the performance of the IPC and Russell Mexico Large Cap indexes.

Introduction

Indexes have not always been adjusted for free float, and not all present-day indexes are float-adjusted.² Why? One explanation is that float adjusting imposes certain costs. These costs include: 1) high initial turnover in ETFs benchmarked to the index and 2) discontinuity in the index’s performance and membership over time. Such costs can be avoided if an index is float-adjusted from inception, but indexes launched before free-float adjustment became popular cannot avoid switch-related distortions. So why bother converting a market capitalization index to a float-adjusted market cap index?

Float-adjusted indexes are meant to accurately represent an investor’s opportunity set. In contrast, a non-float-adjusted index could grossly overstate the available shares in the market if it did not reduce the total shares held by a company’s founders and related parties. An ETF using this non-adjusted underlying index might find it necessary to incur

¹ The author thanks Guillermo Cano, Carmen Campollo and Sarah Orzell for their invaluable contributions.

² Most major players do float adjust. Russell converted to float-adjusted indexes in 1984 and MSCI followed in 2002.

high costs in order to buy shares in this illiquid security.³ An underlying index that excludes highly illiquid securities or uses float adjustment to reflect lower share availability can mitigate such costs for ETFs. This lower contact with illiquid securities is thought to reduce management and maintenance costs for ETFs and indexes alike.

The Bolsa Mexicana de Valores: transition to float adjustment

The BMV undertook float adjustment as part of a methodology revision intended to make its rules more consistent with accepted index practices.⁴ In September 2009, the BMV announced that it would take on the task of gradually float-adjusting its market cap indexes.⁵ However, the existence of a variety of free-float methodologies means that calling an index “float-adjusted” does not guarantee it to be free of constituent weight distortions. In the BMV’s case, the new methodology incorporates several provisions that warp index performance. For example, rules for capping individual and aggregate security weights were introduced into most of the BMV’s indexes’ methodologies between 2009 and 2010. When index weights are capped, or artificially prevented from exceeding a maximum index weight, then large securities may be underweighted and small securities may be overweighted. The IPC caps individual stock weights at 25% to “avoid concentration” in the index, and the top five securities cannot have an aggregate weight greater than 60%.⁶ In addition to the IPC, the IRT LARGE, IRT COMP, IRT MID, IRT SMALL and IPC COMP also cap individual security weights at 25%.⁷ The INMEX has an individual security weight cap of only 10%, while all the Total Return Economic Activity Indices (sector indexes) have individual security caps of 10% to 12%. The practice of weight capping is just one example of how the BMV’s revisions have created new distortions. Float adjustment can create many benefits for an index, but a flawed methodology – even one mandating float-adjustment – will still lead to a flawed product.

The IPC’s methodology

There are several aspects to the IPC’s methodology that create distortions that undermine best index practices.

1. The methodology is non-transparent.

A sound methodology is key to creating benchmarks that allow investors to make the best possible investment decisions. A good methodology is characterized by objectivity and transparency. Transparency is achieved by designing and publishing clear rules, whereas objectivity is achieved by following the rules. The IPC’s methodology represents a set of published rules. However, its methodology fails the transparency test, because its rules are incomplete. While the IPC’s methodology might give investors a general idea of the processes behind the index’s creation, the specifics of these processes are omitted. The

³ A good example is the Yahoo! effect, which encouraged many indexes to begin to adjust for free float. Schoenfeld, Steven A. *Active Index Investing*. Hoboken, NJ: John Wiley & Sons, Inc, 2004. 77-78. Print.

⁴ "Informe Anual Bolsa Mexicana de Valores, S.A.B. de C.V." Bolsa Mexicana de Valores, 12 Dec 2009:37. Web. 1 Sep 2010. <<http://www.bmv.com.mx/wb3/work/sites/BMV/resources/LocalContent/537/11/INFORMEbm09.pdf>>.

⁵ Market cap indexes determine index representation by multiplying a security’s total shares outstanding by share price. Float-adjusted indexes, on the other hand, account for the fact that not all of the constituent’s shares outstanding are necessarily in circulation. Specific methodologies vary, but the idea of free-float adjustment is to remove from the calculation of market cap those shares that for one reason or another are not traded.

⁶ Herrera, S. "BMV Will Adjust Its Index (BMV cambia las reglas)." Bolsa Mexicana de Valores, 29 Sep 2009. Web. 1 Sep 2010. <<http://www.bmv.com.mx/>>.

⁷ "Estadísticas, Gráficos y Metodologías: Principales." Bolsa Mexicana de Valores, n.d. Web. 2 Sep 2010. <http://www.bmv.com.mx/wb3/wb/BMV/BMV_ipc_principales/_rid/1129/_mto/3/_url/BMVAPP/indicesNavegacion.jsf?muestra=ME&or=0&ramo=0&tabSelectedIndex=0>.

result, that no investor can replicate the IPC's results, thereby thwarts investor oversight and inhibits informed investment decisions. No matter how closely the BMV follows its new rules, the fundamental lack of transparency subverts benefits achieved by modifying the rules, inhibiting investor opportunity by preventing investors from anticipating constituent changes and acting to reduce costs.⁸

Disclosure standards: Russell Indexes

On the one hand, the Russell Indexes methodology details each step of the float-adjustment process. In particular, it specifies which holders' shares are removed from free float, and at what holding percentages. Types of holders are clearly defined, so that an investor may distinguish between the various holder categories and exclusion thresholds if the distinction is not immediately obvious. The Russell Indexes methodology explicitly calls for the exclusion of the following holders:

- Employee stock ownership plans of $\geq 10\%$;
- Large private holders (non-institutional holders) of $\geq 10\%$;
- Institutions with holdings $\geq 40\%$;
- Officers' and directors' shares when the sum of their shares is $\geq 10\%$;
- Government shares;
 - Any direct government holdings;
 - Indirect government holdings (often state investment boards) of $\geq 10\%$;
 - Government pension plans of $\geq 40\%$;
- Any corporate cross-ownership (ownership by another index member); and
- Any treasury shares (shares owned by the company itself).

In addition to strategic holdings, Russell reduces index weight for the following reasons:

- IPO lock-ups – all shares not available for purchase following an IPO;
- Depository receipts– generally removed to avoid double-counting the underlying share; and
- Foreign ownership limits – shares foreigners cannot buy at the share class, company, industry/sector or country level.

Russell also considers for index eligibility only those large cap companies with float of greater than 1% and small cap companies with more than 5% float. The above adjustments to a company's index representation are clearly stated in the publicly available Russell Index methodology, which explains the order in which these adjustments occur and exceptions. For these reasons, we believe the Russell Indexes methodology passes the transparency test. It is not required that a transparent methodology teach the reader to conduct float research; it is, however, required that a transparent methodology provide an informed reader with enough of the rules and processes to make the result replicable.

⁸ Laurence B. Siegel. *Research Foundation Publications*, Benchmarks and Investment Management (August 2003): 53. Web. 8 Sep 2010. <<http://www.cfapubs.org/doi/pdf/10.2470/ff.v2003.n1.3922>>.

Disclosure standards: the BMV

On the other hand, the IPC's methodology does not pass the transparency test. On the surface, the IPC float methodology is similar to the Russell Indexes rules. For example, the same types of holders are excluded, and the BMV has a similar minimum free-float requirement. Both methodologies also exclude shares that foreigners cannot buy. However, the two key documents that detail the IPC's float methodology list only the types of excluded holders, but not at what percentage.⁹ To illustrate, the document "BMV Will Adjust Its Index," specifies exclusion of the following holder types:

- "Strategic investors" –
 - Governments;
 - "Controlling shareholders" or "control groups";
 - Management;
 - Shares subject to foreign ownership restrictions; and
- Founding families.

The actual methodology of the IPC restates excludable holdings as:

- Controlling shareholders;
- Key directors and non-independent directors;
- Shareholders controlling lending companies;
- Pension funds or employee options; and
- "Strategic companies."

In the English version only, "BMV Will Adjust Its Index" explains that shares off-limits to foreigners are subtracted, but how the rule is applied and the order of steps are omitted.

Despite the clear similarities between the two methodologies, similarity to a transparent methodology does not necessarily ensure transparency. The problem with the IPC's methodology is that it is not replicable; it neither defines who qualifies as what holder type, nor at what percentage a holding should be excluded. For some shareholder categories, the distinction between shareholder subtypes and their exclusion thresholds can demand vastly different free-float factors. A good example is the "Governments" category, which both Russell and the BMV indexes exclude. In reality, there are several types of government holders that all purchase and hold shares for different reasons and lengths of time. The Russell Indexes solution is to break "Governments" into the categories of direct government holders, indirect government holders, and government pension plans. Direct government holders are those that are explicitly labeled "government of" a municipality, province, or state (or "Ministry of"/"Minister of"). Indirect government holders are often sovereign wealth funds, but they can also be corporations held by the state. Government pension plans are often social security entities; as such, they are treated like institutions and are therefore excluded at 40% or more. Russell excludes direct government holders at any holding level, but indirect government holders are only excluded at 10% ownership or more.

⁹ The first methodological document is the BMV's float-adjustment announcement "BMV Will Adjust its Index," and the second is the IPC's methodology "Nota Metodológica del Índice de Precios y Cotizaciones de la BMV" (in English: "Methodology Note of the Prices and Quotations Index"). Both are available for download on the BMV's website.

Returning to the IPC's methodology, the rule does not clarify if or how the various government holders are excluded, much less delve into their type or percentage holding. The problem with methodological ambiguity is that an investor using the index as a benchmark can neither assess the quality of the index's construction versus other indexes nor understand changes in index constituents or weights. To what extent can an investor trust an ETF when the accuracy of its underlying index is nearly impossible to double-check? The lack of transparency means that BMV float calculations and therefore index weights can differ significantly from other indexes' free float in ways that are not readily visible and for reasons that are unknowable.

This problem is particularly grave given how difficult it is to obtain information in Mexico. In a conversation with the BMV, the BMV confirmed that the percentages at which shareholders are removed from the free-float calculation are not disclosed publicly. Also, the BMV and the SEC-equivalent, the Comision Nacional Bancaria de Valores (CNBV), both receive float information from Mexican companies, but this confidential information is never disclosed by either group and is not necessarily reliable.¹⁰ Without investors ever knowing, the BMV could have the same float data as another index but calculate a vastly different free-float factor. An investor would have to undertake extensive float research to know what the free-float factor should be, and whether the expected number of shares was represented in the index. But since Mexican companies are not required to publicly disclose their shareholding pattern, it is not always possible to obtain recent shareholding information for a company, in which case it is nearly impossible to double-check the BMV.

It is unreasonable to expect an investor to research every security in an index to understand why it performs the way it does. For this reason, given that the potential consequences of incorrect float research are high, an investor might be better served by other, more transparent indexes covering the same region and constituents.

2. The IPC methodology utilizes "float bands."

The BMV's float calculation includes a step that the Russell Mexico Index does not employ; securities are placed into float brackets, or "bands," as FTSE calls them,¹¹ based on their free-float factor.¹² The free-float factor is calculated and then checked against the table in Table 1. For any free-float values within the range delimited in the corresponding cell of the table, the percentage of shares to be included in the IPC is automatically bumped up to the predetermined level for that bracket. For example, if a stock's free-float factor is 39%, then 40% of its shares will be represented in the IPC.¹³

¹⁰ Bolsa Mexicana de Valores. Telephone interview by Carmen Campollo and Kyla Roberts. 30 Aug 2010.

¹¹ "Free Float Adjusted." FTSE, n.d. Web. 1 Sep 2010. <http://www.ftse.com/Indices/FTSE_Index_Standards/Free_Float.jsp>.

¹² The BMV calls the process "rounding" or "rounded" ("redondeado"). "Nota Metodológica del Índice de Precios y Cotizaciones de la BMV." Bolsa Mexicana de Valores, Sep 2010. Web. 1 Sep 2010. <<http://www.bmv.com.mx/>>.

¹³ The free-float bands delimited in Table 1 are the same bands used by FTSE. "Free Float Adjusted." FTSE, n.d. Web. 1 Sep 2010. <http://www.ftse.com/Indices/FTSE_Index_Standards/Free_Float.jsp>.

Table 1 / BMV Float Bands

IPC-Calculated Free Float Factor in %	% to Use in Adjusting Market Cap Values
< 5%	Ineligible for the index
> 5% to 14.99%	Actual
> 15% to 19.99%	20%
> 20% to 29.99%	30%
> 30% to 39.99%	40%
> 40% to 49.99%	50%
> 50% to 74.99%	75%
> 75% to 100%	100%

The case where a security's free-float factor is boosted from 39% to 40% is an acceptable use of rounding. Rounding itself is not an issue; numerous reporting documents from the companies themselves round their shareholdings, meaning that free-float factors are often pre-rounded before index usage. The problem is the way the IPC's bands are constructed and delimited. As the methodology currently stands, if a stock's free-float factor is 29.99%, then 30% of its shares will be represented in the IPC. And if the free-float factor is 30.00%, then 30.00% of the shares are represented. But if its free-float factor is 30.01%, then 40% of its shares will be represented in the IPC, at which point the word "rounding" is not accurate. Rounding implies that securities closer to the bottom of the band than to the top are rounded down rather than up. With the BMV's "rounding," securities are rounded up regardless of how far they are from the top.

Despite FTSE's distinguished use of the system represented by Table 1, the practice of float banding is in fact problematic. Small changes in holder positions can cause large changes in index representation. To illustrate: If a holder owns 25.01% (74.99% free float) and reduces its holding to 24.99% (75.01% free float), then its index representation jumps from 75% to 100%. Any security on the border of a float band is in danger of small free float becoming large weight adjustments. Worse, the float bands can either understate or magnify changes in free float. If a 50.00% holder becomes a 59.99% holder, a change of ~10 percentage points (PP), then index representation goes from 75% to 50%. But if a 50.01% holder becomes a 60.01% holder, then representation in the index drops to 40%. A change of 10 PP can translate to index representation changing by up to 35 PP. This example works the other way as well; a 49.99% holding can fall to 25.01%, and index representation stays at 75, disguising changes in shareholding. Either outcome represents an index distortion, since the point of float adjustment is to account for *only* and *all* those shares that are available and being traded freely.

There is some empirical evidence of constituent turnover in the IPC, possibly from float banding. In February 2010, Grupo Famsa and two other securities entered the IPC, while Industrias CH and two others left.¹⁴ In September 2010,¹⁵ Industrias CH (and three others) is slated to reenter the IPC, and Grupo Famsa (and another) will exit.¹⁶ It is problematic that the IPC's methodology allows new securities to enter the index and to exit six months later, and that it reintroduces securities months after they have been kicked out. The same

¹⁴ "Cambio de Muestra del Índice de Precios y Cotizaciones (IPC)." Bolsa Mexicana de Valores, 06 Jan 2010. Web. 1 Sep 2010. <<http://www.bmv.com.mx/>>.

¹⁵ Except in cases of corporate actions, securities have not entered or exited the IPC over the last year, except during the index reconstitutions in February and September 2010.

¹⁶ "Aviso de la nueva muestra del IPC que entrará en vigor el 1° de septiembre del 2010 y hasta el 31 agosto del 2011." Bolsa Mexicana de Valores, 30 Aug 2010. Web. 1 Sep 2010. <<http://www.bmv.com.mx/>>.

securities should not continuously enter and exit an index, as this turnover introduces unnecessary trading costs.¹⁷

Overweighting

The end result of float banding is that virtually all securities in the IPC will be overweighted. Only securities with a free-float factor of between 5% and 14.99% or of 100% are represented in the IPC by precisely their free-float factor.¹⁸ For all other free-float values, though, the securities will be between .01 and 25 PP overweighted.

Why does it matter how many of a company's shares are factored into the index weight? Primarily, companies' share prices get a boost from being in a principal index. They gain visibility and, more importantly, they get the benefits of being part of the group of stocks to which ETFs are indexed.¹⁹ And because the IPC ranks securities by float-adjusted market cap – which is determined *by bracket* – to find its 33 constituents, the idea that float banding could be the difference between a security making and not making the index is of great interest to investors and constituents alike.²⁰ How does float affect the constituent list? Table 2 gives two sample securities.

Table 2 / Market Cap and Free Float: IPC vs. Russell

	Market Cap (millions of pesos)	Free Float Factor (%)	Russell Float-Adjusted Market Cap (millions of pesos)	IPC Float-Adjusted Market Cap (millions of pesos)
Security A	1,000	75.01	750	1,000
Security B	1,250	74.99	937.375	937.500

If only one of these securities were to be included in the index, then Russell Indexes would include Security B, because it has a higher market cap. But by IPC methodology, Security A's one billion-peso float-adjusted market cap would be considered the higher market cap. Security B's float-adjusted market cap hardly changes between Russell Indexes and IPC methodology, but the IPC and Russell Indexes methodologies produce opposite results; under the IPC methodology, Security A would be included in the index and Security B would

¹⁷ FTSE deals with high constituent turnover from banding by not changing the security's bracket unless the change in free float increases the security's free-float factor to five PP above or below the boundary of the adjacent band. While this practice would decrease turnover, it might also increase the amount of distortion allowed in the index. In theory, if a security's free-float factor decreased from 100% to 71%, then by the FTSE methodology the security would stay at a free-float factor of 100% despite the 29 PP distortion. The various IPC methodology documents are all silent on whether or not it applies a similar 5% cushion to float band changes. Given that the BMV's methods are modeled off of the FTSE model per a conversation with the consultant who suggested the model, it is possible that the 5% cushion is employed by the BMV as well. FTSE The Index Company. "Free Float." FTSE, n.d. Web. 1 Sep 2010. <http://www.ftse.com/Indices/FTSE_Global_Equity_Index_Series/Index_Rules/Eligibility_Screens/Free_Float.jsp>.

¹⁸ The FTSE index standards, which the BMV's methodology echoes, call for free-float values of between 5% and 14.99% to be rounded up to the next whole number, which would slightly overweight securities with low free float. The document "BMV Will Adjust its Index" asterisks the word "Actual," but the document is missing the corresponding footnote to clarify the meaning of the asterisk. The Spanish version lacks even the asterisk. Given that the BMV's methods are modeled off of FTSE, it is probable that securities with a free-float factor of between 5% and 15% are also slightly overweighted. "Free Float Adjusted." FTSE, n.d. Web. 1 Sep 2010. <http://www.ftse.com/Indices/FTSE_Index_Standards/Free_Float.jsp>.

¹⁹ For a discussion of this so-called "reconstitution effect," see Laurence B. Siegel *Research Foundation Publications*, Benchmarks and Investment Management (August 2003): 53-55. Web. 8 Sep 2010. <<http://www.cfapubs.org/doi/pdf/10.2470/rf.v2003.n1.3922>>.

²⁰ "Nota Metodológica del Índice de Precios y Cotizaciones de la BMV." Bolsa Mexicana de Valores, Sep 2010. Web. 1 Sep 2010. <<http://www.bmv.com.mx/>>.

not. Part of the distortion is that not all securities are equally benefited by float banding. Some securities (i.e., those with a free-float factor of ~75%) get a 25 PP boost, while others (i.e., those with between 5% and 15% free float) do not get a float-banding boost at all.

There is another reason why investors might care about the IPC's float-bracketing practice. For securities with a relatively small market cap, whether 35% or 40% of its shares are represented in the index will not necessarily materially affect either the security's weight in the index or overall index performance. However, for large securities, overweighting from float banding can affect index performance.

Figure 1 depicts IPC cumulative returns between August 2005 and July 2010 in gray, and Russell Mexico Large Cap Index (Russell Mexico LC) in blue.²¹ Although the two indexes' cumulative returns are in general highly correlated (see Table 3), Russell Mexico LC significantly outperformed the IPC for the period May 2007 to May 2008, while the IPC has increasingly outperformed Russell Mexico LC over the past year. To illustrate, on October 30, 2009, the IPC outperformed Russell Mexico LC by 2.07 PP. By November 30, 2009, outperformance had increased to 3.13 PP. IPC outperformance spiked to 10.47 PP on February 26, 2010, just after the IPC rebalance. Beginning in March 2010, IPC outperformance fell, stabilizing at just under 5.0 PP (around 4.80 PP) on July 30, 2010.

Figure 1

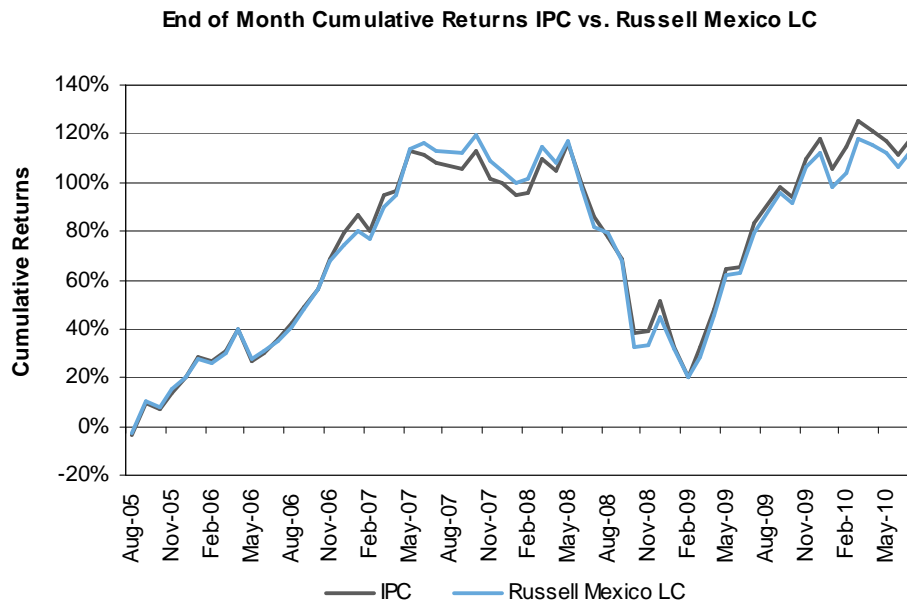


Table 3 / Correlation and Standard Deviation, August 2005–July 2010

Correlation				Standard Deviation		
August 05–July 10		November 09–July 10		Date	Russell	IPC
Russell	IPC	Russell	IPC			
1	0.9941	1	0.9396	8/05-7/10	0.370337	0.370094
Russell	1	1	0.9396	11/09-7/10	0.063774	0.060922
IPC	0.9941	0.9396	1			

²¹ Data from Russell Indexes.

The IPC's outperformance coincides with the IPC float adjustment, which occurred between November 3, 2009 and August 2, 2010. As mentioned, overweighting matters most for companies with large market caps and index weights. As the next section will discuss, some of the top securities in the IPC are significantly overweighted, with a noticeable effect on index performance.

Overcontribution: a coin toss

The constituent and weighting differences between Russell Mexico LC and the IPC are a major factor in the IPC's outperformance between November 2009 and August 2010. In terms of constituent differences, Russell Mexico LC is comprised of 27 securities, only five of which are not in the IPC (some appear in other BMV indexes). The IPC, on the other hand, has numbered between 31 and 35 securities since November 2009. Over the same time period, 13 of those securities are not included in Russell Mexico LC (they are in the Russell Mexico Small Cap Index). Those securities only in the IPC have consistently overcontributed relative to the securities that are only in Russell Mexico LC, with the effect that the IPC's performance is often more extreme than Russell Mexico LC's performance.

Weighting differences also play an important role in IPC outperformance, since most IPC securities are overweighted from float banding. The two securities that appear to have the greatest influence over index performance are the two largest securities in both Russell Mexico LC and the IPC: America Movil and Walmex. Table 4 shows that the IPC weights Walmex more heavily than does Russell Mexico LC, while Russell Mexico LC weights America Movil more heavily than does the IPC.²²

Table 4 / Russell Mexico LC vs. IPC selected weights in % as of August 2010

	Russell Mexico LC	IPC
America Movil	31.1%	26.5%
Walmex	9.8%	11.5%

Comparing the IPC's and Russell Mexico LC's performance on the days when the difference in their daily returns was the most extreme, Walmex's overcontribution and outperformance in the IPC and America Movil's overcontribution and poor performance in Russell Mexico LC appear to have contributed strongly to the IPC's significant outperformance. Table 5 shows that on February 18, 2010, America Movil overcontributed in Russell Mexico LC (-0.128 of Russell Mexico LC's daily return of +0.51%) and Walmex overcontributed in the IPC (+ 0.443 of the IPC's 0.9% return). The IPC outperformed Russell Mexico LC for the day.

Table 5 / Comparison of Daily Returns and Contribution to Performance on Selected Dates

Date	America Movil Contribution		Walmex Contribution		IPC Daily Return	Russell Mexico LC Daily Return
	RMLC	IPC	RMLC	IPC		
2/18/10	-0.128	-0.079	0.263	0.443	0.9%	0.51%
3/3/10	0.704	0.430	-0.095	-0.173	0.9%	1.28%

²² The IPC caps individual security weights at 25%. Between June and September 2010, the BMV has temporarily allowed America Movil's weight to exceed 25% while it sells Telmex Internacional (TELINTL) shares. America Movil acquired Telmex Internacional and Grupo Carso Telecom in January 2010. "BMV permitirá que AMóvil supere la ponderación máxima." *El Economista*. Reuters, 27 May 2010. Web. 2 Sep 2010. <<http://eleconomista.com.mx/mercados-estadisticas/2010/05/27/bmv-permitira-que-amovil-supere-ponderacion-maxima>>.

Table 5 also shows that overweighting does not always work in the IPC's favor. On March 3, 2010, America Movil outperformed in the Russell Mexico LC (+0.704 of the day's return of +1.28%), while Walmex underperformed in the IPC (-0.173 of the daily return of +0.9%). Notice that when America Movil performed well and Walmex did not, Russell Mexico LC experienced a higher daily return. But when America Movil performed badly and Walmex did well, the IPC outperformed Russell Mexico LC for the day.

The conclusion is that although the IPC's outperformance may imply that it has a methodological advantage, this knife cuts both ways. The IPC is currently enjoying the benefits of the fact that some large and overweighted securities are outperforming, while some securities that it underweights relative to Russell Mexico are underperforming. When the fate of an index hangs on a few securities' exaggerated influence, the index can be vulnerable to poor performance even if only one or two securities underperform.

Conclusion

This paper has demonstrated that there are two major problems with the IPC's new methodology. First, the methodology is not transparent. Excludable holders are inadequately defined, and the thresholds for exclusion remain undisclosed. Second, the IPC's float bands are constructed such that by definition, most securities will be overweighted, some by as much as 25%. If the security's free-float calculation is off for any reason, including rounding error, reporting error or differences in exclusion thresholds, then the overweighting can exceed 25%. Finally, small changes in holdings can cause disproportionate changes in index weight. Non-transparency makes the index's representativeness suffer, and the consequences are apparent in index performance.

Since November 2009, the IPC has increasingly outperformed Russell Mexico LC. During this time period, the IPC-only securities outperformed the Russell-only securities. Furthermore, Russell Mexico LC assigns a greater weight to America Movil than the IPC does, and the IPC weights Walmex more highly than Russell Mexico does. The fact that America Movil has been a lagging mover while Walmex has been a leading mover appears to have significantly influenced performance for both indexes.

The fact that the IPC is enjoying elevated returns does not imply that the IPC's methods generally produce better results. This analysis concludes that the situation could easily reverse itself, and the IPC's performance could suffer from its overweighting. As with any concentrated index, the IPC (along with Russell Mexico LC) is dependent on the performance of a few key securities. So long as – and only so long as – these securities do well, so should the IPC. In the end, a transparent, objective methodology with sound float adjustment practices is what matters. Outperformance is a good thing, but if the methodology is flawed, then the results might not be replicable – or sustainable. Our conclusion is that just because a method is promulgated by a distinguished index does not mean that it is necessarily the best index practice.

**For more information about Russell Indexes, call us or visit www.russell.com/indexes.
Americas: +1-877-503-6437; APAC: +65-6880-5003; EMEA: +44-0-20-7024-6600**

Disclosures

Russell Investments is a Washington, USA corporation, which operates through subsidiaries worldwide and is a subsidiary of The Northwestern Mutual Life Insurance Company.

Russell Investments is the owner of the trademarks, service marks and copyrights related to its respective indexes.

Indexes are unmanaged and cannot be invested in directly.

This material is proprietary and may not be reproduced, transferred or distributed in any form without prior written permission from Russell Investments. It is delivered on an "as is" basis without warranty.

Nothing contained in this material is intended to constitute legal, tax, securities or investment advice, nor an opinion regarding the appropriateness of any investment, nor a solicitation of any type. The general information contained in this publication should not be acted upon without obtaining specific legal, tax and investment advice from a licensed professional.

This is not an offer, solicitation or recommendation to purchase any security or the services of any organization.

Copyright © Russell Investments 2010. All rights reserved.

First use: October 2010.

CORP-6335