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Exploring Liquidity and Dividends in Peru

EXECUTIVE SUMMARY

In recent years, Peru has seen rapid changes and developments in its capital market. Based on our research, two major developments worth noting are recent improvements in liquidity and the persistent tendency of Peruvian securities to pay dividends. These two elements combined create implications for the type of strategies and market access available to market participants. In this paper, we explore how more liquid portfolios perform compared to the broad market in Peru. Our analysis shows that more liquid portfolios tend to perform better, but that sector diversification needs to be considered as well. Next, we examine if dividend payers are consistently rewarded by the market compared with non-payers. Based on the back-tested results, our analysis shows that an income-oriented strategy, with a focus on liquidity, has historically delivered higher returns than the broad market and the universe of dividend-paying securities.

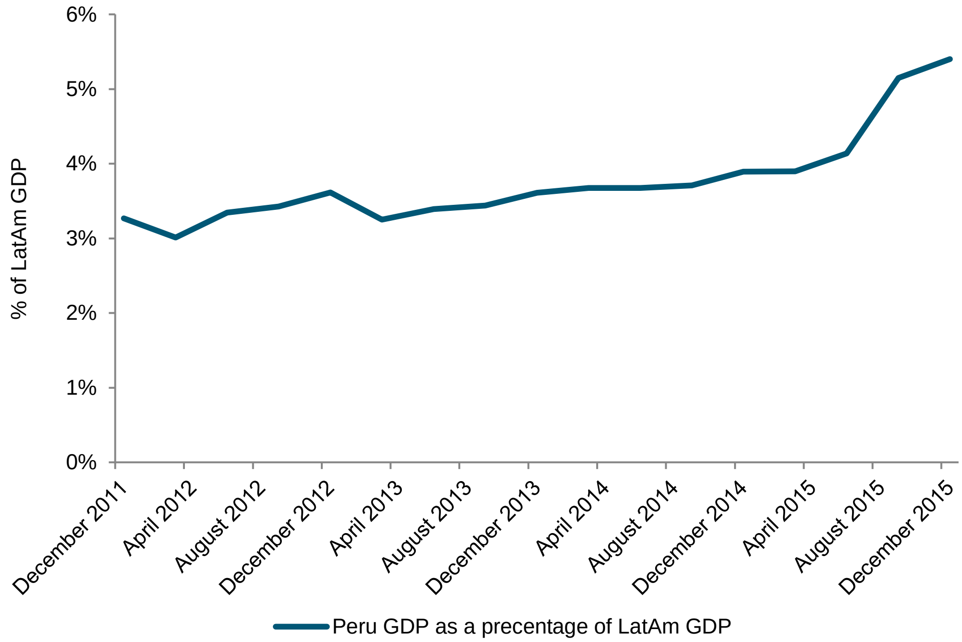
I. OVERVIEW

Peru presents a growing diversified opportunity set for market participants looking for exposure beyond the traditional Latin American economies such as Brazil, Mexico, Chile, and Argentina.

Peru, which represents around 1.15% of the U.S. economy, has experienced an average annual real growth of 4.8% over the past five years.[1] As shown in Exhibit 1, the Peru's representation of the Latin American economy has been steadily increasing. Given this growth, Peru presents a growing diversified opportunity set for market participants looking for exposure beyond the traditional Latin American economies such as Brazil, Mexico, Chile, and Argentina.

[1] Data adapted from third party materials, World Bank http://data.worldbank.org/

Exhibit 1: Quarterly GDP Comparison Between Peru and Latin America



Source: Adapted from The World Bank, data in USD, annualized. Data from December 2011 to December 2015. Chart is provided for illustrative purposes.

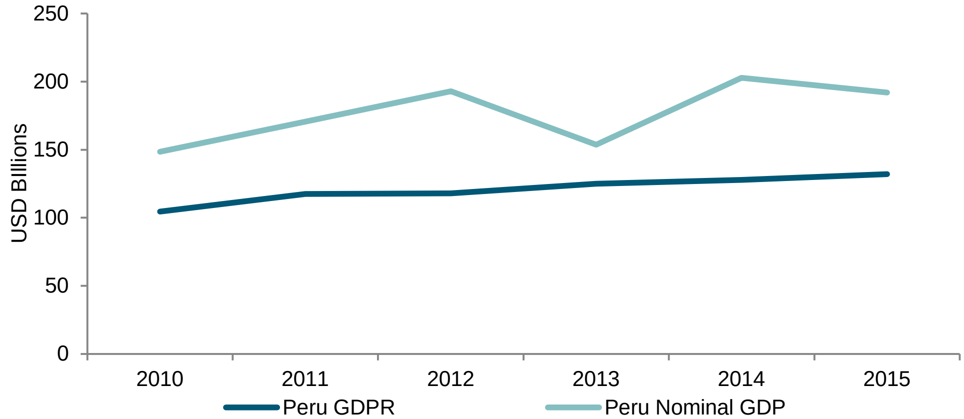
It should be noted that part of the increase in representation of Peru's GDP within Latin America could stem from of decline in the Brazilian economy. As is shown in Exhibit 2, in real terms, Peru's GDP has been rather stable for the past five years. The growth in GDP has been seen only in nominal terms.

In terms of capital markets, Peru makes up roughly 4% of Latin American equity markets (see Exhibit 3). While the sum of the total market cap outstanding of all the securities in the S&P Peru BMI[2] amounts to approximately 28% of the economy, the figure drops to just 10% when using the float-adjusted market cap of the securities (see Exhibit 4). This finding highlights the importance of using free-float adjusted market cap to accurately represent the amount of shares available to market participants. For an emerging economy, in addition to free float, liquidity is another important consideration. In the next section, we explore whether liquidity has had an impact on the returns of securities.

For an emerging economy, in addition to free float, liquidity is another important consideration.

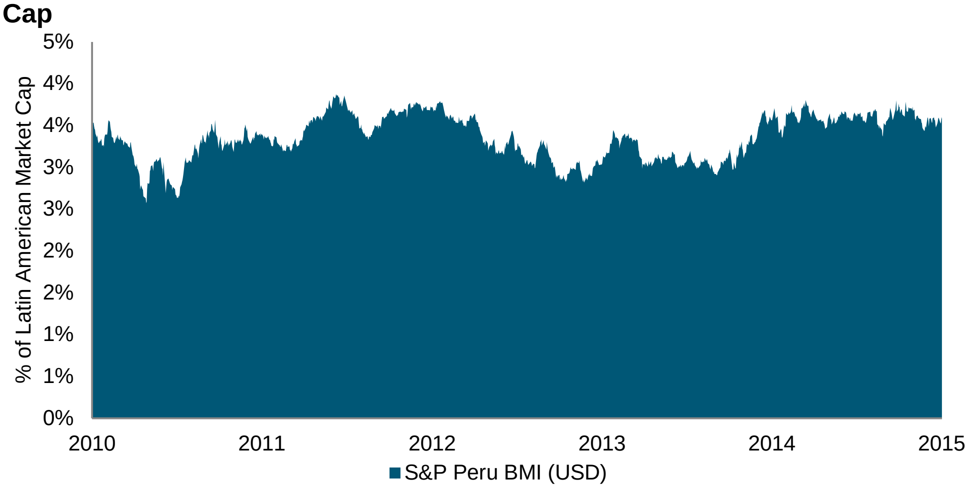
[2] The S&P Peru Broad Market Index (BMI) is a broad benchmark country index of the S&P Global BMI, representing nearly 95% of the market. At its annual rebalancing, eligible constituents must have a minimum float-adjusted market capitalization of USD 100 million and a minimum annual value traded of USD 50 million to become index members. For more information please refer to the *S&P Global BMI, S&P/IFCI Methodology* located on our Web site, www.spdji.com.

Exhibit 2: Peruvian GDP



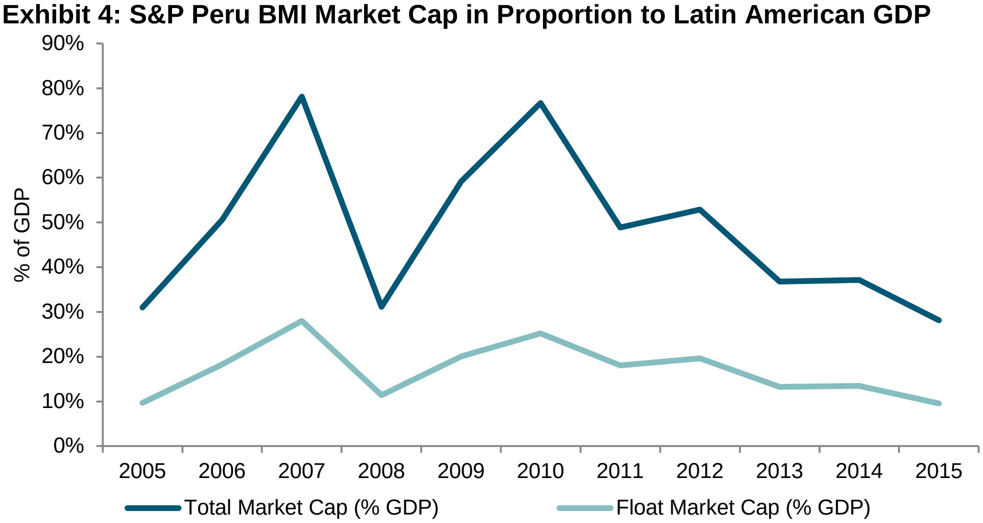
Source: Adapted from The World Bank, data in USD. Data from December 2010 to December 2015. Chart is provided for illustrative purposes.

Exhibit 3: Peruvian Market Cap as a Percentage of Latin American Market Cap



Source: S&P Dow Jones Indices LLC. S&P Latin America BMI and S&O Peru BMI, Data from December 2010 to December 2015, in USD. Chart is provided for illustrative purposes.

Exhibit 4: S&P Peru BMI Market Cap in Proportion to Latin American GDP



Source: Adapted from The World Bank, data in USD. S&P Dow Jones Indices LLC, S&P Peru BMI. Data from December 2005 to December 2015. Chart is provided for illustrative purposes.

II. LIQUIDITY

Liquidity characterizes the efficiency of trading securities with little or no price impact.

Liquidity characterizes the efficiency of trading securities with little or no price impact. According to Financial Times, the term liquidity implies, "how easy it is to perform a transaction in a particular security or instrument. A liquid security, such as a share in a large listed company or a sovereign bond, is easy to price and can be bought or sold without significant price impact. With an illiquid instrument, trying to buy or sell may change the price, if it is even possible to transact."[3] A high-liquid stock typically has adequate buyers and sellers, so the stock can be traded quickly without substantial changes in price. On the other hand, an illiquid stock requires a longer transaction, which can cause a wide swing in price movement.

There are many ways to gauge market liquidity. One commonly used measurement is the average daily trading volume (ADTV) over a specified period. For example, a three-month ADTV means the average of daily trading volume over the past three months. Since trading volume can vary from time to time, ADTV provides an estimate of the average daily level of volume market participants can reasonably expect. High ADTV indicates that a stock can be traded easily with minimal price impact.

However, ADVT is susceptible to distortions. For example, a stock that normally trades at a low liquidity level can have days during a given period with significantly higher trading volume. Therefore, over a specified period, its ADTV can be distorted, because the high volume data from that unique period will bring up the overall volume level. In most markets, especially developed markets, ADTV is a good method for assessing liquidity. However, in many emerging markets, where liquidity is often a concern, using ADTV to measure market liquidity could be misleading.

In order to minimize any distortion stemming from possible abnormal trading volumes, the median trading volume provides a less skewed way to measure liquidity. In our analysis, we used monthly median traded value ratio (MTVR) to examine the liquidity of Peru's equity market.

The process of calculating MTVR is as follows.

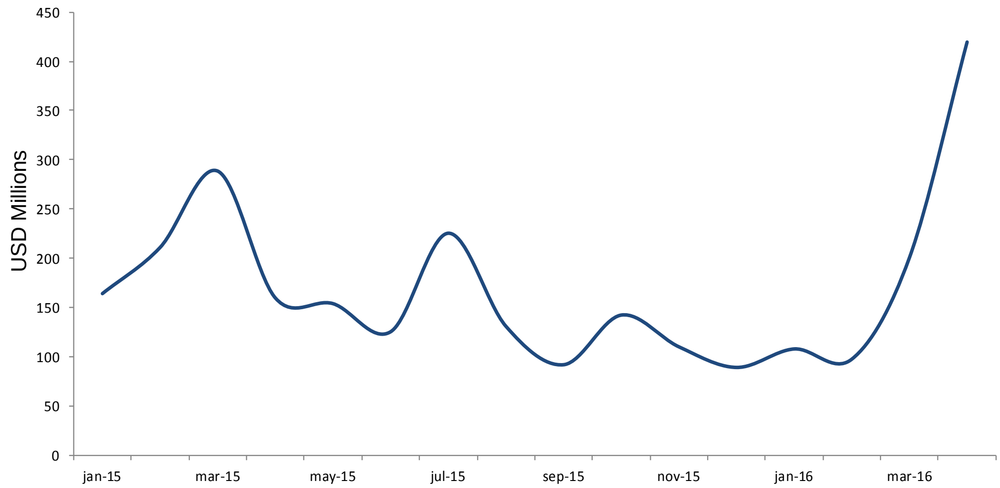
1. Calculate the monthly median traded value, which is the monthly median daily value traded * monthly days traded.
2. Calculate the month-end float-adjusted market cap.
3. Calculate the monthly MTVR, i.e. the result from step 1/result from step 2.
4. Calculate the monthly MTVR for six months, then average the six-month monthly MTVR.

[3] Please refer to the Financial Times http://lexicon.ft.com/Term?term=liquidity for further details.

Starting in 2011, liquidity in Peru's capital markets plunged significantly. Trading volume started picking up in late 2015, partly in response to a series of capital market reforms passed by the government. Exhibit 5 illustrates recent changing liquidity levels in Peru's stock market.

Given that liquidity levels in Peru begin improving, we tested to see if liquidity plays a major role in driving the returns of Peruvian securities. In particular, we looked to see if more liquid portfolios produced better risk and return charactiertsics than the broader market.

Exhibit 5: Liquidity Levels in Peru–Monthly Traded Volume, Equity



Source: Adapted from Bolsa de Valores de Lima (BVL). Data from January 2015 to March 2016. Chart is provided for illustrative purposes.

Using the S&P/BVL Peru Select Index[4] as our selection universe, we studied the risk and return characteristics displayed by three hypothetical portfolios measuring liquid securities. Each portfolio was float-adjusted market cap weighted. In order to avoid single-stock concentration risk, we limited the weight of single companies to a maximum weight of 20% of the portfolio. Furthermore, we capped the number of securities in each Global Industry Classification Standard (GICS®)[5] Industry[6] for Portfolio 1 and Portfolio 2, making it so that no Industry could have more than three stocks. All three portfolios were rebalanced semiannually in March and September. We tested the performance of the portfolios from Sept. 15, 2006, through March 31, 2016.

[4] The S&P/BVL Peru Select Index has high thresholds to screen large cap and active stocks. For more information on the index please refer to the *S&P/BVL Peru Select Index* methodology posted on our Web site, www.spdji.com.

[5] Global Industry Classification Standard is a four-tiered industry classification structure. For more information, please refer to *S&P Dow Jones Indices' GICS Methodology* document.

[6] The portfolios in this study used GICS' Industry, the third level of its four-tier classification structure which offered better diversification than the typical Sector level.

The three hypothetical portfolios were constructed as follows.

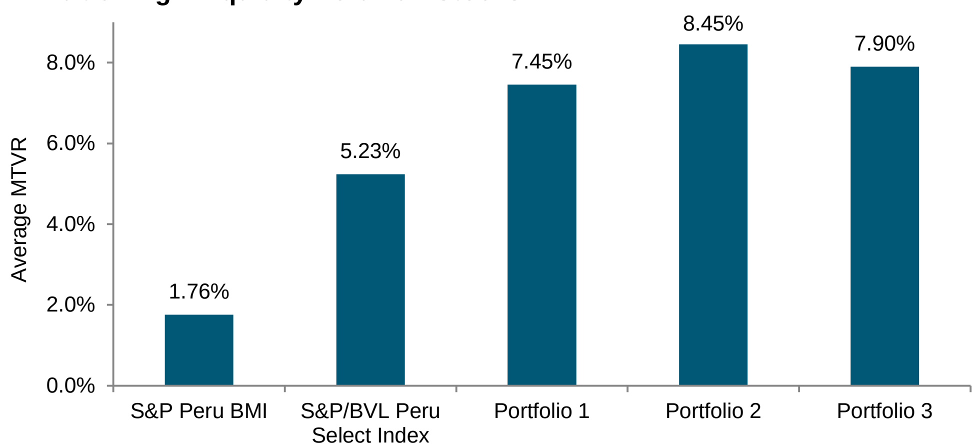
Portfolio 1: Excluded the companies with six-month average MTVR in the bottom 10%.

Portfolio 2: Excluded the companies with six-month average MTVR in the bottom 20%.

Portfolio 3: Selected the top 12 most liquid companies in terms of six-month average MTVR.

As shown in Exhibit 6, having the additional liquidity requirement helped the overall trading volume in the hypothetical portfolios. For example, after eliminating the companies with liquidity ratios ranked in the bottom 20%, the overall MTVR of Portfolio 2 increased to 8.45%, compared with 1.76% and 5.23% seen in the S&P Peru BMI and S&P/BVL Peru Select Index, respectively.

Exhibit 6: High-Liquidity Peruvian Stocks



*Portfolio 1, Portfolio 2, and Portfolio 3 are hypothetical portfolios.
Source: S&P Dow Jones Indices LLC. Data from August 2006, to February 2016. Past performance is no guarantee of future results. Chart is provided for illustrative purposes and reflects hypothetical historical performance. Please see the Performance Disclosures at the end of this document for more information regarding the inherent limitations associated with back-tested performance.

Despite higher risk/reward ratios, the drawdowns of both portfolios were higher than the broad market.

The hypothetical portfolios told a different story when looking through risk and return figures (see Exhibits 7 and 8). Based on the back-tested data, both Portfolio1 and Portfolio 2 historically delivered better risk-adjusted returns than the broad market indices over the short- and long-term investment horizons. It should be noted that despite higher risk/reward ratios, the drawdowns of both portfolios were higher than the broad market.

We did not, however, observe the same higher risk/reward ratio in Portfolio 3. For Portfolio 3, although its liquidity had improved, the risk-adjusted returns were only in line with the broad market indices, as measured by the

S&P Peru BMI, the MSCI Peru,[7] and the S&P/BVL Peru General Index.[8] Portfolio 3 also had higher drawdowns than the other two hypothetical portfolios. We concluded that the tradeoff of including high-liquidity stocks in a portfolio with no sector consideration (Portfolio 3) resulted in lower portfolio returns and higher possible drawdowns.

Exhibit 7:

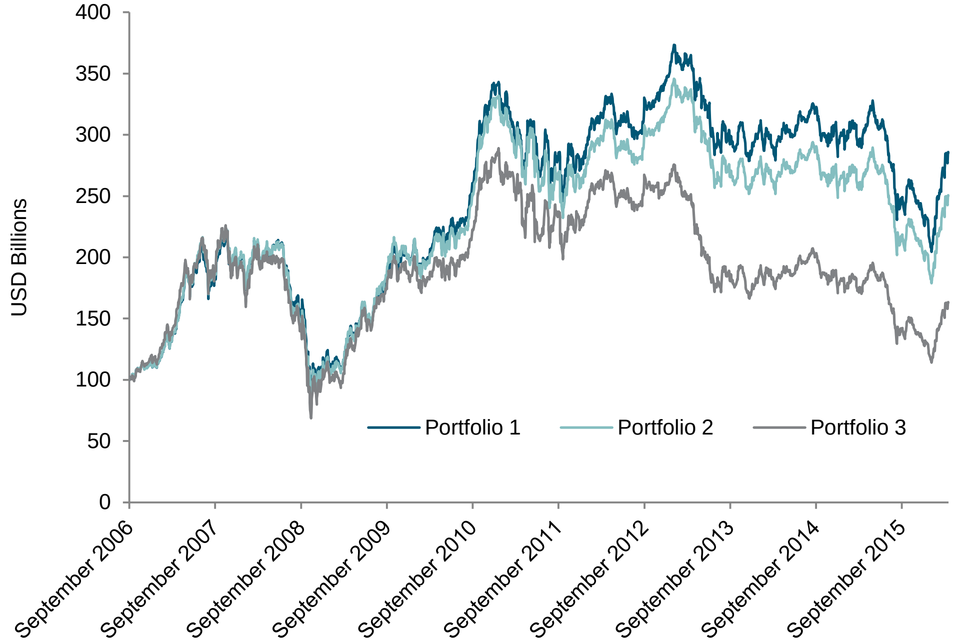
Time Period	Portfolio 1	Portfolio 2	Portfolio 3	S&P Peru BMI	MSCI Peru	S&P/BVL Peru General Index†
Annualized Return (%)						
1-Year	-2.26	-2.76	-5.06	-6.00	-0.78	-3.24
3-Year	-7.67	-9.32	-13.25	-12.05	-3.22	-15.22
5-Year	-1.26	-3.53	-8.80	-6.48	-2.64	-5.98
7-Year	11.68	9.50	4.20	6.43	7.52	7.91
Since September 2006	11.15	9.60	5.00	7.30	9.09	7.50
Annualized Risk (%)						
1-Year	28.62	29.01	31.65	28.33	26.96	28.68
3-Year	19.98	20.68	24.00	20.60	20.43	21.16
5-Year	19.85	20.76	23.48	20.91	20.99	22.99
7-Year	21.29	22.31	24.01	22.64	24.26	23.85
Since September 2006	25.73	26.93	29.87	27.81	30.42	26.61
Risk-Return Ratio						
1-Year	-0.079	-0.095	-0.160	-0.212	-0.029	-0.113
3-Year	-0.384	-0.451	-0.552	-0.585	-0.158	-0.719
5-Year	-0.063	-0.170	-0.375	-0.310	-0.126	-0.260
7-Year	0.549	0.426	0.175	0.284	0.310	0.332
Since September 2006	0.433	0.356	0.167	0.262	0.299	0.282
Max Drawdown (%)	-58.68	-61.46	-69.69	-62.84	-68.00	59.6

*Portfolio 1, Portfolio 2, and Portfolio 3 are hypothetical portfolios.
Source: S&P Dow Jones Indices LLC. Data from September 2006, to March 2016. Past performance is no guarantee of future results. Table is provided for illustrative purposes and reflects hypothetical historical performance. Please see the Performance Disclosures at the end of this document for more information regarding the inherent limitations associated with back-tested performance. †To maintain consistency in the data, historical performance for the S&P/BVL Peru General Index uses float-adjusted market capitalization weighting methodology.

[7] The MSCI Peru Index is a modified market-cap-weighted index that is designed to serve as the broad benchmark for the Peruvian stock market.

[8] The S&P/BVL Peru General Index is designed to measure the performance of the large- and mid-cap segments of the Peruvian market. For more information on the index, please refer to https://www.msci.com/

Exhibit 8: Overall Performance



*Portfolio 1, Portfolio 2, and Portfolio 3 are hypothetical portfolios.
Source: S&P Dow Jones Indices LLC. Data from September 2006, to March 2016. Past performance is no guarantee of future results. Chart is provided for illustrative purposes and reflects hypothetical historical performance. Please see the Performance Disclosures at the end of this document for more information regarding the inherent limitations associated with back-tested performance.

The Peruvian equity market is significantly driven by the materials sector, with the largest concentration seen in the metals & mining industry in particular.

Given that the Peruvian economy is dominated by the mining sector, reflecting its abundance in natural resources, it is not surprising that the country's equity market is significantly driven by the materials sector, with the largest concentration seen in the metals & mining industry in particular. In fact, according to the January 2016 report from the U.S. Geological Survey (USGS), Peru has become the third-largest producer of copper in the world.[9]

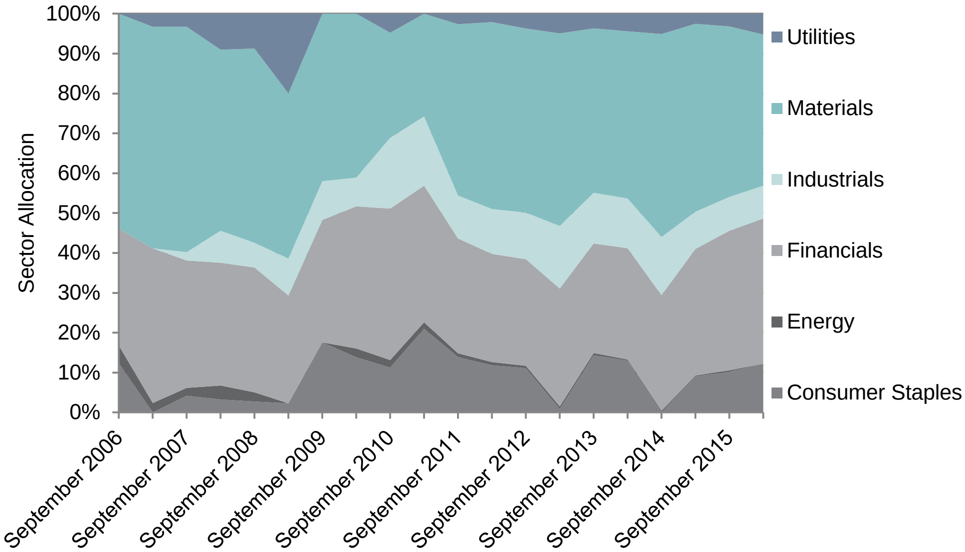
When selecting highly liquid companies, the difference in composition between the three hypothetical portfolios amounts to merely a handful of securities. Part of the outperformance of Portfolio 1 and Portfolio 2 over Portfolio 3 could be the result of the additional rule imposed in Portfolio1 and Portfolio 2 to diversify industry allocation.

Exhibits 9.1, 9.2, and 9.3 show the historical sector compositions of the three portfolios during the back-tested period. Given the constraint that no single industry can have more than three securities, both Portfolio 1 and Portfolio 2 exhibited a fair degree of sector diversification, whereas Portfolio 3 lacked sector diversification, despite having the most liquid stocks.

[9] http://minerals.usgs.gov/minerals/pubs/commodity/copper/mcs-2016-coppe.pdf

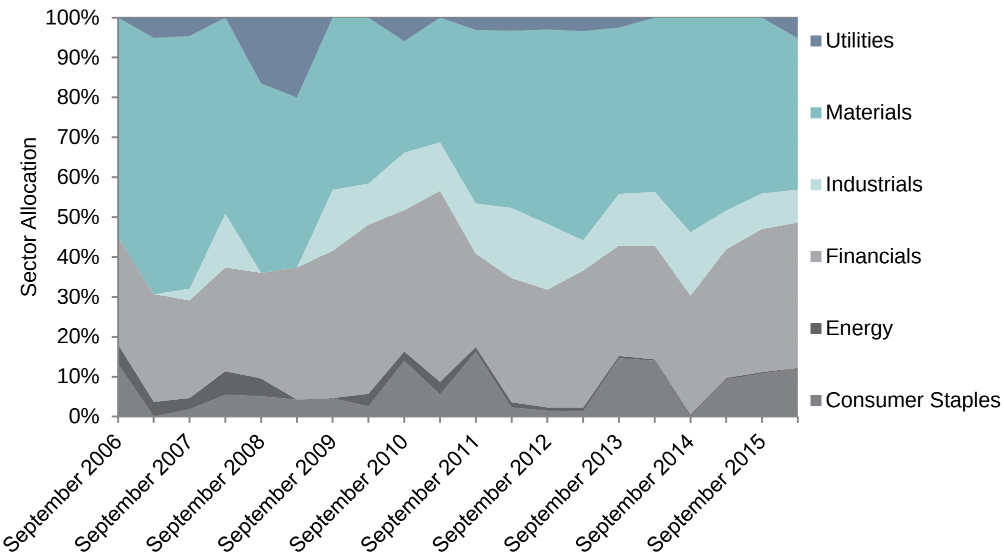
Given the constraint that no single industry can have more than three securities, both Portfolio 1 and Portfolio 2 exhibited a fair degree of sector diversification.

Exhibit 9.1: Portfolio 1 Sector Allocation



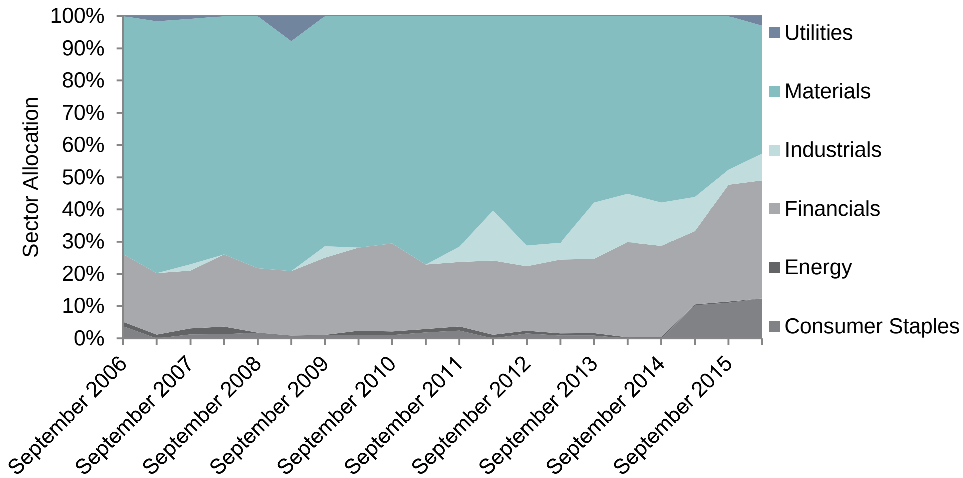
*Portfolio 1 is a hypothetical portfolio.
Source: S&P Dow Jones Indices LLC. Data from August 2006, to March 2016. Past performance is no guarantee of future results. Chart is provided for illustrative purposes and reflects hypothetical historical performance. Please see the Performance Disclosures at the end of this document for more information regarding the inherent limitations associated with back-tested performance.

Exhibit 9.2: Portfolio 2 Sector Allocation



*Portfolio 2 is a hypothetical portfolio.
Source: S&P Dow Jones Indices LLC. Data from August 2006, to March 2016. Past performance is no guarantee of future results. Chart is provided for illustrative purposes and reflects hypothetical historical performance. Please see the Performance Disclosures at the end of this document for more information regarding the inherent limitations associated with back-tested performance.

Exhibit 9.3: Portfolio 3 Sector Allocation



*Portfolio 3 is a hypothetical portfolio.
Source: S&P Dow Jones Indices LLC. Data from August 2006, to March 2016. Past performance is no guarantee of future results. Chart is provided for illustrative purposes and reflects hypothetical historical performance. Please see the Performance Disclosures at the end of this document for more information regarding the inherent limitations associated with back-tested performance.

The lack of sufficient sector diversification can adversely affect investment returns, even if a portfolio is formed with highly liquid companies.

The lack of sufficient sector diversification can adversely affect investment returns, even if a portfolio is formed with highly liquid companies. Exhibit 10 illustrates the performance attribution of the three hypothetical portfolios compared with the S&P Peru BMI over a 10-year investment horizon.

For Portfolio 1 and Portfolio 2, sector allocation contributed overwhelmingly to the positive excess returns over the benchmark. Nearly 90% of excess returns for Portfolio 1 and over 85% of the same for Portfolio 2 were attributed to sector allocation differences. On the other hand, for Portfolio 3, sector allocation detracted nearly 18.6% from its relative returns as compared with the benchmark. As we noted previously, while Portfolio 3 may have had higher liquidity, its poor sector allocation and security selection together caused over 53% of its relative underperformance.

Exhibit 10: Sector Attribution

Attribution	Portfolio 1			Portfolio 2			Portfolio 3		
	Allocation Effect	Selection + Interaction	Total Effect	Allocation Effect	Selection + Interaction	Total Effect	Allocation Effect	Selection + Interaction	Total Effect
Sector	**47.54**	**21.67**	**69.20**	**29.01**	**4.97**	**33.97**	**-18.58**	**-34.51**	**-53.09**
Consumer Staples	27.34	-2.72	24.63	9.42	-5.77	3.65	0.37	-5.15	-4.79
Energy	-0.25	5.20	4.95	-3.53	3.07	-0.46	-3.74	-2.47	-6.21
Financials	5.85	-5.32	0.54	9.76	-2.19	7.56	-2.26	-8.24	-10.50
Industrials	7.69	6.16	13.86	14.99	-1.74	13.24	-3.76	-4.73	-8.49
Materials	7.41	17.85	25.26	3.71	20.16	23.87	-2.63	-11.00	-13.63
Utilities	-0.51	0.48	-0.03	-5.33	-8.55	-13.89	-6.56	-2.91	-9.47

*Portfolio 1, Portfolio 2, and Portfolio 3 are hypothetical portfolios.
Source: S&P Dow Jones Indices LLC. Data from September 2006, to March 2016. Past performance is no guarantee of future results. Table is provided for illustrative purposes and reflects hypothetical historical performance. Please see the Performance Disclosures at the end of this document for more information regarding the inherent limitations associated with back-tested performance.

The contribution of each sector to portfolio total returns shows the need for sector diversification as well. For example, the consumer staples sector in Portfolio 3 generated 11.51% average annual return over the 10-year period. However, the sector only contributed 0.16% to the portfolio's total return due to its small weight (3.08%). In contrast, the materials sector in Portfolio 3 delivered a similar average annual return (10.58%), but it contributed to over 7.45% of the portfolio's total return due to its heavier weight (65.98% on average) in the portfolio (see Exhibit 11).

Our analysis up to this point has highlighted the importance of sector diversification for market participants looking for exposure to the Peruvian market. While liquidity is important and more liquid portfolios tend to perform better than the broad market, our study shows that a lack of sufficient sector diversification can potentially result in portfolio underperformance.

The contribution of each sector to portfolio total returns shows the need for sector diversification as well.

Exhibit 11: Sector Weight and Contribution Over the 10-Year Period

Sector	Average Weight (%)			Total Return (%)			Contribution to Return (%)		
	Portfolio 1	Portfolio 2	Portfolio 3	Portfolio 1	Portfolio 2	Portfolio 3	Portfolio 1	Portfolio 2	Portfolio 3
Consumer Staples	9.86	7.66	3.08	23.71	6.77	11.51	2.74	1.16	0.16
Energy	1.29	1.78	0.78	-2.13	-2.13	-3.38	-0.07	-0.11	-0.10
Financials	30.39	30.94	24.67	17.24	18.90	16.33	5.18	5.53	3.84
Industrials	10.49	10.30	5.10	21.47	16.72	10.08	1.31	1.63	-0.48
Materials	43.98	46.17	65.94	13.86	14.30	10.58	6.49	7.16	7.45
Utilities	3.98	3.14	0.44	10.12	4.56	-0.54	0.62	0.08	0.18

* Portfolio 1, Portfolio 2, and Portfolio 3 are hypothetical portfolios.
Source: S&P Dow Jones Indices LLC. Data from September 2006, to March 2016. Past performance is no guarantee of future results. Table is provided for illustrative purposes and reflects hypothetical historical performance. Please see the Performance Disclosures at the end of this document for more information regarding the inherent limitations associated with back-tested performance.

III. DIVIDENDS

In our previous research on emerging market dividends,[10] we noted that emerging economies can offer investors not just growth opportunities but also enhanced yield strategies, as an increasing percentage of companies pay out dividends. Peru is no exception. Our analysis of Peruvian companies shows that a large majority of them pay dividends, making it attractive for income-seeking domestic and foreign market participants.

Over the 10-year period ending Dec. 31, 2015, an average of approximately 70% of the companies in the Peruvian equity market distributed cash dividends annually (see Exhibit 12). Dividend-payers also tended to be large-cap companies and have a size bias, as they constitute roughly 91% of the total market cap of the universe, reaching as high as 97% in years such as 2010 and 2011 (see Exhibit 13).

[10] See "A Field Guide to Emerging to Emerging Market Dividends," Qing Li and Aye Soe, 2015.

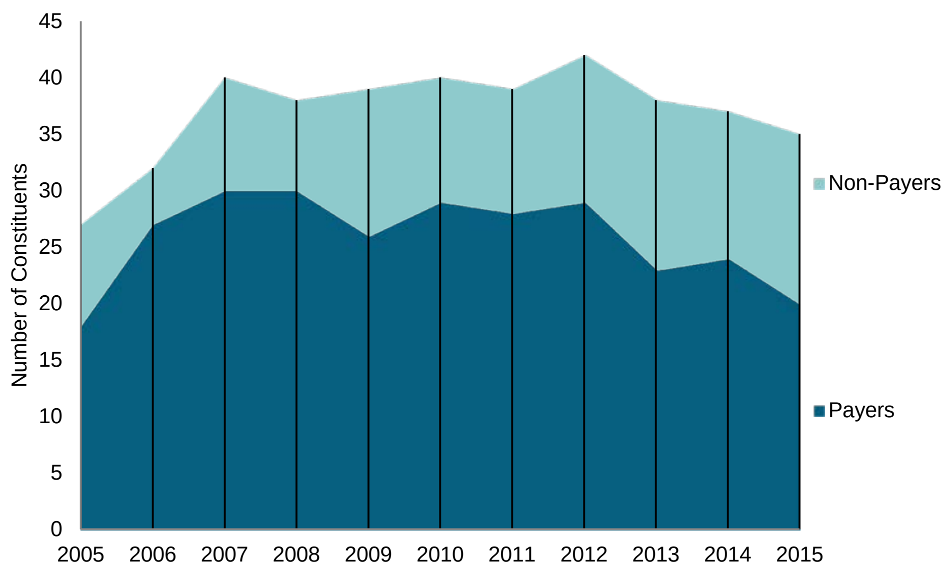
A closer examination shows a consistent pattern of dividend payments. On average, nearly 75% of the dividend payers in the universe continue to pay dividends consistently for the next five years.

Numerous academic studies have shown that dividend payers have historically outperformed non-payers.[11] However, much of the available dividend research focuses on the U.S. and other developed markets. A study published by Morgan Stanley Research[12] showed that there is a strong relationship between dividend yield and total return in developed and emerging markets, with this link being the strongest in emerging markets.

Emerging economies can offer investors growth opportunities and enhanced yield strategies.

To examine whether dividend payers fared better than non-payers, we computed the historical back-tests, comparing the performance of the two groups. The universe studied was all of the securities in the S&P/BVL Peru General Index. The universe was then divided in two groups: dividend payers and non-payers. Payers included companies that paid cash dividends at least once during the trailing calendar-year period as of December 31 of each year. Returns were calculated in local currency (Peruvian nuevo sol), with dividends reinvested as of their expiration date.

Exhibit 12: Number of Dividend Payers and Non-Payers



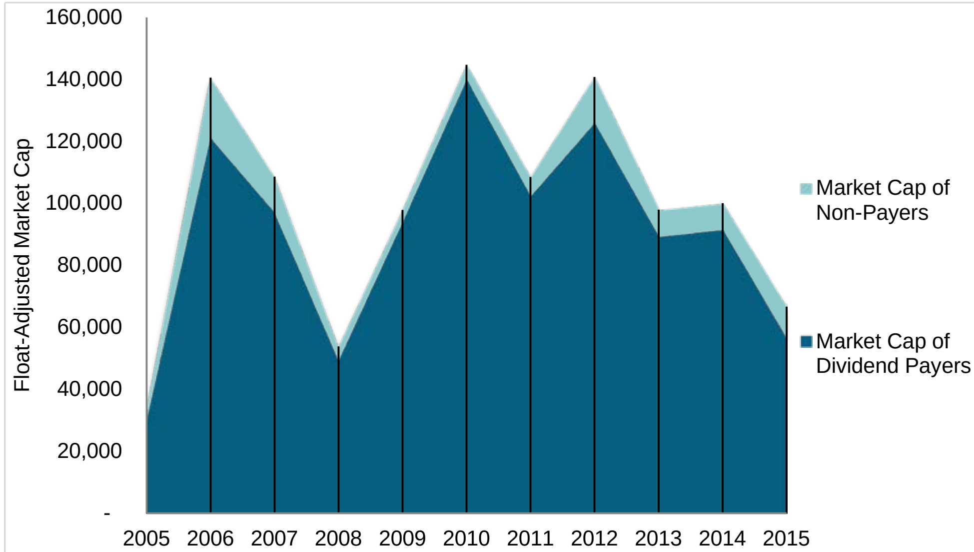
Source: S&P Dow Jones Indices LLC. Data from December 2005, to December 2015. Chart is provided for illustrative purposes.

[11] Example: Fuller, Kathleen P. and Michael A. Goldstein. 2011. “Do Dividends Matter More in Declining Markets?” Journal of Corporate Finance, vol. 17, issue 3 (June).

[12] Shimada, Alison: Emerging Market Equity: A Sustainable Source of Income and Growth (November 2014).

Over the 10-year back-tested period, dividend-paying securities outperformed non-payers on an equal-weighted basis.

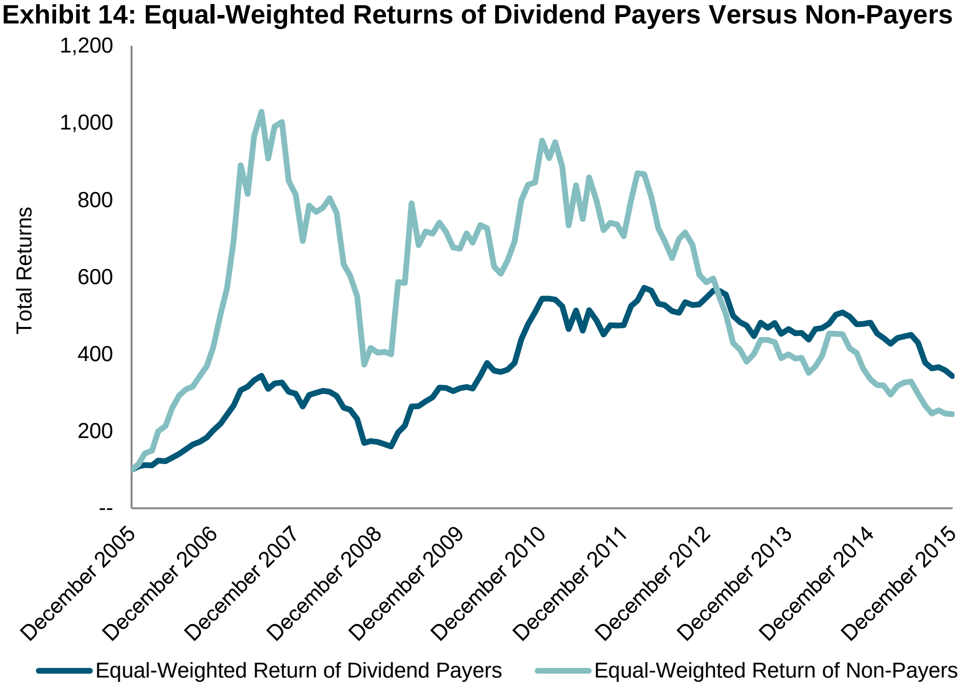
Exhibit 13: Float-Adjusted Market Cap of Payers and Non-Payers



Source: S&P Dow Jones Indices LLC. Data from December 2005, to December 2015. Chart is provided for illustrative purposes.

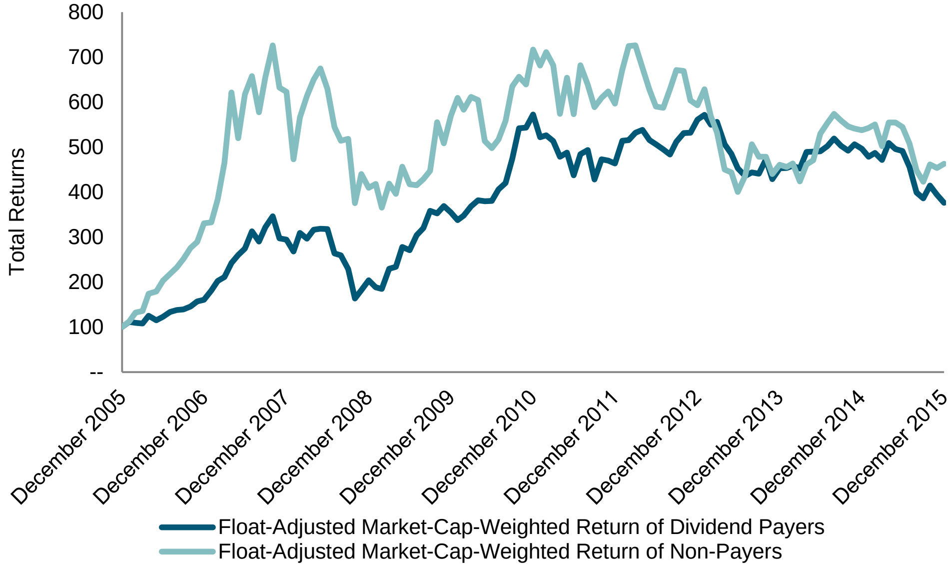
The data show that over the 10-year back-tested period, dividend-paying securities outperformed non-payers on an equal-weighted basis (see Exhibits 14 and 15). However, when computed on the float-adjusted market-cap-weighted basis, we found that non-payers fared better on a cumulative return basis. It was also interesting to note that from 2005 to 2012, payers overwhelmingly underperformed non-payers under both weighting schemes.

Exhibit 14: Equal-Weighted Returns of Dividend Payers Versus Non-Payers



*Data is from hypothetical portfolios.
Source: S&P Dow Jones Indices LLC. Data from December 2005, to December 2015. Past performance is no guarantee of future results. Chart is provided for illustrative purposes.

Exhibit 15: Float-Adjusted Market Cap-Weighted Returns of Dividend Payers Versus Non-Payers



*Data is from hypothetical portfolios.
Source: S&P Dow Jones Indices LLC. Data from December 2005, to December 2015. Past performance is no guarantee of future results. Chart is provided for illustrative purposes.

Because a large percentage of companies in the universe pay out dividends, the number of non payers amounts to few, resulting in a concentrated group with a substantially large single-stock weight.

The underperformance of dividend-paying securities relative to non-paying securities may stem from a number of sources. Because a large percentage of companies in the universe pay out dividends, the number of non-payers amounts to few, resulting in a concentrated group with a substantially large single-stock weight. A significant run up in the prices of non-paying securities, together with a disproportionate weight, can result in the non-paying group outperforming the paying group by a significant margin.

In fact, a closer examination of two non-dividend paying securities confirms that. The first is Volcan Compañía Minera S.A.A., which operates as a polymetalic mining company in Peru. With two series trading on the Peruvian stock exchange, Bolsa de Valores de Lima (BVL), and weighted at 20% in both the equal-weighted and market-cap-weighted portfolios of non payers, the company had a price return of 617% from Dec. 31, 2005, through Dec. 31, 2006. Similarly, the company Sociedad Minera el Brocal SA posted an impressive annual return close to 500% in 2006. Both companies started paying dividends after December 2006.[13]

If we start the back-testing period at the end of 2007, we can see a significant differencein performance reversal among dividend payers and non-payers. Exhibits 16 and 17 show the equal-weighted and market-cap-weighted performances of the two groups. The results show that, over the eight-year investment horizon, dividend-paying Peruvian securities

[13] Based on data from the S&P Global Market Intelligence, Factset and calculated by S&P DJI. Data sources are from Dec. 31, 2005, to Dec. 31, 2006.

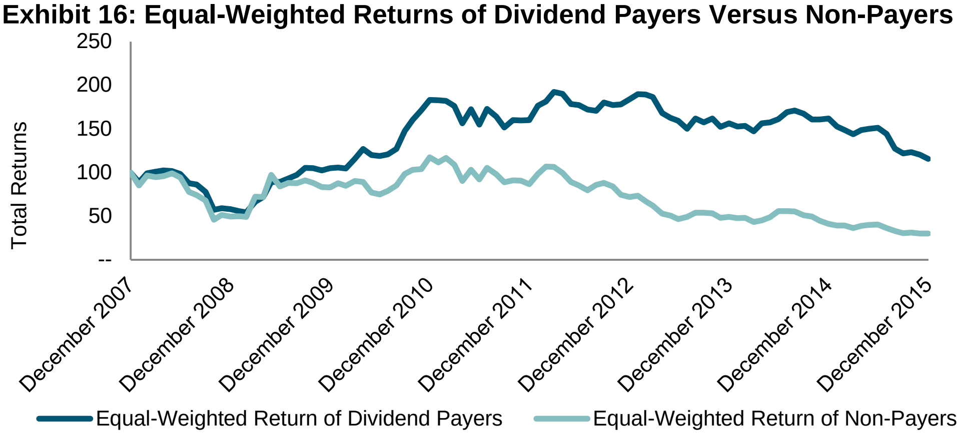
delivered higher cumulative returns than their non-paying counterparts under both weighting schemes.

Another possible way of constructing an income portfolio is to weight the constituents by dividend yield. Unlike equal weighting, which gives all securities the same weight regardless of their characteristics, and market cap weighting, which gives the largest security the highest weight, the yield-weighting mechanism tilts the portfolio in favor of highest-yielding securities. Exhibits 18 and 19 present the annualized risk/return characteristics of dividend payers against their non-paying counterparts and the historical yields.

The results show that there is an outperformance of payers in all three weighting mechanisms against the broad market in mid to long term periods. Even against non-payers, payers fared generally better over the longer timeframe.

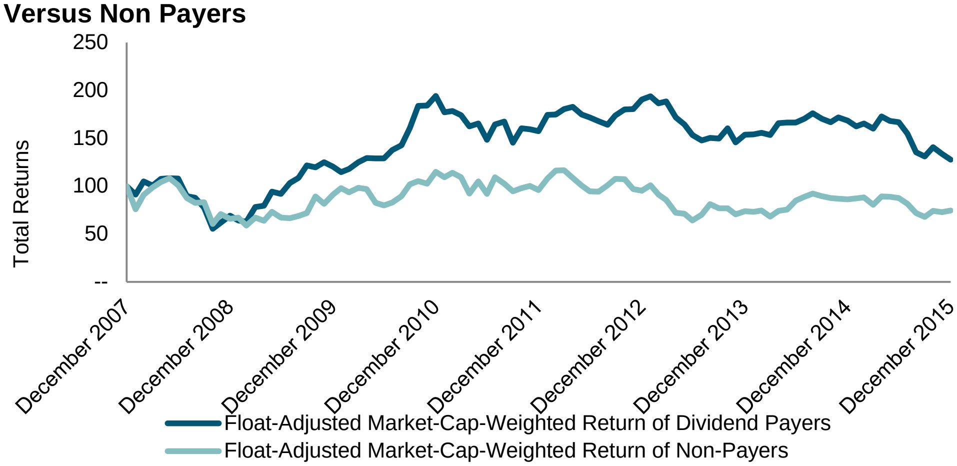
Over the eight-year investment horizon, dividend-paying Peruvian securities delivered higher cumulative returns than their non-paying counterparts under both weighting schemes.

Exhibit 16: Equal-Weighted Returns of Dividend Payers Versus Non-Payers



*Data is from hypothetical portfolios.
Source: S&P Dow Jones Indices LLC. Data from December 2007 to December 2015. Past performance is no guarantee of future results. Chart is provided for illustrative purposes.

Exhibit 17: Float-Adjusted Market Cap-Weighted Returns of Dividend Payers Versus Non Payers

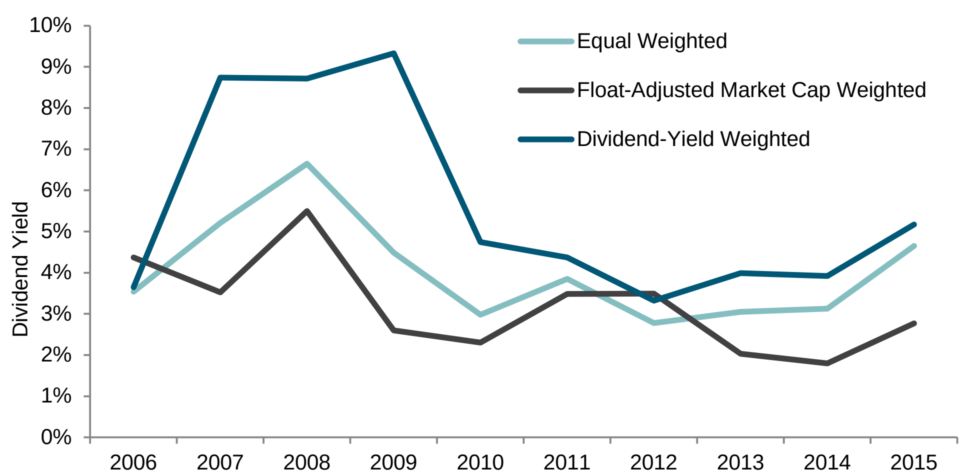


*Data is from hypothetical portfolios.
Source: S&P Dow Jones Indices LLC. Data from December 2007 to December 2015. Past performance is no guarantee of future results. Chart is provided for illustrative purposes.

Exhibit 18: Risk/Return Profiles of Dividend Payers Versus Non-Payers						
Risk/Return Profile	Payers			Non-Payers		S&P/BVL Peru General Index†
Total Return Indices	Float-Adjusted Market Cap Weighted	Equal Weighted	Dividend-Yield Weighted	Float-Market Cap Weighted	Equal Weighted	
Annualized Return (%)						
3-Year	-7.54	-7.79	-6.50	3.63	-13.37	-15.22
5-Year	-2.93	-3.65	-2.71	-2.76	-18.03	-5.98
7-Year	9.73	11.98	14.47	5.07	-7.98	7.91
Since Dec. 31, 2007	4.59	4.70	4.52	-0.60	-10.37	1.05
Annualized Volatility (%)						
3-Year	19.10	20.11	20.81	29.16	27.49	21.16
5-Year	19.62	20.29	20.30	29.58	28.24	22.99
7-Year	21.18	22.10	21.41	30.03	30.52	23.85
Since Dec. 31, 2007	26.40	25.16	26.07	33.39	36.12	28.93
Risk-Return Ratio						
3-Year	-0.39	-0.39	-0.31	0.12	-0.49	-0.72
5-Year	-0.15	-0.18	-0.13	-0.09	-0.64	-0.26
7-Year	0.46	0.54	0.68	0.17	-0.26	0.33
Since Dec. 31, 2007	0.17	0.19	0.17	-0.02	-0.29	0.04

*Data is from hypothetical portfolios.
Source: S&P Dow Jones Indices LLC. Data from December 2007 to March 2016. Past performance is no guarantee of future results. Table is provided for illustrative purposes and reflects hypothetical historical performance. Please see the Performance Disclosures at the end of this document for more information regarding the inherent limitations associated with back-tested performance. †To maintain consistency in the data, historical performance for the S&P/BVL Peru General Index uses float-adjusted market capitalization weighting methodology.

Exhibit 19: Historical Dividend Yield of Payers in Peru



*Data is from hypothetical portfolios.
Source: S&P Dow Jones Indices LLC. December 2005 to December 2015. Past performance is no guarantee of future results. Table is provided for illustrative purposes and reflects hypothetical historical performance. Please see the Performance Disclosures at the end of this document for more information regarding the inherent limitations associated with back-tested performance.

IV. HIGH-LIQUID CONSISTENT PAYERS

Improvements in market liquidity, combined with a large percentage of the universe distributing cash dividends, present compelling enhanced yield strategies for domestic and foreign investors, with a focus on liquidity. We found that, on average, more than 54% of companies that were in the top quartile by liquidity paid out dividends consistently every year.

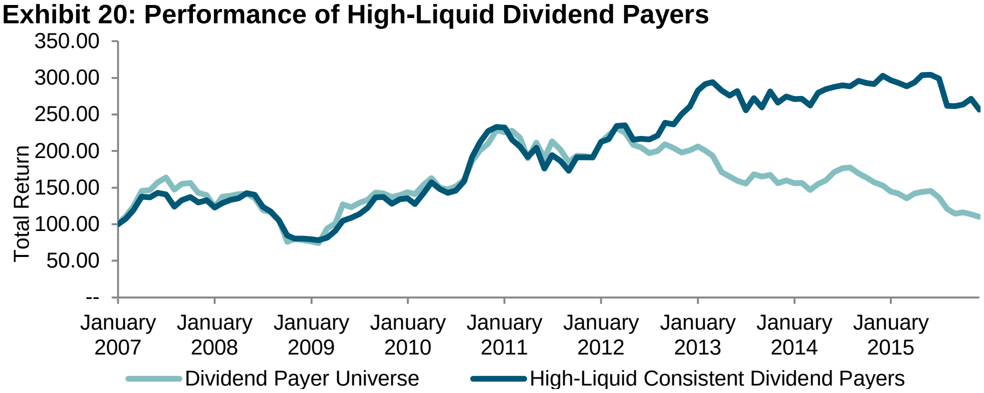
In this section, we propose a stylized hypothetical portfolio consisting of the most liquid securities that have consistently paid out dividends for at least five years. The index is rebalanced as of December 31 of each year and uses a dividend-yield weighted scheme. In order to enhance tradability and reduce single-stock concentration risk, we also imposed a maximum basket liquidity weight for each constituent by using the ratio of its six-month median daily value traded for the theoretical portfolio value.

Across most markets, market participants tend to reward consistent dividend growers, as those companies signify blue-chip, high-quality characteristics.

Exhibits 20 and 21 show the performance of high-liquid, consistent dividend payers versus the dividend payer universe. In addition to outperforming the overall dividend payers universe, as well as the broad market on a cumulative basis, our analysis found that the portfolio of high-liquid, consistent dividend payers also had the highest annualized returns and the lowest volatility, resulting in the highest risk/reward ratios.

The outperformance of high-liquid, consistent dividend payers was not surprising. Across most markets, market participants tend to reward consistent dividend growers, as those companies tend to represent blue-chip stocks with high-quality characteristics. For example, in the United States, the S&P 500® Dividend Aristocrats, which is designed to measure companies that have consistently increased their dividends for 25 consecutive years, had an annualized return of 11.94% from Jan. 31, 1990, through March 31, 2016.[14] During the same period, the S&P 500 posted annualized returns of 9.35%.

Exhibit 20: Performance of High-Liquid Dividend Payers



*Data is from hypothetical portfolios.
Source: S&P Dow Jones Indices LLC. Data from December 2006 to December 2015. Past performance is no guarantee of future results. Chart is provided for illustrative purposes.

[14] Source: S&P Dow Jones Indices LLC. Data from Jan. 31, 1990 to March. 31, 2016. Past performance is no guarantee of future results.

Exhibit 21: Risk/Return Profiles–Payers Versus High-Liquid Consistent Payers					
Risk/Return Profile	Dividend Payers		High-Liquid Consistent Payers		S&P/BVL Peru General Index†
Dividend-Yield Weighted	Price Return	Total Return	Price Return	Total Return	
Annualized Return (%)					
1-Year	3.87	7.67	-3.28	1.82	-3.24
3-Year	-9.73	-6.50	-4.73	-0.04	-15.22
5-Year	-6.90	-2.71	2.53	7.38	-5.98
7-Year	9.24	14.47	14.78	20.08	7.91
Since Dec. 31, 2007	-0.54	4.52	5.30	10.05	14.30
Annualized Volatility (%)					
1-Year	27.77	27.79	27.11	27.31	28.68
3-Year	20.76	20.81	18.84	19.10	21.16
5-Year	20.84	20.30	20.71	20.51	22.99
7-Year	21.88	21.41	22.70	22.78	23.85
Since Dec. 31, 2007	26.34	26.07	23.50	23.63	28.83
Risk/Return Ratio					
1-Year	0.14	0.28	-0.12	0.07	-0.11
3-Year	-0.47	-0.31	-0.25	0.00	-0.72
5-Year	-0.33	-0.13	0.12	0.36	-0.26
7-Year	0.42	0.68	0.65	0.88	0.33
Since Dec. 31, 2007	-0.02	0.17	0.23	0.43	0.50

*Data is from hypothetical portfolios.
Source: S&P Dow Jones Indices LLC. Data from December 2007 to March 2015. Past performance is no guarantee of future results. Table is provided for illustrative purposes and reflects hypothetical historical performance. Please see the Performance Disclosures at the end of this document for more information regarding the inherent limitations associated with back-tested performance. †To maintain consistency in the data, historical performance for the S&P/BVL Peru General Index uses float-adjusted market capitalization weighting methodology.

In Peru, dividend payers, on average, have outperformed non-payers and the broad market.

V. CONCLUSION

In Peru, dividend payers, on average, have outperformed non-payers and the broad market. In addition, highly liquid companies that have consistently paid dividends have outperformed the underlying dividend payers universe. With payers representing more than 90% of the S&P/BVL Peru Select Index, an enhanced yield strategy measuring Peruvian dividend payers can be constructed for market participants looking for market access and income. In this paper, we showed that a stylized income growth strategy with a liquidity tilt can earn higher risk-adjusted returns than the market over a long-term investment horizon.

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