S&P Dow Jones Indices

An S&P Global Division

RESEARCH
Strategy

CONTRIBUTORS

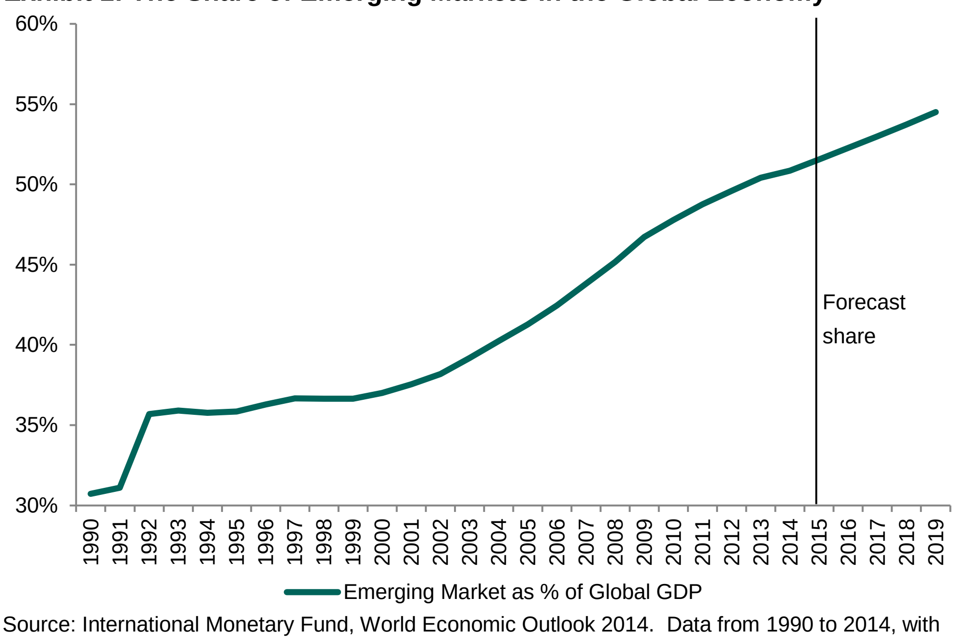
Qing Li
Associate Director
Global Research & Design
qing.li@spglobal.com

Aye M. Soe, CFA
Senior Director
Global Research & Design
aye.soe@spglobal.com

A Field Guide to Emerging Market Dividends

Emerging markets play a vital and expanding role in the global economy. According to IMF estimates, the combined output of emerging economies is expected to account for more than half of the world's GDP by 2019 on the basis of purchasing power, representing nearly twice its share in 1990 (see Exhibit 1).[1][2] Research conducted by Standard Chartered similarly forecast that emerging markets' share of global GDP will rise to 63% by 2030, indicating that two-thirds of global economic growth will come from emerging countries by then.[3] The composition of global business leaders is changing as well, reflecting the growing clout of emerging economies. In 2010, 17% of Fortune Global 500 firms came from emerging countries, up from 5% in 2000. By 2025, however, 46% of all Fortune Global 500 companies are expected to be domiciled in countries like Brazil, China, and other emerging economies.[4]

Exhibit 1: The Share of Emerging Markets in the Global Economy



Source: International Monetary Fund, World Economic Outlook 2014. Data from 1990 to 2014, with forecast from 2015 to 2019. Charts and graphs are provided for illustrative purposes.

[1] Economist: Emerging vs developed economies: Power Shift (August 2011).

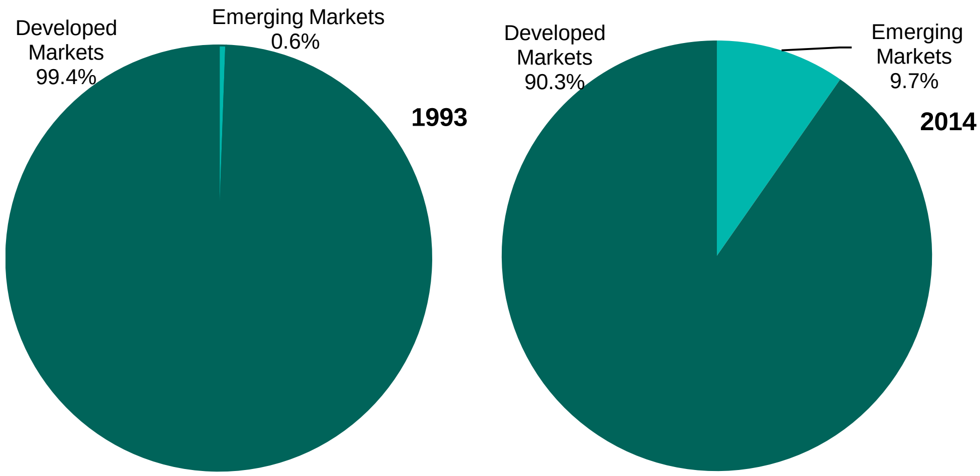
[2] IMF: Capital Flows to Emerging Market Economies (October 2013).

[3] Standard Chartered: The super-cycle lives: EM growth is key (November 2013).

[4] McKinsey Global Institute: Urban world: The shifting global business landscape (October 2013).

Reflecting the growing importance of emerging capital markets, the weight of emerging countries in global equity benchmarks has shifted tremendously over the past 20 years. The share of emerging market countries in the S&P Global BMI (Broad Market Index) rose dramatically from 0.6% in 1993 to 9.7% by the end of 2014 (see Exhibit 2).

Exhibit 2: Share of Emerging Capital Markets in the S&P Global BMI



Source: S&P Dow Jones Indices LLC. Data from 1993 and 2014. Charts and graphs are provided for illustrative purposes.

As emerging economies mature, the investment landscape, opportunity sets, and the types of strategies available to investors are changing as well.

As emerging economies mature, the investment landscape, opportunity sets, and the types of strategies available to investors are changing as well. In particular, over the past decade, yield-based emerging market investment strategies have appeared as a source of not only risk access to emerging markets but also enhanced income.

While there is no shortage of research highlighting the potential benefits of emerging markets in an investor's portfolio, little research has been conducted on emerging market dividends. We aim to fill this void by examining the role of dividends in generating total return in emerging markets.

In this paper, we analyze the risk/return properties of dividend-paying securities versus non-dividend-paying securities in emerging markets. Our analysis shows that, similar to those in developed markets, dividend payers in emerging markets have outperformed non-payers, with much lower volatility. Our findings also show that companies in the highest-yielding quintile have had the highest risk-adjusted returns, with the opposite occurring for those in the lowest-yielding quintile. Lastly, we examine the evolving geographical, sectorial, and fundamental characteristics that underlie the emerging market dividends story. We find that dividend payers have consistently offered higher relative performance than non-payers across different regions and sectors

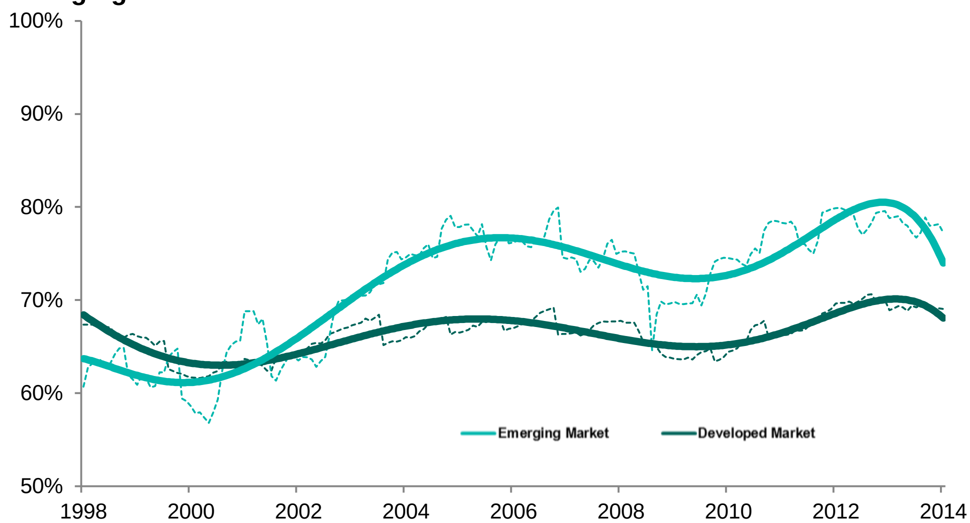
INCREASING PERCENTAGE OF DIVIDEND PAYERS AND HIGHER PAYOUT RATIOS

In the past, investors have turned to emerging markets for growth opportunities rather than yield. However, as emerging economies mature, two important developments—a rising percentage of companies paying dividends as well as higher payout ratios than developed markets—have made enhanced yield strategies possible for income-seeking global investors.

In the past, investors have turned to emerging markets for growth opportunities rather than yield.

Over the past 16 years, the percentage of companies paying dividends has increased at a faster rate in emerging markets than in developed markets. As shown in Exhibit 3, the percentage of dividend-paying companies in developed markets varies between 60% and 70%. The figure is more dynamic in emerging markets, where the percentage of companies paying dividends has steadily increased from 60% at the beginning of the measurement period in 1998 to between 70% and 80% in 2014, surpassing the levels observed in developed markets.

Exhibit 3: Percentage of Dividend-Paying Companies in Developed and Emerging Markets



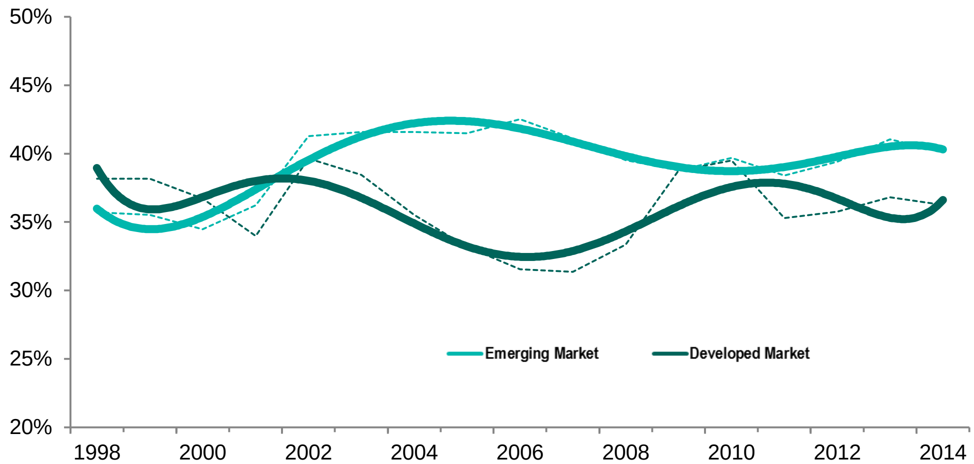
Source: S&P Dow Jones Indices LLC. Data from 1998 to 2014. Charts and graphs are provided for illustrative purposes.

In addition to an increase in the number of companies paying dividends, the aggregate annual dividend payout ratio, computed as the total amount of dividends that have been paid out over the trailing twleve months divided by the total value of the earnings during the same period in a given investment universe, has been climbing steadily in emerging markets (see Exhibit 4)[5]. On the other hand, the dividend payout ratio, which indicates the

[5] It should be noted that the timing or the interval of dividends in the emerging markets may vary when measured over quarterly and semiannual periods. Payments, when viewed over an annual basis, are more consistent and less variable than those measured with higher frequency. Investors who are accustomed to receiving regular monthly or quarterly dividends may want to bear in mind the irregularity of payments when considering emerging markets dividends.

percentage of earnings that is being returned to shareholders, has been declining in developed markets.

Exhibit 4: Dividend Payout Ratio in Developed and Emerging Markets



Source: S&P Dow Jones Indices LLC. Data from 1998 to 2014. Charts and graphs are provided for illustrative purposes.

RELATIVE PERFORMANCE OF DIVIDEND PAYERS VERSUS NON-PAYERS

Dividend Payers Have Outperformed Non-Dividend Payers, With Lower Volatility

Numerous academic studies have shown that dividend payers have historically outperformed non-dividend payers.

Numerous academic studies have shown that dividend payers have historically outperformed non-dividend payers. However, much of the available dividend research focuses on the U.S. and other developed markets. A study published by Morgan Stanley Research 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.[6] Our analysis of emerging markets shows that, on average and similar to developed markets, dividend payers earn higher risk-adjusted returns than non-payers. If stocks are sorted into quintiles based on yield with the highest-yielding stocks in the first quintile, the best relative 12-month performance in the U.S., Europe, and Japan often comes from stocks in Quintile 2, while the best relative performance in emerging markets comes from stocks in Quintile 1.

The universe used in our study is the S&P Emerging BMI. The universe is divided into two groups: dividend payers and non-dividend payers. Payers include companies that pay dividends at least once during the trailing 12-month period at the end of each December (the reference date). The non-dividend paying group contains companies that have not paid dividends during the trailing 12-month period as of the rebalance date. The returns

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

for each group are calculated using monthly, equal-weighted averages of the total returns of all stocks in U.S. dollars.

Dividend-paying securities had a higher Sharpe ratio than non-paying securities, as well as a higher Sharpe ratio than the overall universe.

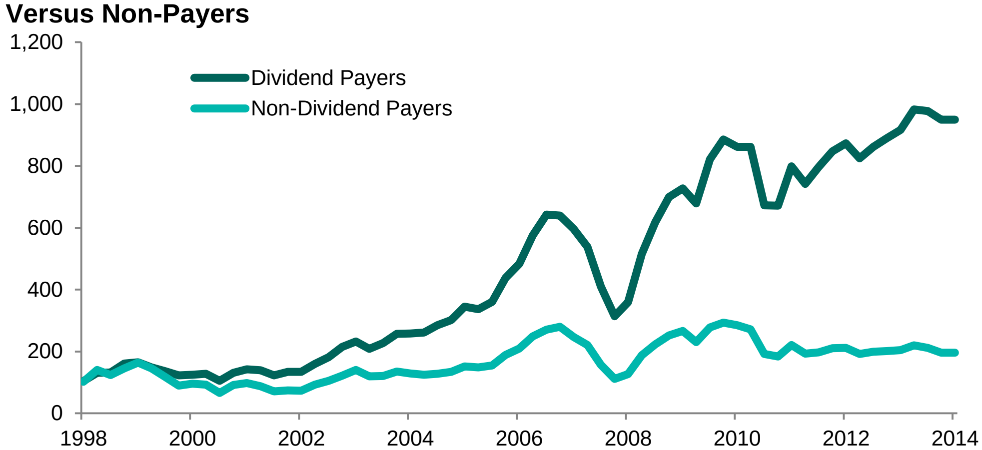
Over the past 16 years ending Dec. 31, 2014, emerging market dividend payers delivered significantly higher returns with lower risk compared with the non-payers and the overall market (see Exhibit 5). The average annual return of dividend-paying firms is 15.79%, compared with 3.52% for the non-payers and 12.96% for the market universe during the period studied. The T-Stats for the dividend payers and the non-payers show the statistical significance of the returns at a 95% confidence interval. Dividend-paying securities had a higher Sharpe ratio than non-paying securities, as well as a higher Sharpe ratio than the overall universe. In addition to better risk-adjusted returns, dividend-paying stocks had lower systematic risk and were less sensitive to market changes, as indicated by a lower market beta.

Exhibit 5: Summary Statistics of Emerging Market Dividend Payers Versus Non-Payers

GROUP	AVERAGE ANNUAL RETURN (%)	SHARPE RATIO	STANDARD DEVIATION (%)	ALPHA	BETA	T-STAT ALPHA
Dividend Payers	15.79	0.30	12.60	0.78	0.93	5.84
Non-Dividend Payers	3.52	0.05	15.79	-2.51	1.15	-7.21
Market Universe	12.96	0.23	13.36	-	-	-

Source: S&P Dow Jones Indices LLC. Data from Dec. 31, 1998, to Dec. 31, 2014. Past performance is no guarantee of future results. Charts and graphs are provided for illustrative purposes.

Exhibit 6: Cumulative Performance of Emerging Markets Dividend Payers Versus Non-Payers



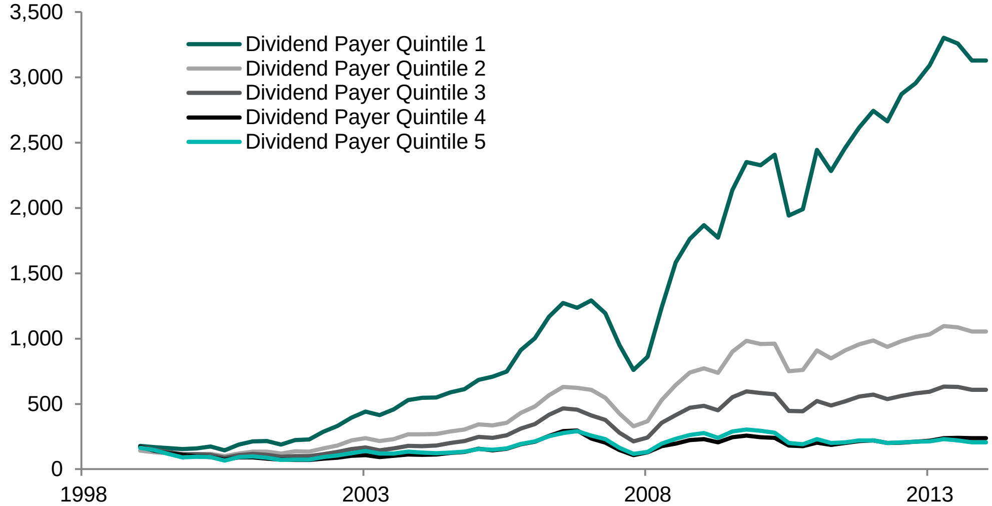
Source: S&P Dow Jones Indices LLC. Data from Dec. 31, 1998, to Dec. 31, 2014. Past performance is no guarantee of future results. Charts and graphs are provided for illustrative purposes.

Exhibit 6 compares the cumulative performance of the dividend payers versus the non-payers over the same time period. Exhibit 7 extends this analysis further by grouping the dividend-paying securities into five quintile portfolios based on yield. Among dividend payers, those in Quintile 1 (the highest-yielding group) have the best cumulative performance over the measurement period. The overall wealth effect is monotonic, with Quintile 5 delivering the lowest cumulative return over the measurement period.

Exhibit 8 supports the assertion made in the previous section that dividend-paying securities offer a degree of downside protection during volatile markets. The data show the maximum drawdown, which is the peak-to-trough decline in returns, of each group during the sample period. With the exception of the lowest-yielding portfolio (Quintile 5), dividend payers generally had lower drawdowns than non-payers.

Dividend payers generally had lower drawdowns than non-payers.

Exhibit 7: Cumulative Returns of Dividend Payers by Quintile



Source: S&P Dow Jones Indices LLC. Data from Dec. 31, 1998, to Dec. 31, 2014. Past performance is no guarantee of future results. Charts and graphs are provided for illustrative purposes.

Exhibit 8: Maximum Drawdown Dividend Payers by Quintile

DRAWDOWN PERCENTAGE	NON-PAYERS	QUINTILE 1	QUINTILE 2	QUINTILE 3	QUINTILE 4	QUINTILE 5
Max. Drawdown (%)	65.23	47.17	50.76	56.86	61.10	67.49

Source: S&P Dow Jones Indices LLC. Data from Dec. 31, 1998, to Dec. 31, 2014. Past performance is no guarantee of future results. Charts and graphs are provided for illustrative purposes.

Previous research by S&P Dow Jones Indices on dividend-paying securities in the U.S. equity market shows that the highest-yielding quintile also has the highest volatility, which may result from including high-yielding stocks with a recent, sharp price drop.[7,8] When sorting high-yielding stocks by volatility into quintiles, the higher-volatility, high-yield portfolio underperformed the lower-volatility, high-yield portfolios, historically, on a risk-adjusted basis.

Our analysis of emerging market dividends indicates that the highest-yielding quintile does not necessarily suffer from lower risk-adjusted returns or the value trap. Based on the dividend yield-sorted quintile portfolios, after adjusting for risk, the highest-yielding quintile has also had the highest Sharpe ratio. The opposite occurred for those companies in the lowest-yielding quintile. Additional risk and return properties can be observed as well. Those in the highest-yielding Quintile 1 portfolio also had the lowest

[7] Luk, Priscilla. The Beauty of Simplicity: The S&P 500 Low Volatility High Dividend Index. (October 2013).

beta to the overall market. This finding is consistent across all the quintiles, whereby each subsequent quintile exhibits a higher market beta.

Exhibit 9: Summary Statistics of Dividend Payers by Quintile

QUINTILE	AVERAGE ANNUAL RETURN (%)	STANDARD DEVIATION (%)	SHARPE RATIO	ALPHA	BETA	T-STAT ALPHA
1	24.93	12.61	0.45	2.86	0.90	6.82
2	16.75	12.08	0.33	1.11	0.88	4.43
3	12.71	12.98	0.23	0.05	0.95	0.19
4	5.77	14.24	0.10	-1.63	1.01	-3.19
5	3.80	15.78	0.06	-2.45	1.15	-7.06

Source: S&P Dow Jones Indices LLC. Data from Dec. 31, 1998, to Dec. 31, 2014. Past performance is no guarantee of future results. Charts and graphs are provided for illustrative purposes.

DIVIDEND PAYERS HAVE OFFERED CONSISTENT RELATIVE OUTPERFORMANCE ACROSS SECTORS AND REGIONS

The previous section establishes that emerging market dividend payers, on average, have delivered higher return with lower risk than non-payers and the overall market. In this section, we examine important sector and geographical composition characteristics, as well as the fundamental drivers behind the emerging market dividends story. We analyze whether the relative outperformance of dividend-paying securities over non-paying securities is consistent across sectors and regions, or if any biases exist. In doing so, we seek to establish if market participants consistently reward payers over non-payers.

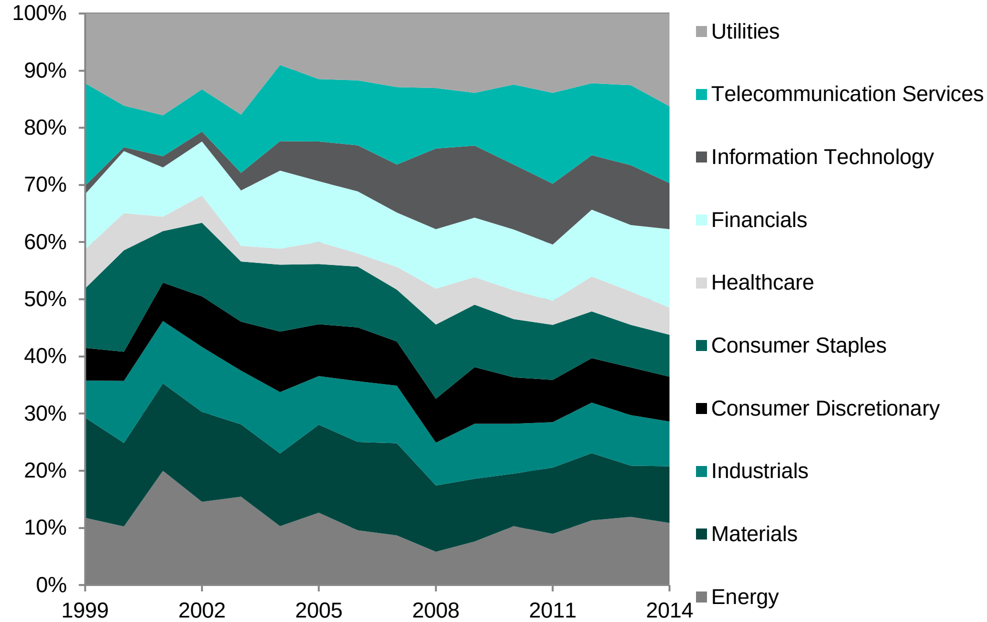
Our research finds a remarkable absence of sector concentration in the emerging market dividends landscape.

Dividend Payers by Sector

Contrary to conventional wisdom, our research finds a remarkable absence of sector concentration in the emerging market dividends landscape. In addition to defensive sectors such as utilities and consumer staples, cyclical and growth-oriented sectors such as energy, materials, and industrials have had fairly healthy representation through time (see Exhibit 10). A closer look at the historical sector composition of dividend-paying securities shows the changing landscape of dividend-contributing sectors. While the traditional dividend-paying sectors, such as utilities and consumer staples, continue to maintain their high historical average weights, contributions from non-traditional income sectors, such as information technology, have increased in recent years. In 1999, dividend payments by the information technology sector made up 1.5% of the total dividends paid out in emerging markets. That figure has increased steadily over the years, with the contribution by the information technology sector coming in at 8.1% in 2014

Dividend-paying securities have higher average annual returns than non-paying securities during the sample period.

Exhibit 10: Contribution of Emerging Markets Dividends by Sector



Source: S&P Dow Jones Indices LLC. Data from Dec. 31, 1998, to Dec. 31, 2014. Past performance is no guarantee of future results. Charts and graphs are provided for illustrative purposes.

A survey of the performance of dividend payers versus non-payers within each sector shows that dividend-paying securities have higher average annual returns than non-paying securities during the sample period. After adjusting for risk, dividend payers have had higher Sharpe ratios than non-dividend payers, as well as the overall sector. The finding is consistent throughout all 10 GICS® sectors (see Exhibit 11).

Exhibit 11: Summary Statistics Dividend Payers and Non-Payers by Sector

SECTOR	AVERAGE ANNUAL RETURN (%)			SHARPE RATIO		
	UNIVERSE	DIVIDEND PAYERS	NON-DIVIDEND PAYERS	UNIVERSE	DIVIDEND PAYERS	NON-DIVIDEND PAYERS
Consumer Discretionary	10.06	13.11	1.10	0.18	0.23	0.02
Consumer Staples	15.30	17.10	3.22	0.34	0.39	0.05
Energy	16.54	19.02	7.86	0.26	0.31	0.08
Financials	14.31	17.28	6.49	0.25	0.30	0.10
Healthcare	16.49	19.16	-2.58	0.33	0.38	-0.04
Industrials	10.61	12.85	1.45	0.19	0.24	0.02
Information Technology	4.40	7.82	-3.53	0.06	0.10	-0.04
Materials	15.59	18.68	3.38	0.26	0.31	0.05
Telecommunication Services	13.85	14.73	9.19	0.21	0.23	0.11
Utilities	17.23	19.74	4.38	0.33	0.39	0.06

Source: S&P Dow Jones Indices LLC, FactSet. Data from Dec. 31, 1998, to Dec. 31, 2014. The underlying universe is the S&P Emerging BMI. Past performance is no guarantee of future results. Charts and graphs are provided for illustrative purposes.

Dividend Payers by Region

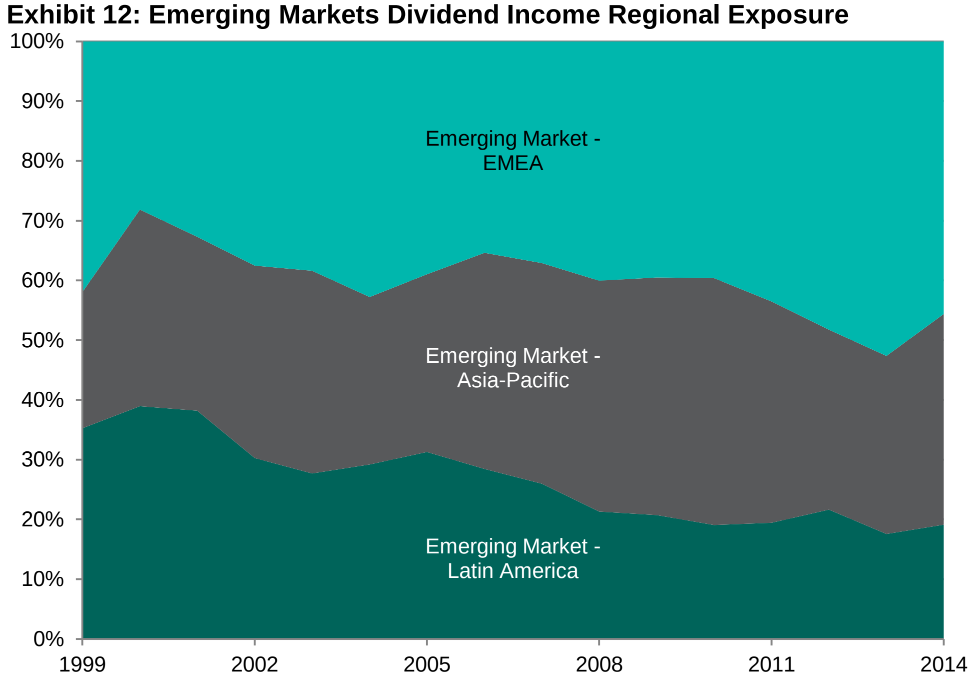
Similar to sectors, grouping dividend-paying emerging market securities by region reveals an evolving landscape. The dividend contribution from the Latin American region represented 19% of the emerging markets at the end of 2014, decreasing significantly from 35% at year-end 1998. In contrast, dividend contributions from both the Asia-Pacific and Europe, Middle East, and Africa (EMEA) regions increased a bit and represented roughly 35% and 46%, respectively, of overall emerging market countries' dividend contributions at the end of 2014 (see Exhibit 12). Exhibit 13 lists the three countries within each region where dividend contribution to total return is the highest.

In spite of the changing regional landscape, our study finds that dividend payers across various regions have consistently had higher average annual returns than non-payers. Exhibit 14 shows that after adjusting for risk, dividend payers in each region have had higher Sharpe ratios than non-payers and the overall market.

Dividend payers not only tend to earn higher relative returns than non-payers, but dividend income also comes in a diverse array of sectors and countries, providing investors with an opportunity to diversify.

When viewed together with the results from the previous section, the findings highlight an important aspect of the emerging market dividends story, which is that dividend payers not only tend to earn higher relative returns than non-payers, but dividend income also comes in a diverse array of sectors and countries, providing investors with an opportunity to diversify. Whether the higher relative returns earned by dividend payers is a reflection of priced risk premium in the market or the systematic underpricing of non-paying stocks is a topic that merits further research.

Exhibit 12: Emerging Markets Dividend Income Regional Exposure



Source: S&P Dow Jones Indices LLC. Data from Dec. 31, 1998, to Dec. 31, 2014. Past performance is no guarantee of future results. Charts and graphs are provided for illustrative purposes.

Exhibit 13: Average Dividend Income in Emerging Markets

REGION	COUNTRY	DIVIDEND INCOME AS A PERCENTAGE OF MONTHLY TOTAL RETURN (%)
Asia Pacific	Taiwan	35.5
	Philippines	20.0
	Malaysia	19.4
Latin America	Chile	22.5
	Colombia	21.4
	Brazil	18.0
EMEA	Czech Republic	23.1
	Poland	19.4
	South Africa	19.1

Source: S&P Dow Jones Indices LLC. Data from Dec. 31, 1998, to Dec. 31, 2014. The underlying universe is the S&P Emerging BMI. Past performance is no guarantee of future results. Charts and graphs are provided for illustrative purposes.

Exhibit 14: Summary Statistics of Emerging Markets Dividend Payers and Non-Payers by Region

REGION	AVERAGE ANNUAL RETURN (%)			SHARPE RATIO		
	UNIVERSE	DIVIDEND PAYERS	NON-DIVIDEND PAYERS	UNIVERSE	DIVIDEND PAYERS	NON-DIVIDEND PAYERS
Asia Pacific	11.07	13.98	1.45	0.19	0.25	0.02
EMEA	12.46	15.76	4.16	0.21	0.28	0.06
Latin America	15.46	17.81	4.91	0.22	0.27	0.06

Source: S&P Dow Jones Indices LLC, FactSet. Data from Dec. 31, 1998, to Dec. 31, 2014. The underlying universe is the S&P Emerging BMI. Past performance is no guarantee of future results. Charts and graphs are provided for illustrative purposes.

EMERGING MARKET DIVIDENDS THROUGH THE LENS OF QUALITY

It is important that the fundamental drivers of dividend payments are sustainable and persistent.

While the yield offered by dividends may serve a number of risk-mitigating purposes, it is important that the fundamental drivers of dividend payments are sustainable and persistent. Numerous studies have been conducted on the quality of developed market dividends, and they have shown that dividend-paying stocks typically have stronger balance sheets, better or more efficient use of capital, and higher profitability when compared with non-payers, and they are therefore better equipped to navigate challenging market environments. We seek to measure the “quality” dimension of emerging market securities using a wide range of metrics that seek to capture the quality factor. In our analysis, the universe of emerging market dividend payers and non-payers are evaluated through the lens of profitability, financial robustness, and earnings quality—sustainable earnings characteristics that we believe an income-producing, quality security should possess in order to increase shareholder value.

Exhibit 15 compares the fundamental characteristics of dividend-paying stocks relative to non-paying stocks, as well as the underlying universe. For each category, the value for each metric is derived as the arithmetic mean of the cross-sectional median values over the 16-year measurement period. Over the time period studied, dividend payers, on average, tend to be more profitable than non-payers and the underlying universe, as shown by higher ROE and higher gross profit margin. Similarly, lower debt-to-equity and debt-to-asset ratios show that emerging market dividend payers have lower leverage in their capital structure than non-payers, and they are thus more likely to be able to meet financial obligations.

The balance sheet accruals ratio (BSA) is used to assess the quality of earnings.

The balance sheet accruals ratio (BSA), defined as the change in the net operating assets over the last 12 months scaled by the average net operating assets over the same period, is used to assess the quality of earnings. Prior research by S&P Dow Jones Indices demonstrated that securities with high BSA consistently underperformed those with low BSA in both developed and emerging markets.[9] When comparing dividend payers to non-payers based on BSA, the results are inconclusive, with dividend-payers having a slightly higher accruals ratio than the non-payers but being in line with the overall universe. It is beyond the scope of this paper, and perhaps a point that merits further research, to examine whether cross-sectional differences in the BSA ratio explain the returns of the dividend payers and non-payers in emerging markets.

Exhibit 15: Emerging Markets Dividend Payers and Non-Dividend Payers Fundamentals

GROUP	PROFITABILITY		FINANCIAL ROBUSTNESS		EARNINGS QUALITY
	RETURN ON EQUITY (ROE)	GROSS PROFIT MARGIN	DEBT/EQUITY	DEBT/ASSET	ACCRUAL RATIO
Payers	0.13	26.06	0.43	0.21	0.11
Non-Payers	0.05	22.49	0.57	0.28	0.09
Universe	0.12	25.66	0.45	0.23	0.11

Source: S&P Dow Jones Indices LLC, FactSet. Data from Dec. 31, 1998, to Dec. 31. 2014. The underlying universe is the S&P Emerging BMI. Past performance is no guarantee of future results. Charts and graphs are provided for illustrative purposes.

[9] Ung, Luk, Kang: Quality: A Distinct Equity Factor? (June 2014).

CONCLUSION

Dividends have been around since the early days of financial markets.

Dividends have been around since the early days of financial markets. Their value and relevance in securities valuation make them one of the most written-about topics in finance. While a substantial amount of research and literature exists on dividend investing in developed markets, little has been written on the story of emerging market dividends. Our research shows that, in addition to playing an important role in generating total return in emerging markets, dividends can potentially limit drawdowns by providing downside protection during volatile periods. Emerging market dividend payers, on average, have outperformed non-payers, in addition to the overall market, with less risk. Among the dividend payers, those yielding the highest have also tended to have the highest risk-adjusted returns. Our analysis also confirms that the outperformance delivered by dividend payers over non-payers has been consistent across various regions and sectors. Together with higher yield, these risk/return properties of emerging market dividend payers may be worthy of consideration by investors who are seeking to access the economic growth potential of emerging markets.

S&P DJI Research Contributors		
NAME	**TITLE**	**EMAIL**
Charles "Chuck" Mounts	Global Head	charles.mounts@spglobal.com
Global Research & Design		
Aye Soe, CFA	Americas Head	aye.soe@spglobal.com
Dennis Badlyans	Associate Director	dennis.badlyans@spglobal.com
Phillip Brzenk, CFA	Director	phillip.brzenk@spglobal.com
Smita Chirputkar	Director	smita.chirputkar@spglobal.com
Rachel Du	Senior Analyst	rachel.du@spglobal.com
Qing Li	Associate Director	qing.li@spglobal.com
Berlinda Liu, CFA	Director	berlinda.liu@spglobal.com
Ryan Poirier	Senior Analyst	ryan.poirier@spglobal.com
Maria Sanchez	Associate Director	maria.sanchez@spglobal.com
Kelly Tang, CFA	Director	kelly.tang@spglobal.com
Peter Tsui	Director	peter.tsui@spglobal.com
Hong Xie, CFA	Director	hong.xie@spglobal.com
Priscilla Luk	APAC Head	priscilla.luk@spglobal.com
Utkarsh Agrawal	Associate Director	utkarsh.agrawal@spglobal.com
Liyu Zeng, CFA	Director	liyu.zeng@spglobal.com
Sunjiv Mainie, CFA, CQF	EMEA Head	sunjiv.mainie@spglobal.com
Daniel Ung, CFA, CAIA, FRM	Director	daniel.ung@spglobal.com
Andrew Innes	Senior Analyst	andrew.innes@spglobal.com
Index Investment Strategy		
Craig Lazzara, CFA	Global Head	craig.lazzara@spglobal.com
Fei Mei Chan	Director	feimei.chan@spglobal.com
Tim Edwards, PhD	Senior Director	tim.edwards@spglobal.com
Howard Silverblatt	Senior Industry Analyst	howard.silverblatt@spglobal.com

GENERAL DISCLAIMER

It is not possible to invest directly in an index. Exposure to an asset class represented by an index is available through investable instruments based on that index. S&P Dow Jones Indices does not sponsor, endorse, sell, promote or manage any investment fund or other investment vehicle that is offered by third parties and that seeks to provide an investment return based on the performance of any index. S&P Dow Jones Indices makes no assurance that investment products based on the index will accurately track index performance or provide positive investment returns. S&P Dow Jones Indices LLC is not an investment advisor, and S&P Dow Jones Indices makes no representation regarding the advisability of investing in any such investment fund or other investment vehicle. A decision to invest in any such investment fund or other investment vehicle should not be made in reliance on any of the statements set forth in this document. Prospective investors are advised to make an investment in any such fund or other vehicle only after carefully considering the risks associated with investing in such funds, as detailed in an offering memorandum or similar document that is prepared by or on behalf of the issuer of the investment fund or other vehicle. Inclusion of a security within an index is not a recommendation by S&P Dow Jones Indices to buy, sell, or hold such security, nor is it considered to be investment advice.

These materials have been prepared solely for informational purposes based upon information generally available to the public and from sources believed to be reliable. No content contained in these materials (including index data, ratings, credit-related analyses and data, research, valuations, model, software or other application or output therefrom) or any part thereof (Content) may be modified, reverse-engineered, reproduced or distributed in any form or by any means, or stored in a database or retrieval system, without the prior written permission of S&P Dow Jones Indices. The Content shall not be used for any unlawful or unauthorized purposes. S&P Dow Jones Indices and its third-party data providers and licensors (collectively "S&P Dow Jones Indices Parties") do not guarantee the accuracy, completeness, timeliness or availability of the Content. S&P Dow Jones Indices Parties are not responsible for any errors or omissions, regardless of the cause, for the results obtained from the use of the Content. THE CONTENT IS PROVIDED ON AN "AS IS" BASIS. S&P DOW JONES INDICES PARTIES DISCLAIM ANY AND ALL EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, ANY WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OR USE, FREEDOM FROM BUGS, SOFTWARE ERRORS OR DEFECTS, THAT THE CONTENT'S FUNCTIONING WILL BE UNINTERRUPTED OR THAT THE CONTENT WILL OPERATE WITH ANY SOFTWARE OR HARDWARE CONFIGURATION. In no event shall S&P Dow Jones Indices Parties be liable to any party for any direct, indirect, incidental, exemplary, compensatory, punitive, special or consequential damages, costs, expenses, legal fees, or losses (including, without limitation, lost income or lost profits and opportunity costs) in connection with any use of the Content even if advised of the possibility of such damages.

S&P Dow Jones Indices keeps certain activities of its business units separate from each other in order to preserve the independence and objectivity of their respective activities. As a result, certain business units of S&P Dow Jones Indices may have information that is not available to other business units. S&P Dow Jones Indices has established policies and procedures to maintain the confidentiality of certain non-public information received in connection with each analytical process.

In addition, S&P Dow Jones Indices provides a wide range of services to, or relating to, many organizations, including issuers of securities, investment advisers, broker-dealers, investment banks, other financial institutions and financial intermediaries, and accordingly may receive fees or other economic benefits from those organizations, including organizations whose securities or services they may recommend, rate, include in model portfolios, evaluate or otherwise address.