

# Global Markets Exploration

By: Noriyuki Oharazawa, Index Strategy Director  
with Kyla Roberts, Research Analyst

SEPTEMBER 2011

## Russell Global Sectors in the Russell Asia ex-Japan Index

With the increasing use of sector indexes as portfolio management tools for risk analysis and as a basis for direct investment via exchange traded funds (ETFs), sector classification has come to the forefront in global investing. The Russell Global Index utilizes Russell's security-level classification system, Russell Global Sectors (RGS), which organizes all constituents into nine sectors, 32 subsectors and 142 industries. The effective use of this sector data in investment and portfolio management can illuminate opportunities for sector-exposure strategies in global investing.

This report focuses on the Russell Asia ex-Japan Index<sup>1</sup> to introduce RGS and demonstrate its practical applications by exploring the characteristics and performance of each sector. Which sectors in the Asia ex-Japan Index have the largest-size constituents as determined by market cap? What are the characteristics of constituent stocks in each sector? And which sectors have the highest performance?

### Overview

- RGS's three-tiered system allows for both granularity at the industry level and high-level analysis at the broad sector level.
- In the Russell Asia ex-Japan Index, the sector with the highest market capitalization is Financial Services, followed by Technology, and the sector with the smallest market cap is Health Care.
- The sector with the largest weight of large cap stocks is Utilities, and the sector with the largest weight of small cap stocks is Health Care. The weight of growth stocks is heaviest in Health Care, while the weight of value stocks is heaviest in Utilities.
- All Asia ex-Japan sectors have outperformed the Asia Pacific and Global sectors for both the past five years and 10 years.
- Among the nine Asia ex-Japan sectors, Energy, Consumer Staples, Consumer Discretionary and Materials & Processing were the highest-performing sectors over the past five years and 10 years.

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<sup>1</sup> The Russell Asia ex-Japan Index is a regional index consisting of 8 countries: China, Korea, Taiwan, India, Malaysia, Indonesia, Thailand and the Philippines, and 2 city-states, Hong Kong and Singapore (as of July 31, 2011).

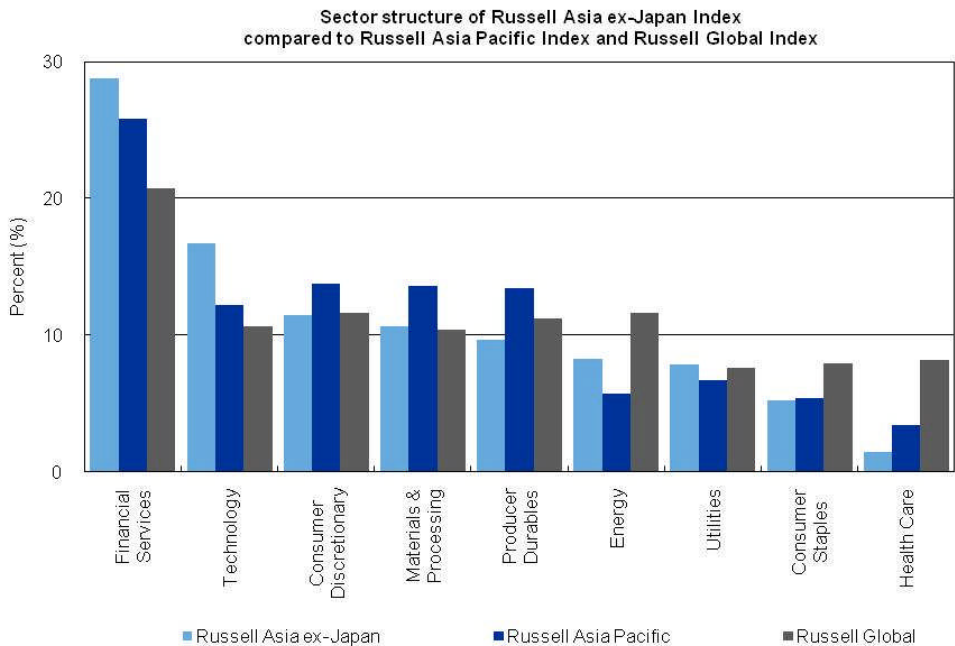
- Over the past five years and 10 years, the Asia ex-Japan sector with the highest risk-adjusted return was Consumer Staples.
- The Asia ex-Japan sector that is least correlated with the other sectors and thus a strong contributor to the diversification of portfolio risk is Technology.

**Sector classification system of the Russell Global Index**

The Russell Global Index bases its sector classification on RGS, which is a robust and simple yet comprehensive and objective security level classification system. RGS utilizes a three-tiered structure for broad (sector-level) or detailed (industry-level) classification. A company is first assigned to an industry based on the goods or services it produces and for whom it produces them, and then to a subsector and a sector. The three-tiered system allows for both detailed classification at the industry level and high-level analysis at the broad sector level. When a company could fall into multiple sectors or subsectors, its primary line of business is established via financial metrics to determine its true classification. As part of the classification process, each security is put through an objective decision-making matrix, ensuring proper sector classification.

Russell sectors, subsectors and industries are reviewed annually, with additional daily, monthly or quarterly reviews to incorporate corporate actions and new IPOs. Annual review changes are implemented shortly after year-end to ensure both a true reflection of the ever-changing economy and consistency with the calendar year.

**Figure 1 / Sector structure comparison (as of July 31, 2011)**



Source: Russell Indexes

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## Characteristics of each sector in the Russell Asia ex-Japan Index

### Financial Services – the largest sector in Asia ex-Japan

The Financial Services sector in the Russell Asia ex-Japan Index consists of companies involved in banking, investment banking and brokerage, as well as insurance, consumer finance and real estate (including REITs).

In the Asia ex-Japan Index, Financial Services is the Russell Global Sectors constituent with the highest investable market cap.<sup>2</sup> As shown in Figure 1, Financial Services represents 28.8% of Asia ex-Japan, as compared to 25.8% of Asia Pacific<sup>3</sup> or 20.8% of Global.

The Asia ex-Japan Financial Services sector represents 14.9% of the Global Financial Services sector (see Table 1). This is the second-largest ratio among the RGS sectors; only the Asia ex-Japan Technology sector is larger, at 16.8% of the Global Technology sector.

Table 2 shows that the percentage of large cap stocks in Asia ex-Japan Financial Services (87.0%) is higher than the percentage of large cap stocks across all sectors (81.5%). Generally, Financial Services is perceived as being tilted toward value stocks; however, according to Table 2, in Asia ex-Japan the weight of value stocks in Financial Services is less than 50%.

### Technology – the Asia ex-Japan sector with the highest percentage representation in the corresponding Global sector

Technology in the Russell Asia ex-Japan Index consists of companies doing business in electronics, information technology and telecommunications.

Figure 1 shows that Technology is the Asia ex-Japan sector with the second-largest market cap. According to Table 1, its market cap accounts for approximately 17% of the market cap of Global Technology, which is the largest representation of any Asia ex-Japan sector in the Russell Global Index sector breakdown.

Growth stocks represent approximately 69% of the market cap of the Technology sector in Asia ex-Japan (see Table 2).

### Consumer Discretionary – a close third among Asia ex-Japan sectors

Consumer Discretionary in the Russell Asia ex-Japan Index consists of companies that manufacture products for and provide discretionary services directly to consumers. Automotive, leisure, retail, consumer products, media and consumer services are all included in this category.

Consumer Discretionary has the third-largest market cap among Asia ex-Japan sectors. However, as Figure 1 illustrates, its market cap is barely larger than that of Materials & Processing (4th) and Producer Durables (5th). At 10.6% of its corresponding Global sector and 40.7% of Asia Pacific Consumer Discretionary, Asia ex-Japan Consumer Discretionary has a medium representation in both the Global and the Asia Pacific indexes.

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<sup>2</sup> Russell pioneered float-adjusted index weightings with the 1984 launch of its U.S. indexes and then extended its industry-leading methodology globally. Each security's shares are adjusted to include only those available for public investment – shares called "free float." The purpose of float adjustment is to exclude from index weights the capitalization that is not available for purchase and that is not part of the global investing opportunity set.

<sup>3</sup> *Asia Pacific* refers to a region comprising 13 countries; it includes Japan, Australia and New Zealand in addition to the 10 Asia ex-Japan countries/city-states (as of July 31, 2011).

Compared to all Asia ex-Japan sectors as a whole, small cap stocks represent a higher percentage of Consumer Discretionary market cap (see Table 2). At 79.3%, growth stocks are also overweight relative to the growth stock percentage of all Asia ex-Japan sectors (again, see Table 2).

### Materials & Processing – a medium-size sector among Asia ex-Japan sectors

Materials & Processing in the Russell Asia ex-Japan Index consists of companies that extract or process raw materials and companies that manufacture chemicals, construction materials, glass, paper, plastic, forest products and related packaging products.

Materials & Processing, which ranks fourth among Asia ex-Japan sectors, is considered a medium-size sector in the region (see Figure 1). Asia ex-Japan Materials & Processing makes up an intermediate 11.0% of Global Materials & Processing (see Table 1).

The weight of small cap stocks in Asia ex-Japan Materials & Processing is relatively higher than the Asia-ex Japan all-sector small cap weight, as is the weight of growth stocks, according to the data in Table 2.

### Producer Durables – fifth in Asia ex-Japan by market cap

Producer Durables in the Russell Asia ex-Japan Index consists of companies engaged in transportation and flight, manufacturing and production, commercial services, machinery and scientific instruments services.

Producer Durables is a medium-size sector in both Asia ex-Japan and Asia Pacific and represents only 9.2% of Global Producer Durables (see Table 1).

The weight of value stocks in Asia ex-Japan Producer Durables (46.5%) is relatively higher than that of the other sectors of Asia ex-Japan (see Table 2). The sector is approximately 26.4% small cap, according to Table 2, which puts it in “the middle of the pack” relative to other sectors’ small cap weights.

**Table 1 / Market size (as of July 31, 2011)**

Market size of Asia ex-Japan sector compared to Asia Pacific and Global					
	Market cap (billions, USD)			(A)/(B) (%)	(A)/(C) (%)
	Asia ex-Japan (A)	Asia Pacific (B)	Global (C)		
Financial Services	1,070	1,959	7,196	54.6	14.9
Technology	621	925	3,698	67.1	16.8
Consumer Discretionary	426	1,045	4,031	40.7	10.6
Materials & Processing	397	1,032	3,602	38.4	11.0
Producer Durables	358	1,019	3,896	35.1	9.2
Energy	308	434	4,015	70.9	7.7
Utilities	292	509	2,637	57.4	11.1
Consumer Staples	194	412	2,760	47.1	7.0
Health Care	53	256	2,825	20.7	1.9
All sectors	3,718	7,592	34,659	49.0	10.7

Source: Russell Indexes

**Energy – accounting for only a small percentage of Global Energy, Asia ex-Japan Energy has the highest percentage representation in Asia Pacific of all Asia ex-Japan sectors**

Asia ex-Japan Energy consists of energy-related businesses, such as oil companies involved in the exploration, production, servicing, drilling and refining processes, as well as companies primarily involved in the production and mining of coal and other fuels used in the generation of consumable energy. The alternative energy subsector includes companies engaged in any aspect of the solar power, wind power, hydro power and biofuel industries.

Asia ex-Japan Energy accounts for over 70% of Asia Pacific Energy, making it the sector with the highest ratio to the equivalent sector in Asia Pacific; but it represents only approximately 8% of the Global Energy sector, making it one of the Asia ex-Japan sectors with the smallest contribution to its Global sector (see Table 1).

At over 90%, the weight of large cap stocks is high in Asia ex-Japan Energy (see Table 2). Growth stocks represent 80.3% of Asia ex-Japan's Energy sector – the second-highest percentage of growth stocks of all the Asia ex-Japan sectors.

**Utilities – among Asia ex-Japan sectors, the sector with the highest weight of large cap and value stocks**

Utilities consists of companies in industries heavily affected by government regulation, such as electric, gas and water utilities. The sector also includes telecommunications, as well as companies that operate as independent producers or distributors of power.

Asia ex-Japan Utilities has a relatively low market cap in both the Global and Asia Pacific Utilities sectors. Within Asia ex-Japan, the Utilities sector represents the third-smallest sector by market cap (see Figure 1).

At 93.3%, Utilities has the highest proportion of large cap stocks of the nine Asia ex-Japan sectors. It also has the highest percentage of value stocks in Asia ex-Japan, at 50.1% (see Table 2).

**Table 2 / Cap and style (as of July 31, 2011)**

Large cap/small cap ratio and growth/value ratio of Asia ex-Japan sector (%)				
	Large	Small	Growth	Value
Financial Services	87.0	13.0	51.3	48.7
Technology	82.0	18.0	68.8	31.2
Consumer Discretionary	73.4	26.6	79.3	20.7
Materials & Processing	72.8	27.2	67.3	32.7
Producer Durables	73.6	26.4	53.5	46.5
Energy	91.2	8.8	80.3	19.7
Utilities	93.3	6.7	49.9	50.1
Consumer Staples	75.0	25.0	77.0	23.0
Health Care	52.2	47.8	85.0	15.0
All sectors	81.5	18.5	63.5	36.5

Source: Russell Indexes

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### **Consumer Staples – among Asia ex-Japan sectors, the sector with the second-smallest market cap**

Consumer Staples consists of companies that provide directly to the consumer products that are typically considered nondiscretionary. It includes manufacturers and distributors of food, beverages and tobacco. It also includes food- and drug-retailing companies, as well as agriculture, fishing, ranching and milling companies.

Consumer Staples is the second-smallest sector in Asia ex-Japan by market cap. At only 7.0% of Global, Asia ex-Japan Consumer Staples also has the second-smallest representation in Global sectors by market cap (see Figure 1).

The weight of growth stocks is relatively high, at 77.0% growth. Consumer Staples has the second-highest percentage of growth stocks in Asia ex-Japan, and at 25.0% small cap it has a fairly high level of small cap stocks (see Table 2).

### **Health Care – the sector with the smallest market cap among Asia ex-Japan sectors**

Asia ex-Japan Health Care consists of companies that manufacture health care equipment and supplies or that provide health care–related services such as pharmaceuticals, biotechnology, medical equipment and medical services.

Asia ex-Japan Health Care has an extremely small market cap (see Figure 1). Whereas all Asia ex-Japan sectors together account for approximately 50% of Asia Pacific's total market cap and approximately 10% of the global index's total market cap, Health Care only accounts for approximately 20% of Asia Pacific Health Care and approximately 2% of Global Health Care (see Table 1).

Small cap stocks account for 47.8% of Asia ex-Japan Health Care, and growth stocks represent 85.0%, which is the highest percentage of any Asia ex-Japan sector (see Table 2).

### **Sector performance of the Russell Asia ex-Japan Index**

#### **High-performance sectors of the past 10 years include Energy, Consumer Staples, Materials & Processing and Consumer Discretionary**

The Table 3 comparison of the returns for the past year by RGS sector indicates that in Asia ex-Japan, Energy, Consumer Staples, Materials & Processing and Consumer Discretionary were the highest–performing sectors. Although there were slight changes in the rankings from time period to time period, these four sectors have all enjoyed high performance over the past five years and 10 years.

Over the past five years and 10 years, Asia ex-Japan outperformed Asia Pacific in all nine sectors. In the past year, Asia ex-Japan outperformed Asia Pacific in six of nine sectors.

In particular, Asia ex-Japan Consumer Discretionary substantially outperformed Asia Pacific Consumer Discretionary over the past one year, five years and 10 years. Additionally, Asia ex-Japan Utilities strongly outperformed Asia Pacific Utilities over the past year. Over the past 10 years, Asia ex-Japan Consumer Staples strongly outperformed its counterpart in the Asia Pacific region; over the past five years, Asia ex-Japan Financial Services also significantly outperformed its corresponding Asia Pacific sector.

**Table 3 / Returns comparison (as of July 31, 2011)**

Annualized return of Asia ex-Japan sector compared to Asia Pacific (% in USD)									
	Past 1 year			Past 5 years			Past 10 years		
	Asia ex-Japan (A)	Asia Pacific (B)	(A)-(B)	Asia ex-Japan (A)	Asia Pacific (B)	(A)-(B)	Asia ex-Japan (A)	Asia Pacific (B)	(A)-(B)
Energy	28.2	28.6	-0.4	15.1	12.3	2.8	25.7	21.4	4.3
Consumer Staples	27.1	25.4	1.7	19.1	11.3	7.8	21.8	13.3	8.5
Materials & Processing	38.4	31.4	7.0	17.0	9.6	7.4	19.3	15.4	3.9
Consumer Discretionary	39.9	28.3	11.7	18.3	7.4	10.9	18.2	9.4	8.8
Financial Services	15.7	15.5	0.2	12.5	2.1	10.4	16.6	9.6	7.0
Producer Durables	15.8	20.4	-4.6	10.9	4.0	6.9	14.6	8.2	6.4
Health Care	12.0	16.7	-4.7	11.8	4.3	7.5	13.7	7.5	6.2
Utilities	14.8	5.5	9.3	10.5	6.2	4.3	11.8	6.7	5.1
Technology	13.9	9.6	4.3	6.6	1.5	5.1	7.6	3.1	4.5
All sectors	21.4	19.5	1.9	12.6	5.3	7.3	14.9	9.3	5.6

Source: Russell Indexes

Table 4 compares the annualized returns of each Asia ex-Japan sector with Global sector returns. Asia ex-Japan all-sector returns substantially surpassed Global all-sector returns over the past five years and 10 years. In these years, Asia ex-Japan outperformed Global for all nine RGS sectors. Consumer Discretionary and Financial Services tended to have the highest excess returns relative to Global sector returns over the past one, five and 10 years, but Energy outperformed and had the absolute highest excess return relative to Global sector returns over the past 10 years (see the Table 4 column titled (A)-(C) for the past year, five years, and 10 years).

**Table 4 / Sector returns comparison (as of July 31, 2011)**

Annualized return of Asia ex-Japan sector compared to Global (% in USD)									
	Past 1 year			Past 5 years			Past 10 years		
	Asia ex-Japan (A)	Global (C)	(A)-(C)	Asia ex-Japan (A)	Global (C)	(A)-(C)	Asia ex-Japan (A)	Global (C)	(A)-(C)
Energy	28.2	33.0	-4.8	15.1	5.5	9.6	25.7	11.4	14.2
Consumer Staples	27.1	22.3	4.8	19.1	10.2	8.9	21.8	10.9	10.9
Materials & Processing	38.4	29.3	9.1	17.0	8.3	8.7	19.3	13.8	5.5
Consumer Discretionary	39.9	28.6	11.4	18.3	6.9	11.4	18.2	6.0	12.2
Financial Services	15.7	7.3	8.4	12.5	-4.6	17.1	16.6	3.0	13.6
Producer Durables	15.8	20.0	-4.2	10.9	4.2	6.7	14.6	5.8	8.8
Health Care	12.0	25.0	-13.0	11.8	4.5	7.4	13.7	4.1	9.6
Utilities	14.8	14.1	0.7	10.5	5.3	5.2	11.8	5.9	5.9
Technology	13.9	16.6	-2.7	6.6	6.1	0.5	7.6	2.2	5.4
All sectors	21.4	20.0	1.3	12.6	3.7	8.9	14.9	6.0	8.9

Source: Russell Indexes

**For the past five years and 10 years, the sector with the highest risk-adjusted return was Consumer Staples**

Table 5 shows Asia ex-Japan annualized sector returns, the standard deviation of the returns, and the ratio of the two. The sector with the smallest standard deviation – i.e., the sector with least volatility – for both the past five years and 10 years was Utilities, while the sector with the largest standard deviation was Energy.

The ratio of return to standard deviation is a simple measurement of risk-adjusted return. The sector with the highest ratio – that is, the sector that best rewarded investors for risk assumed – over the past five years and 10 years was Consumer Staples; the sectors with the next-highest ratios were Consumer Discretionary (over the past five years) and Energy (over the past 10 years). The fact that both Consumer Staples and Consumer Discretionary have had high ratios of return to standard deviation over the past five and 10 years indicates that consumption-related sectors in Asia ex-Japan have historically yielded high rewards relative to risk assumed.

**Table 5 / Risk-return comparison (as of July 31, 2011)**

Annualized return and standard deviation of Asia ex-Japan sectors for the past 5 years and 10 years (% in USD)						
	Past 5 years			Past 10 years		
	Return (A)	Standard deviation (B)	(A)/(B)	Return (A)	Standard deviation (B)	(A)/(B)
Financial Services	12.5	30.4	0.41	16.6	25.0	0.66
Technology	6.6	28.2	0.23	7.6	30.0	0.25
Consumer Discretionary	18.3	29.5	0.62	18.2	25.3	0.72
Materials & Processing	17.0	34.0	0.50	19.3	28.2	0.68
Producer Durables	10.9	31.5	0.35	14.6	26.5	0.55
Energy	15.1	37.4	0.40	25.7	31.0	0.83
Utilities	10.5	20.8	0.51	11.8	17.6	0.67
Consumer Staples	19.1	23.1	0.83	21.8	19.3	1.13
Health Care	11.8	26.1	0.45	13.7	23.4	0.58
All sectors	12.6	28.3	0.44	14.9	24.5	0.61

Source: Russell Indexes

**Among Asia ex-Japan sectors, Technology contributed the most to portfolio risk diversification**

Table 6 shows the correlation coefficients for the Asia ex-Japan sectors over the past 10 years. Smaller correlation coefficients are considered to contribute to diversifying portfolio risk.

Over the past 10 years, Technology particularly contributed to Asia ex-Japan portfolio risk diversification, as shown in Table 6. Technology has the smallest correlation with five sectors: Financial Services, Energy, Utilities, Consumer Staples and Health Care. In contrast, Materials & Processing seems to have had little diversification effect, as indicated by its largest correlation with four of eight sectors.

**Table 6 / Sector correlation (as of July 31, 2011)**

Asia ex-Japan all-sector correlation over the past 10 years, returns in USD									
	Financial Services	Technology	Consumer Discretionary	Materials & Processing	Producer Durables	Energy	Utilities	Consumer Staples	Health Care
Financial Services	1.00	0.79	0.92	0.94	0.92	0.82	0.86	0.86	0.80
Technology	0.79	1.00	0.86	0.81	0.84	0.58	0.67	0.66	0.64
Consumer Discretionary	0.92	0.86	1.00	0.94	0.94	0.79	0.84	0.86	0.82
Materials & Processing	0.94	0.81	0.94	1.00	0.95	0.84	0.86	0.87	0.80
Producer Durables	0.92	0.84	0.94	0.95	1.00	0.81	0.85	0.83	0.77
Energy	0.82	0.58	0.79	0.84	0.81	1.00	0.82	0.81	0.79
Utilities	0.86	0.67	0.84	0.86	0.85	0.82	1.00	0.86	0.76
Consumer Staples	0.86	0.66	0.86	0.87	0.83	0.81	0.86	1.00	0.84
Health Care	0.80	0.64	0.82	0.80	0.77	0.79	0.76	0.84	1.00

Source: Russell Indexes

### Conclusion

The Russell Global Sectors classification system gives investors opportunities both to evaluate performance and to segment the market on a country, regional, size or style level. RGS allows for both high-level analysis at the sector level and detail and granularity at the industry level.

Using the Russell Asia ex-Japan Index as a case study, this report has demonstrated the insights that a sector analysis can bring to the interpretation of index weights and performance. For example, in the Russell Asia ex-Japan Index, Financial Services has the highest market cap, and Health Care has the smallest. But the sector analysis has also shown that the Health Care sector contains both the highest percentage of small cap stocks and the highest percentage of growth stocks. The Utilities sector, on the other hand, was found to have both the largest percentage of large cap stocks and the largest percentage of value stocks. These insights can help investors to select sector and region exposures consistent with their portfolio objectives.

Perhaps of most interest to investors is the fact that all Asia ex-Japan sectors have outperformed all Asia Pacific and Global sectors for the past five years and 10 years, with Energy, Consumer Staples, Consumer Discretionary and Materials & Processing representing the highest-performing sectors for both the past five and the past 10 years. Consumer Staples has shown the highest risk-adjusted return for the same periods. These findings demonstrate that an RGS analysis of any region or index can reveal important insights into investing climates and opportunities.

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First use: September 2011.

CORP-7016