MSCI

Research Insight

Impact of Yen on Japanese Stocks

David T. Owyong, PhD

July 2011

This paper considers the changing value of the yen and its impact on the Japanese stock market during the last three decades, and we examine how this currency sensitivity varied substantially across Japanese firms over the observed period. In addition, the response to a rising or falling yen was found to be asymmetric. The dispersion of yen sensitivity also varied over time, which has potential implications for the passive-active investment debate under volatile exchange rate conditions. Finally, yen sensitivity was also found to contribute substantially to stock volatility.

Introduction

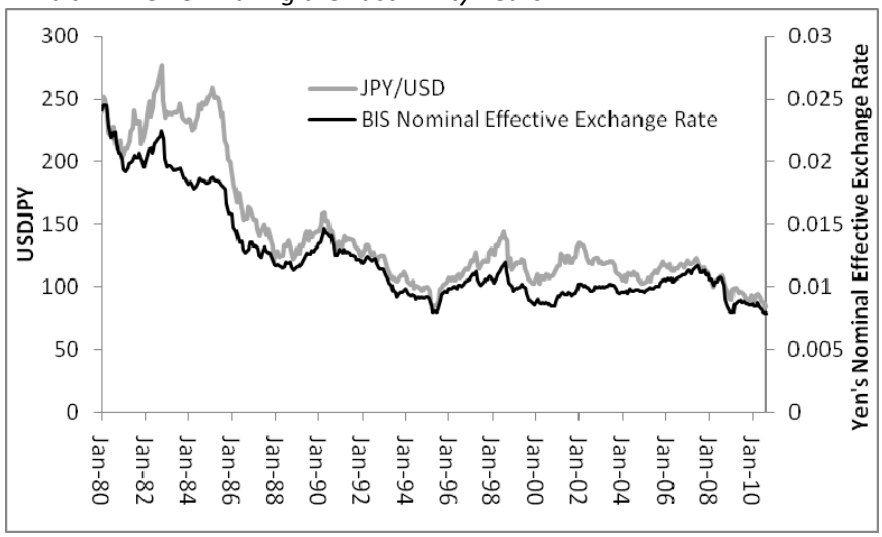
Japan is known for the export-driven nature of its economy and, given the importance of the exchange rate in driving exports, the yen is therefore closely monitored by Japanese companies and policymakers alike (Hashi and Ito (2009)). In the last few years, the yen has been on an appreciating trend, and even reached a new high in the aftermath of the recent earthquake in March 2011 (Bloomberg News, Jun 21, 2011). Given this backdrop, it is worth investigating the historical relationship between the yen and the Japanese stock market.

This paper examines the impact of the yen on Japanese stocks over three decades from 1980 to 2010. In particular, it analyzes the heterogeneity in the yen sensitivity of Japanese firms, and also the variation in this sensitivity over this thirty-year period. The possibility of an asymmetry in the stock price response to a rising or falling yen is also considered. In addition, this paper studies the historical dispersion of yen sensitivity under different conditions. The contribution of yen sensitivity to a stock's overall volatility is also examined. Lastly, historically stock screens based on yen sensitivity are compared to the performance of other common stock screens used by investors.

The Appreciation of the Yen Historically

The yen is one of the world's most heavily traded and widely watched currencies today.[1] Over the last thirty years, it has also been very volatile, as seen in Exhibit 1 below.

Exhibit 1: The Yen During the Last Thirty Years



Source: Bank of Japan, Bank of International Settlements

[1] Central Bank Survey of Foreign Exchange and Derivatives Market Activity, Bank of International Settlements.

© 2011 MSCI. All rights reserved.
Please refer to the disclaimer at the end of this document

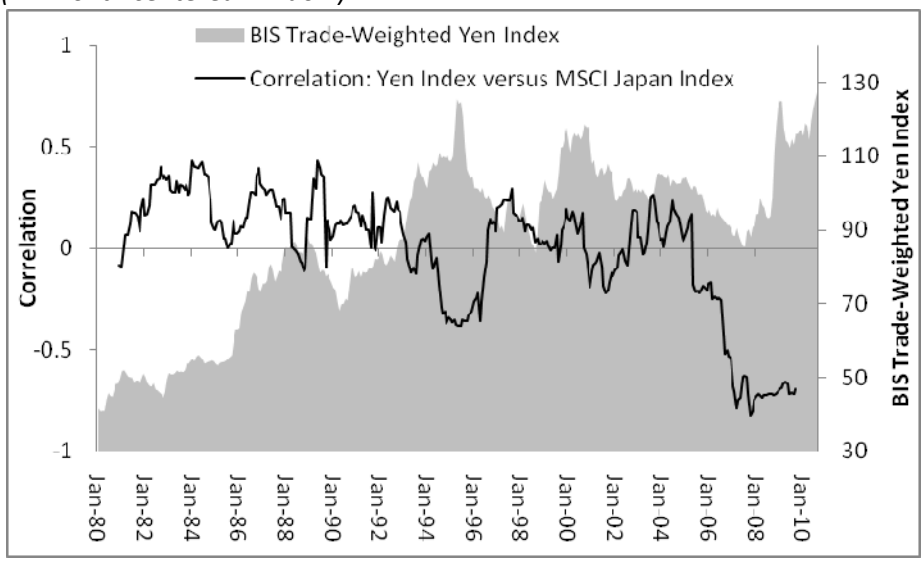
The gray line on the chart depicts the dollar-yen exchange rate, while the black line is the nominal effective exchange rate (derived from a trade-weighted exchange rate index constructed by the Bank of International Settlements). This nominal effective exchange rate is constructed by combining the respective exchange rates between the yen and foreign currencies, with the weights being determined by the volume of trade between Japan and the corresponding countries. During the observed period the two lines tended to move closely together. Given that the dollar-yen exchange rate and the trade-weighted index were highly correlated at 0.94, we shall stick to just one for the rest of this paper. We shall use the trade-weighted index because it takes into account not only the value of the yen against the dollar, but also against other foreign currencies.

The Yen's Historical Impact on Japanese Stocks

To get a first glance of the relationship between the yen and the Japanese stock market over the observed period, we examined the correlation between the trade-weighted yen index and the MSCI Japan Index. This is shown graphically in Exhibit 2 below. A negative correlation implies a negative relationship between the yen's strength and Japanese stock prices. In Exhibit 2, the trade-weighted yen index is displayed as the shaded region and corresponds to the vertical axis on the right. From this chart, the correlation hovered around zero for most of the sample period. The only exception was from 2006, when it stayed negative for a sustained period.

The mean-reverting behavior around zero suggests that the yen generally had no sustained impact on the Japanese stock market, whether positive or negative. However, the use of a stock market index here with its associated aggregation may have masked differences at the stock level. For instance, exporters may have been hurt by a stronger yen, but at the aggregate level this could have been offset by the gain enjoyed by importers.

Exhibit 2: Correlation between Yen and Japanese Stocks
(24-month centered window)



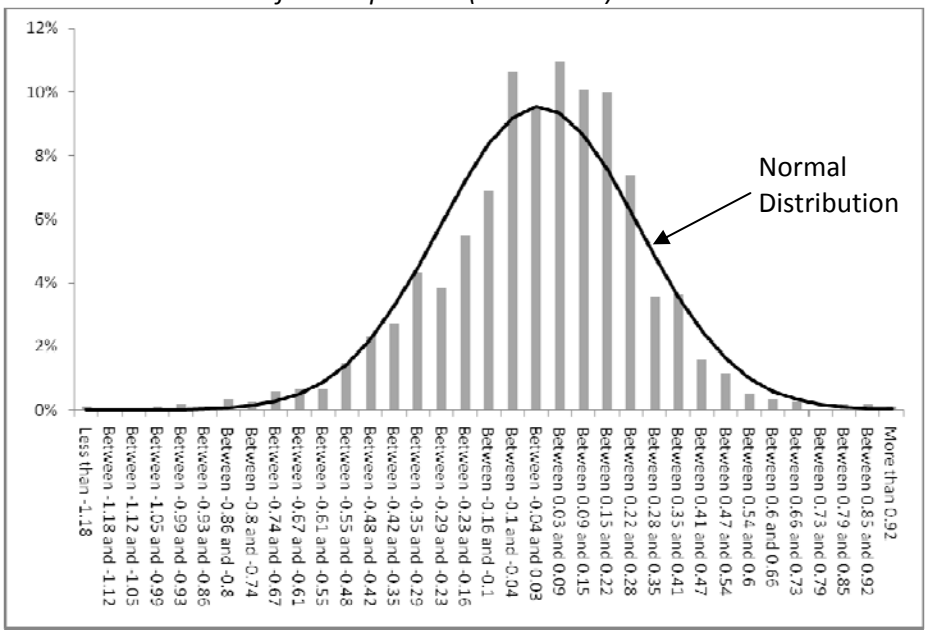
Source: MSCI, Bank of International Settlements

To investigate further, we shift our focus to the stock level. To keep things simple, we regressed the excess return of individual stocks on the excess return of the market – as represented by the MSCI Japan Index – as well as the return of the trade-weighted yen index. This is a time-series regression with

© 2011 MSCI. All rights reserved.
Please refer to the disclaimer at the end of this document

monthly observations during the sample period from 1980 to 2010. The coefficient to the trade-weighted yen index is therefore a measure of the yen sensitivity of a given stock during that period. A negative value implies a negative impact on stock price from a stronger yen and vice versa. Next we consider the distribution of these yen sensitivities for Japanese stocks, shown in Exhibit 3 below.[2]

Exhibit 3: Distribution of Yen Exposures (1980-2010)



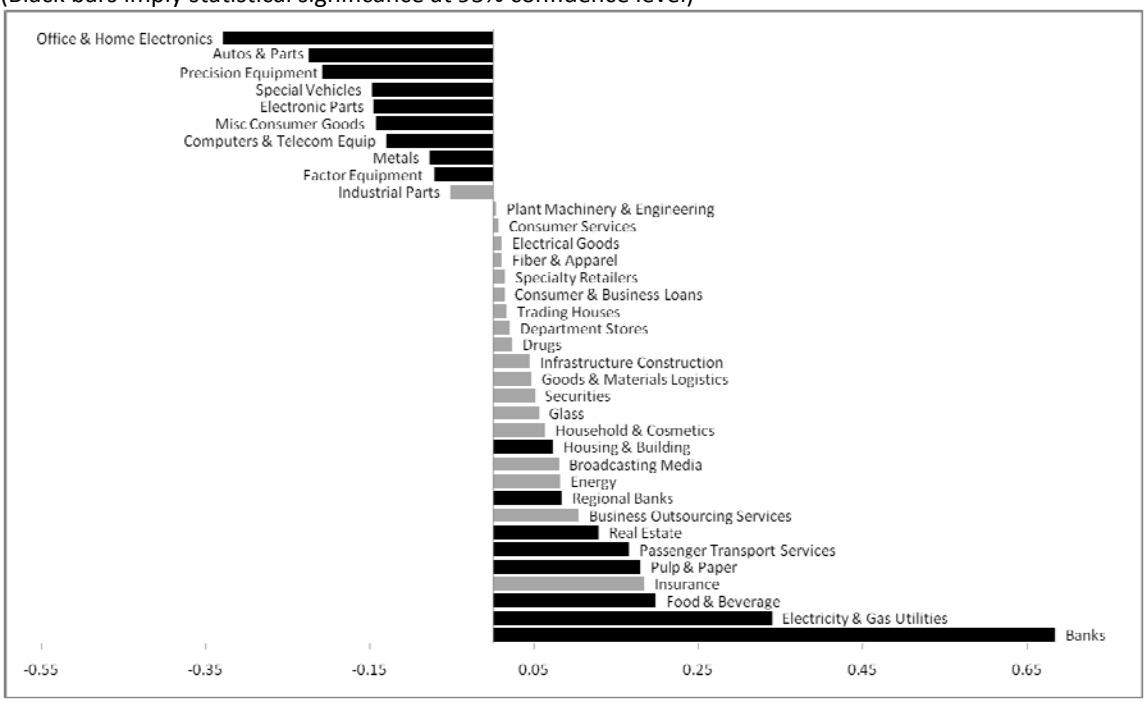
The average of the yen sensitivity across stocks was almost zero at 0.004, which is consistent with the low correlation between the market index and the trade-weighted yen index shown in Exhibit 2. Exhibit 3, however, confirms that there was significant cross-sectional variation at the stock level, resulting in a muted response to yen changes at the aggregate market level.

Exhibit 4 indicates substantial industry differences in yen sensitivity. As expected, most of the industries with negative sensitivity tended to be export-oriented, such as firms producing autos, office and home electronics, precision equipment, electronic parts, computers and telecom equipment. At the other extreme, food and beverage companies, as well as utility firms, had positive yen sensitivity, presumably due to lower costs of raw materials from a stronger yen. Banks also had positive yen sensitivity, which could be related to their holding foreign exchange positions.

[2] For comparability, only stocks that existed throughout the whole sample period are included. This sample has about 1,200 stocks.

© 2011 MSCI. All rights reserved.
Please refer to the disclaimer at the end of this document

Exhibit 4: Yen Sensitivity by Industry
(Black bars imply statistical significance at 95% confidence level)



Historical Stability of Yen Exposures

In Exhibit 5, the 30-year sample period is divided into three 10-year intervals. Within each period, the yen sensitivities are computed separately for different stocks. These estimates are compared at the stock level across adjacent time periods using a paired t-test. The null hypothesis here is that there was no change in the stock-level yen sensitivities between the first and second decades, and separately between the second and third. For both cases, this null hypothesis of no change in yen sensitivity was strongly rejected. This result is supported by examining the absolute percentage change in the yen sensitivities shown in Exhibit 5 below. The absolute changes are very high, suggesting that yen sensitivity was highly unstable during the three decades.

Exhibit 5: Stability of Yen Sensitivity Across Time

	Absolute percent change in Yen Sensitivity (Average for all stocks)
Between 1980s and 1990s	937%
Between 1990s and 2000s	551%

Note: Absolute percent change in yen sensitivity was computed by dividing its absolute difference between two decades by the absolute value of yen sensitivity in the earlier decade.

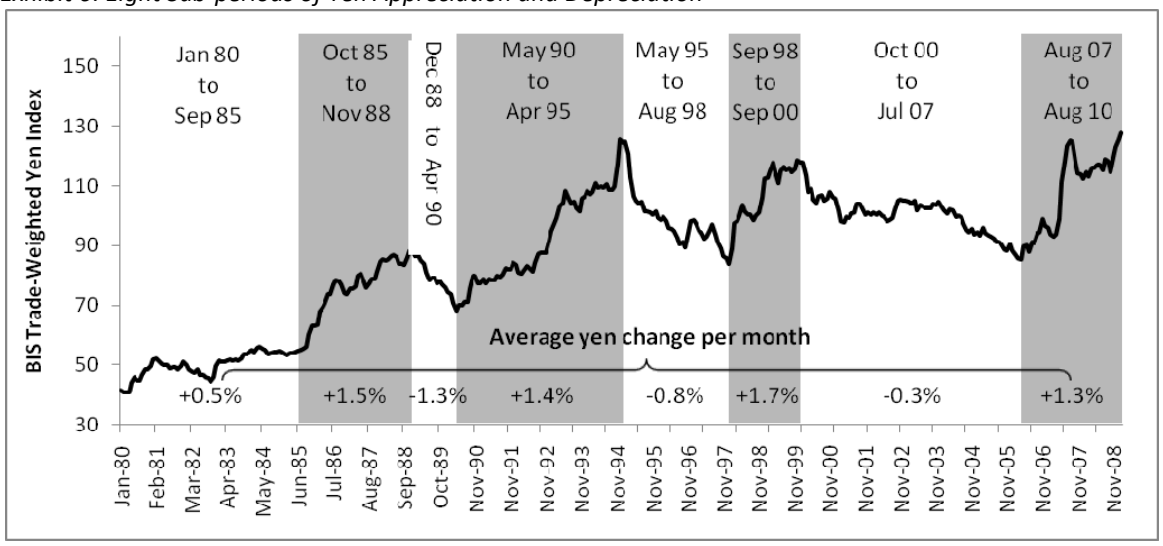
Yen Appreciation versus Depreciation: Asymmetric Effects?

The instability of yen sensitivities could have resulted from asymmetric effects of yen appreciation and depreciation. To further pursue this line of thought, we divided the sample period into 8 subperiods,

© 2011 MSCI. All rights reserved.
Please refer to the disclaimer at the end of this document

corresponding to the direction of yen movement. These are illustrated below in Exhibit 6. The first period is from January 1980 to September 1985, which is just before the Plaza Accord and was a period of relatively mild yen appreciation. In all other appreciation periods, the average monthly rise in the yen exceeded 1%. For the three periods in which the yen fell, the average decline per month ranged from -0.3% to -1.3%. Dividing the thirty-year span into these eight periods allows us to examine variation in yen sensitivity according to the direction of yen movement.

Exhibit 6: Eight Sub-periods of Yen Appreciation and Depreciation



Source: Bank of International Settlements (BIS)

We computed the yen sensitivities for the respective stocks separately for each of the eight time periods. We then compared their values for periods of rising yen to adjacent periods in which the yen weakened. The average yen sensitivities are shown in Exhibit 7 below. First focusing on the top section that applies to all Japanese equities, we see that yen sensitivity was not stable, even at the stock level. This is consistent with the instability we observed earlier when dividing the sample into three decades. The average values were generally negative when the yen was strongly appreciating (3 out of 4 times) and positive when yen was depreciating (3 out of 3 times). The implication is striking: both negative yen sensitivity during the yen appreciation periods, as well as positive yen sensitivity during the yen depreciation periods, implies that the typical stock during those periods was adversely affected by yen movements in both directions.

In terms of the change in yen sensitivity across consecutive periods, there was also a consistent asymmetry. Moving from periods of rising yen to falling yen periods always caused yen sensitivity to move higher in the positive direction, and vice versa. In other words, there was a tendency of reversion towards zero sensitivity. This asymmetry may have therefore been a major reason behind the perceived instability of the yen sensitivity over the last thirty years.

Looking at the exporter stocks with negative yen sensitivity (middle section of Exhibit 7), we observed a tendency for zero-reversion. The same applies to importer stocks that are represented by the bottom section of Exhibit 7. For these importing firms, we saw that the adverse effect they suffered during periods of yen weakness was greater than the benefit they enjoyed during times of yen appreciation.

MSCI Research
© 2011 MSCI. All rights reserved.
Please refer to the disclaimer at the end of this document

Exhibit 7: Change in Yen Sensitivity between Yen Appreciation and Depreciation Periods

From	Oct 85 - Nov 88 (Yen +1.5% /mth)	Dec 88 - Apr 90 (Yen -1.3% /mth)	May 90 - Apr 95 (Yen +1.4% /mth)	May 95 - Aug 98 (Yen -0.8% /mth)	Sep 98 - Sep 00 (Yen +1.7% /mth)	Oct 00 - Jul 07 (Yen -0.3% /mth)
To	Dec 88 - Apr 90 (Yen -1.3% /mth)	May 90 - Apr 95 (Yen +1.4% /mth)	May 95 - Aug 98 (Yen -0.8% /mth)	Sep 98 - Sep 00 (Yen +1.7% /mth)	Oct 00 - Jul 07 (Yen -0.3% /mth)	Aug 07 - Aug 10 (Yen +1.3% /mth)
All Stocks in Japanese Universe						
Average yen sensitivity (first period)	-0.032	0.578	0.264	0.593	-0.455	0.345
Average change between periods	0.64	-0.30	0.34	-1.01	0.79	-0.56
Stocks with statistically significant and negative yen sensitivity						
Average yen sensitivity (first period)	-1.18	-2.39	-0.81	-0.96	-1.43	-1.16
Average change between periods	1.69	0.07	0.90	0.24	1.71	0.91
Stocks with statistically significant and positive yen sensitivity						
Average yen sensitivity (first period)	1.13	2.84	0.89	1.54	1.22	1.52
Average change between periods	-0.72	-2.57	-0.25	-1.91	-0.93	-1.69

The typical stock was hurt by yen movements in both directions, because average yen sensitivity was negative when the yen was rising and negative when the yen was falling.

For exporters with negative yen sensitivity, this sensitivity tended to shrink the following period (i.e. cross-period differences are positive).

Similarly, tendency for zero reversion in yen sensitivity for importers. Yen sensitivity was higher when the yen was weakening than when the yen was appreciating, suggesting that the adverse impact these firms experienced during periods of yen weakness was more than the benefit they enjoyed during periods of yen appreciation.

Source: Computed from MSCI data.

Historical Dispersion in Yen Sensitivity

We considered the distribution of yen sensitivity for different firms earlier, but did not examine the possibility of dispersion across firms changing over the last 30 years. Again, the entire sample period from 1980 to 2010 is divided into 8 subperiods according to the direction of yen movement. The dispersion of yen sensitivity across stocks during this period is shown in Exhibit 8 below.

Exhibit 8: Changing Dispersion of Yen Sensitivity Across Time

Period	Yen Change Per Month	Yen's Direction	Dispersion	Dispersion / absolute % yen change
Jan 80 - Sep 85	0.5%	Up	0.48	94.9
Oct 85 - Nov 88	1.5%	Big Up	0.70	46.0
Dec 88 - Apr 90	-1.3%	Down	1.72	127.5
May 90 - Apr 95	1.4%	Big Up	0.44	31.3
May 95 - Aug 98	-0.8%	Down	0.90	107.6
Sep 98 - Sep 00	1.7%	Big Up	0.95	56.7
Oct 00 - Jul 07	-0.3%	Down	0.81	237.6
Aug 07 - Aug 10	1.3%	Big Up	0.94	70.2

	Average Dispersion	Average Dispersion per abs % yen change
Yen Up	0.70	59.8
Yen Down	1.14	157.6

Note: Dispersion is computed from taking the standard deviation of the yen sensitivity across all stocks.

The dispersion in yen sensitivity appeared larger during yen depreciation periods than during yen appreciation periods. One possible reason is that a rising yen tended to occur during times of market uncertainty and risk aversion, when most stocks were adversely affected. This asymmetry also has

© 2011 MSCI. All rights reserved.
Please refer to the disclaimer at the end of this document

potential implications for the active versus passive debate, since the opportunity set could be larger during periods of a weakening yen, compared to times when the yen is strengthening.

To What Extent Did Yen Sensitivity Contribute to Stock Volatility?

Here we examine the relative degree that the cross-sectional variation of stock volatility was explained during the observed period by yen sensitivity, compared to other factors such as company size, growth or value bias and industry. The results are shown below in Exhibit 9.

Exhibit 9: Contribution of Yen Sensitivity to Stock-Level Variation in Stock Volatility

Yen change / month	*0.5%*	*1.5%*	*-1.3%*	*1.4%*	*-0.8%*	*1.7%*	*-0.3%*	*1.3%*
	Jan 80 - Sep 85	**Oct 85 - Nov 88**	**Dec 88 - Apr 90**	**May 90 - Apr 95**	**May 95 - Aug 98**	**Sep 98 - Sep 00**	**Oct 00 - Jul 07**	**Aug 07 - Aug 10**
Yen Sensitivity (Abs)	0.19	0.25	0.22	0.20	0.39	0.33	0.34	0.35
Style Factors								
Size	-0.05	0.18	0.20	-0.05	-0.16	-0.09	-0.07	-0.09
Value	-0.22	-0.24	-0.13	-0.35	-0.23	-0.22	-0.24	-0.17
Growth	0.06	-0.03	-0.01	0.03	-0.03	0.08	0.02	0.23
Industry Factors								
Average Abs Value	0.08	0.05	0.04	0.04	0.04	0.05	0.06	0.05
Max Abs Value	0.35	0.17	0.12	0.25	0.16	0.19	0.15	0.15
Min Abs Value	0.0010	0.0009	0.0011	0.0025	0.0000	0.0002	0.0013	0.0031

Note: This table shows coefficient estimates obtained from regressing stock volatility on the various variables in the first column. Stock volatility is based on stock-level exposures of stocks to the Volatility factor in the Barra JPE3 Model.

Yen sensitivity was often the dominant factor explaining stock volatility and it also generally increased over time

There are two observations one could make from the results. The first is that yen sensitivity was usually the dominant variable in explaining stock volatility. The second is that this dominance increased over time across the eight subperiods.

Stock Screens Based on Yen Sensitivity

In this section, we investigate two common stock screens based on yen sensitivity and compare them to other common screens used by investors in Japanese stocks. The first of these, called the Long Exporters screen, favors stocks most hurt by yen strength against those which benefit the most. The objective is to favor exporters while tilting away from importers. The second screen is to favor stocks with low yen sensitivity, so that highly sensitive stocks (whether on the positive or negative side) are underweighted; we call this second approach the Low Yen Exposure screen.

The stock screens based on various criteria are rebalanced monthly and are executed as follows: at the end of each month, all stocks are sorted according to one of the criteria and divided into three equal parts; the return of the top third minus the return of the bottom third (both cap-weighted) is computed for the following month and becomes the return for the stock screen. Due to monthly rebalancing, this sorting and selection process is conducted on a monthly basis, and the performance results are shown in

© 2011 MSCI. All rights reserved.
Please refer to the disclaimer at the end of this document

Exhibit 10 below. In addition to these two screens, others commonly used by investors are also included for comparison.

Exhibit 10: Comparing Various Stock Screens
(1985-2010, with Monthly Rebalancing)

	Annualized Return	Annualized Volatility	Sharpe Ratio
Value (B/P)	11.8%	16.7%	0.71
Value (E/P)	9.8%	14.0%	0.70
Long Exporters	3.7%	13.1%	0.28
Low Volatility	3.1%	19.9%	0.15
Small Caps	2.4%	17.1%	0.14
Low Yen Exposure	-0.5%	8.9%	-0.05
Momentum	-3.4%	21.6%	-0.16

Note: The table includes book-to-price (Value B/P), earnings-to-price (Value E/P), exchange rate exposure (Long Exporters), absolute exchange rate exposure (Low Yen Exposure screen), market capitalization (small caps), standard deviation of daily returns over preceding 65 days (Low Volatility), and cumulative stock returns over last 12 months (Momentum). All of these data are drawn from the corresponding descriptor exposure within the Barra Japan Equity Model (JPE3).

Of the two screens based on exchange rate exposure, the Long Exporters screen performed better over the backtested period. In particular, it compared favorably with all other screens, except for the two value screens. The one on Low Yen Exposure, however, did not perform as well, and generated a loss over the same backtest period.

We also compared the correlation of these two screens with the others available, and the correlation matrix of the respective screens is shown in Exhibit 11 below. The correlations that the Low Yen Exposure screen shares with the others are highlighted in gray, and these values are generally very low, except for the correlation with the low-volatility screen, which is 0.5. As was found in the preceding section, stocks with lower yen sensitivity tended to be less volatile; it is not surprising that these two screens were more highly correlated. As for the Long Exporters screen, the correlations were highlighted in black. These correlations were well below 0.5 and therefore this screen had generally low correlations with the others.

Exhibit 11: Correlation Matrix of Various Stock Screens

	B/P Value	E/P Value	Long Exporters	Low Volatility	Small Caps	Low Yen Exposure	Momentum
Value (B/P)	1						
Value (E/P)	0.44	1					
Long Exporters	-0.21	0.24	1				
Low Volatility	-0.11	0.35	0.35	1			
Small Caps	0.60	0.18	-0.12	-0.18	1		
Low Yen Exposure	-0.03	0.07	0.13	0.50	-0.07	1	
Momentum	-0.63	-0.34	0.16	0.24	-0.33	0.09	1

© 2011 MSCI. All rights reserved.
Please refer to the disclaimer at the end of this document

Conclusion

The yen is a closely monitored economic variable for the Japanese economy. This paper analyzed the yen's impact on the Japanese stock market during the last three decades, and examined how sensitivity to the Yen varied across Japanese firms and over time. We found that yen sensitivity may not have been evident at the aggregate market level, because of substantial industry differences, where exporters had high negative values and importers had positive values. The variation over time was also substantial; generally, Japanese stocks we evaluated were negatively affected by yen movements in both directions. The dispersion of yen sensitivity across stocks also appeared to change over time, and fell when the yen strengthened and rose when the yen declined. The extent of sensitivity to the yen also contributed significantly to a stock's volatility, as compared to style and industry factors, and the extent of this contribution also increased over the observed period. Lastly, this paper also considered stock screens based on yen sensitivity and found better performance during the observed period by a screen that leaned towards exporters.

References

Hashi, Yuko and Takatoshi Ito (2009). "Effects of Japanese Macroeconomic Announcements on the Dollar/Yen Exchange Rate: High-Resolution Picture", *NBER Working Paper* No. w15020.

"Yen Heading to New High as No Intervention in Sight With Fed Rates on Hold", *Bloomberg News* (Jun 21. 2011).

MSCI Research
© 2011 MSCI. All rights reserved.
Please refer to the disclaimer at the end of this document

Client Service Information is Available 24 Hours a Day

clientservice@msci.com

Americas

Americas	1.888.588.4567 (toll free)
Atlanta	+ 1.404.551.3212
Boston	+ 1.617.532.0920
Chicago	+ 1.312.675.0545
Montreal	+ 1.514.847.7506
Monterrey	+ 52.81.1253.4020
New York	+ 1.212.804.3901
San Francisco	+ 1.415.836.8800
Sao Paulo	+ 55.11.3706.1360
Stamford	+1.203.325.5630
Toronto	+ 1.416.628.1007

Europe, Middle East & Africa

Cape Town	+ 27.21.673.0100
Frankfurt	+ 49.69.133.859.00
Geneva	+ 41.22.817.9777
London	+ 44.20.7618.2222
Milan	+ 39.02.5849.0415
Paris	0800.91.59.17 (toll free)

Asia Pacific

China North	10800.852.1032 (toll free)
China South	10800.152.1032 (toll free)
Hong Kong	+ 852.2844.9333
Seoul	798.8521.3382 (toll free)
Singapore	800.852.3749 (toll free)
Sydney	+ 61.2.9033.9333
Tokyo	+ 81.3.5226.8222

Notice and Disclaimer

- This document and all of the information contained in it, including without limitation all text, data, graphs, charts (collectively, the "Information") is the property of MSCI Inc. or its subsidiaries (collectively, "MSCI"), or MSCI's licensors, direct or indirect suppliers or any third party involved in making or compiling any Information (collectively, with MSCI, the "Information Providers") and is provided for informational purposes only. The Information may not be reproduced or redisseminated in whole or in part without prior written permission from MSCI.
- The Information may not be used to create derivative works or to verify or correct other data or information. For example (but without limitation), the Information many not be used to create indices, databases, risk models, analytics, software, or in connection with the issuing, offering, sponsoring, managing or marketing of any securities, portfolios, financial products or other investment vehicles utilizing or based on, linked to, tracking or otherwise derived from the Information or any other MSCI data, information, products or services.
- The user of the Information assumes the entire risk of any use it may make or permit to be made of the Information. NONE OF THE INFORMATION PROVIDERS MAKES ANY EXPRESS OR IMPLIED WARRANTIES OR REPRESENTATIONS WITH RESPECT TO THE INFORMATION (OR THE RESULTS TO BE OBTAINED BY THE USE THEREOF), AND TO THE MAXIMUM EXTENT PERMITTED BY APPLICABLE LAW, EACH INFORMATION PROVIDER EXPRESSLY DISCLAIMS ALL IMPLIED WARRANTIES (INCLUDING, WITHOUT LIMITATION, ANY IMPLIED WARRANTIES OF ORIGINALITY, ACCURACY, TIMELINESS, NON-INFRINGEMENT, COMPLETENESS, MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE) WITH RESPECT TO ANY OF THE INFORMATION.
- Without limiting any of the foregoing and to the maximum extent permitted by applicable law, in no event shall any Information Provider have any liability regarding any of the Information for any direct, indirect, special, punitive, consequential (including lost profits) or any other damages even if notified of the possibility of such damages. The foregoing shall not exclude or limit any liability that may not by applicable law be excluded or limited, including without limitation (as applicable), any liability for death or personal injury to the extent that such injury results from the negligence or wilful default of itself, its servants, agents or sub-contractors.
- Information containing any historical information, data or analysis should not be taken as an indication or guarantee of any future performance, analysis, forecast or prediction. Past performance does not guarantee future results.
- None of the Information constitutes an offer to sell (or a solicitation of an offer to buy), any security, financial product or other investment vehicle or any trading strategy.
- MSCI's indirect wholly-owned subsidiary Institutional Shareholder Services, Inc. ("ISS") is a Registered Investment Adviser under the Investment Advisers Act of 1940. Except with respect to any applicable products or services from ISS (including applicable products or services from MSCI ESG Research Information, which are provided by ISS), none of MSCI's products or services recommends, endorses, approves or otherwise expresses any opinion regarding any issuer, securities, financial products or instruments or trading strategies and none of MSCI's products or services is intended to constitute investment advice or a recommendation to make (or refrain from making) any kind of investment decision and may not be relied on as such.
- The MSCI ESG Indices use ratings and other data, analysis and information from MSCI ESG Research. MSCI ESG Research is produced ISS or its subsidiaries. Issuers mentioned or included in any MSCI ESG Research materials may be a client of MSCI, ISS, or another MSCI subsidiary, or the parent of, or affiliated with, a client of MSCI, ISS, or another MSCI subsidiary, including ISS Corporate Services, Inc., which provides tools and services to issuers. MSCI ESG Research materials, including materials utilized in any MSCI ESG Indices or other products, have not been submitted to, nor received approval from, the United States Securities and Exchange Commission or any other regulatory body.
- Any use of or access to products, services or information of MSCI requires a license from MSCI. MSCI, Barra, RiskMetrics, ISS, CFRA, FEA, and other MSCI brands and product names are the trademarks, service marks, or registered trademarks of MSCI or its subsidiaries in the United States and other jurisdictions. The Global Industry Classification Standard (GICS) was developed by and is the exclusive property of MSCI and Standard & Poor's. "Global Industry Classification Standard (GICS)" is a service mark of MSCI and Standard & Poor's.

About MSCI

MSCI Inc. is a leading provider of investment decision support tools to investors globally, including asset managers, banks, hedge funds and pension funds. MSCI products and services include indices, portfolio risk and performance analytics, and governance tools.

The company's flagship product offerings are: the MSCI indices which include over 148,000 daily indices covering more than 70 countries; Barra portfolio risk and performance analytics covering global equity and fixed income markets; RiskMetrics market and credit risk analytics; ISS governance research and outsourced proxy voting and reporting services; FEA valuation models and risk management software for the energy and commodities markets; and CFRA forensic accounting risk research, legal/regulatory risk assessment, and due-diligence. MSCI is headquartered in New York, with research and commercial offices around the world.

© 2011 MSCI. All rights reserved.
Please refer to the disclaimer at the end of this document