

Assessing the Impact of Celebrity Endorsement for Luxury Fashion Brands on its Profitability: An Event Study Analysis

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ABSTRACT

The advertising strategy of celebrity endorsement is gaining significance in almost every part of the world. The fact that the celebrities have an influence on the customers' preferences and buying behavior is what makes the base of this advertising strategy. Despite extensive studies related to the impact of celebrity endorsements, there is comparatively little work related to the economic impact of the celebrity endorsements and there is very few studies regarding this for the luxury brands. This study is an attempt to examine the impact of celebrity endorsement of luxury fashion brands on firm's profitability using event study methodology. The celebrity endorsement contract of few top luxury fashion brands has been analyzed. The results depicts that, overall, the impact of these celebrity endorsements on the firm's stock returns is positive and therefore it could be profitable and worthy for the firms to invest in these contracts.

Keywords: Celebrity Endorsement, Luxury Fashion Brands, Event study methodology

INTRODUCTION AND CONCEPTUAL FRAMEWORK

The field of advertising is undergoing rapid transformation throughout the globe. In this industry that influences everything from our broader culture to individual desires, more new advertising strategies are coming into use than ever before. However, one of the most often used strategy still remains to be celebrity endorsement. This form of advertising has a long history of being a part of marketing strategies across industry segments and across the world. Many studies find that on average about 20% of the commercials on television feature a celebrity and about 10% of the marketing budget spent on television commercials is used in advertisements involving celebrity endorsements (Advertising Age 1987; Sherman 1985). The contracts of celebrity endorsement are showing an increase in number and value, and these contracts take a significant and growing proportion of the advertising budgets (McGill 1989). A number of other studies have also analyzed the response of the consumers towards the advertisements involving celebrity endorsements. The results show that advertisements become more believable with celebrities' endorsement (Kamins, Brand, Hoeke, & Moe, 1989) and also make them easier to recall for customers (Friedman & Friedman, 1979). The celebrity endorsements are expected to generate greater probability for customers to choose the endorsed brand (Heath & McCarthy, 1994; Kahle & Homer, 1985; Kamins et al., 1989; Ohanian, 1991). Therefore, the celebrity endorsements, as an advertising strategy, is believed to improve the marginal value of advertisement expenditures and create brand equity by means of the "secondary association" of a celebrity with a brand (Keller, 1993).

There are a number of studies that made an attempt to analyze the impact of various strategic marketing decisions such as advertising expenditures, product innovation, expenditures on research and development, product quality and consumer satisfaction on firm profitability (Capon, Farley, & Hoenig, 1990; Szymanski, Bharadwaj, & Varadarajan, 1993). Since increasing number of firms are spending funds in celebrity endorsements to improve their brand equity, it becomes important to analyze as to what economic returns are firms getting by making investments in this form of advertising.

The celebrity endorsement for luxury brands is an important tool to build their brand image in the minds of the customers. Luxury brands are simply the ones for which customers from all income groups aspire for but only few can afford them. These are high-end brands offering products that have a unique brand value associated with it. These brands serve as a high status symbol for its consumers. The luxury brands are available in most of the industries such as automobiles, clothing, apparel & accessories, etc. For this study, the luxury brands in the fashion industry are taken in to consideration.

This study is an attempt to analyze the impact of celebrity endorsements advertising strategy for fashion luxury brands on its profitability. Various studies have been done on the analysis of the impact of celebrity endorsements and offered valuable insights in the context of consumers' response. The purpose of this study is to assess as to whether the celebrity endorsement strategy have an effect on the firm in terms of its profitability and economic returns.

METHODOLOGY

It is difficult to measure the overall impact of the firm's advertising expenditures on its sales vis-a-vis a direct analysis of the effects of celebrity endorsements on firm's profitability. Apart from this, advertising is something whose results and effects are not immediately observed. Instead, it often accrues over time and therefore the concurrent profitability may not showcase the true impact of the given campaign accurately. Due to the problem associated with isolating and measuring the profit associated with a given celebrity endorsement campaign, an alternative approach has been used i.e. event study methodology. Event study methodology usually measures the magnitude of the effect that an unpredicted event has on the expected profitability and risk of a portfolio of firms associated with that event, and this methodology is well accepted and has been widely used in a variety of disciplines, such as finance, accounting, law, organizational behavior, and business strategy (Agrawal, Agrawal, Kamakura, & Kamakura, 1995). The theory underlying event study methodology is the efficient market hypothesis (Fama et al. 1969). According to this theory, the price of a security is the present value of future cash flows expected from a firm's assets and, at any given time, reflects all the available information about the firm's current and future profit potential. In this study, this approach involves the expected profit associated with a celebrity endorsement campaign as reflected in the stocks and abnormal returns of a firm. If anything related to an unpredicted event is expected to affect a firm's current and future earnings, the stock price changes as soon as the market get aware of the event. Therefore, stock prices are considered as reliable indicators of a firm's value. The amount of change in the price of a stock after an event, relative to its pre-event price, would reflect the market's unbiased estimate of the economic value of that event (Brown & Warner, 1985). To examine whether an event had any impact on the firm's value, abnormal return, which is the change in stock price after it has been adjusted for changes resulting from general market movements, is measured. Abnormal returns are measured using event study methodology along with Single-factor model and Two-factor model. As we know, a firm's profit is effected by several factors, and isolating the effect of contribution of any one variable is difficult, therefore the event study methodology has been used in this study. This methodology provides a means and unique opportunity to analyze the impact of a particular strategy on a firm's expected future profits.

For this study, 11 luxury fashion brands were previously taken into consideration namely Louis Vuitton, Gucci, Hermes, Cartier, Rolex, Prada, Fendi, Chanel, Jimmy Choo, Christian Dior and Ralph Lauren. Due to lack of sufficient information and the fact that many luxury fashion brands are not involved in the stock market trading, we have limited our study to shortlisted 5 luxury fashion brands i.e. Louis Vuitton, Coach Inc., Burberry, Tiffany & Co. and Christian Dior. For the analysis as per the event study methodology, we have the event date as the date when the first advertisement has been appeared by the celebrity endorser. The event window has been taken as a period of 10 days including the event day i.e. $t-4$ to $t+5$ days relative to event date, $t=0$. The estimation period is taken as 30 days before the event window i.e. $t-11$ to $t-40$. By analyzing the data on the firms' stock, market index and concerned industry index, the abnormal returns on firms' stock and cumulative abnormal returns have been measured. For market return, the concerned market index of the stock exchange has been considered in which the firm's stocks are traded. For industry return, the S&P Global Luxury Index (by S&P Dow Jones Indices) has been taken into consideration. Further, the values of risk (beta), intercept, R square, standard error have been calculated by following the Single-factor model (market) and Two-factor model (market and industry) along with t-test to test the significance of the result. The significance was tested as to whether the value of T-stat is more than 1.96 which means that there are 5% chance that the abnormal returns are due to random circumstances. The slope under Two-factor model shows the level of interaction between the firm's returns and the concerned market and industry return.

RESULTS

The data has been analyzed for the 5 mentioned luxury brands individually.

- For the luxury brand Louis Vuitton, a French actress Lea Seydoux was signed as the endorser and her first public appearance as the brand endorser for Louis Vuitton was at UNICEF ball in LA on 12th January 2016 wearing an evening gown. Tables in Appendix 1 shows that as per the Single-factor model, the beta i.e. risk on the firm's stock is about 0.73 times than the market risk at that point of time which means the firm's stock is having less risk than the market risk. The Single-factor model explains about 32.4% of the variation in returns for Louis Vuitton whereas it is about 45% under the Two-factor model. The abnormal returns shows a bigger change on the day just after the event date which was found significant as well. The cumulative abnormal return was found to be positive for the event window in both the models but there is not any drastic change in the abnormal returns during the event period. Apart from this, a simple comparison between the average stock returns during the estimation period

and the event period has been made. It shows a better average stock return during estimation period as compared to the event period.

- For the luxury brand Coach Inc., an American actress Gwyneth Paltrow was signed as the brand endorser and this announcement was first made on the 70th anniversary of the brand on 19th July 2011. Tables in Appendix 2 shows that as per the Single-factor model, the beta i.e. risk on the firm's stock is about 1.3 times than the market risk at that point of time which means the firm's stock is having more risk than the market risk. The Single-factor model explains about 60.4% of the variation in returns for Louis Vuitton whereas it is about 62.5% under the Two-factor model. The abnormal returns shows a bigger change on the day just after the event date but the abnormal returns was not found significant on any day during the event window. The cumulative abnormal return was found to be negative for the event window in both the models but there is not any drastic change in the abnormal returns during the event period. Apart from this, a simple comparison between the average stock returns during the estimation period and the event period has been made. It shows a better average stock return during the event period as compared to the estimation period.
- For the luxury brand Burberry, a celebrity couple were signed as the brand endorsers and their first ad for the brand appeared on 30th June 2013. Tables in Appendix 3 shows that as per the Single-factor model, the beta i.e. risk on the firm's stock is about 0.02 times than the market risk at that point of time which means the firm's stock is having less risk than the market risk. The Single-factor model explains about 38.6% of the variation in returns for Louis Vuitton whereas it is about 47.3% under the Two-factor model. The abnormal returns shows a bigger change on the day just after the event date and it was found significant. The cumulative abnormal return was found to be positive for the event window in both the models but there is not any drastic change in the abnormal returns during the event period. Apart from this, a simple comparison between the average stock returns during the estimation period and the event period has been made. It shows a much better average stock return during the estimation period as compared to the event period.
- For the luxury brand Tiffany & Co., an American actress was signed as the brand endorser and her first public appearance as the brand endorser for Tiffany was at the Oscar award ceremony on 27th February 2016 where she wore brand's jewelry. Tables in Appendix 4 shows that as per the Single-factor model, the beta i.e. risk on the firm's stock is about 1.2 times than the market risk at that point of time which means the firm's stock is having more risk than the market risk. The Single-factor model explains about 27.9% of the variation in returns for Louis Vuitton which is almost same under the Two-factor model as well. The abnormal returns shows a bigger change 3 days before the event date and it was found significant. The cumulative abnormal return was found to be negative for the event window under Single-factor model. It was positive under the Two-factor model and there was a considerable increase in the abnormal returns during the event period. Apart from this, a simple comparison between the average stock returns during the estimation period and the event period has been made. It shows a better average stock return during the event period as compared to the estimation period.
- For the luxury brand Christian Dior, famous singer and songwriter Rihanna was signed as the brand endorser and her first ad for the brand appeared on 14th May 2015. Tables in Appendix 5 shows that as per the Single-factor model, the beta i.e. risk on the firm's stock is about 0.14 times than the market risk at that point of time which means the firm's stock is having more risk than the market risk. The Single-factor model explains about 4% of the variation in returns for Louis Vuitton whereas it is about 25.7% under the Two-factor model. The abnormal returns shows a bigger change 5 days after the event date and it was found significant. The cumulative abnormal return was found negative for the event window under both the models but there was a considerable decrease in the abnormal returns during the event period under Two-factor model. Apart from this, a simple comparison between the average stock returns during the estimation period and the event period has been made. It shows a much better average stock return during the event period as compared to the estimation period.

CONCLUSION

Discussing about the luxury brand Louis Vuitton, it shows a significant effect on the stock returns during the event window. Investors seem to value positively the use of celebrities in advertisement. In case of Coach Inc., apart from better average stock return during the event period, there wasn't any significant found during the event period and there was also a higher risk for the stock than the market risk. For the luxury brand Burberry, the result were comparatively beneficial as it shows a lower stock risk than the market risk and a significant abnormal return the next day after the event. In case of Tiffany & Co., the celebrity endorser hosted the entire award ceremony which was announced few days before the event. Therefore, this could possibly be the reason that there was significant abnormal return 3 days before the event. Discussing about the luxury brand Christian Dior, the brand chose a famous singer as its endorser to which investors responded positively and this could possibly resulted in beneficial response from the stock market. There was a lower risk and also significant abnormal return 5 days after the event.

These results, more or less, shows a positive results for the advertising strategy of celebrity endorser. The positive average abnormal returns could possibly mean that the expected incremental gain from celebrity endorsements exceeds the incremental costs of advertising due to such contracts.

Since stockholders are one of the major stakeholders in the firm, shareholder value analysis has been advocated and practiced (Arzac, 1986; Day & Fahey, 1990) as a means of assessing the financial consequences of strategic decisions. Recent studies show a positive association between abnormal returns and investments in intangible assets, such as innovativeness (Chaney, Devinney, & Winer, 1991) and brand quality (Aaker & Jacobson, 1994) with analysis of marketing strategies.

REFERENCES

- [1] Sherman, Stratford P. (1985). "When You Wish Upon A Star", *Fortune*, 19 (August), 68
- [2] *Advertising Age* (1986), "E. F. Hutton's Spokesman Idea a 'Cos' Celebre" 21 (April), 1
- [3] McGill, Douglas C. (1989), "Star Wars in Cola Advertising", *New York Times*, 22 (March), D1
- [4] Kamins, M. a, Brand, M. J., Hoeke, S. a, & Moe, J. C. (1989). Two-Sided versus One-Sided Celebrity Endorsements: The Impact on Advertising Effectiveness and Credibility. *Journal of Advertising*, 18(2), 4–10.
- [5] Friedman, H. H., & Friedman, L. (1979). Endorser Effectiveness by Product Type. *Journal of Advertising Research*, 19(5), 63–71.
- [6] Heath, T. B., & McCarthy, M. S. (1994). Spokesperson fame and vividness effects in the context of issue-relevant thinking: The. *Journal of Consumer Research*, 20(4), 520–534.
- [7] Navpreet Singh Tung, Gurpreet Kaur, Gaganpreet Kaur, Amit Bhardwaj, Optimization Techniques in Unit Commitment A Review, International Journal of Engineering Science and Technology (IJEST), Volume 4, Issue, 04, Pages 1623-1627.
- [8] Kahle, L. R., & Homer, P. M. (1985). Physical Attractiveness of the Celebrity Endorser: A Social Adaptation Perspective. *Journal of Consumer Research*, 11(4), 954–961.
- [9] Ohanian, R. (1991). The impact of celebrity spokespersons' perceived image on consumers' intention to purchase. *Journal of Advertising Research*, 31(March), 46–54.
- [10] Keller, K. L. (1993). Conceptualising, Measuring, and Managing Customer-Based Brand Equity. *Journal of Marketing*, 57(1), 1–22.
- [11] Capon, N., Farley, J. U., & Hoenig, S. (1990). Determinants of Financial Performance: A Meta-Analysis. *Management Science*, 36(10), 1143–1159.
- [12] Szymanski, D. M., Bharadwaj, S. G., & Varadarajan, P. R. (1993). An analysis of the market share-profitability relationship. *Journal of Marketing*, 57(3), 1.
- [13] Agrawal, J., Agrawal, J., Kamakura, W. a., & Kamakura, W. a. (1995). The Economic Worth of Celebrity Endorsers: An Event Study Analysis. *Journal of Marketing*, 59(July), 56.
- [14] Fama, Eugene F. (1970), "Efficient Capital Markets: A Review of Theory and Empirical Work", *Journal of Finance*, 25 (2), 383-417.
- [15] VK Kamboj, A Bhardwaj, HS Bhullar, K Arora, K Kaur, Mathematical model of reliability assessment for generation system, Power Engineering and Optimization Conference (PEDCO) Melaka, Malaysia, 2012 IEEE.
- [16] Brown, S. J., & Warner, J. B. (1985). Using daily stock returns. *Journal of Financial Economics*, 14(1), 3–31. [http://doi.org/10.1016/0304-405X\(85\)90042-X](http://doi.org/10.1016/0304-405X(85)90042-X)
- [17] Arzac, E. R. (1986). Do your business units create shareholder value? *Harvard Business Review*, 64(1), 121–126.
- [18] Day, G., & Fahey, L. (1990). Putting Strategy into Shareholder Value Analysis. *Harvard Business Review*, 68(2), 156–162.
- [19] Chaney, P. K., Devinney, T. M., & Winer, R. S. (1991). The Impact of New Product Introductions on the Market Value of the Firm. *Journal of Business*, 64(4), 573–610.
- [20] Aaker, D. A., & Jacobson, R. (1994). The Financial Information Content of Perceived Quality. *Journal of Marketing Research*, 31(2), 191–201. <http://doi.org/10.2307/3152193>

Appendix 1: Louis Vuitton

Table 1: Average Return on Stock

Average Stock Return: Estimation period	146.522
Average Stock Return: Event period	135.243

Table 2: As per Single-factor Model (Market Model)

t days	Abnormal Return	T-stat	Significant	Cumulative Abnormal Return
-4	-0.013	-0.77	NO	-0.013
-3	0.019	1.126	NO	0.006
-2	-0.015	-0.846	NO	-0.008
-1	0.005	0.291	NO	-0.003
0	0.021	1.198	NO	0.017
+1	-0.02	-1.165	NO	-0.003
+2	0.036	2.118	YES	0.034
+3	0.037	2.143	YES	0.071
+4	0.011	0.663	NO	0.082
+5	0.009	0.531	NO	0.091

Intercept	-0.004
Slope (beta)	0.734
Standard Error	0.017
R-square	0.324

Table 3: As per Two-factor model (Market – Industry Model)

t days	Abnormal Return	T-stat	Significant	Cumulative Abnormal Return
-4	0.0009	0.057	NO	0.0009
-3	0.021	1.322	NO	0.022
-2	-0.01	-0.776	NO	0.01
-1	-0.004	-0.242	NO	0.006
0	0.032	2.005	YES	0.038
+1	-0.012	-0.743	NO	0.026
+2	0.037	2.308	YES	0.062
+3	0.032	2.038	YES	0.095
+4	0.002	0.105	NO	0.096
+5	0.023	1.449	NO	0.119

	Industry	Market	Intercept
Slope	0.179	0.607	-0.002
Standard Error	0.294	0.192	0.003
R-square	0.447	0.016	#N/A
F Statistic	10.9	27	#N/A
Ssxy	0.005	0.007	#N/A

Appendix 2: Coach Inc.

Table 4: Average Return on Stock

Average Stock Return: Estimation period	54.653
Average Stock Return: Event period	58.545

Table 5: As per Single-factor Model (Market Model)

t days	Abnormal Return	T-stat	Significant	Cumulative Abnormal Return
-4	-0.006	-0.558	NO	-0.006
-3	-0.002	-0.172	NO	-0.008
-2	-0.007	-0.597	NO	-0.015
-1	0.01	0.878	NO	-0.005
0	0.005	0.455	NO	0.00007
+1	-0.017	-1.546	NO	-0.017
+2	-0.005	-0.429	NO	-0.022
+3	-0.01	-0.887	NO	-0.032
+4	-0.002	-0.139	NO	-0.034
+5	-0.0007	-0.067	NO	-0.034

Intercept	0.002
Slope (beta)	1.307
Standard Error	0.011
R-square	0.604

Table 6: As per Two-factor model (Market – Industry Model)

t days	Abnormal Return	T-stat	Significant	Cumulative Abnormal Return
-4	-0.004	-0.373	NO	-0.004
-3	-0.009	-0.833	NO	-0.013
-2	-0.004	-0.325	NO	-0.017
-1	0.007	0.675	NO	-0.01
0	0.014	1.249	NO	0.004
+1	-0.022	-1.953	NO	-0.017
+2	-0.003	-0.23	NO	-0.02
+3	-0.014	-1.248	NO	-0.034
+4	-0.004	-0.346	NO	-0.038
+5	-0.002	-0.137	NO	-0.039

	Industry	Market	Intercept
Slope	0.266	1.077	0.001
Standard Error	0.217	0.273	0.002
R-square	0.625	0.011	#N/A
F Statistic	22.45	27	#N/A
Ssxy	0.006	0.003	#N/A

Appendix 3: Burberry

Table 7: Average Return on Stock

Average Stock Return: Estimation period	1332.844
Average Stock Return: Event period	1288.352

Table 8: As per Single-factor Model (Market Model)

t days	Abnormal Return	T-stat	Significant	Cumulative Abnormal Return
-4	0.008	0.449	NO	0.008
-3	-0.002	-0.09	NO	0.006
-2	-0.007	-0.44	NO	-0.001
-1	0.017	0.997	NO	0.015
0	-0.008	-0.47	NO	0.007
+1	0.029	1.738	NO	0.036
+2	0.005	0.298	NO	0.041
+3	-0.0002	-0.01	NO	0.041
+4	-0.004	-0.24	NO	0.037
+5	0.001	0.065	NO	0.038

Intercept	0.0006
Slope (beta)	1.191
Standard Error	0.017
R-square	0.386

Table 9: As per Two-factor model (Market – Industry Model)

t days	Abnormal Return	T-stat	Significant	Cumulative Abnormal Return
-4	0.001	0.073	NO	0.001
-3	-0.003	-0.185	NO	-0.002
-2	-0.004	-0.282	NO	-0.006
-1	0.012	0.783	NO	0.006
0	-0.005	-0.334	NO	0.0009
+1	0.033	2.127	YES	0.034
+2	0.002	0.137	NO	0.037
+3	0.016	1.027	NO	0.053
+4	-0.004	-0.285	NO	0.048
+5	0.002	0.13	NO	0.05

	Industry	Market	Intercept
Slope	0.96	0.278	0.0002
Standard Error	0.453	0.507	0.003
R-square	0.473	0.016	#N/A
F Statistic	12.13	27	#N/A
Ssxy	0.006	0.007	#N/A

Appendix 4: Tiffany & Co.

Table 10: Average Return on Stock

Average Stock Return: Estimation period	55.59
Average Stock Return: Event period	56.25

Table 11: As per Single-factor Model (Market Model)

t days	Abnormal Return	T-stat	Significant	Cumulative Abnormal Return
-4	-0.007	-0.561	NO	-0.007
-3	-0.038	-3.137	YES	-0.044
-2	0.011	0.893	NO	-0.034
-1	-0.003	-0.255	NO	-0.037
0	-0.0004	-0.037	NO	-0.037
+1	-0.002	-0.156	NO	-0.039
+2	0.005	0.407	NO	-0.034
+3	0.002	0.163	NO	-0.032
+4	0.016	1.349	NO	-0.016
+5	0.016	1.323	NO	-0.0001

Intercept	0.0003
Slope (beta)	1.204
Standard Error	0.012
R-square	0.279

Table 12: As per Two-factor model (Market – Industry Model)

t days	Abnormal Return	T-stat	Significant	Cumulative Abnormal Return
-4	-0.007	-0.551	NO	-0.007
-3	-0.038	-3.076	YES	-0.044
-2	0.011	0.897	NO	-0.033
-1	-0.003	-0.231	NO	-0.036
0	-0.0003	-0.028	NO	-0.036
+1	-0.002	-0.169	NO	-0.039
+2	0.005	0.393	NO	-0.034
+3	0.002	0.169	NO	-0.032
+4	0.016	1.331	NO	-0.015
+5	0.016	1.291	NO	0.0003

	Industry	Market	Intercept
Slope	0.015	1.205	0.0003
Standard Error	0.247	0.373	0.002
R-square	0.279	0.012	#N/A
F Statistic	5.228	27	#N/A
Ssxy	0.002	0.004	#N/A

Appendix 5: Christian Dior

Table 13: Average Return on Stock

Average Stock Return: Estimation period	163.432
Average Stock Return: Event period	175.654

Table 14: As per Single-factor Model (Market Model)

t days	Abnormal Return	T-stat	Significant	Cumulative Abnormal Return
-4	-0.008	-0.554	NO	-0.008
-3	0.007	0.486	NO	-0.0009
-2	-0.011	-0.788	NO	-0.012
-1	0.002	0.152	NO	-0.01
0	0.009	0.63	NO	-0.001
+1	-0.017	-1.228	NO	-0.018
+2	-0.014	-1.014	NO	-0.032
+3	-0.012	-0.849	NO	-0.043
+4	-0.001	-0.106	NO	-0.045
+5	-0.031	-2.245	YES	-0.075

Intercept	0.004
Slope (beta)	0.144
Standard Error	0.014
R-square	0.04

Table 15: As per Two-factor model (Market – Industry Model)

t days	Abnormal Return	T-stat	Significant	Cumulative Abnormal Return
-4	0.009	0.715	NO	0.009
-3	0.009	0.738	NO	0.018
-2	-0.012	-0.982	NO	0.006
-1	0.003	0.242	NO	0.009
0	-0.003	-0.269	NO	0.005
+1	-0.015	-1.188	NO	-0.009
+2	-0.015	-1.199	NO	-0.024
+3	-0.013	-1.081	NO	-0.037
+4	-0.014	-1.121	NO	-0.051
+5	-0.029	-2.4	YES	-0.08

	Industry	Market	Intercept
Slope	0.927	0.037	0.004
Standard Error	0.33	0.124	0.002
R-square	0.257	0.012	#N/A
F Statistic	4.677	27	#N/A
Ssxy	0.001	0.004	#N/A