The 2015 Elections in Nigeria: Evidence of Announcement Effect from the Stock Exchange

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Abstract

his paper explores the transmission mechanism of political/democratic announcements in the Nigerian economy and presents empirical evidence from the Nigerian stock market using a two-stage analysis. In the first stage, Abnormal Returns (Volatilities) are found significant on event periods and there is a surprise. The results indicate distinct sets of announcement effects within the period; one of which border on good governance. The anomaly index was high when the presidential candidate was announced, highest when the presidential elections were postponed but lower when the winner was being announced. This result provides evidence that the impact of new information on a stock depends on how unexpected the news is. In the second stage, all the two logistic models show high levels of overall correct classification of the announcement effect ranging from 79.4% to 80.4%. The anomaly results are not found to be statistically significant by the logistic models although the models correctly classify the announcement effect at the point of declaration of presidential results and confirm the anomaly results. The results indicate the Nigerian stock market may still be like a casino and that "crowd psychology" is an important determinant of prices further indicating deviation from market fundamentals or evidence of irrationality may be the norm. The paper recommends government practice and promotes good governance.

Keywords: Announcement effect, Stock exchange, Rational-Expectations, Nigerian general elections, Efficient markets hypothesis.

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Background to the Study

Economists usually believe that given the assumption of rational behavior and of rational expectations, the asset prices must simply reflect market fundamentals i.e. prices can only depend on information about current and future returns from the assets. Deviations from market fundamental values are taken as prima facie evidence of irrationality. Market participants on the other hand, often believe that fundamentals are only part of what determines the prices of assets. They believe extraneous events may well influence the price if believed by other participants to do so and this makes" crowd psychology" an important determinant of prices. Such belief found support in a pioneering study on equity financing in Nigeria by Ako (1997) which reported that nearly 50% (43%) of investments in Nigeria was characterized by considerations outside economics and finance.

Statement of the Problem

It has been reported that rationality of both behavior and of expectations often does not imply that the price of an asset be equal to its fundamental value. In other words, there can be rational deviations of the price from this value (Blanchard & Watson 1982).Seemingly concurring with this position, Bernanke and Gertler (2000) and Bernanke, Kenneth and Kuttner (2005) argues that it is nearly impossible to know for sure whether a given change in asset values results from fundamental factors, non-fundamental factors, or both. Hence, research in this area is always topical. Moreover, Economists who are also market participants are at home with both positions and this is the direction of pursuit employed in this paper.

Objectives of the Study

The main objective of the study is to examine for evidence of Announcement Effect from the Stock Exchange in Nigeria during the last presidential elections in 2015. Following from this background to the study, Section 2 presents literature review; Section 3 introduces the methodology while Section 4 contains the results of the paper. Section 5 concludes with some policy implications.

Literature Review

Stylized Literature

The 2015 elections in Nigeria were generally dubbed "the most hotly contested election since the end of military rule in 1999" by the international press amid immense and largely negative global attention focused on Nigeria. Within the country, political tensions were at feverish pitch and governance practically suspended in the process even as the economy itself appeared at a standstill in the midst of growing general insecurity. As matters were coming to a head, the imminent elections were suddenly postponed. The presidential and National Assembly elections were shifted from 14 February to 28 March while the governorship and state Houses of Assembly elections were shifted from 28 February to 11 April. According to Attahiru Jega, chairman of the Independent National Electoral Commission (INEC), National Security Advisor Sambo Dasuki directed the postponement of the February 14 elections for at least six weeks. Dasuki said that starting

February 14, the military and security services will launch a campaign against Boko Haram, the militant Islamist movement in northeast Nigeria. Therefore, they cannot provide the necessary security for the electoral process. "Nobody has coerced us ... to take this decision," Jega said. As reported by Reuters news network, the election postponement was the direct result of the national security advisor and the security services' call for postponement. Jega's statement clearly indicated that the postponement was not caused by the logistical challenges of organizing the polling, specifically the distribution of permanent voter cards.

The ruling Peoples Democratic Party -PDP had been pressuring the INEC to delay the polls, arguing it is not ready to hold them. The National Security Advisor Sambo Dasuki had called for a delay the previous month over concerns that not enough biometric I.D. cards necessary for voting would be distributed in time and now wrote conveying inability of the security agencies to provide security for the scheduled elections. Concerns over security, due to the insurgency in the northeast, have been raised several times as a reason for a delay, although INEC had outlined red zones where the vote could not be held and alternative polling units for the affected constituencies. The opposition All Progressives Congress -APC had insisted on keeping the February date for the elections to remain credible, saying the only reason the pro-Jonathan camp was pushing for a delay was that it knew he would lose if the polls were held as scheduled. Buhari, who was running for a fourth time against the PDP, believed that he will win. Jonathan was initially viewed as the likely winner but the momentum had shifted to the opposition.

Given this background, there were immediate and far-ranging reactions to the announced election postponement as widely reported in local and international media some of which are reviewed herein. Following the election postponement announcement, U.S. Secretary of State John Kerry said in a statement Washington was "deeply disappointed" by Nigeria's decision to delay the election. "Political interference with the Independent National Electoral Commission is unacceptable, and it is critical that the government not use security concerns as a pretext for impeding the democratic process," said Kerry who had visited Nigeria on Jan. 25, 2015 urging both candidates to prevent potential post-election violence by their supporters. In its editorial, the New York Times (NYT) said: "any argument to delay the vote might be more credible if President Goodluck Jonathan's government had not spent much of the past year playing down the threat posed by the militants and if there were a reasonable expectation that the country's weak military has the ability to improve security in a matter of weeks. The NYT stated further that "It appears more likely Mr. Jonathan grew alarmed by the surging appeal of Muhammadu Buhari, a former military ruler who has vowed to crack down on Boko Haram. By dragging out the race, Mr. Jonathan stands to deplete his rival's campaign coffers, while he continues to use state funds and institutions to bankroll his own. The NYT editorial concluded, "That Mr. Buhari, who helped launch a coup against a democratically elected government in 1983 and ruled until late 1985, has emerged as the potential winner is more of an indictment of Mr. Jonathan's dismal rule than recognition of the former military chief's appeal".

Similarly, according to a February 9, 2015 Council for Foreign Relations (CFR) blog by John Campbell titled "Why Were Nigeria's Presidential Elections Postponed?", "Skepticism abounds about the postponement. Buhari's momentum had been building. A delay may allow Jonathan and the PDP to recapture the momentum. Cynics - or realists suggest that a delay will also enable the PDP to put in place the necessary arrangements to rig the elections. Others suggest that the military and the security services will do all that is necessary to block a Buhari presidency. When Buhari was chief of state for twenty months, 1983-1985, he cracked down on the ubiquitous corruption within the military and elsewhere. Accordingly, he was ousted from office in a military coup led by Gen. Ibrahim Babangida". Campbell's blog further opined that "Given the government's failure over the past five years to address the resilient militant movement's violent insurgency, Dasuki's claim that the security services can defeat Boko Haram in the next six weeks rings hollow. Despite the short period to fulfill such an enormous task, Dasuki is claiming that the general election will not be postponed any further. Nevertheless, if his new military initiative against Boko Haram falls short and the elections are again postponed in March, the possibility of popular unrest will increase. The blog concluded that "Nigeria is in unchartered territory, with political developments no longer following familiar precedents".

Concept of Announcement Effects and Rational-Expectations

By definition, an Announcement Effect also known as a "signal effect" is a change in security prices or volatility as a result of some announcement. It can be used as a general term for the reaction to any development that affects trading, such as a change in dividend policy, new products and acquisitions or a stock split. Normally, the types of news reports (positive or negative) that are issued at any particular moment generate different types of impact on markets. For instance, earnings reports (good or bad), corporate governance (increased or poor), overall economic and political indicators (positive, uncertainty or negative), and unexpected, unfortunate occurrences will translate to corresponding buying/selling pressure and an increase/decrease in stock price. Furthermore, the definition of "news" has expanded overtime (see Dominguez and Panthaki, 2006).

However, in reality, it is difficult if not impossible, to capitalize on the news in the market. This is because the impact of new information on a stock depends on how unexpected the news is since the market is always building future expectations into prices. For example, if a company posts better-than-expected profits, its stock price will likely jump but, if that same profit was expected by a majority of investors, the stock's price will likely remain the same as the profit would have already been factored into the stock price. Consequently, it is unexpected news - and not just any news - that helps drive prices.

The Efficient Markets Hypothesis

In theory, an efficient market is one where no individual or group of people gets an abnormal profit from trading because prices are random in nature. The concept of efficient markets is explained in the efficient markets hypothesis which predicts very rapid systematic price reaction stones surprises to prevent risk-adjusted profit opportunities. This theory of efficient markets was popularized in the Random Walk Hypothesis by early researchers like Gordon (1959) but more precise version of market efficiency was given by Fama (1965 & 1970). One of the common themes of this theory is that the volatility effect of announcement potentially depends on factors such as mixed expectations, contradictory information, and the source of the shocks, the sign of the shock, and whether the announcement is planned or spontaneous (Flood and Garber 1980, Garber 2000, Farhi and Tirole, 2009).

Advances in econometric modeling now enable researchers to better examine the relation between announcements and volatility (Gertler and Kiyotaki 2009, Martin and Ventura 2010, Neely and Dey, 2010 & 2011). The main finding from the literature is that news releases public information can immediately impact prices and volatility and impacts volume through order flow with a delay. The release of public information causes an immediate "average" effect on prices, as well as delayed trading based on both the news and private information (Evans and Lyons, 2005). This delayed trading produces the protracted volatility found in the literature. Several studies have established that public information flow affects market volume and volatility (Ederington and Lee, 2001; Melvin and Yin, 2000; Chang and Taylor, 2003).

Methods and Materials

A two-stage analytical method is employed; the first stage being exploratory and the second stage being confirmatory or inferential.

First Stage Methodology

The first stage methodology consists of examining 103 daily returns of the All Share Index (ASI) during the period of interest from 1st December 2014 to 30th April 2015 to identify anomaly cases using Identify Unusual Cases procedure of the computer software IBM SPSS. The procedure is a tool for quick detection of unusual cases for data auditing purposes in an exploratory analysis, prior to any inferential data analysis. The procedure is designed for generic anomaly detection; that is, anomalous cases are identified based upon deviations from the norms of their peer groups and is not specific to any particular application in which anomalies have established definitions.

Second Stage Methodology

In the second stage, logistic regression analysis is conducted to predict the announcement effect around the 2nd April 2015 declaration of presidential election results indicating imminent change in government in Nigeria. Logistic regression is performed to test the efficient markets hypothesis which predicts very rapid system at price reaction stone assure praises to prevent risk-adjusted profit opportunities. The logistic regression analysis is employed to predict the probability that the Nigerian Stock Exchange is efficient and responds to public announcements. Predictor variables are the daily actual and lagged values of the ASI recorded within the study period and their various derivatives considered pertinent. The All-Share Index tracks the general market movement of all listed equities on the Exchange, including those listed on the Alternative Securities Market (ASeM), regardless of capitalization.

Two forms of the equation or function of the logistic regression analysis estimated are as follows:

$$\log \frac{P}{1-P} = \alpha + \beta_1 A S I + \beta_2 A S I_{-1} + \beta_3 A S I_{PC} + \beta_4 A S I_C + \beta_5 A S I_{CD} + \beta_6 A S I_{PCD} + \varepsilon \dots \dots (1)$$

$$\log \frac{P}{1-P} = \alpha + \beta_1 A S I + \beta_2 A S I_{-1} + \beta_3 A S I_{PCA} + \beta_4 A S I_{CD} + \beta_5 A S I_{PCD} + \varepsilon \dots \dots (2)$$

Where:

Log [p/(1-p)] = logarithm of the odds that a particular event will occur.

 α = Intercept or constant.

 $\beta_1 \dots \beta_6$ = Predictor parameters estimated.

Definition of Variables

The variables are defined and specified as follows:

Table 1: Definition of Variables

Variable	Definition				
AE	Dummy for Announcement Effects; 1 for days of election announcement issues				
	and 0 otherwise				
ASI	Daily Index Points of the All Share Index (ASI) recorded on the Stock Exchange				
ASI_1	Lagged (Previous day) ASI				
ASI _{PCA}	Percentage Actual Daily Change in ASI				
ASIC	Simple Numerical Change in ASI without directional signs				
ASI _{CD}	Dummy for ASI _C ; 0 if below calculated mean and 1 otherwise				
ASI _{PC}	Percentage Simple Numerical Change in ASI without directional signs				
ASI _{PCD}	Dummy for ASI _{PC} ; 0 if below calculated mean and 1 otherwise				

Data

Primary data consist of 103 daily returns of the All-Share Index (ASI) from 1^{st} December 2014 to 30^{th} April 2015. Secondary data consist of lagged values of the primary data (ASI_1) and pertinent derivatives. The data is analyzed using Identify Unusual Cases and binary logistic regression procedures of the computer software IBM SPSS for the first and second stages respectively.

Results and Discussions

First Stage Results

Tables2 - 3 present the exploratory results of the anomaly indices for the primary and secondary data **cases** respectively while Table 4 harmonizes the anomaly cases indicated with public announcement issues. From the results, anomalies were indicated for the All Share Index of the Nigerian Stock Exchange (ASI) on days surrounding public announcements for the emergence of Buhari as a presidential candidate, on days surrounding the announced postponement of presidential elections for six weeks and on

days surrounding the announcement of Buhari as the winner of the 2015 presidential elections in Nigeria. Furthermore, the anomalies were high when Buhari was announced presidential candidate, highest when the presidential election was postponed and lower when the winner of the presidential elections was being announced. This could indicate that the Nigerian stock market reacted quite strongly to public announcement of Buhari as presidential candidate, reacted most strongly to the unprecedented postponement of presidential elections amidst conflicting signals for six weeks and also responded strongly to the public announcement of the presidential elections in Nigeria.

It would appear the Nigerian stock market strongly noted the blunders of corporate governance of the Nigerian polity in the election postponement as it had underlying negative implications for corporate Nigeria. These indications are further amplified by Figures 1-6 of the recorded ASI during the pertinent announcement periods as presented below. Here, we see some evidence that the impact of new information on a stock depends on how unexpected the news is since the market is always building future expectations into prices. The news of the final announcement of results of presidential elections had lowest anomaly indices because the results were expected by a majority of investors and would have already been factored into the stock price. On the other hand, postponement of elections was unprecedented and unexpected news by a majority of investors which likely caused stock prices to jump leading to highest anomaly index within the period.

Table 2: Anomaly Cases for Primary Data ASI

Anomaly Case Index List					
Case	Anomaly Index				
51	5.863				
52	5.208				
8	4.528				
50	4.328				
83	3.791				

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Case	Peer ID	Peer Size	Peer Size
			Percent
51	2	68	66.0%
52	2	68	66.0%
8	1	35	34.0%
50	2	68	66.0%
83	2	68	66.0%

Table 3: Anomaly Cases for Secondary Data ASI_1

Case	Anomaly Index			
52	5.849			
53	5.195			
9	4.368			
51	4.319			
84	3.783			

Case	Peer ID	Peer Size	Peer Size
			Percent
52	2	68	66.7%
53	2	68	66.7%
9	1	34	33.3%
51	2	68	66.7%
84	2	68	66.7%

Anomaly Case Peer ID List

Table4: Anomaly Cases versus Announcement Issues

ANOMALY	CORRESPONDING	PEER ID	ANNOUNCEMENT ISSUE
CASE	DATE		
8	December 10,2014	1	Buhari Emerges Presidential Candidate
9	December 11,2014	1	Buhari Emerges Presidential Candidate
50	February 12, 2015	2	February 14 Presidential Elections
			Postponed
51	February 13, 2015	2	February 14 Presidential Elections
			Postponed
52	February 16, 2015	2	February 14 Presidential Elections
			Postponed
53	February 17, 2015	2	February 14 Presidential Elections
			Postponed
83	March 31, 2015	2	Buhari Emerging President Elect
84	April 01, 2015	2	Buhari Emerging President Elect

Figure 1: ASI before Presidential Election Postponement



Source: The Nigerian Stock Exchange – Market Data



Figure 2: ASI at Presidential Election Postponement

 $\textbf{Source:} \, The \, Nigerian \, Stock \, Exchange \, \text{--} \, Market \, Data$

Figure 3: ASI first day after Presidential Elections



Source: The Nigerian Stock Exchange - Market Data



Figure 4: ASI first day of Presidential Election Results

Source: The Nigerian Stock Exchange - Market Data

Figure 5: ASI second day of Presidential Election Results



Source: The Nigerian Stock Exchange – Market Data

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Figure 6: ASI final day of Presidential Election Results

Source: The Nigerian Stock Exchange - Market Data

Second Stage Results

Model 1 Results

Tables 5-7**present the results of model 1 estimation:** The predictor variables are daily All Share Index (ASI), lagged daily All Share Index, Percentage Simple Numerical Change in ASI without directional signs, Simple Numerical Change in ASI without directional signs, Dummy for Simple Numerical Change in ASI without directional signs and Dummy for Percentage Simple Numerical Change in ASI without directional signs. From Table 5, the model explains only 15.7% (NagelkerkeR²) of the variance in stock prices but is able to correctly classify 97.5% of routine daily stock market activities and 14.3% of public announcement related stock market activities for an overall success rate of 80.4% as presented in Table 6.Table7shows the logistic regression function:

 $-5.282 + .000^{*} \text{ ASI} + .000^{*} \text{ ASI}_{-1} - .493^{*} \text{ ASI}_{PC} + .002^{*} \text{ ASI}_{C} + .358^{*} \text{ ASI}_{CD} + 1.103^{*} \text{ ASI}_{PCD}.$

This model shows a strong correct classification for the presence of announcement effect of the final results of the presidential elections a day before, on the final day and a day after the public announcement. This may indicate that this particular model is able to capture some evidence of protracted volatility in the Nigerian stock market. It is also worth noting that the ASI and its lag had the same magnitude of influence on the classification results with both posting $.000\beta$ values. Employing a .05criterion of

statistical significance, none of the predictor variables is significant and are therefore not explored further.

 Table 5: Model Summary

Step	-2 Log	Cox & Snell R	Nagelkerke R	
	likelihood	Square	Square	
1	92.924ª	.100	.157	

a. Estimation terminated at iteration number 5 because parameter estimates changed by less than .001.

Table 6: Classification Table^a

Observed		Predicted				
		А	Е	Percentage		
		.00	1.00	Correct		
C A E	.00	79	2	97.5		
t	1.00	18	3	14.3		
€ IOverall Pe 1	rcentage			80.4		

a. The cut value is .500

Table 7: Variables in the Equation

		В	S.E.	Wald	df	Sig.	Exp(B)	95% C.I.fo	or EXP(B)
								Lower	Upper
	ASI	.000	.000	.004	1	.949	1.000	.999	1.001
	ASI_1	.000	.000	.036	1	.850	1.000	.999	1.001
	ASI _{PC}	493	1.074	.211	1	.646	.611	.074	5.012
Step 1ª	ASI _C	.002	.003	.290	1	.590	1.002	.995	1.008
	$ASI_{CD}(1)$.358	1.372	.068	1	.794	1.431	.097	21.083
	$ASI_{PCD}(1)$	1.103	1.430	.595	1	.441	3.012	.183	49.643
	Constant	-5.282	4.062	1.691	1	.193	.005		ĺ

a. Variable(s) entered on step 1: ASI, ASI_1, ASIPC, ASIC, ASICD, ASIPCD.

Model 2 Results

Tables 8 – 10**present the results of model 2 estimation**: In model 2, the predictor variables are daily All Share Index (ASI), lagged daily All Share Index, Percentage Actual Daily Change in ASI, Dummy for Simple Numerical Change in ASI without directional signs and Dummy for Percentage Simple Numerical Change in ASI without directional signs. From Table 8 the model explains 21.0% (Nagelkerke R^2) of the variance in stock prices and is able to correctly classify 96.3% of routine daily stock market activities and 14.3% of public announcement related stock market activities for an overall success rate of 79.4% as presented in Table 9. Table10shows the logistic regression function:

-5.910 + .009* ASI - .009* ASI $_{-1} - 2.994*$ ASI $_{PCA} + .254*$ ASI $_{CD} + 1.468*$ ASI $_{PCD}$.

This model also shows a strong correct classification for the presence of announcement effect of the final results of the presidential elections but only on the final day of the public announcement. It is also worth noting that the ASI and its lag had the same magnitude of influence on the classification results but this time, they had opposing influences on the results. Employing a .05criterion of statistical significance, again none of the predictor variables is significant and are therefore not explored further although three predictor variables (ASI,ASI_1 and ASI_{PCA}) are shown to be significant at the .10 criterion of statistical significance.

Table 8: Model Summary

Step	-2 Log	Cox & Snell R	Nagelkerke R
	likelihood	Square	Square
1	89.014ª	.134	.210

a. Estimation terminated at iteration number 6 because parameter estimates changed by less than .001.

Table 9: Classification Table^a

Observed			Predicted				
			A	Æ	Percentage		
			.00	1.00	Correct		
Step	٨E	.00	78	3	96.3		
	AL	1.00	18	3	14.3		
T	Overall Pe	rcentage			79.4		

a. The cut value is .500

Table 10: Variables in the Equation

		В	S.E.	Wald	df	Sig.	Exp(B)	95% C.I.for EXP(B)	
								Lower	Upper
Step 1ª	ASI	.009	.005	3.013	1	.083	1.009	.999	1.020
	ASI_1	009	.005	2.947	1	.086	.991	.980	1.001
	ASIPCA	-2.994	1.721	3.026	1	.082	.050	.002	1.461
	$ASI_{CD}(1)$.254	1.294	.038	1	.845	1.289	.102	16.281
	$ASI_{PCD}(1)$	1.468	1.328	1.222	1	.269	4.341	.322	58.594
	Constant	-5.910	4.155	2.023	1	.155	.003		

a. Variable(s) entered on step 1: ASI, ASI_1, ASIPCA, ASICD and ASIPCD.

Conclusions and Recommendation

This paper explores the transmission mechanism of political/democratic announcements in the context of the Nigerian economy. Specifically, the paper explores empirical evidences of democratic change announcement on the Nigerian stock market and investigates the existence of abnormal patterns or volatility of capital market operations indicated by the value-weighted All-Share Index (ASI) of the Nigerian Stock Exchange. The results provide evidence that the impact of new information on a stock depends on how unexpected the news is since the market is always building future expectations into prices. The news of the final announcement of results of presidential elections had lowest anomaly indices because the results were expected by a majority of investors and would have already been factored into the stock price. On the other hand, postponement of elections was unprecedented and unexpected news by a majority of investors which likely caused stock prices to jump leading to highest anomaly index within the period. The results of the anomaly estimations variously indicate distinct sets of announcement effects within the period; one of which border on good governance. The Nigerian stock market reacted quite strongly to public announcement of Buhari as presidential candidate, reacted most strongly to the unprecedented postponement of presidential elections amidst conflicting signals for six weeks and also responded strongly to the public announcement of the winner of the presidential elections in Nigeria. The Nigerian stock market strongly noted the blunders of corporate governance of the Nigerian polity in the election postponement as it had underlying negative implications for corporate Nigeria.

All the two logistic models show high levels of overall correct classification of the announcement effect ranging from 79.4% to 80.4% although none of the predictor variables is statistically significant at the .05criterion. Nevertheless, the anomaly results are not found to be statistically significant by the logistic regression analysis although the logistic regression models estimated correctly classify the announcement effect at the point of declaration of presidential results and confirm the anomaly results. The results further indicate the Nigerian stock market may still be like a casino as reported by Ako in a pioneering research nearly 20 years ago in 1997. "Crowd psychology" is still an important determinant of prices on the Nigerian stock exchange and deviation from market fundamentals or evidence of irrationality may be the norm. The paper recommends government practice and promotes good governance.

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Appendix 1: Data Used

ASI	ASI_1	AE	ASI_{PCA}	ASI_{PC}	ASI_{PCD}	ASI_C	ASI_{CD}
33914.25	#NULL!	0	0	0	0	0	0
33550.73	33914.25	0	-1.07	1.07	0	363.52	0
33255.67	33550.73	0	-0.88	0.88	0	295.06	0
33175.78	33255.67	0	-0.24	0.24	0	79.89	0
33228.29	33175.78	0	0.16	0.16	0	52.51	0
33075.71	33228.29	1	-0.46	0.46	0	152.58	0
32932.41	33075.71	1	-0.43	0.43	0	143.3	0
32203.62	32932.41	1	-2.21	2.21	1	728.79	1
31062.03	32203.62	1	-3.54	3.54	1	1141.6	1
30763.38	31062.03	1	-0.96	0.96	0	298.65	0
30492.3	30763.38	0	-0.88	0.88	0	271.08	0
29789.59	30492.3	0	-2.36	2.36	1	702.71	1
28961.67	29789.59	0	-2.78	2.78	1	827.92	1
29311.25	28961.67	0	1.21	1.21	1	349.58	0
30306.51	29311.25	0	3.4	3.4	1	995.26	1
31371.93	30306.51	0	3.52	3.52	1	1065.42	1
32786	31371.93	0	4.51	4.51	1	1414.07	1
34428.82	32786	0	5.01	5.01	1	1642.82	1
34663.92	34428.82	0	0.68	0.68	0	235.1	0
34684.32	34663 92	0	0.06	0.06	0	20.4	0
34684.32	34684.32	0	0	0	0	0	0
33947 29	34684.32	0	-212	212	1	737 03	1
32522.31	33947 29	0	-4 2	4 2	1	1424.98	1
31167 54	32522 31	0	-4 17	4 17	1	1354 77	1
30420 54	31167 54	0	-24	24	1	747	1
30144 7	30420 54	0	-0.91	0.91	0	275 84	0
30234 72	30144 7	0	0.91	0.91	0	90.02	0
29889.86	30234 72	0	-1 14	1 14	0	344.86	0
29009.00	29889.86	0	-1.14	3.84	1	11/9 25	1
207 40.01	29009.00	0	0.25	0.25	1	70.78	1
20011.39	28811 20	0	0.23	0.23	0	223 5	0
29034.09	20011.39	0	2.54	2.54	1	729 51	1
29773.4	29034.09	0	2.54	0.15	1	15 00	1
29019.39	29775.4	0	0.15	0.15	0	40.25	0
29739.04	29019.39	0	-0.2	0.2	0	71 11	0
29007.93	29739.04	0	-0.24	0.24	0	104.10	0
29012.05	29007.93	0	0.42	0.42	0	22.00	0
29779.17	29012.03	0	-0.11	0.11	0	70.90	0
29009.00	29779.17	0	0.27	0.27	0	19.09	0
29907.00	29009.00	0	0.10	0.10	0	40.0	0
29042.30	29907.00	0	-0.09	0.09	0	200.20	0
29362.07	29042.30	0	-0.27	1.00	0	220.21	0
29882.28	29562.07	0	1.08	1.08	0	320.21	0
30018.35	29882.28	0	0.46	0.46	0	136.07	0
30617.96	30018.35	0	1.00	1.00	1	599.61	1
30200.97	30617.96	0	-1.36	1.36	1	416.99	1
29985.08	30200.97	0	-0.71	0.71	0	215.89	0
29360.55	29985.08	1	-2.08	2.08	1	624.53	1
29125.69	29360.55	1	-0.8	0.8	0	234.86	0
28721.27	29125.69	1	-1.39	1.39	1	404.42	1
27935.77	28721.27	1	-2.73	2.73	1	785.5	1
27585.26	27935.77	1	-1.25	1.25	1	350.51	0

27728.63	27585.26	1	0.52	0.52	0	143.37	0
28452.6	27728.63	1	2.61	2.61	1	723.97	1
29177.58	28452.6	0	2.54	2.54	1	724.98	1
29282.04	29177.58	0	0.36	0.36	0	104.46	0
29383.93	29282.04	0	0.35	0.35	0	101.89	0
29793.13	29383.93	0	1.39	1.39	1	409.2	1
30145.6	29793.13	0	1.18	1.18	0	352.47	0
30195.56	30145.6	0	0.17	0.17	0	49.96	0
30045.56	30195.56	0	-0.5	0.5	0	150	0
30103.81	30045.56	0	0.19	0.19	0	58.25	0
30267.18	30103.81	0	0.54	0.54	0	163.37	0
30601.13	30267.18	0	1.1	1.1	0	333.95	0
30614.93	30601.13	0	0.05	0.05	0	13.8	0
30365.05	30614.93	0	-0.82	0.82	0	249.88	0
31049.31	30365.05	0	2.25	2.25	1	684.26	1
31195.93	31049.31	0	0.47	0.47	0	146.62	0
31355.28	31195.93	0	0.51	0.51	0	159.35	0
30869.17	31355.28	0	-1.55	1.55	1	486.11	1
30973.8	30869.17	0	0.34	0.34	0	104.63	0
30719.36	30973.8	0	-0.82	0.82	0	254.44	0
29929.56	30719.36	0	-0.26	0.26	0	789.8	1
29553.69	29929.56	0	-1.2	1.2	1	375.87	0
29434.36	29553.69	0	-0.4	0.4	0	119.33	0
29243.91	29434.36	0	-0.65	0.65	0	190.45	0
29334.23	29243.91	0	0.31	0.31	0	90.32	0
29505.47	29334.23	0	0.58	0.58	0	171.24	0
29584	29505.47	0	0.27	0.27	0	78.53	0
29889.91	29584	0	1.03	1.03	0	305.91	0
30073.1	29889.91	0	0.61	0.61	0	183.19	0
30562.93	30073.1	0	1.63	1.63	1	489.83	1
31090.81	30562.93	1	1.73	1.73	1	527.88	1
31744.82	31090.81	1	2.1	2.1	1	654.01	1
34388.46	31744.82	1	8.33	8.33	1	2643.64	1
35728.12	34388.46	1	3.9	3.9	1	1339.66	1
34941.79	35728.12	1	-2.2	2.2	1	786.33	1
34175.24	34941.79	1	-2.19	2.19	1	766.55	1
34520.14	34175.24	1	1.01	1.01	0	344.9	0
34930.02	34520.14	1	0.12	0.12	0	409.99	1
35190.23	34930.02	1	0.74	0.74	0	260.21	0
35043.44	35190.23	0	-0.42	0.42	0	146.79	0
34965.88	35043.44	0	-0.22	0.22	0	77.56	0
34832.62	34965.88	0	-0.38	0.38	0	133.26	0
35005.05	34832.62	0	0.5	0.5	0	172.43	0
34730.95	35005.05	0	-0.78	0.78	0	274.1	0
34507.85	34730.95	0	-0.64	0.64	0	223.1	0
34529.46	34507.85	0	0.06	0.06	0	21.61	0
34494.36	34529.46	0	-0.1	0.1	0	35.1	0
34485.72	34494.36	0	-0.02	0.02	0	8.6	0
34317.72	34485.72	0	-0.49	0.49	0	168	0
34129.88	34317.72	0	-0.55	0.55	0	187.84	0
34050.92	34129.88	0	-0.23	0.23	0	78.96	0
34708.11	34050.92	0	1.93	1.93	1	657.19	1
		0	1.70	1.70	1	~~ /	1