



MEASURING FINANCIAL STRENGTH OF COUNCIL DESIGNATED HOSPITALS IN TANZANIA USING FINANCIAL STRENGTH INDEX MODEL

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ABSTRACT

Assessment of hospital's financial strength refers to the evaluation of hospitals' financial viability, stability and profitability. In assessing the hospitals financial strength the analysts often use elements such as profitability (ability to generate profit), solvency (ability to pay obligations to creditors and other liabilities) as well as liquidity. This study applies the cash flow theory in conjunction with Financial Strength Index (FSI) model to gauge the financial strength of the Council Designated Hospitals (CDHs) in Tanzania. 17 CDHs were employed in the study which covered 2009 to 2013. Objective of the study was to establish if the CDHs can generate the required margin to support the ongoing hospitals mission. The study also aims to determine whether the CDHs can maintain all the current service line offered into the future. Findings revealed that CDHs were having financial strength index score of -1.0496 which implies a fair financial strength or conditions. Fair financial strength of CDHs was largely caused by strong liquidity and zero percentage of debt financing contained in the CDHs' capital structure. Specifically, the result records that CDHs were experiencing low ability to generate profit, this was also the same in the case of average age of plant which was also less than the proposed standard. Finding implies that CDHs could not afford to generate margin (or retained earnings) to finance their expenditure rather they can take advantage of good liquidity position they have. CDHs can maintain all current service line offered into the future, since they have good liquidity position and they can almost double the number of days required (in the hospitals industry) for the hospitals to operate without receiving additional cash. Result also confirms that CDHs were experiencing very low financial risk since most of them were financed using internal source particularly liquidity maintained rather than debt financing.

Keywords: *Financial Strength, Council Designated Hospitals, Tanzania*

INTRODUCTION

Health care sector is one of dynamic and continually changing industries. Council Designated Hospitals (CDHs) are primarily owned by private sector, and the use of CDHs as the public health facilities influence the way how public health services are organized, provided, and financed in Tanzania. Therefore, changes that are taking place in the health sector have a big role to play on the performance of hospitals. In a study by Broyles, Brandt Jr, & Biard-Holmes (1998) change in health industry is largely characterized by “dramatic changes” that “determine the financial strength and status of hospitals”. The term hospitals performance may involve



regular collection, analysis as well as reporting of data that is linked to some measure of improvement; such as monitoring of financial outcomes, monitor operational efficiency, patient quality. CDHs are private not for profit (PNFP) hospitals, owned by non-profit organizations (or social entrepreneurs) and managed under the partnership arrangements between the government and PNFP. Assessment of hospital's financial strength may refer to the evaluation of hospitals viability, stability and profitability. Professionals in this area normally prepare hospitals performance report using the financial ratios extracted from the financial statements and other reports. In assessing the hospitals financial strength the analysts will often use (assess) elements such as *profitability (ability to generate profit)*, *solvency (ability to pay obligations to creditors and other liabilities)* as well as *liquidity (ability to maintain positive cash flows)*. Financial insolvency refers equity or the point where the market value of the firm is less than liabilities. Literature shows that statistically significant financial indicators that are validated in many hospitals empirical studies include; *cash flows margin, days cash on hand, debt per bed, average age of plant, current ratio, equity finance*. Literature further records that *Cash flow Theory, Resource Dependency Theory and Organizational - Environmental Theory* are most frequently referenced theories in the hospitals' solvency (Semritc, 2009). However, this study opted to dwell on Cash flow theory in conjunction with financial distress model, known as Financial Strength Index Model to gauge financial strength of CDHs. Cash flow theory is one of major theoretical frameworks for scrutinizing the hospitals' solvency. It is also known as the pecking order theory. According to Frank and Goyal (2002) cash flow theory argues that organization will use their liquid assets or resources (including cash and marketable securities) before relying on debt and equity. Hospitals (or organizations) which pursue the cash flow theory have an incentive to opt for less than the "optimal" size of the leverage, this therefore increase greater reliance on the internal sources of financing (reserve) (Kim and McCue,2008).

Aim and Objectives of the Study

The aim of this paper is to evaluate financial strength of the CDHs in Tanzania. The objectives are:

- i. To find whether the CDHs can generate the required margin to support the ongoing hospitals mission
- ii. To assess if the CDHs can maintain all the current service line into the future

Significance of the Study

The study is significant since it assesses the elements of financial strength (*as depicted in figure 1*) of the council designated hospitals (CDHs) in the country. Testing of hospitals' financial strength enables hospitals' administrators to act pro-actively before the situation go beyond control. Price, Cameron, and Price (2005) added that regular monitoring of financial solvency indicators and timely detection allows executives to take corrective actions and prevent further deterioration of hospitals financial health. Findings from this study are expected to contribute to the existing body of knowledge of hospitals financial performance particularly in Tanzania. Findings reported in this study may also be useful to the administrators of CDHs specifically in benchmarking their performance according to the required standards in the industry. Since the CDHs are financed under the partnership arrangement between the government and owners, parties to the contract (public and private partners) may agree on how to enhance the capacity of



the CDHs and reduce the deterioration in key elements of financial strength that may lead to the financial risks of the hospitals such use of excessive debt financing, expense control over the revenue and liquidity to ensure hospitals financial sustainability and continuous operation of the hospitals activities in Tanzania.

In the study conducted by Wertheim & Lynn (1993) they reported that profit margin was the financial ratio measure with the highest overall accuracy for predicting hospital closure. Since this study employed operating margin as profitability measure, it implies that findings from this study can close the gap and predict the sustainability of CDHs in the country. Gapensiki (2007) contended that analyzing internal operation and financial reports using financial and operation metrics is very important since gauge performance critical to the success of the hospitals.

REVIEW CASH FLOW THEORY

An organization is said to be financially healthy if it produces an operating margin sufficient to finance the current and future capital required for the maintenance and growth of business. Generally, the two financial distress models namely; Altman's Z-score and Financial Strength Index (FSI) have been employed to support the cash flow and resource dependency theories and provide background for the findings in the previous hospital studies particularly those relating to financial performance.

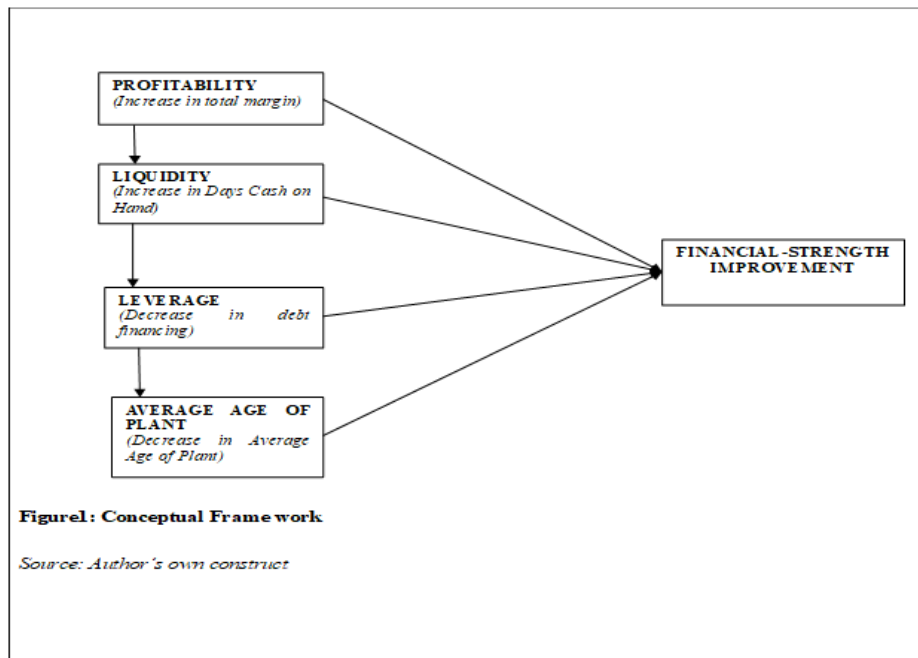
As contended by Semritc (2009) Cash Flow Theory or Perking theory requires that organization should use their most liquid assets (reserve) such as marketable securities, before start seeking for additional equity or debt from outside. Due to the nature of the business and ownership structure of the health facilities particularly not for profit hospitals, financial structure of most hospitals is quite different with organizations from other industries/sectors. Impliedly this theory contends that the hospitals and health facilities depend much on their internal sources of financing and avoid the risks associated with debt financing. Literature also shows that hospitals today apply cash flow theory due to high correlation between the debt financing and risk. Generally, there are major two types of classifications of health facilities based on profit ; one group of classifications is profit based category where there is for-profit hospitals (investor's owned) and the second category is not-for-profit hospitals (volunteering agency hospitals) these are owned by social entrepreneurs. Cash flows theory is very useful in private not for profit hospitals which have limited accessibility to debt financing.

The cash flow theory contravene with the optimal debt financing theory which argues that the firm should strike balance between combination of the equity and liability that optimize the value. However, to ensure sustainability cash flows theory applies to both categories regardless whether the hospitals are for profit or not for profit. However, Cleverly and Baserman (2005) argued that, the cash flow theory is more appropriate to volunteering agency hospitals (not for profit hospitals) than it is for-profit hospitals, they added that *not for profit hospitals* depend heavily upon cash and other liquid assets when replacing their equipment, on the other hand for-profit hospitals have a room to raise additional equity or external funds such as debt financing from external sources. For example, the applicability of cash flow theory is evident in the study conducted by Kim and McCue (2008); where they examined hospitals performance according to capital investment decisions. In their findings, they revealed that, there is positive feedback loop between *cash flow, hospitals financial solvency and capital investment* actions. Meaning that increase in cash flow leads to growth in investment actions and enhanced solvency and new



capital investment often increases cash flow and thus secure hospital financial performance. During the data collection we went through different audited financial statements (particularly balance sheet) of hospitals under the study and observed the capitals structure of almost all CDHs under review were characterized by zero or very limited debt financing. In most cases the financing of the CDHs hospitals activities was largely dominated by the collection from operating activities and grants from the government or donors' fund. However, in some cases there were short term debt financing which ideally was the result of liquidity and cash flow that the particular hospitals was having or expecting to have. It was very rare to come across long term loan or debt financing in the capital structure of the CDHs.

Literature report that one of the suitable models for testing hospitals financial health is Financial Strength Index (FSI). Financial Strength Index (FSI) model is the composite measure of *four dimensions* that comprise dimensions which include four financial ratios which collectively gauge the hospitals' financial health, the model was developed by William Cleverley. The four dimensions include *profitability, liquidity, financial leverage and age of physical facility (plant)*. Literature also stress that the Healthcare Financial Management Association of United States (US) recognizes the model, along with the modified Z-index, as a composite measure of hospital financial distress. Wertheim & Lynn (1993) assessed the validity of 21 financial ratio measures for predicting hospital closure. They also assessed differences in validity using a one year or a two years lag for measuring the financial state of the hospital. They concluded that profit margin was the financial ratio measure with the highest overall accuracy for predicting hospital closure. However, hospital financial experts agree that no single financial ratio measure is adequate for capturing the financial situation of a hospital. Hospitals administrators rely on internally generated financial and operational reports in decision, in most cases analysed internal operation and financial reports are used in gauging hospitals performance in comparison to previous years or compared to the key performance indicators (KPI) which are also known as 'financial and operation metrics' that gauge performance critical to the success of the hospitals (Gapensiki, 2007)



Hospitals' Profitability

Hospitals' profitability can be measured using total operating margin, total margin describes hospitals' overall efficiency for generating net profit. This financial ratio takes into account all revenue generated by the hospital and assesses how much of it hospital get to keep, versus amount used to cover expenses. As an example, a ratio of 0.25 means that you keep 25percents on every shilling you collect. Higher total margin ratios are always better. Increasing revenue or decreasing costs will increase this ratio and improve hospitals' profitability ratio.

Hospitals' Days Cash on Hand

Hospital's day cash on hand can be measured by the average number of days of cash available to pay for hospital expenses that is maintained in cash accounts. A higher number is favourable, since it indicates a greater ability of hospital to meet outstanding obligations. It is computed by taking $(\text{Cash} + \text{Short-Term Investments}) \div ((\text{Total Expenses} - \text{Depreciation}) \div 365 \text{ days})$. Financial institutions and lending organizations consider the ratio as an important ratio in evaluating hospital's ability to finance new projects. It measures the number of days an organization could operate if no additional cash was collected or received (it is one of liquidity ratios). It represents the amount of cash readily available to meet short-term obligations and make debt payments. According to NRHRC, (2012) the Favorable values are above the median of 68.83 days



Hospitals' Leverage

Hospitals' leverage implies the long-term debt-to-capitalization, it is important ratio for evaluating hospitals that have significant capital expenditures and substantial long-term debt. This ratio is calculated as long-term debt divide by total capital available. Essentially it indicates how highly leveraged the hospitals is in relation to its total financial assets. A ratio higher than 1 indicate a precarious financial position for the hospitals in which its long-term debts are greater than its total available capital. Financial analysts prefer to see ratio of less than 1 since it indicates a lower overall financial risk level for a company. Measures the percentage of net assets (or equity) that is debt financed.

Hospital Average Age of Plant (in years)

The ratio indicates the financial age of the fixed assets of the hospital, the older the average age, the greater the immediate need for capital resources. It is calculated by accumulated depreciation ÷ depreciation expenses. It measures the average age in years of the buildings and equipment of hospitals (operations ratio), average age of plant is a good indicator of distress with older hospitals having greater problems in upkeep (Johnson, 2015).

RESEARCH METHODOLOGY

The study applied the cash flow theory in support of Financial Strength Index (FSI) model to gauge the financial strength of 17 (seventeen) Council Designated Hospitals (CDHs) in Tanzania covering the period from 2009 to 2013. The sample was selected using stratified sampling technique. Relevancy of cash flows metric is in line with the Financial Strength Index (FSI) model. Financial strength index (FSI) is the composite measure of *four dimensions* that was proposed by Cleverley, arguing that the four dimensions of financial ratios collectively gauge the hospitals' financial strength. The four dimensions include *profitability, liquidity, financial leverage and age of physical facility (plant)*. Hospitals' financial ratios have been used in previous studies by (Cleverly and Rohleder, 1985; Ehreth, 1994; Ozcan and McCue, 1996; Zeller, Stanko and Cleverly, 1996). This study used the ratio of *net profit to total revenue to measure hospitals' profit margin*; the ratio of *total debt to total capital to measure leverage*; the ratio of *accumulated depreciation to annual depreciation to measure average age of plant*; the ratio of *cash and cash equivalent to expenses per day as well as ratio of current assets over current liabilities to measure liquidity* (Ref: Appendix 1). Financial ratio analysis provides early signal on the financial position (and strength) when the analysis is designed on longitudinal basis. Table 1 summarizes the four ratios that constitute financial strength index (model) as well as their meaning:



Table 1: Financial Ratios - Computations and Normalized Measures				
Financial ratio	Formula	Trend	Industry rate*	Normalized Financial Ratio Measure
Total margin	$\frac{net.income}{total.revenue}$	UP (+)	Above 2.5 %	$(\frac{Total.Margin - 4.0}{4.0})$
Days cash on hands	$\frac{cash+marketablesecurities+unrestrictedinvestments}{\frac{totalexpenditure-depreciation}{daysinperiod}}$	UP (+)	Above 60 Days	$(\frac{Days.Cashonhand - 50}{50})$
Debt financing ratio	$\frac{total.debt}{total.capital}$	DOWN (-)	Less than 17%	$(\frac{50 - Debt.Financing}{50})$
Average age of plant	$\frac{accumulated.depreciation}{annual.depreciation}$	DOWN (-)	Less than 9 years	$(\frac{9 - Plant.Age}{9})$

* National Rural Health Resource Centre (NRHRC), 2015

To compute the FSI the four dimensions (listed in Table 1) are normalized around the industry value reflecting good financial standing on the measure according to the opinion of the professionals. According to Cleverly argument the selected industry value is industry average value.

FSI (Financial Strength Index) = Profitability indicator + liquidity indicator + leverage indicator + indicator for average age of plant.

Meaning that;

FSI =

Profitability indicator - is measured by total margin and higher total margin are always better, improvement in total margin can be caused by either increase in revenue or decrease in cost (Ref.Table1);

Liquidity indicator - is measured by day's cash on hand and current ratio, it is very important in evaluating hospitals ability to finance new projects and cover outstanding liabilities;

Leverage indicator - is measured by debt financing percentage, it signifies the result of being highly leveraged and the decline trend is much preferred;

Average age of plant - is measured by age of hospitals' physical facilities, it is a good measure of the distress as it indicates old assets cannot efficiently generate sales and the hospitals need immediate replacements of the assets.

The interpretation of the FSI Score is as follows:

Hospitals with large profits, significant liquidity, low levels of debt and good physical facilities are considered to be in excellent financial conditions (Cleverly, 2002)

FSI score ranging between -2.0 and 0.0 indicate the fair financial strength or conditions



A score ranging between 0.0 and 3.0 indicates the hospital has average financial health

An index score of greater than 3.0 shows the excellent financial health/financial strength.

Generally, both FSI and Altman Z-score model can be used to test firm's financial distress. However, the FSI was designed specifically for hospitals. The model had been widely used in the previous hospitals studies, to mention few Price, Cameroon and Price (2005); Cleverly (2002) and Wertheim and Lynn (1993) applied the model to test indicators of hospitals solvency. As contended by Price, et al.,(2005) the FSI model gives a pretty starting point for evaluating hospitals' financial conditions.

FINDINGS AND DISCUSSION

Financial Strength Index (FSI) provide a good starting point for examining the applicability of the cash flow theory, Analysis revealed that the hospitals under review manifested fairly financial strength or condition (Ref. Appendix.1). Generally, hospitals with high profit, substantial amount of cash, small or no amount of debt and new plants implies strong financial strength, on the other hand hospitals with little cash, greater amount of debt financing, very old plant are said have a very weak financial strength and the chances of staying in business for long period is very small. Computation of the financial strength index (FSI) of CDHs shows that:

$$FSI = -155.22 + 115.263 + 85 + -46.094 = -1.0496$$

An index of **-1.0496** Implies a fair financial strength or conditions. Fair financial strength of CDHs was largely caused by strong liquidity and zero percentage of debt financing contained in the CDHs capital structure. Therefore, CDHs were experiencing fair financial strength over the sampled period (2009 – 2013) (Ref. Appendix 1).

Findings hold that, CDHs hospitals were manifesting a fair financial strength. The counterbalance of null or negative growth in equity financing with zero debt financing were the main deriving factors for the fair financial conditions over the study period. Specifically, the result records that CDHs were experiencing low ability to generate profit since the overall profit ratio has a negative coefficient, this was the same in the case of average age of the plant which was also less than the proposed benchmark of (9) nine years. Finding implies that CDHs to some extent could afford to finance their expenditure but not using the part of the profit generated (or retained earnings). As far as debt financing and liquidity are concern CDHs have proven that they Can maintain all current service line into the future, since they have high liquidity and they can almost double the number of days required (in the hospitals industry)for the hospitals to operate without receiving additional cash.

CONCLUSION AND RECOMMENDATIONS

This study aimed at evaluating financial viability of CDHs in Tanzania, 17 CDHs were employed in the study covering the period from 2009to 2013. Financial strength index (FSI) model was used to scrutinize *liquidity, leverage, profitability and assets management* of the CDHs. Generally, the findings revealed that CDHs hospitals were manifesting a fair financial strength with almost zero debt financing. However, the hospitals were facing difficulties in



generating operating margin. Result further confirms that CDHs were experiencing very low financial risk since most of them were financed using internal source particularly liquidity maintained rather than debt financing, this implies the CDHs can sustain to offer current services in future.

The study recommends that the CDHs administrators and hospitals' managers should revisit hospitals' revenue sources and hospitals' cost structures so as to enhance CDHs' ability to generate profit, this is because profit is the excess of what has been collected as revenue against what has been spent to generate that revenue. Enhancing hospitals profitability will ensure growth in equity, maintain current services line into the future as well as support the ongoing hospitals mission. It is also recommended that hospitals' administrators should focus on benchmarking the elements of hospitals performance with the required industry rate (or hospitals' performance standards). Since the CDHs are operated under the partnership arrangements between government and private sector, this study recommends that policy makers (the ministry) should have a policy and strategies which will facilitate supervisory role not only on the quality of the services delivered but also on the management of the CDHs in totality. To ensure sustainability of CDHs the study also suggest hospitals 'managers and administrators should continue advocating cash flow theory by focusing on the internal sources of financing and avoid indulging into the debt financing. Natural extension of this work may consider another category of hospitals so as to allow platforms for the comparison of the findings. Future studies may also use alternative technique (such as Altman Z-score model) to evaluate the financial conditions of the CDHs in the country.

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Appendix 1: Financial Strength Index (FSI) For CDHs 2009 -2013

Period	HOSPITAL	Operating margin	Equity Growth	Current ratio	Days cash on hand	Equity financing	Average age of plant	Strength Index (FSI)Financial
2009	A	-0.18288	1.702069	1.8212	82.16188	-3.39194	5.510109	0.985283
2009	B	-0.12593	-0.48768	1.8212	135.0086	-15.5602	9.42556	1.621405
2009	C	-2.35122	32.09341	1.8212	127.8906	-4.86568	1.638989	1.787896
2009	D	-2.36472	-0.48768	1.8212	70.23034	-4.68076	9.42556	-0.23386
2009	E	0.148505	32.09341	3.50422	120.4681	-7.12847	1.638989	2.264379
2009	F	-1.49776	0.852018	284.7373	65.03714	-25.686	5.305528	0.3368
2009	G	0.055587	0.542032	1.8212	127.6525	-2.56818	8.287739	1.646086
2009	H	-0.55377	32.09341	4.672293	110.4722	-3.62534	1.638989	1.888891
2009	I	-0.10902	-0.5395	3.50422	80.31977	-2.31972	7.660088	0.728019
2009	J	0.827818	-0.48768	1.8212	82.61423	-8.93505	9.42556	0.811955
2009	K	-0.01448	-0.34843	3.50422	72.68334	-0.11525	113.4161	-11.1517
2009	L	-1.61991	-0.88316	1.8212	87.52296	-61.0288	34.72018	-2.51232
2009	M	0.737194	0	1.8212	82.33051	-0.45269	8	0.94202
2009	N	0.266136	0.026615	1.023146	153.6991	-2.89918	7.807221	2.273047
2009	O	0.672265	0	1.8212	216.0315	-7.57289	8	3.599808
2009	P	-12.2512	32.09341	3.893577	156.0541	-5.76165	1.638989	-0.12383
2009	Q	0.94238	0.156288	1.8212	110.0217	-7.63026	16.77361	0.572294
2010	A	-0.23889	-0.91952	0.472149	20.69945	-7.84512	11.1994	-0.89011
2010	B	-2.83412	-0.3232	0.472149	117.9999	-26.0566	12.24232	0.291211
2010	C	-0.12897	-1.85285	0.472149	137.9933	-55.0499	23.27648	0.141348
2010	D	-16.3765	-0.3232	0.472149	86.44823	-27.3902	12.24232	-3.72542
2010	E	-3.82614	-1.85285	1.218983	83.23203	-82.7596	23.27648	-1.87817
2010	F	-0.97056	-0.5395	17.29443	115.1594	-49.8136	8.265379	1.142172
2010	G	0.958983	0.297502	0.472149	126.4114	-3.33935	8.214566	1.855245
2010	H	0.159283	-1.85285	1.625311	127.4142	-38.5453	23.27648	0.001829
2010	I	-0.45661	32.84276	1.218983	121.9055	-0.2938	1.439695	2.163991
2010	J	0.367569	-0.3232	0.472149	91.98602	-14.7185	12.24232	0.571355
2010	K	0.123553	0.033598	1.218983	145.0903	0.001943	112.5423	-9.57201
2010	L	-0.98424	0.376577	0.472149	113.0894	-191.719	30.21865	-1.3419



2010	M	0.150506	0	0.472149	83.30104	-0.44704	9	0.703647
2010	N	-0.05096	-0.04092	0.265252	57.48247	-3.07275	8.970278	0.140212
2010	O	0.037556	0	0.472149	129.6314	-13.5386	9	1.602018
2010	P	0.443971	-1.85285	1.354425	138.0508	-62.7138	23.27648	0.285733
2010	Q	0.892098	-0.14496	0.472149	127.0341	-9.58953	19.10859	0.640531
2011	A	-10.9228	0	3.433944	111.2681	-10.2792	12.1994	-1.86083
2011	B	-37.0121	1.154752	3.739776	120.5566	-15.8099	8.761191	-7.81536
2011	C	0.658804	28.77946	3.986254	72.66269	-3.93768	2.512468	1.338792
2011	D	-2.05484	1.154752	3.317221	112.2168	-9.49723	8.761191	0.757161
2011	E	-11.138	28.77946	7.458528	110.1138	-6.64265	2.512468	-0.86139
2011	F	0.414533	21.05003	128.0668	127.1996	-4.5411	1.717169	2.456829
2011	G	-0.00178	-0.27284	3.433944	121.3805	-0.6378	10.51225	1.259137
2011	H	0.520177	28.77946	9.944704	91.69719	-2.83264	2.512468	1.684825
2011	I	-3.63416	-0.08645	7.458528	130.9947	-0.40786	2.504737	1.43305
2011	J	0.449108	1.154752	3.433944	130.0951	-4.55393	8.761191	1.740713
2011	K	0.041944	0.852018	7.458528	127.3859	0.023711	79.92119	-6.32193
2011	L	-1.95061	21.18699	3.433944	90.12746	-23.471	3.606517	0.914173
2011	M	0.134182	0	3.433944	218.4213	-0.31052	10	3.29086
2011	N	-1.44207	-0.08645	2.282285	189.5929	-3.06131	10.37554	2.278503
2011	O	0.003664	0	3.433944	110.9978	-4.11999	10	1.109761
2011	P	-0.4387	28.77946	8.287253	171.9884	-4.67012	2.512468	3.05093
2011	Q	0.749508	0.156288	3.433944	113.4225	-3.57704	25.11505	-0.33473
2012	A	-8.72988	0	4.096593	140.9946	-9.33295	13.1994	-0.82918
2012	B	-6.56552	-0.48768	4.580697	98.48417	-22.6084	12.58643	-1.07019
2012	C	0.686503	0.434943	5.08224	96.69387	-3.11367	3.063677	1.765095
2012	D	0.717876	-0.48768	4.169758	115.8671	-8.66778	12.58643	1.098317
2012	E	-8.3896	0.434943	17.71763	86.16464	-5.7872	3.063677	-0.71452
2012	F	0.585873	-0.1703	17.71763	128.4711	-4.41932	2.876998	2.396223
2012	G	0.068129	0.480447	4.096593	127.0338	-0.46884	9.476088	1.50481
2012	H	0.599528	0.434943	23.6235	149.9999	-2.21521	3.063677	2.809472
2012	I	-3.60903	0.105988	17.71763	121.3191	-0.52488	3.378681	1.148715
2012	J	-12.6676	-0.48768	4.096593	86.37642	-7.66246	12.58643	-2.83786
2012	K	0.215396	14.83223	17.71763	84.42367	0.043673	10.49621	0.576077
2012	L	-4.38452	-1.82749	4.096593	181.1599	-22.3141	42.81215	-2.22984
2012	M	-6.97386	0	4.096593	181.7974	-2.61902	11	0.670261



2012	N	-2.02094	0.105988	2.617097	128.2501	-2.9586	10.85336	0.853837
2012	O	-1.43315	0	4.096593	122.8798	-3.70027	11	0.877086
2012	P	-1.01932	0.434943	19.68625	93.42399	-3.85733	3.063677	1.273241
2012	Q	0.916295	-0.14496	4.096593	158.9892	-2.26839	37.2288	-0.72768
2013	A	-58.413	0	5.353777	119.3761	-12.5396	14.1994	-13.7934
2013	B	-8.97104	0	5.92563	139.9899	-19.3989	13.58643	-0.95257
2013	C	0.923352	0.349843	5.358756	114.0692	-2.4584	3.607559	2.111382
2013	D	0.838143	0	5.334154	123.0596	-6.67434	13.58643	1.161124
2013	E	-0.05247	0.349843	5.390124	94.45202	-4.82247	3.607559	1.475083
2013	F	-0.15228	-0.03874	207.555	159.7052	-4.22417	3.933828	2.718943
2013	G	1	-0.16839	5.353777	185.9999	-8.3659	11.34727	2.70919
2013	H	0.646533	0.349843	7.186832	162.5983	-1.73539	3.607559	3.012759
2013	I	-3.50655	0.026615	5.390124	123.9203	-0.65101	4.33431	1.120179
2013	J	0.167741	0	5.353777	167.9993	-6.07442	13.58643	1.892318
2013	K	0.22367	-0.1703	5.390124	97.29591	0.091973	12.47316	0.615929
2013	L	-1.37669	21.18699	5.353777	55.08747	-15.1568	4.692772	0.236158
2013	M	0.357687	0	5.353777	123.1178	-2.21494	0	2.551779
2013	N	-52.9737	0.026615	3.699089	91.22888	-4.80665	11.71083	-12.7201
2013	O	-2.6319	0	5.353777	137.8932	-3.1087	12	0.766556
2013	P	-0.10051	0.349843	5.989027	83.30073	-3.22115	3.607559	1.240047
2013	Q	0.927561	0.156288	5.353777	78.49111	-1.00461	47.24046	-3.44723
								-1.0496