A LOCAL GOVERNMENT COST INDEX FOR NEW ZEALAND

May 2010

Prepared for Local Government New Zealand

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Preface

One of the most regulatory voiced criticisms of local government expenditure, and the source of great frustration by councils, is the claim that councils are irresponsible fiscal managers because rates tend to increase at a faster rate than the consumer price index. Why the rate at which prices increase for households should be taken as indicative of the rate at which prices increase for local governments has always left us bemused.

We have published a number of papers and reports which explain that local government costs are driven by what happens to the price of construction material, given that most council expenditure is in those areas. However, until we commissioned papers, we have never been able to prove it. A Local Government Cost Index for New Zealand examines the main cost drivers for local government activity and measures the degree to which these have changed year on year, creating a local government cost index to parallel the household price index.

What this research highlights is the degree to which council costs have been rising at a faster rate than household costs. What this means in practice is that any council that sets its rates at a figure less than the local government cost index (LGCI) is either reducing services; transferring costs to future generations or finding efficiencies. We hope that councils will be able to use this paper to help explain to their communities the real nature of the cost pressures they are facing and the actual steps they are taking to address them.

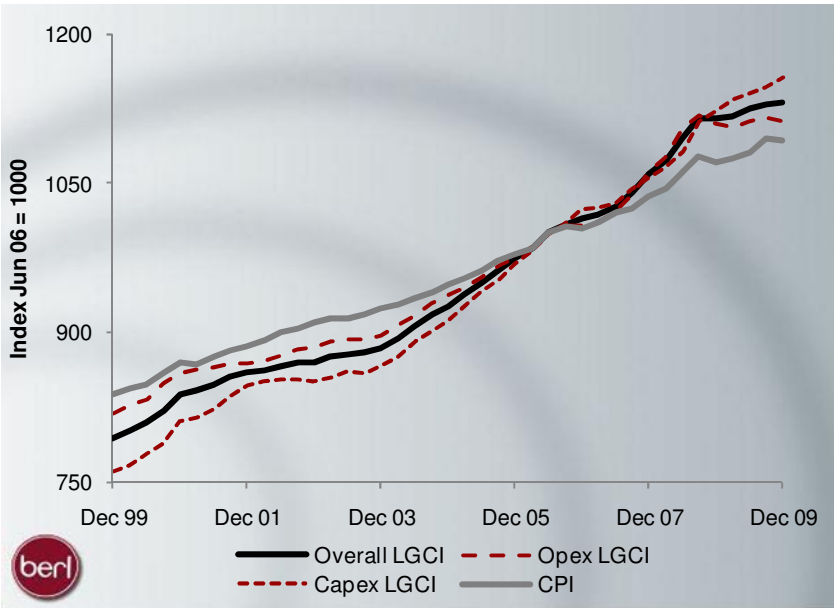
Eugene Bowen
Chief Executive
Local Government New Zealand

A Local Government Cost Index for New Zealand

1 Executive summary

This project was commissioned by Local Government New Zealand (LGNZ). Its purpose was to develop a Local Government Cost Index (LGCI) based on the cost structures of New Zealand's local governments.

The chief outcomes of the project are summarised in the figure.



The Overall LGCI has risen significantly faster than the consumers price index (CPI). Since 1999, the LGCI has increased by 43.9 percent, compared with a 30.6 percent increase in the CPI. These are average annual rates of 3.6 percent and 2.7 percent respectively.

Major drivers of the higher rise in the Overall LGCI have included:

- a 54.0 percent rise in the Capex LGCI led by:
    - a 67.9 percent rise in the Capex: Three waters index
    - a 56.0 percent rise in the Capex: Transport index
    - a 40.4 percent rise in the Capex: Community index
- a 36.3 percent rise in the Opex LGCI led by:
    - a 42.3 percent rise in the Opex: Goods and services index.

These findings confirm the hypothesis that the cost structures faced by local governments differ significantly from those captured within the CPI basket. We recommend regular updates of the LGCI series to ensure that local governments are able to keep a better track of how the costs they face compare with growth in the CPI.

2 Introduction

This project was commissioned by LGNZ. Its purpose was to develop an LGCI based on the cost structures of New Zealand's local governments.

LGNZ and its members are increasingly aware of the fact that changes in prices faced by local governments are not always in line with the CPI. Local governments face cost increases that often differ significantly from those faced by the consumer because of the different cost structures each deals with.

The result is that consumers often feel that rates rises are not justified, as the rates changes may be larger than rises in the CPI. Local governments thus need a better understanding of how costs they face have changed over time.

Section 3 describes the methodology used to develop the Overall LGCI, the Capex LGCI, and the Opex LGCI.

Section 4 presents the key results of the project in graphic form.

Section 5 provides more technical data in table form.

3 Methodology

This section explains the process undertaken to develop the LGCI series presented in this report.

3.1 How much do local governments spend, and on what?

The first step in developing the LGCI was to determine the scale and composition of local government spending. To do this, we needed to get an idea of what New Zealand's 85 territorial local authorities (at Regional, unitary authority and local level) spend. For example, South Australia has developed a Local Government Price Index (LGPI) that includes 15 categories of operational expenditure and three categories of capital expenditure, based on data showing spending by category. This has allowed the creation of a South Australia LGPI with a component Capex LGPI and an Opex LGPI.

Unfortunately, in New Zealand, breakdowns of operational and capital expenditure by local governments are not available at such a detailed level although we believe this is something the Department of Internal Affairs (DIA) is looking into. Statistics New Zealand publishes operational spending by local governments across four categories:

- purchases of goods and services, grants and donations, and all other expenditure
- employee costs
- depreciation
- interest paid.

No such data is regularly collected on capital expenditure. For this information, we made use of the 2007 *Report of the Local Government rates Inquiry*, which provided estimates of what Local governments were spending on capital outlays in 2007.

Combining these two data sets yielded the results in Table 3.1.

Table 3.1 Expenditure by class, local governments, 2006/07

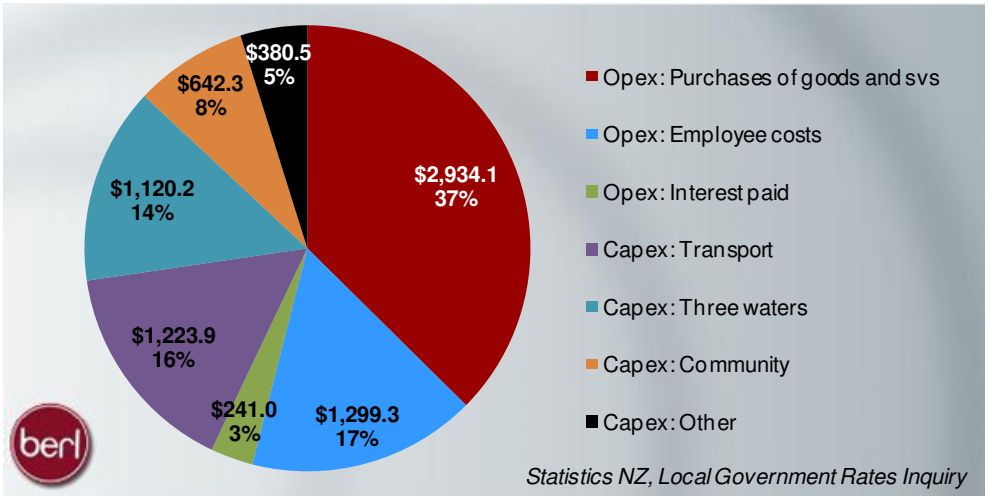
Expenditure class	NZ$m
Operating expenditure	**$5,631.0**
Purchases of goods and services, grants and donations, and all other expenditure	$2,934.1
Employee costs	$1,299.3
Depreciation	$1,156.6
Interest paid	$241.0
Capital expenditure	**$3,366.9**
Transport	$1,223.9
Three waters	$1,120.2
Community	$642.3
Other	$380.5
Total expenditure	**$8,997.9**

Statistics NZ, Local Government Rates Inquiry

By far the largest expense category is the purchase of goods and services, grants and donations, at $2.93 billion. Several other capital and operational expenditures fall in the $1.0 billion to $1.3 billion range.

Taking out depreciation, as it has been replaced by actual expenditure on capital items, yields the results displayed in Figure 3.1. Total spending excluding depreciation is $7.84 billion.

Figure 3.1 Local government expenditure excluding depreciation, 2006/07, NZ$m



Almost 40 percent of spending is on purchases of goods and services, with 16.6 percent being employee costs. One dollar in six is spent on transport capital costs, while one in seven is spent on the "three waters" – water supply, wastewater, and stormwater.

Community capital expenditure refers to the renewal, growth in capacity, and improvement of community facilities including parks, pools and property.

3.2 Which price indices best represent each spending category?

Having split up our spending categories as much as possible based on available data, we needed to match existing price indices to each category of spending.

This section summarises the weights used, and the appropriate price indices used for each category of expenditure in our series.

3.2.1 Opex: Purchase of goods and services

This component makes up the largest individual share of the LGCI, at more than 37 percent. It refers to purchases by local governments of consumables necessary to carry out their responsibilities. It is based on a single price index from the producers price index.

Source indices: PPI – inputs, Local government and civil defence: 1.00

Weighting: 0.374

In other words, the Opex: Purchase of goods and services index accounts for 37.4 percent of the Overall LGCI.

3.2.2 Opex: Employee costs

Employee costs include wages and salaries and are captured by one existing index from the labour cost index (LCI). Employee costs are around one-sixth of total operational and capital spending captured by the LGCI.

Source indices: LCI – All salary and wage rates, Local government sector: 1.00

Weighting: 0.166

In other words, the Opex: Employee costs index accounts for 16.6 percent of the Overall LGCI.

3.2.3 Opex: Interest paid

Interest paid refers to interest paid on Local government debts, and is covered by the mortgage interest component of the CPI. No equivalent series exists in the producers price index.

Source indices: CPI – Mortgage interest: 1.00

Weighting: 0.031

In other words, the Opex: Interest paid index accounts for 3.1 percent of the Overall LGCI.

3.2.4 Capex: Transport

The transport component refers to spending on transport projects, in particular roading. It draws on two price indices – one from the CGI and one from the PPI. As one of the most financially demanding components of local government expenditure, it accounts for almost one-sixth of the index.

Source indices: CGI – Transport ways (other construction): 0.75

PPI – inputs, Road transport: 0.25

Weighting: 0.156

In other words, we use two existing indices with relative weights of 75 : 25 to construct the Capex: Transport index, which has a total weighting of 15.6 percent of the Overall LGCI.

3.2.5 Capex: Three waters

In many ways this is the most difficult component to weight with any degree of accuracy, and for which to select the most representative indices. Indices included consider the role of pipeline construction and maintenance; irrigation; and river control. The first of these indices applies to all three waters – supply, waste, and storm. The second applies to water supply only, and the third, to stormwater only.

We therefore took into account the relative spending on each of the three waters as well as the likely split in spending within each to develop this index.

Source indices: CGI – Pipelines: 0.75

CGI – Irrigation and Land Drainage: 0.125

CGI – Reclamation and River Control: 0.125

Weighting: 0.143

In other words, we use three existing indices with relative weights of 0.75 : 0.125 : 0.125 to construct the Capex: Three waters index, which has a total weighting of 14.3 percent of the Overall LGCI.

3.2.6 Capex: Community

Capex: Community refers to capital expenditure on community facilities such as pools, parks and reserves. It covers renewal of existing facilities, increases in capacity, and improvements in levels of service. It is based on two price indices, one from the PPI and one from the CGI.

Source indices: PPI – inputs, Cultural and recreation services: 0.50

CGI – Earthmoving and site work: 0.50

Weighting: 0.082

In other words, we use two existing indices with equal weights (50 : 50) to construct the Capex: Community index, which has a total weighting of 8.2 percent of the Overall LGCI.

3.2.7 Capex: Other

Capex: Other simply refers to capital expenditure not captured elsewhere. We therefore use the All groups index of the CGI.

Source indices: CGI – All groups: 1.00

Weighting: 0.049

In other words, the Opex: Other index accounts for 4.9 percent of the Overall LGCI.

3.3 Re-basing existing series

The various price indices produced by Statistics New Zealand and used in the LGCI have different base dates. For example, the current PPI series are based on the December 1997 quarter, while the current CGI series are based on the September 1999 quarter. The current LCI series are based on the June 2009 quarter, while the current CPI series are based on the June 2006 quarter.

In order to make it possible to compare sub-components of the LGCI, such as and Opex LGCI or the Capex LGCI, it makes sense to rebase them all to a certain quarter. Our choice of base quarter is June 2006. This allows direct comparison to the CPI.

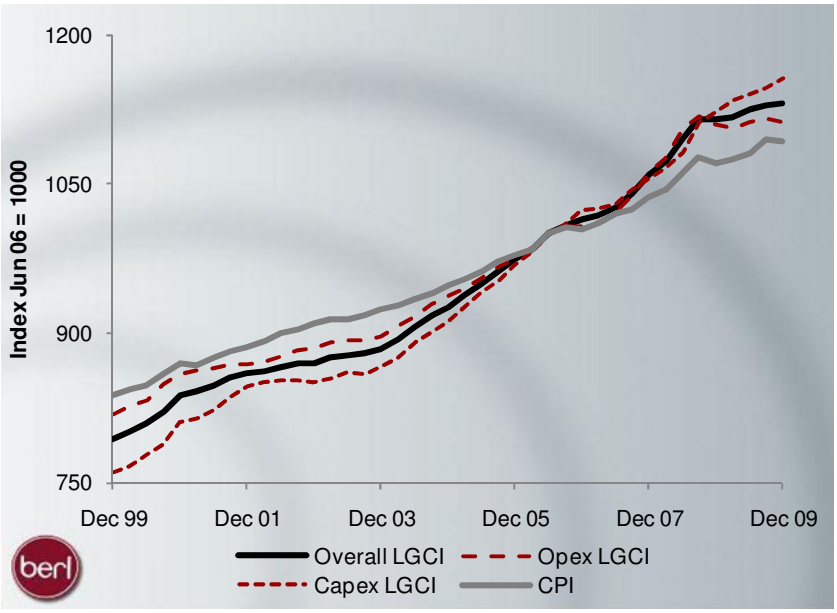
4 Results

This section presents, in graphic form, the LGCI and its sub-components, and compares growth in the LGCI with growth in the CPI over the 10 years to 2009. For a more detailed table showing the actual index figures over the 10-year period, see Section 5.

4.1 Overall LGCI

The Overall LGCI and its two sub-components – the Opex LGCI and the Capex LGCI – are presented in comparison with the CPI in Figure 4.1.

Figure 4.1 LGCI, Opex LGCI, Capex LGI, and CPI, 1999 to 2009



Several key points evident from the graph include:

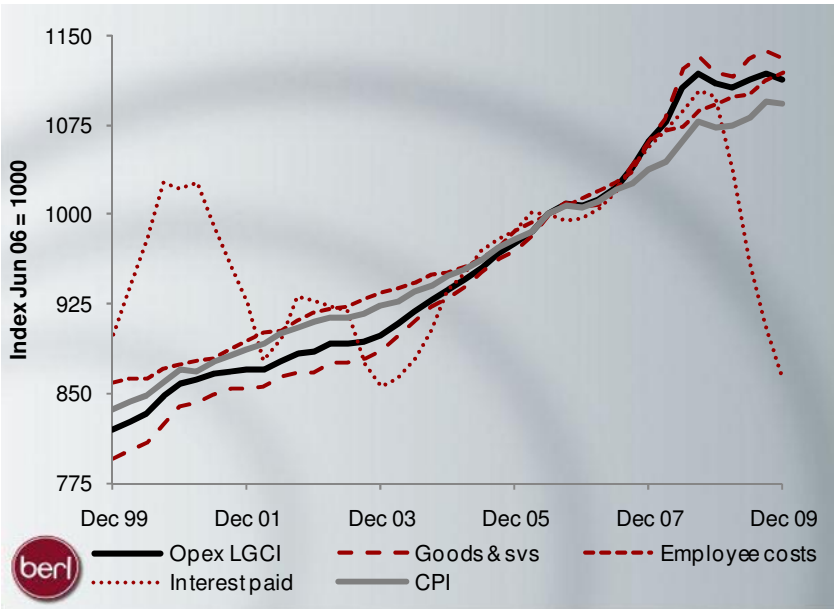
- the Overall LGCI has risen faster than the CPI over the past decade, and is up 43.9 percent on 1999 levels, compared with 30.6 percent for the CPI. This equates to an average annual rate of 3.6 percent for the Overall LGCI and 2.7 percent for the CPI.
- both the Capex LGCI and the Opex LGCI rose faster than the CPI, up 54.0 percent and 36.3 percent respectively. This equates to 4.3 percent and 3.1 percent a year respectively.
- there was a particularly large spike in the Opex LGCI in June 2008, of 2.8 percent quarter-on-quarter. This was largely the result of a 3.9 percent jump in the Opex: Purchase of goods and services index. This appears to be linked to a spike in electricity prices of 50 percent in that quarter, which affected the producer inputs price index

strongly. In fact, the Opex: Purchase of goods and services index raised the Opex LGCI by 2.6 percent in the quarter, and the Overall LGCI by 1.4 percent.

4.2 Opex LGCI

Figure 4.2 presents the changes in the Opex LGCI and its three sub-components for the 10 years to December 2009, compared with changes in the CPI.

Figure 4.2 Opex LGCI and sub-components, 1999 to 2009



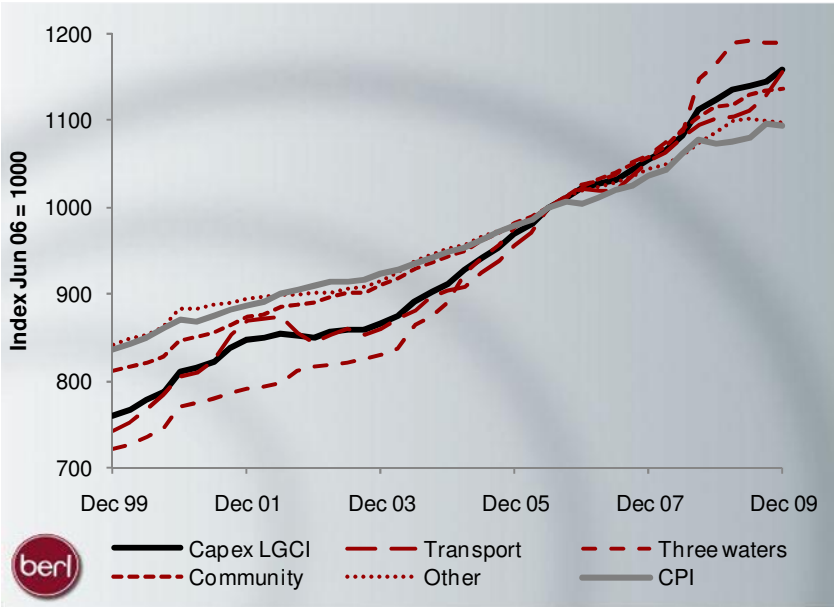
Key points evident from the graph are that:

- the Opex: Purchase of goods and services sub-component most closely mirrors the Opex LGCI. This is because the Opex: Purchase of goods and services sub-component accounts for 65.5 percent of the Opex LGCI. It also shows that the Opex: Purchase of goods and services component of spending has been rising faster than the Opex LGCI.
- the June 2008 quarter experienced a significant spike, particularly in the Opex: Purchase of goods and services sub-component, as discussed elsewhere in this report.
- interest paid, although a small share of the Opex LGCI (5.4 percent) experienced wide fluctuations across the period, ranging between 1103 in September 2008, as interest rates peaked, and 856 in December 2003. Particularly noticeable is the sharp decline in this index between September 2008 and the end of 2009, as interest rates plummeted.

4.3 Capex LGCI

Figure 4.3 presents changes in the Capex LGCI and its three sub-components for the 10 years to December 2009, compared with changes in the CPI.

Figure 4.3 Capex LGCI and sub-components, 1999 to 2009



Again, some key points are evident from the graph:

- Capex: Transport forms 36.4 percent of the Capex LGCI, and therefore most closely mirrors the Capex LGCI.
- Capex: Three waters had a major impact on the Capex LGCI in the September 2008 quarter. This was the result of surges of 6.0 percent in pipeline costs and 6.1 percent in irrigation and land drainage in that quarter alone. The spike in Capex: Three waters pushed the Capex LGCI up by 1.9 percent in that quarter, and the Overall LGCI up by 0.8 percent.
- Increases in Capex: Community and Capex: Other spending have been steadier over the decade, with spending on Capex: Other rising in line with the CPI.

5 Appendices

Table 5.1 Growth in LGCI and sub-components, 1999 to 2009

	Quarter ending							%pa change	
Component	**Dec 99**	**Dec 01**	**Dec 03**	**Dec 05**	**Dec 07**	**Dec 08**	**Dec 09**	***Dec 08 to Dec 09***	***Dec 99 to Dec 09***
Overall LGCI	**793**	**860**	**884**	**974**	**1059**	**1116**	**1132**	***1.5***	***3.6***
Opex LGCI	**819**	**869**	**898**	**976**	**1062**	**1110**	**1113**	***0.3***	***3.1***
Opex: Goods & svs	795	853	885	970	1062	1119	1131	*1.1*	*3.6*
Opex: Employee costs	859	895	934	987	1062	1091	1119	*2.5*	*2.7*
Opex: Interest paid	899	926	856	986	1056	1098	861	*-21.6*	*-0.4*
Capex LGCI	**760**	**847**	**866**	**970**	**1055**	**1123**	**1157**	***3.0***	***4.3***
Capex: Transport	742	868	860	956	1052	1102	1157	*4.9*	*4.5*
Capex: Three waters	721	791	830	977	1061	1163	1190	*2.3*	*5.1*
Capex: Community	812	875	912	982	1057	1116	1136	*1.9*	*3.4*
Capex: Other	843	894	916	980	1044	1086	1096	*0.9*	*2.7*
CPI	**837**	**886**	**924**	**979**	**1037**	**1072**	**1093**	***2.0***	***2.7***

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Table 5.2 Quarterly changes

	Overall LGCI	Opex LGCI	Capex LGCI	CPI	% over same quarter last year Overall LGCI	Opex LGCI	Capex LGCI	CPI
Mar 00	**801**	826	766	843				
Jun 00	**809**	834	777	849				
Sep 00	**823**	848	789	860				
Dec 00	**838**	859	810	870	5.6	4.9	6.6	4.0
Mar 01	**841**	862	814	869	5.1	4.3	6.3	3.1
Jun 01	**847**	866	823	876	4.7	3.9	5.9	3.2
Sep 01	**855**	869	837	881	4.0	2.5	6.2	2.4
Dec 01	**860**	869	847	886	2.6	1.2	4.6	1.8
Mar 02	**862**	871	850	891	2.4	1.0	4.4	2.6
Jun 02	**867**	876	853	900	2.3	1.2	3.7	2.8
Sep 02	**870**	883	852	904	1.7	1.6	1.8	2.6
Dec 02	**870**	886	850	910	1.3	1.9	0.4	2.7
Mar 03	**876**	891	856	913	1.7	2.4	0.6	2.5
Jun 03	**878**	892	860	913	1.3	1.8	0.7	1.5
Sep 03	**879**	894	859	918	1.1	1.2	0.8	1.5
Dec 03	**884**	898	866	924	1.6	1.4	1.9	1.6
Mar 04	**893**	908	874	928	2.0	1.8	2.2	1.5
Jun 04	**906**	918	891	935	3.2	2.9	3.6	2.4
Sep 04	**917**	929	902	941	4.4	4.0	4.9	2.5
Dec 04	**926**	936	912	949	4.7	4.3	5.3	2.7
Mar 05	**937**	945	927	953	4.9	4.1	6.0	2.8
Jun 05	**950**	956	942	962	4.8	4.1	5.7	2.8
Sep 05	**961**	967	954	973	4.8	4.1	5.8	3.4
Dec 05	**974**	976	970	979	5.2	4.2	6.4	3.2
Mar 06	**984**	986	982	985	5.0	4.3	5.9	3.3
Jun 06	**1000**	1000	1000	1000	5.3	4.6	6.1	4.0
Sep 06	**1009**	1008	1010	1007	5.0	4.3	5.9	3.5
Dec 06	**1014**	1008	1023	1005	4.2	3.3	5.4	2.6
Mar 07	**1018**	1012	1026	1010	3.5	2.6	4.6	2.5
Jun 07	**1026**	1022	1031	1020	2.6	2.2	3.1	2.0
Sep 07	**1040**	1038	1043	1025	3.1	3.0	3.2	1.8
Dec 07	**1059**	1062	1055	1037	4.4	5.3	3.2	3.2
Mar 08	**1072**	1077	1066	1044	5.3	6.4	3.8	3.4
Jun 08	**1096**	1107	1082	1061	6.9	8.2	5.0	4.0
Sep 08	**1115**	1118	1112	1077	7.2	7.7	6.6	5.1
Dec 08	**1116**	1110	1123	1072	5.3	4.5	6.4	3.4
Mar 09	**1118**	1106	1135	1075	4.3	2.7	6.5	3.0
Jun 09	**1125**	1113	1141	1081	2.6	0.6	5.4	1.9
Sep 09	**1129**	1117	1146	1095	1.3	-0.1	3.0	1.7
Dec 09	**1132**	1113	1157	1093	1.5	0.3	3.0	2.0