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# COMPILATION GUIDE

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# BUILDING MATERIAL PRICE INDEX

[REFERENCE BASE 2005 = 100.0]

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## **Preface**

The Compilation Guide on the Building Material Price Index (Reference Base 2005 = 100.0) aims to educate users of the data on how the Building Material Price Index with the Reference Base 2005 = 100.0 is constructed by the Economic Statistics Division of the Fiji Bureau of Statistics (FBoS). The report contains an overview of the basic structural and index data on Building Material Price Index activities undertaken by building merchants, hardware business and consumers in Fiji as well as other relevant information on the industry.

The first and second BMPI were constructed in the early 1970 and 1989 respectively however the last BMPI methodology report was done in 1989. Like any other commodity, building material prices are generally influenced by the prevailing supply and demand situation. Customers and builders generally tend to shift their preferences for items which are available more cheaply.

The co-operation of those hardware and building merchants that participated in the survey is acknowledged.

Your comments and suggestions on the compilation guide will be welcomed.



Epeli Waqavonovono  
**Government Statistician**

## NOTES

1 Total values are subject to rounding errors.

2 Key to Abbreviations:

BMPI	Building Material Price Index
COICOP	Classification of Individual Consumption by Purpose
FBoS	Fiji Bureau of Statistics
FSIC	Fiji Standard Industrial Classification
GDP	Gross Domestic Product
VAT	Value Added Tax

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## **PART A**

### **1.0 Introduction**

1.1 The Building Material Price Index (BMPI) has been re-referenced, re-weighted and linked and now has as its Reference Base, Average 12 months 2005 = 100.0. The new Base incorporates expenditure data from the 2005 Census of Construction.

1.2 History of the previous studies done in chronological order is -

#### **1.2.1 BMPI 1970 = 100.0**

During the early part of 1970, FBoS approached several Construction Companies on a confidential basis with a view of securing from them the expenditure details of buildings that they had just constructed. Weights were derived using these expenditures and 36 items divided into 6 components were selected.

#### **1.2.2 BMPI 1989 = 100.0**

The Index consisted of 66 different items of building materials that were categorised under 8 different groups. These were derived after a review of the 36 items that made up the 1970 = 100.0 index and with the selection of the new types of houses that were not included in the previous index.

### **2.0 What is the BMPI?**

The BMPI is a base – weighted index aimed at measuring price changes over time for a selection of principal commodities used in the building construction industry.

### **3.0 Uses of the BMPI and using the BMPI**

3.1 There are various uses of the BMPI and they are:

3.1.1 For monitoring building material prices for a period of time;

3.1.2 Important instrument for economic analysis as it provides a concise summary of past developments and aids in forecasting future trends, both of which are critical for making economic policy decisions;

3.1.3 Used as deflators in the compilation of the Gross Domestic Product (GDP).

3.2 Like any other commodity, building material prices are generally influenced by the prevailing supply and demand situation. Customers and builders generally tend to shift their preferences for items which are available more cheaply.



#### 4.0 Composition of the BMPI basket

The selection of items in the new basket was obtained from the 2005 Census of Construction. The information gathered was used to obtain estimates of spending patterns for the BMPI population group and this was the starting point for selecting the BMPI basket for which prices were collected regularly.

A representative sample of companies was also interviewed to provide the latest detailed reports on items frequently purchased by customers and construction companies. These items were also taken for consideration. These were the determining factors drawn at selecting the new products which needed to be included in the new basket and replacing the ones which are no longer available.

The basket cannot include every item purchased by construction companies and consumers but it does include all the important items they purchase which are subject to similar price changes. The whole idea is to select key representative items so that the index reflects price changes for a much wider range of products than is actually sampled.

The BMPI basket includes prices of Hardware goods ranging from Wood & Related Materials to Electrical products. The items in the BMPI basket were chosen not only because they were representative of constructions builders' and consumers' spending habits but also because the items were those whose prices could be associated with an identifiable and specific commodity.

The total basket is divided into 8 sections with a total of 77 items to be priced on a quarterly basis. *Refer Appendix II for details.*

**Table 1: Classification**

<b>Groups</b>	<b>Sections</b>
Group 1	Wood & Related Materials
Group 2	Cement & Related Materials
Group 3	Iron and Steel
Group 4	Plumbing ware
Group 5	Paint & Glass
Group 6	Floor & Wall tiles
Group 7	Door & Window Frame
Group 8	Electrical Products

## **5.0 Collecting the prices**

All prices are collected under the provisions of the Statistics Act (Cap 71). This Act not only stipulates the collection of the prices but also protects the confidentiality of the prices submitted by the Hardware outlets.

The price collection is carried out by trained and experienced personnel operating out of the offices of the FBoS. The prices used in the BMPI are those that any building contractor or member of the public would have to pay on the pricing day to purchase the specified item. Government tax, for example, the value added tax (VAT) attached to the item is included in the price. Sale prices, discount prices and 'specials' are reflected in the BMPI so long as the items concerned are of normal quality (that is, not damaged or shop soiled), and are offered for sale in reasonable quantities. To ensure that the price movements reflect the buying experience of the bulk of the population, the brands and the varieties of the items which are priced are generally those which sell in greatest volume.

### **5.1 Geographical coverage**

Prices are collected from the greater Suva – Nakasi areas only.

### **5.2 Outlet coverage**

Information on prices is collected from retail outlets, for example, Hardware stores and building merchants.

### **5.3 Price quotations**

In total, over 317 separate price quotations are collected.

### **5.4 Frequency of price collection**

The Building Materials are priced on a quarterly basis. Prices are collected in the middle month of each quarter.

## **6.0 Imputation of Missing Prices**

Consistent methods should be used to handle missing prices, whether they are temporarily missing or unavailable.

For temporarily missing prices, it is not possible to be prescriptive as the preferred treatment can depend on particular circumstances. However, as a general rule, prices should be imputed on the basis of the movement in prices of similar products sold by the same outlet or other outlets. In some cases, it may be appropriate to repeat the last reported price (e.g. if the price history of the product indicates that it is very stable and only changes once a year).

It is important that replacements are selected on a timely basis for products that become permanently unavailable. For a given commodity, consistent techniques are used over time.

## **7.0 Calculating the BMPI**

7.1 The following are involved in the calculation of the BMPI:

- 7.1.1 Once the prices are gathered, they are carefully examined for accuracy and validity before they enter into the BMPI calculations. This involves careful checks of price levels in the current period and of price changes since the previous pricing period; field staff make additional on-the-spot checks where necessary.
- 7.1.2 Once accuracy is ascertained, an average price; that is, the average price charged by the sampled establishments selling the specified good or service is calculated for each sub-group.
- 7.1.3 Having calculated the average price for each sub-group, the next step is to calculate the price relative (or ratio) of each sub-group. The price relative is obtained by dividing the average price of each sub-group in the current period by the average price of each corresponding sub-group in the base period.
- 7.1.4 The price relative of each sub-group is then multiplied by the base weight of each sub-group to get the current weight for each sub-group.
- 7.1.5 The current weight for each sub-group is divided by the base weight of each sub-group and then multiplied by a 100 to get the index for each sub-group for the current period.

The group and section index and the all items index are calculated in a similar way.

The following example shows how this is done, *in principle*, for Wood & Related Materials:

**Table 2: Example of Calculating the BMPI**

Wood & Related Materials	Base Weight	Average prices in		Price Relative	Current
	(%) [1]	Base period (cents) [2]	Current quarter (cents) [3]	(3) ÷ (2) [4]	Weight (4) x (1) [5]
Rough gauged treated No.1 Framing grade	49.0	924.2	925.0	1.001	49.0
Dressed treated No1 framing grade	11.2	989.4	988.0	0.999	11.2
Dressed treated No1 dressing grade	13.6	956.0	975.0	1.020	13.9
Ditto in 75X30 Cornice	3.8	2.725	2.75	1.009	3.8
Dressed Hardwood No.1 Framing grade	0.8	999.2	999.2	1.000	0.8
4mm Interior grade plywood (ditto)	12.9	20.1	19.27	0.957	12.3
100mm wide Damp Proof course (DPC)	0.7	0.37	0.33	0.892	0.6
150mm Ditto, Damp Proof Course (DPC)	0.8	0.5	0.5	0.990	0.8
<b>TOTAL</b>	<b>92.8</b>	<b>3892.5</b>	<b>3910.0</b>		<b>92.5</b>

**7.2 Index formula**

The Laspeyers Formula is used to calculate the Building Material Price Index.

In technical terms this procedure is known as base weighted [Laspeyers] index expressed as:

$$I_n = \left( \frac{\sum_{x=1}^x \frac{(P_n)}{(P_o)} P_o Q_o}{\sum_{x=1}^x P_o Q_o} \right) \times 100$$

- Where:
- I<sub>n</sub> = Index for current period
- 1-x = Sub-group (commodity)
- Σ = The sum of
- P<sub>n</sub> = Price per unit in current period
- P<sub>o</sub> = Price per unit in base period
- P<sub>o</sub>Q<sub>o</sub> = Weight in the base period

The above formula is used to calculate the Building Material Price Index at the National Level.

### 7.3 Calculating Index Changes

Movements in price indexes from one period to another can be expressed either as percentage changes or as changes in 'index points'. It is important not to confuse the two approaches. Percentage changes are useful for people wishing to measure price change without reference to the base period of the index, for example, from one quarter to another or between corresponding quarters in successive years. Changes in index points, on the other hand, are affected by the level of the index in relation to its base period. The following examples illustrate both methods of measuring change:

**TABLE 3: CALCULATING THE INDEX CHANGE**

#### A BMPI 2007

[Reference base 2005 = 100.0]

<u>Quarters</u>	<u>Index</u>
Quarter 1, 2007	104.4
Quarter 2, 2007	105.7
Quarter 3, 2007	106.2
Quarter 4, 2007	106.7

#### B POINTS AND PERCENTAGE CHANGE

<u>Example</u>	<u>Points change</u>	<u>Percentage change</u>
1. From Quarter 1, 2007 to Quarter 2, 2007	$104.4 - 100.0 = +4.4$	$\frac{4.4}{100} \times 100 = +4.4\%$
2. From quarter 3, 2007 to Quarter 4, 2007	$106.2 - 105.7 = +0.5$	$\frac{0.50}{105.7} \times 100 = +0.5\%$

### 8.0 Data dissemination

The BMPI is released on the first week of the next quarter. An Advance Release Calendar posted on the FBoS Website gives information on the date the BMPI is going to be released. Data are disseminated via:

- *Quarterly press release*: contains tables and commentary.
- *Website*: The same data that is released to the media is posted to the FBoS Website [www.statsfiji.gov.fj](http://www.statsfiji.gov.fj) on the first working day of every month.
- *Key Statistics*: this is a quarterly publication of the FBoS and includes the same table that is posted on the FBoS website.
- *Email*: Data is sent in Portable Document Format (PDF) on request by users.

## **9.0 Periodic re-basing (re-weighting) of the BMPI**

Like any other longstanding and important statistical series, the BMPI is re-based from time to time in order to ensure it continues to be relevant to current conditions. New Building Materials are introduced into the market and so they are available in Hardware outlets.

In Fiji, the BMPI re-basing has usually been carried out at approximately five yearly intervals. Following each revision, the new series are not linked to the old to form a continuous series (except for the reference base 2005 = 100.0). It is possible to carry out such linking in such a way that the resulting continuous series reflect only price variations and not differences between old and new baskets. Any user wishing to link BMPI numbers on different reference bases can seek advice on the linking method from the FBoS.

## **10.0 The BMPI in perspective**

The BMPI is designed to provide a broad measure of changes in retail prices encountered by building contractors and consumers as a group and should not be expected to exactly reflect the experience of any one particular contractor or consumer with respect to changing prices. For instance, building contractors and consumers may not purchase every single item in the list of Building Material priced for the BMPI. Similarly, specific building contractors and consumers may have very different spending patterns from the overall list.

The BMPI is really an attempt to reflect, each quarter, the combined price movement of millions of retail transactions which have taken place during the period. Any such statistical indicator is bound to have limitations for particular uses. The BMPI is regarded as a good general measure of the effect of price change on the purchasing power of the dollar for overall Hardware outlets in the country.

## **PART B**

### **11.0 BMPI Methodology: Reference Base 2005 = 100.0**

The BMPI should be revised once every 5 years to update the consumption pattern of building contractors and consumers. But due to resources constraints this has never been done. The latest revision is based on the results of the 2005 Census of Construction.

This methodology presents the step by step re-basing of the BMPI series using the updated weighting pattern.

#### **11.1 The Re-Weighting, Re-Referencing, and Linking the Index**

The following are the detailed steps involved in deriving the updated weighting pattern for the 2005 Base Year:

- 11.1.1 The 2005 Census of Construction was looked at according to the Fiji Standard Industrial Classification (FSIC) 2004. The total expenditure on materials purchased from the 2005 Census of Construction report was analyzed.
- 11.1.2 Re-referencing the old index from 1989 to 2005, compiling the new re-weighted index on a reference base of June 2009, and linking to the old (re-referenced) index.
- 11.1.2.1 After June 2009, compilation had been completed, as a one-off exercise, the old series was re-referenced from 1989 = 100.0 to 2005 = 100.0.
- 11.1.2.2 The new index for quarter 3, 2009 was compiled (and for all subsequent quarters) on a June 2009 reference period;
- 11.1.2.3 Quarter 3, 2009 prices were loaded (the prices for Quarter 2, 2009 had already been loaded for the normal, ongoing BMPI compilation);
- 11.1.2.4 Missing prices, if any, were imputed;
- 11.1.2.5 Average prices and then price relatives for September 2008 were calculated (i.e. Quarter 3, 2009 prices divided by Quarter 2, 2009 prices);
- 11.1.2.6 Elementary indices for the elementary expenditure aggregates, including splicing new items into the most relevant elementary aggregate were calculated;
- 11.1.2.7 Input and output editing were undertaken;
- 11.1.2.8 upper-level indices using the new elementary expenditure and higher level weights were calculated;
- 11.1.2.9 link factors were applied to the new June quarter 2009 indices at the publication group and all groups level, and divisional level, to link the new series (with June 2009 as the link month) to the old series (re-referenced from 1989 = 100.0 to 2005 = 100.0). The link factors for each published group and all groups index were: old June quarter 2009 index number (re-referenced to 2005)/100.0;

- 11.1.2.10 the same link factors applied to the new indices at the publication level for June quarter 2009 and all subsequent quarters.
- 11.1.3 In summary, it was “business as usual” for the BMPI compilation up to, and including, quarter 2, 2009. After Quarter 2, 2009 compilation was completed, the old time series was re-referenced from 1989 to 2005 up to June 2009.
- 11.1.4 From quarter 3, 2009 and for every subsequent month and year, link factors will be applied to each published group and all groups index, to link the new quarter 2, 2009 based indices to the old indices (re-referenced to 2005 from 1989).
- 11.1.5 The publication of the re-referenced and linked series from September quarter 2009 conforms to the established BMPI timetable. Quarterly indices have been published from January 2006 to illustrate that the percentage changes remain the same as previously published.



## 12.0 Results

**TABLE 4: 2005 BUILDING MATERIAL PRICE INDEX WEIGHTS COMPARED WITH THE 1989 WEIGHTS**

	<u>ITEM DESCRIPTION</u>	<u>Unit</u>	<u>1989 Weights</u>	<u>2005 Weights</u>
<b>1</b>	<b>WOOD &amp; RELATED MATERIAL</b>			
1	Rough gauged treated No.1 framing grade	Cu.m	90.6	49.0
2	Dressed treated No.1 framing grade	Cu.m	20.7	11.2
3	Dressed treated No.1 dressing grade	Cu.m	25.1	13.6
4	Ditto in 75x30 Cornice		7.1	3.8
5	Dressed hardwood No.1 framing grade	Cu.m	1.4	0.8
6	4mm interior grade plywood (ditto)	No.	23.9	12.9
7	10mm wide Damp proof course (DPC)	m	1.3	0.7
8	150mm Ditto, Damp Proof Course (DPC)	m	1.4	0.8
			<b>171.5</b>	<b>92.7</b>
<b>2</b>	<b>CEMENT AND RELATED MATERIAL</b>			
1	Cement (Portland) in 50kg bag	No.	103.5	146.2
2	Sand	Cu.m	15.6	22.0
3	Aggregate	Cu.m	38.4	54.2
4	Standard concrete block : 100 thick	No.	14.5	20.5
5	Standard concrete block : 150 thick	No.	21.4	30.2
6	Bond Beam block : 100 thick	No.	4.9	6.9
7	Bond Beam block : 150 thick	No.	16.9	23.9
8	Corner block : 150 thick	No.	7.7	10.9
9	Plain end Jamp block : 150 thick	No.	5.0	7.1
10	Selected hard fill	Cu.m	8.1	11.4
11	.005Visqeen D.P.C (60 cm long roll)	No.	3.7	5.2
			<b>239.7</b>	<b>338.6</b>
<b>3</b>	<b>IRON AND STEEL</b>			
1	24 Gauged corrugated roofing iron	m	82.2	37.2
2	24 Gauged standard ridge cap	m	8.4	3.8
3	24 gauged x 250 Girth Barge Flashing	m	5.5	2.5
4	Double side aluminum sisalation (60m x 1250mm long sheets)	No.	14.2	6.4
5	50mm Ditto galvanized iron pipe (in porch post)	No.	9.0	4.1
6	6mm Ditto mild steel in concrete and block work	No.	9.5	4.3
7	12mm Ditto mild steel in concrete and block work	No.	38.8	17.6
8	Roofing Nail	Kg	6.2	2.8
9	Galvanized louvre frame : 4 blade	Pr	4.6	2.1
10	Galvanized louvre frame : 7 frame	Pr	3.4	1.5
11	Lumberlok strip brace	m	1.9	0.9
12	Ditto J.H (Joist Hanger)	No.	6.5	2.9
13	Purlin Straps	m	11.9	5.4
			<b>202.1</b>	<b>91.5</b>
<b>4</b>	<b>PLUMBING WARE</b>			
1	PVC standard gutter (3m long)	No.	8.2	1.6
2	15mm Dia. PVC pipe (6m long)	No.	1.1	0.4
3	20mm Ditto PVC pipe	No.	1.0	0.7
4	75mm PVC downpipe (6m long)	No.	5.6	1.8
5	100mm Ditto PVC pipe	No.	5.9	3.7
6	W.C suite complete with pan, cistern and seat	No.	9.9	13.1
7	Stainless sink (Double & Single bowl)	No.	8.8	14.2
8	Standard precast concrete (Ditto)	No.	2.2	15.1
9	Wash hand basin	No.	4.8	4.7
10	Double bowl standard precast concrete	No.	-	5.5

	<b>ITEM DESCRIPTION</b>	<b>Unit</b>	<b>1989 Weights</b>	<b>2005 Weights</b>
11	Wash hand basin	No.	-	14.2
12	Waste pipe 1'1/2"	No.	-	1.3
13	Waste pipe 2"	No.	-	1.8
14	PVC Glue 100grams	No.	-	0.3
15	Taps 1/2"	No.	-	0.5
			<b>47.5</b>	<b>78.9</b>
<b>5</b>	<b>PAINT &amp; GLASS</b>			
1	Metal Primer	Ltr	2.6	12.2
2	Timber Primer	Ltr	5.3	10.4
3	Under Coat	Ltr	3.3	11.2
4	Finishing Coat (Full Gloss enamel)	Ltr	5.3	13.9
5	Concrete Paint (PVA 2 Coats)	Ltr	27.8	13.6
6	Cemstik	Ltr	2.7	4.8
7	Clear Glass 24"X 6"X4mm	No.	5.5	1.0
8	Obscure Glass 36"X 6" X 5mm	No.	1.2	1.3
9	Vanish	Ltr	-	10.2
10	Paint Brush 100mm	No.	-	7.5
11	Multipurpose thinner	750 ml	-	4.1
12	Mineral Turpentine	750 ml	-	3.3
			<b>53.7</b>	<b>93.5</b>
<b>6</b>	<b>FLOOR AND WALL TILES</b>			
1	Vinyl floor tiles	Sq.m	57.7	9.0
2	Mosaic floor tiles	Sq.m	21.7	22.0
3	Glazed ceramic wall tiles	Sq.m	16.6	15.7
4	Ceremic/ Mosaic tiles adhesives	Kg	1.8	1.0
5	Vinyl tiles adhesives	Ltr	9.6	9.8
			<b>107.4</b>	<b>57.4</b>
<b>7</b>	<b>DOOR AND WINDOW FRAME</b>			
1	Sliding doors [2.1 X 2.0 & 1.88 X 2.1 meters	No.	42.3	45.7
2	Anodized single light overall size 600 X 600mm high]	No.	5.3	6.0
3	Anodized aluminum two light windows size 1200 X 1200m high	No.	92.5	19.3
4	Ditto size 1400 X 1000mm & 1600 X 800mm high	No.	27.1	18.4
			<b>167.2</b>	<b>89.4</b>
<b>8</b>	<b>ELETRICAL PRODUCTS</b>			
1	Zelemite board [14" x 12"]	No.	0.7	22.5
2	Main switch [55 amps]	No.	0.7	49.9
3	Single Gangswitch [10 amps]	No.	1.9	15.0
4	Power Point [Single]	No.	2.6	22.4
5	Tube light and fittings [2"]	No.	2.7	30.9
6	Tube Light [2"]	No.	0.3	3.4
7	Light bulb [60 watts]	No.	0.5	1.9
8	Light wire [Twin red and white]	m	1.5	2.1
9	Energy Saving Bulb	No.	-	9.9
			<b>10.9</b>	<b>158.0</b>
	<b>All Items</b>		<b>1000.0</b>	<b>1000.0</b>

Table 5:

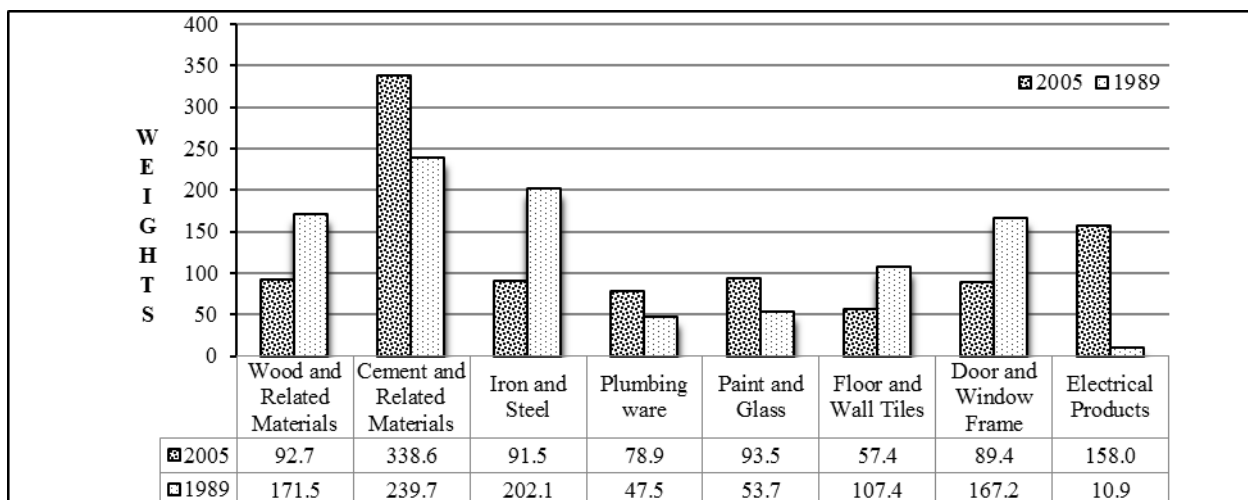
**BUILDING MATERIAL PRICE INDEX**  
[Base: 2005 = 100.0]

			Percentage	Wood and	Cement	Iron	Plumbing-	Paint	Floor	Door and	Electrical
			Change	Related	and	and	ware	and	and	Window	Products
			[on	Materials	Related	Steel		Glass	Wall	Frame	
			corresponding	Group 1	Materials	Group 3	Group 4	Group 5	Tiles	Group 7	Group 8
			period in						Group 6		
			previous								
			year]								
WEIGHT	1000	%		92.7	338.6	91.5	78.9	93.5	57.4	89.4	158
<b>Annual</b>											
	2006	104.3	4.3	99.2	102.3	99.7	99.3	105.6	104.8	119	105.5
	2007	108.9	4.5	101.4	105.8	103.6	105.3	106	103.2	133.8	111.5
	2008	116.6	7.1	102.3	111	121.2	105.9	105.0	101.3	154.5	110.1
	2009	128.9	10.5	103.2	125	132.2	117	123.2	105.4	186.2	123.2
<b>Quarterly</b>											
2006	Mar	100.3	1.4	98.8	100.5	98.0	86.2	105.6	105.2	103.1	99.4
	Jun	103.6	3.4	98.8	100.5	96.6	100.4	105.2	105.2	121.1	105.8
	Sept	105.3	5.3	98.8	103.7	101.4	104.6	105.8	105.3	121.1	109.2
	Dec	107.7	6.8	100.4	104.4	102.9	106	105.5	103.1	130.7	107.8
2007	Mar	108.2	7.9	101.0	105.4	103.6	105.9	105.6	103.2	130.7	107.4
	Jun	109.4	5.6	102.3	105.7	104.3	104.4	105.8	103.2	134.8	112.4
	Sept	109.4	3.9	102.4	106.0	103.3	105.3	106.2	103.2	134.8	114.3
	Dec	108.8	1.0	100.0	106.0	103.2	105.3	106.3	103.2	134.8	111.9
2008	Mar	109.5	1.3	100.2	106.2	108.7	105.6	105.6	100.3	134.8	110.2
	Jun	115.5	5.5	101.1	106.8	115.2	105.6	105.8	101.6	161.1	106.6
	Sept	119.3	9.0	104.3	111.3	127.2	105.4	103.8	101.6	161.1	109.7
	Dec	122.4	12.5	103.7	119.8	133.8	106.7	104.5	100.6	161.1	113.8
2009	Mar	125.6	14.7	102.7	120.4	130.0	108.3	109.1	104.1	181.5	114.4
	Jun	129.0	11.7	103.5	124.3	133.1	115.6	128.3	106.4	182.5	125.7
	Sept	130.1	9.1	103.2	125.6	130.8	117.6	129.7	105.0	184.5	122.9

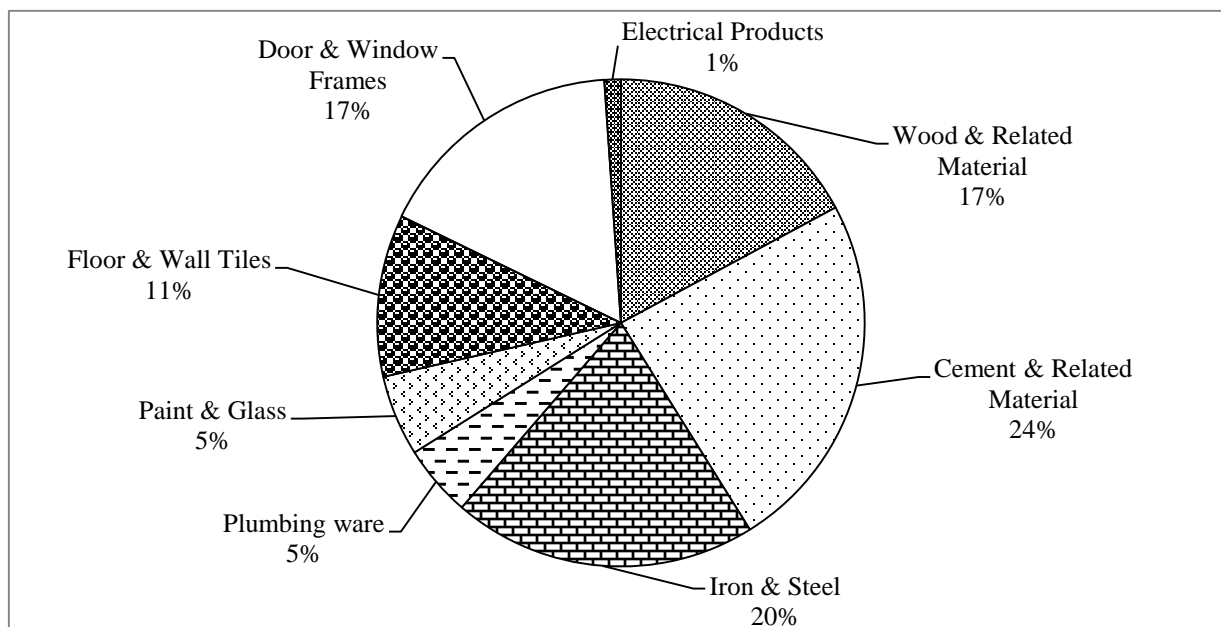
Notes :

Retail prices are collected from selected Hardware and Building Merchants along the Suva – Nakasi corridor on a quarterly basis. Although building material may not necessarily be purchased at retail price by the builders, it was decided to use the price as there are wide variations in the discount rates on building materials.

**Graph 1: GROUP WEIGHTS: 2005 COMPARED WITH 1989**



**Graph 2 : PERCENTAGE CONTRIBUTION TO TOTAL WEIGHT IN 2005**



## APPENDIX 1

### EXPENDITURE ON MATERIALS PURCHASED BY FSIC - 2005

<b>45201- General Building</b>							
Materials Purchased	Imported – Purchased		Locally produced – Purchased		Total	Average	Remarks
	From Abroad	Locally	Manufacturers	Others			
Timber	0	0	2,165,340	6,281,286	8,446,626		
Cement and concrete	0	0	3,217,129	6,981,838	10,198,967		
Gravel and sand	0	0	2,535,944	4,977,380	7,513,324		
Blocks	0	0	2,429,223	5,114,138	7,543,361		
Iron and steel	435,040	1,508,246	1,823,202	3,087,923	6,854,411		
Electrical ware	0	1,675,555	1,652,405	1,543,299	4,871,259		
Plumbing ware	460,880	1,843,273	1,553,929	1,487,420	5,345,502		
Paint	0	1,568,432	1,392,240	2,345,687	5,306,359		
Glass	204,887	1,563,264	1,133,871	1,444,860	4,346,882		
Others	0	833,672	1,737,888	2,842,049	5,413,609		
<b>Total</b>	<b>1,100,807</b>	<b>8,992,442</b>	<b>19,641,171</b>	<b>36,105,880</b>	<b>65,840,300</b>		
<b>45202- Civil Engineering</b>							
Timber	0	0	0	1,489,587	1,489,587		
Cement and concrete	0	0	225,680	1,952,534	2,178,214		
Gravel and sand	0	0	2,611,125	5,451,251	8,062,376		
Blocks	0	0	0	1,365,584	1,365,584		
Iron and steel	0	1,205,360	0	1,794,630	2,999,990		
Electrical ware	0	0	0	0	0		
Plumbing ware	0	0	0	368,589	368,589		
Paint	0	0	0	0	0		
Glass	0	0	0	0	0		
Others	0	1,542,320	716,938	1,556,134	3,815,392		
<b>Total</b>	<b>0</b>	<b>2,747,680</b>	<b>3,553,743</b>	<b>13,978,309</b>	<b>20,279,732</b>		

Materials Purchased	Imported – Purchased		Locally produced – Purchased		Total	Average	Remarks
	From Abroad	Locally	Manufacturers	Others			
<b>45301- Electrical</b>							
Timber	0	0	0	299,356	299,356		
Cement and concrete	0	0	0	245,361	245,361		
Gravel and sand	0	0	0	175,895	175,895		
Blocks	0	0	0	115,648	115,648		
Iron and steel	0	0	0	193,632	193,632		
Electrical ware	1,666,707	5,869,562	0	3,200,315	10,736,584		
Plumbing ware	0	0	0	652,332	652,332		
Paint	0	0	0	191,318	191,318		
Glass	0	0	0	132,240	132,240		
Others	0	569,466	0	656,854	1,226,320		
<b>Total</b>	<b>1,666,707</b>	<b>6,439,028</b>	<b>0</b>	<b>5,862,951</b>	<b>13,968,686</b>		
<b>45302- Plumbing</b>							
Timber	0	0	0	24,431	24,431		
Cement and concrete	0	0	0	16,477	16,477		
Gravel and sand	0	0	0	21,026	21,026		
Blocks	0	0	0	18,630	18,630		
Iron and steel	0	0	0	52,252	52,252		
Electrical ware	0	0	0	21,235	21,235		
Plumbing ware	0	289,108	0	805,677	1,094,785		
Paint	0	0	0	1,365	1,365		
Others	0	0	0	12,927	12,927		
<b>Total</b>	<b>0</b>	<b>289,108</b>	<b>0</b>	<b>974,020</b>	<b>1,263,128</b>		

Materials Purchased	Imported – Purchased		Locally produced – Purchased		Total	Average	Remarks
	From Abroad	Locally	Manufacturers	Others			
<b>45303, 45305- Installation and repair of Air-conditioning system</b>							
Iron and steel	0	0	0	29,211	29,211		
Electrical ware	0	1,218,250	0	650,120	1,868,370		
Plumbing ware	0	1,205,637	0	67,931	1,273,568		
Others	3,207,548	920,320	0	1,317,264	5,445,132		
<b>Total</b>	<b>3,207,548</b>	<b>3,344,207</b>	<b>0</b>	<b>2,064,526</b>	<b>8,616,281</b>		
<b>45401- Building Completion</b>							
Gravel and sand	0	0	41,173	41,173			
Paint	0	0	379,778	379,778			
Others	238,510	0	105,056	343,566			
<b>Total</b>	<b>238,510</b>	<b>0</b>	<b>526,007</b>	<b>764,517</b>			
<b>Summary of all FSIC</b>							
Timber					10,260,000	<b>92.66</b>	Wood and related materials
Cement and concrete					12,639,019	<b>114.14</b>	} Cement and related materials
Gravel and sand					15,813,794	<b>142.81</b>	
Blocks					9,043,223	<b>81.67</b>	
Iron and steel					10,129,496	<b>91.48</b>	Iron and steel
Electrical ware					17,497,448	<b>158.02</b>	Electrical products
Plumbing ware					8,734,776	<b>78.88</b>	Plumbing ware
Paint					5,878,820	<b>53.09</b>	} Paint and glass
Glass					4,479,122	<b>40.45</b>	
Others					16,256,946	<b>146.81</b>	Floor and wall tiles and door and window frames
<b>Total</b>					<b>110,732,644</b>	<b>1000.00</b>	

## APPENDIX II

### BUILDING MATERIALS PRICE INDEX - BASE 1989 and 2005 = 100.0

	All Items	Wood and Related Material	Cement and Related Materials	Iron and Steel	Plumbing ware	Paint and Glass	Floor and Wall Tiles	Door and Window Frame	Electrical Products
	Group 1	Group 2	Group 3	Group 4	Group 5	Group 6	Group 7	Group 8	
<b>Base 1989</b>									
<b>Weights</b>	<b>1000.0</b>	<b>171.5</b>	<b>239.7</b>	<b>202.1</b>	<b>47.5</b>	<b>53.7</b>	<b>107.4</b>	<b>107.2</b>	<b>10.9</b>
1989	102.0	100.1	100.4	104.8	102.5	100.6	99.9	104.3	101.3
1990	109.6	113.4	107.3	112.5	110.2	106.7	104.1	110.4	103.0
1991	116.1	127.5	115.9	116.1	110.4	114.0	104.3	115.5	100.9
1992	121.4	136.0	130.7	115.1	100.4	116.8	101.8	122.6	92.7
1993	127.8	148.5	143.7	108.0	92.1	115.2	101.2	141.7	88.9
1994	129.4	154.5	143.3	107.8	90.8	117.8	103.3	143.9	87.5
1995	132.0	159.3	142.2	107.7	93.5	127.5	103.9	151.9	91.8
1996	135.2	165.7	144.5	111.3	95.5	124.8	107.1	154.7	95.7
1997	137.8	169.1	149.5	112.1	95.6	125.6	107.1	158.3	97.1
1998	150.9	176.6	155.0	127.4	99.8	145.0	114.8	189.6	106.7
1999	151.4	181.1	156.7	122.2	99.5	148.0	116.7	189.6	103.4
2000	147.5	183.9	158.5	119.1	100.7	145.6	115.3	166.4	100.4
2001	151.6	190.6	162.1	120.9	104.3	163.0	128.9	161.4	98.2
2002	151.7	193.4	163.5	116.0	99.1	176.8	127.4	161.3	94.9
2003	155.7	202.0	168.6	118.7	106.5	182.8	119.6	167.1	97.0
2004	159.3	220.3	173.5	120.3	107.8	180.2	109.0	168.6	88.4
<b>Base 2005</b>									
<b>Weights</b>	<b>1000.0</b>	<b>92.7</b>	<b>338.6</b>	<b>91.5</b>	<b>78.9</b>	<b>93.5</b>	<b>57.4</b>	<b>89.4</b>	<b>158.0</b>
2005	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
2006	104.3	249.5	180.0	132.9	109.5	193.7	114.5	205.0	87.9
2007	108.9	255.1	186.2	138.1	116.1	194.5	112.8	230.4	92.9
2008	116.6	257.5	195.4	161.6	116.8	192.6	110.7	266.1	91.7
2009	128.9	103.2	125.0	132.2	117.0	123.2	105.4	186.2	123.2
2010	130.9	103.8	127.6	131.7	116.8	126.7	104.7	191.7	122.5
2011	129.3	104.4	130.8	133.0	121.8	133.4	118.2	183.8	121.2
2012	131.6	107.9	136.6	132.9	123.1	139.4	119.4	183.6	126.8