

BEHAVIOUR OF SHORT TERM INTEREST RATES IN INDIA AND OTHER COUNTRIES: A COMPARISON

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ABSTRACT

In the world of finance, the interest rate is one of the most significant prices in the economy that affects; the investors as well as the borrowers. The structure and level of interest rates prevailing in the country are critical determinants of economic efficiency. The paper tries to analyse the behaviour of short term interest rates in India and in other countries namely, UK, US and Japan. These rates provide the insight into future financial market and economic activity. This paper focuses on the comparative analysis on the basis of interest rates prevailing in the call money market and treasury bills market of these selected Nations for the period from 2008 to 2018. The comparison has been done by using descriptive statistics and correlation matrix. The paper also makes use of charts to exhibit the behaviour of interest rates. The study found that variability in the interest rates of T-bills and call market was the highest in Japan, followed by UK and US, while the same was the lowest in India. The degree of correlation was the highest between the interest rates of UK and Japan, followed by UK and US. The Indian money market showed a weak and insignificant relationship with the three selected nations.

KEYWORDS: T-bills, interest rate, call rate, UK and US.

INTRODUCTION

“Interest rate channel is considered as an important channel of monetary policy transmission. Therefore, the level and the structure of interest rates are critical determinants of economic efficiency with which resources are allocated in an economy” (Mohanty, 2012). The interest rates in the short and medium term contribute to stable inflation and stable developments in production. The two significant short term interest rates in all the four countries, namely UK, US, Japan and India are T-bills rate and call money rate. The rate at which they are traded in the money market is influenced by forces of demand and supply, the existence of an active secondary market and also by the degree of intervention by the Central bank of a particular country in money market operations. The comparative analysis has been done on the basis of annual rates prevailing in these sub-markets of the selected countries.

REVIEW OF LITERATURE

Jain and Bhanumurthy (2005) in their paper assessed the fusion of financial markets in

India. The study made use of call money rates, 91 days treasury bills rates, exchange rates of India, United States and London Inter-bank Offered Rate (LIBOR) and multiple co-integration approach had been applied for the analysis of data. The study found that the call money market was strongly integrated with LIBOR. The relationship between exchange rate and LIBOR was found to be weak and there was no relationship between treasury bills and LIBOR.

Shunmugam and Hashim (2009) in their research paper investigated the volatility in the interest rates. The study was empirical. The study revealed that financial liberalization caused fluctuations in interest rates all over the world. It identified that India was among the highest volatility countries when the cross country analysis of different countries of short term interest rates was done.

Ahmed (2014) in his research paper assessed the integration of financial markets between Pakistan and USA. The study was based on secondary data for the period from January 2001 to December 2010. The study found that there was no relationship between USA money market and Pakistan money market despite more exchange of foreign aids, remittances of funds etc. between the countries. The changes in the rates of one market did not affect the rates of other markets.

Kaur (2015) in her research paper investigated various factors that had an impact on the interest rates in India. The study was based on secondary data for the period June 1996 to March 2012. It was found that the components such as treasury bills, real money supply, gross domestic product (GDP), exchange rate, foreign interest rate had a significant impact on the interest rates.

RESEARCH OBJECTIVE

The paper aims to analyse the behaviour of short term interest rates in India and in other countries namely, UK, US and Japan. It focuses on the comparative analysis on the basis of interest rates prevailing in the call money market and treasury bills market of these selected Nations.

RESEARCH METHODOLOGY

The paper makes use of secondary data which is collected from the website of IMF. The data related to UK, US, Japan and Indian money markets have been collected from IMF Publication titled 'International Financial Statistics Year book' for the period 2008-2018. The comparison has been done by using descriptive statistics and correlation matrix. The paper also makes use of charts to exhibit the behaviour of interest rates for the period from 2008 to 2018.

DATA ANALYSIS AND FINDINGS

A) Treasury Bills Rates in UK, US, Japan and India

Table 1 exhibits the movement of interest rates on T-bills in selected countries from 2008 to 2018.

Table - 1
Interest Rates on T-bills in Selected Countries for the Period 2008 to 2018

Year	UK	US	Japan	India
2008	4.3	1.46	0.561	7.1
2009	0.53	0.16	0.185	3.6
2010	0.5	0.13	0.115	6.2
2011	0.49	0.06	0.102	8.4
2012	0.31	0.09	0.099	8.2
2013	0.3	0.06	0.074	8.9
2014	0.38	0.04	0.026	8.5
2015	0.44	0.06	-0.012	7.4
2016	0.32	0.33	-0.228	6.4
2017	0.32	0.7	-0.208	6.2
2018	0.23	0.82	-0.1	6.6

Table 2 Presents the descriptive statistics of the treasury bills rate in selected countries from 2008 to 2018.

Table -2
Descriptive Statistics of Interest Rates on Treasury Bills in Selected Countries

Descriptive Statistics	INDIA_TBILL	JAPAN_TBILL	UK_TBILL	US_TBILL
Mean	7.0455	0.0558	0.7382	0.3555
Maximum	8.9000	0.5610	4.3000	1.4600
Minimum	3.6000	-0.2280	0.2300	0.0400
C.V.	21.4164	384.0934	160.5658	128.1850
Observations	11	11	11	11

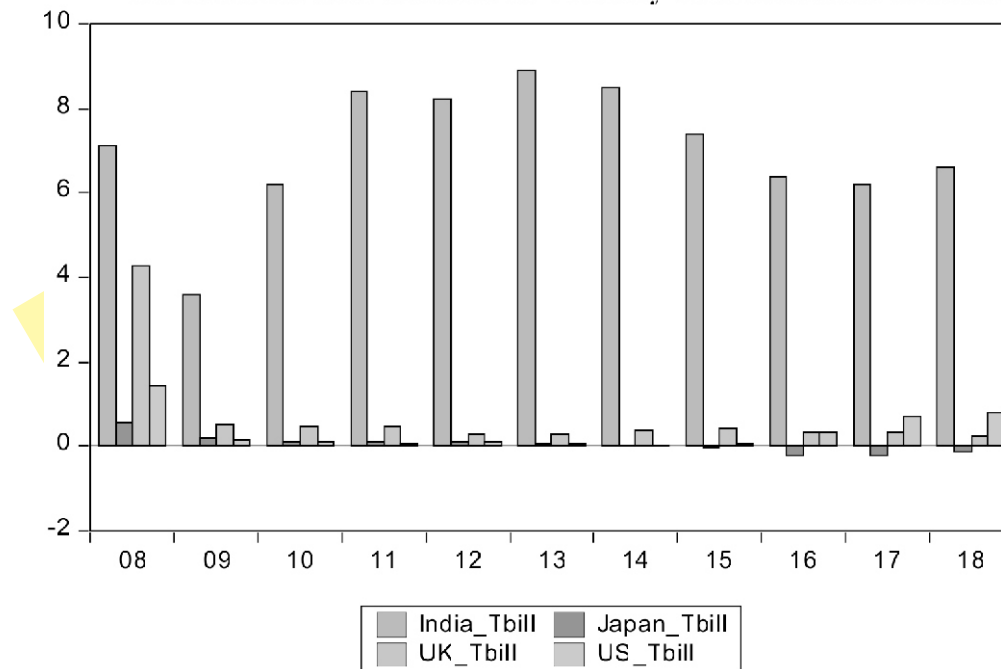
Table 2 shows that the average interest rate on T-bills remained highest in India (7.0455), followed by UK (0.7382), US (0.3555) and Japan (0.0558) during the period 2008 to 2018. The maximum interest rate was achieved by the Indian T-bills (8.9000) and the minimum interest rate was achieved by the Japanese T-bills (-0.2280) for the period 2008 to 2018. The variability in the interest rates of T-bills was the highest in Japan (C.V. = 384.0934 per cent), followed by UK (C.V. = 160.5658 per cent), US (C.V. = 127.1850 per cent) and India (C.V. = 21.4164 per cent) during the study period. Table 3 presents the correlation between interest rates on T-bills in UK, US, Japan and India for the period 2008 to 2018.

Table - 3
Coefficient of Correlation between Interest Rates on Treasury Bills in Selected Countries

	INDIA_TBILL	JAPAN_TBILL	UK_TBILL	US_TBILL
INDIA_TBILL	1.0000			
JAPAN_TBILL	0.0268	1.0000		
UK_TBILL	-0.0172	0.8105	1.0000	
US_TBILL	-0.2001	0.3709	0.7734	1.0000

Table 3 highlights that the degree of correlation between interest rates on T-bills remained highest between UK and Japan (0.8105), followed by UK and US (0.7734), while the same was least and negative between US and India (-0.2001), preceded by India and UK (-0.0172) for the period 2008 to 2018. It further highlights that the Indian T-bills market had a weak relationship with the T-bills markets of UK, US and Japan during the study period. The relationship and movement of interest rates on T-bills have been presented diagrammatically in figure 1. It shows that interest rates on T-bills in India were higher than interest rates on T-bills in UK, US and Japan for the period 2008 to 2018. However, UK and US showed an almost similar trend in the movement of rates. The T-bills rate in Japan was the lowest from 2008 to 2018 and even negative from 2015 onwards

Figure - 1
Movement in Interest Rates on Treasury Bills of Selected Countries



B) Call Rates in UK, US, Japan and India

Table 4 exhibits the movement of call rates of various countries from 2008 to 2018.

Table - 4
Call Rates in Selected Countries for the Period 2008 to 2018

Year	UK	US	Japan	India
2008	4.68	1.93	0.461	7.1
2009	0.53	0.16	0.105	3.2
2010	0.48	0.18	0.094	5.8
2011	0.52	0.1	0.078	8.2
2012	0.48	0.14	0.083	8.1
2013	0.45	0.11	0.075	8.3
2014	0.41	0.09	0.068	8
2015	0.39	0.13	0.073	7
2016	0.3	0.4	-0.26	6.2
2017	0.3	1	-0.048	5.9
2018	0.31	1.83	-0.05	6.3

Table 5 shows the descriptive statistics of the call rates in selected countries from 2008 to 2018.

Table - 5
Descriptive Statistics of Call Rates in Selected Countries

Descriptive Statistics	INDIA_CMMR	JAPAN_CMMR	US_CMMR	UK_CMMR
Mean	6.7364	0.0617	0.5518	0.8045
Median	7	0.0750	0.1600	0.4500
Maximum	8.3000	0.4610	1.9300	4.6800
Minimum	3.20000	-0.2600	0.0900	0.3000
C.V.	22.4178	276.5577	128.2561	160.1079
Observations	11	11	11	11

Table 5 shows that the average interest rate prevailing in the call money market remained highest in India (6.7364), followed by UK (0.8045), US (0.5518) and Japan (0.0617) during the period 2008 to 2018. The maximum call rate was achieved by Indian call money market (8.30000) and the minimum call rate was achieved by Japan (-0.26) from 2008 to 2018. The variability in the call rates was the highest in Japan (C.V. = 276.5577 per cent), followed by UK (C.V. = 160.1079 per cent), US

(C.V. = 128.2561 per cent) and India (C.V. = 22.4178 per cent) during the study period. Table 6 shows the correlation between call rates in UK, US, Japan and India for the period 2008 to 2018.

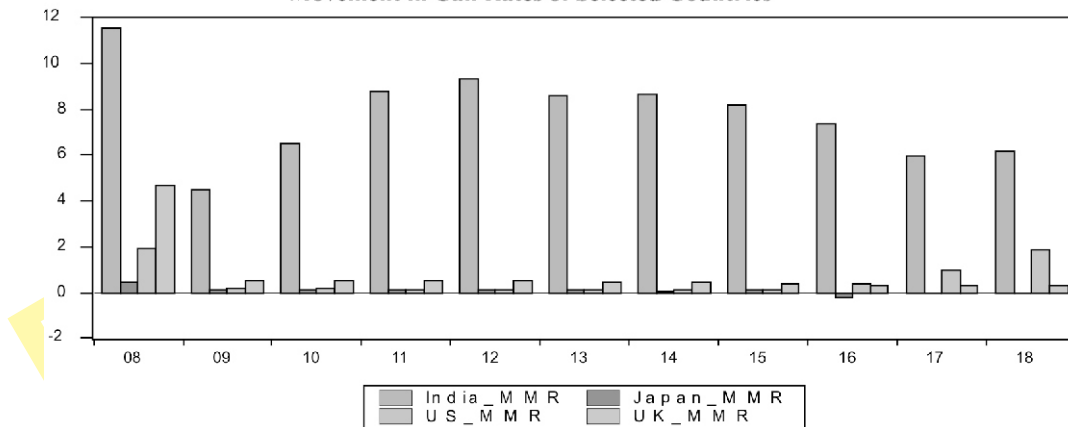
Table - 6
Coefficient of Correlation between Call Rates in Selected Countries

	UK_CMMR	US_CMMR	JAPAN_CMMR	INDIA_CMMR
UK_CMMR	1.0000			
US_CMMR	0.6103	1.0000		
JAPAN_CMMR	0.8070	0.2885	1.0000	
INDIA_CMMR	0.0808	-0.1146	0.1395	1.0000

The table 6 indicates that the degree of correlation between call money rates remained highest between UK and Japan (0.8070), followed by UK and US (0.6103), while the same was least and negative between US and India (-0.1146), preceded by India and UK (0.0808) for the period 2008 to 2018. It also highlights that the Indian call money market had a weak relationship with call markets of US, UK and Japan for the period 2008 to 2018.

The relationship and movement of call rates have been presented diagrammatically in figure 2. It indicates that call rate in India was higher as compared to UK, US and Japan and weakly related to these markets from 2008 to 2018.

Figure - 2
Movement in Call Rates of Selected Countries



CONCLUSION

The analysis of selected money markets brings into picture the subtle differences that prevail in these economies. The variability in the interest rates of T-bills and call market was the highest in Japan, followed by UK and US, while the same was the lowest in India. The degree of correlation was the highest between the interest rates of UK and Japan, followed by UK and US. The Indian money market showed a weak and insignificant relationship with the three selected nations. Also, the interest

rates of India are higher as compared to that of UK, US and Japan. It may be due to reasons like lesser liquidity, higher inflation and weaker currency of India in comparison to these economies. The economies of UK, US and Japan remained in a low-interest rate environment. Japan has had the lowest interest rates (even negative) of all the selected countries during the study period.

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