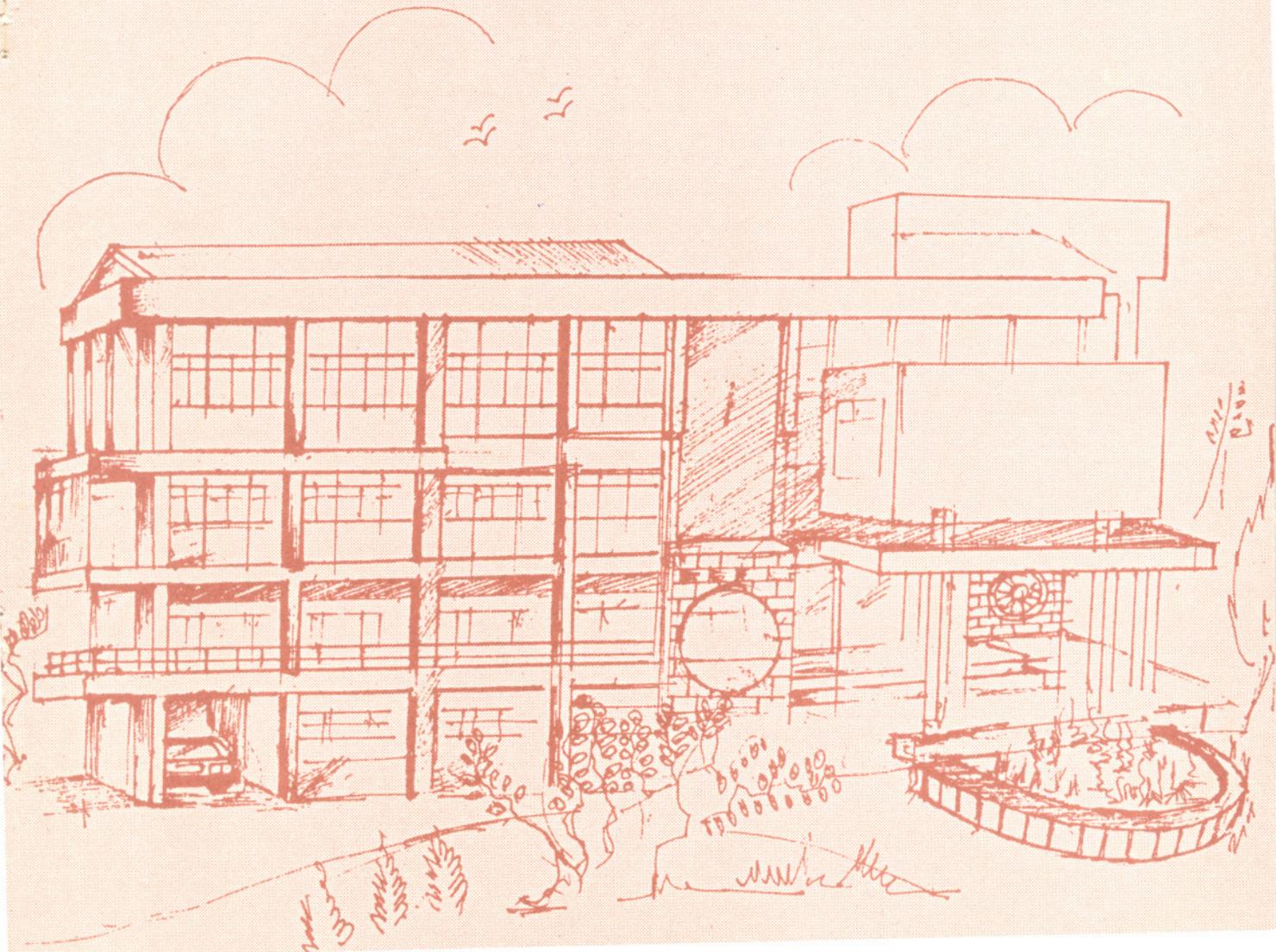




No. 44

Working Paper Series

Institutional Investors in Indian Commodity Markets – Issues and Perspectives



Institutional Investors in Indian Commodity Markets – Issues and Perspectives

Prof. Lakshmi Sharma
Assistant Professor
T.A.Pai Management Institute
Manipal-576104
Karnataka, India.
Email: lsharma@mail.tapmi.org.

TAPMI WORKING PAPER SERIES NO. 2005 / 07

The objective of TAPMI working paper series is to help Faculty members of TAPMI to test out their research ideas/findings at the pre-publication stage.



T. A. Pai Management Institute
Manipal –576 104, Udupi Dist., Karnataka

Institutional Investors in Indian Commodity Markets – Issues and Perspectives
-Prof. Lakshmi Sharma, Assistant Professor

Abstract: The Government of India is contemplating allowing the Institutional investors like Foreign Institutional Investors, Mutual funds and Banks to trade in commodity derivatives markets in India. This has implications for both the liquidity and broad basing of commodity derivatives markets given the assets under management of these investors. Their entry into commodity derivatives markets is also expected to benefit them given the portfolio diversification opportunities. However, there are certain pre-requisites before such a move to grant entry to these institutional investors into commodity derivatives markets like the unification of regulation, putting infrastructure in place to convert the commodity derivative markets products into pure financial products.

Foreign Institutional Investors (FIIs), Mutual Funds and Banks may soon become active participants in Indian commodity derivatives markets. The Reserve Bank of India, Ministry of Finance and Consumer Affairs are considering the proposal on granting permission to these institutional investors into commodity derivatives markets in India. (Business Line February 23, 2005) If these institutional investors are allowed to operate in commodity derivatives markets, it can be expected that they would provide the much wanted breadth and depth to these markets. Since such a move would also warrant the convergence of the commodity derivatives markets with the financial derivatives markets, the commodity derivatives markets could reap extra gains. The Economic Survey for the year 2004-05 rightly points out that the convergence between commodity futures markets and other derivatives markets would induce economies of scale and brings out the fact that, 'it would help in the utilization of capital and institution building, which has already taken place for the derivatives markets for the purposes of India's agricultural sector'. (pp.188) For the institutional investors, the benefits are not just one way but after all mutual. The theory of portfolio diversification and its empirical testing in other markets has already proved that the institutional investors, who have invested in equity and debt markets instruments can benefit from the portfolio diversification gains that the products of commodity derivatives markets can offer. This paper focuses on the implications of the granting of permission to the institutional investors to operate in commodity derivatives markets in India.

Indian Commodity Derivatives Markets

The commodity derivatives markets in India are as old as those of USA. The origin of commodity derivatives markets in India can be traced back to 1875, when the Bombay Cotton Trade Association Ltd., was set up which started trading in cotton futures. Subsequent to this, many other associations were floated at different points in time at different places to trade in derivatives in different commodities. For example, the futures trading in oilseeds started in 1900 at Bombay, raw jute and jute products in 1912 in Calcutta, wheat in Hapur in 1913, bullion in Bombay in 1920. However, in 1939, the options trading in cotton was banned by the Government of Bombay to restrict the speculative activity in cotton market. In subsequent years, forward trading in various commodities like oilseeds, food grains, vegetable oils, sugar and cloth were also prohibited.

After independence, the Constitution of India brought the subject of stock exchanges and futures markets in the union list and in December 1952, Forward Contracts (Regulation) Act, 1952 was enacted. This was followed by the setting up of Forwards Markets Commission in September 1953, which even now is the regulatory authority for commodity derivatives markets in India. In July 1954 the Forward Contracts (Regulation) Rules were framed. However, the widespread shortages that prevailed in many essential commodities, the consequent inflationary pressure and the regulatory constraints resulted in poor trades in these markets. Forward trading was banned in 1960s except in pepper, turmeric, castor seed and linseed. In 1977, the futures trading in castor seed and linseed was also suspended. It is only after the initiation of the liberalization process in the early 1990s, did these markets assume importance once again. The Kabra committee was set up in 1993 to examine the role of futures trading in commodities. The committee recommended the resumption of futures trading in 17 commodity groups. The suggestions by the committee also included the need for strengthening the Forward Markets Commission and the amendment of the Forward Contracts (Regulation) Act. In response to these recommendations, the Government of

India permitted the futures trading in all the commodities that the commission recommended except bullion and basmati rice. In 1998, forward trading in cotton and jute goods were permitted. The year 1999 saw the revival of the derivatives trades in some oilseeds. The National Agriculture Policy in July 2000 announced that the Government would like to encourage futures trading in a large number of commodities to minimize the wide fluctuations in commodity prices and also allow the hedging. The Finance Minister in his budget speech on February 28, 2002 indicated that the futures and forward trading would be expanded to include all agricultural commodities. The real respite for the derivatives markets in commodities came on April 1, 2003 the Government of India issued a notification rescinding all previous notifications which prohibited futures trading in a large number of commodities in the country. This was followed by another notification in May 2003 revoking the prohibition on non-transferable specific delivery forward contract. As of now there are 25 exchanges where commodity futures are traded, three of which – National Multi Commodity Exchange (NMCE), Multi Commodity Exchange (MCX) and National Commodities and Derivatives Exchange (NCDEX) – are national level multi commodity exchanges. The national level multi commodity exchanges have set up many terminals all over the country. NCDEX has set up 505 terminals in 138 centres. MCX and NMCE have set up 763 and 346 terminals in 132 and 90 centres respectively. (Economic Survey 2003-04) Many of the rest of the exchanges are, however, single commodity platforms. The futures trading is available on a large number of commodities. The number of commodities that is traded on these commodity exchanges has also registered an increase over time, from just 8 in 2000 to 80 in 2004. Demutualization and modernization of some of the exchanges are underway. The value of trading in all the commodity exchanges was around Rs.4495 crores in the year 2000-01. It moved upward and is at Rs.129364 crores as of 2003-04. This figure for the first half of the year 2004-05 is Rs.170720 crores as shown in the table below. As many as 12 exchanges have been contributing an annual trading value of over Rs. 1000 crores. The number of contracts in each of the commodities has also gone up over time. While 19 localized exchanges were offering generally one contract each per commodity traded in 2000, with the emergence of the national level multi commodity exchanges, the

scenario has changed drastically with most of the commodities having about 100 contracts each. (Nair 2004)

Table 1
Turnover of Commodity Futures Markets

Exchange	2001-02	2002-03	2003-04	Rs. Crores
				2004-05 First half
NCDEX	0	0	1490	54011
NBOT	14278	34376	53014	51038
MCX	0	0	2456	30695
NMCE	0	4572	23842	7943
All Exchanges	4495	66530	129364	170720

Source : Economic Survey 2004-05 pp.84

The Group on Forward and Futures Markets, 2001 has estimated that the contribution of the commodity exchanges was nominal at 1.2 per cent of the GDP in 1999 and has projected this figure to go up to as high as 10 per cent of the GDP by the year 2007. The Economic Survey, 2004-05 has estimated the total trading volume of all commodities' exchanges,' works out to be roughly around one third of the Government of India bond market and one-tenth of the exchange trading on the equity market'. (pp.84) As per Mr.Sundaresan, Chairman of the Forward Markets Commission the current trend in trading volume in the three national level commodity markets indicate that the volume would touch Rs.500000 crores by March 31, 2005 (Business Line February 10, 2005) To help boost the volumes and to bring in more transparency in futures trading, the Forward Markets Commission has devised a daily monitoring system which will soon be uploaded on the internet.

In spite of all these growth rates over the past and the acceleration estimated for the future, the Indian commodity derivatives markets have to go a long way to catch up with their global counter parts.

Table 2

Sector	Global Futures and Options Volume by Sector		
	Jan-Oct 2004	Jan-Oct 2003	% Change
Equity Indices	3,181,124,152	3,283,896,887	-3.10%
Interest Rate	1,904,380,990	1,610,422,074	18.30%
Individual Equities	1,655,604,644	1,289,569,674	28.40%
Ag Commodities	236,496,821	214,674,164	10.20%
Energy Products	202,561,512	185,588,869	9.10%
Non-Precious Metals	88,108,840	73,239,075	20.30%
Foreign Currency/Index	83,194,448	63,775,407	30.40%
Precious Metals	51,220,592	55,407,734	-7.60%
Other	683,571	561,068	21.80%
TOTAL	7,403,375,570	6,777,134,952	9.20%

(Source: Futures Industry Association)

The reasons for the slow growth and thin trading volumes in Indian commodity derivatives markets are many. Most of the commodity exchanges in India are single commodity platforms and cater mainly to the regional requirements of where they are. Economic Survey, 2004-05 advocates for the establishment of a sound regulatory framework for the development of efficient commodity futures markets. One of the remedies could be the convergence of the derivatives markets in the country and the entry of the institutional investors into the commodity derivatives markets.

Indian Financial Derivatives Markets

The derivatives markets in stocks in India is relatively recent as compared to its counterpart in commodities. The advent of securities derivatives markets can be traced to the promulgation of Promulgation of the Securities Laws (Amendment) Ordinance 1995 withdrawing prohibition on options in securities. The derivatives markets did not, however, take off immediately as there was no regulatory framework to regulate trading in derivatives. In November 1996, SEBI set up a 24 member committee under the chairmanship of Dr.L.C.Gupta to develop the regulatory framework for derivatives trading in India. The committee came up with its recommendations in March 1998. This

was followed by the setting up of another committee with Prof. J.R.Varma as its chairman to recommend the risk containment measures in derivatives markets. The report of this committee containing recommendations on margin system, broker net worth, deposit requirements and real-time monitoring requirements. In December 1999, the Securities Contract Regulation Act was amended to include derivatives within the ambit of securities and the regulatory framework for governing derivatives trading was developed. However, the act also made it clear that the derivatives shall be legal and valid only if such contracts are traded on recognized stock exchanges, thus excluding the Over the Counter derivatives trades. Finally the derivatives trading started in June 2000 in India. In 2001 SEBI permitted the derivative segment of National Stock Exchange (NSE) and Bombay Stock Exchange (BSE) and their clearing house/corporation to commence trading and settlement in approved derivatives contract. Initially the approval was for trading in index futures contract based on S&P CNX Nifty and BSE-30 (Sensex) index . This was followed by approval for trading both in index options based on S&P CNX Nifty and BSE-30 (Sensex) index as well as for trading in options on individual securities. The trading in BSE Sensex options commenced on June 4, 2001 and the trading in options on individual securities commenced in July 2001. Futures contracts on individual stocks were launched in November 2001. The derivatives trading on NSE commenced with S&P CNX Nifty Index futures on June 12, 2000. The trading in index options commenced on June 4, 2001 and trading in options on individual securities commenced on July 2, 2001. Single stock futures were launched on November 9, 2001.

As of now index futures on S&P CNX Nifty and CNXIT, index options on **CNX** Nifty and CNXIT and futures on 52 individual securities and options on 52 individual securities specified by SEBI are available in NSE. In addition to similar products likes these, the Bombay Stock Exchange also offers weekly contracts for 1 and 2 week for index options and options on individual securities.

Though the securities derivatives markets are of recent history, the turnover of these markets have registered an impressive growth.

Table 3

Turnover of Derivatives Markets vis-à-vis Cash Market#

(Rs. Crores)

Period	Derivatives segment	Cash Segment
2001-02	103847	815413
2002-03	442343	935602
2003-04	2143010	1594016
December 2004*	273174	166093

included figures for both NSE & BSE

*Provisional

Source: Author's own compilation from SEBI Bulletin, January 2005

It can be noticed from Table 4 that the derivatives markets in India is growing faster than its counter part i.e. the cash segment. The turnover in the derivatives segment has grown to Rs. 2143010 as of 2003-04 from Rs. 103847 crores in 2001-02, while the turnover in the cash segment is only at Rs.1594016 crores in 2003-04 as against Rs.815413 crores in 2001-02. The rate of growth in turnover in the derivatives markets is around 1964 per cent and it is just 95 per cent for the cash segment. The average trade size at the NSE derivatives segment rose significantly from the year 2001 to the year 2004. The average value of a trade in NSE as of 2004 is around Rs. 5 lakhs. The equity derivatives markets segment in NSE is 2.2 times bigger than that of its equity spot markets as of the calendar year 2004. However, as brought out by the Economic Survey 2004-05, 'the equity derivatives market in India has yet to attain the multiples of spot market turnover which are prevalent in successful derivatives exchanges internationally.'(pp.79) This is obvious because in terms of turnover ratio, i.e. the year's trading volume divided by the market capitalization, India ranks 12th on the international comparison as shown by the following table.

Table 4
Turnover Ratio(per cent) on the Equity Spot Market: An International Comparison*

Rank	Country	Turnover Ratio
1	United Kingdom	165
2	Taiwan	163
3	Turkey	141
4	China	139
5	Germany	125
6	Spain	120
7	United States	119
8	Sweden	118
9	Korea	118
10	Italy	113
11	Finland	112
12	India	107

* Pertains to 11/2003 – 10/2004

Source: Economic Survey 2004-05 pp.78

If the derivatives exchanges are globally ranked in terms of their volume, the National Stock Exchange which accounts for roughly around 99 per cent of the total derivatives turnover volume in this country as of 2004 ranks only 18th.

Table 5
Top 20 Derivatives Exchanges by Volume

Exchange	Jan-Oct 2004	Jan-Oct 2003	% Change
Korea Futures Exchange	2,187,720,968	2,408,256,343	-9.20%
Eurex	892,574,551	874,415,491	2.10%
Euronext.liffe	676,251,742	598,814,922	12.90%
Chicago Mercantile Exchange	671,072,234	539,547,739	24.40%
Chicago Board of Trade	494,383,000	381,647,269	29.50%
Chicago Board Options Exchange	295,664,928	233,654,944	26.50%
International Securities Exchange	293,144,184	198,454,531	47.70%
Bolsa de Valores de São Paulo	196,914,227	145,727,723	35.10%
Mexican Derivatives Exchange	189,800,477	145,713,019	30.30%
American Stock Exchange	167,711,723	151,385,041	10.80%
Bolsa de Mercadorias & Futuros	154,253,439	98,838,411	56.10%
New York Mercantile Exchange	134,371,357	115,394,076	16.40%
Philadelphia Stock Exchange	110,850,639	88,438,774	25.30%
OMX (Stockholm & Helsinki)	81,410,640	63,519,318	28.20%
Pacific Exchange	80,875,435	69,364,093	16.60%
Dalian Commodity Exchange	74,549,275	61,590,335	21.00%
Tokyo Commodity Exchange	64,649,597	75,702,028	-14.60%
National Stock Exchange of India	62,263,505	32,587,995	91.10%

London Metal Exchange	60,446,620	60,433,785	0.00%
Taiwan Futures Exchange	48,444,816	24,597,143	97.00%

(Source: Futures Industry Association)

The institutional investors account for only about 3.3 per cent of the turnover in the derivatives markets segment, though their share is slightly higher at 10.8 per cent in the spot markets segment. The contribution of all the institutional investors to the total turnover of the derivatives markets segment, which was Rs. 51397 crores in the calendar year 2003, has improved over the subsequent year and was at Rs.176940 as of 2004. Of which the share of the FIIs is estimated to be Rs.170338. (Economic Survey 2004-05, pp.81) This shows that a major share of the institutional investors trade in derivatives markets segment is from FIIs which account for 92 per cent of the total. This may be due to the superior human resources, better market surveillance system, a higher holding in equity markets, risk management system followed, etc. The participation by the mutual funds is only marginal, even though the SEBI (Mutual Funds) Regulations authorize mutual funds to use exchange traded equity derivatives for hedging and portfolio rebalancing purposes. However, since the income from derivatives is going to be treated as business income rather than as speculative income as suggested by the Financial Budget for 2005-06, it can be expected that the institutional participation in the derivatives segment of the capital market will certainly go up. It can also be expected that the portfolio management businesses will structure innovative products and attract more investors. As rightly brought out by the Economic Survey 2004-05, 'Subject to prudential norms, the participation of pension funds and contractual savings schemes in equity and long term debt markets needs to be encouraged not only to benefit industry, agriculture and infrastructure, but also allow the small savers to cash in on the handsome returns that such markets are likely to yield in the medium term.'(Economic Survey pp.17) RBI guidelines on investment by banks in capital market instruments do not authorize banks to use equity derivatives for any purpose. The direct and indirect exposure of banks to equity markets is negligible and does not warrant serious management and resources for hedging purposes. As a result, banks are virtually a non-existent entity in equity derivatives markets in India.

Convergence of Derivatives Markets

If the markets are integrated and the institutional investors are allowed to operate in the commodity derivatives markets, we may expect the overall volumes in the derivatives markets to go up in general and specifically in the commodity derivatives segment. As of 2003-04, the total assets under the custody of the FIIs, mutual funds and banks are at Rs.270923 crores. As of December 2004, this figure is 360776 crores.

Table 6
Assets under Custody of Custodians

Year	Mutual Fund	Banks	FIIs	Total Assets under all Custodians (Rs. Crores)
2001-02	32570	17798	61753	270267
2002-03	41368	20814	56139	278855
2003-04	90338	21188	159397	497260

(Source: SEBI Bulletin, November 2004, p.105)

In case of convergence of markets, not only these assets could be expected to be reallocated to various segments of markets to reap the maximum benefits on portfolio returns and risk diversification, but also can be expected to go up as a whole as the risk suffered by these institutional investors would considerably come down. This is possible because the basic tenet of portfolio theory is that diversification reduces risk. This suggests that an optimally diversified portfolio should be one that is invested across as many asset classes and markets as possible. If the commodity derivatives products offer risk and return trade-offs that cannot be easily replicated through other investment alternatives, or provide risk diversification opportunities for investors in other markets segments, then it can be concluded that the investment in commodity derivatives markets would benefit the institutional investors, who are hitherto prohibited from operating in these markets.

The question of whether the commodities represent a separate asset class is a well debated topic in both academic research and practitioner literature. (Greer 1994, Froot 1995, Schneeweis et al., 1997) However, the question that is more relevant is not if the commodities represent a separate asset class but if an investor can benefit from investing in them. Anson (1998) brings out the benefits of investing in commodity futures index. He has found that commodity futures indexes bear a significant positive correlation with the rate of inflation and are as a result an excellent source of portfolio diversification. Becker and Finnerty (2000) also have found that the inclusion of portfolios of long commodity futures contracts improves the risk and return performance of stock and bond portfolios for the period of 1970 through 1990. They have observed that the improvement is more pronounced for the 1970s due to the high inflation with the commodities acting as an inflation hedge. Many other studies have concluded that an allocation to the Goldman Sachs Commodity Index proves to be a good diversifier for stocks and bonds in a mean-variance framework. (Lummer and Siegel, 1993, Kaplan and Lummer 1997) Froot (1995) has found that the Goldman Sachs Commodity Index is an effective portfolio diversification tool both as an initial hedge and as a secondary hedge after other real assets have already been added to the investment portfolio. The study by Satyanarayanan and Varangis (1996) has brought out the fact that an allocation to the same Goldman Sachs Commodity Index can improve the portfolio returns for a given level of risk. The study on spot returns, roll yield and diversification with commodity futures by Anson (1998) shows that an investment in non-financial futures contracts benchmarked to one of four unleveraged commodity futures indexes improves the Sharpe ratios for a diversified portfolio of domestic and foreign stocks and bonds. In 1999, he concludes from another study that he carried out that commodity futures, when considered in their proper portfolio context, are a valuable asset class for risk-averse investors. Because of their excellent profit potential over long periods of time, commodity futures are found to have greater utility, the more risk-averse the investor is. Gorton and Rouwenhorst (2004) provide evidence on the long-term properties of an investment in collateralized commodity futures contracts. They have found that the commodity futures risk premium has been equal in size to the historical risk premium of

stocks (the equity risk premium), and has exceeded the risk premium of bonds during their period of study between July 1959 and March 2004. In addition to this, they also have brought to light the fact that a diversified investment in commodity futures has slightly lower risk than stocks – as measured by standard deviation and because the

distribution of commodity returns is positively skewed relative to equity returns, commodities have less downside risk. Spurgin and Georgiev (2000) have found that the benefits of commodity indices as an alternative means to capture commodity return is not found through direct investing in the underlying production firm as well as possible existence of roll return and the benefits of active trading in metal.

It can be concluded from the results of the various studies carried out that the institutional investors would certainly stand to gain if allowed to trade in commodities derivatives markets. It is a well known fact that the return on investment from debt markets affected by the inflation rates. The bond market has not yet obtained exchange traded futures and options that can play a major role in price discovery, risk management and liquidity. The commodity markets can help take a hedge for these investments as they are positively correlated with inflation. Banks, as a class of investors, are the largest investors in the Indian debt market. They invest in a whole range of products including the Government of India securities, treasury bills, commercial papers, certificate of deposits, corporate bonds and debentures. The investment by mutual funds in the debt markets is also on the rise over the years. The net investment by the mutual funds in the debt market as of 2003-04 is Rs.22701 crores as against Rs.10959 crores in 2001-02. (Reserve Bank of India Annual Report, 2003-04) The role played by the Indian Banks and Mutual funds in the Indian debt market can be assessed by looking at the table given below. The FIIs are also equally active in debt markets. The net investment by the FIIs in the debt markets as of December 2004 stands at Rs.3456 crores.

Table 7

Market Movers in Debt Market

Type of Investor	% of Traded Value February 2004	% of Traded Value January 2004	% of Traded Value December 2003	% of Traded Value April 2002 – March 2003
Indian Banks	32.54	34.85	37.65	38.7
Foreign Banks	9.93	7.52	6.61	10.62
Primary Dealers	17.28	17.38	16.00	22.03
Brokers (Non-Participant Deals)	36.32	35.78	35.49	24.81
Mutual Funds	1.11	1.59	2.05	1.41
Financial Institutions	2.45	2.51	1.92	2.15
Corporate Bodies	0.38	0.37	0.27	0.21

(Source: National Stock Exchange, Indian Fixed Income Securities Market, February 2004)

That presence in commodity derivatives markets will also help the banks by providing them with a protective cover against the default on agricultural loans is an additional advantage that the banks enjoy. Once they start operating in commodity derivatives markets they can lend to farmers and cooperatives with an agreement that their produce be sold in commodity futures market to avoid downside risk in commodity prices in future.

Table 8

Commercial Banks' Credit to Agriculture

(Rs. Crores)

Period	Credit	Share in total institutional credit to agriculture (per cent)
1999-00	24733	53
2000-01	27807	53
2001-02	33587	54
2002-03	41047	58
2003-04	52441	60
2004-05*	52038	61

* Upto December 2004

Source : NABARD as reported in Economic Survey 2004-05, p.178

However, the studies on the ability of commodity futures to provide the advantage of portfolio diversification or better returns are not there. This is not unexpected given the fact that commodity derivatives markets though have been in existence for long has a chequered history and is very shallow. Many studies carried out on Indian commodity markets (Jain and Naik 1999, Sahadevan 2002, Thomas 2003) have brought out the fact that only in a few cases the commodity futures markets performed its basic function of discovering efficient prices. Though the focal points of these studies were different all of them agree on the point that only in case of few commodities where the trade volumes were reasonable could the markets achieve the objective of price discovery to some extent. With the trade volumes of commodity derivatives market in India being very low this finding does not surprise us.

Hence, the studies carried out outside India have certainly document positive evidence on the ability of the commodity derivatives markets to offer the benefits of portfolio diversification and enhanced returns the same cannot be just said about the Indian commodity derivatives markets as well because of certain inherent problems that they suffer currently.

1. The spot/physical markets are fragmented. This may be because of the restrictions on the free movement of commodities in the physical form under the Essential Commodities Act, APMC Act, Licensing restrictions, etc. Hence, the creation of an integrated and vibrant domestic market for physical trading in

commodities with adequate infrastructure and transparent trading system is a pre-requisite for broad based commodity derivatives markets.

2. Lack of mechanism for standardization of warehousing receipts. The absence of the regulatory authority for accreditation of warehouses and for setting standards for scientific grading, packaging, storage and preservation. As a result, though Banks grant credit against warehouse receipts now, they are largely restricted to the ones issued by the Central Warehousing Corporation and those promoted by the State Governments. However, this problem is being sorted out by the Food Ministry, which is in the process of drafting a Warehouse Development and Regulation Act to promote warehouse receipts-based lending and commodity derivative transactions.
3. Dematerialized settlement system for commodities which has the standardization of warehouse receipts as a pre-requisite. A system of physical delivery of commodities backed by warehouse receipt system can help eliminate the quality risk and price risk. It will facilitate seamless nation wide spot market for commodities.
4. Creation of depository system for electronically facilitating transfer and delivery of commodities in dematerialized form.
5. Need to make warehouse receipts transferable. We understand that a bill to amend the Forward Contracts (Regulation) Act, 1952 is slated to be taken up during the current budget session of the Parliament, which proposes to permit the transferability of warehouse receipts by scrapping Section 18(2) of the Act. This will also easy access to finance from banks and financial institutions against produce stored in warehouses.
6. Most of the commodity exchanges function as specialized product bourses. This is even true of the national multi commodity exchanges because of lack of volumes in many commodities in spite the trading being allowed in many

formally. While NCDEX technically trades in 35 commodities, about 90 per cent of its volume comes from just 8 products. In case of MCX, gold and silver account for a major share in the trading volume, though it trades in 41 commodities. Pepper, cardamom, rubber, coffee and jute products are the five products that are prominently traded in NMCE even though about 59 commodities are traded here. This may be attributed to the fact that there are different players for different commodities.

7. There are no uniform contract specifications for the same commodity traded on various exchanges. As a result, there is no proper mechanism to assess price of the same commodity across various exchanges, as price depends on the contract specification.
8. Online trading at the national level is mandatory only in respect of National level multi commodity exchanges, while such a compulsion is not applicable to the regional ones. Hence transparency suffers.
9. Demutualization is yet to happen completely. Many exchanges are associations of members who retain trading rights and ownership. This interest of the promoters as traders has serious implications for the integrity of these exchanges.
10. Residents in India, engaged in import and export trade, may hedge the price risk of commodities in the international commodity exchanges/markets. Applications for commodity hedging are to be forwarded to RBI. A one-time approval will be given by RBI along with the guidelines for undertaking this activity. The Reserve Bank of India, which is considering a proposal to grant blanket approval to Indian companies that have an exposure to commodities to freely hedge in the international exchanges, must also ensure that they use the products available in the Indian commodity derivatives markets.

11. Options trading in commodities are prohibited as of now which puts constraints on the markets. Introduction of options trading in commodities is a necessary condition for institutional investors to trade in commodity derivatives trading, as this would make it easier for the institutional investors to convert the commodity derivatives products as financial products.

If the institutional investors, like banks and mutual funds, whose presence as of now is only in capital markets need to start operating in commodity derivatives markets as well then these additional issues are also required to be addressed.

12. Convergence of the regulators of capital markets and commodity markets is a pre-requisite for free flow of funds between markets.
13. The players in capital markets must acquire the required expertise for trading in commodity markets and vice versa to have an integrated view of all markets.

The Economic Survey 2003-04, states that, 'there is also a need for an extensive effort to harness these markets (commodity markets) in a variety of ways in the economy such as (a) utilizing options for 'price stabilization' efforts of the government, (b) delivering credit products where farmers pay lower interest rates when prices are low, (c) extending knowledge and market access to every district of the country.'(p.78) If all these are properly taken care, then the commodities derivatives markets could be an investment haven for institutional and other investors of capital markets, in addition to facilitating efficiently integrating the spot and futures markets of commodities, improving the bank lending against commodities and promoting collateral management.

References:

Anson, M.J.P., 1998, 'Spot Returns, Roll Yield and Diversification with Commodity Futures', *Journal of Alternative Investments*, Winter, pp.1-17.

Anson, M.J.P., 1999, 'Maximizing Utility with Commodity Futures Diversification', *Journal of Portfolio Management*, Summer, pp.86-95.

Becker K., and J. Finnerty, 2000, 'Indexed Commodity Futures and the Risk and Return of Institutional Portfolios', OFOR Working Paper.

Department of Agriculture & Cooperation, 2001, 'Report of the group on Forward and Futures Markets', December 2001, New Delhi

Froot, K.A., 1995, 'Hedging Portfolios with Real Assets'. *Journal of Portfolio Management*, Summer, pp.60-77.

Gorton G and K.G. Rouwenhorst, 2004, 'Facts and Fantasies about Commodity Futures, Yale ICF Working paper no.04-20.

Greer, R.J.,1994, 'Methods for Institutional Investment in Commodity Futures', *The Journal of Derivatives*, Winter, pp.28-36

Government of India, 2004, 'Economic Survey 2003-04, Ministry of Finance, Economic Division, New Delhi.

Kaplan P.D. and S. Lummer, 1997, 'GSCI Collateralized Futures as a Hedging and Diversification Tool for Institutional Portfolios: an Update', Working Paper, Ibbotson Associates.

Lummer S.L. and L.B.Siegel, 1993, 'GSCI Collateralized Futures: Hedging and Diversification Tool for Institutional Investors', *Journal of Investing*, summer, pp.75-82.

Naik G and S.K. Jain, 1999, 'A Study on the Performance of Indian Commodities Futures Markets, Indian Institute of Management, Ahemdabad as quoted in Nair, C.K.G., 2004, 'Commodity Futures Markets in India: Ready for 'Take-off'', *nsenews*, July 2004, pp.1-4.

Nair, C.K.G., 2004, 'Commodity Futures Markets in India: Ready for 'Take-off?', nsenews, July 2004, pp.1-4.

National Stock Exchange, 2004, Indian Fixed Income Securities Market, February 2004, volume 7, issue 2.

Reserve Bank of India, 2004, 'Hand Book of Statistics on Indian Economy' August 2004.

Satyanarayan S and P. Varangis, 1996, 'Diversification Benefits of Commodity Assets in Global Portfolios', Journal of Investing, Spring, pp.33-50

Sahadevan K.G., 2002, 'Derivatives and Price Risk Management: A Study of Agricultural Commodity Futures in India, Institute of Management, Lucknow as quoted in Nair, C.K.G., 2004, 'Commodity Futures Markets in India: Ready for 'Take-off?', nsenews, July 2004, pp.1-4.

Schneeweis, T., and R.Spurgin, 1997, 'Comparisons of Commodity and Managed Futures Benchmark Indexes', The Journal of Derivatives, Summer, pp. 33-50

Securities and Exchange Board of India, SEBI Bulletin, November 2004

Thomas, S., 2003, 'Agricultural Commodity Markets in India: Policy Issues for Growth', Indira Gandhi Institute for Development Research, Mumbai.

www.thehindubusinessline.com

www.financialpolicy.org

www.futuresindustry.org