

A NEW GENRE : INDICATOR FUTURES

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The major success of financial futures contracts on futures exchanges in Australia and the United States, in particular the volume at which stock index futures have been trading, suggests that they fill a gap in the risk management area. With the advent of the managed floating exchange rate era in the early 1970's, exchange rate volatility became an increased source of risk for traders and the first of the financial futures — currency futures — was introduced by the International Monetary Market of the Chicago Mercantile Exchange. The volatility of the price of foreign money (an exchange rate) was also reflected in the price of internal money (the interest rate) and during the 1970's and early 1980's a wide range of interest rate futures covering mortgage instruments (GNMA futures), long term bonds, short-term bonds and bills and Eurodollars have been introduced to provide for the shifting of interest rate risks.

Most important of the financial futures has been the comparatively recent introduction of stock index futures in both the U.S. and Australia. Stock index futures are futures contracts based on a broad-based stock market index, that enable equity market investors to neutralize the risk of market-wide fluctuations in stock prices. Stock price indexes in the U.S., Australia and in all of those countries that date their business cycles, rank as one of the leading indicators of cyclical turning points in their economies. For this reason stock index futures contracts offer potential investors the opportunity to hedge against the risk of a downturn in the economy.

Stock index futures widen the protection offered to investors to cover a macroeconomic risk rather than the specific price risk of a commodity of financial instrument. Although the success of stock index futures has spawned some interest in developing contracts for sub-groups of the stock index, for example, the Metals and Minerals sub-group of the A.A.S.E. Index, their success also suggests that the provision of indicator, rather than of commodity or financial instrument, futures may be a useful development.

Already the New York Coffee, Sugar and Cocoa Exchange, one of the most innovative of the U.S. futures exchanges, has announced that it is to offer four new contracts based on important macroeconomic indicators will allow traders to hedge against broader macroeconomic risks. The four contracts use Housing Starts, New Car Sales, the CSCE Earnings Index and the Consumer Price Index as their bases. All of these should be of interest in the Australian context and each of them will be discussed in this paper.

CPI FUTURES

The case for CPI futures has been discussed by Dew (1978), Ederington (1980) and Lovell and Vogel (1973) over the past decade as inflation has continued to be of major concern. The New York CSCE consumer price index contract is to be a cash value based on the reported months, U.S. CPI-W, that is, the consumer price index using rental costs as compiled and announced by the Bureau of Commerce. The value of the contract is to be \$1000 times the index, so that a CPI futures contract would enable traders to trade an amount in dollars equal to \$1000 times the index.

Investors, households and businesses could all benefit from protection against the price erosion process of unexpected inflation. The buyer of a CPI futures contract would lock in at the futures price the future cost of the basket of goods on which the CPI calculation is based. For example, a business could lock in the purchasing power of its future wage payments or an investor in a financial instrument might hedge the interest and principal repayments by buying a CPI futures contract.

Lovell and Vogel (1973) suggest that one of the advantages of a CPI futures contract is that it will provide a continuous measure of price expectations and the likely future impact of government policies on inflation could well be measured there. In the present Australian environment where wages are likely to be related to rises in the CPI again following the wage freeze, a CPI futures contract could be used by businesses to offset the cost of additional wage

payments. Compared to that of the commodities and financial instruments on which futures contracts are now based, the volatility of the CPI is not very high but this may be compensated for by requiring a lower margin on the futures contract.

Ederington (1980) suggests that by providing a market in which it is possible for investors to hedge against inflation without diverting their savings to non-productive assets, a CPI futures contract would free funds for more productive uses and discourage hoarding. It would be a preferable alternative to indexed bonds or instruments as it provides a supplement rather than a substitute for existing financial assets. Because the futures price represents the consensus of inflationary expectations it will provide a much needed measure of use in policy input for governments. Ederington (1980) also suggests that a CPI options contract would be a possible addition or alternative to a CPI futures contract. A CPI options contract would provide its purchaser with the right to purchase, for a specified sum, an amount in dollars equal to the CPI, in effect allowing him to insure his ability to purchase the basket of goods represented in the CPI at the option price.

In contrast to a futures contract which represents an obligation to make or take delivery an option gives the buyer the right to sell or buy and his obligation is completely satisfied on paying the premium for the option unless he wishes to exercise it.

NEW CAR SALES FUTURES

The proposed new car sales futures contract is to be for a cash value based on reported annual new car sales with contracts traded for settlement during January, April, July and October for two years hence. The value of each month's contract is to be based on the annual new car sales released in that month, which will measure new car sales up to the end of the previous month. An index equal to the annual retail new car sales measured in thousands of units is the proposed unit of trading with the value of the contract to be \$10 times the index. Contracts will cease trading at noon of the first business day after the announcement date of new car sales figures and any contracts still open at that time will be settled on a cash basis.

This contract offers an opportunity to the suppliers to the automobile industry to protect their interests against unexpected fluctuations in demand due to variations in new car sales. A whole chain of suppliers reaching back to, for example, the miners of platinum and palladium used in catalytic converters may find

this type of futures contract of assistance. Distributors and car dealers should find the contract helpful as a means of hedging their risk in stocks held and may well be able to use it as an insurance of the value of their businesses.

New car sales as a barometer of U.S. industrial production often act as a leading indicator of business cycle turning points, as do housing starts.

HOUSING START FUTURES

The proposed futures contract in housing starts is to be for a cash value based on the reported annual unadjusted housing starts as compiled and reported by the U.S. Bureau of Commerce. These future contracts are to be traded for settlement in the months of January, April, July and October for two years forward. Trading is to commence in each contract for delivery in 24 months time with the value of each month's contract to be based on the annual housing starts released in that month which will measure housing starts to the end of the previous month. The unit of trading is to be an index equal to the annual housing starts measured in thousands of units and the value of the contract will be \$100 times the index.

In view of the CSCE the housing starts contract will allow builders to obtain protection from unexpected short term variations in sales. In the year July 1981 to July 1982 housing starts fell by 40 per cent. Of course not only builders but also suppliers to the trade could usefully obtain protection from these fluctuations. Lenders for housing are another group with interests in the performance of this indicator who could find the availability of a means of heading useful. Housing starts rank as an important leading indicator in the United States.

Both new car sales and housing start futures as they are based on leading indicators of U.S. business cycles will offer the opportunity to hedge or to speculate in relation to cyclical turning points. The proposed availability of these futures contracts for two years ahead should enable cyclically dependent businesses opportunities to protect their investments. Although both indicators are classified as leading indicators this does not mean that they lead cyclical turning points by consistent time-spans or even that they always lead. There is therefore sufficient uncertainty to generate speculation and to ensure continuous trading.

CORPORATE EARNINGS FUTURES

The CSCE's fourth proposed indicator contract is on the CSCE Corporate Earnings Index which will reflect the weighted average earnings per share of the 100

major publicly traded U.S. manufacturing companies ranked by sales for the fiscal year 1982. The specified unit of trading will be an index equal to the weighted average of the fully diluted earnings per share of the 100 companies divided by that average calculated on July 1, 1983, multiplied by 100, so that the index value of July 1, 1983 equals 100 and the contract value would equal \$1000 times the value of the contract or \$100,000 on July 1, 1983. It is proposed that the weighting procedure based on the relative asset size of the 100 companies should be revised on the first business day in July in each year. Bids and offers would be in multiples of .01 of the index, with the contract's minimum price fluctuation of \$10.

It is the purpose of this contract to provide a way for companies to protect their earnings if they believe that their company will under perform relative to the market as well as to allow investors to protect their income from shares when the companies in which they are invested reduce their earnings. It offers portfolio managers a further dimension of protection to that provided by stock index futures.

PROSPECTS

All of the four proposed contracts are based on indicators usually regarded as leading indicators of cyclical turning points and it may be if these are successful that future contracts could well be introduced based on some coincident and lagging

indicators. Certainly the success of stock index futures which are based on a leading indicator in Australia as well as in the U.S. augurs well for the success of other indicator futures.

In the Australian context monthly series are available for new residential building, new car sales, the CPI and the Australian Associated Stock Exchanges have a suitable earnings series. The bases for the development of similar indicator contracts already exist here and perhaps the strength of the business cycle moves in the past few years would provide considerable incentive for investors to use indicator futures contracts.

The new indicator contracts offer one further new dimension, they will have trading for up to two years ahead and if continuous trading in contracts over that period can be achieved, it may reverse the trend seen in the financial futures for the 3-months futures to be the focal point of trade. There seems to be no reason why indicator futures should not be able to offer a medium-term hedge without the necessity of rolling over into a new contract every three or six months.

Certainly the performance of the four proposed indicator futures will be watched with interest as it may well be that the stock index futures have attracted their level of business not only because share holding is widespread but because stock indexes too are leading cyclical indicators.

REFERENCES

- Dew, Kurt "CPI Futures?" Federal Reserve Bank of San Francisco Weekly, *Weekly Letter*, 1978.
- Ederington, Louis H., "Living with Inflation: A Proposal for New Futures and Options Markets" *Financial Analysts Journal*, January-February 1980.
- Lovell, Michael C. and Robert C. Vogel "A CPI-Futures Market" *Journal of Political Economy*, July/August 1973.
- Weston, C.R., "The Case for Stock Index Futures" *Journal of the Australian Securities Analysts*, 1983.