Marginal

After an era of glorious growth, the world's futures exchanges need to get back in the mainstream, writes André Cappon

The invention of financial futures in the mid-1970s led to an explosive growth period for risk management. But now, consolidation as well as profound transformations of exchange functions and structure are called for if exchanges are to maintain their role in the financial system. Several trends and facts are clear.

1) The growth of futures exchanges has levelled off. As illustrated in *Figure 1* (right), the compound annual average growth rate (CAGR) of trading volume on futures exchanges has slowed down sharply in the US, from 16.1% per annum in the 1980s to 4.9% in the 1990s. Outside the US, the volume growth rates were initially very high, due to a catching-up effect, but have also slowed down to a remarkable degree in the mid 1990s.

In the meantime, many exchanges have built new trading floors, revamped systems and generally added capacity to the market. Some of this is clearly excess capacity.

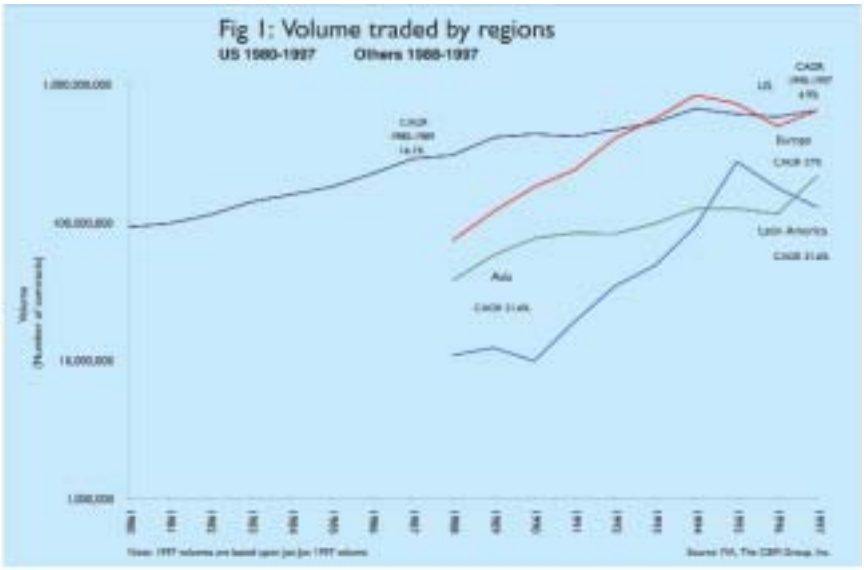
2) The over-the-counter (OTC) market continues to grow and is gaining ground from the exchanges. For a long period of time, the OTC market and exchange trading volumes moved in lockstep, as dealers transacted in the OTC market and laid off their risk on the exchanges. The notional outstanding of exchange-traded derivatives was approximately equal to that of OTC derivatives. However, in the last few years, OTC market volume has continued to grow at very high rates, while the exchange market slowed down (see *Figure 2* overleaf). The OTC market now has over twice the notional outstanding of exchange-traded derivatives....

The OTC market is strong competition for exchanges: it appeals primarily to the larger customers and the larger intermediaries.

- For customers, the OTC market offers flexibility and tailored solutions.
- For the large investor, the OTC market provides ability to deal in size without fear of the locals.
- For dealers, OTC business is usually more profitable than the exchange-traded market.

Stronger, higher-rated players, such as the global investment banks, can differentiate themselves readily in the OTC market, as well as charge a premium for credit risk, whereas exchange-traded markets are by nature much more of an even playing field.

The strengths of exchange-traded markets — liquidity, transparency and security — clearly remain important. However, through netting and collateral arrangements, the OTC market can also manage credit risk quite well. For large, sophisticated customers, the modern OTC market can often be as effective as the organised market.



3) The futures industry is not doing well. Even for the strongest FCM firms, profit margins are under tremendous pressure, due to widespread discounting, slow growth in volumes and continued cost increases. In terms of return on capital, the FCM business worldwide has become unattractive. Consequently, many large players, including several global banks, have recently exited from the FCM business or are seriously evaluating this option.

The number of FCMs in the United States has decreased from some 350 in 1990 to about 250 in 1997, a 30% consolidation in just seven years. Some of this has been driven by the spectacular growth in managed futures, which have concentrated buying power into fewer hands.... Another major factor has been

the overall consolidation of the financial industry – banks, securities firms, insurance companies and so on. There are fewer clients and, as a result, a lot fewer FCMs are needed.

4) Consolidation of exchanges is beginning. By and large, traditional derivatives exchanges are making modest profits (some of this deliberately since, as associations of user-members, they are often structured as non-profit organisations designed primarily to offer low-cost service).

Table 1 summarises the economics of the major derivatives exchanges in the world. Clearly, for traditional exchanges, their profits are modest in absolute terms, and especially when compared to the big-ticket investments they may be called to make in technology, marketing or new trading floors. Exchanges with 'capitalist' owners to reward (partially, such as Matif, or fully such as OM) have been more profit-oriented.

There are several forces pushing towards consolidation of futures exchanges.

- As mentioned above, there is the significant excess capacity currently in the business, as evidenced by the heavy discounting of commissions that characterises futures markets around the world.
- Large exchanges have many competitive advantages.
- Large exchanges tend to be more efficient and can offer their services at a lower price than small exchanges.

Exchange operating costs exhibit clear economies of scale. As illustrated in *Figure 4* (p30), with every doubling of scale (measured in trading volume) the unit costs of an exchange, measured in terms of cost-per-contract, decline predictably, by about 25%, following a so-called '75% slope'.

Large exchanges usually offer a broad product range which enables them to achieve a marketing advantage: they have more to offer to a member or a customer and therefore will attract more business. A larger exchange is also in a better position than a small exchange when the time comes for major technology investments.

Exchange consolidation also helps reduce internal costs for members. The larger FCM firms who have to be present on many exchanges, suffer from duplicate costs (floor teams and back-office duplication). They have been pushing hard for common clearing and are generally in favour of consolidation of exchanges.

There is also resistance to consolidation. Smaller FCMs and locals clearly have interests contrary to consolidation. In a one-member-one-vote governance structure, their opposition can be clearly sufficient to slow down the process.

Nevertheless, exchange mergers and acquisitions are beginning to occur everywhere. In the US, New York Cotton Exchange and Coffee, Sugar and Cocoa Exchange are in merger negotiations. The common clearing initiatives of CBoT and CME are a form of 'virtual merger'. In Latin America, BM&F recently acquired its competitor, the Rio de Janeiro derivatives exchange, BBF. Smaller exchanges everywhere will find it difficult to avoid consolidation.

European monetary union (Emu) is precipitating a wave of consolidation and restructuring among European exchanges. As European yield curves converge to the Euro curve, there will most likely be a single family of interest rate derivatives in Europe. The recently announced joint venture between DTB and Soffex (known as Eurex) intends to compete with Liffe for supremacy in Euro interest rates. At the same time, European stock exchanges in most countries have also been quietly taking over the derivatives exchanges. As they see fixed income business consolidating due to Emu, they wish to secure the control of the equity derivatives business. There have also been other smaller deals such as Liffe's acquisi-

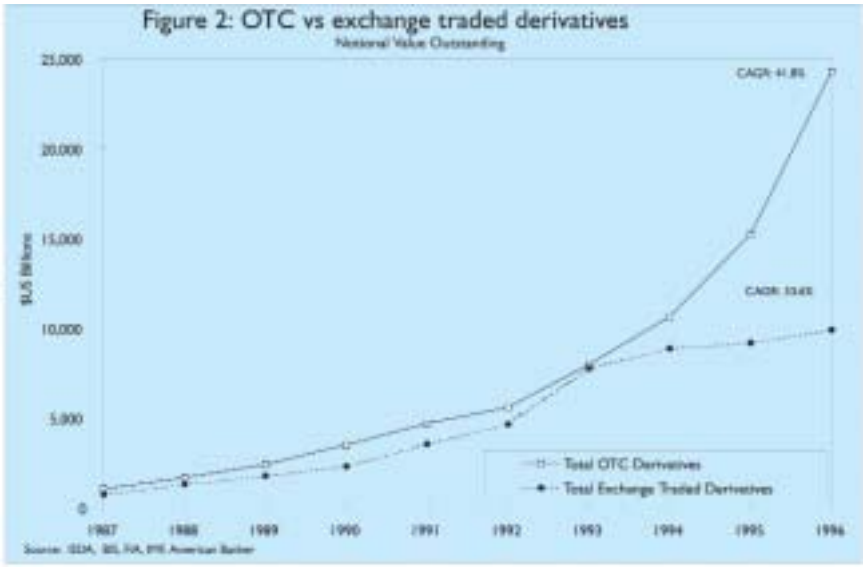


Table 1: A challenge to tradition

1996 (millions)	CBoT	CME	Liffe	BM&F	CBOE	Nymex-Comex*	Matif**	OM
Volume	222	177	163	135	85	79	68	23
Revenues	151	164	178	57	109	97	111	91
Expenses	102	154	140	54	92	76	73	61
Net income	19.6	15.1	32.8	57.7	10.6	20.7	13.6	42.8
Revenue($)/contract	0.68	0.93	1.09	0.42	1.28	1.23	1.31	3.95
Expense($)/contract	0.46	0.87	0.86	0.40	1.08	0.96	1.07	2.63

*1995 numbers
**Revenues/contract are calculated after rebates

Exchange consolidation also helps reduce internal costs for members. The larger FCM firms who have to be present on many exchanges, suffer from duplicate costs

tion of LCE, which are not Emu-related.

5) In addition to consolidating, exchanges will have to transform themselves in radical ways. Electronic trading will grow fast (though it will most likely co-exist with open outcry). While traditional open-outcry exchanges still account for over 80% of global volume in futures and options, most of the derivatives exchanges established since the late 1980s are electronic. Following a few early false starts, electronic trading has now firmly established itself, not only as an off-hours solution, but as an alternative to pit trading.

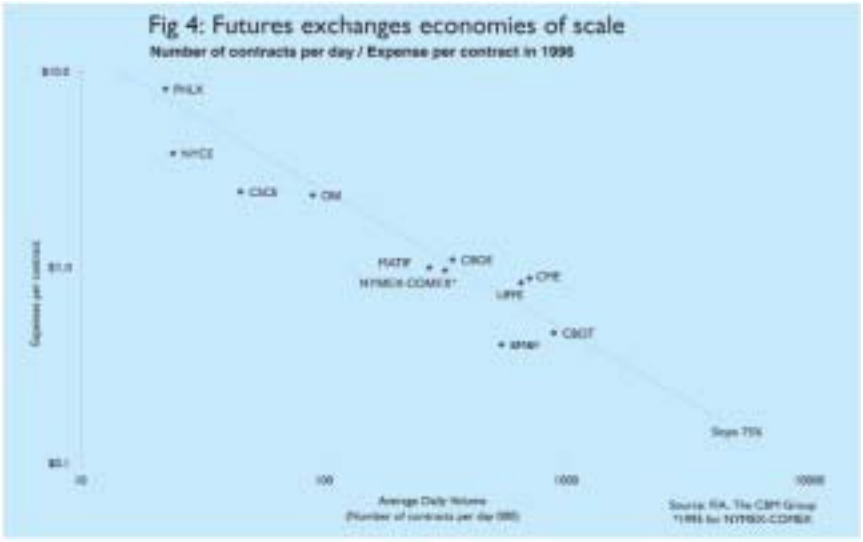
Electronic trading can be much cheaper than open outcry. Estimates suggest that in markets where both open-outcry and electronic trading are available, such as German Bunds, electronic execution is several times cheaper. Indeed, on an electronic market, floors and floor personnel become unnecessary, and back-office work can be readily automated.

However, liquidity and quality of execution are often more important than cost, especially in more difficult or turbulent markets. In turbulent markets, open outcry can be very valuable: locals and floor traders, who have front-row access to the trading floor and its emotion, are more willing and more likely to take risk and provide liquidity than a trader who may be intimidated into inaction by a cold computer screen.

For this reason, both electronic trading and open outcry should eventually be valuable complements of each other. Several exchanges have tellingly introduced electronic trading terminals on the floor.

The co-existence of open outcry and electronic trading might evolve as suggested in *Figure 5* (p31). Electronic trading will penetrate first those market segments where it can be both effective and cost-efficient, and where open outcry is at an economic disadvantage: small orders and low-liquidity products. For large orders, electronic trading may also prove preferable whenever customers are concerned that they can not trade in size for fear of being picked off by the locals: electronic trading may serve as an anonymous screen for large orders or a vehicle for two-way quotes for large blocks and a large-block execution method (such as that used at Finex).

6) There will be increasing convergence between exchanges and OTC trading: 'hybrid markets'. The OTC market has already adopted many of the traditional risk management techniques



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traditionally used in exchange clearing houses, namely collateral/margin deposits, regular margin calls, bilateral and multilateral netting. Naturally, exchange clearing houses are beginning to offer a variety of clearing services to the OTC market: clearing of swaps at Brazil's BM&F, the swap clearing initiative of London Clearing House, various initiatives currently being prepared in France, and so on [as extensively covered in *FOW* over the past 18 months – ed].

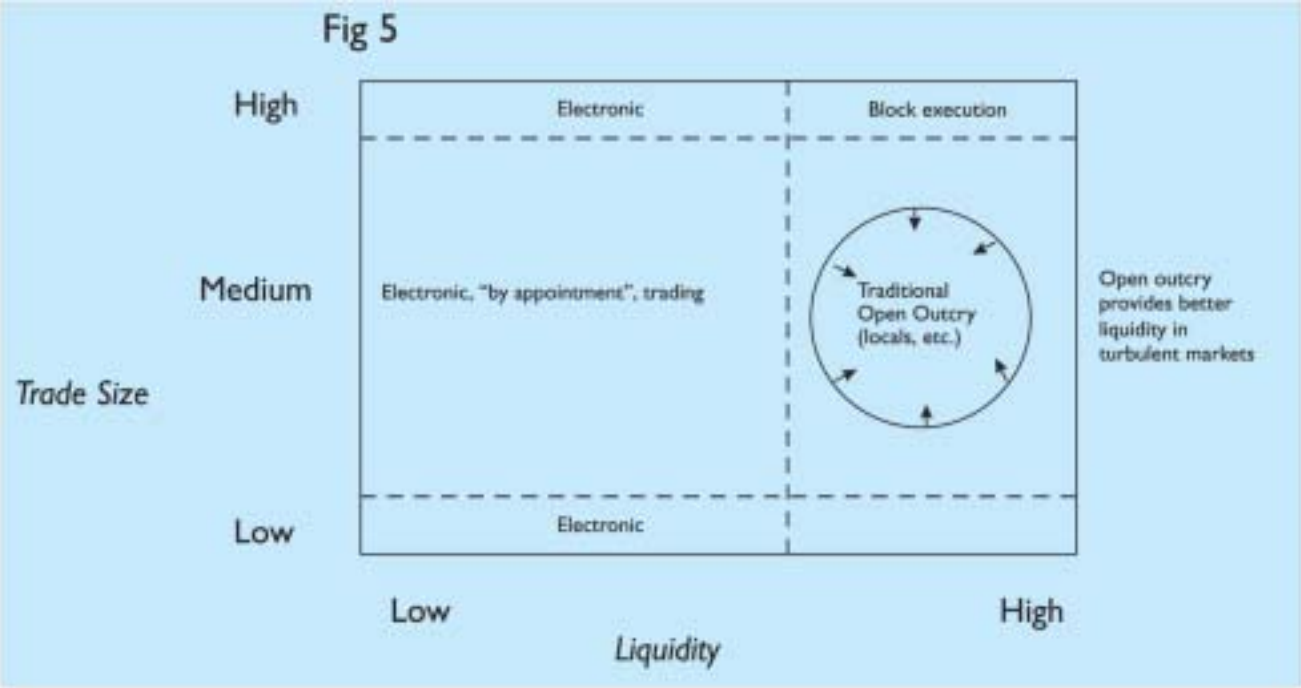
There have also been several recent initiatives, such as Chicago Board Brokerage (CBB) and the recently announced joint venture between Cantor Fitzgerald and New York Cotton Exchange [*FOW* November], which attempt to combine the strengths of interdealer brokerage with those of exchanges.

An interdealer broker creates liquidity, much like an exchange, but without transparency. In fact, much of the value of the interdealer broker arises precisely from its ability to maintain secrecy about trades. A 'hybrid model' of interdealer broker-cum-exchange can, therefore, provide a highly flexible market model, accommodating a broad variety of investors, large and small; professional or individual; those who seek transparency, as well as those who seek anonymity. To the interdealer broker, the association with a clearing house is a powerful way to eliminate credit concerns on the part of its customer.

7) 'Hybrid markets' will also support integration of cash, derivatives and financing (repo) markets. One particularly interesting aspect of hybrid markets is that they naturally support and even encourage the integration of cash, derivatives and financing markets.

Interdealer brokers are typically active in the cash market, OTC derivatives and financing markets, ie repo for fixed income instruments. When married to a derivatives exchange, the possibility of integrating cash, OTC derivatives and financing with futures and options becomes compelling.

This integration will most likely occur via technology. Customers will have on their desk a powerful workstation. On the same screen, they will have access to research, news, real-time prices, analytics and execution. They will be able to initiate, with a click of the mouse, execution



for cash, derivatives, repo or its equivalent for equities, stock loan.

Seamless integration between electronic interdealer brokerage and derivatives exchanges, on a common technological platform, via interconnected networks is already technologically feasible. It promises tremendous benefits to the ultimate customer, the investor: immediacy, 'one-stop shopping', better control and reduced execution costs. It will definitely happen.

8) The evolution of futures markets will force radical changes in exchange structure and governance. The traditional model of US futures exchanges, ie an association of members, is likely to be made obsolete by the various changes outlined above.

In the traditional model, the purpose of the exchange is to provide services for its members. The exchange is designed as a (quasi) non-profit organisation, the goals of which are a) to provide protectionism (where only members can trade or benefit from preferential member pricing for services) and b) to minimise costs (trading fees, clearing fees, etc) to members. The owners are the users of the facility. If the exchange makes a profit, members typically want it distributed, via rebates, reduction in fees or incremental services. The model is largely that of a co-operative or a mutual institution. As such, exchanges generate minimal profits, barely enough to finance necessary investments in their own growth. When you add to this design the typical one-seat-one-vote governance system, you get a strong propensity for the status quo.

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Unfortunately for exchanges, the traditional model does not help them accompany the rapidly occurring changes in the world: electronic trading, hybrid markets, integration of cash and derivatives. These innovations create new opportunities that can be better pursued by profit-seeking enterprises. Not surprisingly, the most innovative exchanges have either adopted a different structure (where ownership is not necessarily equivalent to being a user) or created semi-independent profit-seeking units to pursue the new opportunities. These semi-independent units can be spun off to the members as a reward for having invested in new ventures.

For an electronic, hybrid, cash-plus-derivatives exchange, the very concept of 'member' may change. Examples of fully electronic trading systems or exchanges (such as Instinet, OM and Tradepoint) suggest that, in order to stimulate liquidity, traditional protectionism for members may best be dropped in favour of openness. In such exchanges of the future, the broker's role will need to be redefined: it will always have an advisory role, while its role as credit risk-bearer for the client may eventually be shifted to a clearing organisation.

To sum up, futures exchanges are entering an era of unprecedented change. Consolidation, growth of electronic trading, the emergence of hybrid and integrated markets are only beginning. Very likely, they will transform the industry beyond recognition. In order to continue to be successful in the years ahead, futures exchanges must begin to transform themselves now. Developing effective strategies to do so is a top priority.❖