

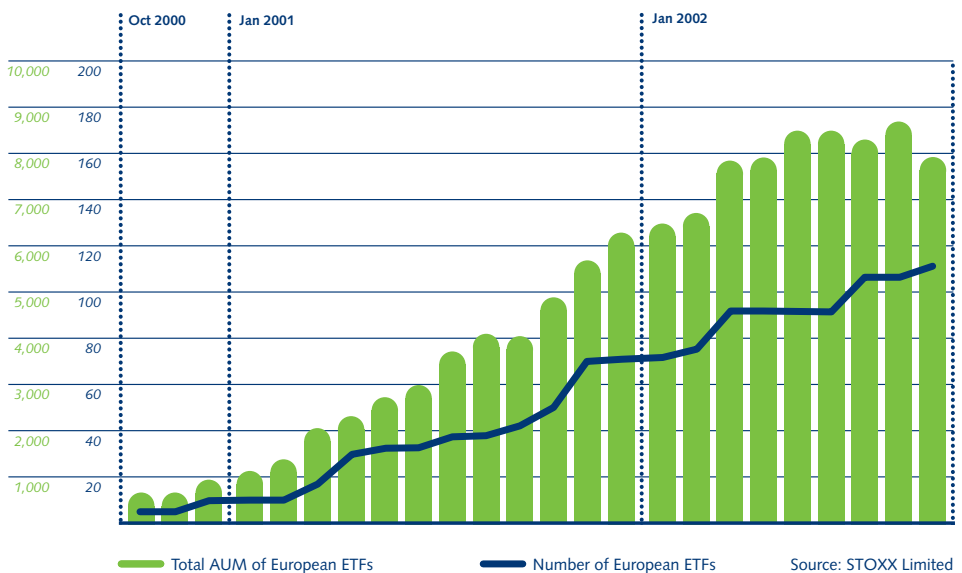
# Futures and Options on Exchange Traded Funds

In 1993, the very first exchange traded funds (ETFs) were introduced in the US. The number of ETFs as well as their assets under management (AUMs) have grown substantially around the globe, covering a variety of styles, sectors, countries and regions. Total assets invested in ETFs reached EUR 120 billion\* worldwide and are estimated to exceed EUR 500 billion by 2007. In April 2000 Deutsche Börse brought the success story of ETFs to Europe with the launch of their XTF segment. In November 2002 Eurex adds a new chapter to this success by offering futures and options on ETFs. By introducing these products, Eurex meets market demand for high-precision risk management tools in today's volatile markets.

## ETF Growth in Europe

The European ETF market has shown growth rates that continuously exceed the US market. As of September 2002, a total of 111 ETFs are listed in Europe with EUR 7.9 billion assets under management.

Assets Under Management (in Millions of EUR) & Number of Exchange Traded Funds



In Europe, growth in ETFs based on major equity indexes i.e. DAX®, SMI® and the Dow Jones EURO STOXX 50 has been strong and Eurex offers futures and options on the most liquid ETFs:

Eurozone Focus	National Focus
Dow Jones EURO STOXX 50 EX	DAX EX
iShares Dow Jones EURO STOXX 50	XMTCH on SMI**
Fresco Dow Jones EURO STOXX 50	

\* Data as of September 2002  
 \*\* Denominated in CHF

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### **ETF Derivatives versus Equity Index Derivatives**

Futures and options on ETFs are not a substitute for equity index derivatives – in fact, they are designed in a complementary manner:

- They are the perfect tools to implement smaller risk exposure strategies as their contract value is significantly lower compared to existing equity index derivatives (ETF prices usually represent 100 fund shares and 1/100 of the index value).
- Futures and options on ETFs are settled by physical delivery – like individual equity options. This is attractive for market participants who wish to invest in particular funds or who want to liquidate their existing positions at the expiration of the contract.

## **Trading Applications**

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Futures and options based on ETFs offer a number of trading and risk management strategies for professional market participants.

### **Cash Equitization**

By establishing a position in a future or option on an ETF, investors can gain the same equity exposure without having to buy all the individual shares in the underlying index. ETF derivatives are the ideal tool for asset allocation, allowing investors to gain or manage their exposure to a benchmark or sector, investing and liquidating as required to fulfill redemption requests – thereby minimizing cash drag or trading risk.

### **Hedging**

Since futures and options on an ETF can be sold short, they provide risk management strategies which can be implemented easily. In a declining equity market, profits from a short position can off-set some of the losses in a portfolio. A money manager can use these strategies to protect and preserve a portfolio from overall market losses or capitalize on negative expectations of a market segment or specific sector.

### **Relative Value (Long & Short Strategies)**

Institutions can take advantage of the features of futures and options to combine long and short strategies aimed at increasing returns. For example, an institution can establish a long position in a country or sector ETF future expected to outperform, while shorting an equity index future in a country or sector expected to underperform.

### **Arbitrage**

Futures on an ETF can be used in the form of cash-and-carry arbitrage to exploit price imbalances between the cash and futures markets. Investors can also tap relative imbalances within individual Eurex derivatives products, for example, by means of time spreads.

For more detailed information on the Eurex ETF futures and options please refer to the Eurex website at [www.eurexchange.com](http://www.eurexchange.com). For more information on the XTF segment of Deutsche Börse AG please refer to the DBAG website at [www.deutsche-boerse.com](http://www.deutsche-boerse.com).