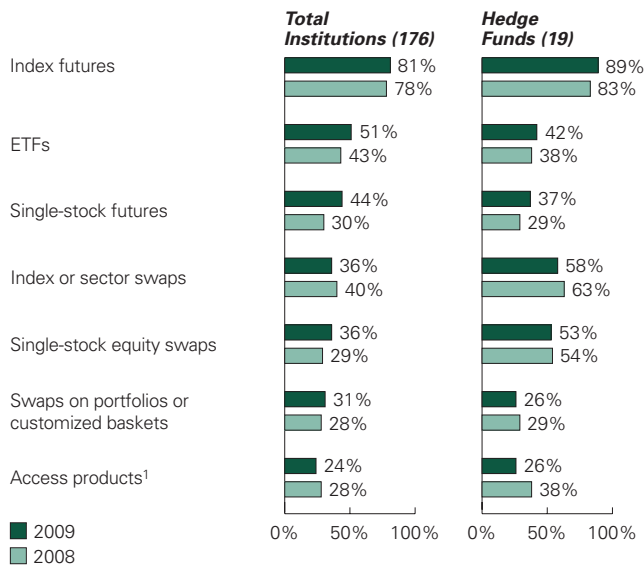


Equity Derivatives: Growth in Europe

As institutions in the United Kingdom and Continental Europe picked up the pace of their hedging activity last year, European markets for “flow” equity derivatives products expanded.

Overall, the percentage of European institutions using options products increased to 78% in 2009 from 66% in 2008. In particular, the proportion of institutions using single-stock listed/“listed look-alike” options increased to 69% from 59% over the period, and the use of index listed/“listed look-alike” options rose to 68% from 60%. Among delta one products, usage of index futures increased to 81% of European institutions in 2009 from 78% in 2008, while the share of institutions using single-stock futures increased to 44% from 30% and ETF usage rose to 51% from 43%. Usage of listed/“listed look-alike” options is highest in the United Kingdom, where 87% of institutions employ these products.

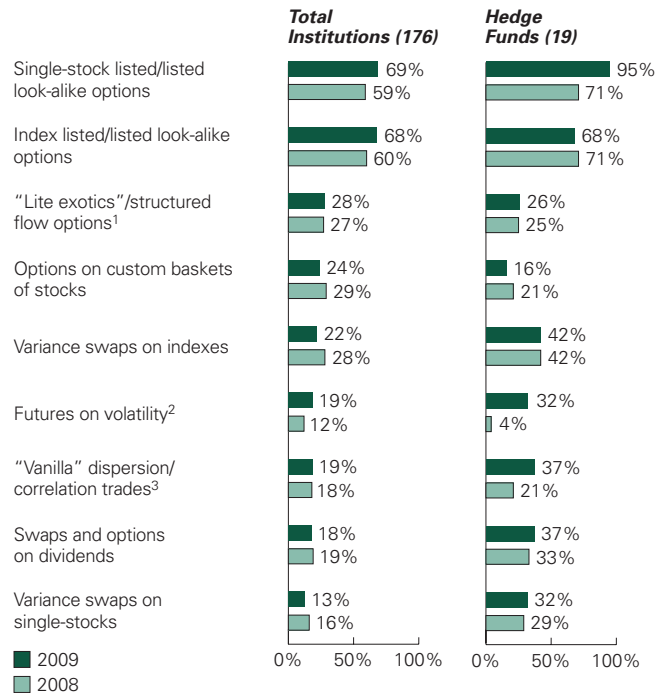
Delta One Product Usage



Note: Numbers in parentheses represent the number of respondents in 2009.
¹P-notes, stock-tracking warrants/certificates, or synthetic futures.
 Source: 2009 European Equity Derivatives Study.

This pick-up in institutional demand resulted in an increase in the overall volume of options product traded last year, as measured by the amount of commissions paid by institutions for these trades. The equity options commission pool increased by an estimated 16% in Europe

Option and Volatility Product Usage



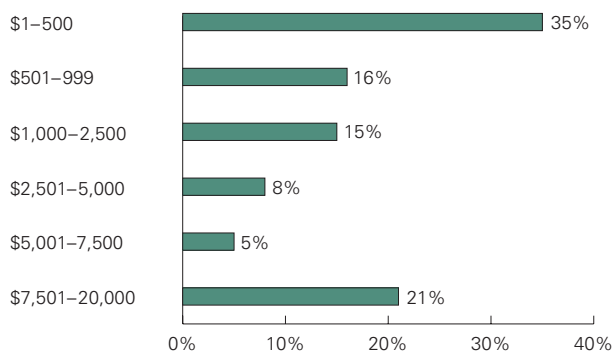
Note: Numbers in parentheses represent the number of respondents in 2009.
¹“best of/worst of”, “knock-out” options; ²VIX futures; ³Trading implied dispersion or correlation between basket of stocks and an index.
 Source: 2009 European Equity Derivatives Study.

from 2008 to 2009. This growth stood in stark contrast to conditions in the United States, where commission volumes decreased 20–25% from mid-year 2008 to mid-year 2009. In both regions, institutions experienced significant decreases in assets under management during the financial crisis, which served to depress the size of equity derivatives trades overall. Across Europe, institutions on average spent \$5 million in options commissions over the past 12 months. However, more than 75% of institutions actually spent less than that amount. As the following chart illustrates, more than half of European institutions spent less than \$1 million on commissions.

Latest Greenwich Findings on the Web

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Range of Commissions Spend on Options Trades

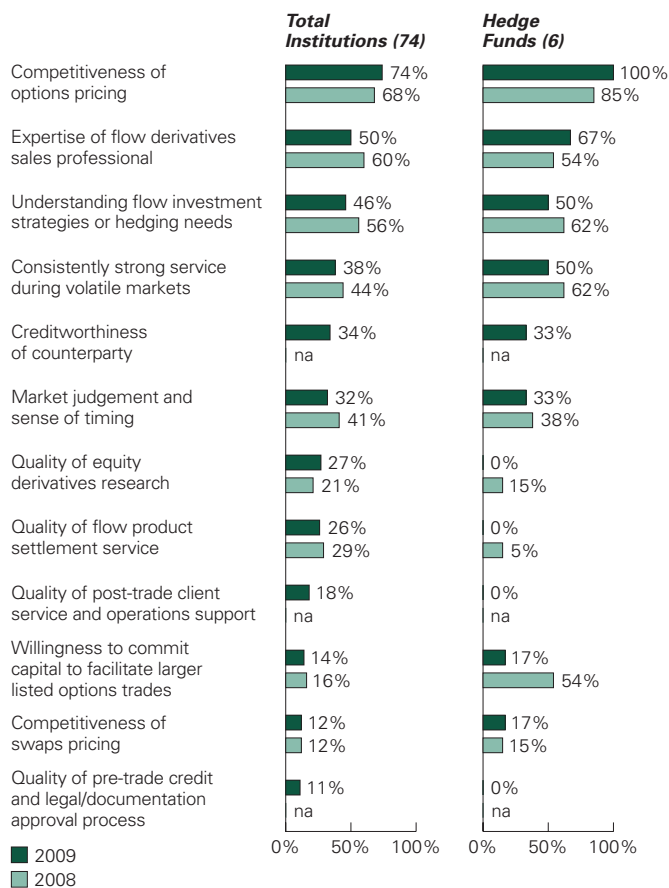


Note: Based on 93 respondents. Range in thousands. Reported Options Commissions Spend averages \$5 million.

Source: 2009 European Equity Derivatives Study.

In the United States, contraction and deleveraging in the hedge fund industry exacerbated the decline in commission volumes. “Hedge funds play a much smaller role in the European equity derivatives market than they do in the United States, so deleveraging had less of an impact, and

Most Important Selection Criteria for Flow Equity Derivatives



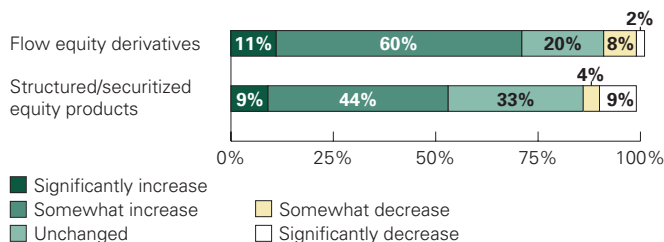
Note: Asked of a random sample. Flow equity derivatives include listed/listed look-alike, futures, equity swaps, variance swaps, dividend or sector swaps, ETF and access products. Numbers in parentheses show number of firms in 2009. Source: 2009 European Equity Derivatives Study.

the increased use of these products by long-only institutions pushed commissions and overall market activity higher,” says Greenwich Associates consultant John Colon.

“Competitiveness of options pricing” remains far and away the most important factor considered by European institutions when selecting brokers for trades of equity derivative flow products, followed by the expertise of a sell-side firm’s flow derivatives sales professionals and the firm’s understanding of the institutions investing strategies and hedging needs.

Looking ahead, approximately 70% of European institutions expect to increase their use of flow equity derivatives products in 2010, including 11% that expect a significant increase. “These results suggest that the equity derivatives business in Europe should grow at (at least) a slightly accelerated pace in the next 12 months,” says Greenwich Associates consultant Jay Bennett. “The flow equity derivatives business remains highly concentrated: the typical European account reports trading flow equity derivatives with only six to seven different brokers, which compares with about two dozen for their European cash equity trading activity.”

Likely Change in Usage of Equity Derivatives in 2010



Note: May not total 100% due to rounding. Source: 2009 European Equity Derivatives Study.

Structured Products: Cautious Optimism

Greenwich Associates has restructured its interview base for equity/secured product trades to focus the study sample on “buy and hold” investors, as opposed to “on-sellers.” Within this year’s revised study sample of 113 European institutional investors/banks (down from 150 in last year’s more broadly focused study), the research results reveal the following patterns in product usage:

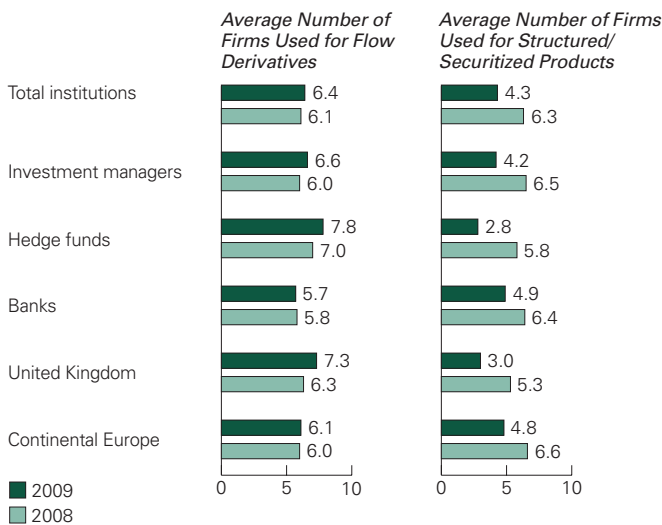
- A stable 88% did trades of single-stock/basket-based products in both 2008 and 2009;
- The share of institutions doing trades of index-based products increased slightly to 82% in 2009;
- The share of institutions doing trades of structured volatility/correlation products trades decreased slightly to 44%

Note: The Greenwich Associates’ research on structured equity derivatives products featured in this report focuses on institutions

categorized as buy-and-hold investors. For more detailed information on structured equity derivatives products purchased by banks and other institutions to resale to retail customers, please see Greenwich Associates' complete report on Retail Structured Products.

Meanwhile reported notional trading volumes fell by half. At the same time, the average number of brokers used by institutions for trades of these products declined sharply last year. In 2008, institutions used an average 6.3 brokers; in 2009 that average dropped to 4.3. These declines were consistent across the entire region. In the United Kingdom, the average number of brokers used for structured equity/securitized products fell to 3.0 from 5.3 and the average in Continental Europe dropped to 4.8 from 6.0. These declines were in part due to sell-side consolidation, in particular the demise of Lehman Brothers. However, the lost relationships were also due to pull-backs by both the buy side and the sell side. "Concerns about counterparty risk and creditworthiness prompted institutions to reevaluate their trading relationships, while brokers operating under their own constraints were rationalizing their resources and capital among their biggest and most profitable clients," says Greenwich Associates consultant Jay Bennett.

Concentration of Equity Derivatives Business



Note: Based on responses from 176 "flow" and 105 "structured" respondents. Source: 2009 European Equity Derivatives Study.

Currently, 42% of European institutions cite the creditworthiness of potential counterparties as an important factor considered when selecting a broker for a structured equity/securitized products trade, up from 39% in 2008. "Starting last year, creditworthiness became a necessary condition required by most institutions to even consider working with an individual broker," says John Colon. "All other considerations became secondary."

Also gaining importance as a selection criterion during the volatile months from 2008 to 2009 was brokers' levels

of understanding of individual institutions' investing strategies and hedging needs. "While pricing remains the most important factor considered by institutions picking a broker for a trade of structured equity/securitized products, pure pricing lost influence last year to these other considerations," says John Colon.

Most Important Selection Criteria for Structured Equity or Securitized Products



Note: Asked of a random sample. Structured equity products include transactions in any single-stock, hedge fund-linked, mutual fund-linked, and index based structured equity products, structured volatility /correlation products. Source: 2009 European Equity Derivatives Study.

Looking ahead to 2010, 53% of European institutions expect to increase their use of structured equity/securitized products, and one third expects their use to remain stable from 2009 levels. "Although counterparty risk and creditworthiness remain real concerns, European institutions are cautiously optimistic about the prospects of this business for the coming year," says Jay Bennett.

Specialists Gain Clout

As hedging takes on added importance for institutions in Europe and around the world, derivatives specialists are assuming control of a growing share of the derivatives trading process. The share of derivatives investment/trading decisions controlled exclusively by derivatives execution specialists increased to 22% in 2009 from 14% in 2008.

Despite these gains, portfolio managers and equity traders still have exclusive control over nearly half of investment and trading decision relating to equity derivatives, and they jointly control another 25% in conjunction with derivative specialists. “The fact is that equity derivatives have become standard tools for gaining exposures and taking positions in the course of the normal investment process,” says John Colon. “As such, portfolio managers and traders will often be the ones employing them, even as specialists assume a more prominent role through the hedging process.”

DMA Attracts New Trading Volume

“The research results reveal a significant increase in the share of futures trading volume executed via direct-market-access (DMA), which rose to 34% in 2009 from 22% in 2008,” says Jay Bennett. “The large turnover and relatively thin margins for brokers make futures trades ideal for DMA execution.” The share of European options trading volume executed via DMA or smart-order routing electronic trades also increased, albeit more modestly, to 18% in 2009 from 11% in 2008. Driven by increases in DMA use in Germany, Italy and Spain, electronic trading of options rose to 20% of volume in Continental Europe, whereas DMA volume in the United Kingdom increased only to 10% as more options volume requires capital commitment. Banks, which execute 60% of their futures volume and a steady 30% of their options trading volume via DMA platforms, remain Europe’s biggest users of electronic trading.

Consultants Jay Bennett and John Colon advise on the European equity markets, including equity derivatives.

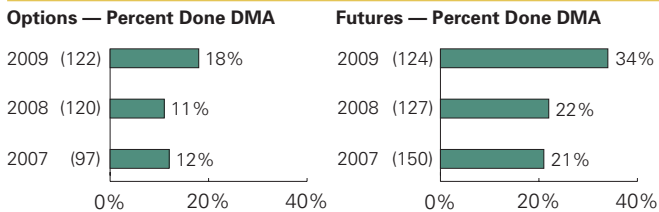
Methodology

Between May and June, 2009, Greenwich Associates conducted interviews with 190 institutions in Austria, Belgium, Denmark, France, Germany, Ireland, Italy, Luxembourg, the Netherlands, Norway, Spain, Sweden, Switzerland, and the United Kingdom that invest in equity derivatives. Interview topics included market trends, service provider assessments, and compensation. Greenwich Associates asked each trader, portfolio manager, or derivatives specialist at these institutions to name their top five firms for equity derivatives.

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Proportion of Options and Futures Trading Volume Done via DMA Electronic Trades*

Self-Directed DMA/Smart-Order Routing Electronic Trades



Note: Numbers in parentheses represent the number of respondents. Reported Futures Commissions Spend averages \$3 million. *Via order management systems or email. Source: 2009 European Equity Derivatives Study.

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Importance of Creditworthiness

October 2009

The financial strength of financial service firms and client perceptions of broker counterparty risk are having a strong impact on the competition among sell-side firms for equity derivatives trading business from European institutions.

More than 90% of European institutions say they are actively monitoring the creditworthiness of sell-side firms, and more than one third say the creditworthiness of potential counterparties is one of the most important criteria they consider when selecting a broker for a trade of flow equity derivative products. “Creditworthiness was not even on the list of most important selection criteria before the start of the global financial crisis,” says John Colon.

Fifty-three percent of European institutions use credit rating agencies to monitor and assess the counterparty

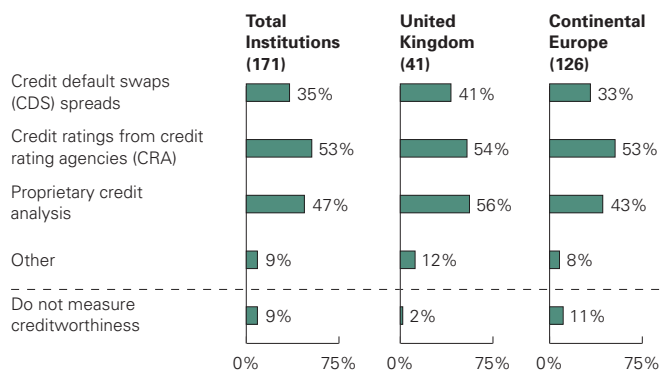
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Mechanisms Used to Measure Creditworthiness of Counterparties



Note: Numbers in parentheses represent number of respondents.
Source: 2009 European Equity Derivatives Study.

risk, and 47% do their own proprietary analysis of counterparty creditworthiness. Hedge funds tend to rely more on their own internal analysis of counterparties and less on credit ratings, which are more commonly employed by insurers. Hedge funds are also more likely than other types of institutions to use credit default swap (CDS) spreads to determine counterparty risk. Across Europe, 35% of institutions use CDS spreads for this purpose.

Fewer European institutions last year cited brokers’ willingness to commit capital to facilitate large trades as an important selection criterion. In fact, the share of institutions overall requiring dealers to commit capital to facilitate options trade declined from 2008 to 2009. This reduction originated in the United Kingdom, where the practice is much more common than it is on the Continent. Only a stable 27% of institutions in Continental Europe require capital commitments from their options brokers; in the United Kingdom, the share of institutions requiring sell-side capital commitments dropped to 58% in 2009 from 72% in 2008.

Greenwich Associates Leaders: European Equity Derivatives

The following tables list the 2009 Greenwich Leaders in Equity Derivatives in terms of market penetration and franchise quality.

Deutsche Bank and J.P. Morgan rank as the leading dealers of flow equity derivatives in Europe by market penetration, with 55-60% of institutions citing the firms as an important trading relationship in these products. Morgan Stanley ranks third, followed Goldman Sachs and Bank of America Merrill Lynch and Credit Suisse, the

last two of which tie for fourth place in the rankings. The 2009 Greenwich Quality Leaders in Equity Derivatives are BNP Paribas, Deutsche Bank, J.P. Morgan, and SG Equity Derivatives.

Firms cited as Greenwich Quality Leaders have distinguished themselves from their competitors through client quality ratings that exceed those of their competitors by a statistically significant margin.

Greenwich Share and Quality Leaders



Flow Equity Derivatives — Europe

Share Leaders	Important Relationships
Deutsche Bank	59%
J.P. Morgan	55%
Morgan Stanley	49%
Goldman Sachs	41%
Bank of America Merrill Lynch	39%
Credit Suisse	39%

Note: Based on 177 institutions.

Flow Equity Derivatives — Europe

Quality Leaders
BNP Paribas
Deutsche Bank
J.P. Morgan
SG Equity Derivatives

Note: In alphabetical order.

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