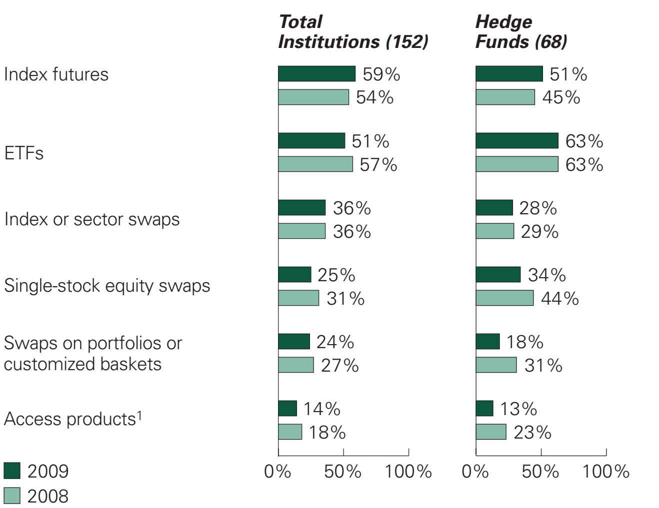
Equity Derivatives — North America
October 2009

Equity Derivatives: Cautious Optimism Among U.S. Institutions

U.S. institutions are increasing their use of flow equity derivatives, but declines in asset values and a sharp fall-off in hedge fund trading activity have driven down both notional amounts of equity derivatives trades and the amount of commission paid by institutions on trades of these products.

Delta One Product Usage

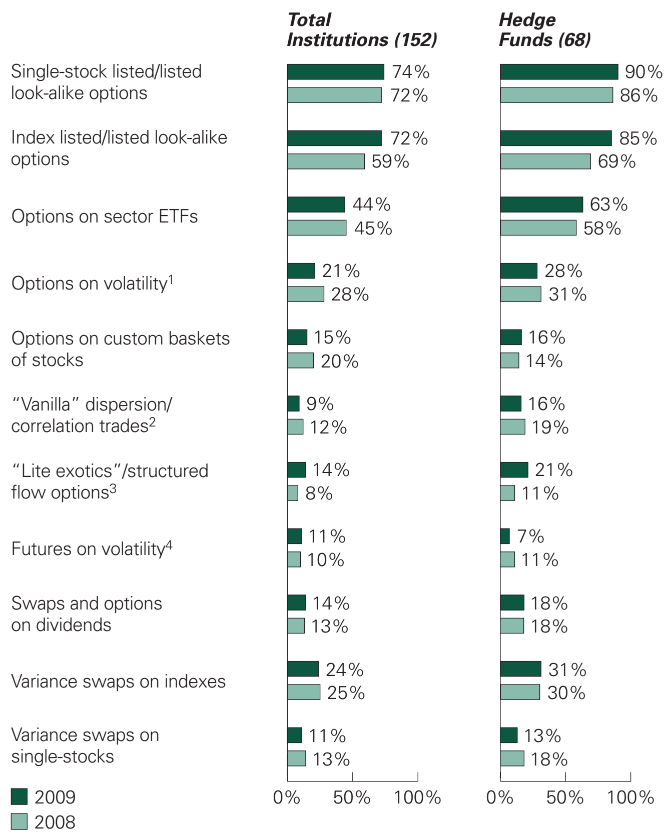


Note: Numbers in parentheses represent the number of respondents in 2009.
[1]P-notes, stock-tracking warrants/certificates, or synthetic futures.
Source: 2009 North American Equity Derivatives Study.

Usage of flow equity derivatives increased among U.S. institutions last year across a range of commonly employed delta-one and option and volatility products. The proportion of institutions using listed/"listed look-alike" options increased to 88% in 2009 from 79% in 2008. While a stable 74% of institutions traded single-stock options in 2008 and 2009, the use of index options increased to 72% of U.S. institutions from 59%.

Despite this increase in use, the amount of commissions paid by U.S. institutions to brokers on trades of options products declined 20–25% from mid-year 2008 to mid-year 2009. "This decline can be attributed to two factors, 1) the sharp drop in institutional assets under management last year, and 2) hedge fund deleveraging," says Greenwich Associates consultant Jay Bennett. "Although the share of hedge funds using these options products remains high and actually increased in cases year-over-year, the absolute number of hedge funds active in the market fell, and those remaining had much smaller positions to hedge as a result of the deleveraging process."

Option and Volatility Product Usage



Note: Numbers in parentheses represent the number of respondents in 2009.
[1]VIX options; [2]trading implied dispersion or correlation between basket of stocks and an index; [3]"best of/worst of", "knock-out" options; and [4]VIX futures.
Source: 2009 North American Equity Derivatives Study.

The average amount spent by U.S. institutions on option commission payments from 2008 to 2009 was $4.5 million. As the accompanying chart illustrates, however, 60% of institutions spent less than $2.5 million in commissions, and nearly a quarter spent less than $500,000.

The research results suggest that both commissions payments and notional trading volumes will increase in the coming year. Fifty-two percent of institutions say they

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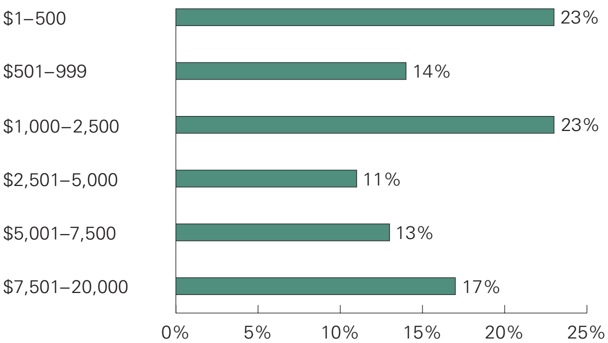
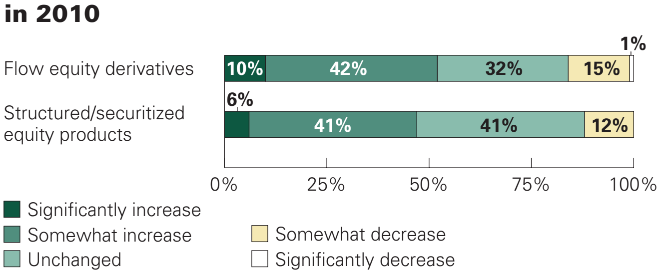
Range of Commissions Spend on Options Trades



Note: Based on 105 respondents. Range in thousands. Reported Options Commissions Spend averages $4.5 million.
Source: 2009 North American Equity Derivatives Study.

expect to increase their use of flow equity derivatives, including approximately 10% of institutions reporting that they plan to increase usage significantly. Investment managers and hedge funds appear more bullish in their intentions than mutual funds or pensions. "These results seem to suggest a cautious optimism among U.S. institutions," says Greenwich Associates consultant John Colon. "There is no doubt that institutions expect to be doing more hedging in the next 12 months. But if the market recovery proves sustainable, it appears that institutions expect to increase their use of equity derivatives in order to gain liquidity and desired exposures, in addition to downside protection."

Likely Change in Usage of Equity Derivatives in 2010



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

Specialists Gain Influence

As hedging rises to a top priority for U.S. institutions, derivatives specialists with particular hedging expertise 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 31% in 2009 from 18% in 2008. "Nevertheless, the extent to which equity derivatives have become fully integrated into institutions' normal investment process is illustrated by the fact that equity portfolio managers and traders are involved in 70% of equity derivatives investing and trading decisions," says Greenwich Associates consultant John Feng.

Spike in Electronic Trading

The share of options and futures trading volume executed via direct-market-access (DMA) or smart-order routing electronic trades increased sharply last year, particularly for futures. In futures, DMA trading continued its steady growth, capturing 43% of trading volume in 2009, up from 33% in 2008 and 22% in 2007. "Particularly in futures trading, which is a huge business with massive turnovers and low margins, brokers are encouraging institutions to utilize electric platforms," says Jay Bennett. In 2007 and 2008, U.S. institutions executed about 11% of their total options volume via DMA trades. In 2009, that share jumped to 16%.

Structured Contraction

Although an increase in the use of index-based products drove a broader increase in the proportion of U.S. institutions employing structured equity/securitized products last year, notional trading volume in these products declined by two-thirds from 2008 to 2009.

In step with the decline in volume, the number of brokers used for trades of these structured equity products decreased over the period, falling to an average 3.0 from 4.5 among investment managers and to 3.1 from 3.4 among hedge funds. "In part this contraction flows from the demise of Lehman Brothers, but people on both sides were picking their spots," says John Colon. "As institutions cut back on their use of these products, they eliminated relationships with dealers they saw as weakest in terms of creditworthiness or other factors. On the sell-side, as brokers' capacity for these types of trades diminished, they were forced to rationalize capital and resources among their best and most profitable clients."

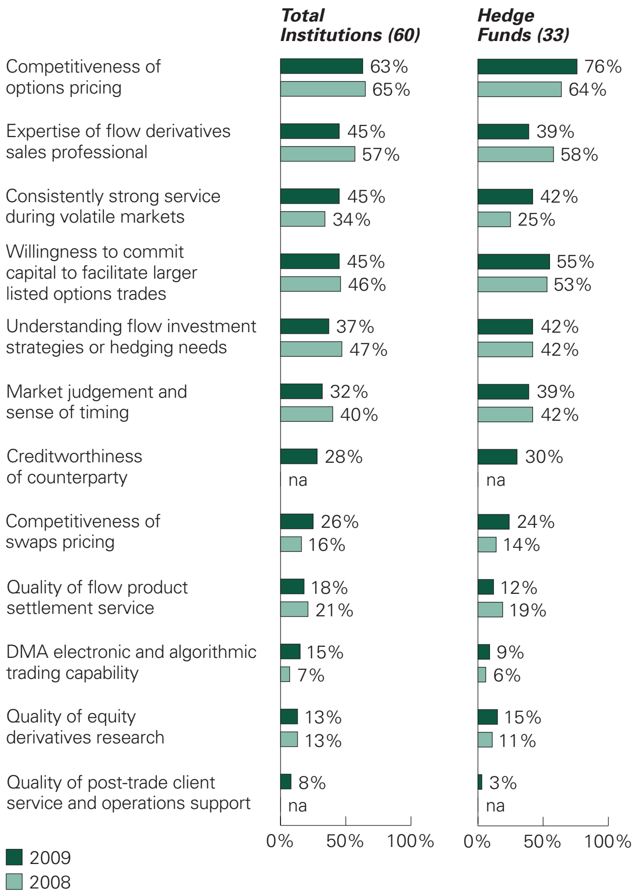
The Greenwich Associates' research on structured equity derivatives products featured in this report focuses on institutions categorized as buy-and-hold investors. For more detailed information on structured equity derivatives products purchased by banks and other institutions to resale to retail customers,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

Greenwich Leaders: Equity Derivatives

After the dramatic events of the past 18 months, concerns about counterparty risk and creditworthiness are playing a more prominent role in institutions' decisions about equity derivatives trades and strategies.

Almost 30% of U.S. institutions in 2009 cite the creditworthiness of potential counterparties as one of the most important criteria used in selecting brokers on trades of flow derivatives products. "This factor was not even on the list before the global crisis," says Jay Bennett. Although competitiveness of options pricing is by far the most important criteria used by institutions in picking a broker for a flow product trade (with 63% of institutions citing it as an important consideration), institutions are also seeking

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.
Source: 2009 North American Equity Derivatives Study.

out and rewarding brokers who stepped up during the crisis. Forty-five percent of U.S. institutions cite "consistently strong service during volatile markets" as an important broker selection factor in flow products, up from just 34% last year.

The creditworthiness of potential counterparties now ranks as the third most important factor considered by U.S. institutions when selecting a broker for a structured equity/securitized equity derivatives trade, behind only competitiveness of pricing and the broker's understanding of the institution's investment strategy and hedging needs.

Among investment managers, almost one-third are using credit default swap spreads as a means of measuring the creditworthiness of counterparties, 42% are using credit ratings from agencies, and almost half are doing their own proprietary credit analysis. "Hedge funds are much more likely to rely on CDS spreads and their own credit analysis," says John Feng. "But is was surprising to see that about one in five hedge funds are not taking any actions to monitor counterparty creditworthiness."

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

Consultants Jay Bennett, John Colon and John Feng advise on the institutional equity markets globally, including the use of equity derivatives.

Greenwich Share and Quality Leaders

Flow Equity Derivatives — North America

Share Leaders	Important Relationships
Goldman Sachs	64%
Credit Suisse	60%
J.P. Morgan	59%
Bank of America Merrill Lynch	55%
Morgan Stanley	55%

Note: Based on 152 institutions.

Flow Equity Derivatives — North America

Quality Leaders
Goldman Sachs

Methodology

Between April and June, 2009, Greenwich Associates conducted interviews with 222 institutions and investors in the United States and Canada that invest in equity derivatives. Interview topics included market trends, service provider assessments, and compensation.

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