

Top Brokers Deliver on Pricing and More to Win Lucrative Trading Business

2015 Greenwich Leaders: Flow Equity Derivatives & Convertibles

Q4 2015

Institutional investors employ a wide variety of derivatives products to hedge positions and gain exposures. These products offer a host of benefits ranging from increased efficiency relative to cash exposures, easier access to certain markets and tax advantages.

Brokers battling for potentially lucrative trading business in options & volatility products, equity swaps, equity futures, and convertibles compete on the basis of pricing, willingness to commit capital to trades, their own creditworthiness, client service, and a range of other factors.

Greenwich Share and Quality Leaders deliver strong offerings across most, if not all, of these areas. This paper summarizes the factors that drive broker selection and trading flows in North America and Europe, and presents the list of 2015 Greenwich Leaders in four product categories in each region.

Convertibles

The ability to deliver new issues has always been a key differentiator among brokers competing for institutional trading business in convertibles. But over the past 12 months, investors have added a focus on a new priority: liquidity. More than half of large U.S. institutional convertibles investors say they have experienced declines in market liquidity in the past year. "Brokers that can help institutions find natural liquidity and are willing to commit capital to help get a trade done are in strong demand," says Greenwich Associates consultant John Feng.

Europe

In European convertibles, Deutsche Bank has separated itself from its rivals in both trading share and quality. The bank's 13.6% share in convertibles secondary trading tops its nearest competitors BNP Paribas and Barclays by a wide margin—a lead Deutsche Bank has consistently maintained for several years. Rounding out the market's top tier in Europe are J.P. Morgan, Bank of America Merrill Lynch, Goldman Sachs, and Morgan Stanley, all of which are statistically tied with market shares of 7.2%–7.8%. These firms are the 2015 Greenwich Share Leaders in European Convertibles. Deutsche Bank also claims the title of 2015 Greenwich Quality Leader in Europe.

United States

Most of the leading brokers of U.S. convertibles have strong primary issuance platforms that they have leveraged to maintain positions atop the market in recent years. J.P. Morgan leads with a trading share of 14.0%, followed by Goldman Sachs at 12.0%, Bank of America Merrill Lynch and Jefferies, which are tied with shares of 10.4%–10.6%, and Citi and Barclays, which are tied with shares between 7.9% and 8.5%. These firms are the 2015 Greenwich Share Leaders in U.S. Convertibles. The 2015 Greenwich Quality Leaders in this segment are J.P. Morgan and Jefferies. "Jefferies is proof that a firm can succeed without a strong new issues platform if it excels in other key areas such as facilitating trades and provid-

2015 Greenwich Share Leaders — Convertibles



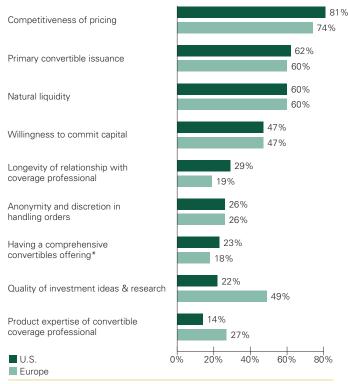
United States

United States	ited States		Europe		
Broker	Trading Share	Statistical Rank	Broker	Trading Share	Statistical Rank
J.P. Morgan	14.0%	1	Deutsche Bank	13.6%	1
Goldman Sachs	12.0%	2	BNP Paribas	9.7%	2T
Bank of America Merrill Lynch	10.6%	3Т	Barclays	9.1%	2T
Jefferies	10.4%	ЗT	J.P. Morgan	7.8%	4T
Citi	8.5%	5T	Bank of America Merrill Lynch	7.5%	4T
Barclays	7.9%	5T	Goldman Sachs	7.3%	4T
			Morgan Stanley	7.2%	4T

Note: Each broker is assigned relationship points for each institution based on long market value and trading volume of institution across four tiers and each broker's importance in trading to the institution (e.g., 1st, 2nd, 3rd, etc. most important broker). Convertible trading share shows each broker's share of the total points. Based on interviews with 104 institutions in the United States and 93 in Europe.

Source: Greenwich Associates 2015 Convertibles Study

Most Important Selection Criteria for Convertibles Trading — U.S. vs Europe



Note: *Across convertibles sales, trading, research and deal flow. Based on 78 respondents in U.S. and 79 in Europe. Asked of a random sample. Source: Greenwich Associates 2015 Convertibles Study

ing trading ideas—but it seems to be the exception to the rule," says John Feng.

Equity Options & Volatility Products

In both Europe and North America, institutions seeking a broker to trade equity options look first at price for index options and single-stock options. After the common focus on price, investors' priorities diverge. In North America, institutions place a strong emphasis on brokers' ability to demonstrate an understanding of their investment strategies and hedging needs. Brokers in North America also are judged on another essential factor: their willingness to commit capital for big equity options trades. "Capital commitment is just not a big driver of the business in Europe," says Greenwich Associates consultant Jay Bennett. "The main reason: Hedge funds make up a large part of the investor base in the U.S., and it is hedge funds that are the most demanding when it comes to broker capital commitment."

Europe

After pricing, European investors are much more concerned about brokers' commitment to providing consistent sales and trading service throughout volatile markets. The Greenwich Share Leaders in Europe (which are determined by the number of "important" relationships they maintain with investors, as opposed to share of trading volume) have all demonstrated this commitment. In addition, they maintain full suites of options & volatility product capabilities across most or all of the major country markets in Europe. J.P. Morgan and Deutsche Bank are tied at the top of this list with relationship penetration scores of 63%-64%, followed by Société Générale and Morgan Stanley at 57%-59%, and Goldman Sachs and Bank of America Merrill Lynch at 48%-51%. The 2015 Greenwich Quality Leaders in Equity Options & Volatility Products Coverage in Europe are Morgan Stanley and Société Générale.

"Some of these leading banks benefit from the fact that European investors also look closely at broker creditworthiness when choosing a counterparty for options trades," says Greenwich Associates consultant Satnam Sohal.

2015 Greenwich Share Leaders — Equity Options & Volatility Product Market Penetration



Furone

North America

North America			Europe		
Broker	Important Relationships	Statistical Rank	Broker	Important Relationships	Statistical Rank
Morgan Stanley	69%	1T	J.P. Morgan	64%	1T
Bank of America Merrill Lynch	67%	1T	Deutsche Bank	63%	1T
Goldman Sachs	66%	1T	Société Générale	59%	3Т
Citi	63%	4	Morgan Stanley	57%	3Т
Deutsche Bank	57%	5T	Goldman Sachs	51%	5T
J.P. Morgan	54%	5T	Bank of America Merrill Lynch	48%	5T

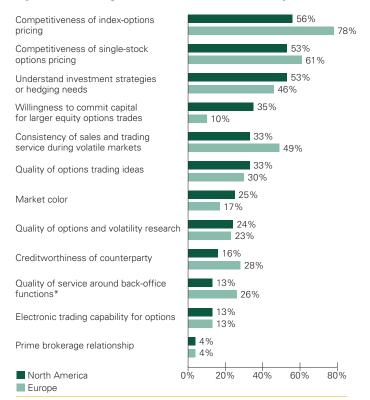
Note: Includes top 10 relationship citations for 2015, distinctive service evaluations and any mention for transactions in specific options & volatility products: listed and listed look-alike options across single-stock, index, options on volatility indices (VIX/V2X), options/swaps/futures on dividends, options on sector ETFs, "lite exotics"/structured flow options, and variance/volatility swaps on indices or single-stocks. Based on interviews with 134 institutions in North America and 165 in Europe. Source: Greenwich Associates 2015 Equity Derivatives Study

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North America

Three banks are deadlocked atop the North American market in equity options & volatility products. Morgan Stanley, Bank of America Merrill Lynch and Goldman Sachs all have relationship penetration scores of 66%– 69%, and all provide competitive pricing on index and single-stock options, high-quality sales coverage and, of

Most Important Selection Criteria for Equity Options Trading — North America vs Europe



Note: *e.g., trade processing, settlement, error resolution. Based on 55 respondents in North America and 69 in Europe. Asked of a random sample. Source: Greenwich Associates 2015 Equity Derivatives Study course, a willingness to use their balance sheets to get trades done. Citi, which ranks fourth with a relationship penetration score of 63%, performs especially well among the market's largest accounts. Rounding out the top tier are Deutsche Bank and J.P. Morgan, which are tied with relationship penetration scores of 54%–57%. These firms are the 2015 Greenwich Share Leaders in Equity Options & Volatility Products in North America. The Greenwich Quality Leaders for Equity Options & Volatility Product Coverage in 2015 are Citi, Goldman Sachs and Morgan Stanley.

Equity Swaps

When it comes to equity swaps, European investors place a premium on finding counterparties that 1) are financially solid and 2) can help them navigate the relatively complicated process of setting up swap contracts in Europe. So although competitive pricing on index swaps tops the list of broker selection criteria for investors in both Europe and North America, Europeans rank quality of service around back-office functions second and include counterparty creditworthiness among their top considerations.

Europe

Based on these factors and overall breadth of coverage of the European marketplace, J.P. Morgan tops the list of 2015 Greenwich Share Leaders in Equity Swaps in Europe with a 60% relationship penetration score, followed by a threeway tie among Deutsche Bank, Goldman Sachs and Société Générale at 54%–57%, and another three-way tie among UBS, Bank of America Merrill Lynch and Morgan Stanley at 43%–44%. The 2015 Greenwich Quality Leaders for Equity Swaps Coverage in Europe are Bank of America Merrill Lynch, Deutsche Bank and Société Générale.

2015 Greenwich Share Leaders — Equity Swaps Market Penetration



Furone

North America

North America			Luiope		
Broker	Important Relationships	Statistical Rank	Broker	Important Relationships	Statistical Rank
Morgan Stanley	67%	1	J.P. Morgan	60%	1
Goldman Sachs	64%	2T	Deutsche Bank	57%	2T
J.P. Morgan	64%	2T	Goldman Sachs	56%	2T
Bank of America Merrill Lynch	62%	2T	Société Générale/SG CIB	54%	2T
Deutsche Bank	62%	2T	UBS	44%	5T
			Bank of America Merrill Lynch	43%	5T
			Morgan Stanley	43%	5T

Note: Includes top 5 relationship citations, distinctive service evaluations, and any mentions for transactions in specific equity swaps products: index, single-stock or custom baskets. Based on interviews with 78 institutions in North America and 63 in Europe.

Source: Greenwich Associates 2015 Equity Derivatives Study

Most Important Selection Criteria for Equity Swaps Trading — North America vs Europe

Competitiveness of index-swaps pricing	67% 68%
Understand investment strategies or hedging needs	8%
Quality of swaps trading ideas	30% 20%
Consistency of sales and trading service during volatile markets	27% 20%
Competitiveness of single-stock swaps pricing	26%
Creditworthiness of counterparty	22%
Willingness to provide liquidity for larger equity swaps trade	22% 8%
Prime brokerage relationship	22% 16%
Quality of service around back-office functions*	48%
Market color	19% 12%
Quality of swaps and synthetic equity research	4%
Quality of pre-trade credit and legal documentation approval process	7% 8%
Electronic trading capability for equity swaps	4%
North AmericaEurope	0% 20% 40% 60% 80%

Note: *e.g. trade processing, settlement, error resolution. Based on 27 respondents in North America and 25 in Europe. Asked of a random sample. Source: Greenwich Associates 2015 Equity Derivatives Study

North America

The prevalence of hedge funds in the swaps market in North America gives a big advantage to brokers with sizable prime brokerage businesses. The typical U.S. hedge fund only uses three to four brokers for swaps and typically executes more than half of its swaps trading business through its lead prime broker. These dynamics help keep trading relationships concentrated among the firms that make up the 2015 Greenwich Share Leaders in Equity Swaps in North America. With a relationship penetration score of 67%, Morgan Stanley tops that list, followed by a four-way tie among Goldman Sachs, J.P. Morgan, Bank of America Merrill Lynch, and Deutsche Bank with penetration scores of 62%–64%. In a market in which client quality ratings are heavily influenced by pricing as well as prime brokerage service, Goldman Sachs and Morgan Stanley share the title of 2015 Greenwich Quality Leader for Equity Swaps Coverage in North America.

Equity Futures

In equity futures, we define important relationships based on the amount of futures execution commissions paid to each broker. Electronic trading plays an important role in those rankings: Approximately 45%–55% of trading commissions generated from equity futures come from electronic trades. As a result, Greenwich Share Leaders in both Europe and North America tend to have robust e-trading platforms. Many also have strong clearing businesses that help attract trade execution business. And more so than in other derivatives products, the list of Greenwich Share Leaders is largely consistent across Europe and North America.

In North America, Goldman Sachs is the clear market leader with a relationship penetration score of 51%, followed by Morgan Stanley at 44%, Bank of America Merrill Lynch and J.P. Morgan at 33%–34%, and Credit Suisse and UBS at 20%–23%. The futures business is more broadly distributed in Europe, where Goldman Sachs and Morgan Staley also lead the market, but are tied with relationship penetration scores of 46%, followed by J.P. Morgan and Bank of America Merrill Lynch at 40%– 42%, and Deutsche Bank and UBS at 38%. These firms are all 2015 Greenwich Share Leaders in Equity Futures.

2015 Greenwich Share Leaders — Equity Futures Market Penetration



Furone

North America

Broker	Important Relationships	Statistical Rank	Broker	Important Relationships	Statistical Rank
Goldman Sachs	51%	1	Goldman Sachs	46%	1T
Morgan Stanley	44%	2	Morgan Stanley	46%	1T
Bank of America Merrill Lynch	34%	3T	J.P. Morgan	42%	3T
J.P. Morgan	33%	3T	Bank of America Merrill Lynch	40%	3T
Credit Suisse	23%	5T	Deutsche Bank	38%	5T
UBS	20%	5T	UBS	38%	5T

Note: Includes top 5 relationship citations based on equity futures execution commissions, distinctive service evaluations, and any mentions for transactions in specific futures products: index, futures on volatility indices (VIX/V2X), single-stock futures, sector futures. Based on interviews with 90 institutions in North America and 112 in Europe. Source: Greenwich Associates 2015 Equity Derivatives Study



Convertibles Overall Service Quality - United States	Convertibles Overall Service Quality - Europe
Broker	Broker
	Deutsche Bank
Jefferies	
Equity Options & Volatility Product Coverage Quality - North America	Equity Options & Volatility Product Coverage Quality - Europe
Broker	Broker
Citi	Morgan Stanley
Goldman Sachs	Société Générale
Morgan Stanley	
Equity Swaps Coverage Quality - North America	Equity Swaps Coverage Quality - Europe
Broker	Broker
Goldman Sachs	Bank of America Merrill Lynch
Morgan Stanley	Deutsche Bank
	Société Générale

Note: Based on interviews with 104 institutions in the United States and 93 in Europe for Convertibles Overall Service Quality, 134 institutions in North America and 165 in Europe for Equity Options & Volatility Product Coverage Quality and 78 institutions in North America and 63 in Europe for Equity Swaps Coverage Quality. Leaders cited in alphabetical order including ties.

Sources: Greenwich Associates 2015 Equity Derivatives and Convertibles Studies

Consultants Jay Bennett, John Colon, John Feng, Thomas Jacques, Satnam Sohal, and David Stryker advise on the institutional equity markets globally, including the use of equity derivatives and convertibles.

Methodology

Between April and June 2015, Greenwich Associates conducted interviews with more than 130 equity derivatives users, including asset managers, hedge funds, insurers, pensions, and banks in North America and more than 160 in Europe. Respondents were asked to name the top 5–10 brokers they use for specific products and to rate the firms according to a series of qualitative factors in each product.

Between April and June 2015, Greenwich Associates conducted interviews with 104 institutions investing in U.S. convertible bonds and 93 institutions investing in European convertibles. Study participants were asked to provide service provider assessments and information on convertibles market trends.

The findings reported in this document reflect solely the views reported to Greenwich Associates by the research participants. They do not represent opinions or endorsements by Greenwich Associates or its staff. Interviewees may be asked about their use of and demand for financial products and services and about investment practices in relevant financial markets. Greenwich Associates compiles the data received, conducts statistical analysis and reviews for presentation purposes in order to produce the final results.

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