

# Positioning through the lens of FX Vol

## Korean conflict triggers unease in the market

The exchange of fire between North and South Korean troops on Tuesday morning has caused significant unease in the global markets, and sent markets scrambling to reduce risk before holiday liquidity sets in. As a result, implied volatilities have heightened across the market, with USDKRW, not surprisingly, most affected. In this note we attempt to glean information about how the market is positioned by the varying reaction in FX volatility curves.

## Three different reactions

Our hypothesis is that currency pairs will fall into three categories: unwind, protect, and indifferent. Unwind is when the market has large positions, and seeks to take them off. Protect is where the market has positions, but seeks to ride out a period of volatility by buying short dated options. Indifferent is when the market is lightly positioned. We characterise these categories based on the reaction in the 1m and 1y volatility curves, and based on this characterisation, determine that the market wants to unwind KRW, protect AUD, and is indifferent to EURJPY.

G10 FX Strategy | Global  
24 November 2010

**Bank of America  
Merrill Lynch**



<b>G10 FX Strategy</b>	+1 646 855 9342
MLPF&S	
G10FX.Strategy@ml.com	
<b>John Hopkinson</b>	+1 646 855 6246
FX Strategist	
MLPF&S	
john.hopkinson@baml.com	
<b>Kevin Zhu</b>	+1 646 855 6246
FX Strategist	
MLPF&S	
kevin.c.zhu@baml.com	

Trading ideas and investment strategies discussed herein may give rise to significant risk and are not suitable for all investors. Investors should have experience in FX markets and the financial resources to absorb any losses arising from applying these ideas or strategies.

BofA Merrill Lynch does and seeks to do business with companies covered in its research reports. As a result, investors should be aware that the firm may have a conflict of interest that could affect the objectivity of this report. Investors should consider this report as only a single factor in making their investment decision.

Refer to important disclosures on page 5 to 7. Link to Definitions on page 4.

## Positioning and FX Vol

The reaction of FX volatility to risk events can provide useful information about market positioning. We hypothesize that there are three possible reactions, based on positioning and risk tolerance.

If the market has large positions, but the increase in risk premium is perceived to be too great, then they may try to unwind the position. The result will be an increase in volatilities across all maturities, reflecting the increased risk premium, but no significant increase in skew. There will also be a large move in the underlying as positions are unwound.

If the market has large positions, but does not wish to take them off, it may move into protect mode, buying short dated options to hold onto a position through a short period of volatility. This should result in a move towards inversion of the vol curve, together with an increased directional demand reflected in the skew.

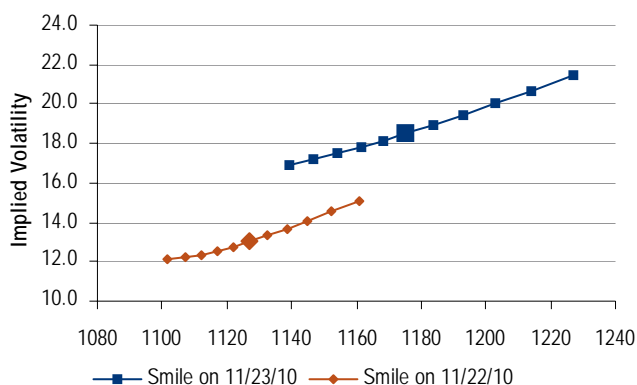
If the market is generally lightly positioned, then the volatility market may well show indifference to the risk event, and react solely to changes in spot, and thus realized volatility.

We chart the 1 month and 1 year implied volatility smile for various currency pairs as it was yesterday, versus the current levels to try to determine where the currencies fall.

## Unwinding Korea

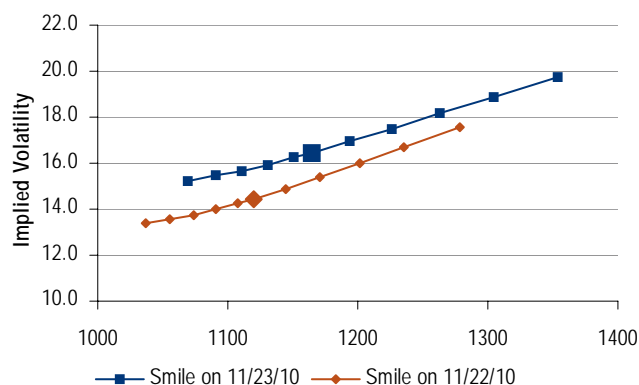
For USDKRW, we see that both the 1m and 1y curves are significantly higher for all strikes, which suggests that an unwind scenario is possible. With the central bank intervening to cap USD appreciation, USDKRW has not moved as far as it otherwise might have. However, it is likely that without this intervention volatilities may have moved even higher. The market will anxiously await developments on the political front. While the skew has increased in nominal terms, as a percentage of the ATM vol it is little changed, further reinforcing the desire to unwind rather than protect positions. We also note that while the curve has become inverted, the increase in 1 month vol relative to 1 year vol is more likely a function of the sensitivity of 1 month vol to risk premium, as opposed to an excessive demand for short dated protection.

Chart 1: USDKRW 1-month Smile



Source: BofA Merrill Lynch Global Research

Chart 2: USDKRW 1-year Smile

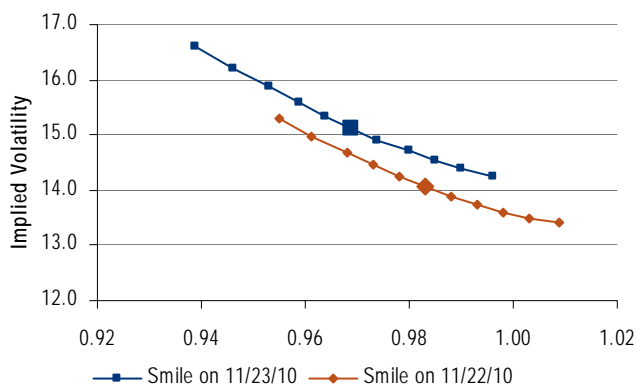


Source: BofA Merrill Lynch Global Research

## Protecting Aussie

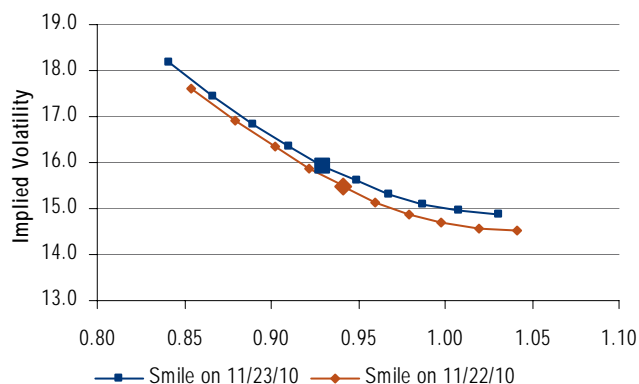
In AUDUSD, we observe an increase in volatility across all strikes in the 1 month, and also an increase in the skew from around 13.5% of the ATM to about 15.5%. Conversely, for the 1 year curve, the change in volatilities is almost exactly consistent with the move in spot. This strongly suggests that the market is seeking to protect their positions in AUDUSD, but is not looking to unwind them.

Chart 3: AUDUSD 1-month Smile



Source: BofA Merrill Lynch Global Research

Chart 4: AUDUSD 1-year Smile

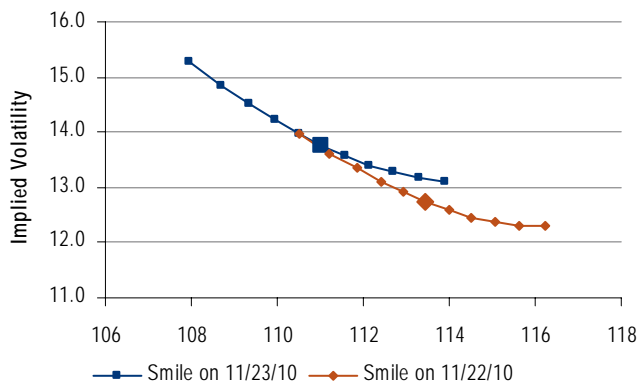


Source: BofA Merrill Lynch Global Research

## Indifference in EURJPY

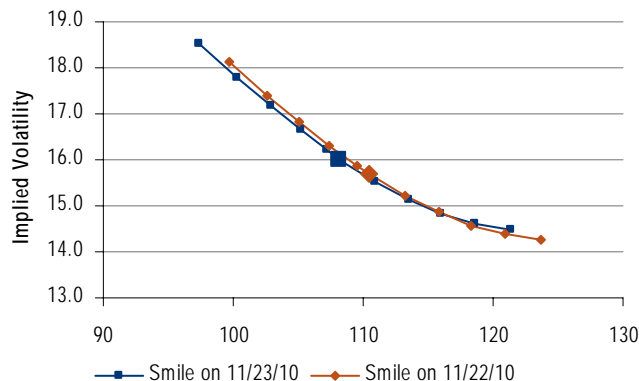
The third situation is amply illustrated by EURJPY. There has been a large move in spot over the past day, but volatility curves have merely adjusted themselves to take account of this, without any additional premium being built in. The apparent increase in 1 month volatilities for high strike options can be accounted for by the fact that these options have moved far out of the money with the large spot move, and thus have acquired an additional 'wing' premium.

Chart 5: EURJPY 1-month Smile



Source: BofA Merrill Lynch Global Research

Chart 6: EURJPY 1-year Smile



Source: BofA Merrill Lynch Global Research

## Link to Definitions

### Macro

Click [here](#) for definitions of commonly used terms.

## Important Disclosures

---

Due to the nature of strategic analysis, the issuers or securities recommended or discussed in this report are not continuously followed. Accordingly, investors must regard this report as providing stand-alone analysis and should not expect continuing analysis or additional reports relating to such issuers and/or securities.

BofA Merrill Lynch Global Credit Research analysts regularly interact with sales and trading desk personnel in connection with their research, including to ascertain pricing and liquidity in the fixed income markets.

## Other Important Disclosures

Recipients who are not institutional investors or market professionals should seek the advice of their independent financial advisor before considering information in this report in connection with any investment decision, or for a necessary explanation of its contents.

Officers of MLPF&S or one or more of its affiliates (other than research analysts) may have a financial interest in securities of the issuer(s) or in related investments.

**BofA Merrill Lynch Global Research policies relating to conflicts of interest are described at <http://www.ml.com/media/43347.pdf>.**

**"BofA Merrill Lynch" includes Merrill Lynch, Pierce, Fenner & Smith Incorporated ("MLPF&S") and its affiliates. Investors should contact their BofA Merrill Lynch representative or Merrill Lynch Global Wealth Management financial advisor if they have questions concerning this report.**

**Information relating to Non-US affiliates of BofA Merrill Lynch and Distribution of Affiliate Research Reports:**

MLPF&S and BASL distribute, or may in the future distribute, research reports of the following non-US affiliates in the US (short name: legal name): Merrill Lynch (France): Merrill Lynch Capital Markets (France) SAS; Merrill Lynch (Frankfurt): Merrill Lynch International Bank Ltd, Frankfurt Branch; Merrill Lynch (South Africa): Merrill Lynch South Africa (Pty) Ltd; Merrill Lynch (Milan): Merrill Lynch International Bank Limited; MLPF&S (UK): Merrill Lynch, Pierce, Fenner & Smith Limited; Merrill Lynch (Australia): Merrill Lynch Equities (Australia) Limited; Merrill Lynch (Hong Kong): Merrill Lynch (Asia Pacific) Limited; Merrill Lynch (Singapore): Merrill Lynch (Singapore) Pte Ltd; Merrill Lynch (Canada): Merrill Lynch Canada Inc; Merrill Lynch (Mexico): Merrill Lynch Mexico, SA de CV, Casa de Bolsa; Merrill Lynch (Argentina): Merrill Lynch Argentina SA; Merrill Lynch (Japan): Merrill Lynch Japan Securities Co, Ltd; Merrill Lynch (Seoul): Merrill Lynch International Incorporated (Seoul Branch); Merrill Lynch (Taiwan): Merrill Lynch Securities (Taiwan) Ltd.; DSP Merrill Lynch (India): DSP Merrill Lynch Limited; PT Merrill Lynch (Indonesia): PT Merrill Lynch Indonesia; Merrill Lynch (Israel): Merrill Lynch Israel Limited; Merrill Lynch (Russia): Merrill Lynch CIS Limited, Moscow; Merrill Lynch (Turkey): Merrill Lynch Yatirim Bankasi A.S.; Merrill Lynch (Dubai): Merrill Lynch International, Dubai Branch; MLPF&S (Zürich rep. office): MLPF&S Incorporated Zürich representative office; Merrill Lynch (Spain): Merrill Lynch Capital Markets Espana, S.A.S.V.; Merrill Lynch (Brazil): Banco Merrill Lynch de Investimentos S.A.

This research report has been approved for publication in the United Kingdom by Merrill Lynch, Pierce, Fenner & Smith Limited and BASL, which are authorized and regulated by the Financial Services Authority; has been considered and distributed in Japan by Merrill Lynch Japan Securities Co, Ltd, a registered securities dealer under the Securities and Exchange Law in Japan; is distributed in Hong Kong by Merrill Lynch (Asia Pacific) Limited, which is regulated by the Hong Kong SFC and the Hong Kong Monetary Authority; is issued and distributed in Taiwan by Merrill Lynch Securities (Taiwan) Ltd.; is issued and distributed in Malaysia by Merrill Lynch (KL) Sdn. Bhd., a licensed investment adviser regulated by Malaysian Securities Commission; is issued and distributed in India by DSP Merrill Lynch Limited; and is issued and distributed in Singapore by Merrill Lynch International Bank Limited (Merchant Bank) and Merrill Lynch (Singapore) Pte Ltd (Company Registration No.'s F 06872E and 198602883D respectively) and Bank of America Singapore Limited (Merchant Bank). Merrill Lynch International Bank Limited (Merchant Bank) and Merrill Lynch (Singapore) Pte Ltd. are regulated by the Monetary Authority of Singapore. Merrill Lynch Equities (Australia) Limited (ABN 65 006 276 795), AFS License 235132 provides this report in Australia in accordance with section 911B of the Corporations Act 2001 and neither it nor any of its affiliates involved in preparing this research report is an Authorised Deposit-Taking Institution under the Banking Act 1959 nor regulated by the Australian Prudential Regulation Authority. No approval is required for publication or distribution of this report in Brazil.

Merrill Lynch (Frankfurt) distributes this report in Germany. Merrill Lynch (Frankfurt) is regulated by BaFin.

This research report has been prepared and issued by MLPF&S and/or one or more of its non-US affiliates. MLPF&S is the distributor of this research report in the US and accepts full responsibility for research reports of its non-US affiliates distributed to MLPF&S clients in the US. Any US person receiving this research report and wishing to effect any transaction in any security discussed in the report should do so through MLPF&S and not such foreign affiliates.

### **General Investment Related Disclosures:**

This research report provides general information only. Neither the information nor any opinion expressed constitutes an offer or an invitation to make an offer, to buy or sell any securities or other financial instrument or any derivative related to such securities or instruments (e.g., options, futures, warrants, and contracts for differences). This report is not intended to provide personal investment advice and it does not take into account the specific investment objectives, financial situation and the particular needs of any specific person. Investors should seek financial advice regarding the appropriateness of investing in financial instruments and implementing investment strategies discussed or recommended in this report and should understand that statements regarding future prospects may not be realized. Any decision to purchase or subscribe for securities in any offering must be based solely on existing public information on such security or the information in the prospectus or other offering document issued in connection with such offering, and not on this report.

Securities and other financial instruments discussed in this report, or recommended, offered or sold by Merrill Lynch, are not insured by the Federal Deposit Insurance Corporation and are not deposits or other obligations of any insured depository institution (including, Bank of America, N.A.). Investments in general and, derivatives, in particular, involve numerous risks, including, among others, market risk, counterparty default risk and liquidity risk. No security, financial instrument or derivative is suitable for all investors. In some cases, securities and other financial instruments may be difficult to value or sell and reliable information about the value or risks related to the security or financial instrument may be difficult to obtain. Investors should note that income from such securities and other financial instruments, if any, may fluctuate and that price or value of such securities and instruments may rise or fall and, in some cases, investors may lose their entire principal investment. Past performance is not necessarily a guide to future performance. Levels and basis for taxation may change.

Futures and options are not appropriate for all investors. Such financial instruments may expire worthless. Before investing in futures or options, clients must receive the appropriate risk disclosure documents. Investment strategies explained in this report may not be appropriate at all times. Costs of such strategies do not include commission or margin expenses.

BofA Merrill Lynch is aware that the implementation of the ideas expressed in this report may depend upon an investor's ability to "short" securities or other financial instruments and that such action may be limited by regulations prohibiting or restricting "shortselling" in many jurisdictions. Investors are urged to seek advice regarding the applicability of such regulations prior to executing any short idea contained in this report.

Foreign currency rates of exchange may adversely affect the value, price or income of any security or financial instrument mentioned in this report. Investors in such securities and instruments effectively assume currency risk.

UK Readers: The protections provided by the U.K. regulatory regime, including the Financial Services Scheme, do not apply in general to business coordinated by BofA Merrill Lynch entities located outside of the United Kingdom. BofA Merrill Lynch Global Research policies relating to conflicts of interest are described at <http://www.ml.com/media/43347.pdf>.

Officers of MLPF&S or one or more of its affiliates (other than research analysts) may have a financial interest in securities of the issuer(s) or in related investments.

MLPF&S or one of its affiliates is a regular issuer of traded financial instruments linked to securities that may have been recommended in this report. MLPF&S or one of its affiliates may, at any time, hold a trading position (long or short) in the securities and financial instruments discussed in this report.

BofA Merrill Lynch, through business units other than BofA Merrill Lynch Global Research, may have issued and may in the future issue trading ideas or recommendations that are inconsistent with, and reach different conclusions from, the information presented in this report. Such ideas or recommendations reflect the different time frames, assumptions, views and analytical methods of the persons who prepared them, and BofA Merrill Lynch is under no obligation to ensure that such other trading ideas or recommendations are brought to the attention of any recipient of this report.

In the event that the recipient received this report pursuant to a contract between the recipient and MLPF&S for the provision of research services for a separate fee, and in connection therewith MLPF&S may be deemed to be acting as an investment adviser, such status relates, if at all, solely to the person with whom

MLPF&S has contracted directly and does not extend beyond the delivery of this report (unless otherwise agreed specifically in writing by MLPF&S). MLPF&S is and continues to act solely as a broker-dealer in connection with the execution of any transactions, including transactions in any securities mentioned in this report.

**Copyright and General Information regarding Research Reports:**

Copyright 2010 Merrill Lynch, Pierce, Fenner & Smith Incorporated. All rights reserved. This research report is prepared for the use of BofA Merrill Lynch clients and may not be redistributed, retransmitted or disclosed, in whole or in part, or in any form or manner, without the express written consent of BofA Merrill Lynch. BofA Merrill Lynch research reports are distributed simultaneously to internal and client websites and other portals by BofA Merrill Lynch and are not publicly-available materials. Any unauthorized use or disclosure is prohibited. Receipt and review of this research report constitutes your agreement not to redistribute, retransmit, or disclose to others the contents, opinions, conclusion, or information contained in this report (including any investment recommendations, estimates or price targets) without first obtaining expressed permission from an authorized officer of BofA Merrill Lynch.

Materials prepared by BofA Merrill Lynch Global Research personnel are based on public information. Facts and views presented in this material have not been reviewed by, and may not reflect information known to, professionals in other business areas of BofA Merrill Lynch, including investment banking personnel. BofA Merrill Lynch has established information barriers between BofA Merrill Lynch Global Research and certain business groups. As a result, BofA Merrill Lynch does not disclose certain client relationships with, or compensation received from, such companies in research reports. To the extent this report discusses any legal proceeding or issues, it has not been prepared as nor is it intended to express any legal conclusion, opinion or advice. Investors should consult their own legal advisers as to issues of law relating to the subject matter of this report. BofA Merrill Lynch Global Research personnel's knowledge of legal proceedings in which any BofA Merrill Lynch entity and/or its directors, officers and employees may be plaintiffs, defendants, co-defendants or co-plaintiffs with or involving companies mentioned in this report is based on public information. Facts and views presented in this material that relate to any such proceedings have not been reviewed by, discussed with, and may not reflect information known to, professionals in other business areas of BofA Merrill Lynch in connection with the legal proceedings or matters relevant to such proceedings.

This report has been prepared independently of any issuer of securities mentioned herein and not in connection with any proposed offering of securities or as agent of any issuer of any securities. None of MLPF&S, any of its affiliates or their research analysts has any authority whatsoever to make any representation or warranty on behalf of the issuer(s). BofA Merrill Lynch Global Research policy prohibits research personnel from disclosing a recommendation, investment rating, or investment thesis for review by an issuer prior to the publication of a research report containing such rating, recommendation or investment thesis.

Any information relating to the tax status of financial instruments discussed herein is not intended to provide tax advice or to be used by anyone to provide tax advice. Investors are urged to seek tax advice based on their particular circumstances from an independent tax professional.

The information herein (other than disclosure information relating to BofA Merrill Lynch and its affiliates) was obtained from various sources and we do not guarantee its accuracy. This report may contain links to third-party websites. BofA Merrill Lynch is not responsible for the content of any third-party website or any linked content contained in a third-party website. Content contained on such third-party websites is not part of this report and is not incorporated by reference into this report. The inclusion of a link in this report does not imply any endorsement by or any affiliation with BofA Merrill Lynch. Access to any third-party website is at your own risk, and you should always review the terms and privacy policies at third-party websites before submitting any personal information to them. BofA Merrill Lynch is not responsible for such terms and privacy policies and expressly disclaims any liability for them.

All opinions, projections and estimates constitute the judgment of the author as of the date of the report and are subject to change without notice. Prices also are subject to change without notice. BofA Merrill Lynch is under no obligation to update this report and BofA Merrill Lynch's ability to publish research on the subject company(ies) in the future is subject to applicable quiet periods. You should therefore assume that BofA Merrill Lynch will not update any fact, circumstance or opinion contained in this report.

Certain outstanding reports may contain discussions and/or investment opinions relating to securities, financial instruments and/or issuers that are no longer current. Always refer to the most recent research report relating to a company or issuer prior to making an investment decision.

In some cases, a company or issuer may be classified as Restricted or may be Under Review or Extended Review. In each case, investors should consider any investment opinion relating to such company or issuer (or its security and/or financial instruments) to be suspended or withdrawn and should not rely on the analyses and investment opinion(s) pertaining to such issuer (or its securities and/or financial instruments) nor should the analyses or opinion(s) be considered a solicitation of any kind. Sales persons and financial advisors affiliated with MLPF&S or any of its affiliates may not solicit purchases of securities or financial instruments that are Restricted or Under Review and may only solicit securities under Extended Review in accordance with firm policies.

Neither BofA Merrill Lynch nor any officer or employee of BofA Merrill Lynch accepts any liability whatsoever for any direct, indirect or consequential damages or losses arising from any use of this report or its contents.