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EMU Sovereign Risk

Lessons from EM sovereign restructuring/default

Recent events in euro sovereign debt markets are exceptional for investors in developed markets. We have therefore called on the expertise of our colleagues in Emerging Markets, who have more experience in analyzing sovereign credit events.

They identify ten points from EM markets which provide useful guidance to investors in developed markets given the markets' and ratings agencies' elevated concerns around sovereign risk – set out in this research note.

They also give an overview of the recent forms of debt restructuring seen in EM credits, and infer some broad strategy implications for investors in EUR peripherals.

In terms of our investment recommendations in euro sovereign spreads, we reiterate our recommendations:

- **Long low vs. high coupon bonds** in Greece, Spain and Portugal as a way to protect against the risk of markets anticipating a move towards trading on a price basis rather than a yield basis
- **Long Italy and Ireland vs. Spain** given the greater macroeconomic risk we see in Spain

However, **we exit our long 2y Portugal vs. Germany recommendation:** while the deterioration in market sentiment does not appear to be primarily driven by a worsening of underlying fiscal dynamics, we cannot ignore that the increased spread volatility has made a long position in Portugal vs. Germany increasingly unattractive on a risk-adjusted basis.

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Lessons from EM sovereign restructuring/default

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Exhibit 1

Ten points about EM sovereign restructuring/default

A. Pre-conditions for default/restructuring

1. Initial conditions
2. Ability and willingness to repay
3. Liquidity versus solvency

B. The mechanics of default/restructuring

4. Methods of restructuring sovereign debt
5. Equivalence between creditors
6. Distinction between external and local default
7. Collective action and the creditor coordination problem

C. Market behaviour around debt/restructuring

8. Price action in the prelude to distress or default – and after
9. Dynamics of debt renegotiation
10. Sovereign defaults tend to happen in periodic clusters, and are rarely isolated incidents

Source: Morgan Stanley Research

Sovereign debt distress and default has a long history and there are many aspects – financial, economic, political and legal – involved.

Our aim is not to provide an exhaustive treatise on sovereign distress and default. Rather, we aim to guide readers on what we believe to be the essential points to assess the context of the recent developments related to sovereign risk, based on a recent history of EM sovereign distress and default episodes.

We divide guidance into three sections:

- Ten points about EM sovereign restructuring/default
- Recent forms of sovereign restructuring
- Case study: Uruguay (2003)

Particular details in what follows may or may not be relevant for any particular instance of sovereign distress, whether in EM or DM. But we conclude with a handful of broad strategy implications which we believe should be useful for investors in eurozone sovereigns.

Ten points about EM sovereign restructuring/default

A. Pre-conditions for default/restructuring

1. Initial conditions – What is characteristic from a macroeconomic perspective of individual instances of sovereign default? Though high government debt/GDP figured prominently in recent sovereign default episodes, fiscal deficits combined with recession/negative growth have been more prevalent features in what eventually turned out to be sovereign debt restructuring/default episodes – more so than high government debt/GDP ratios, *per se*. Recent EM bond defaults show in many cases sovereigns had relatively low debt/GDP ratios at the time (~60% GDP). The trigger for market concern over default relates more to repayment prospects – the sustainability – of the debt (the flow) rather than the overall debt burden (the stock).

Emphasis on debt stock becomes more prevalent in the restructuring, related to considerations of what, post-default, would be considered sustainable as far as the debt level is concerned and how that may influence the haircut in a restructuring. The NPV reduction of the debt becomes an important consideration for the market in assessing post-default scenarios, especially as this applies to debt sustainability and growth recovery. There is also a strong link between sovereign default and banking/currency (balance of payments) crisis.

2. Ability and willingness – When it comes to sovereigns, ability and willingness are both determinants of the prospects of debt repayment. Sovereigns tend to default when there is no access to refinancing, and domestic political considerations often come into play. The dimension of external versus internal constituents factors in here, with policymakers tending to retain scarce resources for domestic residents over that of external creditors.

3. Liquidity versus solvency – “New money and time” has characterized the initial reaction to payment duress in the midst of sovereign crises. The Baker Plan in 1985 preceded the Brady Plan in 1989 and called for new money operations to fund debt refinancing. It did not work and the Brady Plan followed, which called for market-based and voluntary debt reduction negotiated between creditors and debtors. The Argentina mega-swap of 2001 termed out bond payments in an effort to buy time but it did little to address the underlying solvency issue of the government. Argentina subsequently defaulted end-2001 (missed the first bond payment January 2002) and

engineered a 75% NPV reduction in its bonds by 2005. The distinction between liquidity and solvency is often difficult to ascertain *a priori*, complicating the path to resolution.

B. The mechanics of default/restructuring

4. Methods of restructuring sovereign debt – (1) contractual arrangements; or (2) voluntary restructuring. Unlike a corporate bond restructuring, sovereign bond restructuring does not benefit (as of yet) from an internationally recognized bankruptcy/resolution procedure. This was the motivation for the establishment of a Sovereign Debt Restructuring Mechanism (SDRM) as proposed by the IMF, to provide an orderly and efficient restructuring – or curing of default – of sovereign debt. As an aside, there have been legal precedents established which mitigate creditor claims on sovereign assets in the event of technical/legal default under the principle of sovereign immunity. But it is still in the interest of the sovereign to mitigate the risk of litigation for creditor claims, which could include attempts at attachment on sovereign assets.

a. Contractual arrangements – Typically associated with unilateral default, in this case the repayment terms and/or bond covenants are amended at the request of the debtor. Such procedures are instituted only after a technical/legal default has occurred, and any such request may itself trigger technical default and acceleration of principal repayment if voted on by bondholders. Due to collective action problems, such instances have been rare in recent sovereign bond default episodes but have occurred. Uruguay used the CAC clause in the Samurai bond in 2003 to reprofile the bond.

b. Voluntary restructurings – otherwise known as distressed bond exchanges or swaps, these have become more regular occurrences in EM and involve the exchange of outstanding bonds for new bonds that typically have a longer maturity (average life of principal repayment), lower (below-market) coupons and/or reduced principal. In some recent cases in EM, the bonds were already in default (Ecuador 2002, Ukraine 2001) and in others, the bonds were current but the issuer was in distress (Argentina mega-swap 2001, Pakistan 1998, Ukraine 1998, Uruguay 2003). Even in the cases of distressed exchanges (with no unilateral default), rating agencies considered the operations events of distress/selective default because they resulted in NPV losses for bondholders.

Some incentive is necessary to induce bondholders to agree to the swap. This can be (1) the threat of non-payment on outstanding bonds for holdouts (the new bonds would include exit consents – including provisions for excluding cross-default of the old bonds to the new bonds); or (2) depending on prevailing market prices, a higher NPV post the swap on the assumption that the resolution of payment duress as a result of the voluntary exchange would lower yields and raise prices of the new bonds (even with below-market coupons or extended maturities).

Therefore, the market's confidence in the exchange being an exit restructuring (putting the sovereign on the path towards debt repayment sustainability) is crucial in determining (1) the participation rate of the exchange; and (2) the exit yield/spread. Typically, the larger the implied haircut prior to the completion of the exchange, the lower is the yield/spread after the exchange. This can offset the reduction in NPV stemming from a reduction in the notional cash-flow stream.

5. Equivalence between creditors – There are several aspects related to equivalence, or similar/dissimilar treatment across creditors/bondholders, including: (1) Local/foreign bondholders; and (2) NPV versus par claim.

a. Legal jurisdictions – Bonds relating to differing legal jurisdictions may be treated differently in a restructuring/default scenario – particularly local holders versus foreign holders. In some cases, foreign debt may be implicitly senior to that of local debt. Local holders may be penalized more than foreign holders where international law does not apply, particularly where weak domestic enforcement mechanisms prevail or where it may be easier to identify and negotiate favourable terms with

creditors. Furthermore, the rationale for a sovereign remaining current on foreign jurisdiction obligations and defaulting at the same time on local jurisdiction obligations is that it may preserve some degree of access to new money in international markets.

b. NPV versus par claim – Some recent EM sovereign bond restructurings tended to emphasize the curing of defaults by concentrating new issues in larger, more liquid new bonds with limited consideration made to the NPV losses suffered across the curve or creditor classes. Instead, restructurings included new bonds that provided the sovereign with a low repayment burden in early years and a rising repayment burden in later years (Argentina, Russia), not just a terming out of the debt. This included features such as step-up coupons, capitalizing principal, PIKs, and/or amortizing principal. In these cases, assuming the holder held on through the period of payment duress and default/restructuring, if they held a short-tenor high coupon bond they would have suffered significantly larger NPV losses relative to a holder of a longer-tenor lower coupon bond. Practically speaking however, NPV gains or losses will, in the end, depend on where an investor bought the bond and the market discount rate on the cash flow stream of the restructured bonds over a given time horizon.

More recently, in an effort to be fair across the curve to bondholders, there have been NPV-equivalent exchanges (Ecuador 2002, Uruguay 2003). In these cases, the attempt was to treat bondholders across the curve more or less equally from the standpoint of NPV losses. In the case of Uruguay, the exchange involved a terming out of maturities, in order to have the same NPV impact across the curve. In this case, bond prices had already converged reflecting the market's assumption of recovery value, obviating the need for considering fair treatment across bondholders on an NPV basis.

6. Distinction between external and local default – The emphasis here is on 'external-currency' bond default as opposed to 'local-currency' or domestic bond default. By 'external-currency' it is assumed that the central bank of the country cannot generate the currency (foreign exchange) required to repay the debt. This may induce a credit event in the case of payment duress, as opposed to an inflation event in the case of payment duress for 'local-currency' bonds. We consider Eurozone economies to be operating under a regime of 'external-currency' debt since their central banks are not able to 'print' EUR required to repay their EUR-denominated obligations – just as an EM economy is not able to 'print' USD required to repay their USD-denominated obligations. Default on local-currency denominated government debt has nonetheless occurred, most recently in the case of Jamaica (2010).

Bond credit spreads for 'external-currency' bonds are a function of default probabilities and an assumed recovery rate.

Estimate for default probability given the credit spread:

Instantaneous Default Probability $\approx$ (Spread to risk-free in bp/10,000) / (1 – Recovery rate in %)

7. Collective action and the creditor coordination problem – difficulty in coordinating the actions of creditors when there is payment duress and/or default. In early sovereign default episodes, there was considerable difficulty in coordinating the actions of creditors to resolve default and this dragged on the curing of these defaults and complicated the path towards restructuring of the debt. Ad-hoc creditor committees typically were established. The more dispersed the bondholders, the more difficult the collective action problem.

More recently, sovereign bond covenants – under New York law – had specified a majority of bondholders (in some cases 100%) to agree to a change in payment terms, which complicated the resolution of sovereign default and/or restructuring. This induced a move towards voluntary restructurings for EM sovereigns, even as collective action clauses (CACs) were introduced into sovereign bond contracts. CACs allowed for a qualified majority of bondholders to represent in terms of a

modification of payment terms to reduce the potentially disruptive impact of holdouts. In some cases, CACs included aggregation clauses through which a super-majority could modify each bond if a minimum required threshold is reached for each class of outstanding bond.

In practice, collective action and coordination problems have been less of an issue in recent sovereign bond restructurings, with the exception of Argentina where there had been a sizable proportion of holdouts. Argentina has yet to fully cure the default – and is attempting a swap in the coming weeks – and as such, its access to international markets remains impaired.

C. Market behaviour around debt/restructuring

8. Price action in the prelude to distress or default – and after. As the market front-loads the probability of default the credit curve necessarily inverts as the likelihood of default becomes more immediate. Cash-at-risk becomes the paramount consideration as the market's anticipation of a credit event rises. In fact, as default risk becomes tangible, the probability to receive future cash flows is seen as very low so that yield and spread concepts become irrelevant in terms of return, and so the duration for hedging purposes. The price of each bond then reflects the sole recovery value anticipated by investors. While little is known about the potential restructuring terms, the market tends to assume a percentage of par recovery across the curve so that bond prices converge towards the assumed recovery value.

Typically, this means the market value of shorter-tenor and/or with higher coupon bonds falls more relative to longer-tenor and/or lower coupon bonds (see Exhibit 2). Prices will tend to converge, given no available information regarding the nature of any potential/prospective restructuring, and the yield/spread curve significantly inverts as a result. Prior to default, bonds with higher accrued coupon will fall more than bonds with lower accrued coupon. On many occasion, market practice in EM has been to trade bonds flat (of accrued) following default.

EM bond prices tended to converge prior to default as the market's anticipation of a credit event increased. The market moves from a yield/spread (duration) basis to a price (cash-at-risk) basis. This can happen (and has happened) at prices well above eventual assumed recovery.

In terms of sequence:

1. The curve starts trading on a price and not yield basis as the notion of default or restructuring becomes widespread – the yield/spread curve flattens and then inverts;
2. As default intensity rises, price convergence begins and bonds across the curve gravitate towards the same cash price;
3. Prices fall further, towards the assumed recovery value of the market. Note, in the process of price convergence, higher coupon bonds may trade at a modest premium to lower coupon bonds but bonds with higher accrued interest fall more than bonds with lower accrued interest.

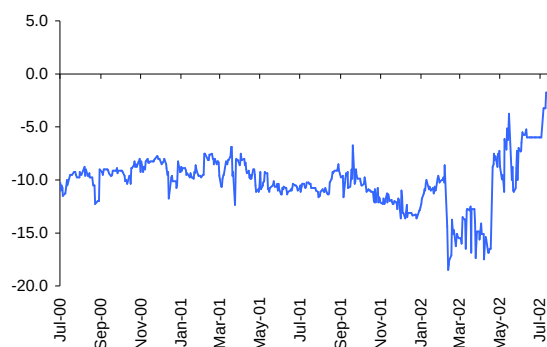
The more the market anticipates NPV equivalence, the less likely prices are to converge. However, there is usually a considerable degree of uncertainty with respect to future events, and the market has tended to gravitate towards the assumption of a par claim across the curve. Moreover, the more onerous the debt burden, the more likely it is that the market may consider a larger NPV reduction exercise, beyond which NPV equivalence could be affected (see The Many Forms of Sovereign Restructuring, below).

However, after default/restructuring, a very different distinction is made between bonds with the highest accrued coupon and those with lowest accrued coupon. Bonds with higher past-due interest (PDI) will stabilize at higher market prices to reflect the fact a certain percentage of PDI is expected to be acknowledged in the restructuring process.

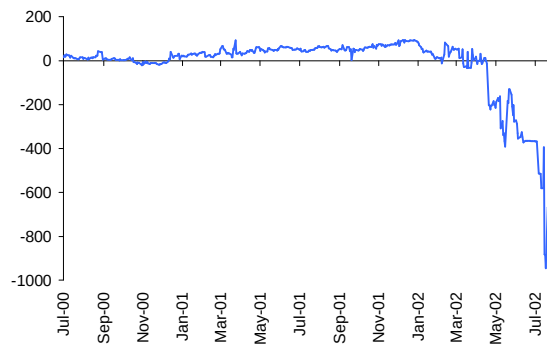
Exhibit 2

As the market front-loads an increasing probability of default, prices converge and yield curve inverts: Uruguay 2027 vs. 2010

Uruguay 2010 vs. 2027 clean price differential (points)



Uruguay 2010 vs 2027 yield differential (bp)



Source: Morgan Stanley Research

9. Dynamics of debt renegotiation – EM sovereign bond default episodes do not take a straight line from the market sensing payment duress to default. Most episodes involve policymakers denying the existence of payment duress and attempting many approaches – including soliciting outside assistance and support (bilateral or multilateral aid) – before considering a restructuring or moving towards default as these attempts fail to instill market confidence. The larger, more prominent EM sovereign default episodes (Argentina, Russia) have been characterized by interim periods of optimism and pessimism before the eventual defaults.

10. Sovereign defaults tend to happen in periodic clusters, and are rarely isolated incidents – Typically linked to boom/bust cycles, easy credit leads to a boom in borrowing and tight credit leads to difficulty in refinancing and ultimately default. Since the 19th century sovereign default episodes have occurred on average 50 years apart, with some less onerous episodes in between. This includes the 1820s, 1870s, 1930s and 1980s.

Recent Forms of Sovereign Restructuring

There is any number of possible structures for a given debt re-profiling episode. That said, the structure of any particular debt re-profiling exercise will tend depend on a number of factors, including (1) the extent of debt relief or NPV reduction that is required to aid in achieving debt sustainability; (2) legal jurisdictions involved; (3) specific contractual terms of the debt; (4) the extent of dispersion of bondholders; (5) mark-to-market implications for bondholders; (6) the extent to which NPV equivalence is considered an objective; and (7) effecting a high participation rate, including the use of exit consents and sweeteners.

One of the primary goals of any re-profiling, whether unilateral or voluntary, is to ensure a high participation rate. This necessarily improves the extent of debt relief, but just as importantly mitigates the potential disruptive impact of holdouts.

With respect to debt relief, it is important to distinguish between liquidity and solvency. To the extent that the nature of payment duress is considered temporary, a terming out of the debt may be sufficient to allow external conditions and market access to improve. This will also tend to aid in achieving NPV equivalence. To the extent that it is considered a solvency issue, a more onerous NPV reduction of the debt is likely to be required, including principal haircuts. This may also complicate – though not necessarily eliminate – the prospect of NPV equivalence across the curve.

Recent episodes of sovereign bond restructuring ended in NPV reduction on average or value-weighted average of 23% or 53%, respectively corresponding to recovery rates of 47-77% (Exhibit 3). Traded prices tended to decline further prior to the credit events, anticipating even larger NPV losses but this also reflected forced selling of defaulted debt by market participants. Traded prices then increased post-event as exit yields declined into and out of the bond exchanges.

In most cases, the NPV reduction was modest. Argentina and Russia did include a significant principal reduction of the bonds – 18% in the case of Russia and 56% in the case of Argentina, for example.

Participation rates were generally high, over 85%.

We outline below two possible scenarios of sovereign restructuring. In the first case, a liquidity crisis is likely considered to be at play rather than a solvency crisis and in this case it is more in line with pre-default distressed exchange episodes in recent history, such as Uruguay (2003). The second scenario considers a more onerous NPV reduction of the debt and is more reminiscent of unilateral default episodes as in the case of Argentina (2001) and Russia (1998).

Exhibit 3

Recent sovereign bond restructurings

Recent sovereign bond restructurings

Country	Event year	Year Cured	Bonds USDbn	Type	Bond prices [1]		Part. Rate	Est. NPV loss [2]	Government debt/GDP	
					Pre	Post			Pre-event	Post-event
Russia	1998	2000	72.7	Default	18	50	98	44	107	78
Pakistan	1999	-	1.6	Pre-emptive	52	65	95	8	94	92
Ecuador	1999	2000	6.6	Default	44	60	97	25	172	124
Ukraine	1998, 2000	2000	1.1	Pre-emptive/Default	69	60	95	5	39	56
Ivory Coast	2000	2010	2.8	Default	18	61	91	20	-	-
Argentina	2001	2005	82.3	Pre-emptive/Default	27	30	76	75	54	78
Uruguay	2003	-	5.7	Pre-emptive	66	85	93	8	111	105
Dominican Republic	2005	-	1.6	Pre-emptive	95	95	-	1	49	46
Ecuador	2008	2008	3.2	Default	26	38	-	-	-	-
Jamaica [3]	2010	-	7.8	Pre-emptive	-	-	97	20	118	-
Average					46	60	92	23	89	83
Value-weighted average					25	41	85	53	82	74

* We exclude some more recent sovereign bond defaults/restructurings including Moldova (2001, 2002), Grenada (2004), Belize (2006), Seychelles (2008)

[1] 30 days prior to default or exchange and 30 days after

[2] Ratio of PV received in the exchange relative to what was initially promised using the yield that prevailed prior to default/exchange

[3] Restructuring of local and foreign-currency denominated government debt

Source: Morgan Stanley, IMF, Moody's, S&P

Scenario 1 – Termining out the redemption profile. In this case, a re-profiling amounts to extending maturities of all eligible bonds. The goal is less NPV reduction *per se*, but more immediate repayment relief. New bonds would have similar coupons as the outstanding bonds. To achieve NPV equivalence, the terming out would be identical across instruments. Participation rates are likely to be a function of how confident bondholders are that this will ease payment duress and the extent to which they are induced to participate in the exchange. Exit consents, sweeteners (such as up-front cash or value kickers) coupled with an understanding that a strong contingent of bondholders will in any case go into the exchange may influence this decision.

Scenario 2 – NPV reduction. Such a scenario involves a more onerous treatment of outstanding obligations in an effort to achieve a larger, more impactful NPV reduction of the debt. The goal is to provide an *exit restructuring* that helps achieve long-term debt sustainability. Such an exercise may involve the exchange into new bonds with below-market coupons, and/or a terming out of maturities. Principal reduction may also be involved. In such a case, bondholders exchange outstanding bonds for a smaller notional equivalent of new bonds. To affect a more front-loaded reduction in repayment burden and on the assumption that repayment capacity will improve in later years, the exchange may involve new bonds with step-up coupons, capitalization of coupons, amortizing principal and/or PIKs.

In the Brady/London Club deals in the 1980s and 1990s, principal collateral was also provided in the form of US Treasury bonds as well as some extent of rolling coupon coverage. These exchanges may also involve the use of sweeteners that have asymmetric payoff profiles (to the benefit of bondholders), which are important to enhance participation. Argentina's 2005 exchange also involve the introduction of GDP-linked warrants as sweeteners to the deal; similarly Brady/London Club exchanges in the 1990s and more recently involved the use of similar warrants (such as oil-linked warrants for Mexico, Nigeria and Venezuela).

In the more recent EM sovereign bond re-profiling episodes, distressed exchanges in which the sovereign remained current on its bonds tended to be associated with much lower NPV reduction than re-profiling episodes that occurred post-default. In all such cases, pre-default sovereign bond re-profiling involved a terming out of bond

maturities and involved no principal write-downs. That said, in the case of Argentina, the so-called mega-swap of June 2001 amounted to a terming of bond redemptions and the country was at the time current on its debt. It did little to affect favorably the country's debt repayment ability and Argentina subsequently called a standstill on debt repayment in December 2001 (missing the first bond payment in January 2002), leading to a much more onerous write-off of its bonded debt in the exchange of 2005.

Private sector burden sharing

IMF involvement in sovereign support carries potential adverse aspects, from the vantage point of private creditors. There has been increased emphasis from the official sector for the private sector to participate more in the resolution of sovereign payment duress. More recently, the IMF this year supported the restructuring of Jamaica's local-currency government bonds as a condition for aid (Jamaica remains current on its foreign-currency-denominated bonds). As was previously mentioned, the IMF had originally called for a more onerous restructuring of Uruguay's private creditor obligations (note, 45% of Uruguay's external debt was to multilaterals, including the IMF at the time). In 1999, Pakistan was mandated to re-profile its Eurobonds as condition for Paris Club debt release on the principle of comparability of treatment with bilateral debt relief.

Though not explicitly recognized, implicitly multilateral/IMF debt is considered senior to private creditor debt. Sovereigns were less likely to default on multilateral debt as IMF aid was a last resort in terms of access to external financing – particularly given that bilateral aid was typically tied to an agreement with the IMF and private creditor sentiment was enhanced with the existence of IMF backing. This, however, depended and is likely to depend on the relative share of the debt repayment burden across creditor classes. In the past, bilateral debt was considered implicitly subordinate to private creditor debt, and private creditor debt implicitly subordinate to multilateral/IMF debt. Due to the principle of equivalence, this dynamic has changed.

Therefore, the involvement of the IMF likely increases the prospect of some form of private-sector bail-in as far as the resolution of sovereign payment duress is concerned, particularly where IMF– and to a lesser extent bilateral – funds are at stake.

Case Study: Uruguay (2003)

The proximate cause of Uruguay's financial and economic duress in 2001-2003 was the suspension of the Convertibility Law in Argentina in 2001 and subsequent debt default. The abandonment of the currency board (in which the Argentine peso was linked 1 for 1 with the US dollar and each peso in circulation backed by US dollar reserves) led to a collapse in real economic activity, real depreciation of the ARS of 150% and a run on the currency following the asymmetric "pesification" as well as freeze of bank deposits. Uruguay had strong links with Argentina, in particular via trade and its banking system, leading to contagion and ultimately a run on the country's banks in mid-2001. Uruguay did receive multilateral support from the IMF and engineer policy adjustments, including a crawl and eventual float of its currency, fiscal adjustment and a shutting down of insolvent banks. But this proved to be insufficient given the sustained reversal in financial flows at the time and ongoing economic contraction.

In an effort to stave off a liquidity crisis, Uruguay engineered a bond exchange operation in May 2003 that effectively termed out the bond redemption profile by five years. Officials were initially at odds with the IMF over the solution to the banking system and bond payment duress, with the IMF arguing for a more onerous burden-share by private creditors and securitization of bank deposits (into bonds) but Uruguayan officials with US backing insisting on retaining as much as possible creditor rights. Uruguayan officials insisted the country faced a liquidity crisis and not a solvency crisis and as such, "buying time" – in large part to allow the external

market environment and domestic growth conditions to improve – would be sufficient to stave off outright default.

The market had a sense of the payment duress that the sovereign was under, as traded prices for USD-denominated bonds were in 50-60 range prior to the announcement of the exchange. It was clear to market participants that a significant adjustment needed to take place, but that said at the time it was not evident that Uruguay was beyond the tipping point with respect to debt sustainability and solvency.

Uruguay's sovereign credit ratings had already declined from mid-BBB in 1997 to low-B in 2003, prior to the exchange.

The bond exchange took place across three jurisdictions consistent with where the bonds were originally issued – locally, internationally and Japan. In all cases but the Samurai bond, a voluntary exchange mechanism was introduced. In the case of the Samurai bond, given the CAC provisions in the bond a contractual arrangement was executed at a bondholders meeting.

The structure of the exchange was as follows – an effective 5-year terming out of the bond redemption profile, with coupon structures maintained. More specifically:

1. Three new benchmark USD-denominated global bonds were to be issued, in which all of the outstanding bonds would be exchanged – the 2011, 2015 and 2033. The exchange was done at varying exchange ratios.
2. Investors were given several options in the exchange, with the effect of attempting to equalize the NPV impact across the curve. Some options even included the provision for up-front cash in addition to new bonds, particularly for shorter-tenor bonds to sweeten participation in the exchange – given the priorities of reducing the near-term redemption burden.
3. There were specific threshold conditions under which the exchange itself would become effective. At least 80% participation was required for the exchange offer to become valid.

Eligible securities were 46 domestically issued T-bills and bonds, 18 internationally issued USD and EUR-denominated bonds, and 1 Samurai JPY-denominated bond.

Overall participation in the exchange was 93% and represented USD5.2bn of securities. Participation ranged from 25-100% depending on the security. In the case of the Brady bonds, participation rates were very low, in part given the embedded US Treasury collateral and that some holders who did not require marking-to-market, would need to do so (and as a result take a loss) following the exchange.

A number of important mechanisms were employed to reduce the prospect of holdouts and to enhance overall participation in the exchange.

Exit consents were employed, which effectively altered some of the contractual terms of the to-be-exchanged bonds, effectively making them subordinate to the new bonds. Such provisions included de-listing the outstanding bonds to reduce liquidity and removing provisions relating to cross-default and acceleration. This prevented holdouts from forcing cross-default on new bonds in the case of default on outstanding bonds; this also gave confidence to participants that non-payment on old bonds would not trigger cross-default.

Another aspect employed was the establishment of a trust indenture mechanism that replaced the fiscal agent for the new bonds. This had the effect of mitigating the risk of legal attachment of bond payment flows for outstanding bondholders in case of litigation for creditor claims.

NPV reduction was achieved by extension of maturities alone. NPV losses were on the order of 13% based on a post-exchange/exit yield of 12% – but in time there was effectively no NPV loss as yields post-exchange declined as macroeconomic and financial conditions for Uruguay improved. Post-exchange, NPV losses were higher for domestic bonds compared to international bonds. Though not a technical/legal

default, the exchange was deemed an episode of default by the credit rating agencies given their criteria that the exchange, though voluntary, was executed under duress with the intent of reducing the NPV of debt leading to bondholder losses.

The exchange had the effect of reducing the payment burden over the prevailing five years (2003-2008) by 5.1% of GDP. But this was not enough. The country had to engage in fiscal consolidation to an extent that put debt/GDP on a sustainable path. At the time, it was recognized that Uruguay would need to grow by on average 3% per year and sustain a primary fiscal surplus of 3% of GDP as well. Uruguay was able to tap the international markets five months later, with USD200mn-equivalent 3-year bond issued in Uruguay pesos and linked to CPI. Though arguably largely aided by a vast improvement in external macroeconomic and market conditions after 2003, a sustained commitment to fiscal adjustment and the floating of the exchange rate were likely important preconditions for the sustained recovery in Uruguay that followed the bond exchange operation.

Strategy Implications for EUR peripherals

- 1. Think credit risk, not inflation risk** – Payment duress for Eurozone sovereigns is a credit consideration not inflation consideration. Bond curves will flatten and invert – not steepen – on rising default risk.
- 2. Reduce cash-at-risk** – Position in the lowest cash-price instruments as opposed to higher cash-price instruments. Be mindful of accrued coupons. Valuation across the curve will be a function of assumed recovery values and the market estimation of the nature of any re-profiling (NPV-equivalent or par claim).
- 3. Local versus foreign jurisdiction bonds** – Foreign holders may be given preferential treatment in a restructuring.
- 4. Guard against contagion** – History shows that sovereign restructurings usually come in clusters. Whether because of similar fiscal stresses or simply because of market dynamics, contagion is usually a risk which investors should take into account.

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Not-Rated/Hold	15	1%	4	1%	27%
Underweight/Sell	373	15%	87	11%	23%
Total	2,525		764		

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