

Portuguese Credit Strangles

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Positioning for possible Portuguese PSI

Given the need for Portugal and the EU to renegotiate a package as soon as September, the prospect of PSI is looking altogether likely. But with the ongoing negative developments on the Greek PSI negotiations, EU leaders may consider means to distinguish other problem sovereigns, giving just enough money to Portugal to see it through a few years of further adjustment. We recommend going short PGB 3.6% Oct-14 vs going long 4.46% Jun-18 par-for-par, effectively long forward yields at above 17%, with a modestly positive carry, and a cash-out of 14.7 points which can be realised in the event of equal haircuts. Due to the relative cheapness of long-end bonds, we also recommend buying PGB 4.8% Jun-2020 vs buying protection through the CDS market.

Recent moves by the ECB to ameliorate markets through a flood of liquidity have made bearish conviction trades uncomfortable, forcing many investors to ration the shorts to those trades which have the highest plausible payoffs and, meanwhile attempting to minimise the price tag of serious negative carry.

While serious contagion risk appears to have been damped by the LTROs, it is clear that Portugal will need to negotiate an extension to its rescue package. Portugal's original package was conditioned on market access by Sep-2013 with the coming €10bn redemption, something clearly unattainable at this juncture, and the IMF will demand further assurances of funding coverage in the lead-up to any disbursement in September of this year.

In order to ensure that Portugal is covered for as long as it takes or at least until 2020, EU leaders will need to find €156bn on top of the already committed €78bn from the original package (see Nomura Economics/Strategy Presentation: [Euro area outlook—January update](#)). This would be politically unpalatable for Northern European politicians and voters. But in order to prevent further contagion to Ireland and possibly Spain and Italy, the EU would have to cover Portugal's primary deficit (soon to be in surplus) and redemption needs for at least another two years. The price tag on two years of funding may be more digestible at close to €40bn.

But given the large and growing official sector segment of the national debt, any further aid has the disadvantage of further subordinating PGBs. The Nomura Economics team estimates that removing T-bills, EFSF and bilateral loans and non-tradable debt, PGBs represented only 65% of total debt stock in Portugal, and by end-2012 this should fall to 51% (of which the ECB holds close to 9.5% and, if Greece is a template, ECB holdings will not participate fully in any PSI), and reduce yet further with each passing year.

Thus, while we remain hopeful that the EU will learn from the mistakes of the ongoing Greek PSI and be more generous to Portugal in the lead-up to the June and September reviews, and commit to EU leaders' statements that "Greece is different", we are not convinced this will happen. We see a clear risk that political considerations force a stricter stance toward Portugal. Consequently, we think it makes sense to position so as to benefit from any possible PSI, especially in maturities longer than mid-2014, but with downside protection in the case the package is extended.

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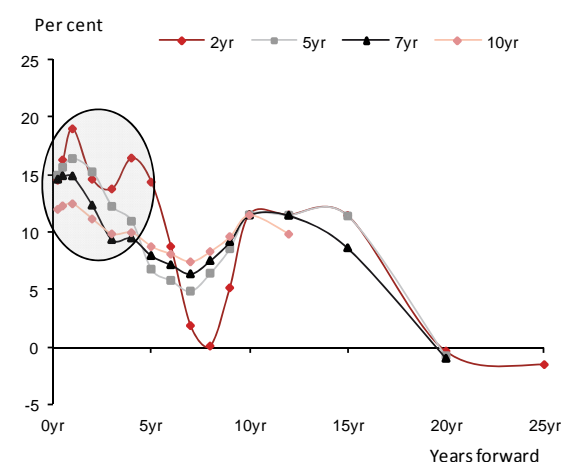
So we are interested in stress trades with some upside from a rally. Our goal is to benefit from a rally should spreads recover but be positioned so as to also gain from a restructuring. The most natural such trades would be cash-for-cash or par-for-par trades. Moreover, our goal is to avoid negative carry.

PGB Forwards - Par-for-par with pickup to CDS

We use the framework we originally developed for Italian BTP trades (see [Trading Italy as Credit I: The difficulty in haircutting BTPs](#)) and consider flatteners in more general terms than the purely dv01-neutral. In particular we look at the par-for-par flatteners, which should perform under a recovery, being long duration, but also provide protection in the event of restructuring. As before when selecting trades we look at the initial cash-out value, retained value under different recovery scenarios, carry and synthetic forward.

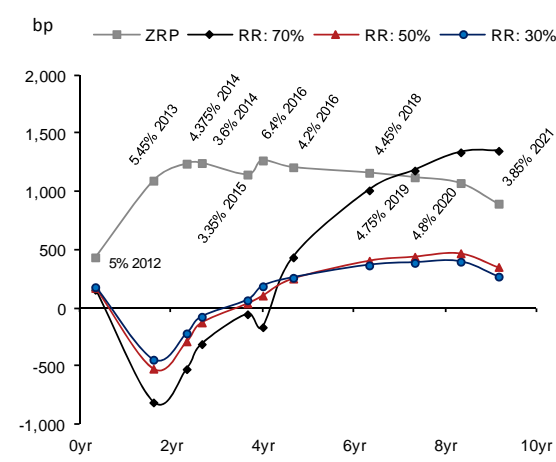
We use the PGB forward curves to narrow down potential candidates for the trade. Figure 1 suggests two-year bonds one year forward as the most appropriate place to start although five-year bonds one or two years forward are equally attractive. We note that the IMF/EC package ends in 2013 and the large redemption for PGB 5.45% Sep-13 will probably only be paid subject to the extension of this package.

Fig. 1: Forward curves



Source: Bloomberg

Fig. 2: ZCM under various recovery rates



Source: Nomura

One of the novelties of the framework we introduce here is to look to credit-adjusted zero-coupon margins as one means of determining the relative richness or cheapness of bonds to CDS. Many market participants look to generic measures of rich/cheap such as ASWs or ZCMs (zero-coupon-margins), merely spreading the cashflows from a risky bond to the swap curve as though these cash-flows were risk-free. We believe these measures may give an inaccurate impression of the relative riskiness of bonds. The default probability or riskiness of the bonds is inferred from the entire CDS curve together with a recovery assumption. Given this curve of forward default probabilities and the recovery, we are able to extract a set of expected cashflows factoring in the riskiness, and thus spread them over swaps to extract a measure of rich/cheap.

And, while a reasonable candidate for a Portugal trade would also be via CDS, in particular notional-neutral, we note that CDS curves have already flattened, while the bonds have not kept pace. This is evident from the credit-adjusted ZCM as seen in Figure 2.

According to the credit-adjusted ZCM, the 2yr sector is expensive to CDS, while the 7yr sector is cheap to CDS. Consequently, a bond switch trade

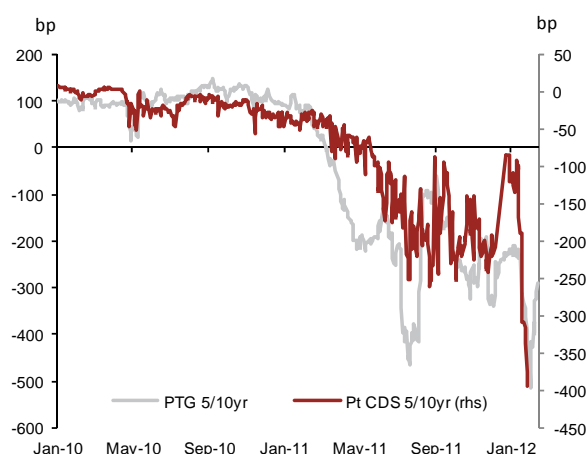
could easily give further pickup to a pure CDS trade. And it would seem prudent to look to 5yr tenors, 2yr forward, which gives yields of close to 17% (while the 2yr tenor 2yr forward would be even more attractive save for the risks that a solution is found).

CDS leads bond spreads, CDS slopes lead bond slopes

Numerous studies have found that while price discovery occurs in both the sovereign bond and CDS markets, the latter tends to lead (see [Andenmatt et al. 2000](#), [Brill 2000](#), [Manthos, Mylonidis, Nikolaos 2010](#), [Hassan, Ngene, Suk-Yu, 2011](#)). This causality is even more appropriate for the weaker sovereigns in the euro area such as Portugal since the market has become less liquid as demonstrated by increasing bid-offer spread.

We see this as well using 5yr-10yr CDS slopes relative to bond slopes (Figure 3). In particular, if we test Granger causality as in Figure 4, it appears that since January 2010, moves in the CDS slope "cause" or precede moves in the bond slope, rather than vice versa. This should give further comfort in the flattening theme.

Fig. 3: CDS and bond slopes



Source: Bloomberg

Fig. 4: CDS moves precede bond moves according to Granger causality test

H0: CDS does not lead Cash

F-Statistic:	10.98
Probability of H0	0.00
Df	(2, 516)
Sample:	1 Jan 2010 - 30 Jan 2012

H0A: Cash does not lead CDS

F-Statistic:	0.33
Probability of H0A:	0.74
Df	(1, 520)
Sample:	1 Jan 2010 - 30 Jan 2012

Source: Nomura

While the Sep-2013 is the richest bond according to default-adjusted ZCM, the timing of the redemption is such that, in the event that any package is extended, this bond should immediately rally (possibly wiping out the gains of being long duration). We attempt to play it safer by instead of shorting the Sep-13, shorting the Oct-2014 whose redemption would be at the expiry of any two-year extension. We remain long duration, so as to gain from any across-the-curve rally, while of course bearing the risk that the front end rallies disproportionately.

Par-for-par trades

We would **recommend selling the Oct-14 vs buying the Jun-18, par for par**. The trade has a €15 cash-out and remains positive duration. Implicitly, this is like receiving forwards at 17.96%, although below the peak entry of close to 24% for trades involving the Sep-13, still very attractive. The trade maintains positive carry of 2c per month, far smaller than the 30-32 cents a month that shorting either of the legs outright would cost (as seen in Figure 5). In Figure 6, we note that the trade remains positive duration and convexity (always beneficial in a higher volatility environment), benefiting from rallies, effectively going long at close to an 18% yield. In the event of possible restructuring, the 14 points upfront cash-out can be realised.

While the individual bonds can trade special on repo, the specialness is limited. The repo on many PGBs has been special for some time and term repo rarely trades. The Jun-14s are somewhat less special on repo at close to

-0.20 S/N and have intermittent 2w repo offered, but they run more risk of being covered by any package. The Oct-14s are more special on repo and the risk of buy-ins has led to -0.65 to -0.75 o/n repo. That said, this repo rate has persisted for a considerable period of time, at least the past few months.

The risk to this trade is thus rolling the repo with the possible downside that the short end could trade particularly special as in Greece (where forcible settlement through HDAT auctions killed much short-interest in some bonds), or as in Ireland.

Fig. 5: PGB descriptive statistics (flattener/forward)

	Short	Long
Maturity	Oct-14	Jun-18
Issued	Jun-09	Mar-08
Coupon (%)	3.60	4.45
Price (clean, EUR)	77.00	60.50
Price (dirty, EUR)	78.22	63.49
Yield	17.52	17.70
Mod Duration	2.54	5.18
DV01	-1.73	-2.87
Convexity	7.07	28.22
Repo (1m, bp)	-0.65	0.18
Carry (1m, bp)	49.25	21.89
Carry (1m, EUR)	0.30	0.32

Source: Nomura

Fig. 6: Flattener/Forward trade descriptive statistics

	DV01 Neutral	Par for Par	Proceeds Neutral
Weight (short leg)	-1.66	-1.00	-0.81
Cash-out	66.35	14.73	0.00
DV01	0.00	-1.14	-1.47
VAR (EUR)	-1.79	-0.92	-1.01
Curvature (EUR per bp ²)*	0.08	0.12	0.13
Carry (1m, EUR)	-0.18	0.02	0.07
Implied forward yield	-	17.96	17.87
Value (R - €90, t=0m)	-59.40	0.00	16.95
Value (R - €80, t=0m)	-52.80	0.00	15.06
Value (R - €70, t=0m)	-46.20	0.00	13.18
Value (R - €90, t=12m)	-61.62	0.19	17.82
Value (R - €80, t=12m)	-55.02	0.19	15.94
Value (R - €70, t=12m)	-48.42	0.19	14.05

Source: *2nd derivative of price to interest rates. Source: Nomura

Cash-CDS basis

Our credit-adjusted ZCM rich-cheap plot in Figure 2 is essentially a means of deciding the richness/cheapness of the cash-CDS basis. There are many implicit assumptions in this analysis, in particular that in the event of a trigger, all bonds recover equally. This may be a reasonable first pass, but could be worth revisiting on individually recommended trades. In particular, what is apparent is the front end, the Sep-13, Jun-14, and Oct-14 are rich to CDS, especially for high recoveries. Meanwhile, all maturities longer than around 2018 are cheap to CDS. We note that the high recovery scenarios make less sense for the longer-maturity bonds due to the creeping subordination issue. Nonetheless, the longer maturities are particularly cheap. Due to the relative expensiveness of cash shorts in the front end and the greater challenge in running shorts, we prefer to **buy PGB 4.8% Jun-2020 for 58.3** (which has a repo of 12bp S-N, so bonds are not difficult to find, with a carry in cents of 0.35, or 17.95bp per month) **and go long 8yr Rep Portugal CDS for 39.2** and a running cost of 100bp (8.33bp per month), so a **package price of 97.5 and positive carry of 9.6bp per month**. We note repo on the 2020s is not particularly special at close to 12bp S/N so the bonds are relatively readily available.

Disclosure Appendix A-1

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