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Currency risk in a Eurozone break-up - Legal Aspects

Eurozone break-up risk has risen notably over the past few months, as European policy makers have failed to put in place a credible backstop for the larger Eurozone bond markets. Given this increased risk, investors should pay close attention to the 'redenomination risk' of various assets. There are important legal dimensions to this risk, including legal jurisdiction of the obligation in question. Risk premia on Eurozone assets are likely to be increasingly determined by this 'redenomination risk'. In a full-blown break-up scenario, the redenomination risk may depend crucially on whether the process is multilaterally agreed and on whether a new European Currency Unit (ECU-2) is introduced to settle existing EUR contracts.

Executive Summary

- Escalating tensions in the Eurozone, around Greece as well as core Eurozone countries, mean that the risk of a break-up has sharply increased. The potential for a break-up raises the question about the future of current Euro obligations: Which Euro obligations would remain in Euros, and which would be redenominated into new national currencies.
- Investors should consider three main parameters when evaluating 'redenomination risk': 1) legal jurisdiction under which a given obligation belongs; 2) whether a break-up can happen in a multilaterally agreed fashion; and 3) the type of Eurozone break-up which is being considered, including whether the Euro would cease to exist.
- In a scenario of a limited Eurozone break-up, where the Euro remains in existence for core Eurozone countries, the risk of redenomination is likely to be substantially higher for local law obligations in peripheral countries than for foreign law obligations. From this perspective, local law obligations should trade at a discount to similar foreign law obligations.
- In a scenario of a full-blown Eurozone break-up, evaluating the redenomination risk is more complex, as even foreign law obligations would have to be redenominated in some form. In this case, redenomination could happen either into new national currencies (in accordance with the so-called *Lex Monetae* principle), or into a new European Currency Unit (ECU-2). This additional complexity in the full-blown break-up scenario leaves it harder to judge the appropriate relative risk premia on local versus foreign law instruments.
- The distinction between local and foreign law jurisdiction also becomes less important in situations involving insolvency. In those instances, the lower redenomination risk associated with foreign law obligations may be negated by higher haircuts. Hence, the legal jurisdiction therefore seems most relevant from a trading perspective in connection with high quality corporate credits which are highly resilient to insolvency.
- Redenomination risk is not only a legal matter. Redenomination risk for German assets has a different economic meaning compared with redenomination risk for Greek assets.

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The following analysis of the risks and process associated with defaults in and/or secession from the Euro / Eurozone is not meant to constitute legal advice. The authors of this report are not acting in the capacity of an attorney. Readers of this report should consult their legal advisers as to any issues of law relating to the subject matter of this report

Introduction: The break-up risk is for real

Developments over the past few weeks have highlighted that some form of Eurozone break up is a very real risk.

The clearest example of this was the recent discussion around Greece: The proposed Greek referendum on the bailout package and Eurozone membership was the most concrete step in this direction to date. The discussion about a possible Greek exit has moved from the backrooms and corridors to the exceptionally explicit, involving statements from French President Sarkozy as well as Euro-group head Juncker. This specific threat forced a change in government in Greece, and the central case remains that the current tranche of official assistance will be disbursed, and that a Greek default can still be averted for now. But this does not change the fact that any slippage on the austerity program down the line will bring the exit debate back to the fore. In fact, legislation is now being considered in Germany, which will make it easier for Eurozone countries to exit. *This highlights the increasing risk of some limited form of Eurozone break-up, where one specific or a few smaller Eurozone countries exit, and the remaining Eurozone countries stay put and continue to use the Euro.*

The severe instability in the Italian bond market over the past week is another development, which highlights the increasing break-up risk. Italian 5-year CDS spreads spiked to a high of 575bp on Wednesday last week, which, under standard recovery rate assumptions would be equivalent to an implied default probability of 40%. Hence, the default scenario needs to be taken quite seriously. Importantly, it is unclear that the ECB would be able provide continued liquidity to Italian banks in an Italian sovereign default scenario, and this in turn would imply a break-down in the cross-border liquidity provision, effectively separating monetary assets in Italy from monetary assets in the rest of the Eurozone (the first step towards a currency separation). *This highlights that there is also an increasing risk of a more dramatic break-up scenario, involving an Italian default and a potential break-down of the entire monetary union. In this more dramatic scenario, the Euro would eventually cease to exist and the ECB would be dissolved.*

We will evaluate the probabilities of the various break-up scenarios in detail elsewhere. Here we will instead focus on some important legal aspects of a break-up.

Specifically, we will focus on the legal aspects of a potential redenomination of current EUR denominated securities and contracts into new national currencies under various scenarios of a Eurozone break-up. The aspects of the method of exit are numerous and many authors have covered them in much detail[1]. As we will illustrate, the specific contractual parameters of a given obligation, including legal jurisdiction, can have important implications for potential losses on the obligation in a Euro-zone break-up scenario.

We start with some general legal considerations in relation to 'redenomination risk'. We then use the legal framework to group key Eurozone assets (across equities, bonds and loans) into separate buckets of 'redenomination risk', based mainly on legal jurisdiction (rather than the domicile of the issuer).

[1] See e.g., E. Dor, *Leaving the euro zone: a user's guide*, IESEG Working paper series, Oct 2011, link, and H.S. Scott, When the Euro Falls Apart, International Finance 1:2, 1998, 207-228, link

Redenomination risk: Which Euros will stay Euros?

Countries do change their currency from time to time. Argentina moved away from an effectively dollar-based economy in 2002, towards a flexible peso based currency system. Similarly, currency unions have seen break-downs in the past. The break-up of the Czechoslovakian currency union in 1993 and the break-up of the Rouble currency area between 1992 and 1995 are key examples from the relatively recent history.

In the context of the Eurozone, the issue of redenomination is complex because there is no well-defined legal path towards Eurozone and EU exit (and some debate about the specifics of Article 50 of TFEU and the immediacy of its applicability[2]). However, the recent political reality has demonstrated that the lack of legal framework for an exit/break-up is unlikely to preclude the possibility. Moreover, during its recent national congress the German CDU party approved a resolution that would allow euro states to quit the monetary union without having to also exit the EU. We note that this decision would need to be approved by the national parliament before having any legal power. Nevertheless, it shows the direction in which politics are moving.

Since the risk of some form of break-up is now material, investors should be thinking about 'redenomination risk': Which Euro denominated assets (and liabilities) will stay in Euro, and which will potentially be redenominated into new local currencies in a break-up scenario?

The importance of legal jurisdiction

There are a number of important parameters, which from a legal perspective should determine the risk of redenomination of financial instruments (bonds, loans, etc).

The first parameter to consider is the *legal jurisdiction of an obligation*.

- If the obligation is governed by the local law of the country which is exiting the Eurozone, then that sovereign state is likely to be able to convert the currency of the obligation from EUR to new local currency (through some form of currency law).
- If the obligation is governed by foreign law, then the country which is exiting the Eurozone cannot by its domestic statute change a foreign law. If the currency is not explicit to the foreign contract, then it may be up to the courts to determine the implicit nexus of contract.

Applying this principle to a scenario of Greek exit from the Eurozone, it implies that Greek government bonds issued under Greek law (which account for 94% of the outstanding debt), can be redenominated into a new Greek drachma. However, Greek Eurobonds, (which are issued under English law) or their USD-denominated bonds (under NY Law), would not easily be redenominated into a new local currency, and may indeed stay denominated in Euros.

The second legal parameter to consider is the *method* for breakup. Is the method a legal or multilateral framework or is it done illegally and unilaterally? The method for breakup has vastly different consequences for the international recognition.

Lawful and Consensual Withdrawal. There is debate about legal methods for exiting the Euro but there is some consensus around the use of Article 50 in the Lisbon Treaty. There may be other methods for "opting out" in the use of Vienna convention on the Law of Treaties[3] if there is no agreement on the usage of Article 50, then this would accord more international jurisprudential acceptance.

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[2] See P Athanasiou, Withdrawal and expulsion from the EU and EMU: Some reflections, ECB Legal Working paper series no 10, Dec 2009, (see link), although we note that the Commission has specifically said exit was not possible.

[3] See, e.g., Eric Dor, Leaving the Euro zone: a user's guide, IESEG School of Management working paper series, 2011-ECO-06, Oct 2011, link. We note that France, Malta and Romania are not signatories to the Vienna Convention and this may complicate the international acceptance of Vienna-based methods of exit.

Unlawful and Unilateral Withdrawal. Treaties are merely contracts between sovereign nations and can always be broken, and it may prove far more expedient to undergo a unilateral withdrawal rather than to wait for the vast array of agreements needed for consensual withdrawal. Similarly, expulsion could also be unlawful in theory.

The third parameter to consider is the *nature of the break-up*, and what it means for the existence of the Euro as a functioning currency going forward. There are many possible permutations, but they can be grouped into two main categories:

- *Limited break-up: Exit of one or more smaller Eurozone countries*. In this scenario, the Euro will likely remain in existence. This scenario materializes if a few smaller countries, such as Greece and perhaps Portugal, end up exiting and adopt their own new national currencies.
- *Full-blown break-up*: In this scenario, perhaps precipitated by an Italian default, the Euro would cease to exist, the ECB would be dissolved, and all existing Eurozone countries would convert to new national currencies or form new currency unions (e.g., bifurcation into North-South unions) with new currencies, and new central banks.

This leaves four basic scenarios to consider, depending on whether obligations in question are issued under local or foreign jurisdiction and depending on the nature of the break-up.

For obligations issued under *local law*, it is highly likely that redenomination into new local currency would happen through a mandatory statute/currency law. This is the case regardless of the nature of the break-up (unilateral, multilaterally agreed, and full blown break-up scenario). For example, Greek bonds, issued under local Greek law, are highly likely to be redenominated into a new Greek currency if Greece exits the Eurozone.

For obligations issued under *foreign law*, the situation is more complex. We will go into detail later. But before we do that, it is helpful to highlight the big picture:

- **Unilateral withdrawal** and no multilaterally agreed framework for exit, foreign law contracts are highly likely to remain denominated in Euro. For example, Greek Eurobond, issued under UK law, should remain denominated in Euros.
- **Exit is multilaterally agreed**, there may be certain foreign law contracts and obligations which could be redenominated into new local currency using the so-called *Lex-Monetae* principle, if the specific contracts in question have a very clear link to the exiting country, or if there is an EU directive specifying certain agreed criteria for redenomination. However, the large majority of contracts and obligations are likely to stay denominated in Euro.
- **Full blown Eurozone break-up:** In a scenario where the Eurozone breaks up in its entirety and the EUR ceases to exist, contracts cannot for practical purposes continue to be settled in Euros. In this case, there are two basic solutions. Either obligations are redenominated into new national currencies by application of the *Lex Monetae* principle or there is significant rationale of the legal basis for the argument of *Impracticability* or *Commercial Impossibility*[4]. Alternatively, existing EUR obligations are converted into a new European Currency Unit (ECU-2), reversing the process observed for ECU denominated obligations when the Euro came into existence in January 1999.

[4] The more common *Frustration of Contract* is unlikely to apply, see Procter, Euro-Fragmentation.

Fig. 1: Redenomination risk on eurozone assets

	Small Break-Up Scenario: EUR remains the currency of core Eurozone countries		Full-blown Break-up Scenario: Euro ceases to exist
	Unilateral withdrawal	**Multilaterally agreed exit**	
Securities/Loans etc governed by international law	**No redenomination: EUR remains the currency of payment** (except in cases of insolvency where local court may decide awards)	**No general redenomination: EUR remains currency of payment**, although certain EUR contracts/obligations could be redenominated using Lex Monetae principle (if there are special attributes of contracts) and/or an EU directive setting criteria for redenomination	***Redenomination*** *happens either to new local currencies by applying Lex Monetae principle or by converting contacts/obligations to ECU-2*
Securities/Loans etc governed by local law	***Redenomination to new local currency*** *(through* change in local currency law, unless not in the interest of the specific sovereign)		

Source: Nomura

The need for an ECU-2 and EU directives in a break-up scenario

There are a number of complex practical difficulties associated with creating a new European Currency Unit (ECU-2) to provide a means of payment on EUR denominated contracts and obligations. These include issues related to clearing, and issues related to anchoring/fixing of its value. We will address those issues in detail elsewhere. For now, we simply want to highlight the introduction of the ECU-2 as a potential option for settling payment on EUR obligations and contracts in the full-blown break-up scenario. Without some overriding statutory prescription, the Courts are left having to decide the currency of each contract. While this has certain advantages given the overall flexibility of the *Lex Monetae* principle for attempting inference as to the originally intended (and likely more equitable) currency of the contract, in the event of complete split-up, it is likely that a great many ambiguous cases result in arbitrary awards.

The advantage of applying an ECU-2 based redenomination is that it removes this uncertainty over obligations that would otherwise be difficult to re-denominate into national currencies. For example, how should a EUR denominated loan extended by a UK bank to a Polish corporation be handled after a Eurozone break-up? An ECU-2, which is linked to the new national currencies according to a weighting scheme, could help ensure an orderly handling of situations, where there is no clear way to redenominate an obligation. By issuing an EU directive, English courts would be instructed to interpret EUR in any contract to mean ECU-2 thereafter.

We note that the Euro itself was created by the process of EU directives as well as passage of legislation in NY, Tokyo and other localities (while some were determined to need no further statutes)[5]. These statutes were passed to ensure continuity of contract and in order to do so specifically stated that no frustration was feasible, that *force majeur* clauses, redenomination clauses or the possibility of claiming material adverse change would all be overruled. In order to ensure a more timely and certain outcome (although we can certainly not claim it to be more just), an EU directive could compel UK courts to re-denominate contracts into some official new currency such as the ECU-2, at a specific rate.

Risk premia and legal jurisdiction

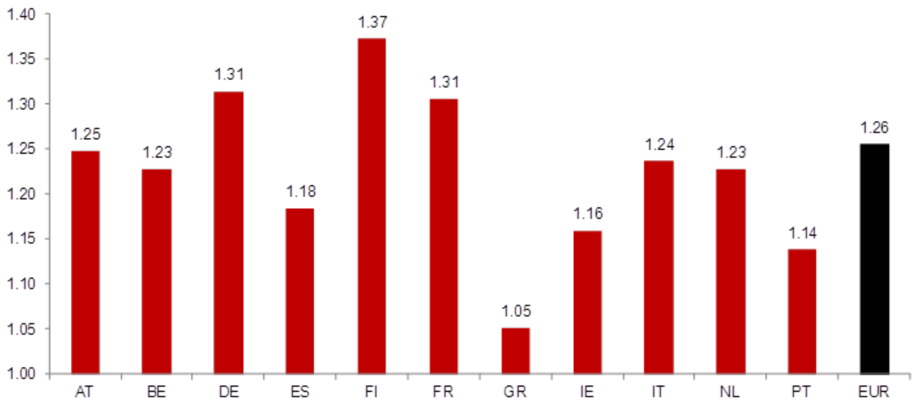
The overall conclusion from a our perspective is that the risk of redenomination of EUR obligations into new local currency is higher for local law obligations compared with obligations issued under foreign law.

[5] Hal S Scott, *When the Euro Falls Apart*, Intl Fin 1:2 1998, 207-228 (see link) lists particulars of UK and NY adoption of legislation to ensure continuity of contract.

This distinction is especially relevant in scenarios where the break-up is limited, and where the EUR remains a functioning currency. In the alternative scenario of a full-blown break-up, redenomination into new local currency or ECU-2 is possible even for foreign law bonds, and there is a less clear-cut case for differing risk premia based on different jurisdictions.

In any case, the immediate conclusion from an investor perspective should be that assets issued under local law should trade at a discount to foreign law obligations, given the greater redenomination risk for local law instruments. This conclusion is based on the implicit assumption that a new national currency would trade at a discount to the Euro. Obviously the validity of this assumption will depend on the specific country in question, but most would agree that this assumption is likely to be correct for countries such as Greece, Portugal, Ireland, Spain and Italy. The chart below illustrates this by showing estimated 'fair value' levels by country, based on the prevailing real exchange rate from 1990-1998. The caveat to this argument is that insolvency may alter the conclusion. In the case of insolvency, foreign law obligations may remain denominated in Euro (in a limited break-up scenario). But there could still be a material hair-cut on foreign law obligations. Hence, in an insolvency, whether local law obligations should trade at a discount to similar foreign law obligations will then depend on an evaluation of the higher redenomination risk relative to the size of likely haircuts on local law vs foreign bonds. If hair-cuts on foreign law bonds are higher than local law bonds, that could negate the redenomination effect, and foreign law bonds should no longer trade at a premium in this scenario.

Fig. 2: Fair values ahead of Eurozone creation (1990 to 1998)



Source: Nomura

Grouping Eurozone assets according to redenomination risks

The table below highlights the legal jurisdiction of a number of key Eurozone assets.

While we cannot claim completeness, we have attempted to highlight the appropriate governing principals, whether Local, English or NY and the body of law (e.g. Banking Law for deposits, Covered Bond law for Pfandbriefe, Company Law for Equities) which governs each security, contract or interest. In the case of English or NY law, the only relevant body of law likely will be contract law, as foreign law is only used as a means of contracting outside of a local jurisdiction, and no specific foreign statute could have an impact.

We give examples of the various financial instruments which trade. For instance, while BTPs and GGBs are governed by local statute and local contract law and for the most part international bonds (Rep of Greece Eurobonds, and Rep of Italy Eurobonds) are governed by English law or NY law, there are some countries which have issued international bonds (i.e., for international investors) under local law, making the outcome of a redenomination far less certain given the ambiguity of the nexus of the governing law.

What is obvious as well about this table is the vast number of master agreements which underpin most financial transactions. These include the various swap agreements from ISDA (under NY or English law) to those under French, German or Spanish law, as well as the various Repo and Securities Lending master agreements and MTN platforms for issuing bonds. Each master agreement involves far more paperwork than a single standalone swap contract or bond. But the setup costs ensure that once the master agreement is finished, individual swap and bond transactions can be documented quickly and efficiently. Moreover some master agreements such as MTNs may be flexible enough as to allow the issuance of bonds to be under various different governing laws.

Fig. 1: Governing law and standard financial securities and contracts

Governing Law	Security Type	Body of Law	Examples
Local Law	Sovereign Bonds, Bills	Local Statute/Contract	GGBs, Bunds, OATs
	International Bonds	Local Contract	Rep of Italy, Kingdom of Spain, etc
	Corporate Bonds	Contract	
	Covered Bonds (Pfandbriefe, OF, Cedulas, etc)	Covered Bond Law (Pfandbriefe)	Pfandbriefe, Obligacions Foncieres, Cedulas, Irish CBs
	Schuldscheine (marketable loans)	Contract	Banking schuldscheine
	Loans	Contract	
	Equities	Company	Any EU Equity
	Commercial Contracts	Contract	
	Deposits	Banking Law	CDs
English Law	Sovereign Bonds	Contract	Greek Euro-bonds, Rep Italy Eurobonds, Kingdom of Belgium USD-denominated bonds
	Corporate Bonds (Euro-bonds)	Contract	
	Loans (Euro-Loans)	Contract	Euro-Loans
	Commercial Contracts	Contract	
NY / Other Law	Sovereign Bonds	Contract	Yankees, Samurai, Kangaroos, Maple, Bulldogs, Dim Sum, Kauri, Sukuk, etc
	Corporate Bonds	Contract	
	Loans	Contract	
	Commercial Contracts	Contract	
Master Agreements	International Swap Dealers Association (ISDA)	English or NY Contract	IR Swap/Fwd, FX Swap/Fwd, CDS, Bond options
	Commodity Master Agreements	Various for each commodity	Gold Swaps/Forwards, Electricity Swaps/Fwds, etc
	Rahmenvertrag für Finanztermingeschäfte (DRV)	German Contract	Swaps and Repos with German counterparties
	Fédération Bancaire Française (AFB/FBF)	French Contract	Swaps with French counterparties and all local authorities
	Contrato Marco de Operaciones Financieras (CMOF)	Spanish Contract	Swaps with Spanish counterparties
	ICMA Global Master Repurchase Agrement (GMRA)	English Contract	Repo Agreements
	Master Repurchase Agreement (MRA)	NY Contract	Standard NY Law Repo Agreements
	European Master Agreement (EMA)	English Contract	Repo with Euro-systems NCB/ECB
	General Master Securities Loan Agreement (GMSLA)	English Contract	Sec lending
	Master Securities Loan Agreement (MSLA)	NY Contract	Sec lending
	(Euro) Medium Term Note Programme (MTN/EMTN)	English or NY Contract	WB, Rep Italy, EIB MTN Programmes
Other	Bond Futures (Eurex)	German Contract	Bund, Bobl, Schatz, BTP Futures on Exchange
	IR Futures (Liffe)	English Contract	Euribor Contracts on Exchange
	Equity Futures	Local Law/English Law	SX5E, DAX, CAC40, MIB, IDX, IBEX, BEL20, PSI-20,WBA ATX
	OTC Futures	English or NY Contract	Client back-to-back futures with member firm
	Clearing Houses (LCH, ICE, etc)	English Contract, etc	Repo, CDS etc via clearing houses
	Cash Sales	Sales or Transaction	All cash sales prior to settlement (i.e., before T+3)

Source: Nomura

The judicial process in detail

In terms of the judgment, there will likely be some variance as to courts' decisions based on both the method for introduction of the new currency and any legislation directly binding on the courts. The general criteria for decision

Local Courts

- **Specific Legislation** (a currency law) for Redenomination of Local Contracts into new currency can bind courts and overrule any contractual terms. It is particularly likely that contractual terms will be changed to re-denominate all local law contracts.

English Courts:

- **Lawful and Consensual Process implies application of *Lex Monetae* principle**: if legal nexus is to the exiting country then redenomination can happen in some cases. Otherwise, the Euro will remain the currency of payments.
- **Unlawful and Unilateral Withdrawal - No redenomination** -- As UK is signatory to the Treaties, unlawful withdrawal is manifestly contrary to UK public policy and no redenomination will likely allowed.
- **EU Directive/UK Statute to redenominate** and ensure continuity of contract: English Court must uphold UK statute and/or interpret UK Statute so as to be in agreement with EU directive and re-denominate.

NY/Other Courts:

- ***Lex Monetae* principle**: If legal nexus is to the exiting country then redenominate. Otherwise, leave in euro.
- **NY (or other) Statute to redenominate and ensure continuity of contract**. NY Courts must uphold NY State Legislation and re-denominate contracts if so directed.

We note that the difference between lawful and unlawful exit/breakup is crucial for UK courts. This is, in particular, because the UK was signatory to the treaties, and unless otherwise directed, a Legal tender law from an exiting country in flagrant violation of the treaties will be considered to be manifestly contrary to UK public policy and the *Lex Monetae* of the Exiting Country will likely not be upheld in UK Courts. The legality of exit is of little consequence to NY and other non-EU courts and probably will not prejudice their judgments.

We thus expect that foreign law will insulate contracts from redenomination in the vast majority of cases, and in the UK in particular, will do so in all cases when the method of exit is unilateral and illegal. The one overriding concern would be the introduction of legislation (NY or EU/English) which circumvents any court decision, although due to the politics of exit, it is unlikely that any such legislation would occur unless there were complete breakup.

In a scenario where the Eurozone breaks up in its entirety and the EUR ceases to exist, contracts cannot for practical purposes continue be settled in Euro's. In this case, there are two basic solutions. Either obligations are redenominated into new national currencies by application of the *Lex Monetae* principle or there is significant rationale of the legal basis for the argument of *Impracticability* or *Commercial Impossibility*[6]. Alternatively, existing EUR obligations are converted into a new European Currency Unit (ECU-2), reversing the process observed for ECU denominated obligations when the Euro came into existence in January 1999.

With specific mention of sovereign bonds, it is likely that local law sovereign bonds will immediately be redenominated, while the foreign-law bonds, with obvious international distribution, would likely remain in EUR.

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[6] The more common *Frustration of Contract* is unlikely to apply, see Protter, Euro-Fragmentation.

Enforcement

The court of judgment is of some matter, but the court of enforcement is of paramount importance in determining payoffs. In particular, if the court is:

Local Court:

- Courts will enforce only in the local currency (as per the new Currency law) and conversion will take place at the time of award or at some official rate (which may differ from the market rate (see Nomura's Global Guide to Corporate Bankruptcy, 21 July 2010, link .
- Insolvency: If the entity is undergoing an insolvency governed by local law, conversion is generally made at time of insolvency filing (irrespective of eventual award).
- There probably will be uncertainty over the timing of payment and the conversion rate may not be at market rates, but exchange controls may further complicate repatriation of awards.

English NY/Other Court:

- Redenomination is unlikely to change the award and enforcement will likely be made in appropriate foreign currency.
- Insolvency: If English or other court is determined to be the appropriate jurisdiction for insolvency, then delivery in appropriate foreign currency (see Global Guide to Corporate Bankruptcy link)

The combination of the award and the enforcement risk highlight a number of interesting credit concerns. If there is an exit, local law instruments will typically be redenominated and there will be little protection in them, but foreign law affords far greater protection. If on the other hand the exit also involves an insolvency, foreign law instruments may similarly afford little protection. This would be true for instance for Greek bonds. Generally, investors look to Greek Eurobonds for the extra protection afforded by English Law, attempting to avoid some of the restructuring risk in GGBs. If, on the other hand we take exit into account, it would make more sense for the Greek government to continue to service their GGBs using seignorage revenue (or perhaps with support of the CB), and default on the overly expensive Eurobonds. The current PSI discussions underway, on the other hand, appear to give little comfort to holders of either Greek or Foreign law debt.

Quantifying foreign law eurozone assets

In addition, in order to get a sense of the break-down of assets issued under local versus foreign law for various Eurozone countries, we compiled some basic macro-level statistics.

The table below provides some key figures. The data on bonds comes from the BIS and shows the amount issued in the local market and in the international market. It is important to note that International bonds refer to bonds issued outside of the national market. This means that bond issued elsewhere in the Eurozone are considered international bonds, even though some of them would be governed by the issuer's national law. For example, Greece has €173bn in international government bonds, but only about €16bn has been issued under foreign laws.

Fig. 1: Assets outstanding in the eurozone by location of issuance (bn EUR)

	Equities	Bonds						Loans		Total
		Sovereign		Financial corp.		Non-fin corp.				
		Local	Intl	Local	Intl	Local	Intl	Local banks	Foreign banks	
Austria	74	106	88	140	152	34	34	371	77	1,074
Belgium	170	220	130	182	313	18	24	315	219	1,591
Finland	121	19	56	33	46	10	18	183	98	584
France	1,115	1,339	53	949	1,268	209	337	2,230	1,038	8,537
Germany	992	1,327	250	433	1,800	294	108	2,369	842	8,415
Greece	28	120	173	80	151	0	9	267	78	907
Ireland	87	48	48	202	329	2	10	349	400	1,475
Italy	371	1,529	198	556	816	278	81	1,990	428	6,245
Neth.	185	304	19	370	1,006	91	62	1,043	574	3,654
Portugal	52	76	49	87	148	38	9	292	116	867
Spain	423	516	147	617	1,293	18	18	1,920	409	5,361
Total	3,617	5,603	1,210	3,650	7,322	992	709	11,329	4,278	38,710

Source: BIS, Bloomberg, Nomura. No International bonds refer to bonds issued outside of the national market. This means that bond issued elsewhere in the Eurozone are considered international-bonds, even though some of them would be governed by the issuer's national law. For example, Greece has 173bn in international government bonds, but only about 16bn has been issued under foreign laws. However, for corporate bonds, this is not an issue. Most international corporate bonds are governed by foreign laws, mainly English and NY laws.

As can be seen, some major issuers of sovereign bonds, such as France, don't have very much outstanding debt issued under international law (EUR50bn). However, smaller countries, such as Belgium and Spain do have considerable amounts of bonds issued outside of the domestic market (EUR130bn and EUR147bn, respectively). However, we estimate that only EUR7bn and 8bn respectively were issued under foreign laws.

Perhaps more importantly, a large amount of corporate bonds, as well as bank bonds are issued in international markets. Most international corporate bonds are governed by foreign laws, mainly English and NY laws. According to our data, about two-thirds of the financial corporate bonds, about EUR7300bn, were issued in the international market. For non-financial corporations, more than half of total issuance, about EUR709bn, was done on the international markets.

Conclusion

A scenario of Greek exit from the Eurozone is being openly discussed. German policy makers are even preparing legislation which would facilitate such and exit, should a country desire to move in that direction.

At the same time, the escalating tension in some of the Eurozone's biggest bond markets, including the Italian and French bond markets, has raised the probability of large-scale sovereign defaults. Since both Italy and France are too big to backstop within the current bail-out infrastructure, it will be hard to manage a debt restructuring in an orderly fashion; and default by one of the largest Eurozone economies would pose a major obstacle to keeping the currency union together.

The potential for break-up of the Eurozone raises the question about the future of current Euro obligations: Which Euro obligations would remain in Euro, and which would be redenominated into new national currencies.

Investors should consider three main parameters when evaluating 'redenomination risk'. The first parameter is the legal jurisdiction under which a given obligation belongs. The second is the likelihood that a break-up can happen in a multilaterally agreed fashion. The third parameter is the type of Eurozone break-up which is being considered, including whether the Euro would cease to exist in a given break-up scenario.

In a scenario of a limited Eurozone break-up, where the Euro remains in existence for core Eurozone countries, the risk of redenomination is likely to be substantially higher for local law obligations in peripheral countries than for foreign law obligations. From this perspective, local law obligations should trade at a discount to similar foreign law obligations.

In a scenario of a full-blown Eurozone break-up, evaluating the redenomination risk is more complex, as even foreign law obligations would have to be redenominated in some form. In this case, redenomination could happen either into new national currencies (using the *Lex Monetae* principle), or into a new European Currency Unit (ECU-2). This additional complexity in the full-blown break-up scenario leaves it harder to judge the appropriate relative risk premia on local versus foreign law instruments.

We also note that the distinction between local and foreign law jurisdiction becomes less important in situations involving insolvency. In those instances, the lower redenomination risk associated with foreign law obligations may be negated by higher haircuts. The importance of the legal jurisdiction therefore seems most relevant in connection with high quality corporate credits which can potentially avoid insolvency in scenarios involving sovereign default, and special consideration should also be given to the size of international assets.

Redenomination risk is clearly not only a legal matter. Redenomination risk for German assets present a different economic meaning compared with redenomination risk for Greek assets. For German assets in particular, it is often perceived that a break-up could entail currency appreciation in a redenomination event. But there is a caveat to this argument. While peripheral countries have an incentive to re-denominate debt, in order to avoid assuming debt in a stronger 'hard currency', this is not the case for Germany. Looking at the economics of debt service in isolation, you can argue that Germany would have an incentive to maintain its liabilities in Euros (or ECU-2) in a break-up scenario, in order to achieve lower debt service cost.

We will have more to say about these issues, and potential trading opportunities in short order.

Appendix: *Lex Monetae*

Lex Monetae or “the law of money” is a well determined principle with a great deal of case law. It is generally established that sovereign nations have the internationally recognised right to determine their legal currency. Reliance on this principal was actually key to the establishment of the EUR itself (see W Duisenberg, The Past and Future of European Integration: A Central Banker's Perspective, IMF 1999 Per Jacobsson Lecture, see link) .

For a brief overview of the principle, see C Proctor, The Euro-fragmentation and the financial markets, Cap Markets Law J (2011) 6(1) (see link) or The Greek Crisis and the Euro – A Tipping Point, June 2011 (see link) and for a more in-depth exposition as well as the history of case law, C Proctor, Mann on the Legal Aspect of Money, 6th Ed, Oxford UP, 2005 (see link).

Must establish the legal territorial nexus of contract/obligation

1. Explicit Nexus of contract can be established via a (re)denomination clause: The EUR or in any event the legal currency of <*Exiting* Country> from time to time.

2. Implicit Nexus of contract if

    a. Contract is governed by the Laws of <Exiting Country>

    b. Location of Obligor (debtor) is <Exiting Country>

    c. Location which action must be undertaken (e.g., place of payment) is <Exiting Country>

    d. Place of payment is <Exiting Country>

If no such denomination clauses exists, it is up to the courts to determine the Implicit Nexus of the contract. Was EUR meant to be EUR or the currency of the <Exiting Country>? If all of the factors mentioned tie the contract to the <Exiting country>, there is a rebuttable presumption that the parties to the contract had intended to contract on the currency of the <Exiting Country>. If one or more of the implicit tests fails, it is highly likely that there is insufficient evidence to determine the link to the <Exiting Country> and the contract or obligation is likely to kept in EUR. We expect that under this principle, the vast majority of English Law contracts originally denominated in EUR will remain in EUR (if it exists).

DISCLOSURE APPENDIX A1

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