

## Bad Bank Thoughts

### The Italian market for distressed asset needs liquidity via lower bid-ask

Deteriorated loans in Italy have now reached 20% of GDP, up 25% pa since 2008, or 16% of loans versus 5% in 2007. NPLs' write-offs have slowed to more than six years today from four pre-crisis. NPLs' sales totalled €7.5bn in 2014, a small number signalling the inefficient auction sales system (six auctions needed to sell distressed assets, double that in 2007). Only 8% of the auctions were awarded in 2013 (79% below the 2007 peak) with the auction sale price declining to 53% of the official value, from c.80% in 2007.

### Accelerating foreclosures by one year would reduce bid-ask by 3% . . .

The anticipated upcoming decree on NPLs should favour the development of a more structured market and reduce the current 25% gap in bid-ask via a lower time value discount applied by the market. We calculate the bid-ask spread would drop by 10p.p. to 15% if the recovery period of the NPLs decreases by three years, i.e. roughly 3p.p. lower spread for each shortened year in the foreclosure procedure.

### . . . and increase EPS by 6% and CET1 by 10bps via higher earnings

We estimate accelerating recovery procedures by one year would also generate a +6% impact on 2018 earnings, via LLPs release from lower time value discount on collateral, ranging from +3% at UCG/Credem to +25% at Creval. BP, BPER and MPS would hover over c.16%, on our estimates. Such an earnings boost would account for +10bps of CET1 ratio.

### Fully deducting credit losses in year 1 would have no EPS impact though . . .

Under the current regime, credit losses contribute to the taxable income in equal installments over five years (i.e. 20% pa). As such, banks anticipate cash to the Central Government via higher taxes in exchange for booking DTAs pro-rata to the share of credit losses that cannot be deducted. As a result, we show that moving the deductibility of provisioning from 5 years to 1 year would have no EPS impact.

### . . . and 10bps CET1 boost via halting the creation of new DTAs

However, full deductibility of LLPs would halt the creation of new DTAs. As credit losses DTAs transformable into Tax Credits are risk-weighted 100%, we forecast a 10bps higher CET1 ratio at Italian banks from no new DTAs formation (20bps at BP and MPS).

### Pending decree on NPLs could thus boost loan growth by 4 p.p. . . .

As such, the NPLs decree could boost the CET1 ratio at Italian banks by 20 bps, 50% via higher earnings from lower time-value provisioning and 50% from halting DTAs creation. The related €1.7bn capital free-up, i.e. €15bn RWAs, could fuel extra loan growth of 4p.p. Or, alternatively, one could argue the decree could offset one-third of the 60 bps CET1 erosion that we estimate from a potential 20% risk weight on Italian govies, as we see roughly 15bps CET1 erosion for each 5p.p. of risk weight.

### . . . and facilitate the set-up of a 'Bad bank' with the support of the 'new CDP'

We think the pending NPLs' decree should help with setting up a bad bank. A management change at CDP announced over the weekend could ease a CDP guarantee, if needed, to surround any state aid red flag from Bruxelles. A recent ASTRID proposal shows the mechanics on an SPV vehicle helping banks offloading low quality assets repackaged into ABS with various guarantee options. We show how such SPVs could be tailor-made into a proper bad bank by adding 10% of NPLs, thus issuing ABS backed by a mix of performing assets and NPLs. If, as we suspect, the main constraint to a bad bank is the government not willing to rely on taxpayers' money, than banks could consider paying for the guarantee as this would mean swapping any upfront loss from disposing net NPLs today with the cost of a guarantee spread during the life of the SPV bonds (normally 7-8 years). The government could surround the issue of 'adverse selection vs mandatory contribution' by conditioning the access to the new foreclosure procedures, and thus to the lower time value discount, only for the assets transferred to such a SPV.

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The impact on Italian banks of the pending NPLs decree

Banks	CET Impact from no DTAs	2018 EPS impact from 1yr shorter recovery time	CET1 impact from 1yr shorter recovery time	Extra loan growth from the NPLs decree
UCG	2 bps	3%	5 bps	2%
ISP	7 bps	5%	9 bps	4%
MPS	18 bps	16%	18 bps	7%
UBI	9 bps	12%	13 bps	5%
BP	16 bps	17%	21 bps	7%
BPER	9 bps	17%	19 bps	8%
BPM	7 bps	9%	9 bps	5%
POPSO	9 bps	7%	6 bps	5%
CREVAL	10 bps	25%	20 bps	8%
CREDEM	5 bps	3%	3 bps	2%
	9bps	6%	9 bps	4%

Source: Mediobanca Securities

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## Establishing an Italian SPVs to manage NPLs

We are not aware of any development towards setting up a public bad bank in Italy. However we believe two ongoing changes could facilitate such a potential outcome: 1) the pending NPLs decree discussed in this note which should set a more favourable framework for such a project to eventually be considered; 2) The management change at Cassa Depositi e Prestiti announced over the weekend which could foresee higher availability from the 'new CDP' in supporting any government initiative on the bad bank by providing a CDP guarantee aimed at surrounding any state aid red flag from Bruxelles. Alternatively to a CDP guarantee we think a state guarantee could still work as long as it is at market price. Finally, a repeat of what Monti did in 2012 could be considered, when the government passed an ad hoc decree that allowed Italian banks issuing €60bn state guaranteed bonds eligible for ECB at the LTRO with no impact on the public debt.

A recent proposal of ASTRID shows the mechanics on an SPV vehicle conceived to help banks offloading low quality but still performing assets repackaged into ABS with different guarantee options. The Junior tranche properly reduced would be bought by the bank that sells the assets, the mezzanine tranche properly increased would be state guaranteed while the Senior tranche, owing to the guarantee on the Mezzanine one, would enjoy a higher rating. A guarantee on the mezzanine tranche would thus allow a thinner junior tranche to be engineered, resulting in lower risk, which would translate into a lower yield. The state guarantee would be based on the country's risk appetite, which would determine the maximum loss it is ready to write on its public book in case of default of the ABS up to the guaranteed mezzanine tranche level. As such, the risk appetite would characterize the thickness of the mezzanine tranche. Thereafter it would quantify the cost of this guarantee at market values and the one-to-one correspondence, through probability measures, between these financial variables. As the junior tranche would ensure the first loss absorption, the government guarantee would become contingent, thus not weighing on its public debt budget. Leveraging on such a proposal we show in this chapter how such mechanics could also work if tailored made into a proper bad bank by simply adding 10% of NPLs to the performing but low quality asset of the ASTRID proposal, thus issuing ABS backed by a mix of performing assets and NPLs.

Our analysis in this chapter shows two things: 1) the guarantee vs state aid problem is manageable; 2) the maths supporting and pricing the ABS scheme works. As such, we think the real constraint to the Government delivering a bad bank is not necessarily related to the guarantee per se but to the intention not to use taxpayers' money to cover any potential loss. If this is the case, we think the solution could lie in the banks paying for the guarantee and thus swapping any upfront loss from disposing NPLs today with the cost of a guarantee spread during the life of the SPV bonds (normally 7-8 years). Moreover the government could surround the problem of adverse selection versus mandatory contribution to the SPV by conditioning the access to the new foreclosure procedures (and thus to the lower time value discount of the collateral) only for the assets transferred to such a SPV.

### Purpose and goals of setting up SPVs for NPLs disposals

Goal: profit maximization versus loss minimization

As we analysed in chapter 3, disposing of NPLs via a Special Purpose Vehicle has proven to be a common solution in the past, and has frequently been successful. This option has been used to different ends:

- ◆ To facilitate the resolution of bankrupt or non-viable financial institutions, e.g. RTC (US);
- ◆ To restructure distressed but viable financial institutions, e.g. Securum (Sweden);
- ◆ To privatise government-owned or government-intervened banks, e.g. Consortium de Realization (France).

In order to enable a SPV to operate successfully, clearly defined goals and market friendly governance are an essential part of the set up. The operational goals of SPVs vary across countries.

- ◆ In certain countries the focus has been to liquidate within the private sector any bad assets that have been transferred to the government as quickly as possible. The aim of such an exercise is to avoid further deterioration in the value of the bad assets and to minimise the carrying cost of these assets to the government.
- ◆ Alternatively, governments set up SPVs to function as restructuring vehicles. As such the focus is on restructuring NPLs in order to make them marketable at a better price.

In other words the ultimate objective is either profit maximization or loss minimization.

#### Governance: centralized versus decentralised SPV

As far as governance is concerned SPVs managing bad assets can either be public or private entities. Similarly, the parties that transfer their bad assets can be either private or public.

- ◆ Usually, when bad assets amounting to a substantial value are transferred to SPVs, it is difficult to find a private investor willing to take ownership of the vehicle if the bad assets are not supplemented by a government-guarantee. In such a situation, the government might be better off owing the SPVs directly as opposed to acting as guarantor, as this would enable taxpayers to benefit from any future upward price movements on the value of the assets. Furthermore, the mere provision of a guarantee by the state does not necessarily incentivise liquidating bad assets at the best possible price. This could in turn lead to further losses for the State. Hence, in these situations, it takes commercial acumen for the government to take direct ownership of the vehicle in our view.
- ◆ Alternatively the bank could set up the SPVs as a subsidiary of the same bank so to benefit from its prior knowledge of the bad assets and close contact with the respective borrowers. Nevertheless, banks must ensure their focus remains on the restructuring of the cleaned bank and that it does not deviate towards the disposal of the bad assets. In addition, with certain types of assets, e.g. real estate, it might be better to seek help from professionals outside the bank to expedite their disposal. If the government has provided financial support to the bank, it might be entitled to ask for a share in the upside of the SPV subsidiary.

As such, SPVs managing bad assets can follow a centralised state intervention approach (single SPV) or a decentralised approach (several competing SPVs).

- ◆ A centralised SPV serves as a vehicle for transferring NPLs out of troubled banks, based on a uniform valuation allowing governments to attach conditions to purchase NPLs in terms of bank restructuring. Centralised ownership of collateral is also helpful in providing more leverage over debtors and more effective management. It can also be given special legal powers to expedite loan recovery and bank restructuring.
- ◆ Decentralised SPVs within the bank offer the advantage of the bank's prior knowledge of the borrower, which can facilitate effective debt restructuring. However a lack of experience in restructuring bad assets could cause a loss of focus in conducting normal banking functions, particularly if the NPL portfolio is too large. It can also give rise to conflicts of interest with the parent bank, as well as governance issues.
- ◆ Alternatively, a decentralised approach could be implemented outside of the banks by involving private experts' vehicles. This offers the advantage of helping to create a secondary market for distressed assets. Upfront loss recognition also facilitates the quick clean-up of books, although a lack of prior knowledge of the borrower in this case would not help debt restructuring. Equally, banks might not have sufficient capital to recognise upfront losses associated with selling to an SPV.

#### Legal powers

An important consideration in the formation of SPVs is the legal powers extended to them. An efficient legal standing should allow clean transfers of titles in all asset transactions. Any legal obstacle, such as requiring permission from debtors to transfer assets, would represent a constraint to success, in our view. The legal basis of a SPV for bad assets should be designed in a way that

allows it to carry out orderly and effective insolvency processes, in line with the bank's corporate-restructuring objectives. For instance, if the goal of corporate restructuring is to maintain viable companies, the vehicle's focus should not be rapid conversion to cash, but rather corporate workouts and possible equity-ownership positions.

#### Assets selection process

The choice of assets an SPV should purchase and the banks from which it should purchase them is a fundamental question.

- ◆ Some countries, e.g. US and Thailand, have chosen to acquire assets only from banks that are being resolved by liquidation or merger and that are hence under government ownership/control.
- ◆ Other countries have provided assistance to banks that have remained open after the SPVs bought the bad assets; this is in order not to disadvantage better banks in the industry that are struggling to handle bad loans unassisted. One solution to this problem is for governments to buy some but not all of the bad assets of the banks they assist. This ensures that assisted banks are left with roughly the same proportion of bad assets as the rest of the surviving industry.
- ◆ When handling the assets of failed banks, differentiating between better-quality loans and impaired assets is very important. Unimpaired loans can eventually recover their value if left in the banking system, and hence should be transferred to another operating bank as quickly as possible. Examples include the Federal Deposit Insurance Corporation (FDIC, USA), which transfers good loans to an assuming bank at the time of the failure of resolution. Korea achieved the same via a bridge bank. In Thailand, the assets of the closed finance companies were sold through public auction.

## Designing a Public Bad Bank in Italy

Different options . . .

Learning from previous experiences we can conclude that the potential design of a bad bank in Italy varies. The different forms we see include balance-sheet guarantees (where a bank protects part of its bad assets via government guarantees), internal restructuring units (where a bank places bad assets in a separate unit within the bank), SPVs where a bank offloads bad assets to an ad hoc vehicle and external bad banks (where a bank transfers assets to a legally separate banking entity).

. . . lead us to conclude in favor of an Italian centralized solution . . .

In our opinion the first decision facing any government choice is between a centralised or a decentralised solution. History suggests this depends on a number of factors, including the types of the assets to be transferred, the magnitude of the bad-asset issue, the depth of the markets for bad assets, and the characteristics of the debtors involved. We think that the lack of market depth for a given set of assets as analysed in chapter 1 represents a strong rationale for Italy to form a centralised vehicle to dispose of such assets. State-owned, centralised SPVs have been successful in Indonesia, Korea and Malaysia. In Thailand, a more mixed approach has been used - a public vehicle was formed in return for purchasing residual assets from the Thai Financial Sector Restructuring Agency (FRA), while encouraging commercial banks to establish their own separate SPVs. Ownership of the SPVs should be open to the banks themselves and to private partners that have equity capital and provide asset management services. This means the proceeds of the assets disposal should initially go towards the repayment of the outstanding debt of the vehicle with any remaining proceeds being assigned according to the capital share in the partnership.

. . . with flexibility on legal rights . . .

The rights of ownership and legal obligations between debtors and creditors are an essential part of the set up in providing for the orderly resolution of disputed claims, including debt recovery and the realisation of collateral for unpaid debt. However, we do not think the existing legal framework in Italy is equipped to deal with a large base of bad assets, and we would expect the pending

decree to grant special legal powers to the Italian bad bank for asset recovery and restructuring. Malaysia's Danaharta for instance is a clear case of an SPV having special legal powers to use at its discretion, to aid in effective asset management and disposal:

- ◆ special vesting powers insulate Danaharta and subsequent purchasers from any undisclosed claims made after it acquires the NPL from the selling bank;
- ◆ Danaharta can appoint special administrators without having to go to court; and
- ◆ Danaharta can readily foreclose on collateral.

We think this should represent the best reference case for Italy.

**. . . constraints on working out only foreclosed properties . . .**

We think any Government driven Italian vehicle should have limited discretion in choosing which assets to purchase, thus only taking over assets that can be managed effectively. In the context of Italy, this means setting up an SPV managing only foreclosed properties. Securum's success in Sweden was partly attributed to the fact that its assets comprised primarily commercial real estate, which was easier to dispose of than other asset types. We believe this is equally true in Italy for residential properties.

**. . . and priced at fair value . . .**

Italian troubled assets transferred to the SPV should be valued based on current market prices. As such, troubled assets for which there is no market should be transferred to the bad bank at a zero price and therefore at zero cost to the Government as the bad bank's sponsor. The transfer of assets at fair value would help:

- ◆ Preventing banks from boosting capital by transferring NPLs at above-market value to their private SPVs; and
- ◆ Ensuring that SPVs do not serve as a means by which the Government bails out private banks by purchasing NPLs at above-market value.

**. . . which can be difficult in the case of Italian NPLs . . .**

Alternatively the transfer could take place at an initial price, with an agreement to estimate the final price after the value of assets has been estimated or the assets sold. The drawback of this approach is that sellers might be reluctant to transfer assets without having an idea of the final price. Again, the Malaysian experience suggests this problem can be addressed by applying some form of profit-loss sharing agreement. At its inception, Danaharta purchased NPLs at an average discount of 55% to book value. However, sellers had the right to receive 80% of any excess recoveries Danaharta would have realised from NPL disposal (net of the acquisition cost). Furthermore, banks had the option not to transfer their NPLs to Danaharta, in which case they were required to make provisions to reduce the value of the NPLs down to 80% of the offer price. In fact, some banks rejected Danaharta's offer on the premise that they were better equipped to affect a recovery of NPLs, a situation we would expect to see materialising in Italy as well, especially at larger banks.

**. . . and funded via government guarantee bonds eligible at the ECB . . .**

We think the bad bank should be funded by the government. It would need to be sufficiently funded to carry out the effective disposal of NPLs. Funding is required both for the acquisition of assets and for day-to-day operations. A government-owned bad bank should be funded directly by the government but we would expect the Italian bad bank to issue its own bonds backed by the government guarantee. NAMA paid for acquired loans by issuing debt; 95% of the payment was upfront, in the form of Irish government-guaranteed bonds that could be used as collateral by the banks in the interbank lending market and in open-market operations conducted by the ECB. Equally, SAREB issued senior bonds in exchange for the asset to enhance the liquidity of participating banks, i.e. their ability to use these bonds as collateral at the ECB.

**. . . with tax treatment aligned to government bonds...**

If the bonds of the bad bank were to be tradable, one issue that the government might need to consider is their treatment for taxation purposes. For instance, if the SPV bonds were government-guaranteed and pay the same interest as government securities, investors would be likely to review them on a tax-equivalent basis, thus suggesting that both types of bonds be given the same tax treatment. Danaharta's funding was in the form of five-year zero-coupon bonds guaranteed by the central government. Korean Asset Management Corporation (KAMCO) was funded by government-guaranteed tradable bonds with semi-annual interest payments. In contrast, the Mexican Fondo Bancario de Protección al Ahorro (FOBAPROA) followed a non-market-based, illiquid funding structure and was funded by 10-year non-tradable promissory notes, where interest accrued on notes was not payable until maturity.

**. . . and the goal of maximising the recovery value . . .**

We think the Italian bad bank should be guided by goals of maximizing the recovery value of the NPLs in possession. The problem with this approach is the lack of clarity with regard to the meaning of 'recovery value' as it can mean either maximization of the market value of assets or the maximization of their book value.

- ◆ The US, for instance, during its S&L crisis, adopted the goal of maximizing net present value (NPV) of assets, in order to account for the time value of money.
- ◆ On the other hand, Sweden carried out a peculiar calculation for each of its NPLs: assuming property prices were going to increase gradually, it estimated the required yearly price increase in property to compensate for financial and other costs of holding on to the assets. If the required rate of increase was not considered realistic by property-market experts, the assets were sold immediately.
- ◆ China's experience provides the least preferable reference here, in our view. China's bad banks purchased c. \$205bn in bad loans at face value, despite bad loans being unlikely to realise their full face value. In return for the bad assets, Chinese banks received 10-year bonds paying a taxable coupon of 2.25% p.a. The result has been that instead of relieving the Chinese state-owned banks of bad loans, the bad banks have been bailed out themselves by the same state-owned banks that created them.

**. . . within a reasonably long time horizon**

The speed of asset disposal varies significantly. For instance, Spain, the US, and Sweden were able to dispose of assets relatively rapidly. In contrast, the fragile state of Indonesia's economy and the scale of assets acquired by the Indonesian Bank Restructuring Agency (IBRA) prevented the rapid disposal of assets there. IBRA was formed in 1998 for a period of five years, the recovery process took longer than expected, and the Government terminated it in 2004, transferring the remaining NPLs to the Ministry of Finance.

### **In search of a guarantee**

We are not aware of any concrete development towards setting up a public bad bank in Italy. However two pending changes could represent the triggers for such a project to take shape:

- ◆ The expected government NPLs decree discussed in this note will set up a more favourable framework for such a project to eventually be considered;
- ◆ The management change at Cassa Depositi e Prestiti announced by the government over the weekend is the precondition to give birth to the 'new CDP'. This could also foresee higher availability from the new management of CDP in supporting any government initiative on the bad bank by providing a CDP guarantee. This would help surrounding the opposition of Bruxelles in setting up a bad bank with a government guarantee that would be considered as state aid.

### Red light from Brussels?

It is not clear to us what is preventing Brussels from giving the green light to a state guarantee, which would allow the Italian bad bank to work efficiently. Officially, the answer lies in the state aid framework that this would create. In practice however, we would not discount this happening in the future, and at the very least we do not see it as reason enough for Italy not to undertake the setting up of its own bad bank in this way.

Indeed we think three options are available:

- ◆ A state guarantee at market price should be accepted by Bruxelles. It is difficult to foresee state aid if the banks pay for the guarantee provided by the state. The low rates environment should help banks affording such a cost in our view;
- ◆ An ad hoc government decree. We have been here before in December 2012, when the Monti government passed an ad hoc Decree that managed to avoid the state aid case that allowed banks to issue government guaranteed bonds that were eligible to the ECB without having an impact on Italian public debt. We recollected €60bn government guaranteed bonds were issued by Italian banks which were then brought to the ECB as collateral for the LTRO auctions.
- ◆ Finally, should a state solution not been considered viable for Italy in light of the new bail in regulation, we think Cassa Depositi e Prestiti could represent an alternative option. Considering that ESA 95 allows CDP not to be included in the Italian public debt perimeter, a guarantee to the bad bank offered by CDP at market price could represent the best compromise, in our view.

### A potential solution

As such we think the real constraint to the Government delivering a bad bank is not necessarily related to the guarantee per se but to the intention not to use taxpayers' money to cover potential losses. If this is the case, the solution could lie in the banks taking the loss in exchange of spreading it during the life of the bonds of the SPV (i.e. paying for the guarantee provided by the state or by CDP) and conditioning the access to the new pending foreclosure procedures (and thus to the lower time value discount determining the haircut to the fair value collateral) only for the assets transferred to the bad bank.

## The ABS with a guarantee either by the government or by CDP

### As recently highlighted by Astrid

Italy could consider the possibility of structuring ABS with government guarantees on mezzanine tranches, making them eligible for a higher rating and therefore helping banks to offload assets. A state guarantee on the mezzanine tranche or, even better, a joint guarantee coming from both the State and a supranational institution such as the European Investment Bank (EIB), would in theory provide ABS with an higher rating. Moreover a guarantee is an indispensable condition for ABS to be eligible under the ECB's ABS purchase programme.

The scheme envisaged by a recent proposal of Astrid and CDP works as follows:

- ◆ The Junior tranche properly reduced would be bought by the bank that sells the assets;
- ◆ The Mezzanine tranche properly increased would be state guaranteed;
- ◆ The Senior tranche, owing to the guarantee on the Mezzanine one, would enjoy a higher rating.

A guarantee on the mezzanine tranche would allow a thinner junior tranche to be engineered, resulting in lower risk, which would translate into a lower yield. The state guarantee would be based on the country's risk appetite, which would determine the maximum loss it is ready to write on its public book in case of default of the ABS up to the guaranteed mezzanine tranche level. As the junior tranche would ensure the first loss absorption, the government guarantee would become contingent, thus not weighing on its public debt-budget.

## A practical example with low to mid quality but still performing assets

The above scheme would work particularly well in the case of granting eligible ECB status to performing SME loans. Here we propose a few possible ABS schemes with underlying assets rated from 'double C' to 'double B'.

ABS are financial assets issued by legal entities set up ad hoc in the context of securitisation transactions. In particular, a bank - from the perspective of freeing financial resources to be invested or to improve its balance sheet - transfers specific 'asset classes' (for example loans, mortgages, of other credits) to the SPV. The vehicle receives the liquidity needed to acquire the assets from the bank by issuing ABS. Consequently, the SPV is structured in order to be risk-neutral. In particular:

- ◆ ABS reflect the overall risk of the underlying assets, which are re-arranged in a standardised way producing different categories of bundled assets (tranches), with different and increasing level of risk (respectively junior, mezzanine and senior);
- ◆ ABS cash flows are aligned with those of the underlying assets (by using asset swaps).
- ◆ The expected loss of the asset classes transferred to the SPV should be properly reflected within the correspondent expected loss of the ABS. In order to do this, it is important preliminarily to estimate the potential losses over time of these asset classes in order to cluster them in terms of their risk-return profile. In this way it is possible to set the capital structure of the ABS, i.e.: the entity and risk-return profile of the different tranches.
- ◆ In the following examples we refer to the ECAI rating classification in order to provide a minimum disclosure about the magnitude of these financial variables by averaging the results of the analysis over a time period between 5 to 10 years.

The tranches with lower risk are placed on the market, while the ones with higher risk (junior) - which are engineered to absorb the first losses occurring on the underlying portfolio - are usually bought directly by the bank.

### ABS scheme

Bank A			
Liquidity	95	8	Capital Debt
→ Junior	5	92	
Total Assets	100	100	Total Liabilities

  

SPV A			
→ Credits	100	65	Senior (AA)
		30	Mezzanine (A)
		5	Junior (Unrated)
Total Assets	100	100	Total Liabilities

Source: Mediobanca Securities, Astrid

In the light of the above we propose in the table below four schemes:

- ◆ 'double C' portfolio,
- ◆ 'double B' portfolio,
- ◆ with state guarantee alone, or
- ◆ with a 50-50 State and EIB guarantee.

This choice, in fact, allows to easily interpolating also several intermediate cases. The schemes are assumed considering the current triple B rating of the country. In structuring the ABS, as already said, the expected loss of the portfolio is reversed on the capital structure of the securities.

**A guarantee on the mezzanine tranche to 'reinforce' the capital structure . . .**

Moreover the presence of the guarantee implies synthetically an improvement in the quality of the pool of underlying assets. However the conditional event that the guarantor would default as well has to be properly taken into account in the calculation of the expected losses. In other words the guarantee 'reinforces' overall the capital structure of the ABS by improving its waterfall structure.

**. . . the cost of which depends on the guarantor's risk appetite . . .**

Anytime a guarantee is engineered within an ABS scheme it is needed to handle with the issue of defining the risk appetite of the guarantor, that is the amount of expected losses he wants to undertake. Once defined this quantity, it is thus defined the cost of the guarantee at market value and the portfolio exposure given the one-to-one correspondence, through probability measures, between these financial variables. Moreover the definition of the portfolio exposure identifies the amount of the ABS capital structure that would be moved immediately from the junior tranche to a risk level higher or equal to the one of the guarantor.

**. . . which increases the 'thickness' of the mezzanine tranche . . .**

For the sake of clarity and by simplifying the reasoning, let's make the example of an ABS where the junior tranche without the guarantee would result to be 40 (at the end of the risk-neutral engineering process). Once the guarantee scheme is implemented and assuming that the risk appetite of the guarantor (in terms of risk exposure) is set equal to 30, this last quantity would move from the junior tranche to the upper ones while the guarantor risk would characterize the mezzanine tranche.

**. . . to be bought, together with the senior tranche, by the ECB . . .**

In this ABS structuring the liquidity risk component is considered negligible given the assumption that all the *tranches* (with the exception of the *junior* one) are bought by the ECB. In this perspective we think a new piece of regulation is needed in the wake of the decision n. 45 of November 2014.

**. . . but also institutional investors could switch from govies to guaranteed ABS**

Also institutional investors could play a role in it. They could in fact replace the Government Bonds in their portfolio with these ABS notes since a Government Bond and a structured product that show the same loss probability are financially equivalent. In order to make this "substitution scheme" effective the structure of the guarantee should be designed to assure that the management of risks underlying the Govies will be dynamically aligned with those of the mezzanine tranches. Moreover some levelling playing fields pieces of regulations should be implemented since at the moment, in terms of risk limits, structured notes are badly treated if compared with Government Bonds.

Similar adjustment would also have to be implemented within the Basel regulation in order to increase the capital release deriving from financial engineering solutions like those here described.

## ABS structure with State/Supranational guarantee

Credits Portfolio Rating	CC			BB		
	Tranche	Rating	%	Tranche	Rating	%
Government Guarantee	Junior		12	Junior		6
	Mezzanine Guaranteed	BBB	36	Mezzanine Guaranteed	BBB	15
	Senior	A	52	Senior	A	79
	Risk Appetite		30	Risk Appetite		9
Guarantee 50% Government + 50% EIB	Junior		12	Junior		6
	Mezzanine Guaranteed	A	33	Mezzanine Guaranteed	A	12
	Senior	AA	55	Senior	AA	82
	Risk Appetite		30	Risk Appetite		9

Source: Mediobanca Securities, ASTRID

#### Junior tranche to be bought by a bank...

In all the above scenarios the *junior tranche* is bought by the bank that sells the ABS credits portfolio. The *junior tranche* is engineered to be lower in magnitude than that belonging to an ABS with an unsecured *mezzanine tranche*. As a consequence of this risk transfer a reduction of the *junior tranche* yields can be assumed, providing benefits, in terms of the overall riskiness, to the ABS capital structure. The *junior tranche* could also be acquired by a third subject that would play the role of a *bad bank* with the benefit for the bank of releasing more capital that can then be made available for new credits. A similar solution does not necessarily require that the ownership of the bad bank would be of the State since the fees cashed by the Government represent the reward at market value for the implemented guaranteed schemes.

- ◆ The structuring of a government guaranteed ABS with an underlying portfolio composed by banking loans rated 'double C' above includes a government guarantee on the mezzanine tranche. The government is characterized by a risk appetite of 30%; consequently, the originating banks are expected to buy the re-dimensioned junior tranche equal to 12%. The risk of the mezzanine tranche is aligned to Italy's credit risk and in this way it could be underwritten, together with the senior tranche, by the ECB until depletion of the available plafond. The residual part of the mezzanine tranche (or the whole amount, in the absence of the ECB intervention) should be bought by institutional investors.
- ◆ If we add a government/EIB guaranteed to the scheme above the two guarantors share the same amount of the overall risk appetite of 30%; consequently, the originating banks are expected to buy the re-dimensioned junior tranche equal to 12%. The EIB support would enhance the rating of the senior and mezzanine tranches as well as increase the weight of the senior tranche.
- ◆ The right hand side of the above table assumes the same scheme applied on a higher rated portfolio composed of banking loans rated 'double B'. The government is characterised by a risk appetite of 9%; consequently, the originating banks are expected to buy the re-dimensioned junior tranche equal to 6%.

The final choice among the different outcomes will depend on the risk appetite of guarantors, on market evaluation and on the criteria and the size of the ABS purchase programme that is eventually defined by the ECB.

In any case the advantage of a similar scheme is that it is able to activate a virtuous circle in which old credit once "backed" would recall new credits within the banks' balance sheets.

### Adding NPLs to the equation

In order for the banks to accelerate the disposal of non-performing loans a solution could be to pool them with performing assets in a securitisation process, in line with the above schemes, which were conceived only on performing albeit low quality assets. As such, the schemes in the following table follow the same logic but the mix now includes 10% of NPLs. The public guarantee would be weighted according to the country's risk appetite and the maximum loss it is prepared to take in the event of default of of an ABS default up to the guaranteed mezzanine tranche level. As the junior tranche would ensure the first loss absorption, the government guarantee would become contingent, thus not weighing on its public debt budget. Alternatively such guarantee at market price could be provided by CDP. Moreover, the more the risk appetite a sovereign state would have, the more an ABS's rating would increase and the greater the impact on banks' liquidity and capital release would be.

### ABS structure (including 10% of NPLs) with State/Supranational guarantee

Credits Portfolio Rating	CC			BB		
	Tranche	Rating	%	Tranche	Rating	%
Government Guarantee	Junior		14	Junior		7
	Mezzanine Guaranteed	BBB	36	Mezzanine Guaranteed	BBB	15
	Senior	A	50	Senior	A	78
	Risk Appetite		32	Risk Appetite		10
Guarantee 50% Government + 50% EIB	Junior		14	Junior		7
	Mezzanine Guaranteed	A	33	Mezzanine Guaranteed	A	12
	Senior	AA	53	Senior	AA	81
	Risk Appetite		32	Risk Appetite		10

Source: Mediobanca Securities

- ◆ In the table above we can observe how the guarantor's risk appetite and the junior thickness increase, compared to the previous table, because of the inception of 10% of NPLs as to the deterioration of the expected loss on the asset portfolio.
- ◆ It is clear that the magnitude of the different financial variables (capital structure, cost of the guarantee, risk appetite, junior tranche yields, etc.) involved in the structuring of this Government guaranteed mixed non/performing ABS will be of paramount importance for its success. A similar process would in fact be considered the "make" option to be compared with the "sell" option to a specialized company.