10 May 2018 Structured Finance

SIENA NPL 2018 S.R.L.

Non-Performing Loans

Scope Ratings

Ratings

Series	Rating	Notional (EURm)	% of assets (GBV)	Credit enhancement CE (%)*	Coupon	Final maturity
Class A	BBB+$_{SF}$	2,918.2	12.1%	87.9%	3-months Euribor + 1.5%	Jan 2033
Class B	NR	847.6	3.5%	84.4%	3-months Euribor + 8.0%	Jan 2047
Class J	NR	565.0	2.4%	82.0%	12.0% (fixed)	Jan 2047
Total		4,330.8	18.0%			

CE is computed as a percentage of the non-performing loan portfolio's gross book value. It is provided by both a % purchase price discount and the principal subordination of the mezzanine and junior tranches.

Scope's analysis is based on a EUR 24.07bn portfolio (or if closed borrowers are excluded EUR 23.94bn) as per the valuation date of 30/09/2017, and subsequent updates provided by the arranger. Scope's Structured Finance Ratings constitute an opinion about relative credit risks and reflect the expected loss associated with the payments contractually promised by an instrument on a particular payment date or by its legal maturity. See Scope's website for the SF Rating Definitions.

Transaction details

Purpose	Liquidity/funding
Issuer	SIENA NPL 2018 S.R.L.
Originator	Banca Monte dei Paschi di Siena S.p.A. (not rated); MPS Capital Services Banca per le Imprese S.p.A. (not rated) and MPS Leasing & Factoring S.p.A. (not rated)
Master servicer	Credito Fondiario S.p.A. (not rated)
Special servicers	Credito Fondiario S.p.A.; Italfondiario S.p.A. (not rated); Juliet S.p.A. (not rated); Prelios Credit Servicing S.p.A. (not rated)
Hedge providers	HSBC Bank plc (HSBC Holdings plc rated AA-/S1+ Stable) and Mediobanca – Banca di Credito Finanziario S.p.A. (not rated)
Paying agent	BNP Paribas Securities Services, Milan Branch (parent company rated AA-/S-1+ Stable)
Account bank	BNP Paribas Securities Services, Milan Branch (parent company rated AA-/S-1+ Stable) and Intesa Sanpaolo S.p.A. (A/S-1) as operating bank
Asset class	Non-performing loans – structured finance
Portfolio size	EUR 24.07bn
Issuance date	The Class B and J notes were issued on 28 December 2017 together with Class A1 and A2 notes. On 10 May 2018 the Class A notes were issued in order to repay the Class A1 and A2 notes
Rating date	10 May 2018
Payment frequency	Quarterly (30 April, July, October and January)

SIENA NPL 2018 is a static cash securitisation of first lien secured (41.6% of gross book value, or GBV) and unsecured as well as junior lien secured (58.4%) non-performing loans (NPLs) extended to borrowers in Italy. The loans were originated by Banca Monte dei Paschi di Siena S.p.A. (around 84% of GBV); MPS Capital Services Banca per le Imprese S.p.A. (around 15.3% of GBV) and MPS Leasing & Factoring S.p.A. (around 0.7% of GBV), all of which belong to the Banca Monte dei Paschi di Siena banking group (MPS) and were granted to companies (81%) and individuals (19%). The portfolio is very granular with the top 10 and top 100 borrowers respectively accounting for only 2.1% and 9.5% of GBV. The first lien secured loans are backed by commercial, industrial or other non-residential properties (71.8% of GBV) as well as residential properties (28.2%). The loans are geographically well distributed with 36% of GBV located in the north, 36% in the centre and 28% in the south of Italy (based on borrower location).

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Related Research

General Structured Finance Rating Methodology, August 2017

Methodology for Counterparty Risk in Structured Finance, August 2017

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Rating rationale (summary)

The ratings reflect: i) the legal and financial structure of the transaction; ii) the quality of the underlying collateral given the cyclical rebound in the Italian macroeconomic environment; iii) the ability of Credito Fondiario S.p.A as master servicer and special servicer; iv) the ability of Italfondiario S.p.A.; Juliet S.p.A. an untested, newly formed joint venture between Quaestio Holding S.p.A. and Cerved S.p.A. to which a part of MPS' servicing operations will be transferred; as well as Prelios Credit Servicing S.p.A. as special servicers; v) the counterparty exposure to BNP Paribas Securities Services, Milan Branch (the parent company BNP Paribas SA is rated AA-/S-1 Stable by Scope) as account bank and paying agent; vi) the counterparty exposure to Intesa Sanpaolo S.p.A. (rated A/S-1 by Scope) as operating bank; vii) the counterparty exposure to Securitisation Services S.p.A, which acts, inter alia, as calculation agent and representative of noteholders; and viii) the counterparty exposure to HSBC Bank Plc and Mediobanca ‐ Banca di Credito Finanziario S.p.A. as interest rate cap providers. When analysing the pool Scope treated the data on a loan-by-loan basis and linked the underlying collateral to their respective loans. The numbers in this report are based on this itemised, loan-by-loan approach.

The relatively limited liquidity protection for the Class A notes constrains the rating these notes can achieve. The rating is also driven by Scope's expected recovery amount and timing assumptions for the NPL portfolio which was acquired by the issuer at a discount of approximately 79% relative to the portfolio's GBV. Scope's recovery and timing assumptions incorporate the agency's positive assessment of the four special servicers' capabilities and of the incentive scheme which applies to all of them. The rating also reflects Scope's stable economic outlook on Italy. The rating is supported by the structural protection provided by sequential principal amortisation, the absence of equity leakage provisions, an interest rate cap and an inherent cap on the calculation of the Class B interest, which are due senior in the waterfall. The rating also takes into account the trigger which subordinates Class B interest to Class A principal should cumulative collections fall below 50% of the expected cumulative collections set out in the business plan.

Scope's analysis is based on the portfolio cut-off date of 30 September 2017, collections after the cut-off date and the removal of closed positions after the cut-off date. The issuer acquired the portfolio on 20 December 2017, the asset transfer date. However, the issuer is entitled to all portfolio collections received from the cut-off date onwards, and on the 30 April 2018 payment date around EUR 215.9m (the collections between 28 December 2017 and 31 March 2017) were used, inter alia, to pay senior fees, interest on the notes and to amortise the Class A notes for an amount equal to EUR 177.4m. EUR 108m of collections received between 1 October 2017 and 28 December 2017 were applied on 28 December to fill up the cash reserve, the recovery expense reserve and to pay some initial costs.

Rating drivers and mitigants

Positive rating drivers

High level of credit enhancement. The Class A notes are backed by around 87.9% credit enhancement as a proportion of GBV, which is around 12-20 percentage points higher than most public NPL securitisations in Italy.

Portfolio servicing: Four independent special servicers limit the transaction's sensitivity to a servicer disruption. The master servicer will assist the issuer in finding a suitable replacement in the event of a servicer disruption and the other special servicers may step in. In addition, the fee structure aligns the special servicers' incentives with investors' interests.

Granular and geographically diversified pool: The pool is very granular as the top 10 and top 100 borrowers respectively account for only 2.1% and 9.5% of GBV. The geographical locations of borrowers are well distributed over Italy with around 36% located in the north, 36% in the centre and 28% in the south of Italy.

High portion of proceedings in advanced stages: Around 35.2% of the secured loans are in the auction phase and 6.7% are in the distribution phase, which reduces the expected time to collections compared to those loans which are still in the initial phases of the legal proceedings.

Real estate operating company (REOCO): At the request of the special servicers and the issuer, a REOCO can purchase illiquid properties which have been put up for auction if it believes that the properties can be resold at a higher price. A well-functioning REOCO can help to improve the recoveries for illiquid assets by removing them from the judicial process. Adequate property management and capex investments can increase the likelihood of reselling them for a higher price at a later stage.

Negative rating drivers and mitigants

Senior notes' liquidity protection: A 3.5% cash reserve provides liquidity to senior noteholders, covering senior fees and interest on Class A notes for around one year. This liquidity coverage is lower than the 18-24 month coverage seen in most other public securitisations. The fact that the pool is serviced by four different special servicers mitigates the risk of a complete servicer disruption.

Low proportion of new valuations: Only around 10% of the properties backing the secured loans have a new drive-by or full valuation made by an independent party. Around 15% of the properties have a *Consulenza Tecnica d'Ufficio* (CTU) valuation. Almost two-thirds of the valuations (approximately 65%) are indexations of the original valuation made when the loan was disbursed or valuations based on other types of statistical method. Finally, the remaining 10% of the properties have an updated valuation prepared by MPS. We applied specific haircuts ranging from 5-20% on valuation types different to full/drive by.

Relatively large proportion of loans treated as unsecured: Due to limited available information regarding loans backed by a second or more junior lien, Scope has classified these loans as unsecured with a weighted average seasoning of 4.8 years. Expected recoveries from unsecured loans are generally significantly lower than those from secured loans and aged, unsecured loans generally have lower recovery prospects.

Loans not covered by reps and warranties: The portfolio includes some loans with encumbrances (e.g. attachments, seizures or pledges made in favour of third parties) or limitations on transferability (e.g. due to specific clauses in the loan contract or intercreditor agreements for syndicated loans). These loans are not covered by the reps and warranties which generally exclude encumbrances and limitations to transferability. Scope has excluded the loans with encumbrances and considered that the collections for those loans with limitations on transferability may have to pass through the sellers and could therefore be lost or delayed.

REOCO waterfall: Some costs and expenses incurred by the REOCO will be paid pari passu with the payment of the deferred purchase price to the issuer. As a consequence, the issuer will not receive the full payment of the purchase price if the proceeds from the resale of the property are not high enough over the deferred purchase price to also cover the costs paid pari passu. The fact that any shortfalls are aggregated and deducted from the investment limit of EUR 100m reduces the potential negative impact of the REOCO for the issuer to EUR 100m, or less than 1% of the value of the properties backing the secured loans.

Upside rating-change drivers

Improved liquidity coverage: Improved liquidity coverage for the Class A notes could positively impact the ratings.

Servicer outperformance: The servicers' consistent outperformance of their initial business plans in terms of recovery rates and timing could positively impact the ratings.

Downside rating-change drivers

Collateral appraisal values: NPL collateral appraisals are more uncertain than standard appraisals, because repossessed assets are more likely to deteriorate. The ratings could be negatively impacted if the sales proceeds from the collateral are significantly lower than the appraisal values.

Ineffectiveness of legal reforms: The ratings could be downgraded if recent legal reforms prove unsuccessful and recovery timings deteriorate significantly.

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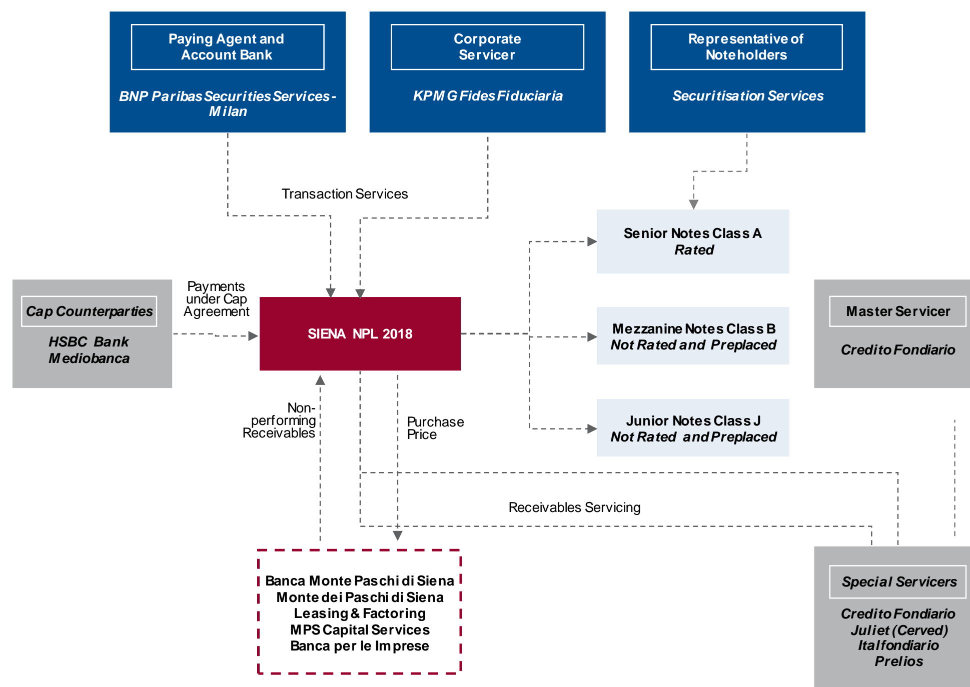
1. Transaction summary

Figure 1: Transaction diagram



Source: MPS

Siena NPL 2018 is a static cash securitisation of an approximately EUR 24bn portfolio of Italian non-performing loans, originated by MPS. The cut-off date for the portfolio is 30/09/2017 and all collections after that date belong to the issuer. As of the 30 April 2018 payment date, EUR 215.8m in collections realised between 28 December 2017 and 31 March 2018 were applied to senior fees, interest on the notes and amortisation of the Class A notes equalling EUR 177.4m. On 28 December 2017, from around EUR 108m in collections realised between 1 October 2017 and 28 December 2017, EUR 98m were used to fill up the cash reserve, around EUR 8.4m were used to fill up the recovery expense reserve and the remainder was used to pay some initial costs. As some positions have been completely closed, we have deducted them and refer to a total GBV of EUR 23.94bn in the following figures (i.e. collections have been made and the servicer has considered that no more collections can be made on those positions).

The main portfolio characteristics are highlighted in Figure 2 below. A large portion of the portfolio is made up of unsecured loans or secured loans with a junior lien, which we have collectively treated as unsecured (58.4%), with the remainder of the portfolio being first lien mortgages (41.6%). Most of the loans were granted to Italian companies (81% of the portfolio). The portfolio is geographically diversified, with around 36% of GBV located (borrower location) in the north of Italy, 36% in the centre and 26% in the south. In addition, there are no significant borrower concentration levels, with the top 10 and top 100 borrowers representing 2.1% and 9.5% of the portfolio's GBV respectively.

One positive feature is that slightly more than 35% of the secured loans are in the auction phase, which means that they are roughly halfway through the judicial process.

Figure 2: Key portfolio stratifications

	All	Secured	Unsecured
Number of loans	545,939	85,557	460,382
GBV (EUR)	23,939,243,132	9,962,354,914	13,976,888,218
% of GBV	100%	41.6%	58.4%
WA seasoning	4.4	3.8	4.8
Borrow er type			
Corporate	81.0%	73.1%	86.7%
Individual	19.0%	26.9%	13.4%
Procedure			
Bankrupt borrow er	36.6%	28.1%	42.6%
Non bankrupt borrow er	63.4%	71.8%	57.4%
Stage of procedure (secured loans)			
Initial		52.6%	
CTU		5.4%	
Auction		35.2%	
Distribution		6.7%	
Geography (GBV based on borrow er location)			
North	35.9%	34.1%	37.2%
Centre	36.0%	35.1%	36.7%
South and Islands	28.1%	30.8%	26.2%
WA LTV		120%	

Source: Data tape from MPS, calculations by Scope Ratings

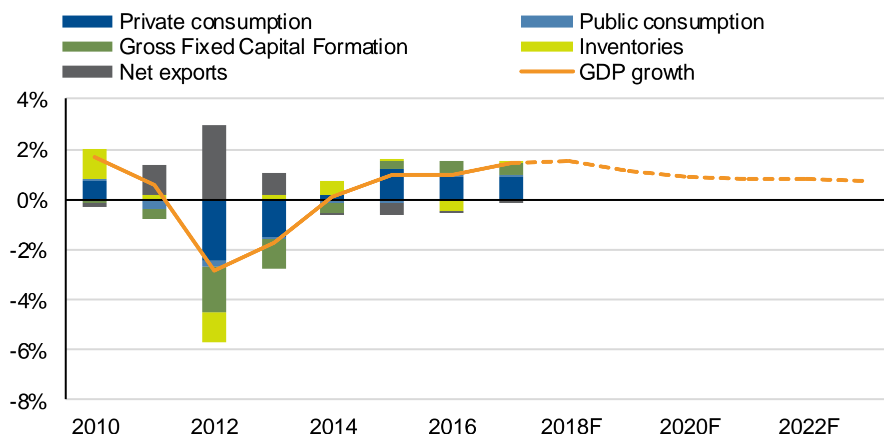
2. Asset analysis

2.1. Macroeconomic environment in Italy: cyclical rebound but long-term economic challenges

A large, diversified economy

Italy's 'A-/Stable' sovereign ratings are underpinned by its large and diversified economy (nominal GDP in 2017 of EUR 1,716bn). The economy's manufacturing sector – the second largest in the euro area after that of Germany – has helped to generate current-account surpluses since 2013 (of 2.8% of GDP in 2017). Unlike many advanced economies, Italy did not experience a credit-driven boom-bust cycle before the 2008 crisis. Domestic non-financial private debt stands at a comparatively moderate 156% of GDP as of Q3 2017, comparing favourably with that of euro area peers.

Figure 3: Percentage point contribution to real GDP growth, with IMF forecasts



Source: IMF, national statistical accounts, calculations by Scope Ratings

Sustained economic recovery

Italy has sustained its economic recovery, with real growth of 0.3% QoQ in Q4 2017, after 0.4% QoQ in Q3 2017. In Q4 2017, YoY growth stood at 1.65%. The recent cyclical strength reflects gains in household consumption (1.2% YoY in Q4 2017) as well as a notable pick-up in investment (4.4% YoY in Q4 2017). The economic recovery is consistent with broad-based growth in the region, supported by accommodative monetary, fiscal and financial conditions. The growing euro area economy has raised Italy's export sector performance.

In its April 2018 World Economic Outlook (WEO), the IMF revised Italy's growth forecast for 2018 up to 1.5% from 1.1%, and up to 1.1% from 0.9% for 2019. In line with this forecast, recent indicators suggest ongoing growth, though some indicators have s tailing-off in momentum (similar to recent growth slow-down signs in the euro area at large). ISTAT's consumer survey was strong at 117.1 in April 2018, near post-financial crisis peaks. Similarly, business confidence also stands near post-2007 peaks. Italy's Composite PMI dipped to 53.5 in March 2018, from 59.0 as of January. Some of the selected weakening in sentiment indicators may reflect uncertainties following the Italian elections in March 2018.

Long-term growth picture remains weak

While the cyclical rebound in Italy has exceeded expectations, the long-term growth picture remains weak (for example, the IMF's medium-term forecast[1] remained at 0.8% in its April 2018 WEO, the same as its estimate as of November 2017). Italy's production capacity fell in the aftermath of the global financial crisis and subsequent euro crisis. As of February 2018, industrial production volumes stood at 81% of early 2008 levels. This comes in contrast to the full recovery in German industrial production post-crisis.

The drop in industrial production capacity is a reflection of the vulnerabilities within Italy's production infrastructure. More than 90% of manufacturing output is generated by micro firms concentrated in industrial districts. Even though international trade statistics exhibit competitiveness within their niche markets (luxury clothing, household goods, food processing, mechanical products, motor vehicles), they are also susceptible to market shocks. Their financing capacities are limited and were hit hard by the euro crisis.

Improvements in the labour market but inflation still tepid

Unemployment has continued to gradually drift downwards since 2014 peaks (at 13% as of November 2014), standing at 10.9% in February 2018. However, inflation remains tepid, as it does in the rest of the region, at only 0.5% YoY in April 2018. Core inflation was reported at only 0.2% YoY in April. Wage growth has picked up, now at 1.0% YoY as of March 2018, after lows of 0.3% YoY in February 2017 – translating into modest real wage gains.

Political and banking system challenges

At the same time, political uncertainties following the March 2018 general elections, as well as ongoing challenges in the banking sector, may weigh on the economic rebound. Lending from Italian banks rose to residents at 1.9% YoY in February, reflecting modest growth after earlier years of contraction.

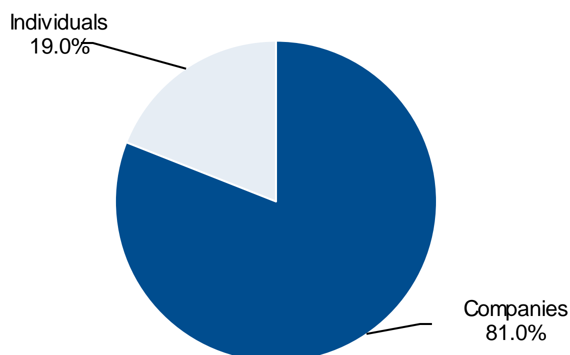
2.2. Portfolio characteristics

Main portfolio characteristics as of 30/09/2017

The charts below summarise the main portfolio characteristics as of 30/09/2017, excluding positions closed through 31/03/2018. The figures incorporate some of Scope's analytical assumptions. Further analytical details are provided in the 'Portfolio Analysis' section. Percentage figures refer to gross book value, unless otherwise stated.

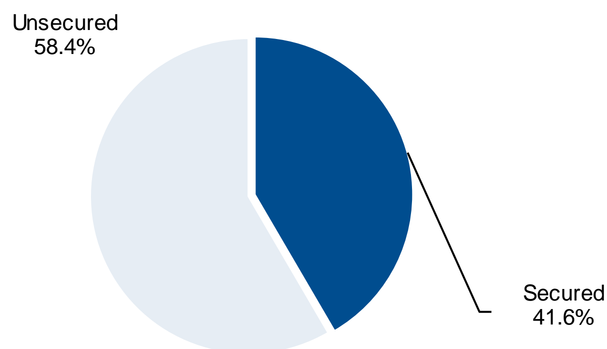
[1] Referring to the IMF's April 2018 WEO's forecast for 2023 growth.

Figure 4: Borrower type



Source: Data tape from MPS, calculations by Scope Ratings

Figure 5: Loan type



Source: Data tape from MPS, calculations by Scope Ratings

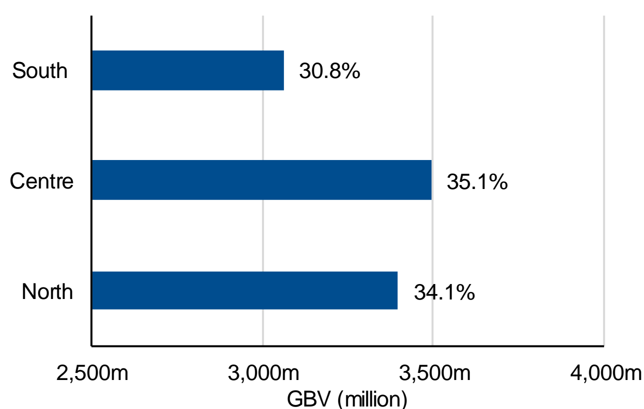
The pool's 545,939 loans (lines of credit) were granted to 79,669 borrowers. Notably, principal and interest for a given loan have been classified into two different lines of credit, with overdue interest and different fees and expenses classified as further lines of credit. If all of these lines are merged, then the actual number of loans is around 85,000.

More than half of the loans are unsecured (58.4%)

Companies and individuals represent 81.0% and 19.0% of the pool respectively. More than half of the loans are unsecured (58.4%), with the remainder being secured.

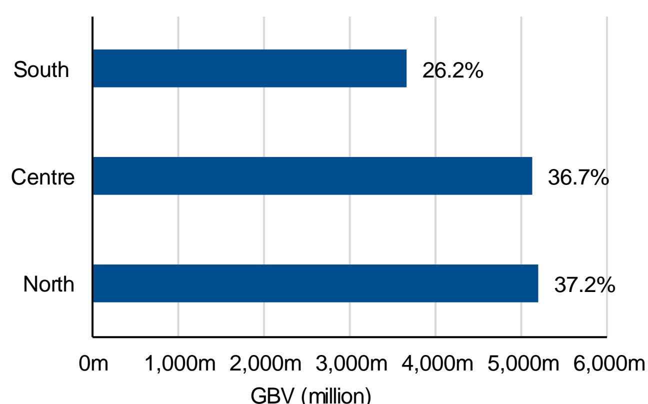
The borrowers for the secured loans are geographically quite well distributed across the north (34.1%), centre (35.1%) and south (30.8%) of Italy while for the unsecured loans approximately 37% of the borrowers are located in the north and centre of Italy respectively and the remaining part (approximately 26%) located in the south. As a consequence, the blended portfolio is geographically well diversified.

Figure 6: Borrowers' location, secured loans



Source: Data tape from MPS, calculations by Scope Ratings

Figure 7: Borrowers' location, unsecured loans

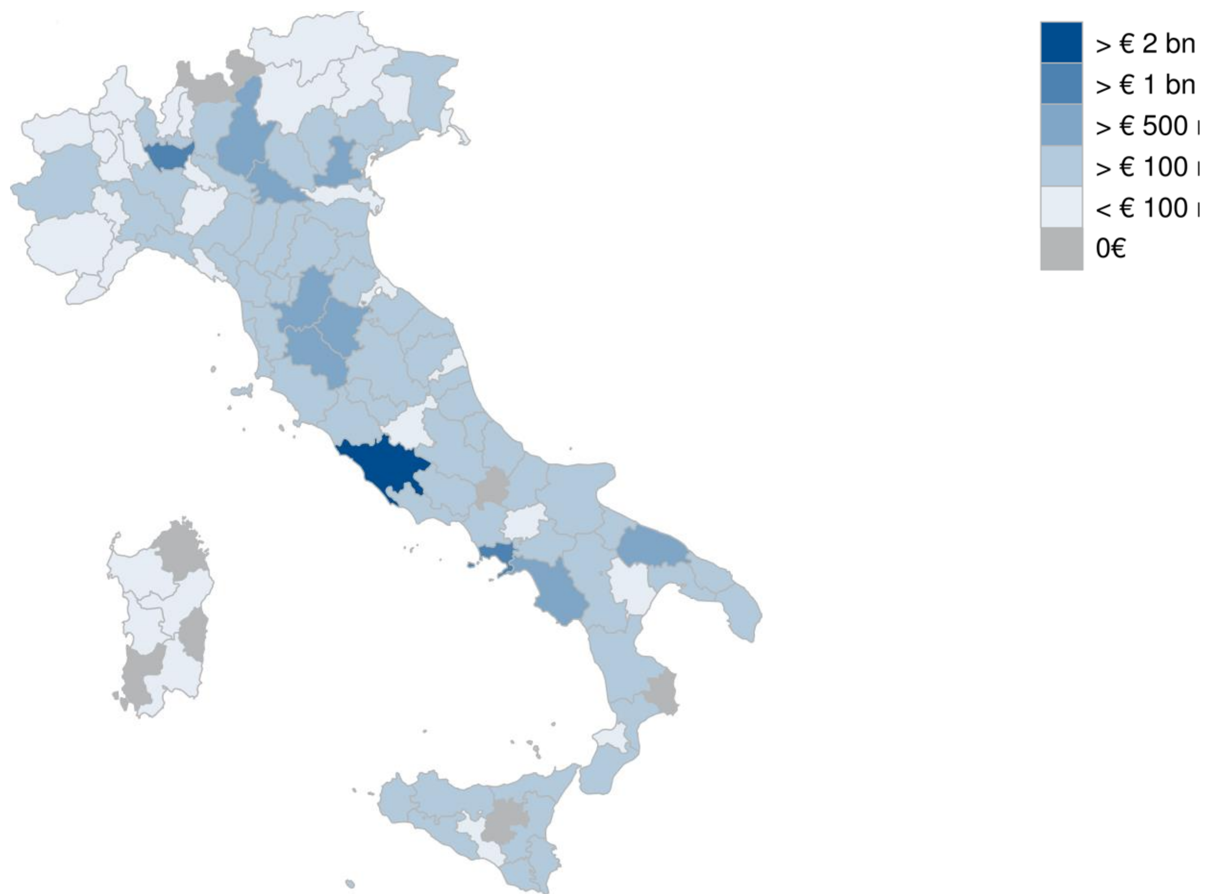


Source: Data tape from MPS, calculations by Scope Ratings

Rome is the only province with a GBV close to 10% of the pool balance

The figure below highlights the portfolio's exposure to the borrowers' provincial locations. Rome is the province with the largest concentration of loans, reaching 10% of total portfolio GBV. Concentration in Milan and Naples already falls to within a 5-9% range and all other provinces have less than 5%. It should also be noted that there are very few provinces without any secured or unsecured loans.

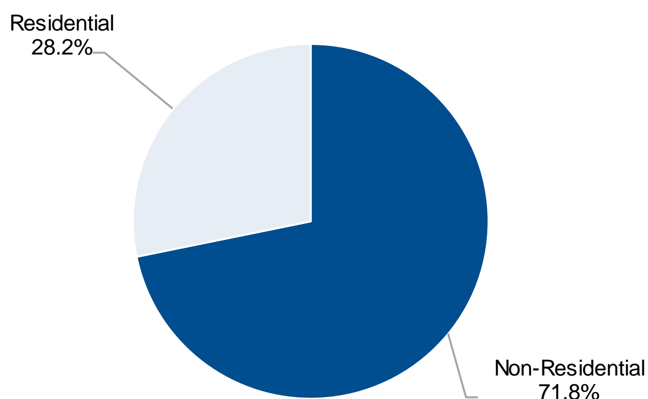
Figure 8: Heat map of Italian provinces for secured and unsecured loans by GBV



Source: Data tape from MPS, calculations by Scope Ratings

The secured loans are mainly backed by non-residential properties

Figure 9: Property types (proportion of 1st lien appraisal values)

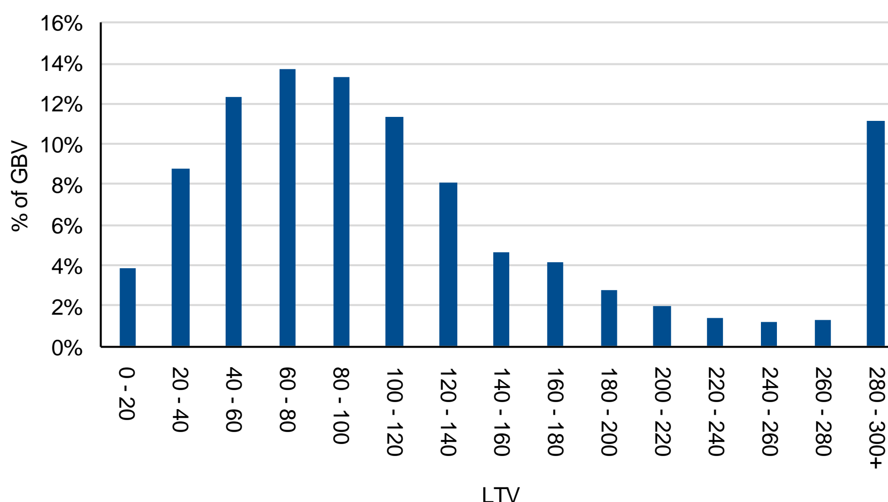


Source: Data tape from MPS, calculations by Scope Ratings

The calculated weighted average LTV is around 120%

There are some loans with very high loan-to-value ratios (LTVs) which may be due to: i) the use of the latest valuation (which may be lower than the original one); ii) the accrual of overdue interest and expenses which increase the GBV; and iii) the potential data limitations when linking the assets to the loans. In Figure 10 we have prorated the loans based on the GBV, if many secured loans are on the same asset. The calculated weighted average LTV is around 120% based on the buckets in the figure below.

Figure 10: LTV distribution for secured loans (1st lien)



Source: Data tape from MPS, calculations by Scope Ratings

2.3. Portfolio eligibility criteria

The main eligibility criteria for the selection of the securitised portfolio are:

- All loans are denominated in euros;
- All loans agreements are governed by Italian law;
- All borrowers are reported by the originator as defaulted (in sofferenza) to the Italian Credit Bureau (Centrale Rischi) of the Bank of Italy as of 31 December 2016 or 20 December 2017
- All loans have been accelerated

2.4. Portfolio analysis

The secured part of the portfolio has been analysed line-by-line

We derived the expected amount and timing of recoveries by analysing the portfolio on a line-by-line basis. Secured and unsecured exposures were assessed using different analytical frameworks. Our assumptions are based on our view of Italian macroeconomic and real estate fundamentals and on the servicers' historical performance data. We have also taken the servicer's business plan into account.

For secured exposures, Scope's recovery assumptions are mainly based on our fundamental assessment of collateral values. The starting point for the recovery timing assumptions is the data, published by the Ministry of Justice, which provides the time it takes to process foreclosure or bankruptcy cases in every Italian court. The actual recovery timing assumption for each loan is then adjusted based on the line-by-line information on the borrower status coupled with the stage of the recovery process as of the cut-off date.

For unsecured exposures, the recovery amounts and timing assumptions are based on recovery vintage data provided by the special servicers and on a representative sample of loan level data provided by MPS. We then benchmarked the results with other data sources. Our assumptions were subsequently calibrated to take into account the fact that unsecured borrowers in the portfolio have been in default for an average of 4.8 years as of the cut-off date.

BBB rating-conditional stress on recovery assumptions

Recovery assumptions for the Class A reflect levels of performance stress commensurate with a BBB rating-conditional level.

2.4.1. Expected amount of recoveries

Exposures secured by first-lien mortgages

Only first lien loans considered as secured

We have classified as secured the gross book value of loans secured by a first lien mortgage. All loans secured by a second lien or more junior lien mortgage have been classified as unsecured loans since we have not received the current outstanding amount of the preceding lien.

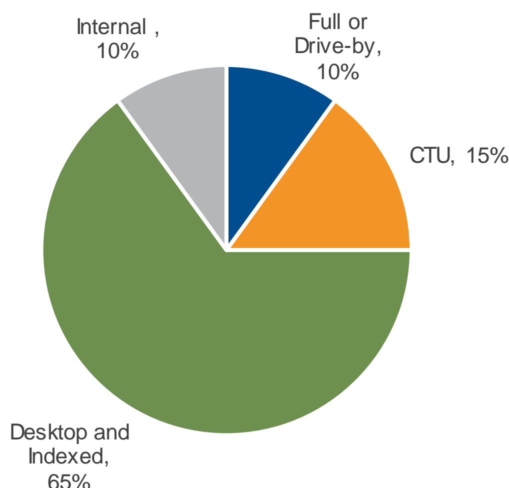
The recovery amount assumed for each collateralised position is the minimum among: i) the loan's GBV; ii) the nominal mortgage value; and iii) Scope's property value assumptions as of the estimated liquidation date. The latter typically drives the level of recovery. However, if the liquidation of the collateral is insufficient to repay the outstanding GBV, we have assumed that the issuer may benefit from further unsecured recoveries.

Fundamental collateral-valuation approach

We generally estimate property values based on a fundamental collateral-valuation approach, which is a function of: i) the credit given to collateral appraisal values; ii) collateral value indexation; and iii) Scope's security value haircut (SVH) assumptions.

The SVH haircut considers the market value decline, reflecting a price index decline assumption which is different for each rating level, i.e. it is rating conditional. The SVH also contains a fire sale discount component, based on our view that the properties are expected to be sold under distressed conditions. Appendix I contains a more detailed description of the SVH haircut and its components together with numerical details for the BBB rating category.

Figure 11: Valuation type (% of first-lien's appraisal value)



Source: Data tape from MPS, calculations by Scope Ratings

As illustrated by Figure 11, around 65% of the property appraisals are desktop valuations. In the context of this transaction, this type of valuation almost exclusively consists of indexations of original appraisals made when the loan was extended. Thus, they do not consider recent information on the property. We have therefore applied a 20% valuation haircut. CTU (*Consulenza Tecnica d'Ufficio*) valuations are conducted by a court-appointed expert and set the minimum selling price in the first auction. We have applied a 10% haircut for this type of valuation. We have also applied a 5% haircut to the internal valuations.

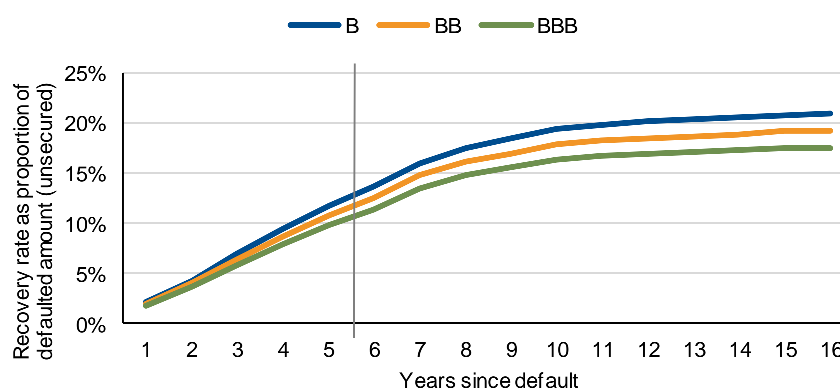
BBB combined valuation haircuts range between 27.6-48.9%

In the BBB scenario, the combined haircut applied to the appraisal values (considering the SVH and the valuation type haircuts in a multiplicative way) range between 27.6-48.9% depending on the asset type, the location of the asset and the valuation type applied to value the asset.

Unsecured exposures

For unsecured positions, we based our recovery rate and recovery timing assumptions on historical loan-by-loan data for similar unsecured defaulted loans received from MPS and data in vintage format received from the servicers. We also benchmarked the results of our analysis with other data sources.

Figure 12: Cumulative recovery rates for similar unsecured loans



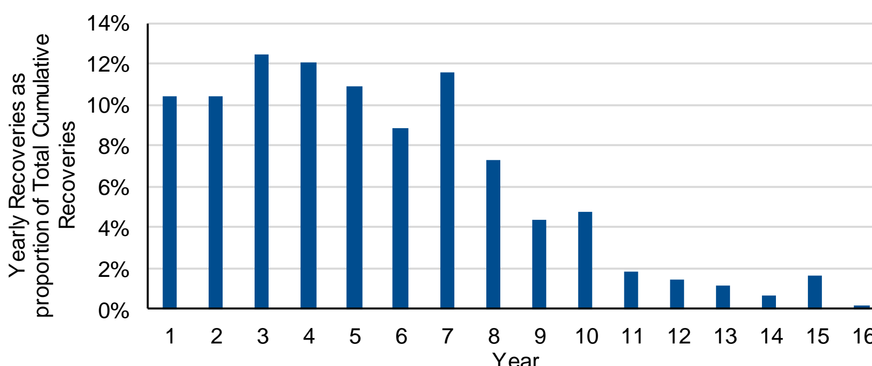
Source: Data from special servicers and MPs, calculations by Scope Ratings

The B scenario is the base case

Figure 12 shows the cumulative recovery rates for similar unsecured loans to those in the pool over a 16 year time horizon: the base case scenario or B scenario. To reach the BB scenario, an 8% haircut is applied to the base case recoveries, while the BBB scenario entails a 16% haircut to the recovery rates of the base case scenario.

As a significant amount of time has already passed since the unsecured loans in the pool were declared defaulted, we have only considered the potential recoveries to the right of the vertical line in Figure 12 when deriving the unsecured recovery rate assumption.

Figure 13: Each year's recoveries as a proportion of lifetime recoveries



Source: Data from special servicers and MPS, calculations by Scope Ratings

Most recoveries for unsecured loans are realised within the first seven years after default

Figure 13 shows the same information as Figure 12 but from a different angle. In Figure 13, the recoveries for each year (the increase in the cumulative recovery rate in one year in Figure 12) are reported as a proportion of the total lifetime recoveries. This shows that recoveries on the unsecured loans are mainly realised during the first seven years after default and that the additional recoveries each year then trail off.

Ageing-adjusted future unsecured recovery rate calculated for each servicer

Based on the analysis of each special servicer considering both the provided recovery data and the information received during management meetings, we have also differentiated between the different special servicers with regard to ageing-adjusted future recovery rates. Considering the time elapsed since the default for each loan, our future recovery rate assumption for unsecured positions averages around 9.2% in the BBB scenario with a range of 8.3% to 10.8% for the different special servicers.

Cash-in-court positions

Cash-in-court positions are defined as secured exposures for which the security has already been executed (e.g. the property was sold at auction) but the recovery proceeds still remain with the relevant court, waiting for distribution among creditors.

The collected amounts will be paid by the relevant court to the originators because since the legal procedure on those claims has been closed, the issuer cannot be admitted as a party in the legal procedure. The originators must undertake to transfer these sums to the issuer as soon as they are made available.

We have considered the cash-in-court positions

In addition to the above, if the transfer of the receivables is made before the cash-in-court amounts are distributed (piano di riparto), the transfer is notified to the administrator of the procedure so that the issuer's details can be included in the relevant distribution plan. In any case, the originators are obliged to immediately transfer the relevant sums to the issuer. We have considered the cash-in-court positions in our cash flow analysis.

Loans with encumbrances and limitations to transferability

Encumbrances or transfer limitations

According to the reps and warranties in the transfer agreement, none of the loans have any encumbrances, i.e., third party rights which prevent the originator/seller from having the sole and unencumbered legal title to the loans (e.g. by attachments, seizures or pledges made in favour of third parties). Furthermore, according to the transfer agreement, none of the loans have any limitation which prevents the sellers from transferring the loan to the issuer. Limitations could stem from intercreditor agreements for loans made together with a syndicate of banks or specific clauses in the loan agreements which limit or exclude the possibility for the seller to transfer the loan to the issuer.

If the transferability of any loan is limited, or an encumbrance is attached to the loan, the respective seller will indemnify, with the exception of 729 loans for which, if there is an encumbrance or limitation to transferability, there will not be any indemnification.

In the context of our analysis, we have not considered any recoveries from the loans with potential encumbrances. For the loans with a limitation on transferability, the worst-case scenario is that recovery amounts will not be transferred directly to the issuer but rather to the seller. According to the transaction documents the sellers must transfer any collections they receive to the issuer within a few business days. If the sellers become insolvent, the transfer of any collections could become delayed or even lost. We have therefore assumed that only half of the expected collections from the loans with transfer limitations will be received by the issuer. This is done by assuming that the probability of an insolvency event for the sellers is 50% over the life of the transaction.

Collections from 1 October 2017

EUR 323.8m in collections

Between 1 October 2017 and 31 March 2018, there have been around EUR 323.8m in collections from the loans in the portfolio. In December 2017, EUR 98m was used to fill up the cash reserve, around 8m was used to fill up the recovery expense reserve and around 2m was used to different initial costs etc. The remaining EUR 215.9m were used on the payment date of 30 April 2018 to pay senior fees and interest, and to top up the

cash reserve with around EUR 4.1m (to a new target of around EUR 102.1m). On 30 April 2018, an amount equal to EUR 177.4m was also used to redeem the Class A notes to their current size of around EUR 2,918.2m.

2.4.2. Expected timing of recoveries

Exposures secured by first-lien mortgages

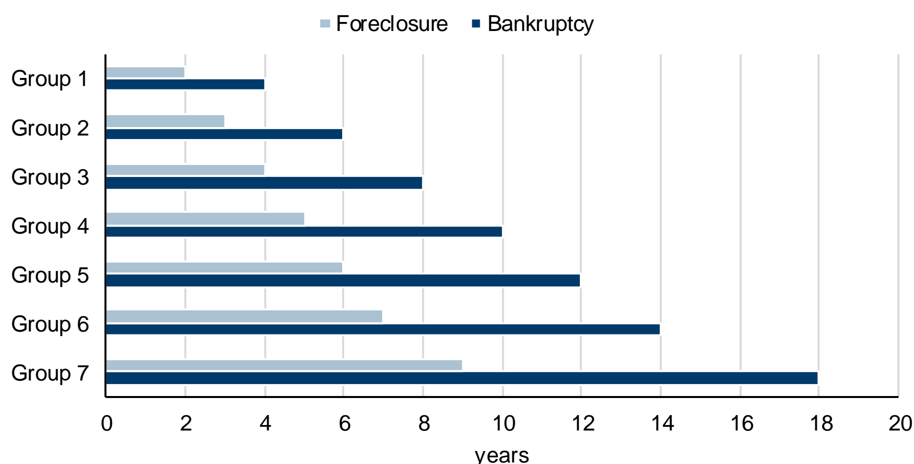
We have derived base case recovery timing assumptions based on official data from the Ministry of Justice for the years 2015 and 2016. Such records provide the average total length of foreclosure and bankruptcy procedures by court for all 140 main courts in Italy. Generally, a foreclosure procedure takes slightly more than half the time a bankruptcy procedure takes. The average time for a foreclosure process in 2016 was around 3.7 years while the average time for a bankruptcy process was around 7 years in 2016.

Significant dispersion between courts

The dispersion between different courts is also significant, with the courts in the north generally, but not always, being faster than the courts in the south of Italy. As an example, the time to go through a bankruptcy process can be 4-5 years in the faster courts while the slowest courts can take three to four times as long.

We have grouped the different courts into eight different buckets depending on the average time observed for foreclosures and bankruptcies in the Ministry of Justice data for 2015 and 2016 (Figure 14).

Figure 14: Base case recovery timing assumptions from Ministry of Justice data



Source: Ministry of Justice, calculations by Scope Ratings

For a BB rating scenario, we have added 0.5 years to the foreclosure time and 1 year to the time for bankruptcies while in a BBB rating scenario we have added 1 and 2 years respectively compared to the base case scenario.

Scope's line-by-line recovery timing assumptions

The servicers also provided Scope with their best estimate, based on their experience to date, of the relative length of each stage of the recovery process. In order to capture the stage that each position currently is in, Scope's line-by-line recovery timing assumptions for each secured loan incorporate the adjustments to the recovery vectors shown in Figures 15 and 16.

Figure 15: Foreclosure recovery timing vector

Foreclosure procedures	Time remaining
Documentation phase	100%
CTU phase	85%
Auction pahse	50%
Distribution phase	20%

Source: The special servicers

Figure 16: Bankruptcy recovery timing vector

Bankruptcy procedures	Time remaining
Documentation phase	100%
CTU phase	85%
Auction pahse	55%
Distribution phase	25%

Source: The special servicers

Unsecured exposures

The recovery timing for unsecured exposures was assumed to follow the blended pattern observed in the loan-by-loan data provided by MPS and the data in vintage format from the servicers as shown in Figure 13.

Cash-in-court positions

Cash not always subject to immediate distribution among creditors

Cash sitting in the courts will not always be subject to immediate distribution among creditors. The distribution timeframe ranges from six months to two years. In addition to the above-mentioned assumptions for different processes and courts we have assumed that cash-in-court positions will be collected as of the end of the first year since closing. We also assumed for all rating scenarios that future collections from secured positions have to transit through this stage (without any rating conditionality), which effectively adds 12 more months on top of the abovementioned court times, before the issuer can benefit from the collections.

3. Financial structure

3.1. Capital structure

Three tranches pay both principal and interest

The liability structure features three tranches which pay both principal and interest: i) senior Class A notes; ii) mezzanine Class B notes; and iii) junior Class J notes. Scope only rates the Class A notes.

The Class B principal is fully subordinated to Class A, and the Class J notes are fully subordinated to classes A and B. However, class A principal is subordinated to class B interest payments as long as the Class B subordination event has not occurred. The Class B and Class J notes were already issued in December 2017. The proceeds from the issuance of the notes together with recoveries collected from 1 January 2017 until 30 September 2017 were used to purchase the portfolio. The portfolio was purchased at a discount compared to the GBV. On 8 May the Class A notes were issued and the proceeds used to repay the Class A1 and A2 notes.

The Class B interest is capped at 8%

The Class A notes will pay quarterly interest, referenced to 3-month EURIBOR, plus a constant margin of 1.5%. The Class B notes will pay 3-month EURIBOR plus an 8% margin. The Class B interest is capped at 8% paid senior in the waterfall. Class B interest amounts in excess of 8% will be paid junior to principal on Class A notes, together with the Class B additional interest (1% per annum, payable semiannually in July and January).

Interest is only accrued on the outstanding amount of each class of notes. The amount due on the junior notes is 12% fixed and a variable return. Under certain circumstances also a Class X amount on the Class X detachable coupons, which were detached from the Class J notes at the issuance date, will be paid, depending on the available amounts on each collection date, but no interest, variable return or Class X amount will be paid before the Class B notes have been fully redeemed.

3.2. Liquidity protection

3.5% of the outstanding balance on Class A notes

Liquidity available in the structure is a significant constraining factor for the rating of the Class A notes. The structure contains a cash reserve of EUR 102.14m or the equivalent of around 3.5% of the outstanding balance on the Class A notes.

The cash reserve can cover approximately 12 months of interest on Class A and items senior thereto. This assumes an Euribor rate equal to the average strike price for the interest rate cap during the first four years after closing and no collections received from the portfolio. Although the servicer disruption risk is partially mitigated, the weaker liquidity coverage limits the achievable rating for this transaction. Other comparable Italian public NPL transactions usually have liquidity coverage closer to two years.

The cash reserve will amortise during the life of the transaction with a 3.5% target ratio on the outstanding balance of the Class A notes. A reserve floor is set at EUR 16m (equivalent to around 0.5% of the initial Class A notes balance). The cash reserve will fully amortise once the Class A notes have been completely redeemed.

The cash reserve will be available to cover any shortfalls in the interest payments on the Class A notes as well as any items senior to them in the priority of payments. The cash reserve was filled up with collections after 30 September 2017 on two occasions: the most important one in December 2017, when EUR 98m in collections were added to the cash reserve, and on 30 April 2018 when around EUR 4.1m were added to the cash reserve. As the cash reserve was filled up with collections from the portfolio, the amounts released when it amortises will flow through the waterfall and can therefore also be used to further repay the Class A notes.

Cash reserve does not cover Class B

The Class B notes will not benefit from any liquidity protection.

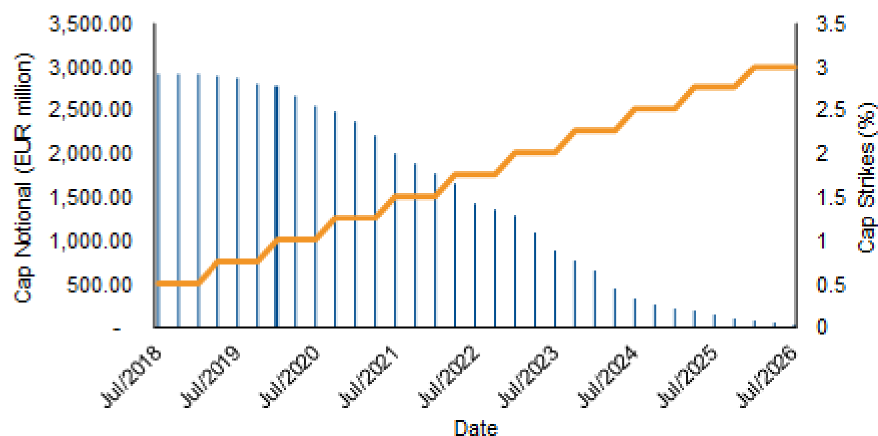
3.3. Hedging agreement

On the asset side, the non-performing nature of the securitised portfolio means that the issuer will not receive regular cash flows and that the collections will not be linked to any defined interest rate. On the liability side, the issuer will pay a floating coupon on Class A and Class B notes, defined as 3-month Euribor plus a certain fixed margin.

Progressively increasing cap rates

An interest rate cap, with a progressively increasing strike (cap rate) as shown in Figure 17, partially mitigates the risk of increased liabilities on the notes due to a rise in Euribor levels. The swap counterparties are HSBC Bank plc. (Scope rates HSBC Holding plc. AA-) and Mediobanca ‐ Banca di Credito Finanziario S.p.A.. HSBC Bank plc. covers 77.5% of the total cap notional and Mediobanca ‐ Banca di Credito Finanziario S.p.A.. the remaining 22.5%.

Figure 17: Interest rate cap notional (LHS) and cap strikes (RHS)



Source: Transaction documents

Interest rate risk partially hedged

We do not expect interest rate risk to be a material risk driver. However, if the rated notes amortise at a slower pace than the scheduled notional amount defined in the cap agreement, a portion of the outstanding notes would be unhedged. In the cash flow analysis, we have considered any partial unhedged and applied a stressed EURIBOR rate of around five percentage points above the cap strikes to that portion of unhedged notes.

The 8% cap on the interest for the class B notes is another layer of protection against the risk of increasing Euribor rates.

The notional of the cap agreement will be the scheduled notional amount in each period.

3.4. Priority of payments

Combined waterfall

The structure features a combined priority of payments which protects against payment interruption. Principal collections from the assets can be used to pay interest on the bonds.

On each quarterly payment date, the funds available to the issuer (i.e. collection amounts received from the portfolio, the cash reserve and payments received under the interest rate cap agreement) will be used in the following simplified order of priority:

1. Senior fees (costs, taxes and expenses, fees due to the entities providing services to the issuer, such as the master servicer, special servicers, representative of the noteholders, etc.)
2. Fees payable to the GACS guarantor in relation to the GACS guarantee
3. Filling up the recovery expenses reserve to its target level
4. Interest on the Class A notes
5. Amounts due under the GACS guarantee (other than the amounts paid under item 2)
6. Filling up the cash reserve to its target level
7. Interest on Class B notes up to 8% and as long as the Subordination Event has not occurred
8. To use all remaining funds to redeem the Class A notes
9. Pro rata and pari passu: i) Class B additional interest; ii) interest on the Class B notes in excess of 8% and if a Subordination Event has occurred iii) Class B interest up to 8%
10. Subordinated servicing fees
11. Once the Class A notes have been fully redeemed to pay principal on Class B notes until fully redeemed

12. Once the Class B notes have been fully redeemed to pay junior items

The Subordination Event is curable

A **Subordination Event** occurs if the cumulative collections are lower than 50% of the level set out in a specific schedule attached to the master servicing agreement. It is notable that when calculating the collections for the Subordination Event all collections made since 1 January 2017 should be considered and the collections for the whole of 2017 were assumed to be equal to the target. This means that even if the collections for the first quarterly periods after the issuance of the Class A notes is below 50% the trigger would not be hit as the collections considered before the issuance of the Class A notes were equal to the target. As a consequence the trigger is weaker than if it would have been set on 50% of the cumulative collections after the issue date of the Class A notes.. The Subordination Event is curable.

If, on any payment date, the master servicer fails to deliver the servicer report, the calculation agent will prepare a provisional payment report in which the cash reserve and the portfolio collections from the last payment date are earmarked as funds available to the issuer. These funds will be used to cover items 1 to 6 in the above order of priority (except for the master servicer and special servicers fees). The rest of the amounts due will be paid on the following payment date.

Upon the occurrence of a trigger event (i.e. failure to pay interest due on the senior notes or any principal amount due and payable on the notes, a breach of obligations, insolvency or unlawfulness), the notes will come due and will be payable in the following accelerated order of priority:

1. Senior fees (costs, taxes and expenses, fees due to the entities providing services to the issuer, such as the master servicer, special servicers, representative of the noteholders, etc.)
2. Fees payable to the GACS guarantor in relation to the GACS guarantee
3. Filling up the recovery expenses reserve to its target level
4. Interest on the Class A notes
5. Amounts due under the GACS guarantee (other than the amounts paid under item 2)
6. To use all remaining funds to redeem the Class A notes
7. Pro rata and pari passu: i) Class B additional interest, ii) interest on the Class B and if relevant iii) any deferred interest on the Class B notes
8. Subordinated servicing fees
9. Once the Class A notes have been fully redeemed to pay principal on Class B notes until fully redeemed
10. Once the Class B notes have been fully redeemed to pay junior items

3.5. Alignment of interests

Fee structure reduces conflict of interest

The servicing fee structure (see section on servicing fees), which links the portfolio performance with the level of fees received by the special servicers, mitigates the potential conflict of interests between the special servicer and noteholders. During the first two years since closing, underperformance is defined as cumulative collections being 15% below the business plan and, after two years, it is defined as cumulative collections being 10% below the business plan. In the case of an underperformance event, 10% of the performance fees will be subordinated in the waterfall and they will be paid junior to the additional interest on the Class B notes. These features constitute an incentive for the special servicers to maximise recoveries and to stay in line with the initial business plan.

The representative of noteholders and the master servicer will supervise the special servicers' activities and calculations, mitigating operational risk as well as moral hazard that could negatively impact the interests of the noteholders. This risk is further mitigated

by the discretionary servicer termination event in cases of underperformance by any special servicer.

3.6. Servicing structure

Under the master servicing agreement, Credito Fondiario S.p.A. has been appointed as master servicer of the transaction. In its role as master servicer it acts as the entity in charge of collecting the receivables and providing the collection and payment services through the special servicers.

Four special servicers

In order to administer, manage and collect the loans in the pool, the master servicer and the issuer have appointed four special servicers:

- Juliet S.p.A., a newly formed a joint venture between Quaestio Holding S.p.A. and Cerved S.p.A., to which some of the servicing operations of MPS have been transferred.
- Italfondiario S.p.A.
- Credito Fondiario S.p.A.
- Prelios Credit Servicing S.p.A.

The special servicers perform most of the collection activities for the defaulted receivables in their respective portfolio, but the master servicer is able to monitor all of the actions taken and collections made as they are all recorded in the master servicer's IT system.

3.6.1. Servicing fees

The special servicers will be entitled to: i) a base fee, calculated at each payment date on the relevant outstanding portfolio's GBV; and ii) a performance fee, calculated at each payment date on the period's collections net of legal costs. The performance fee constitutes the lion's share of the expected servicing fees in order to incentivise the servicer to work-out the NPLs and collect the recoveries, instead of just collecting the base fee.

The master servicer, on the other hand, receives a base fee calculated on the outstanding portfolio's GBV.

3.6.2. Servicer termination events

Master servicer termination events: Failure to transfer any collections received within five business days, insolvency, unremedied breach of obligations, unremedied breach of representations and warranties, loss of legal eligibility to perform the obligations under the master servicing agreement.

If any of these events occur, the issuer may terminate Credito Fondiario S.p.A.'s appointment as master servicer and appoint a back-up servicer.

Material underperformance event

Special servicer termination event: Failure to transfer collections to the issuer within five business days, insolvency, failure to deliver the special servicer report to the master servicer, unremedied breach of obligations, unremedied breach of representations and warranties, loss of legal eligibility to perform the obligations under the servicing agreement, or a material underperformance event.

On the payment date falling 24 months after closing, and on each following payment date, a material underperformance event will occur if the special servicer's cumulative collections are 20% below the business plan**.**

If any of these events occur the master servicer may terminate the appointment of the special servicer but the termination will not become effective before it has appointed a substitute special servicer.

3.7. Real Estate Operating Company (REOCO)

A framework agreement between the master servicer, all of the special servicers and a REOCO will be signed after closing. According to this agreement, the special servicers, after having received approval from the issuer, can indicate situations in which they would like the REOCO to intervene in the auction process and purchase the property. If the REOCO agrees that the property can be sold for a higher price outside of the auction process, it can decide to participate in the auction and purchase the property.

If the REOCO purchases the property at auction it will defer the payment of the purchase price to the issuer until the property is resold. The issuer will receive interest on the deferred purchase price at a rate equal to the Class A notes interest rate. The REOCO will also receive financing from the mezzanine noteholder, the current holder of the Class B notes to a maximum amount of EUR 20m. This financing serves to cover costs and taxes for the REOCO and can also be used for property improvements through capex expenditure. The interest rate due on the financing is equal to the interest rate on the Class B notes.

Once the property is resold, the proceeds will be used to cover: i) pro rata and pari passu interest on the deferred purchase price to the issuer and interest and repayment of principal on the part of the financing used to cover costs and taxes; ii) payment of the purchase price to the issuer; iii) repayment of the part of the financing used for capex expenditure, if any; iv) shortfalls realised by the issuer on previous property sales; and v) junior items such as special servicing fees paid by the REOCO, profit for the REOCO, extra interest and profit for the provider of the financing.

The issuer will only pay the performance fee to the special servicers once the property has been resold by the REOCO and only for the actual proceeds that the issuer receives from the final sale of the property by the REOCO.

A well-functioning REOCO can help to improve recoveries for illiquid assets by removing them from the judicial process and, if necessary, improving and then reselling them on the open market. Adequate property management and capex investments can increase the likelihood of reselling a property for a higher price at a later stage. The presence of a REOCO submitting bids can also stimulate opportunistic buyers, who may otherwise wait for prices to drop, to bid for fear of losing out to the REOCO. In this way, the REOCO can improve the price in the auction process without actually having to purchase the property.

The flip side of the coin is that the REOCO will incur costs which, through the abovementioned waterfall, also impact the proceeds that the issuer receives, as part of the costs are senior to the payment of the purchase price to the issuer. The fact that the REOCO has a maximum investment limit at any time of EUR 100m, and that any shortfalls (i.e. cases in which the deferred purchase price is not repaid in full as the REOCO has sold the property for a price lower than the costs and deferred purchase price plus interest) will reduce the investment limit, mitigates the weakness in the REOCO waterfall. In this way the maximal loss for the issuer is limited to EUR 100 million, which is less than 1% of the estimated property value at closing.

In Scope's opinion the REOCO is a positive feature, although the maximum investment limit reduces its possibility to act proactively while, on the other hand, its small size reduces any potential loss.

4. Quantitative analysis/cash flow analysis

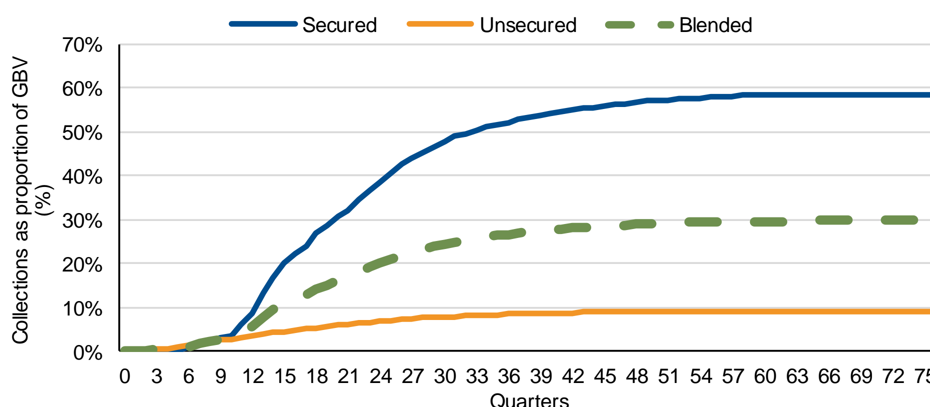
Cash flow characteristics analysed

Scope has analysed the specific cash flow characteristics of the transaction. Asset assumptions have been captured through rating conditional gross recovery vectors. The analysis captures the capital structure, and an estimate of legal costs based on the

transaction documents. Servicing costs both for the master servicer and recurring and performance based fees for the special servicers have been considered. Other senior fees and expenses of EUR 500,000 per annum have also been considered. We have taken into account the reference rate payable on the notes based on the 3-month Euribor forward curve reflected by the strike rates for the interest rate cap.

Figure 18 depicts Scope's future expected cumulative gross recovery vector under the BBB rating level scenario as a proportion of GBV split by secured and unsecured loans and the blended vector.

Figure 18: BBB scenario gross recoveries split by secured and unsecured loans and the blended vector, all as a proportion of the respective GBV

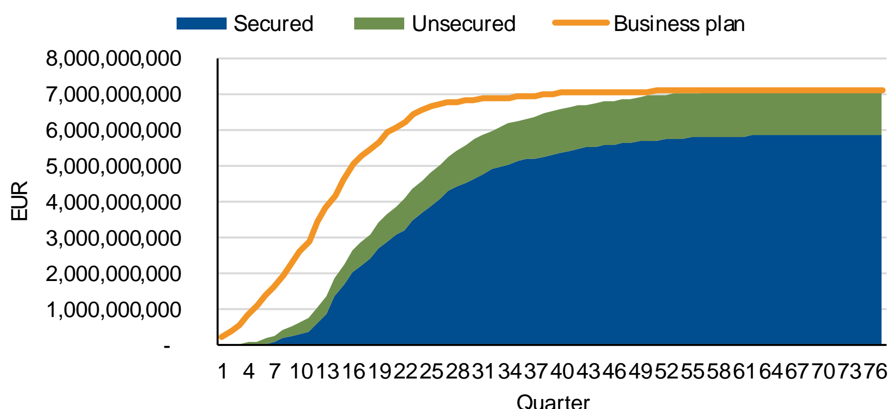


Source: Data tape provided by MPS, calculations by Scope Ratings

BBB rating level scenario

Figure 19 depicts Scope's future expected cumulative gross recovery cash flows under a BBB rating scenario compared to the business plan in the transaction documents.

Figure 19: BBB scenario gross recoveries versus the transaction's business plan



Source: Data tape provided by MPS, Scope Ratings' calculations and transactions documents

5. Rating stability

5.1. Rating sensitivity

Sensitivity of the ratings to input assumptions

Scope tested the resilience of the ratings against deviations from expected recovery rates and recovery timing. This analysis has the sole purpose of illustrating the sensitivity of the ratings to input assumptions and is not indicative of expected or likely scenarios.

Scope tested the sensitivity of the analysis to deviations from the main input assumptions: i) recovery rate level; and ii) recovery timing.

The following shows how the results for Class A change compared to the assigned credit rating in the event of:

- a decrease in secured and unsecured recovery rates by 10%, negative 0 notches; and
- an increase in the secured recovery lag of two years, negative 0 notches

6. Sovereign risk

Sovereign risk does not limit the transaction's ratings

Sovereign risk does not limit any of the ratings. The risks of an institutional framework meltdown, legal insecurity or currency convertibility problems, due to Italy's hypothetical exit from the Eurozone, are not material for the notes' rating.

For more insight into Scope's fundamental analysis of the Italian economy please refer to our rating report on the Republic of Italy, dated 30 June 2017.

7. Counterparty risk

The transaction is exposed to counterparty risk from: i) the originators, regarding representation and warranties and regarding eventual payments that might be made by the borrowers, especially for the cash-in-court cases; ii) the servicers and master servicer; iii) HSBC Bank plc and Mediobanca ‐ Banca di Credito Finanziario S.p.A. the interest rate cap counterparties; iv) BNP Paribas Securities Services, the account bank, and paying agent; and v) Intesa Sanpaolo S.p.A. the operating bank. In Scope's view, none of these exposures limits the maximum ratings achievable by this transaction.

BNP Paribas Securities Services is a subsidiary of BNP Paribas SA, rated AA-/S-1 Stable by Scope, while Intesa Sanpaolo S.p.A. is rated A/S-1 and HSBC Holdings plc is rated AA-/S-1

The replacement triggers for the account bank and operating bank are set at a loss of BB or S-3.

7.1. Servicer disruption risk

A servicer disruption event for any of the servicers may have a negative impact on the performance of the transaction. However, the presence of four independent special servicers partially mitigates a servicer disruption risk. The master servicer will assist the issuer in finding a suitable replacement in the event of a servicer disruption and the other special servicers could step in to service the part of the pool related to the servicer disruption event.

7.2. Commingling risk

Collections paid directly to the issuer

Commingling risk is limited as debtors will be instructed to pay directly into an account held under the name of the issuer. In the limited cases in which the servicer was to receive payments from a debtor, the servicer undertakes to transfer the amounts within two business days after the receipt and identification of such payments.

7.3. Claw-back risk

In proximity to the effective date of the transfer agreement, the sellers provided: i) a good standing certificate from the Chamber of Commerce; ii) a solvency certificate signed by a representative duly authorised; and iii) a certificate from the bankruptcy court (tribunale civile – sezione fallimentare) confirming that the seller is not subject to any insolvency or similar proceedings (where available). This mitigates claw-back risk as the issuer should be able to prove that it was not aware of the originator being in a state of insolvency as of the transfer date.

7.4. Enforcement of representations and warranties

Representations and warranties limited by time and amount

The issuer will rely on the representations and warranties given by the sellers in the transfer agreement. If there is a breach of a representation and warranty which materially and adversely affects the value of the loan, the issuer, through the special servicers, can request the sellers to indemnify the issuer for the damages deriving from that breach. Upon receiving notification of the breach of representation and warranties the sellers will need to indemnify the issuer within 20 business days.

It should be noted that indemnifications would only be paid out for claims made within three years of the closing date. In addition, there is an aggregate deductible amount of EUR 1m before any indemnifications will be paid out. The transactions documents also contain a single loan deductible if EUR 10,000 and, in any case, indemnifications on an aggregate level cannot be higher than 28% of the purchase price for the portfolio.

8. Legal structure

Governed by Italian law

The transaction documents are governed by Italian law, while the interest cap agreement and deed of charge are governed by English law.

The transaction is fully governed by the terms in the documentation and any changes are subject to the noteholders' consent.

8.1. Use of legal opinions

Scope had access to the legal opinions produced for the issuer, which provide comfort on the legally valid, binding and enforceable nature of the contracts.

9. Monitoring

The ratings will be monitored continuously

Scope will monitor this transaction based on the performance reports from the calculation agent and servicer as well as other available information. The ratings will be monitored continuously and reviewed at least once a year, or earlier if warranted by events.

Scope analysts are available to discuss all the details surrounding the rating analysis, the risks to which this transaction is exposed and the ongoing monitoring of the transaction.

10. Applied methodology

For the analysis of this transaction Scope applied its General Structured Finance Instruments Rating Methodology, and Methodology for Counterparty Risk in Structured Finance available on www.scoperatings.com

I. Appendix: Transaction-specific SVH assumptions

Figure 20: Transaction-specific security value haircut assumptions

MVD ASSUMPTIONS (residential and non-residential)

	Mainland - metropolitan cities									Mainland rest of povinces*			Islands	
Rating level/macro region	Milan	Turin	Genoa	Bologna	Venice	Rome	Florence	Naples	Bari	North	Center	South	Metropolitan cities	Rest of provinces
B	-7.0%	-7.0%	-7.0%	-7.0%	-7.0%	-7.0%	-7.0%	-7.0%	-7.0%	-7.0%	-7.0%	-7.0%	-7.0%	-7.0%
BB	-1.5%	-1.6%	-1.8%	-1.6%	0.3%	0.9%	-0.6%	0.4%	-0.3%	-0.6%	-0.6%	0.9%	0.8%	0.8%
BBB	3.9%	3.8%	3.5%	3.8%	7.5%	8.8%	5.8%	7.8%	6.4%	5.8%	5.8%	8.8%	8.6%	8.6%
A	9.4%	9.2%	8.7%	9.2%	14.8%	16.7%	12.2%	15.1%	13.2%	12.2%	12.2%	16.7%	16.4%	16.4%
AA	14.8%	14.6%	13.9%	14.6%	22.0%	24.6%	18.6%	22.5%	19.9%	18.6%	18.6%	24.6%	24.2%	24.2%
AAA	20.3%	20.0%	19.2%	20.0%	29.3%	32.5%	25.0%	29.9%	26.6%	25.0%	25.0%	32.5%	32.0%	32.0%

* includes the smallest metropolitan city of Regio Calabria

RESIDENTIAL FIRESALE DISCOUNT (FSD)	NON-RESIDENTIAL FSD
25	30

Resi SVH = 1- [(1-MVD)*(1-Resi FSD)]

	Mainland - metropolitan cities									Mainland rest of povinces*			Islands	
Rating level/macro region	Milan	Turin	Genoa	Bologna	Venice	Rome	Florence	Naples	Bari	North	Center	South	Metropolitan cities	Rest of provinces
BBB	27.9%	27.9%	27.6%	27.9%	30.6%	31.6%	29.4%	30.8%	29.8%	29.4%	29.4%	31.6%	31.5%	31.5%

Non-Resi SVH = 1- [(1-MVD)*(1-Non-Resi FSD)]

	Mainland - metropolitan cities									Mainland rest of povinces*			Islands	
Rating level/macro region	Milan	Turin	Genoa	Bologna	Venice	Rome	Florence	Naples	Bari	North	Center	South	Metropolitan cities	Rest of provinces
BBB	32.7%	32.7%	32.4%	32.7%	35.3%	36.2%	34.1%	35.4%	34.5%	34.1%	34.1%	36.2%	36.0%	36.0%

Figure 20 highlights the analytical process we have followed to determine our market-value-decline (MVD) assumptions and security value haircut (SVH) assumptions for the transaction's NPL portfolio.

Scope determined real estate price expectations using a base case scenario. Based on different affordability measures, we believe that current real estate prices in Italy, in real terms, are at sustainable levels and that they will benefit from nominal appreciation in the mid term, in line with inflation expectations. We have assumed a 7% nominal price appreciation for the assets in the transaction, assuming an estimated average time to liquidation of about five to six years.

Scope has derived AAA real estate price index decline assumptions based on the observed volatility of deflated nominal house prices in different parts of Italy where the deflator used is the assumed sustainable growth rate. When sizing for the sustainable growth rate used, we considered macro-regional real estate price drivers such as economic strength and diversity, house price affordability, population growth or per capita purchasing power.

To derive the MVD assumptions reported in Figure 20, we calculated the mean and standard deviation for each deflated city or regional price index. The AAA MVD is calculated as the distance from the latest index value to two standard deviations from the historical mean value for each city or regional index. We derive intermediate rating stresses through linear interpolation between the B and the AAA MVD assumptions.

The next step in our analytical approach is to derive region- and sector-conditional fire sale discount assumptions. Fire sale discounts reflect our view that the properties are expected to be sold under non-standard market or distressed conditions due to several factors, such as asset deterioration or a lack of sufficient competition in the auction process.

The average level of fire sale discounts is mainly based on observations from a property database containing properties sold in an auction process provided by the servicers. The database covers more than 30,000 single positions. For residential properties, a fire sale discount of 25% has been used while for commercial and industrial properties a discount of 30% was applied.

Security Value Haircuts (SVH) assumptions were derived based on the following equation:

SVH = 1-(1-MVD)*(1-Fire sale discount)

II. Appendix: Comparables

The figure below shows a benchmark table between Siena NPL 2018 and other comparable transactions in Italy. Scope analysed Siena NPL 2018 on a loan-by-loan basis with collateral linked to the loans. In this way, part of the borrower exposure can be secured and another part can be unsecured without the need to classify the entire exposure to one borrower as either secured or unsecured.

Figure 21: Comparable transactions

Transaction	Siena NPL 2018	Bari 2017	Elrond
Originator	MPS	BPB, CRO	Creval
Master Servicer	Credito Fondiario SpA	Prelios Credit Servicing SpA	Securitisation Services SpA
Special Servicer	Juliet SpA, Italfondiario SpA, Credito Fondiario SpA, Prelios Credit Servicing SpA	Prelios Credit Servicing SpA	Creved Credit Management
Back up Servicer	N/A	Securitisation Services SpA	Securitisation Services SpA
General portfolio attributes			
GVB (EURm)	23,939.2	345	1,422.3
Number of borrowers	79,669	1,565	3,712
Number of loans	545,939	4,569	6,951
WA seasoning (years)	4.4	4.5	3.7
WA seasoning (years) - Unsecured portfolio	4.8	N/A	N/A
WA LTV buckets (% or secured portfolio)			
bucket [0-25]	5.7	N/A	3.6
bucket [25-50]	12.4	N/A	11.1
bucket [50-75]	16.8	N/A	13.7
bucket [75-100]	17.0	N/A	19.6
bucket [100-125]	13.4	N/A	24.6
bucket [125-150]	8.3	N/A	8.6
bucket [150-175]	5.3	N/A	4.8
bucket [175-200]	3.9	N/A	1.6
bucket > 200	17.1	N/A	12.5
Cash in court (% of total GBV)	N/A	N/A	2
Loan types (% of total GBV)			
Secured first lien	41.6	53.6	66.4
Secured junior lien		2.5	7.6
Unsecured	58.4	43.9	26.0
Syndicated loans	5.1		
Debtors (% of total GBV)			
Individuals	19	12	12.7
Corporates or SMEs	81	88	87.3
Procedure type (% of total GBV)			
Bankrupt	36.6	39	57.6
Non bankrupt	63.4	43	42.4
Other		18	
Not started			
Borrower concentration (% of total GBV)			
Top 10	2.1	28.2	13.4
Top 100	9.5	69	42.4
Borrower regional concentration (% of total GBV)			
North	35.9	18.3	61.6
Centre	36	14.1	14.6
South	28.1	67.6	23.8
Collateral type (% of Secured loans GBV)			
Residential	28.2	43	32.6
Commercial	71.8	40	32.4
Industrial			23.2
Land		18	8.7
Other or unknown			3.4
Valuation type (% of Secured loans GBV)			
Full or drive-by	10	96.31	70.8
Desktop	65		4
CTU	15	3.69	23.6
Other	10	0	0.5
Secured portfolio procedure stage (% of total GBV)			
Initial	52.6	55.5	36.1
CTU	5.4	14.2	10.7
Auction	35.2	26.5	36.4
Distribution	6.7	3.8	16.8
Summary of assumptions			
Secured loans			
Secured recovery rate	58.6	N/A	N/A
Unsecured loans			
Remaining lifetime recovery rate	9.2	N/A	N/A
Structural features			
Liquidity reserve (% of Class A notes)	3.5	4	4
Interest rates hedging	Yes, Interest rate cap and Class B capped rate	Yes, Interest rate cap with strike at 0.1%	Yes, Interest rate cap with strike at 0.5%
Class A (% of GBV)	12.1	25.3	33
Class B (% of GBV)	3.5	3.1	3

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