MONTE DEI PASCHI DI SIENA
BANCA DAL 1472

Risk Management Report

New York Branch September 2017

Direzione Chief Risk Officer

Contents

Regulatory RWA and Internal RWA

Credit Risk Analysis of the Lending Portfolio

Interest Rate Risk Analysis of the Banking Book Portfolio

Operational Risk Management

Monitoring of credit risk by internally implemented portfolio model

Regulatory RWA and Internal RWA as at 30-09-2017

($ mln)		NEW YORK					
Regulatory / Internal RWA		**dic-16**	**mar-17**	**giu-17**	**set-17**	**ΔQ**	**ΔQ%**
Credit and Counterparty Risk		**263,68**	**277,52**	**299,14**	**218,19**	**-81**	**-27,1%**
	Credit Risk	**263,68**	**277,52**	**299,14**	**218,19**	**-81**	**-27,1%**
	Standard	*263,68*	*277,52*	*299,14*	**218,19**	*-81*	*-27,1%*
Operational Risk		**13,26**	**13,37**	**15,58**	**16,42**	**1**	**5,4%**
REGULATORY RWA		**276,94**	**290,89**	**314,72**	**234,61**	**-80**	**-25,5%**
INTERNAL RWA		**276,94**	**290,89**	**314,72**	**234,61**	**-80**	**-25,5%**

Contents

Regulatory RWA and Internal RWA

Credit Risk Analysis of the Lending Portfolio

Interest Rate Risk Analysis of the Banking Book Portfolio

Operational Risk Management

Monitoring of credit risk by internally implemented portfolio model

Credit Loans Portfolio – Regulatory measures

			Credit Risk						
Values in $/mln			**dec-16**	**mar-17**	**jun-17**	**sep-17**	**dec-17**	**ΔQtD**	**ΔYtD**
RWA	**TOTAL**		**263,7**	**277,5**	**299,1**	**218,2**		**-27%**	**-17%**
	Standard		263,7	277,5	299,1	218,2		**-27%**	**-17%**
		- of which Bonis	*263,7*	*277,4*	*269,2*	*218,2*		**-19%**	**-17%**
		- of which Default	*0,0*	*0,1*	*29,9*	*0,0*		**-100%**	**-70%**
	AIRB		0,0	0,0	0,0	0,0		**0%**	**0%**
		- of which Bonis	*0,0*	*0,0*	*0,0*	*0,0*		**0%**	**0%**
		- of which Default	*0,0*	*0,0*	*0,0*	*0,0*		**0%**	**0%**

Values in $/mln			**dec-16**	**mar-17**	**jun-17**	**sep-17**	**dec-17**	**ΔQtD**	**ΔYtD**
EAD	**TOTAL**		**494,0**	**415,1**	**361,6**	**345,1**		**-5%**	**-30%**
	of which Intragroup		**0,0**	**0,0**	**0,0**	**0,0**		**0%**	**0%**
	of which no Intragroup		**494,0**	**415,1**	**361,6**	**345,1**		**-5%**	**-30%**
	Standard		**492,4**	**413,4**	**361,2**	**345,1**		**-4%**	**-30%**
		- of which Bonis	*492,3*	*413,4*	*341,3*	*345,1*		**1%**	**-30%**
		- of which Default	*0,0*	*0,1*	*20,0*	*0,0*		**-100%**	**-70%**
	AIRB		**1,6**	**1,6**	**0,3**	**0,0**		**-100%**	**-100%**
		- of which Bonis	*0,0*	*0,0*	*0,0*	*0,0*		**0%**	**0%**
		- of which Default	*1,6*	*1,6*	*0,3*	*0,0*		**-100%**	**-100%**

- RWA decrease from the previous quarter (-27%, -81 $/mln) due to the standard Corporate segment, in particular the reduction of exposure of “GENERAL DEVELOPMENT CORPORATION” (-31 $/mln of RWA) and the closure of relations with the “SEVCON INC.” and “LATIN AMERICA EXPORT FINANCE FUN” (respectively -16 $/mln and -15 $/mln of RWA).

- The decrease of EAD observed compared to the end of June is mainly due to the reduction of EAD of the counterpart above mentioned.

Contents

Regulatory RWA and Internal RWA

Credit Risk Analysis of the Lending Portfolio

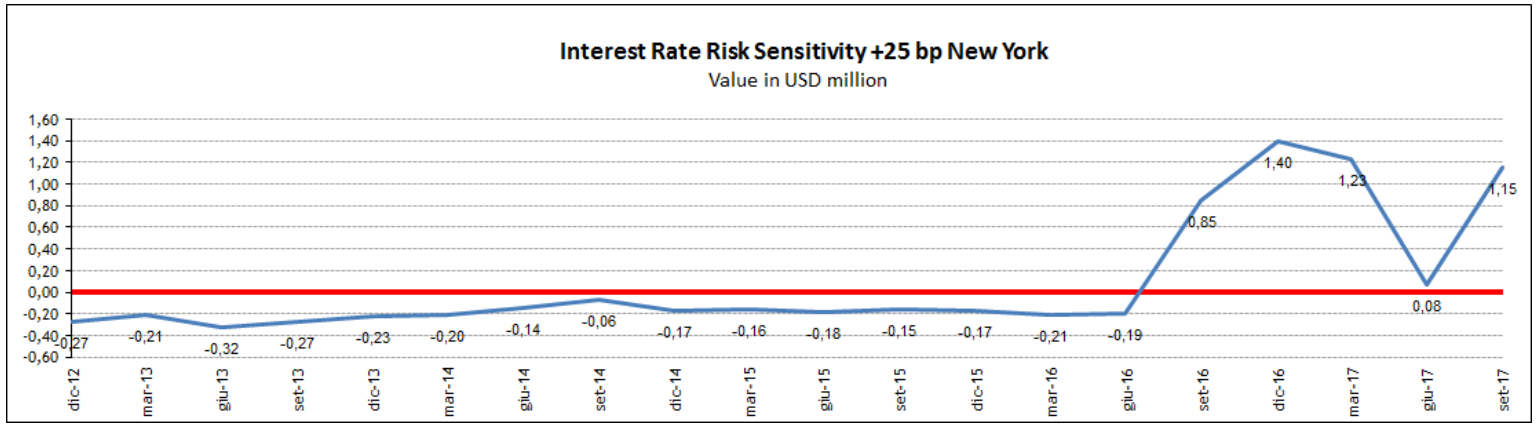
Interest Rate Risk Analysis of the Banking Book Portfolio

Operational Risk Management

Monitoring of credit risk by internally implemented portfolio model

Interest Rate Sensitivity

Interest rate sensitivity September 2017						*Value in $/ mln*
	shock+25bp	*shock-25bp*	*shock +100 bp*	*shock -100 bp*	*shock +200 bp*	*shock -200 bp*
New York Branch	1,15	-1,16	4,52	-4,74	8,83	-8,96



Contents

Regulatory RWA and Internal RWA

Credit Risk Analysis of the Lending Portfolio

Interest Rate Risk Analysis of the Banking Book Portfolio

Operational Risk Management

Monitoring of credit risk by internally implemented portfolio model

Operational Risk Management – Loss Data Collection overview

The process of Loss Data Collection (LDC) consists of searching and registering loss data, triggered by operational risk events, and analytically examining them in order to fully understand loss causes and their implications as far as mitigation is concerned.

The New York branch collects operational losses data from 2006; its operational losses are generally of a low amount (averagely 3,000 USD/year) and are related to errors/delays in executing operations. The branch has registered only one relevant event in the past (Map Marine lawsuit, 8.8 USD/mln, 2010).

Concerning the period under investigation, one operational risk event (less than 50 €), related to a mistake in executing a customer's payment order (and therefore classified under Basel 2 Event Type "7"), occurred in **Q3 2017**.

Contents

Regulatory RWA and Internal RWA

Credit Risk Analysis of the Lending Portfolio

Interest Rate Risk Analysis of the Banking Book Portfolio

Operational Risk Management

Monitoring of credit risk by internally implemented portfolio model

Credit Portfolio Measurement System – Methodological Notes

1. Measuring and monitoring of credit risk are made in Banca MPS by means of the internally implemented portfolio model.

2. The model, under the responsability of the Risk Management Dept, takes into account:
   a) probability of default (PD) derived from the internal rating system for AIRB portfolio counterparties and from External Rating (if available) or benchmark approach for Standard portfolio counterparties. Until September 2015 the pd benchmark was estimated by average default rate approach above whole group portfolio. Since December 2015 the pd benchmark was estimated by average default rate approach above foreign branch portfolio, improving approximately 70-80%;
   b) loss given default (LGD) rates obtained from specific 7-year time series of recovering and costs relating to "close" defaulted position;
   c) coefficients of exposure at default (EAD);
   d) data relating to different types of guarantees supporting specific transactions.

3. The model takes into account the diversification effect by means of a structural and dynamic correlation matrix which considers the concentration and diversification effects of the risk, together with the marginal redistribution of risk at single counterparty level.

4. The main measures regularly presented are:
   a) expected loss, representing the annual average estimated loss;
   b) unexpected loss, representing the difference between the loss - measured on a yearly holding period at 99,93% confidence interval - and the expected loss;
   c) economic capital, measure of the capital requirement originated from the positions held in the portfolio;
   d) stress testing measures calculated on specific variables (i.e., increase in PD, etc.), representing extreme but possibile scenarios.

5. LGD parameters are estimated according to the "workout LGD" concept. LGD is calculated on the basis of historical recoveries and costs relating to defaulted positions over several years, discounted at the proper rates and adjusted through "cure-rate" methodology.

6. The parameters utilized to compute economic capital are the same according to the international Regulatory framework for the validated AIRB approach.

7. The Herfindahl index (also known as Herfindahl–Hirschman Index, or HHI) measures Credit Portfolio concentration. It is defined as market shares sum of squares, where the market shares are expressed as ratios. It can vary from 0 to 1.0, moving from a huge number of borrowers to a single monopolistic borrower. Herfindahl index increase generally indicates a diversification decrease and a lending portfolio concentrantion increase and vice-versa.

Credit Loans Portfolio – Bonis portfolio

Credit risk information, included from the current slide to ahead, are based on managerial measurements.

USD/EUR 1,1806

September 30, 2017 - New York - $/mln

Portfolio	Drawn	EAD	EL	Ecap	EL / EAD (bp)	Ecap / EAD %	AVG PD %
Corporate	213,04	214,48	0,72	9,28	33	4,33%	0,83%
Institutional	132,28	132,26	0,03	0,37	2	0,28%	0,04%
Family	0,04	0,06	0,00	0,00	46	2,31%	1,59%
Total	**345,36**	**346,80**	**0,74**	**9,64**	**21**	**2,78%**	**0,53%**

Loans* exposures – at September 2017 – amount to 345,36 $/mln. Expected Loss (EL) and Economic Capital (ECap**) are respectively 0,74 $/mln and 9,64 $/mln.

213,04 $/mln of exposure, almost 62% of whole portfolio, is represented by Corporate counterparts.

In terms of relative credit risk ratios, EL/EAD ratio is equal to 21 bps while ECap/EAD is 2,78%.

The table below shows the recalculation of risk measures on EL and Ecap of bonis portfolio after application of the rates of pd and lgd stressed according to the approach used by the Group MPS.

USD/EUR 1,1806

September 30, 2017 - New York - $/mln

Portfolio	Drawn	EAD_Stress	EL_Stress	Ecap_Stress	EL / EAD (bp)	Ecap / EAD %	AVG PD %_Stress
Corporate	213,04	220,42	1,12	11,08	51	5,03%	1,26%
Institutional	132,28	146,27	0,44	1,90	30	1,30%	0,67%
Family	0,04	0,07	0,00	0,00	48	1,75%	1,59%
Total	**345,36**	**366,77**	**1,56**	**12,99**	**43**	**3,54%**	**1,02%**

** The Portfolio considered, in line with the analysis made at Bank and Group level, does not include the defaulted positions according to the international Regulatory framework for the validated AIRB approach.*

*** ECap is calculated taking into account the diversification effect at the entire Group Portfolio level*

Credit Loans Portfolio – Top 20 – Bonis portfolio

Bonis portfolio - Top 20 *

USD/EUR 1,1806

September 30, 2017 - New York - $/mln

Counterparty Name	Drawn	EAD	EL	Ecap	EL / EAD (bp)	Ecap / EAD %
FEDERAL RESERVE BANK OF NEW YORK	114,22	114,22	0,02	0,31	1	0,28%
ACIST MEDICAL SYSTEMS INC.	34,00	34,00	0,03	0,75	8	2,22%
U.S. SILICA	14,88	14,88	0,06	0,82	43	5,52%
TERRA MILLENIUM CORP.	14,81	14,81	0,06	0,82	43	5,52%
GENERAL NUTRITION CENTERS, INC	14,41	14,41	0,06	0,81	44	5,63%
PETROSERVE MARINE INC	12,12	12,12	0,05	0,69	44	5,66%
BAYERISCHE LANDESBANK	10,00	10,00	0,01	0,03	6	0,28%
M & G POLYMERS USA, LLC	10,00	10,00	0,04	0,57	44	5,66%
RAVN AIR GROUP, INC.	9,57	9,57	0,04	0,53	43	5,53%
PIZZAROTTI IBC LLC	9,50	9,50	0,03	0,40	33	4,18%
DEL CONCA USA INC	8,77	8,77	0,01	0,20	8	2,23%
MATICA TECHNOLOGIES INC.	8,05	8,07	0,04	0,46	44	5,66%
PRODOTTI MEDITERRANEI INC	8,00	8,00	0,03	0,33	32	4,17%
JPMORGAN CHASE BANK N.A.	7,96	7,96	0,00	0,02	6	0,29%
IOCHPE HOLDINGS LLC	7,50	7,50	0,03	0,42	44	5,66%
RANA MEAL SOLUTIONS LLC	6,94	7,14	0,01	0,24	17	3,32%
EUROTRANCIATURA MEXICO S.A. DE C	6,87	6,90	0,01	0,25	19	3,62%
BERETTA USA CORP	5,00	5,00	0,00	0,07	4	1,36%
FAMECCANICA INDUSTRIA E COMERCIO	4,75	4,91	0,00	0,08	6	1,69%
PANARIAGROUP USA INC	3,83	3,83	0,00	0,10	11	2,54%
Total	311,19	311,61	0,55	7,90	18	2,53%

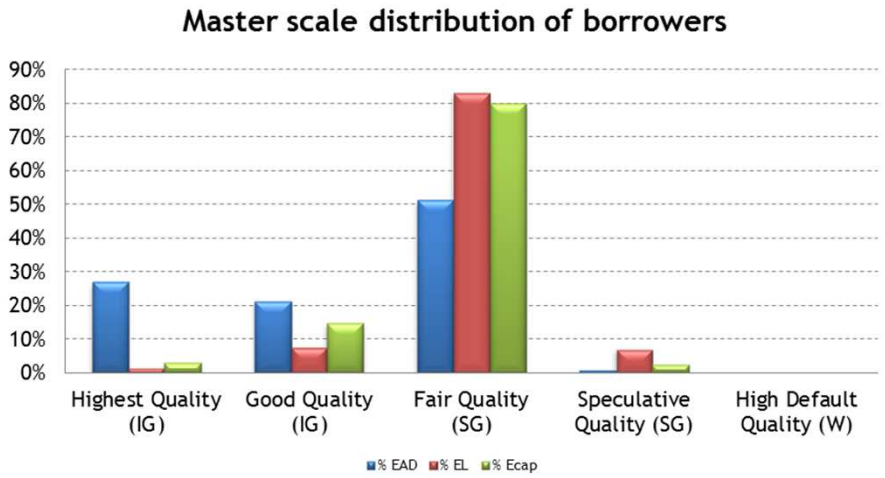
** Counterparties highlighted represent new entries in portfolio compared with the previous quarter*

Credit Loans Portfolio – quality distribution – Bonis portfolio

Master Scale	Basis point from	Basis point to	S&P's Rating	Description
Highest Quality (IG)	-	16	AAA / A-	Investment
Good Quality (IG)	16	56	BBB+ / BBB-	
Fair Quality (SG)	56	298	BB+ / BB-	Speculative
Speculative Quality (SG)	298	1.774	B+ / B-	
Hight Default Quality (W)	1.774	10.000	CCC+ / D	Watch

On September 2017, the measurement of Exposures At Risk (EAD), in terms of internal-external ratings (according to the MPS Master Scale), results in the following counterparties distribution (as also represented in the graph below):

- Speculative Grade Class about 52% (see Fair and Speculative classes);
- Investment Grade about 48%.



Credit Loans Portfolio – Default portfolio

Default portfolio *USD/EUR 1,1806*

September 30, 2017 - New York - $/mln

Counterparty Name	Drawn	EAD	EL	LGD
GENERAL DEVELOPMENT CORPORATION	0,04	0,04	0,04	93,00%
LASCIALFARE CARLO ALBERTO	0,01	0,01	0,00	75,56%
Total	0,05	0,05	0,04	90,78%

Loans default exposures – at September 2017 – amount to 0,05 $/mln. Expected Loss (EL) is 0,04 $/mln. LGD of default portfolio is 90,78%.

The table below shows the recalculation of risk measures on EL of default portfolio after application of the rates of lgd stressed according to the approach used by the Group MPS.

Default portfolio after stress *USD/EUR 1,1806*

September 30, 2017 - New York - $/mln

Counterparty Name	Drawn	EAD	EL Stress	LGD Stress
GENERAL DEVELOPMENT CORPORATION	0,04	0,04	0,05	126,35%
LASCIALFARE CARLO ALBERTO	0,01	0,01	0,00	79,94%
Total	0,05	0,05	0,05	120,46%

Credit Loans Portfolio – Transition Matrix

The table below shows the comparison between 30th September 2016 and 30th September 2017 risk ratings assigned to MPS Group Counterparties.

Credit Loans Whole Portfolio Transition Matrix

- Banca Monte dei Paschi di Siena: New York Branch -

Pd_t-1 \ Pd_t	0,01%	0,03%	0,05%	0,09%	0,13%	0,20%	0,30%	0,46%	0,69%	1,05%	1,59%	2,42%	3,99%	6,31%	9,95%	16,03%	22,12%	31,63%	45,00%	100,00%
0,01%																				
0,03%		114,22																		
0,05%			0,00		0,12															
0,09%				5,00		2,04														
0,13%					17,96															
0,20%						4,91														
0,30%							5,05	10,70												
0,46%										0,38										
0,69%								8,30		8,00	1,05									
1,05%				1,23		42,77	4,53	0,21	5,40	66,85		4,50				1,00				
1,59%											0,14									0,01
2,42%																				
3,99%											0,08									
6,31%																				
9,95%																				
16,03%																				
22,12%																				
31,63%																				
45,00%																				
100,00%																				0,04
<nuovi ingressi>									0,08	41,95		0,30								

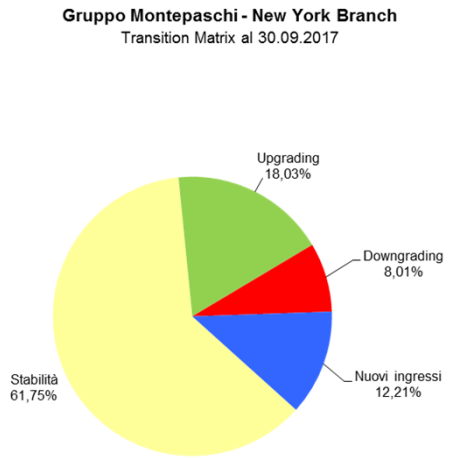
EUR/USD 1,1806

(€ millions)

Periodo t = 30th September 2017

Periodo t-1 = 30th September 2016

Variazione	EAD ($)	EAD (%)
Stabilità	214,19	61,75%
Upgrading	62,53	18,03%
Downgrading	27,80	8,01%
Nuovi ingressi	42,33	12,21%
Totali =	346,85	100,00%



Credit Loans Portfolio – Concentration Exposure: drill down by Region

The overall concentration index level of the New York Branch Bonis Portfolio (HH – Herfindhal Index) is 13,25%. The high value of concentration index is due to increased exposure with Federal Reserve. The marginal value of concentration index without Federal Reserve is 5,35%.

The table below shows both the single-name concentration within each single country and the overall Regional concentration level.

The next table shows both the single-name concentration within each industry and the overall Industry concentration level.

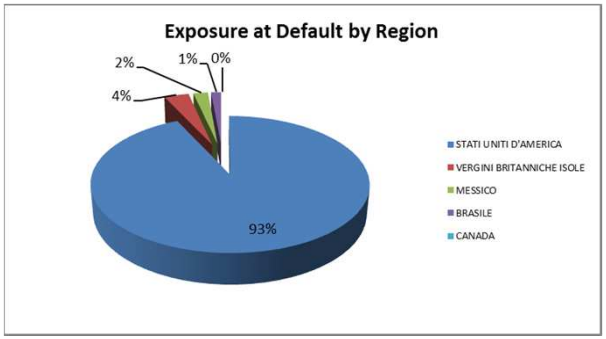
Bonis portfolio

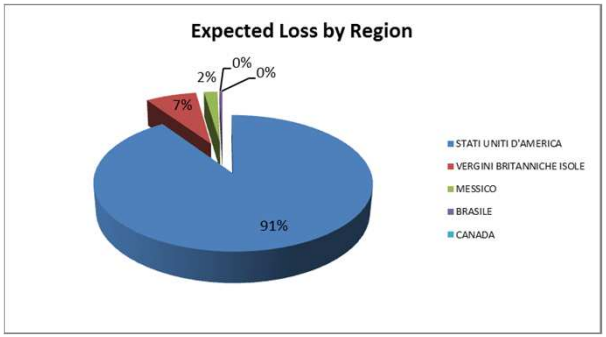
September 30, 2017 - New York

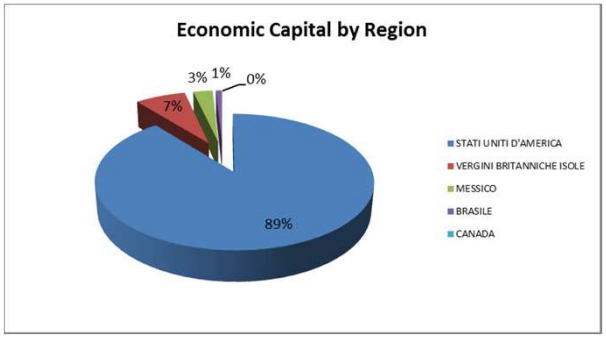
ID_GEO	IM_EAD	IM_EL	IM_CE	AV_LGD	AV_PD	CAP_EAD	HH
STATI UNITI D'AMERICA	322,62	0,67	8,61	42,02%	0,52%	2,67%	14,83%
VERGINI BRITANNICHE ISOI	12,12	0,05	0,69	41,89%	1,05%	5,66%	80,64%
MESSICO	7,14	0,01	0,26	41,00%	0,48%	3,69%	56,49%
BRASILE	4,91	0,00	0,08	31,18%	0,20%	1,69%	40,13%
CANADA	0,00	0,00	0,00	44,91%	0,05%	0,13%	100,00%
	346,80	**0,74**	**9,64**	**41,84%**	**0,53%**	**2,78%**	**86,73%**

EUR/USD 1,1806

($ millions)





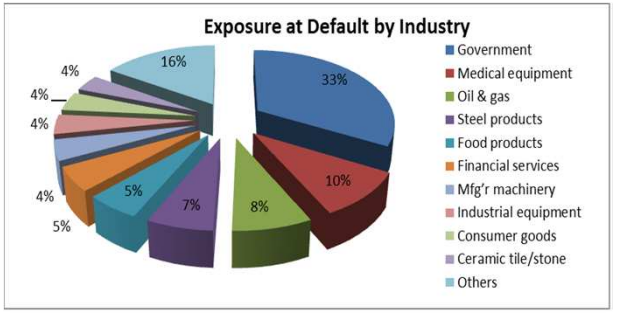


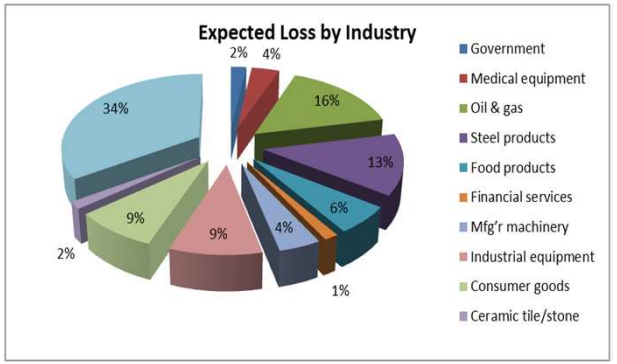
Credit Loans Portfolio – Concentration Exposure: drill down by Industry

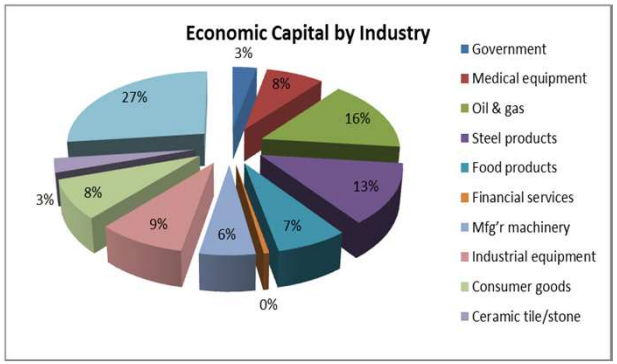
Bonis portfolio
September 30, 2017 - New York

ID_INDUSTRY	IM_EAD	IM_EL	IM_CE	AV_LGD	AV_PD	CAP_EAD	HH
Government	114,22	0,02	0,31	45,00%	0,03%	0,28%	99,19%
Medical equipment	34,00	0,03	0,75	41,02%	0,20%	2,22%	100,00%
Oil & gas	27,00	0,12	1,51	41,33%	1,05%	5,58%	46,62%
Steel products	22,55	0,10	1,26	41,23%	1,05%	5,57%	54,22%
Food products	18,70	0,04	0,69	34,56%	0,71%	3,67%	32,21%
Financial services	18,04	0,01	0,05	45,01%	0,13%	0,29%	34,83%
Mfg'r machinery	15,40	0,03	0,54	37,92%	0,51%	3,48%	19,28%
Industrial equipment	14,81	0,07	0,85	41,89%	1,11%	5,72%	46,75%
Consumer goods	14,41	0,06	0,81	41,69%	1,05%	5,63%	100,00%
Ceramic tile/stone	12,61	0,01	0,29	39,89%	0,23%	2,33%	56,07%
Airlines	9,57	0,04	0,53	40,96%	1,05%	5,53%	100,00%
Construction	9,50	0,03	0,40	30,96%	1,05%	4,18%	40,17%
Computer services	8,07	0,04	0,46	41,89%	1,05%	5,66%	52,66%
Firearms & apparel	5,00	0,00	0,07	41,89%	0,09%	1,36%	52,00%
Packaging	3,00	0,03	0,26	41,89%	2,42%	8,51%	100,00%
Furniture	2,54	0,01	0,15	41,89%	1,05%	5,76%	100,00%
Mfg'r of specialized equi	2,25	0,01	0,10	41,17%	0,66%	4,46%	16,79%
Apparel	2,09	0,00	0,05	45,13%	0,21%	2,48%	95,04%
Agriculture	2,02	0,00	0,06	41,89%	0,30%	2,90%	100,00%
Mining & exploration	1,81	0,00	0,05	41,91%	0,30%	2,90%	45,57%
Bicycle parts	1,50	0,00	0,04	31,94%	0,50%	2,98%	87,24%
lawyer's services	1,45	0,01	0,08	41,14%	1,05%	5,66%	100,00%
Mfg'r kitchens	1,23	0,00	0,02	41,89%	0,09%	1,36%	37,19%
Jewelry	1,17	0,01	0,06	34,48%	1,44%	5,22%	59,24%
Wine importer	1,06	0,00	0,02	30,90%	0,30%	2,14%	100,00%
Logistics	1,01	0,00	0,05	44,14%	0,93%	4,73%	54,01%
Electric utility	1,00	0,07	0,15	41,89%	16,03%	15,21%	100,00%
Leather goods	0,38	0,00	0,02	41,89%	1,05%	5,76%	21,57%
Hotel supplies	0,12	0,00	0,01	46,40%	1,05%	6,38%	100,00%
Dispensing products	0,08	0,00	0,00	48,30%	0,46%	4,28%	100,00%
Real estate mgt	0,08	0,00	0,00	30,90%	1,59%	5,20%	100,00%
Fashion Accessories	0,08	0,00	0,00	30,90%	1,59%	5,20%	100,00%
Individual	0,06	0,00	0,00	29,11%	1,59%	2,31%	22,69%
Eyewear	0,00	-	-	0,00%	0,13%	0,00%	100,00%
	346,80	**0,74**	**9,64**	**41,84%**	**0,53%**	**2,78%**	**14,35%**

EUR/USD 1,1806
($ millions)







MONTE
DEI PASCHI
DI SIENA
BANCA DAL 1472