# Inventaris B-stukken (vertrouwelijk - 8:29 Awb)

**Op de zaak betrekking hebbende stukken met betrekking tot het besluit van de minister van Financiën van 1 februari 2013**

**Zittingsdatum: 15 februari 2013, 09.00 uur**
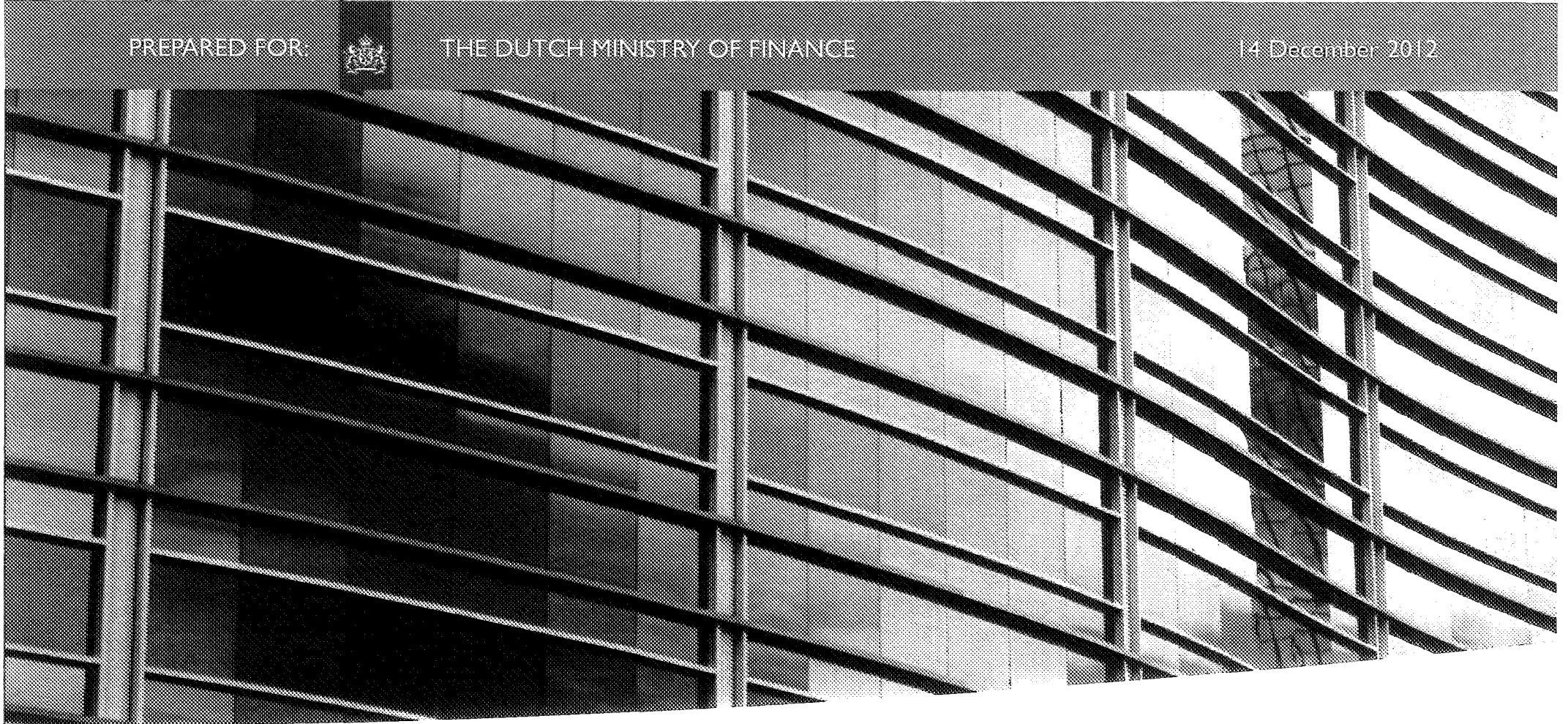
43.      Rapportage Cushman & Wakefield

A REPORT OF

# CUSHMAN & WAKEFIELD

PREPARED FOR: THE DUTCH MINISTRY OF FINANCE

14 December 2012

**STRICTLY CONFIDENTIAL, RELIANCE RESTRICTED**
VERSION; 14 December 2012

**CUSHMAN &
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# PROJECT MERCURIUS

# DISCLAIMER

In this report ("Report") we present the results of the assessment of the real economic value ("REV") of Mercurius' loan portfolio. This Report has been prepared exclusively for the use of the Dutch Ministry of Finance ("Ministry") and does not carry any right of publication or disclosure to any other party. This Report is incomplete without reference to, and should be viewed solely in conjunction with, the oral briefing provided by Cushman & Wakefield V.O.F. ("C&W"). Neither this Report nor its content may be used for any other purpose without the prior written consent of C&W. C&W accepts no responsibility to anyone other than the Dutch Ministry of Finance for the information and views contained in this Report, which has been prepared in good faith by C&W. Except with prior written consent, the Ministry will not circulate, quote, disclose, or distribute any of the Report or any summary or abstract thereof, or any information contained therein, or make any reference thereto, to anyone other than the Ministry's employees or advisors.

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This Report is an independent assessment of the real economic value of the loan portfolios of Mercurius at a point in time. Capital market volatility could result in these assessments being outdated within a short period of time. The assessments are dependent on a number of assumptions regarding the data provided from various sources and as such, may lead to misleading conclusions if the data misrepresents the loans.

Assumptions are made as to the quality of information provided in any independent assessment of REV. This information is generally provided by borrowers to lenders and is dependent on the asset management strengths of the lender.

As such, C&W makes no representations or warranties with regards to the assessment provided in this Report and these numbers should not be relied upon by any party other than the Ministry.

The assessment of the REV, the basis of this Report, involves projections of future cash flows. Implicit in this calculation is a prediction of future economic variables. Various models were utilised, but with any prediction of future events, no matter the source, the results can vary, based upon actual future events.

# PROJECT MERCURIUS

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# I - READING GUIDE

# PROJECT MERCURIUS

## 1. - Reading guide, summary of scope and structure of this report

### READING GUIDE

In this report we present the results of the assessment of the real economic value ("REV") of Mercurius' loan portfolio. In the sections that follow we describe the methodology to determine the real economic value of the portfolio under different scenarios. The report is based on the work we executed since we were mandated on 22nd of October 2012. We analysed the loans listed in the data tape, with further specification of the coverage of the loan analysis in the Summary of Scope.

### SUMMARY OF SCOPE

For the valuation of the loan portfolio we include the loans contained in the data tape provided by Mercurius, with reference date 30 June 2012. We analysed the performing loans (coded with "WIT" in the data tape) and the non-performing loans (coded "ORANJE" and "ROOD"). The list below presents the summary of our scope regarding the loans in the data tape:

### STRUCTURE OF THIS REPORT

This report contains seven sections that form the content of our report:
- Executive summary: contains the main findings of the assessment of loan portfolio
- Understanding of the portfolio: contains an overview of the structure of the portfolio
- Methodology: contains the steps in the process and methodology of the valuation
- Macroeconomic forecast
- Results: contains the findings and results
- Limitations: delineation of this report
- Appendices: contains in-depth numbers on results, assumptions and forecast scenarios

# 2 - INTRODUCTION

## 2. - INTRODUCTION

### INTRODUCTION

We have been mandated by the Ministry of Finance to advise on Project Mercurius and to provide an independent assessment of the real economic value of the loan portfolio of Property Finance. In this presentation we explain the process, the applied methodology and the assumptions for the assessment.

Key objectives provided by the Ministry of Finance ("Ministry") in relation to the engagement were:
- Independent: An independent analysis of the value of the loans to be provided based on real estate market parameters and macroeconomic drivers
- Efficient Review and Timing: Very short time frame and therefore capitalizing on previous work completed and prepared by Mercurius and its contractors
- Flexibility: Designed to run different scenarios for calculations at a later stage

### CONCEPT OF REAL ECONOMIC VALUE

The concept of real economic value as being an appropriate measure for the valuation of bank assets was introduced in the European Commission' ("EC") Impaired Asset Communication which was given effect from 25th February 2009. The valuation and pricing principles and processes for both real economic value and market value were detailed in Annex 4. This communication was further expanded upon in section 4.2 of a paper by Boudghene, Y., Maes, S. and Scheicher, M. (September 4, 2010. *"Asset Relief Measures in the EU – Overview and Issues"*).

This latter document contains the following guidance with regard to real economic value in section 4.2.1: *"The (base case) REV or intrinsic value of an asset (portfolio) could be estimated as the sum of the discounted expected cash flows that follow from holding the asset (portfolio) until maturity. Put differently, the REV corresponds to the Net Present Value (NPV) of the stream of expected cash flows, taking into account upward revisions of expected losses (due to the crisis) but ignoring factors such as lack of liquidity that has plagued several markets."* We have relied on the guidance contained in both these documents in determining the Real Economic Value of the Loans of Mercurius. In this wording the REV can be seen as an intrinsic value.

We have developed an approach and methodology for the assessment of the portfolio of Mercurius based on our broad experience on loan valuation. This methodology enables us to come to an accurate, consistent and verifiable real economic value of the portfolio, which runs through different scenarios. More specifically we will assess a real economic value in a base case scenario and an adverse case scenario. This approach is essentially the methodology that C&W has been employing for the Federal Deposit Insurance Corporation ("FDIC") in the United States for the past five years.

C&W's approach has been utilized for almost two decades and is the basis for decision-making by the public sector (Regulators, Agencies) and the private sector (Banks, Insurance Companies, Pension Funds). It involves bucketing, sampling, file review and extrapolation and has been utilized on over EUR 200 bn. of loan products in the last five years. C&W is the world's largest private commercial real estate advisory firm and has offices throughout the globe. Specifically, we have offices in all the countries where collateral of this loan portfolio is located.

3 - OBJECTIVE AND SCOPE

## 3. - OBJECTIVE AND SCOPE

### OBJECTIVE

The objective of this assignment is to create an independent assessment of the value of the real estate loans of Mercurius - based on assumptions regarding specific real estate market variables, as well as broader macroeconomic drivers, and taking into account that recent previous work on this front has already been done. The goal of this undertaking is to come up with an independent real economic value of the portfolio under different scenarios. Ideally the approach is flexible so that a range of different scenarios can be run at a later stage.

### SCOPE

To assess the portfolio we define the scope by the loans we cover, the information sources which we have available and the quality of the information. For the valuation of the loan portfolio we included the loans contained in the data tape, provided by Mercurius. This data tape is leading for further steps in the assessment. We analysed the performing loans (labelled with "WIT" in the data tape) and the non-performing loans (labelled) "ORANJE" and "ROOD").

We treat the loans coded with signal colour "-1" in the data tape as performing loans, since Mercurius rated these with a LGD and PD 0%. According to Mercurius, the data can no longer be connected with a loan, resulting in the colour "-1".

The loan portfolio within the scope of this assessment include (as of 30 June 2012):
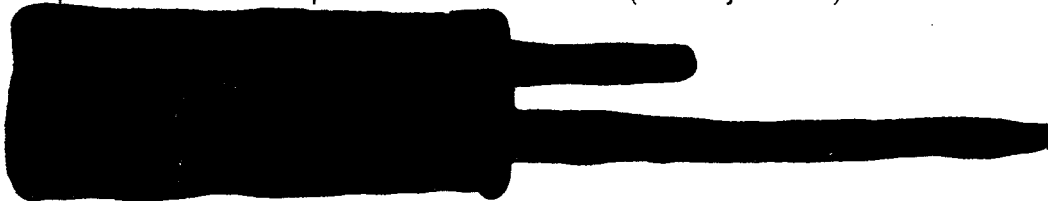
The information sources within the scope of this report include:
- Mercurius' data tape: list with loans, starting point for the loans within our scope, and with reference date June 2012
- Merrill data room: online data room with loan information, collateral information, rental information
- Mercurius reports: loan information per RC
- Ernst & Young ("E&Y") reports: largest RC analysed by E&Y and presented in different reports
- Additional information provided by Mercurius
- C&W market information: extensive and many years of experience in real estate and real estate loan valuation
- Publicly available information: land register, maps, and any other publicly available information

# 4 - GLOSSARY

# PROJECT MERCURIUS

## 4. - GLOSSARY

LIST OF KEY WORDS WITH ASSOCIATED MEANING

| Term | Description |
|---|---|
| Bucket | Part of the total portfolio. Selection criteria: financing type and collateral type |
| Default rate | Annual growth of the defaulting loans |
| Default ratio | Relation between performing loans and defaulting loans (non-performing loans) |
| DSCR | Debt Service Coverage Ratio |
| ERV | Estimated Rental Value |
| ICR | Interest Coverage Ratio |
| LGD | Loss Given Default |
| LTV | Loan to Value |
| NPL | Non-performing Loan |
| PD | Probability of Default |
| PL | Performing Loan |
| RC | Relation complex |
| REO | Real Estate Owned |
| REV | Real Economic Value |
| Sample | Representative selection of RCs in a bucket |
| UPB | Unpaid Principal Balance |
| WAC | Weighted Average Coupon |
| WAM | Weighted Average months to Maturity |
| WAS | Weighted Average months since Start date |

# 5 - EXECUTIVE SUMMARY

I.     Summary of the process and methodology

II.    Summary of the structure of the portfolio

III.   Summary of the results

# PROJECT MERCURIUS

## 5. – EXECUTIVE SUMMARY

### INTRODUCTION

The goal of this undertaking is to come up with an independent assessment of the Real Economic Value of the portfolio of Mercurius under different scenarios. Ideally the approach should be flexible, so that a range of different scenarios can be run at a later stage. We utilize a methodology to determine the Real Economic Value of the loan portfolio in a base case and an adverse case.

The analysis is based on the available information sources: Mercurius' data tape, information in Merrill data room, Mercurius' reports, E&Y reports, additional information provided by Mercurius, public information and C&W in-house market knowledge.

The portfolio consists of loans with real estate as collateral. The loans are related to various types of collateral: retail, residential, offices, industrials, development and other. These collateral types are financed through different financing types: Project, Investment, Land, Trade, Sale-and-lease-back and Sell-out finance facilities. The total amount outstanding is                                                                    as of June 2012.

### BUCKETING AND SAMPLING

Our methodology is based on sampling loans from groups of loans with the same profile. We place loans with a comparable risk profile in buckets and we value these buckets with applying a sampling technique. The seven buckets are based on the types of financing facilities (Project finance and Land Finance) and on collateral types (Industrial, Office, Other, Residential and Retail).

We set a representative sample within each bucket of loans. The loan portfolio of Mercurius is highly skewed and so are the buckets. Therefore we selected the largest RCs per bucket and an additional random selection of the remaining RCs in the bucket. The samples represent 62% of the of the non-performing loans and 54% of the UPB of the performing loans.
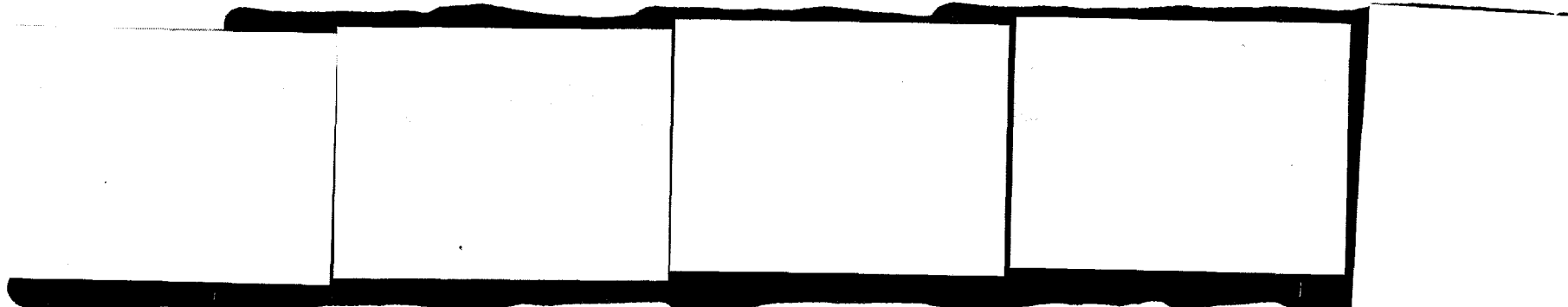
# PROJECT MERCURIUS

## 5. – EXECUTIVE SUMMARY

### VALUATION PROCESS

For the non-performing loans we perform a valuation of the cash flow generated by its associated collateral. We have modeled the future collateral cash flow. The information to execute this valuation is gathered through file review of the collateral cash flow on individual property level. Cash flows are based on the (expected) income generated by the collateral (rental income, collateral sell-out) corrected for foreclosure costs, diminution of cash flow and an exit value based on the residual after taking control of the asset and stabilising it. We extrapolate the results derived from the sample per bucket to determine the real economic value of the whole bucket. With the real economic value of the bucket we derive the LGD rate per bucket, by dividing the UPB by the REV of the bucket. We use this number as an input for the determination of the real economic value of the performing loan buckets.

We are determining the cash flows of the performing loan portfolio based on contractual terms and estimates of future interest rates and prepayments. The estimated default rates (PDs based on the results of file reviews of the performing loans) and loss severities (LGDs based on the results of file reviews of the non-performing loans) are applied on the cash flows of the performing loans.

Sub-performing loans are performing loans of which we expect to default in the 5 year stabilizing period. To determine if a performing loan is a sub-performing loan we take into account the LTV, ICR, DSCR and a qualitative (and therefore semi-subjective) analysis of the borrower and tenant rollover. A high LTV, low ICR and DSCR , poor liquidity position of the borrower and potential vacancy are indicators for us to label a loan as sub-performing.

We have not been provided with a WACC to calculate the NPV for future cash flows and to calculate REV. We therefore applied discount rates for deriving the REV of the performing loans based on the specific risk profiles in the buckets and based on our assumption of appropriate discount rates irrespective of liquidity and financing concerns and from the perspective of a (real estate) bank. We based the discount rates on a risk free rate, specific real estate risk and a spread for servicing the performing loan portfolio. We have structured the cash flow for the portfolio for the 5 year period and we calculated NPV to derive the REV of the loan portfolio. The applied discount rate is a weighted average ⬤ based on the risk profile in the different buckets in the performing loan portfolio.

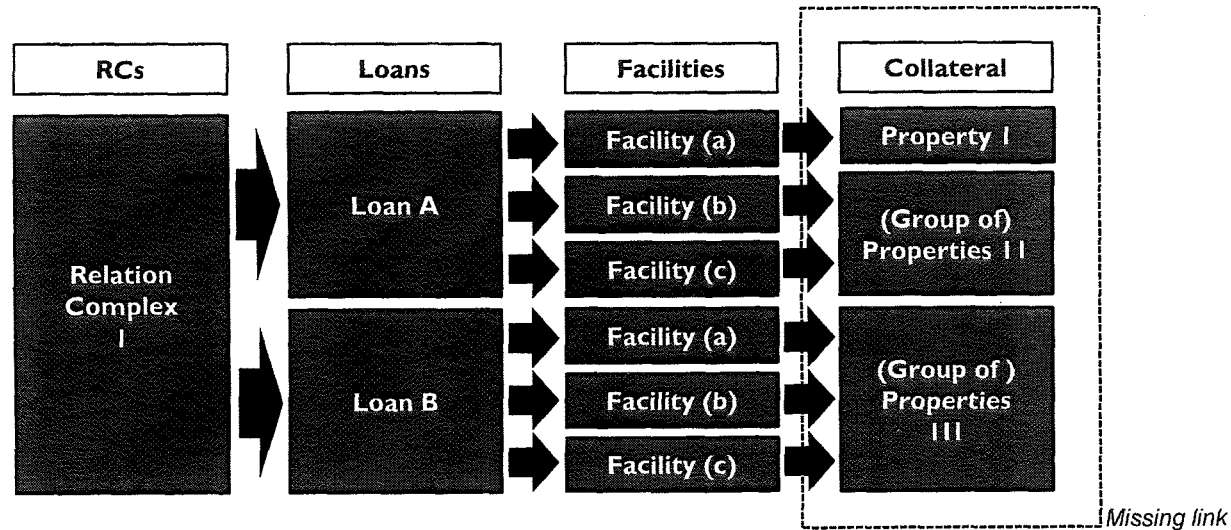# 6. - UNDERSTANDING OF THE LOAN PORTFOLIO

# PROJECT MERCURIUS

## 6. - UNDERSTANDING OF THE LOAN PORTFOLIO

### UNDERSTANDING OF THE DATA TAPE

Mercurius' real estate portfolio consists mainly of loans collateralized by real estate assets. The portfolio consists of ●●RCs, The loans within those RCs have in total ●●●facilities, collateralized by real estate. Facilities can be collateralized by one or more properties.

Below we present a graphical overview of the structure of the data tape. The missing link in this overview points out one of the time consuming complexities in this assessment. The data does not contain any direct link to the underlying collateral. For the largest RCs in this portfolio E&Y created these links while necessary for their assessment. Using these reports together with an extensive file review we have been able to create this link for a large part of the loan portfolio.

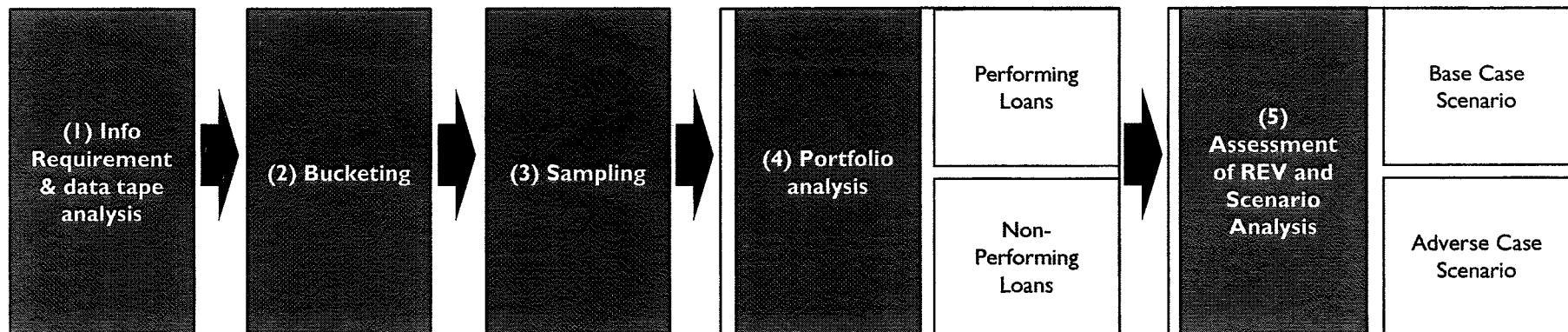| RCs | Loans | Facilities | Collateral |
|---|---|---|---|
| Relation Complex I | Loan A | Facility (a) | Property I |
| | | Facility (b) | (Group of) Properties II |
| | | Facility (c) | |
| | Loan B | Facility (a) | (Group of) Properties III |
| | | Facility (b) | |
| | | Facility (c) | |

Missing link

# 7 – METHODOLOGY

I.    5-step approach

II.    Bucketing

III.    Sampling

IV.    Methodology for analysing non-performing loans

V.    Methodology for analysing performing loans

VI.    Methodology for determining REV for the total portfolio

# PROJECT MERCURIUS

## 7. - METHODOLOGY

### 5-STEP APPROACH

The methodology can be summarized in 5 steps: 1) Analysis of available data, 2) Bucket determination, 3) Sample selection, 4) Portfolio analysis and 5) Assessment of REC and scenario analysis

| (1) Info Requirement & data tape analysis | → | (2) Bucketing | → | (3) Sampling | → | (4) Portfolio analysis | Performing Loans | → | (5) Assessment of REV and Scenario Analysis | Base Case Scenario |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | Non-Performing Loans | | | Adverse Case Scenario |

We have not made a distinction between core and non-core facilities. We based our approach on the characteristics and the risk profile of the loans. We divided the loan portfolio into performing loans and loans which are in default, called non-performing loans.

The analysis is based on the available information sources: Mercurius' data tape, information in Merrill data room, Mercurius' reports, E&Y reports, additional information provided by Mercurius, public information and C&W in-house market knowledge.

The portfolio consists mainly of loans with real estate as collateral. A very small number of loans is not collateralised. The real estate loans are related to various types of collateral: retail, residential, offices, industrials and other. These collateral types are financed through different financing types: Project, Investment, Land, Trade, Sale-and-lease-back and Sell-out finance facilities. The total UPB is ████████████████████████████████████████████
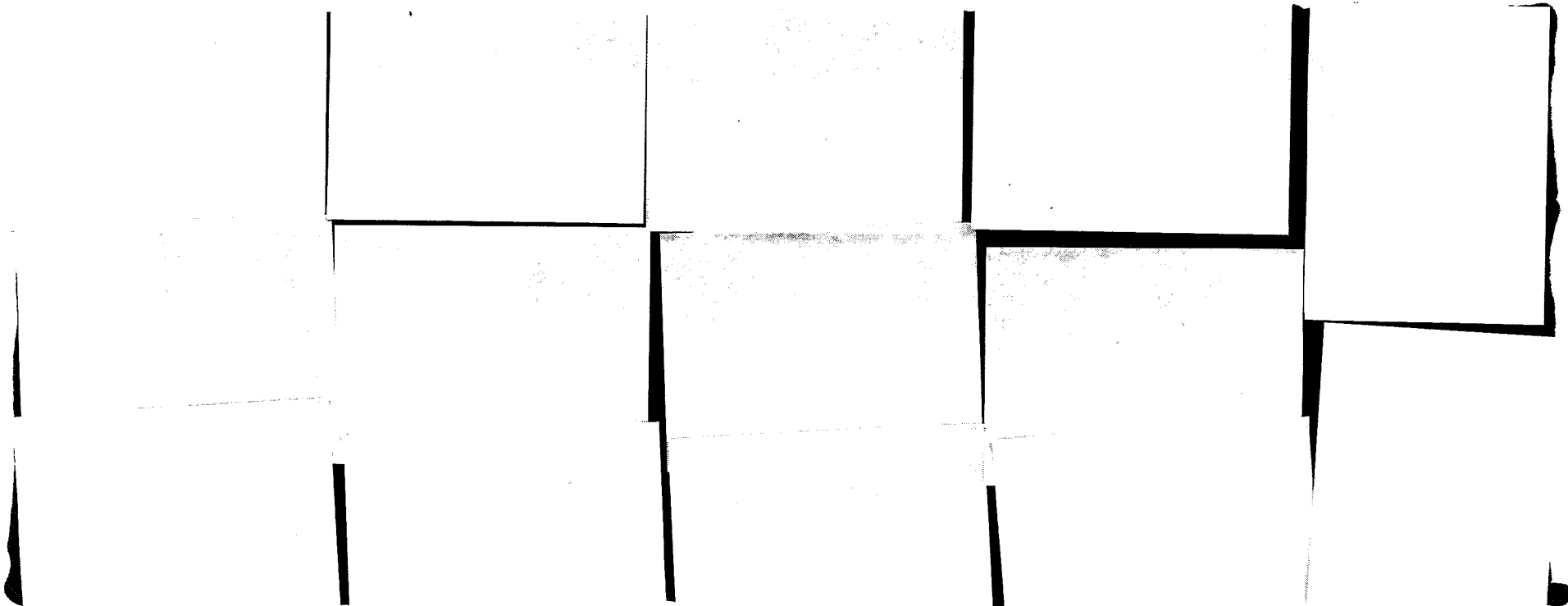
## 7. - METHODOLOGY

BUCKETING

The methodology for our analysis is based on sampling loans from groups of loans with the same characteristics. Based upon our experience we consider a sampling approach the best approach to assess the real economic value of the loan portfolio within the given time frame. This is a widely tested and proven approach.

We determine buckets based on the right balance between homogeneity of the risk profiles given the specifications of the data tape that we received. We have selected seven buckets which are based on the types of financing facilities (Project finance and Land Finance) and on collateral types (Industrial, Office, Other, Residential and Retail).

We have split the portfolio between non-performing and performing loans because of a different approach for analysing and assessing the real economic value. In the provided data tape the distinction between the two is made by Mercurius and labeled "WIT" (performing) and "ORANJE" and "ROOD") (non-performing).

Below we indicate the composition according to the risk profile of each bucket.
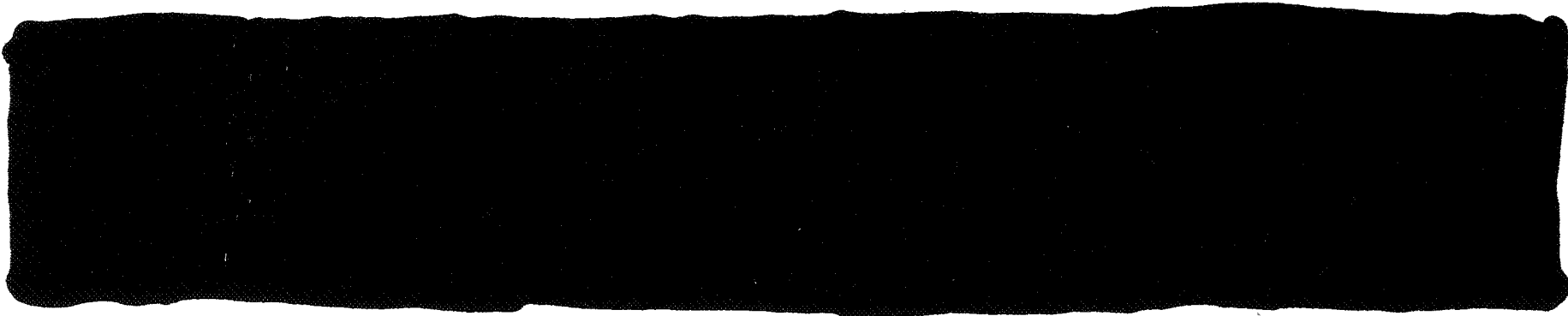
# PROJECT MERCURIUS

## 7. - METHODOLOGY

SAMPLING

Once we have divided the loan portfolio into buckets, we selected a representative sample from each bucket of loans. Based on our broad experience we adopted the following guidance regarding the composition of the samples:

- Representativeness of the population within the buckets and within the portfolio
- A large coverage of outstanding balance (preferably 50-70% for the loans)
- Focus towards the largest loans of each bucket combined with a random sample from the remainder

The loan portfolio of Mercurius is characterised by a relatively small number of RCs representing a high percentage of UPB. We were therefore able to cover a very high percentage UPB in each bucket. We have created the following samples for the non-performing loan portfolio and the performing loan portfolio:

## 7. - METHODOLOGY

### METHODOLOGY FOR ANALYSING NON-PERFORMING LOANS

For the non-performing loans we performed an assessment of real economic value based on the cash flows generated by its associated collateral. The information to execute this undertaking is gathered through file review on individual property level. Cash flows are based on the (expected) income generated by the collateral (rental income, collateral sell-out) corrected for foreclosure costs, diminution of cash flow and an exit value of the collateral after stabilising it. We have modeled future collateral cash flows under two scenarios.

For the purposes of deriving the LGD in the non-performing buckets we are analyzing the non-performing loan portfolio under the assumptions that the (new) owner will get control over the asset in year 1. At this moment most real estate markets and capital markets are illiquid and the yield range of real estate is wide. For the assessment of the REV of the portfolio of Mercurius we assumed a stabilized market situation in 4.5 years from know, which is 5 years after the reference date of the data tape June 2012.

There will be parts of the real estate market stabilized before the 5 year period, but there will also be part which need a longer period to stabilize. We assume that at the end of year five the majority will be stabilized and that earlier stabilized real estate will be cancelled out by the real estate that needs more time to stabilise.

After stabilizing the cash flow, the collateral is modelled to be sold at a stabilised market yield. We extrapolate the results for LGD derived from the sample per bucket to determine the LGD and the REV of the whole bucket.

We have not been provided with a WACC to calculate the NPV for future cash flows and to calculate REV. We therefore applied discount rates for deriving REV of the non-performing loans based on the specific risk profiles in the buckets and based on our assumption of appropriate discount rates irrespective of liquidity and financing concerns and from the perspective of a (real estate) bank. We based the discount rates on a risk free rate, specific real estate risk and a spread for servicing the non-performing loan portfolio.

# PROJECT MERCURIUS

## 7. - METHODOLOGY

METHODOLOGY FOR ANALYSING PERFORMING LOANS

The methodology for the assessment of the performing loan portfolio is based on a market standard valuation technique. We assess the cash flows of the loans, which are driven by interest rate, interest spread, amortization and prepayments. The estimated PDs (PDs are based on the results of file review and analysis of the performing loans) and loss severities (LGDs based on the results of file reviews and analysis of the non-performing loans) are applied on the cash flows of the performing loans.

Most loans in the portfolio are structured with a large bullet repayment in the last year of the financing term. Therefore loans which mature within the stabilizing 5 year period have a higher PD. Based on financing structure of the loans and taking into account the higher probability of default for maturing loans, we divide the PL portfolio into three categories:

1. Sub-performing loans: performing loans that we expect to default in the 5 year stabilizing period (file review and analysis)
2. Loans maturing within the 5 year stabilizing period (info available in the data tape)
3. Loans not maturing within the 5 year stabilizing period (info available in the data tape)

Key parameters for determining sub performing loans include:
1. LTVs: Analysis of values with a pragmatic view towards potential payment and/or maturity defaults
2. DSCR and ICR: Pragmatic view towards potential payment defaults based upon minimum coverage
3. Borrower/Guarantor Analysis: Determination of financial capacity
4. Other: Any correspondence or indication of future defaults (i.e. tenant rollover)

The determined percentage of sub-performing loans gives the total percentage of loans expected to default in the performing portfolio for the 5 year period. We have modeled the default rate on a yearly basis for the analysed time period based on the current percentage of sub performing loans and a view towards the future. From the model we derived a declining LGD for most buckets over the 5 year period (due to a stabilising scenario). We have additionally modeled a percentage of maturing loans that will default at maturity date and a larger percentage that will pay-off.

Since this is a more qualitative analysis than the determination of LGD's in the non-performing portfolio, C&W's experience within the Dutch and international real estate markets and experience through various real estate cycles in the US and in Europe were crucial in ensuring that these PDs reflected actual expectations moving forward.

# PROJECT MERCURIUS

## 7. - METHODOLOGY

METHODOLOGY FOR DETERMINING THE REV FOR THE TOTAL PORTFOLIO

For the assessment of the REV for the portfolio of Mercurius we use the results from the analysis of the non-performing portfolio and the performing portfolio.

In the non-performing portfolio analysis we have calculated the REV for the defaulted loan portfolio.

The key to deriving the REV for the performing loan portfolio is assembling the following categories in the Portfolio cash flow:

I. Principal and Interest ("P&I")
   - Prepayment speeds and a view towards what loans will be paying is essential towards deriving P&I and pay-offs
II. Pay-offs
   - There will be some performing loans that will be pushed to the end of the time frame that will need to be exited at the end of the analysis (in a time period with more liquidity)
III. Resolutions
   - Resolutions will be captured by deriving Probability of Default ("PD") and Loss Given Default ("LGD")
     - PDs are captured through sampling of the performing loans and understanding the likelihood of continued performance
     - LGD's are derived by understanding the current value of the non-performing portfolio and the expected values over the period of analysis

We have not been provided with a WACC to calculate the NPV for future cash flows and to calculate REV. We therefore applied discount rates for deriving the REV of the performing loans based on the specific risk profiles in the buckets and based on our assumption of appropriate discount rates irrespective of liquidity and financing concerns and from the perspective of a (real estate) bank. We based the discount rates on a risk free rate, specific real estate risk and a spread for servicing the performing loan portfolio. We have structured the cash flow for the portfolio for the 5 year period and we calculated the NPV to derive the REV of the loan portfolio. The applied discount rate is a weighted average ⬛ based on the risk profile in the different buckets in the performing loan portfolio.

# 8 - MACROECONOMIC FORECAST

# PROJECT MERCURIUS

## 8. - MACROECONOMIC FORECAST

### MACROECONOMIC SCENARIOS

The assessment of the REV is calculated under two different scenarios: a base case and an adverse case scenario.

**Base case scenario:**
- The base case uses the European Commission forecasts. Where not available by data item or year, a range of other publicly available sources have been used.

- The judgement of C&W researchers has been used looking at the average of other forecasts, older forecasts, adjusting for outliers and the fit to the EC forecasts to ensure a consistent and logical time series.

**Adverse case scenario:**
- The adverse case is not based on a specific economic scenario but on an assumed period of significant underperformance across all economic segments, accompanied by lower inflation and higher short and long term interest rates. This reflects a higher risk free rate and is used in our models for determining exit yields of collateral.

- The level of economic loss assumed in the adverse case is significantly worse than in the recessions suffered in the early 1990's but less severe for most countries than those seen after the recent Credit Crunch.

The main differences between the base case and the adverse case are visible in the expected cash flows of the loans and of the collateral in case of a non-performing loan, and are not visible in the discount rates.

These factors and the macroeconomic scenarios in base and adverse case will mainly affect estimated rental value (ERV), rental income growth rate, vacancy incentives for new leases and exit yields. Please refer to Appendix 2 for the macroeconomic scenarios used in the base and adverse case scenarios.

| | Key parameters |
|---|---|
| **Macroeconomic** | • Real GDP<br>• Inflation<br>• Short Term Interest Rates<br>• Long Term Interest Rates |
| **Real Estate** | • Stabilised exit yields<br>• Rental income growth rate<br>• Stabilised market rents<br>• Occupancy growth<br>• Stabilised occupancy<br>• Growth rate of costs<br>• Development of housing prices |

# 8. - MACROECONOMIC FORECAST

## MACROECONOMIC SCENARIOS

Developing the Adverse Case Scenario

Over the 5 year period we have used an adverse case economic cycle which is in the range of 0.5 to 1.5 standard deviations from the historic norm for GDP growth to ensure the advice is realistic in light of the country's history.

The adverse case cycle within the 5 years has been assumed to be stepped, with marked under-performance in years 1 and 2 fading to mild underperformance and then equality with the base case in years 4 or 5 (see graph opposite). The steps have been adjusted subjectively to deliver the standard deviation range targeted.

The countries are divided on the levels of deviation expected between less risky markets such as Denmark, Canada, Luxembourg and Germany and riskier markets, such as Spain and Italy.

- Inflation has been estimated in the same manner as GDP as outlined above.

- Interest rates under the adverse case are assumed 100 bps higher in each year than the base case.

- Other variables are modelled based on their past correlation with GDP patterns.

- Assumptions of a uniform change in interest rates across the different countries over the 5 year period are sufficiently realistic given the increased correlation that now exists, albeit less so for long term than short rates.

- While assumption of a uniform increase year by year is simplistic, it mirrors the approach taken by the Steering Committee advising on the analysis conducted for the Bank of Spain (Banco de España).

- In some instances, for certain data items, these assumptions have been varied, usually to reflect changes seen since historic periods which mean the historic patterns may be less valid e.g. in the lesser volatility of Turkey or future areas of risk, such as the US fiscal cliff or differing exposures to the euro zone crisis.

### BASE AND ADVERSE CASE – Netherlands, GDP Growth
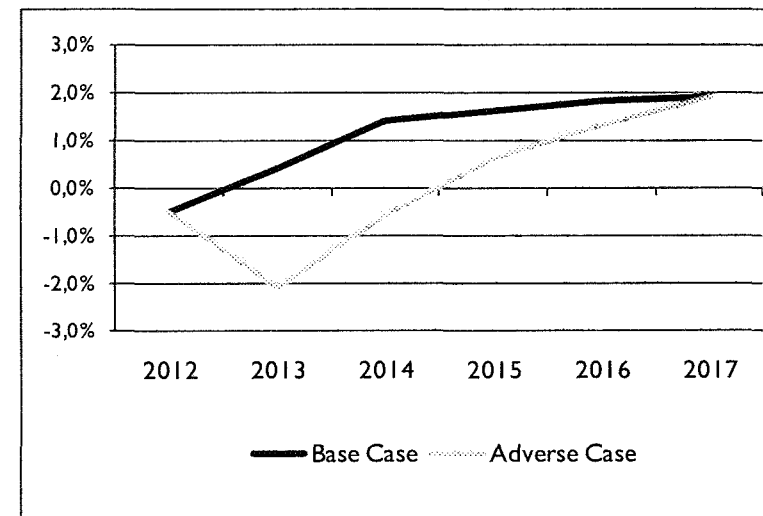


### BASE AND ADVERSE CASE – By Market, 5 years to 2017
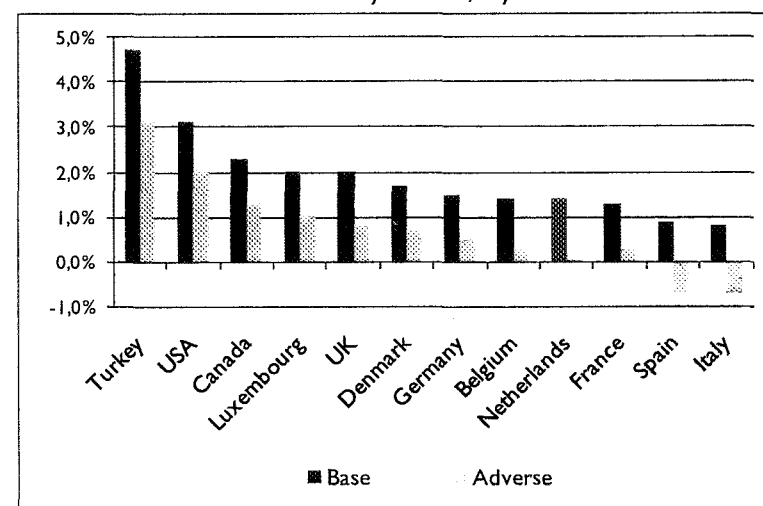
# 9 - RESULTS

    I.     Breakdown of the loan portfolio

    II.    Result total portfolio base case

    III.   Result total portfolio adverse case

    IV.   Results per bucket

# 10 – LIMITATIONS

## 10. - LIMITATIONS

GENERAL LIMITATIONS

- This report is based on information from Mercurius and other third party information, as stated in the objective and scope section of this report.

- The main source of information is the data tape dated 30 June 2012 which contained some specifications of the loan portfolio though not all specifications were in line with our request.

- The available Merrill data room contained information of the relation complexes and the loan portfolio. It is difficult to get a good overview of the available information and several documents are very difficult to read due to the quality of the digital documents and the watermark printed in it. It has been difficult to keep overview of all updates during the assessment. The consequence is that we might have missed relevant information in our assessment.

- We have used information for the assessment that was available to us up to the 4$^{th}$ of December 2012, 11:00 am. As a result, there might be more information available than used in our analysis.

- The date of availability of the information for the international project finance loans was too late to completely analyse the information and the loans. As a consequence we were not able to do a complete analysis on individual property level.

- According to Mercurius for loans with a "-1" signal colour, the adjustment of data has not been done in a consistent way. That data on the rating can no longer be connected with a loan. We put the "-1" as performing initially as there was nothing in the tape to indicate otherwise. ▬▬▬▬▬▬▬▬

- The loans in the data tape are categorized with collateral types Land, Industrial, Retail, Residential, Office and Other. After reviewing the loans and associated collateral we concluded that the labelling is not very consistent resulting in buckets with properties in them that should have been in an other bucket. The consequence is that improved labelling could lead to more accuracy.

- There is limited information available regarding the smaller RCs. We have randomly sampled some smaller loans to improve the representativeness of the sample in a bucket. However, if there is additional information available of smaller RCs, indicating a different risk profile, this could be taken into consideration in follow-up research for more accuracy.

- Cross collateralisation is unclear in the available information. We have asked for a clear guideline or a specification in the data tape. Due to the fact that we have not received clear information, we assumed that performing loans from one RC in a specific bucket are cross collateralised.

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## 10. - LIMITATIONS

LIMITATIONS

- The missing direct link between the data tape and the associated collateral made the analysis complex and sensitive for mistakes.

- Provisions: the UPB in the data tape that we have used in our analysis is before any impairments or provisions already taken into account by Mercurius.

- Guarantees or obligations of the borrower to the lender or any other guarantee or obligation that is not in the data tape are not taken into account.

- We have not received loan documentation and we have assumed that the data tape is a correct reflection of the loan conditions. The result is that this assessment is a simplified approach to reality and there may be other relevant items in the individual loan documents.

- We have not analysed Credit Committee documents, minutes and other correspondence not available in the data room. The result is that this information could be taken into consideration at the moment that this assessment is updated to a newer data tape as of 1 January 2013, as indicated by the Dutch Ministry of Finance.

- The LGD derived in the non-performing Residential bucket is excluding the German residential, since they would have had a disproportionally high share in the determination of the LGD for this bucket.

- The REOs ███████████████ have been assessed separately outside the scope of this report. C&W has derived an indicative value for the REOs although with limited in depth analyses, due to low quality and quantity of information in the first instance and late received additional information.

# 10 - APPENDICES

Appendix 1: Overview of real estate parameters and assumptions

Appendix 2: Macroeconomic forecast

Appendix 3: Development of housing prices

# PROJECT MERCURIUS

## APPENDIX 2: MACROECONOMIC FORECAST

| | | | 2013 | 2014 | 2015 | 2016 | 2017 |
|---|---|---|---|---|---|---|---|
| Netherlands | Base Case | GDP | 0,40% | 1,40% | 1,60% | 1,80% | 1,90% |
| | | Inflation | 2,40% | 1,60% | 1,70% | 1,70% | 1,90% |
| | | Short term Interest Rates | 0,30% | 0,50% | 0,55% | 0,60% | 0,70% |
| | | Long Term Interest Rates | 2,30% | 2,90% | 3,00% | 3,50% | 4,00% |
| | Adverse Case | GDP | -2,10% | -0,60% | 0,60% | 1,30% | 1,90% |
| | | Inflation | 0,90% | 0,35% | 0,70% | 0,95% | 1,40% |
| | | Short term Interest Rates | 1,30% | 1,50% | 1,55% | 1,60% | 1,70% |
| | | Long Term Interest Rates | 3,30% | 3,90% | 4,00% | 4,50% | 5,00% |
| Belgium | Base Case | GDP | 0,70% | 1,60% | 1,50% | 1,50% | 1,60% |
| | | Inflation | 1,80% | 1,60% | 1,80% | 1,75% | 1,70% |
| | | Short term Interest Rates | 0,30% | 0,50% | 0,55% | 0,60% | 0,70% |
| | | Long Term Interest Rates | 3,25% | 3,50% | 3,75% | 3,80% | 4,20% |
| | Adverse Case | GDP | -1,80% | 0,10% | 0,50% | 1,00% | 1,60% |
| | | Inflation | 0,30% | 0,35% | 0,80% | 1,00% | 1,70% |
| | | Short term Interest Rates | 1,30% | 1,50% | 1,55% | 1,60% | 1,70% |
| | | Long Term Interest Rates | 4,25% | 4,50% | 4,75% | 4,80% | 5,20% |
| Canada | Base Case | GDP | 2,10% | 2,40% | 2,50% | 2,40% | 2,25% |
| | | Inflation | 1,90% | 2,00% | 2,00% | 2,10% | 2,10% |
| | | Short term Interest Rates | 1,40% | 1,50% | 2,00% | 3,00% | 3,85% |
| | | Long Term Interest Rates | 2,20% | 2,75% | 3,50% | 4,20% | 4,50% |
| | Adverse Case | GDP | 0,10% | 0,90% | 1,50% | 1,90% | 2,25% |
| | | Inflation | 0,40% | 1,00% | 1,50% | 1,85% | 2,10% |
| | | Short term Interest Rates | 2,40% | 2,50% | 3,00% | 4,00% | 4,85% |
| | | Long Term Interest Rates | 3,20% | 3,75% | 4,50% | 5,20% | 5,50% |
| Denmark | Base Case | GDP | 1,60% | 1,30% | 1,95% | 1,85% | 1,80% |
| | | Inflation | 2,00% | 1,70% | 1,70% | 1,70% | 1,70% |
| | | Short term Interest Rates | 0,45% | 0,60% | 0,75% | 0,80% | 0,85% |
| | | Long Term Interest Rates | 1,90% | 2,00% | 2,10% | 2,40% | 2,75% |
| | Adverse Case | GDP | -0,40% | -0,20% | 0,95% | 1,35% | 1,80% |
| | | Inflation | 1,00% | 0,95% | 1,20% | 1,45% | 1,70% |
| | | Short term Interest Rates | 1,45% | 1,60% | 1,75% | 1,80% | 1,85% |
| | | Long Term Interest Rates | 2,90% | 3,00% | 3,10% | 3,40% | 3,75% |
| France | Base Case | GDP | 0,40% | 1,20% | 1,50% | 1,70% | 1,75% |
| | | Inflation | 1,70% | 1,70% | 1,75% | 1,80% | 1,90% |
| | | Short term Interest Rates | 0,30% | 0,50% | 0,55% | 0,60% | 0,70% |
| | | Long Term Interest Rates | 2,60% | 3,00% | 3,50% | 3,75% | 4,00% |
| | Adverse Case | GDP | -1,60% | -0,80% | 0,75% | 1,45% | 1,75% |
| | | Inflation | 0,20% | 0,20% | 0,75% | 1,05% | 1,90% |
| | | Short term Interest Rates | 1,30% | 1,50% | 1,55% | 1,60% | 1,70% |
| | | Long Term Interest Rates | 3,60% | 4,00% | 4,50% | 4,75% | 5,00% |
| Germany | Base Case | GDP | 0,80% | 2,00% | 1,90% | 1,55% | 1,40% |
| | | Inflation | 1,90% | 1,80% | 1,80% | 1,90% | 2,00% |
| | | Short term Interest Rates | 0,30% | 0,50% | 0,55% | 0,60% | 0,70% |
| | | Long Term Interest Rates | 1,90% | 2,20% | 2,75% | 3,25% | 3,50% |
| | Adverse Case | GDP | -1,20% | 0,50% | 0,90% | 1,05% | 1,40% |
| | | Inflation | 0,40% | 0,80% | 1,30% | 1,40% | 2,00% |
| | | Short term Interest Rates | 1,30% | 1,50% | 1,55% | 1,60% | 1,70% |
| | | Long Term Interest Rates | 2,90% | 3,20% | 3,75% | 4,25% | 4,50% |

# PROJECT MERCURIUS

## APPENDIX 2: MACROECONOMIC FORECAST

| | | | 2013 | 2014 | 2015 | 2016 | 2017 |
|---|---|---|---|---|---|---|---|
| Italy | Base Case | GDP | -0,50% | 0,80% | 1,20% | 1,20% | 1,30% |
| | | Inflation | 2,00% | 1,70% | 1,50% | 1,75% | 1,60% |
| | | Short term Interest Rates | 0,30% | 0,50% | 0,55% | 0,60% | 0,70% |
| | | Long Term Interest Rates | 5,00% | 5,00% | 4,90% | 4,90% | 4,80% |
| | Adverse Case | GDP | -3,50% | -1,70% | 0,20% | 0,45% | 0,80% |
| | | Inflation | 0,00% | 0,20% | 0,50% | 1,00% | 1,35% |
| | | Short term Interest Rates | 1,30% | 1,50% | 1,55% | 1,60% | 1,70% |
| | | Long Term Interest Rates | 6,00% | 6,00% | 5,90% | 5,90% | 5,80% |
| Luxembourg | Base Case | GDP | 0,70% | 1,50% | 2,50% | 2,75% | 2,70% |
| | | Inflation | 1,90% | 1,80% | 2,00% | 2,00% | 2,00% |
| | | Short term Interest Rates | 0,30% | 0,50% | 0,55% | 0,60% | 0,70% |
| | | Long Term Interest Rates | 1,95% | 2,10% | 2,50% | 3,25% | 3,50% |
| | Adverse Case | GDP | -1,30% | 0,00% | 1,50% | 2,25% | 2,20% |
| | | Inflation | 0,65% | 0,80% | 1,25% | 1,75% | 2,00% |
| | | Short term Interest Rates | 1,30% | 1,50% | 1,55% | 1,60% | 1,70% |
| | | Long Term Interest Rates | 2,95% | 3,10% | 3,50% | 4,25% | 4,50% |
| Spain | Base Case | GDP | -1,40% | 0,80% | 1,50% | 1,75% | 2,10% |
| | | Inflation | 2,10% | 1,30% | 1,50% | 1,50% | 1,50% |
| | | Short term Interest Rates | 0,30% | 0,50% | 0,55% | 0,60% | 0,70% |
| | | Long Term Interest Rates | 5,25% | 5,25% | 5,15% | 5,15% | 4,75% |
| | Adverse Case | GDP | -4,40% | -1,70% | 0,00% | 1,00% | 1,60% |
| | | Inflation | 0,10% | 0,05% | 0,50% | 0,50% | 1,25% |
| | | Short term Interest Rates | 1,30% | 1,50% | 1,55% | 1,60% | 1,70% |
| | | Long Term Interest Rates | 6,25% | 6,25% | 6,15% | 6,15% | 5,75% |
| Turkey | Base Case | GDP | 4,10% | 4,75% | 4,85% | 5,00% | 5,00% |
| | | Inflation | 6,50% | 5,50% | 5,00% | 4,75% | 4,65% |
| | | Short term Interest Rates | 8,20% | 8,90% | 9,50% | 9,50% | 9,50% |
| | | Long Term Interest Rates | 9,00% | 9,30% | 9,25% | 9,25% | 9,00% |
| | Adverse Case | GDP | 0,10% | 2,25% | 3,85% | 4,50% | 5,00% |
| | | Inflation | 3,50% | 3,00% | 3,50% | 3,25% | 4,65% |
| | | Short term Interest Rates | 9,20% | 9,90% | 10,50% | 10,50% | 10,50% |
| | | Long Term Interest Rates | 10,00% | 10,30% | 10,25% | 10,25% | 10,00% |
| UK | Base Case | GDP | 0,90% | 2,00% | 2,25% | 2,35% | 2,50% |
| | | Inflation | 2,10% | 1,90% | 2,00% | 2,10% | 2,30% |
| | | Short term Interest Rates | 0,70% | 0,85% | 1,00% | 1,25% | 1,75% |
| | | Long Term Interest Rates | 1,90% | 2,25% | 2,50% | 3,40% | 3,75% |
| | Adverse Case | GDP | -1,60% | 0,00% | 1,25% | 1,85% | 2,50% |
| | | Inflation | 0,60% | 0,65% | 1,00% | 1,60% | 2,30% |
| | | Short term Interest Rates | 1,70% | 1,85% | 2,00% | 2,25% | 2,75% |
| | | Long Term Interest Rates | 2,90% | 3,25% | 3,50% | 4,40% | 4,75% |
| USA | Base Case | GDP | 2,25% | 3,30% | 3,40% | 3,40% | 3,30% |
| | | Inflation | 2,00% | 2,20% | 2,20% | 2,25% | 2,25% |
| | | Short term Interest Rates | 0,25% | 0,75% | 1,00% | 1,30% | 1,70% |
| | | Long Term Interest Rates | 2,30% | 2,50% | 3,50% | 4,20% | 4,60% |
| | Adverse Case | GDP | -0,25% | 1,30% | 2,90% | 2,90% | 3,30% |
| | | Inflation | 0,75% | 1,20% | 1,20% | 1,50% | 1,75% |
| | | Short term Interest Rates | 1,25% | 1,75% | 2,00% | 2,30% | 2,70% |
| | | Long Term Interest Rates | 3,30% | 3,50% | 4,50% | 5,20% | 5,60% |

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## APPENDIX 3: DEVELOPMENT OF HOUSING PRICES

| Housing price development / index | | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Price development (Base case) | % | 18.2 | 11.1 | 6.4 | 3.6 | 4.3 | 3.8 | 4.5 | 4.2 | 2.9 | -3.3 | -2.0 | -2.3 | -2.7 | -4.0 | -2.5 | -1.0 | 0.0 | 2.3 |
| Price development (Adverse case) | % | 18.2 | 11.1 | 6.4 | 3.6 | 4.3 | 3.8 | 4.5 | 4.2 | 2.9 | -3.3 | -2.0 | -2.3 | -2.7 | -6.0 | -4.0 | -2.0 | 0.0 | 2.3 |
| Price index 2000 =100 (Base case) | 100 | 118 | 131 | 140 | 145 | 151 | 157 | 164 | 171 | 176 | 170 | 166 | 163 | 158 | 152 | 148 | 147 | 147 | 150 |
| Price index 2000 =100 (Adverse case) | 100 | 118 | 131 | 140 | 145 | 151 | 157 | 164 | 171 | 176 | 170 | 166 | 163 | 158 | 149 | 143 | 140 | 140 | 143 |

Source: CBS

Legend:
- Price development (Adverse case) %
- Price development (Base case) %
- Price index 2000 =100 (Adverse case) 100
- Price index 2000 =100 (Base case) 100
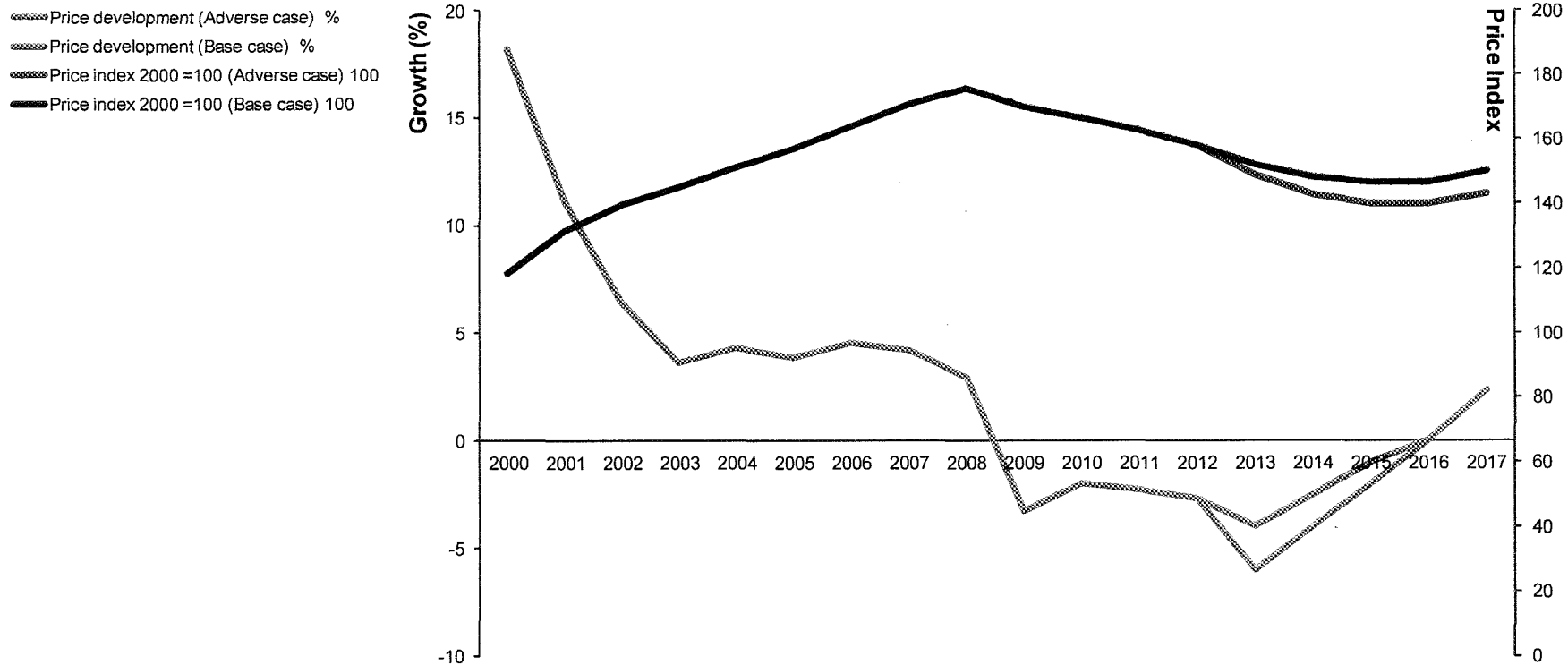
AN ADDITIONAL REPORT OF

# CUSHMAN & WAKEFIELD

PREPARED FOR THE DUTCH MINISTRY OF FINANCE

20 December 2012

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# PROJECT MERCURIUS

## INTRODUCTION

### DISCLAIMER

This report ("Additional Report") contains the matrices for the discount rates and the exit yield as supplement to the report prepared for the Dutch Ministry of Finance ("Ministry") dated the 14th of December 2012 ("Report"). For this Additional Report the same disclaimer and limitations apply as for the Report and this Additional Report should only be read in conjunction with the Report.

### INTRODUCTION

We have been requested to provide the Ministry to elaborate on discount rates and exit yields. This document contains the matrices used for determining the discount rate for performing loans, non-performing loans and the exit yield. These matrices provide with an overview of the breakdown of the discount rates and exit yields. The structured breakdown enables us to underpin the discount rates and exit yield and these in a consistent manner throughout the analyses.

In the next slides we present the matrices for the performing and non-performing discount rates and for the stabilised exit yields. Please note that the exit yields are used on a property level and reflect a stabilised market. The discount rates for the non-performing part of the portfolio are based on a property level while the discount rate for the performing part of the portfolio is based on a weighted average of all buckets.

AN ADDITIONAL REPORT OF
# CUSHMAN & WAKEFIELD

20 December 2012

PREPARED FOR: THE DUTCH MINISTRY OF FINANCE

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# PROJECT MERCURIUS

# INTRODUCTION

## DISCLAIMER

This report ("Additional Report") contains the real economic value from a loan buyers perspective supplement to the report prepared for the Dutch Ministry of Finance ("Ministry") dated the 14th of December 2012 ("Report"). For this Additional Report the same disclaimer and limitations apply as for the Report and this Additional Report should only be read in conjunction with the Report.

## INTRODUCTION

We have been requested to provide the Ministry with the real economic value from a loan buyers perspective. In the following slides we present the methodology related to this perspective additional to the methodology as described in the Report, and the results of the real economic value form a loan buyers perspective in a base case and an adverse case. The real economic value from a loan buyers perspective reflects a market value under certain limitations and conditions. As stated in the Report, the real economic value is the net present value of the expected cash flows, taking in account the upward revisions of expected losses, but ignoring a lack of liquidity in the market. Furthermore we present the LGDs per bucket, from a loan buyers perspective.

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## REAL ECONOMIC VALUE: LOAN BUYERS PERSPECTIVE

In addition to the Report we have assessed the REV of the portfolio from the perspective of a loan buyer, which was not in the scope of the Report.

We have not been provided with a WACC to calculate the NPV for future cash flows and to calculate REV. We therefore applied discount rates for deriving the REV of the performing loans based on the specific risk profiles in the buckets and based on our assumption of appropriate discount rates from the perspective of a loan buyer. We based the discount rates on a risk free rate, specific real estate risk and a spread for servicing the performing loan portfolio. We have structured the cash flow for the portfolio for the 5 year period and we calculated the NPV to derive the REV of the loan portfolio. The applied discount rate is a weighted average ⬤ based on the risk profile in the different buckets in the performing loan portfolio.

Compared to the real economic value presented in the Report dated the 14th of December, the real economic value from a loan buyers perspective is based on different assumptions regarding the LGD and discount rates. The difference in LGD is caused by a higher discount rate which is used in the non-performing loan model. These discount rates are based on the knowledge referring to internal rates of return of loan buyers, which are calculated with a debt level of ⬤ and a ⬤ interest rate.

# ADDENDUM TO THE DECEMBER 14th 2012 REPORT OF

# CUSHMAN & WAKEFIELD

PREPARED FOR:  THE DUTCH MINISTRY OF FINANCE 31 January 2013

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# PROJECT MERCURIUS
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# I. - INTRODUCTION

# PROJECT MERCURIUS

## I. - Introduction

### INTRODUCTION

We have been requested by the Ministry of Finance to update the Report. The objective of this Addendum is to update the results presented in the Report with updated data and new information sources. In the Report we presented an independent assessment of the real economic value of the loan portfolio of Mercurius. In this Addendum we present an update of the results for the real economic value of the loan portfolio of Mercurius. The results in this Addendum are amongst others based on an Updated Data Tape, with reporting date of December 2012 ("Updated Data Tape") where the previous data tape had a reporting date of June 2012 ("Previous Data Tape"). We analysed the Updated Data Tape following the same methodology and with the same model as we did with the Previous Data Tape. In addition, we used updated macroeconomic figures provided by De Nederlandsche Bank ("DNB"). In this Addendum we provide an update on the results and a comparison between the results.

### SCOPE

For the independent assessment of the real economic value of the loan portfolio we include the loans contained in the Updated Data Tape. We analysed the performing loans (labelled with "WIT" and "-1") and the non-performing loans (labelled "ORANJE" and "ROOD"). The list below presents the summary of our scope regarding the loans in the Updated Data Tape :



### UPDATED DATA AND NEW INFORMATION SOURCES:

In addition to the data and information sources used in the Report we use the following updated data and information sources in the Addendum:
- Updated Data Tape and other additional information, provided by Mercurius
- Updated macroeconomic forecast, provided by DNB
- Merrill data room: new posted documents on the online data room with loan information, collateral information, rental information
- C&W market information: extensive and many years of experience in real estate and real estate loan valuation
- Publicly available information: land register, maps, and any other publicly available information

### STRUCTURE OF THIS ADDENDUM

This Addendum contains four sections that form the content:
- Macroeconomic forecast: comparison of the updated and previous macroeconomic scenarios
- Main difference: contains the main differences found between the Updated Data Tape and Previous Data Tape
- Results: contains the findings and results
- Limitations: delineation of this report

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## 2. - MACROECONOMIC FORECAST

I.      Macroeconomic scenarios

II.     Updated macroeconomic forecast for the Netherlands - base case

# PROJECT MERCURIUS

## 2. - MACROECONOMIC FORECAST

### MACROECONOMIC SCENARIOS

The assessment of the REV is calculated under two different scenarios: a base case and an adverse case scenario.

**Base case scenario:**
- The base case uses the European Commission ("EC") forecasts. Where not available by data item or year, a range of other publicly available sources have been used.

- The judgement of C&W researchers has been used looking at the average of other forecasts, older forecasts, adjusting for outliers and the fit to the EC forecasts to ensure a consistent and logical time series.

- For the Netherlands the base case uses the DNB forecasts.

**Adverse case scenario:**
- The adverse case is not based on a specific economic scenario but on an assumed period of significant underperformance across all economic segments, accompanied by lower inflation and higher short and long term interest rates. This reflects a higher risk free rate and is used in our models for determining exit yields of collateral.

- The level of economic loss assumed in the adverse case is significantly worse than in the recessions suffered in the early 1990's but less severe for most countries than those seen after the recent credit crunch.

The main differences between the base case and the adverse case are visible in the expected cash flows of the loans and of the collateral in case of a non-performing loan.

The applied discount rate in the base case scenario and in the adverse case scenario is ⬤ The difference compared to the discount rate in the Report ⬤ is caused by an updated risk free rate and a change in size of several buckets.

The macroeconomic scenarios in the base and the adverse case will mainly affect estimated rental value ("ERV"), rental income growth rate, vacancy incentives for new leases and exit yields.

The results in the Addendum are based on the updated macroeconomic figures for the Netherlands provided by DNB and are forecasted as of January. The differences between the updated and previous macroeconomic scenarios are presented in the next sheet. The new macroeconomic figures affect the exit yields substantially. The exit yield decreases due to a lower long term interest rate.

| | Key parameters |
|---|---|
| **Macroeconomic** | • Real GDP<br>• Inflation<br>• Short Term Interest Rates<br>• Long Term Interest Rates |
| **Real Estate** | • Stabilised exit yields<br>• Rental income growth rate<br>• Stabilised market rents<br>• Occupancy growth<br>• Stabilised occupancy<br>• Growth rate of costs<br>• Development of housing prices |

# PROJECT MERCURIUS

## 2. - MACROECONOMIC FORECAST

UPDATED MACROECONOMIC FORECAST FOR THE NETHERLANDS - BASE CASE

| | | | 2013 | 2014 | 2015 | 2016 | 2017 |
|---|---|---|---|---|---|---|---|
| The Netherlands | Base Case Report | GDP | 0,40% | 1,40% | 1,60% | 1,80% | 1,90% |
| | | Inflation | 2,40% | 1,60% | 1,70% | 1,70% | 1,90% |
| | | Short term Interest Rates | 0,30% | 0,50% | 0,55% | 0,60% | 0,70% |
| | | Long Term Interest Rates | 2,30% | 2,90% | 3,00% | 3,50% | 4,00% |
| | Base Case DNB | GDP | -0,60% | 1,00% | 1,50% | 1,50% | 1,50% |
| | | Inflation | 2,70% | 1,50% | 1,70% | 1,90% | 1,90% |
| | | Short term Interest Rates | 0,20% | 0,30% | 0,40% | 0,40% | 0,40% |
| | | Long Term Interest Rates | 2,00% | 2,30% | 2,40% | 2,40% | 2,40% |
| | Difference Base Case | GDP | -1,00% | -0,40% | -0,10% | -0,30% | -0,40% |
| | | Inflation | 0,30% | -0,10% | 0,00% | 0,20% | 0,00% |
| | | Short term Interest Rates | -0,10% | -0,20% | -0,15% | -0,20% | -0,30% |
| | | Long Term Interest Rates | -0,30% | -0,60% | -0,60% | -1,10% | -1,60% |

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## 3. - MAIN DIFFERENCES

I.      Main differences between Updated Data Tape and Previous Data Tape

II.     Main differences portfolio

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## 3. - MAIN DIFFERENCES

The analysis of the Updated Data Tape resulted worth mentioning findings, although we do not have the rationale behind the findings and therefore we are reluctant to draw any conclusions for the changes.
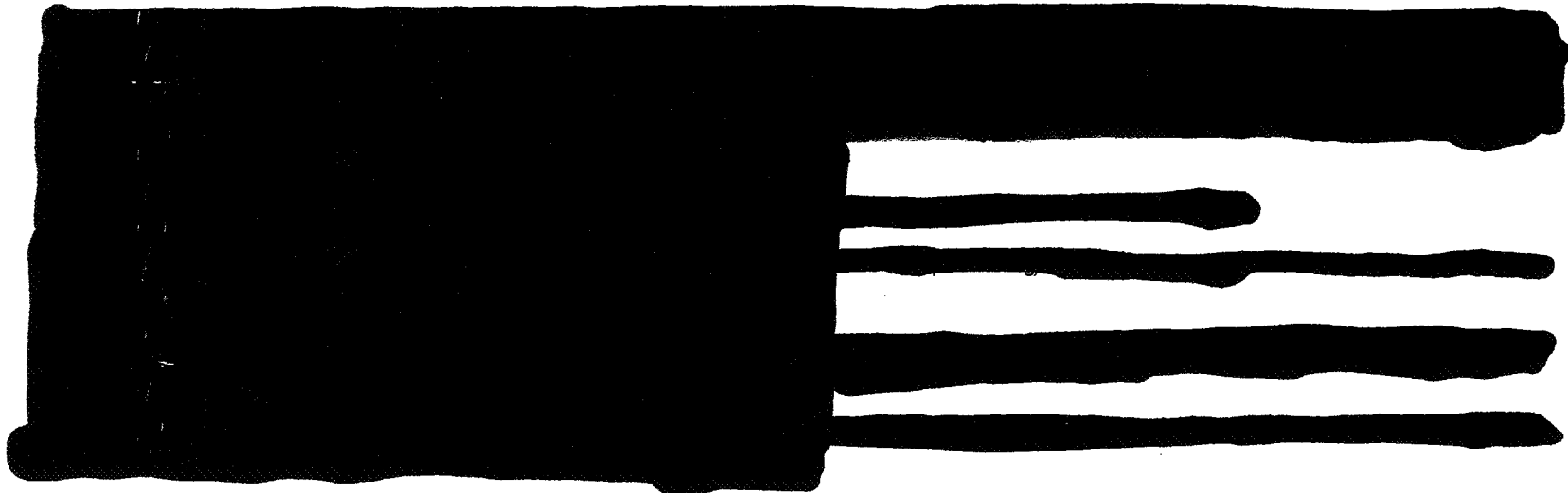


Furthermore, we have noticed other changes in the Updated Data Tape:
- Change of collateral type
- Change of financing type
- Change of RC name
- Change of counterparty name
- Change of signal colour (from performing to non-performing and vice versa)
- No facility ID in new data tape
- New facility numbers

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## 4. - RESULTS

I.    Key portfolio statistics Updated Data Tape

II.    Total portfolio - base case Updated Data Tape

III.    Total portfolio - adverse case Updated Data Tape

# 5. - LIMITATIONS

# PROJECT MERCURIUS

## 5. - LIMITATIONS

### GENERAL LIMITATIONS

- This Addendum is based on information from Mercurius and other third party information, as stated in the introduction of this Addendum.

- The main source of information is the Updated Data Tape, which contained some specifications of the loan portfolio though not all specifications were in line with our request.

- The available Merrill Datasite data room contained information of the relation complexes and the loan portfolio. It is difficult to get a good overview of the available information and several documents are very difficult to read due to the quality of the digital documents and the watermark printed in it. It has been difficult to keep overview of all updates during the assessment. Furthermore, several documents are in out dated and not all relevant information per RC was available. The consequence is that we might have missed relevant information in our assessment.

- We have used information for the assessment that was available to us up to the 23th of January. As a result there might be more information available than used in our analysis.

- According to Mercurius for loans with a "-1" signal colour, the adjustment of data has not been done in a consistent way. That data on the rating can no longer be connected with a loan. We put the "-1" as performing initially as there was nothing in the Updated Data Tape to indicate otherwise. ████████

- The loans in the Updated Data Tape are categorized with collateral types Land, Industrial, Retail, Residential, Office and Other. After reviewing the loans and associated collateral we concluded that the labelling is not very consistent resulting in buckets with properties in them that should have been in an other bucket. The consequence is that improved labelling could lead to more accuracy.

- There is limited information available regarding the smaller RCs. We have randomly sampled some smaller loans to improve the representativeness of the sample in a bucket. However, if there is additional information available of smaller RCs, indicating a different risk profile, this could be taken into consideration in follow-up research for more accuracy.

- Cross collateralisation is unclear in the available information. We have asked for a clear guideline or a specification in the data tape. Due to the fact that we have not received clear information, we assumed that performing loans from one RC in a specific bucket are cross collateralised.

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## 5. - LIMITATIONS

GENERAL LIMITATIONS

- The missing direct link between the data tape and the associated collateral made the analysis complex and sensitive for mistakes.

- Guarantees or obligations of the borrower to the lender or any other guarantee or obligation that is not in the data tape are not taken into account.

- We have not received loan documentation and we have assumed that the data tape is a correct reflection of the loan conditions. The result is that this assessment is a simplified approach to reality and there may be other relevant items in the individual loan documents.

- The REOs ███████████████ have been assessed separately outside the scope of this Addendum. C&W has derived an indicative value for the REOs although with limited in depth analyses.