Credit and Risk Management in a Wind-Down Agency

Christian Bluhm

AK Strategieentwicklung und Controlling in Banken
Schmalenbach-Gesellschaft, Frankfurt am Main, 22.09.2011
Agenda

- The influence of the 2007/2008 financial crisis
- FMS Wertmanagement: a public wind-down agency
- Active CPM at FMS Wertmanagement
- Chances and challenges, outlook and perspectives
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- The influence of the 2007/2008 financial crisis
  - FMS Wertmanagement: a public wind-down agency
  - Active CPM at FMS Wertmanagement
  - Chances and challenges, outlook and perspectives
The 2007/2008 financial crisis initiated huge market and economic irritations ... nowadays ongoing.

In the course of the crisis, Germany established the “Finanzmarktstabilisierungsgesetz” (FMStG) including the (Article 1) “Finanzmarktstabilisierungsfondsgesetz” (FMStFG) effective as of October 17 in 2008.

Purpose: stabilization of German financial institutions and avoidance of a credit crunch.
Aim of this presentation

- Introduce the public law agency "FMS Wertmanagement"
- Explain benefits and mandate as well as structure and organization
- Exploit the operating model of FMS Wertmanagement
- Provide examples for portfolio management activities of FMS Wertmanagement
- Explain chances and challenges in daily business
Agenda

- The influence of the 2007/2008 financial crisis
- **FMS Wertmanagement: a public wind-down agency**
- Active CPM at FMS Wertmanagement
- Chances and challenges, outlook and perspectives
Genesis of FMS Wertmanagement

- September 2008: The HRE Group encounters such serious financial difficulties that it faces going-concern risks
- 17 October 2008: The Parliament of the Federal Republic of Germany moves to establish SoFFin based on the FMStFG dated 17 October 2008
- 13 October 2009: SoFFin acquires full control of the HRE Group
- 21 January 2010: The HRE Group applies for establishment of a winding-up institution
- 8 July 2010: FMS Wertmanagement is founded as an entity under public law pursuant to Section 8a FMStFG
- 30 September 2010: Both the non-strategic operations and the risk positions of the HRE Group are transferred to FMS Wertmanagement at a nominal value of EUR 175.7 billion
- 1 October 2010: FMS Wertmanagement launches its operations

Source: FMS Wertmanagement, Annual Report 2010
Munich, 09/02/2011

FMS Wertmanagement is participating in the Greek bond swap to the tune of just under EUR one billion

The Executive Board of FMS Wertmanagement today indicated in coordination with the company’s Supervisory Board that it was willing to participate in the Greek bond swap. The winding-up institution owned by the German government currently holds a total of EUR 8.76 billion in Greek bonds and loans. Of the 30 individual positions, 13 bonds having maturities prior to 2022 qualify for the Greek government’s offer to swap existing bonds for issues with longer maturities. These 13 bonds have a total nominal volume of EUR 975 million.

“We expect this measure to stabilise the situation and thus want to make a contribution of course”, says Christian Bluhm, Chief Risk Officer on the Executive Board of FMS Wertmanagement, “especially because this will substantially improve the prospects that the remaining Greek bonds in our portfolio will be repaid”.

In October 2010, FMS Wertmanagement had taken on the risk positions and non-strategic operations of the nationalised HRE Group in order to unwind them in ways aimed at minimising losses.

If you have any questions, please do not hesitate to contact Andreas Henry, Head of Communications, at +49 89 954 7627 250 or by email at andreas.henry@fms-wm.de.
Mandate of FMS Wertmanagement

- Intake of risk positions and non-strategic assets, liabilities and derivatives from HRE Group
- Value-maximising management and wind-down of transferred assets and implementation of an appropriate wind-down strategy for the whole portfolio
- Cost-effective management of transferred assets, liabilities and derivatives
- Cost-effective funding through independent treasury function and low funding costs due to obligation of Financial Market Stabilisation Fund (SoFFin) to compensate all losses of FMS Wertmanagement
Basis: charter of FMS Wertmanagement

Basis for FMS Wertmanagement, its mandate and business model is a *charter* /statute as of 7 July 2010

The charter of FMS Wertmanagement was enacted by the Federal Agency for Financial Market Stabilization (FMSA) which is being supervised by the German Ministry of Finance

**SoFFin** (Sonderfonds Finanzmarktstabilisierung) is the financial arm of the FMSA
Section 1  Formation, legal form, registered office

(1) On the date on which this charter enters into force, FMS Wertmanagement shall be established as a structurally and financially independent public law entity with partial legal capacity operating under the auspices of the Federal Agency for Financial Market Stabilisation (Bundesanstalt für Finanzmarktstabilisierung, "FMSA"). FMS Wertmanagement is a winding-up agency within the meaning of section 8a (1) sentence 1 FMStFG.

(2) FMS Wertmanagement may engage in legal transactions in its own name, and it may sue and be sued in court.

(3) FMS Wertmanagement’s registered office is Munich.

(4) FMS Wertmanagement may establish commercial branches (Betriebsstätten), specifically in Frankfurt am Main/Eschborn.
Extracts from the charter of FMS Wertmanagement (2/3)

Section 2 Functions, transactions, application of the Banking Act

(1) FMS Wertmanagement shall be responsible for assuming, liquidating and winding-up with a view to generating a profit the risk assets and non-strategic businesses ("Transferred Assets") of Hypo Real Estate Holding AG and its directly and indirectly held German and foreign subsidiaries and special purpose entities (collectively referred to as the "HRE Group") for the purpose of stabilising the HRE Group and the financial market.

(2) In order to perform its function described in subsection 1, FMS Wertmanagement may engage in all types of banking and financial services transactions and all other transactions that directly or indirectly serve its purposes. The foregoing does not affect subsection 3 sentence 1 no. 2. FMS Wertmanagement’s business activities shall extend to all assets and liabilities among the Transferred Assets.

(3) FMS Wertmanagement:

1. is not a financial institution (Kreditinstitut) or financial services institution (Finanzdienstleistungsinstitut) within the meaning of the Banking Act (Kreditwesengesetz, "KWG"), an investment services enterprise (Wertpapierdienstleistungsunternehmen) within the meaning of the Securities Trading Act (Wertpapierhandelsgesetz, "WpHG"), or an insurance company (Versicherungsunternehmen) within the meaning of the Insurance Supervisory Act (Versicherungsaufsichtsgesetz, "VAG");
Section 7    Duty of loss compensation

(1) Until the dissolution of FMS Wertmanagement pursuant to section 16, SoFFin shall be under an obligation to FMS Wertmanagement and FMSA to do or to cause the following:

1. to promptly, however not later than the third business day following the first request of the Executive Board (if applicable, even prior to maturity of FMS Wertmanagement’s liabilities). pay those amounts which the Executive Board in its due discretion deems necessary in order to ensure that FMS Wertmanagement is always in a position to meet its liabilities in full and in a timely manner, i.e., SoFFin shall be liable to FMS Wertmanagement and FMSA for the liabilities entered into by FMS Wertmanagement;

2. to compensate all losses. Losses within the meaning of this provision are all amounts due and payable under no. 1 and not (any longer) repayable in accordance with subsection 2.

The Executive Board of FMS Wertmanagement is under the obligation to request additional funding within the meaning of no. 1 in the requisite amount and in a timely fashion in order to ensure that FMS Wertmanagement is able to meet any and all payment obligations at all times.

Source: Charter of FMS Wertmanagement (non-binding English translation)
Cheap funding costs for FMS-WM enabled by SoFFin's loss compensation obligation

Based on loss compensation by the SoFFin, FMS Wertmanagement achieved best-in-class ratings

The creditworthiness of FMS Wertmanagement equals the creditworthiness of the Federal Republic of Germany

As a consequence, FMS Wertmanagement can fund itself at low costs
Summary: legal and regulatory framework of FMS Wertmanagement

- Organisation as a legally and economically independent public-law wind-down entity
- FMS Wertmanagement can act under its own name in legal transactions
- Regulation and supervision by the Financial Market Stabilisation Agency (FMSA) and the Federal Financial Supervisory Authority (BaFin)
- FMS Wertmanagement not considered to be a credit institution or financial services institution under the German Banking Act (KWG)
- According to law and the charter, all losses of FMS Wertmanagement are covered by the Financial Market Stabilisation Fund (SoFFin)
- FMS Wertmanagement entitled to conduct certain banking and financial services business related to winding-down the transferred asset portfolio without banking licence
- Liquidation and wind-down of transferred assets to be conducted in accordance with a wind-down plan, designed for a period of 10 years (with regular monitoring reports for FMSA)
Summary: relation to FRG, FMSA, SoFFin and HRE

Cornerstones

1. Governance
   - FMSA has decreed a charter for FMS Wertmanagement (FMS-WM), which governs the organisation, liquidation, supervision and governance etc.
   - Regular reporting about business development by FMS-WM to FMSA

2. Asset Transfer & Servicing
   - Transfer of assets, liabilities and derivatives from HRE Group to FMS-WM
   - Assets include non-strategic and risk carrying positions
   - Servicing by HRE Group

3. Risk management, funding and hedging
   - Refinancing of FMS-WM via capital market issues and bilateral repos, etc.
   - Management of liquidity-, interest rate- and currency risks via Money-/Capital Markets

4. Covering of losses
   - SoFFin to cover losses of FMS-WM
Organizational structure of FMS Wertmanagement (1/2)

Dr. Christian Bluhm
Chief Risk Officer (CRO)

Former position
Head of Credit Portfolio Management
Credit Suisse, Zurich

- Risk Controlling & Portfolio Steering
- Structured Products & Quantitative Analytics
- Global Credit Management
- Global Workout

- Steering and analyses of credit portfolios
- Operative credit and portfolio management
- Limit setting and controlling of
  - counterparty risk
  - market risk
  - liquidity risk
  - operational risk
- Accounting, finance and planning

Ernst-Albrecht Brockhaus
Treasury/Markets

Former position
Head Group Treasury & Investor Relations
Bayerischen Landesbank, Munich

- Treasury
- Capital Markets Funding
- Credit Markets

- Operative steering of liquidity and market risks in line with limits
- Planning and implementation of funding; diversification of funding sources
- Market observation and strategy development for certain liquid asset classes

Frank Hellwig
Chief Operating Officer (COO)

Former position
Head of Sourcing & Corporate Services
Deutsche Pfandbriefbank AG, Munich

- Communications
- Legal, Compliance & Audit
- Committees & HR
- IT & Sourcing

- Key function for operating model of FMS-WM; chief of staff function
- Responsibility for legal department, compliance, internal audit, HR, project management, IT and sourcing
- Internal and external communication; press services
Organizational structure of FMS Wertmanagement (2/2)

Management Board

Executive Board

CRO
Dr. Christian Bluhm
Member of Executive B.

COO
Frank Hellwig
General Manager

Treasury/Markets
Ernst-Albrecht Brockhaus
Member of Executive B.

Risk Controlling & Portfolio Steering

- Risk Controlling
- Finance & Tax
- Controlling & Reporting
- Portfolio Steering & Planning

Structured Products & Quantitative Analytics

- Structured Products
- Quantitative Analytics

Global Credit Management

- Global Credit Management
- Commercial Real Estate
- Infrastructure & Asset Finance
- Public Finance & Financial Institutions
- Structured Products
- Credit Secretary

Global Workout

- Treasury
- Capital Markets Funding
- Credit Markets
- Communications
- Legal, Compliance & Audit
- Committees & HR
- IT & Sourcing

ALM

- ALM
- Funding Mgmt.
- Market Desk Credits
- Legal
- Compliance
- Audit
- HR
- Sourcing

Treasury Analytics

- Treasury Analytics
- Liquidity Management
- Investor Relations
- Project Management
- Commissions
- Solution Implementation
- Sourcing

Structured Products

- Structured Products
- Public Finance & Financial Institutions
- Structured Products

Portfolio Steering & Planning

Assistance

Assistance

Assistance
Committees & governance

Overview of Committees

Supervisory Board of FMS-WM
(Risk Committee & Audit Committee)

Management Board of FMS-WM

Committees

- Risk Committee
- Real Estate Committee
- Asset and Liability Committee
- Portfolio Steering Committee

Duties of Committees

- Approval of material single-name and portfolio decisions; strategy decisions;
- Supervision of management of FMS-WM
- Heading FMS-WM
- Operative overall responsibility

- Single-name and portfolio decisions w.r.t. competence rules
- Funding strategy
- Portfolio steering strategy
- Responsibility of risks in line with MARisk
Organizational principles

- Organization complies with MARisk standards

- Governance and processes reflect independence of market and risk units

- Lean structure, steering and material decisions fully integrated in FMS-WM but execution and other services can be done by external service providers

- Setup could be subject to changes over time; organization serves the purpose and mandate of FMS-WM in line with its charter; best effort, efficiency and value maximization are main drivers as well as compliance with regulation
Agenda

- The influence of the 2007/2008 financial crisis
- FMS Wertmanagement: a public wind-down agency
- **Active CPM at FMS Wertmanagement**
- Chances and challenges, outlook and perspectives
Value and decision drivers in CPM at FMS-WM

- Charter (Mandate)
- Stakeholder
- Governance
- Reputation

Refinancing

- Funding spreads
- P&L optimization
- Exploitation of government guarantee

Opportunity

- Opportunity windows
- One-off chance assessment
- Wind-down horizon of 10 years

Asset/Portfolio Decision

Innovation Stream

- Cluster view
- Risk assessment
- Market assessment
- Strategy

Wind-down Plan
Portfolio structure (1/6) – geographical breakdown (as of Dec-31-2010)

Portfolio structure
Geographical distribution in % of the nominal values on 31 December 2010

- USA: 19%
- Italy: 16%
- United Kingdom: 12%
- Germany: 9%
- Spain: 6%
- Japan: 6%
- Greece: 5%
- France: 3%
- The Netherlands: 3%
- Canada: 3%
- Other*: 18%

* Other 50 countries with an exposure of less than 2 % each

Source: FMS Wertmanagement, Annual Report 2010
Portfolio structure (2/6) – maturity breakdown (as of Dec-31-2010)

Portfolio structure – maturities (without extensions) in %

- < 2011: 1%
- 2011: 8%
- 2012: 7%
- 2013: 5%
- 2014: 3%
- 2015–19: 17%
- 2020–29: 19%
- 2030–39: 21%
- 2040–49: 13%
- > 2050: 6%

Source: FMS Wertmanagement, Annual Report 2010
Portfolio structure (3/6) – rating breakdown (as of Dec-31-2010)

<table>
<thead>
<tr>
<th>EAD (in € billion)</th>
<th>Commercial Real Estate/Workout</th>
<th>Value Management (Public Sector/Structured Products)</th>
<th>Infrastructure</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>31.12.2010</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>26.2</td>
<td>139.8</td>
<td>21.0</td>
<td>187.0</td>
</tr>
<tr>
<td>AAA to A−</td>
<td>0.4</td>
<td>118.0</td>
<td>8.4</td>
<td>126.8</td>
</tr>
<tr>
<td>BBB+ to BBB−</td>
<td>1.3</td>
<td>17.5</td>
<td>4.4</td>
<td>23.2</td>
</tr>
<tr>
<td>BB+ to BB−</td>
<td>7.2</td>
<td>2.2</td>
<td>3.8</td>
<td>13.2</td>
</tr>
<tr>
<td>B+ to B−</td>
<td>8.2</td>
<td>0.6</td>
<td>1.0</td>
<td>9.9</td>
</tr>
<tr>
<td>CCC+ to CCC−</td>
<td>0.3</td>
<td>0.6</td>
<td>0.2</td>
<td>1.1</td>
</tr>
<tr>
<td>D</td>
<td>8.8</td>
<td>0.8</td>
<td>3.2</td>
<td>12.8</td>
</tr>
</tbody>
</table>

Source: FMS Wertmanagement, Annual Report 2010
## Portfolio structure (4/6) – geographical EAD breakdown (as of Dec-31-2010)

<table>
<thead>
<tr>
<th></th>
<th>31.12.2010 EAD (in € billion)</th>
<th>Commercial Real Estate/Workout</th>
<th>Value Management (Public Sector/Structured Products)</th>
<th>Infrastructure</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total portfolio</td>
<td>26.2</td>
<td>139.8</td>
<td>21.0</td>
<td></td>
<td>187.0</td>
</tr>
<tr>
<td>Germany</td>
<td>9.0</td>
<td>6.9</td>
<td>0.4</td>
<td></td>
<td>16.3</td>
</tr>
<tr>
<td>USA</td>
<td>5.1</td>
<td>24.4</td>
<td>2.2</td>
<td></td>
<td>31.7</td>
</tr>
<tr>
<td>United Kingdom</td>
<td>2.3</td>
<td>11.5</td>
<td>10.4</td>
<td></td>
<td>24.2</td>
</tr>
<tr>
<td>PIIGS</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Italy</td>
<td>0.5</td>
<td>33.4</td>
<td>0.7</td>
<td></td>
<td>34.6</td>
</tr>
<tr>
<td>Spain</td>
<td>1.1</td>
<td>10.3</td>
<td>0.4</td>
<td></td>
<td>11.8</td>
</tr>
<tr>
<td>Greece</td>
<td>0</td>
<td>10.8</td>
<td>0</td>
<td></td>
<td>10.8</td>
</tr>
<tr>
<td>Ireland</td>
<td>0.1</td>
<td>2.2</td>
<td>0.2</td>
<td></td>
<td>2.5</td>
</tr>
<tr>
<td>Portugal</td>
<td>0.1</td>
<td>2.2</td>
<td>0.1</td>
<td></td>
<td>2.4</td>
</tr>
<tr>
<td>Japan</td>
<td>0.6</td>
<td>10.0</td>
<td>0.1</td>
<td></td>
<td>10.7</td>
</tr>
<tr>
<td>Asia (excl. Japan)</td>
<td>0.6</td>
<td>2.6</td>
<td>0.3</td>
<td></td>
<td>3.5</td>
</tr>
<tr>
<td>Rest of Europe</td>
<td>6.1</td>
<td>21.4</td>
<td>1.6</td>
<td></td>
<td>29.2</td>
</tr>
<tr>
<td>Rest of World</td>
<td>0.7</td>
<td>4.0</td>
<td>4.6</td>
<td></td>
<td>9.3</td>
</tr>
</tbody>
</table>

Source: FMS Wertmanagement, Annual Report 2010
Portfolio structure (5/6) – maturity EAD breakdown (as of Dec-31-2010)

<table>
<thead>
<tr>
<th>31.12.2010 EAD (in € billion)</th>
<th>Commercial Real Estate/Workout</th>
<th>Value Management (Public Sector/Structured Products)</th>
<th>Infrastructure</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total portfolio</td>
<td>26.2</td>
<td>139.8</td>
<td>21.0</td>
<td>187.0</td>
</tr>
<tr>
<td>2011–2015</td>
<td>19.8</td>
<td>23.3</td>
<td>4.0</td>
<td>47.1</td>
</tr>
<tr>
<td>2016–2020</td>
<td>1.1</td>
<td>27.7</td>
<td>1.3</td>
<td>30.1</td>
</tr>
<tr>
<td>2021–2030</td>
<td>1.3</td>
<td>28.7</td>
<td>2.8</td>
<td>32.8</td>
</tr>
<tr>
<td>2031–2040</td>
<td>0.7</td>
<td>39.3</td>
<td>3.7</td>
<td>43.7</td>
</tr>
<tr>
<td>&gt;2040</td>
<td>1.4</td>
<td>20.8</td>
<td>9.2</td>
<td>31.4</td>
</tr>
<tr>
<td>n.a.*</td>
<td>1.9</td>
<td>0</td>
<td>0</td>
<td>1.9</td>
</tr>
</tbody>
</table>

* Including loans called or loans where extensions are being processed

Source: FMS Wertmanagement, Annual Report 2010
## Portfolio structure (6/6) – valuation breakdown (as of Dec-31-2010)

<table>
<thead>
<tr>
<th>€ million</th>
<th>Of which: public-sector issuers</th>
<th>Of which: banks</th>
<th>Of which: other issuers</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Book value</td>
<td>62,430</td>
<td>11,648</td>
<td>51,275</td>
<td>125,353</td>
</tr>
<tr>
<td>Fair value</td>
<td>46,750</td>
<td>10,331</td>
<td>43,614</td>
<td>100,695</td>
</tr>
<tr>
<td>Deferred write-downs in fixed assets</td>
<td>15,346</td>
<td>1,231</td>
<td>7,850</td>
<td>24,427</td>
</tr>
<tr>
<td>of which: asset-backed securities</td>
<td></td>
<td></td>
<td></td>
<td>2,443</td>
</tr>
<tr>
<td>of which: PIIGS countries</td>
<td></td>
<td></td>
<td></td>
<td>14,519</td>
</tr>
<tr>
<td>Portugal</td>
<td></td>
<td></td>
<td></td>
<td>(437)</td>
</tr>
<tr>
<td>Ireland</td>
<td></td>
<td></td>
<td></td>
<td>(365)</td>
</tr>
<tr>
<td>Italy</td>
<td></td>
<td></td>
<td></td>
<td>(7,655)</td>
</tr>
<tr>
<td>Greece</td>
<td></td>
<td></td>
<td></td>
<td>(4,717)</td>
</tr>
<tr>
<td>Spain</td>
<td></td>
<td></td>
<td></td>
<td>(1,345)</td>
</tr>
</tbody>
</table>

Source: FMS Wertmanagement, Annual Report 2010
Mandate of FMS Wertmanagement enforces active CPM

CPM implementation
- Norm strategies:
  - Sell
  - Hold
  - Restructure
- Segment-specific strategies, e.g., real estate, sovereign, or macro views, etc.
- Credit derivatives and structured credit management
- Hedging strategies
- Workout and restructuring
- Risk deleveraging

CPM at FMS-WM incorporates four units: Structured Credit + CRM\(^1\) + GWO\(^2\) + Credit Markets

\(^1\) CRM: Credit Risk Management  \(^2\) GWO: Global Workout
General CPM principles at FMS-WM

- Qualitative and quantitative assessment of risks and chances is the first step
- Opportunity assessment comes next
- No material sale without a fully-fledged business case with a full valuation of options and a reasonable bottom-line comparison of outcomes
- Exploitation of pull-to-par effect for assets with maturity before wind-down horizon if risk assessment provides confidence that assets remain performing
- No acceptance of loss arising from sale without clear reasoning; arguments often will contain qualitative aspects but must be made firm and quantitative
- Documentation of sales decision is key: legal assessment always has to be in place (internal always; external on need-to-have basis)
- Charter & reputation is key
Examples: commercial real estate

- **Restructuring**
  - Capital structure
  - Waterfall / distribution of proceeds
  - Coverage ratios / debt service
  - Change of sponsor
  - Property management

- **Sale**
  - Bidding process
  - No fire sales / no pressure
  - Value maximizing
  - Within predefined loss budgets*

- **Prolongation / Hold**
  - In case of clear proof of evidence that prolongation/hold maximizes the recovery/sale value later in time
  - If overall risk can be improved in favor of FMS Wertmanagement
  - If other options would accelerate losses

* Main steering instrument and benchmark is the afore-mentioned wind-down plan and the governance framework around it
Portfolio and asset management steering criteria

Three main fields of decision criteria

Economic value maximization via balancing market versus intrinsic asset value under consideration of risk/return profile as well as market segment and market development

Bottom-line valuation of positive and negative expected cash; cumulative P&L result including scenario analysis and upside chances as well as downside risks; concentrations, macro developments, reputation, political aspects, stakeholder demand

Operative capabilities for execution; transaction costs; operative complexity; strategic goals; simplification and clean-up aspects

- Transparency: all aspects, all risk drivers, full understanding
- Full compliance with mandate and all regulatory requirements
- Stakeholder demand / management
Example: simplified scheme intrinsic bond sale

Coupon payments +
Principal payments 

Cashflow +

Operat. variable cost 
Fix cost +
Funding cost incl. FX-CCY-Swaps 

Cost -

Expected Loss / other 
Risk cost -

Current market value micro hedge 
Collateral and other cost -

NPV calculation 

Intrinsic value

Optional:
Dynamization for inflation-linked positions

Micro hedge 

Dr. Christian Bluhm, September 2011, www.fms-wm.de
Examples: structured credit

- **Valuation**
  - Reference pool
  - Structure
  - Securities
  - Payments
  - Performance
  - Risk drivers
  - Stochastics

- **Deleveraging volume**

- **Deleveraging risk**

- **Additional hedging**

- **Collaboration with market participants**
  - Who else is involved?
  - Do we have common interest in managing positions, risks, structures?
  - What experience did other institutions make with considered structures?
  - What is the market view regarding perspectives going forward?
Examples: transaction valuation

Standard **credit risk** model and **cash flow** modeling as basic building blocks

\[
1_{\{\tau_i < t\}} \sim B(1; X_i^{(t)}), \quad (1_{\{\tau_i < t\}} | X_i^{(t)} = x_i)_{i=1,...,m} \text{ independent}
\]

\( (X_i^{(t)})_{i=1,...,m} \) r.v. in \([0,1]^m\) on a probability space \((\Omega, \mathcal{F}, \mathbb{P})\)

\[\mathbb{E}[X_i^{(t)}] = p_i^{(t)}, \quad (p_i^{(t)})_{t \geq 0} \text{ PD term structure for asset } i\]

\[
\mathbb{P}[\tau_1 < t_1, \ldots, \tau_m < t_m] = \int_{[0,1]^m} \left( \prod_{i=1}^m X_i \right) d\mathbb{P}_{X_1^{(t_1)}, \ldots, X_m^{(t_m)}}(X_1, \ldots, X_m)
\]

**But:** **transaction-based** valuation

- Scoring methods are not very useful for a portfolio as the one of FMS-WM
- Instead: **causal** valuation (PD = "hitting probability", **(stressed) loss scenarios**) is necessary, e.g., **cash flow valuation incorporating stochastic components**
- FMS-WM needs to evaluate all significantly large exposures in such ways

**Macro & market views and segment-specific** (e.g., real estate) know-how are crucial
Examples: structures & strategies

Credit enhancement mechanisms
- subordination
- cash traps
- redirection of interest & principal
- trigger events
- structural control

Strategy after transfer to FMS-WM
- analyze position & inherent risks
- understand status quo (e.g., syndicate, breaches, triggers, cash accounts, etc.)
- analyze connected swaps (e.g., interest rate or currency swaps)
- evaluate sale and restructuring options
- elaborate strategies going forward
- bring strategies into committee(s) for approval process
- start with implementation of approved strategy & measures

Comparable situations occur across various asset classes; patterns occur repeatedly
Agenda

- The influence of the 2007/2008 financial crisis
- FMS Wertmanagement: a public wind-down agency
- Active CPM at FMS Wertmanagement
- Chances and challenges, outlook and perspectives
Chances for FMS Wertmanagement

Refinancing
- FMS Wertmanagement can turn negative carry into positive carry

Long breath, no need for firesales
- FMS Wertmanagement has time to wait for pull-to-par or pull-to-value

Concentrated expert Know-how
- FMS Wertmanagement was able to attract experienced portfolio managers, credit specialists, accountants, lawyers, IT professionals, traders in treasury, etc.

Lean organization
- FMS Wertmanagement operates the firm with a moderate number of people
- Insourcing a function instead of outsourcing is only done if
  - FMS Wertmanagement is obliged to insource (e.g., MARisk reasons)
  - FMS Wertmanagement is convinced to perform better than external parties

Cost efficiency
- FMS Wertmanagement is strictly cost conscious
- FMS Wertmanagement follows the strict cost rules of public institutions
Challenges in winding-down a portfolio like the FMS-WM portfolio

**Long term assets**, e.g., public sector or infrastructure finance
- Reliable forecasts over a period of 20-30 years are more or less impossible
- Wind-down plan of FMS-WM currently forsees an initial time period of 10 years

**Complexity**
- Some of the structured credit risks in the FMS-WM portfolio are highly complex
- For instance, tranched assets referencing tranched portfolios of tranched CMBS, etc.
- Statistical modeling of such transactions is possible but time consuming and intense

**Illiquidity**
- Various positions are highly illiquid, for instance, in the infrastructure finance area
- FMS Wertmanagement can then only follow a strategy to try to improve its position at each restructuring step or prolongation round; sale at a large haircut is no option

*It will take time, patience & long term strategic thinking to finally unwind the assets*

*However, the chosen form of wind-down agency can leverage its advantages for the benefit of the owner and, therefore, for the benefit of German tax payers*
**Impressum**

<table>
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<tr>
<th>Name</th>
<th>FMS Wertmanagement AöR</th>
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<tbody>
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