The US sub-prime crisis and its implications

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12. Handelsblatt Jahrestagung
Frankfurt, 4th September 2007
## Agenda

1. What has happened?
2. What caused it?
3. What can we learn?
4. What are the implications for the market?
5. What is the impact on Deutsche Bank?
US sub-prime crisis causes market turbulences

1. What has happened?

**US sub-prime crisis**

**US sub-prime securitisation price index**

<table>
<thead>
<tr>
<th></th>
<th>Apr-07</th>
<th>May-07</th>
<th>Jun-07</th>
<th>Jul-07</th>
<th>Aug-07</th>
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<tr>
<td>Value</td>
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**Contagion into global credit, …**

**Credit risk index**

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<tr>
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<th>Apr-07</th>
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<td>Value</td>
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**… money market …**

**Interbank overnight rate (in %)**

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**… and equity markets**

**Volatility index**

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<th>Jan-07</th>
<th>Mar-07</th>
<th>Jul-07</th>
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(1) ABX Index (for sub-prime MBS with BBB rating); data as of 29.08.2007
(2) Itraxx Crossover: Index of 45 sub-investment grade rated CDS; data as of 29.08.2007
(3) CBOE Index Options Volatility: VIX – S&P 500; VDAX – DAX; data as of 29.08.2007
(4) LIBOR

Source: Datastream, Global Insight, Thomson Financial, British Bankers Association, Deutsche Bank

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The origins of the recent market turbulences

- Mis-pricing of credit risk
- Limited understanding of risk dispersal / amount of leverage
- Loss of trust and increasing nervousness
- Liquidity squeeze in money markets; flight to quality / less complex assets
- Technical sales triggered by redemptions
2. What caused it?

Mis-pricing of credit risk

Tightening spreads in the credit markets …

US credit spreads\(^{(1)}\) (in bps)

- 267 bps

BBB

Investment Grade

… and increasing loan-to-value ratios and declining lending standards in US sub-prime market\(^{(2)}\)

<table>
<thead>
<tr>
<th>Year</th>
<th>Loan-to-value (lhs)</th>
<th>Lending standards (rhs)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2002</td>
<td>80</td>
<td>70</td>
</tr>
<tr>
<td>2003</td>
<td>85</td>
<td>65</td>
</tr>
<tr>
<td>2004</td>
<td>90</td>
<td>50</td>
</tr>
<tr>
<td>2005</td>
<td>95</td>
<td>40</td>
</tr>
<tr>
<td>2006</td>
<td>100</td>
<td>30</td>
</tr>
<tr>
<td>2007</td>
<td>110</td>
<td>20</td>
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</tbody>
</table>

(1) Risk premia over US Treasuries; data as of 24.08.2007
(2) "Originator underwriting matrix" used as lending standards proxy; score represents a composite of loan underwriting standards employed by loan originator; as of year-end and as of first quarter 2007

Source: Bloomberg, DB Global Markets Research, Datastream, Inside Mortgage
2  What caused it?

Loss of trust and increasing nervousness

“… franchise was largely destroyed …, by *undermining the confidence of … business partners.*”

*(broker report, 27.03.07)*

“Recent developments in the US sub-prime and other credit markets may trigger additional heavy losses in 2H 2007. **We remain cautious.**”

*(broker report, 23.08.07)*

“… **shocked the market** with the news that three of its *asset-backed securities funds* … were temporarily frozen”

*(press report, 10.08.07)*

“This is just the **tip of the iceberg**”

*(market observer, 21.08.07)*
Liquidity squeeze in money markets as a consequence of technical sales and flight to quality / less complex assets

Money market rate movements

Money market interest rate 2007, in %

- 90-day asset-backed CP rate\(^{(1)}\)
- US 3-months T-bill rate

Technical sales by institutional investors (primarily hedge funds); exits from structured assets

Flight to quality / less complex assets; banks hoard liquidity

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(1) US ABCP (A1/P1), data as of 28.08.2007
Source: Datastream
Lessons learned

- Improving transparency around risk dispersal
- Greater focus on risk management
- Strengthening of liquidity management
- Coordinated action by central banks
- Greater vigilance by regulators
- Communication by market participants
Sub-prime risks are manageable

Outstanding volume (in USD tn)

- US sub-prime mortgages: ~1.2
- US asset-backed CP (global): ~1.0
- CDOs (global): ~1.5
- US MBS: ~7
- US residential mortgages: ~10

Capitalisation (in USD tn)

- Quoted shares (3): ~50
- Debt securities (4): ~35
- Total capitalisation (5): ~85

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(1) As of 22.08.2007  (2) EU 25, Japan, USA: data as of 31.12.2006; all values translated at year-end FX rates  (3) Total outstanding amount of quoted shares at market value  (4) In nominal value; Outstanding volume as of 31.12.2005  (5) Excluding derivatives

Source: ECB, Federal Reserve, Deutsche Bank
Outlook

- Work-out of the sub-prime crisis in the USA
- Gradual stabilisation of the money and credit markets
- Declining consumer confidence in the USA
- Slight decline in global growth rates
- German economy on growth course
Environment for structured products and leveraged lending remains challenging

US asset-backed CP market

<table>
<thead>
<tr>
<th>Month</th>
<th>Jan</th>
<th>Feb</th>
<th>Mar</th>
<th>Apr</th>
<th>May</th>
<th>Jun</th>
<th>Jul</th>
<th>Aug</th>
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</thead>
<tbody>
<tr>
<td>Volume (in USD bn)</td>
<td>1,051</td>
<td>1,058</td>
<td>1,064</td>
<td>1,072</td>
<td>1,108</td>
<td>1,135</td>
<td>1,152</td>
<td>1,052</td>
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</table>

US market for CDO issuance

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<thead>
<tr>
<th>Month</th>
<th>Jan</th>
<th>Feb</th>
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<th>Jun</th>
<th>Jul</th>
<th>Aug</th>
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<tbody>
<tr>
<td>Issuance (in USD bn)</td>
<td>8</td>
<td>42</td>
<td>41</td>
<td>30</td>
<td>27</td>
<td>40</td>
<td>11</td>
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Leveraged loan underwriting

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<th>Month</th>
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<th>Jul</th>
<th>Aug</th>
</tr>
</thead>
<tbody>
<tr>
<td>Volumes (in USD bn)</td>
<td>41</td>
<td>63</td>
<td>21</td>
<td>66</td>
<td>42</td>
<td>92</td>
<td>103</td>
<td>107</td>
</tr>
</tbody>
</table>

Source: Dealogic, Federal Reserve, Thomson Financial
### Deutsche Bank exposures

**US sub-prime**
- DB is not exposed to further deterioration in US sub-prime mortgages across its books
- Exposure to US mortgage originators tightly managed and largely hedged

**ABCP Conduits**
- Total assets in DB-sponsored conduits of EUR 32 bn
- Substantially all of which consolidated on balance sheet
- The purpose of DB-sponsored conduits is to provide clients and the bank with cheaper funding
- DB-sponsored conduits include assets sourced by DB such as credit card receivables, auto loans/student loans, mortgages, and mortgage backed securities
- CP investors in DB-sponsored conduits have no exposure to US sub-prime

**Hedge Funds**
- High priority client segment
- DB does not lend unsecured to hedge funds
- Exposures are fully collateralized, margin calls are being met
- Types of acceptable collateral governed by strict policies
- Net exposure is marked to market and collateral is called on a daily basis

**Leveraged Finance**
- Pipeline of sponsor loans: EUR 29 bn
- In addition: equity bridges of EUR 750 m
- High credit quality of pipeline

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5. What is the impact on Deutsche Bank?

DB is not exposed to further deterioration in US sub-prime mortgages across its books. Exposure to US mortgage originators is tightly managed and largely hedged. Total assets in DB-sponsored conduits of EUR 32 bn, substantially all of which are consolidated on balance sheet. The purpose of these conduits is to provide clients and the bank with cheaper funding. DB-sponsored conduits include assets sourced by DB such as credit card receivables, auto loans/student loans, mortgages, and mortgage backed securities. CP investors in DB-sponsored conduits have no exposure to US sub-prime.

High priority client segment includes hedge funds, and DB does not lend unsecured to them. Exposures are fully collateralized, and margin calls are being met. Types of acceptable collateral are governed by strict policies. Net exposure is marked to market and collateral is called on a daily basis.

The pipeline of sponsor loans amounts to EUR 29 bn, and in addition, there are equity bridges of EUR 750 m. The high credit quality of the pipeline is maintained.
Cautionary statements

This presentation also contains forward-looking statements. Forward-looking statements are statements that are not historical facts; they include statements about our beliefs and expectations and the assumptions underlying them. These statements are based on plans, estimates and projections as they are currently available to the management of Deutsche Bank. Forward-looking statements therefore speak only as of the date they are made, and we undertake no obligation to update publicly any of them in light of new information or future events.

By their very nature, forward-looking statements involve risks and uncertainties. A number of important factors could therefore cause actual results to differ materially from those contained in any forward-looking statement. Such factors include the conditions in the financial markets in Germany, in Europe, in the United States and elsewhere from which we derive a substantial portion of our trading revenues, potential defaults of borrowers or trading counterparties, the implementation of our management agenda, the reliability of our risk management policies, procedures and methods, and other risks referenced in our filings with the U.S. Securities and Exchange Commission. Such factors are described in detail in our SEC Form 20-F of 27 March 2007 on pages 9 through 15 under the heading "Risk Factors." Copies of this document are readily available upon request or can be downloaded from www.deutsche-bank.com/ir.