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Debt Defaults and Sovereign Risk: CDS Spreads as a Leading Indicator

CFA Society – Austin / San Antonio

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CDS Spreads as a Leading Indicator

Predictive Performance During The Crisis

Related Research:

CDS Spreads and Default Risk: A Leading Indicator?
(May 12, 2011)

CDS Spreads and Default Risk: Interpreting the Signals
(October 12, 2010)

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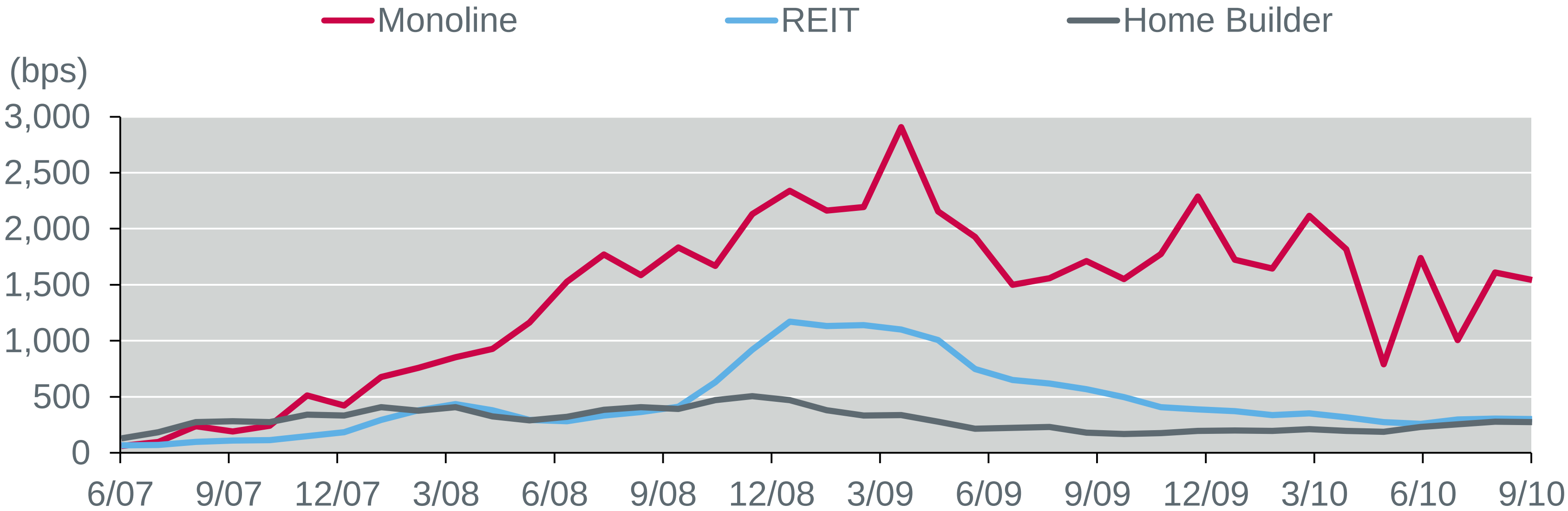
Why Study CDS Spreads?

Property-Sensitive Sectors – CDS Spreads



- Pronounced volatility in CDS spreads during the crisis
- Spreads are one of the analytical tools used by Fitch's credit analysts (e.g., identifying outliers)

Source: Fitch Ratings, Fitch Solutions

CDS Spreads as Risk Indicators

CDS spreads increasingly used for risk analysis

Converting spreads to probabilities of default (PD)

- Assume 60% loss severity (i.e., 40% recovery rate)
- Annual CDS spread = 120 bps (prior example)

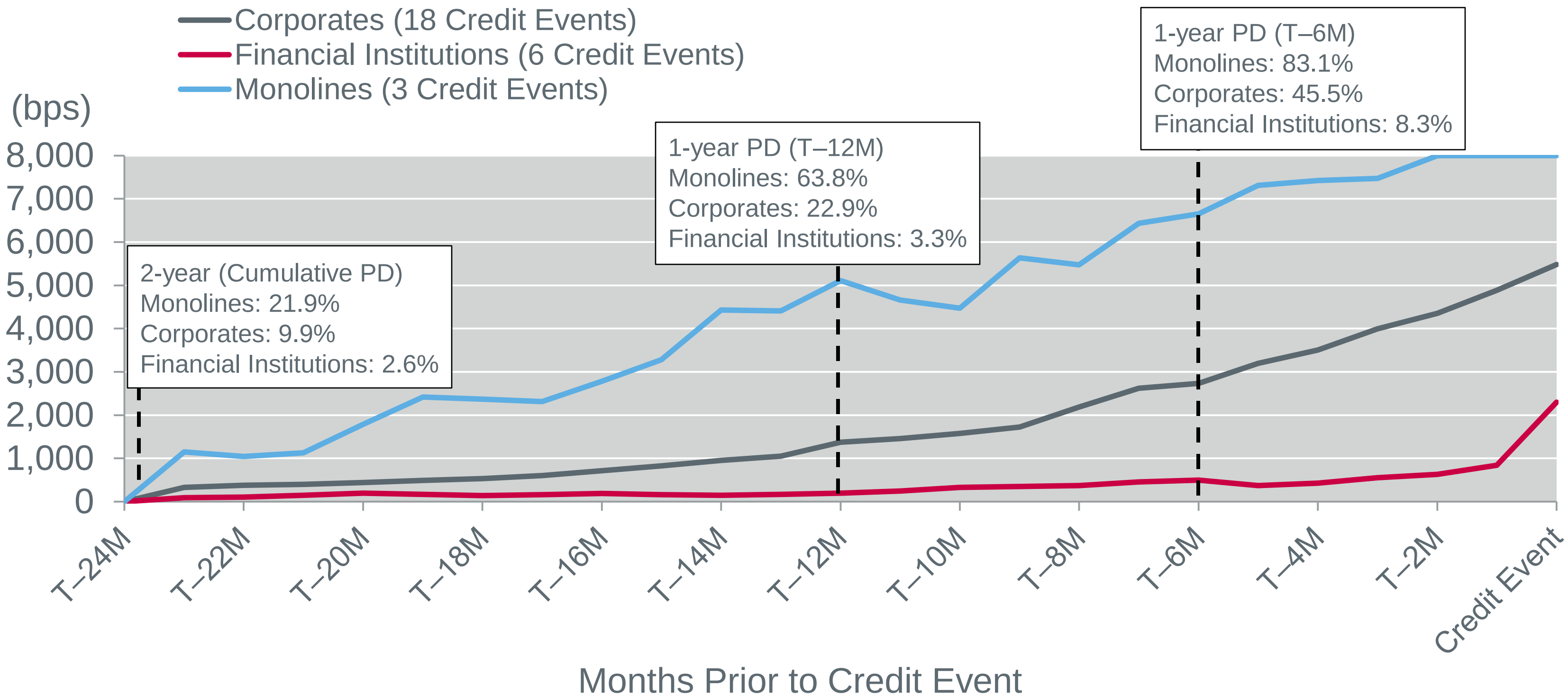
Probability of Default (1 yr)	=	CDS spread (annualized)	/	Loss Severity
2%	**=**	**1.20%**	**/**	**60%**

Assumptions underlying this formula:

- Fixed (rather than stochastic) recovery rate
- Risk-neutrality (i.e., no risk premium beyond compensation for EL)

Mixed Performance in Signaling Eventual Defaults

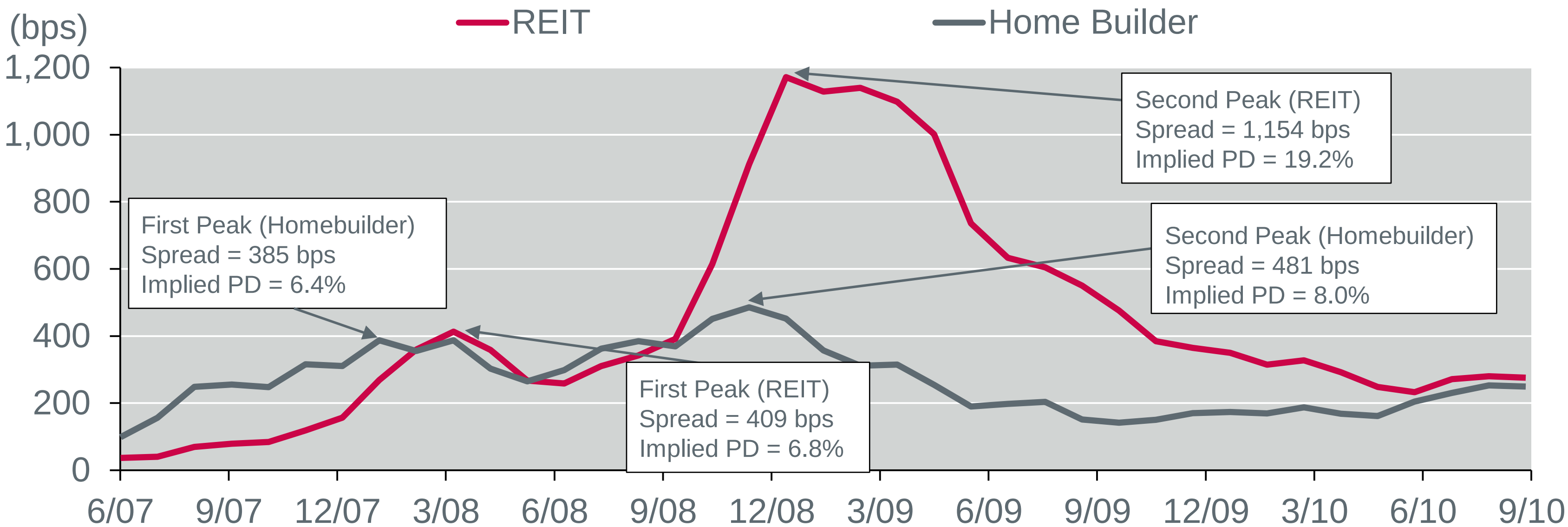
CDS Predictiveness of Credit Events Varies by Sector



M – Months; T – Time of credit event
Source: Fitch Ratings, Fitch Solutions, ISDA

REIT and Homebuilders: False Positive?

REIT and Homebuilders – CDS Spreads and Implied PDs

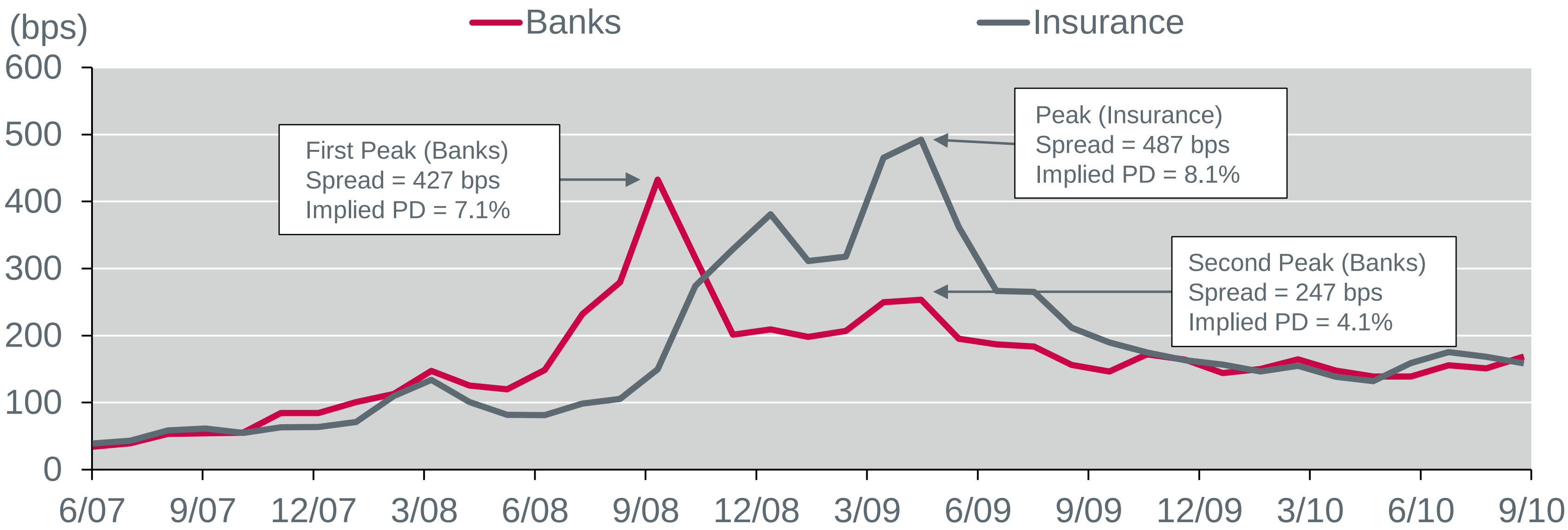


- Rise in implied PD, but no credit events in year following the peak
- PD for REITs increased by a *multiple of 30x* from trough to peak

Source: Fitch Ratings, Fitch Solutions

U.S. Banks & Insurance: Spreads Spiked Despite Support

Financial Services – CDS Spreads and Implied PDs

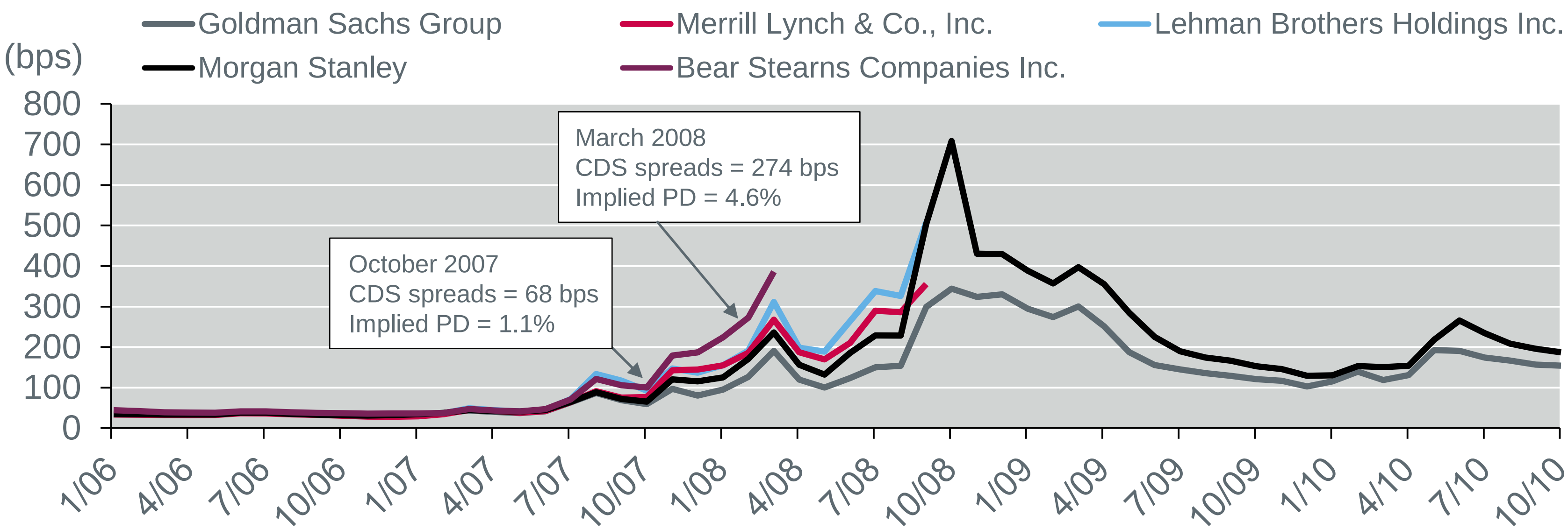


- Extraordinary external support (e.g., government assistance, acquisition)…
- …thus, senior debt obligations continued to perform, despite weakened condition

Source: Fitch Ratings, Fitch Solutions

U.S. Broker-Dealers: Coincident, Not Leading?

U.S. Broker-Dealer – CDS Spreads by Entity



- As of October 2007, PD for sector was 1.1%...
- …however, several events of distress over ensuing 12-month period
- Highest CDS spread observed during period of study: Morgan Stanley (700 bps in October 2008)

Note: CDS spreads in text boxes are aggregated for the broker-dealer sector as a whole and calculated as the average of the spreads of the individual entities
Source: Fitch Ratings, Fitch Solutions

Similar Signals, Different Outcomes…

Challenge in Differentiating Elevated Default Risk from 'False Positives'

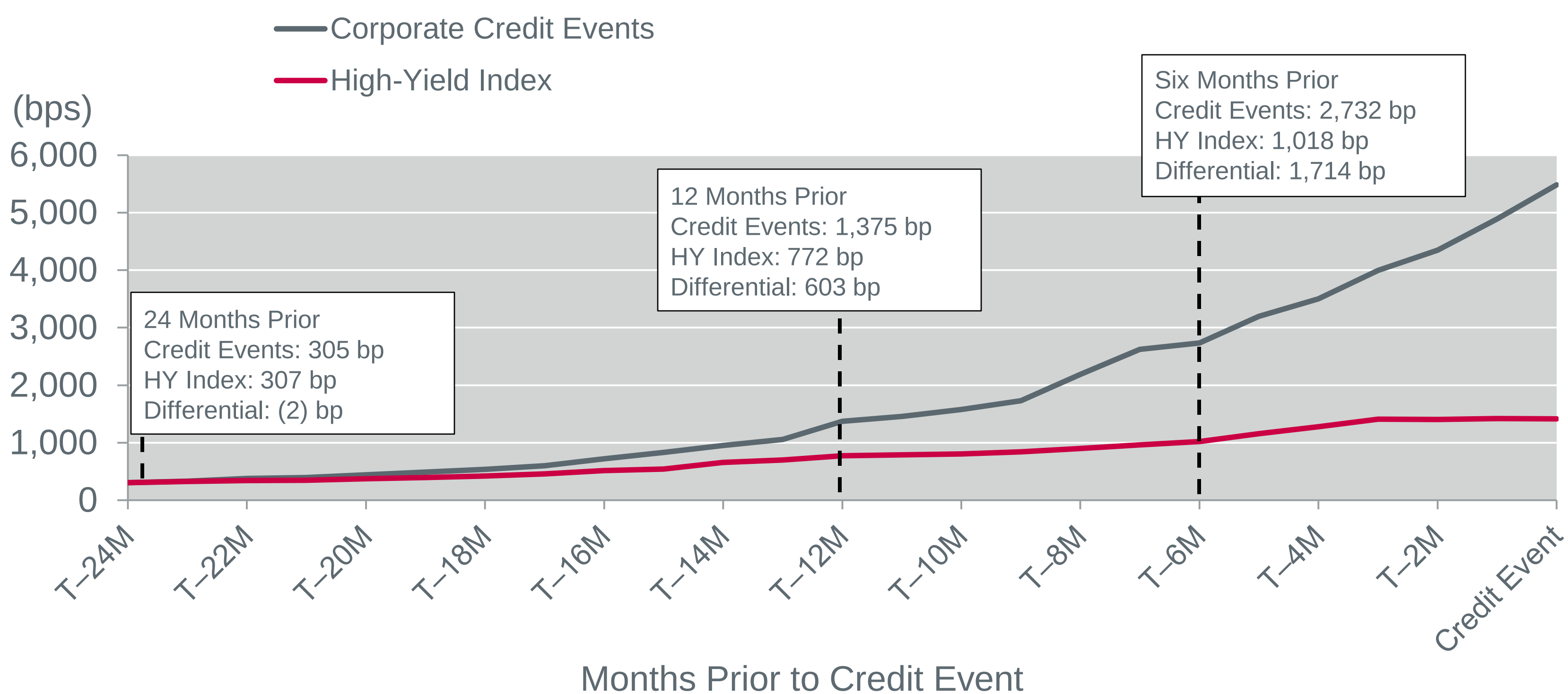
Sample	Entities in Sample	CDS Spreads (bps)	Implied One-Year PD (%)	Credit Events in Ensuing Year (%)
Corporates, One Year Prior to Experiencing Credit Events	18	**1,374**	22.9	**100**
U.S. Real Estate Investment Trusts — Peak Spreads (December 2008)	29	**1,154**	19.2	**0**
Financial Institutions, Three Months Prior to Experiencing Credit Events	6	552	9.2	100
European Insurance Companies — Peak Spreads (March 2009)	17	507	8.5	0
U.S. Homebuilders — Peak Spreads (November 2008)	8	481	8	0
Financial Institutions, One Year Prior to Experiencing Credit Events	6	199	3.3	100

- A priori challenge of interpreting spikes in CDS spreads
- Industry spreads of **> 1,000 bps** not necessarily predictive of default risk

Note: For background and assumptions on peak cohorts above, please see Fitch's report "CDS Spreads and Default Risk: Interpreting the Signals"
Source: Fitch Ratings, Fitch Solutions, ISDA

Performance as Relative Indicators

Identifying Outliers Within High-Yield



M – Months; T – Time of credit event
Source: Fitch Ratings, Fitch Solutions, ISDA

CDS Spreads as a Leading Indicator

Where Do We Go From Here?

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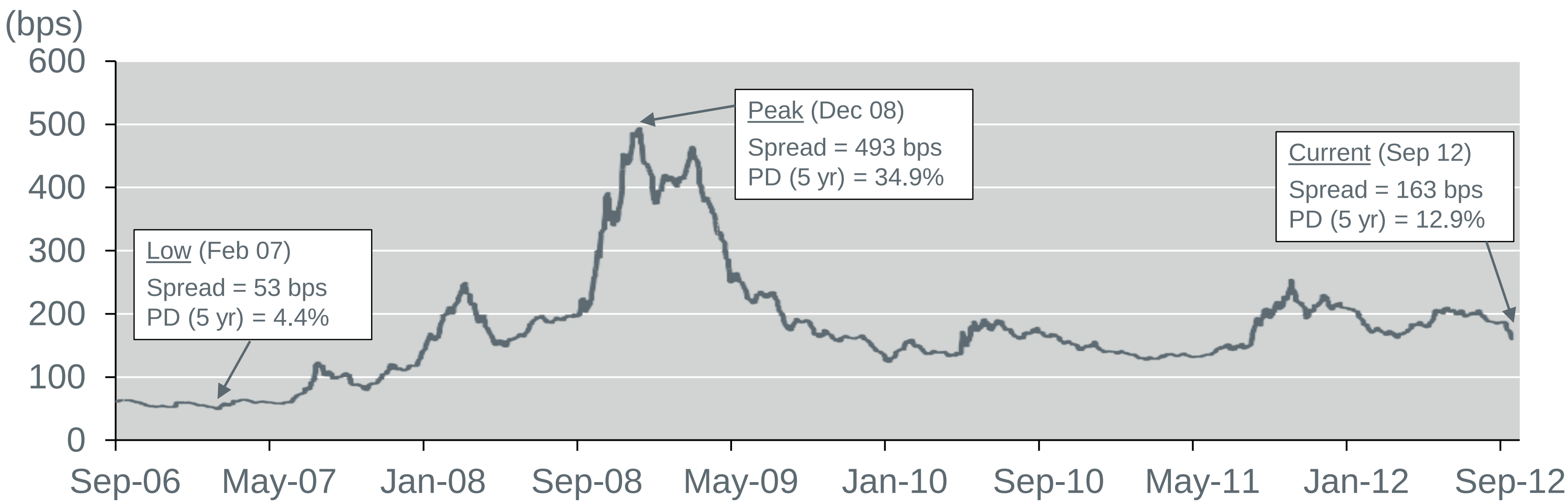
Corporate Spreads Tighter Since Crisis Peaks

Global Corporates – CDS Spreads

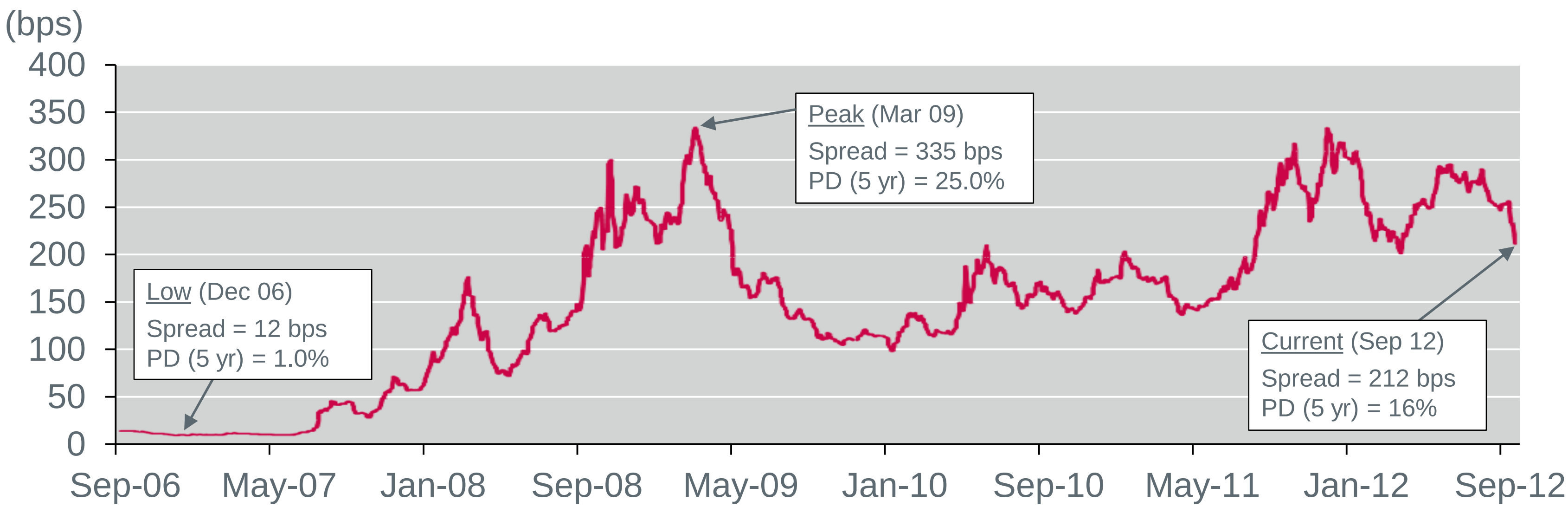


- Relatively strong cash positions and funding liquidity
- Declining default rates after Dec '08 peak (Fitch-rated): 2009 (**2.6%**); 2010 (**0.5%**); 2011 (**0.3%**)
- Global corporate default rate for H1 2012 (Fitch-rated): **0.33%**

Source: Fitch Solutions

Bank Spreads Remain Volatile, Well Above Pre-crisis Lows

Global Banks – CDS Spreads



- Possible Drivers:
  - Bail-in / reduced support
  - Regulatory changes
  - Eurozone stresses

Source: Fitch Solutions

Banks vs. Corporates – Several "Crossovers"

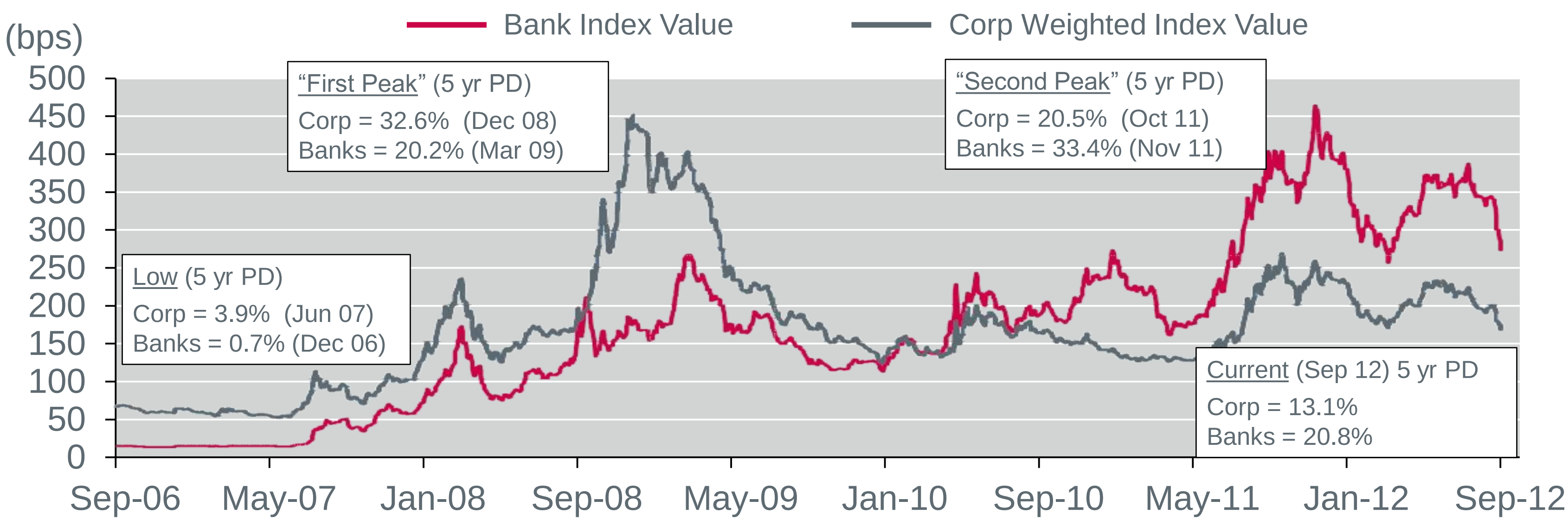
Global Corporates vs. Banks – CDS Spreads

- Corporates widened more than banks during the credit crisis ('08 – '09)
- Reversal over the recent past…potential disintermediation for large corporates?

Source: Fitch Solutions

Bank Widening Particularly Evident in Europe

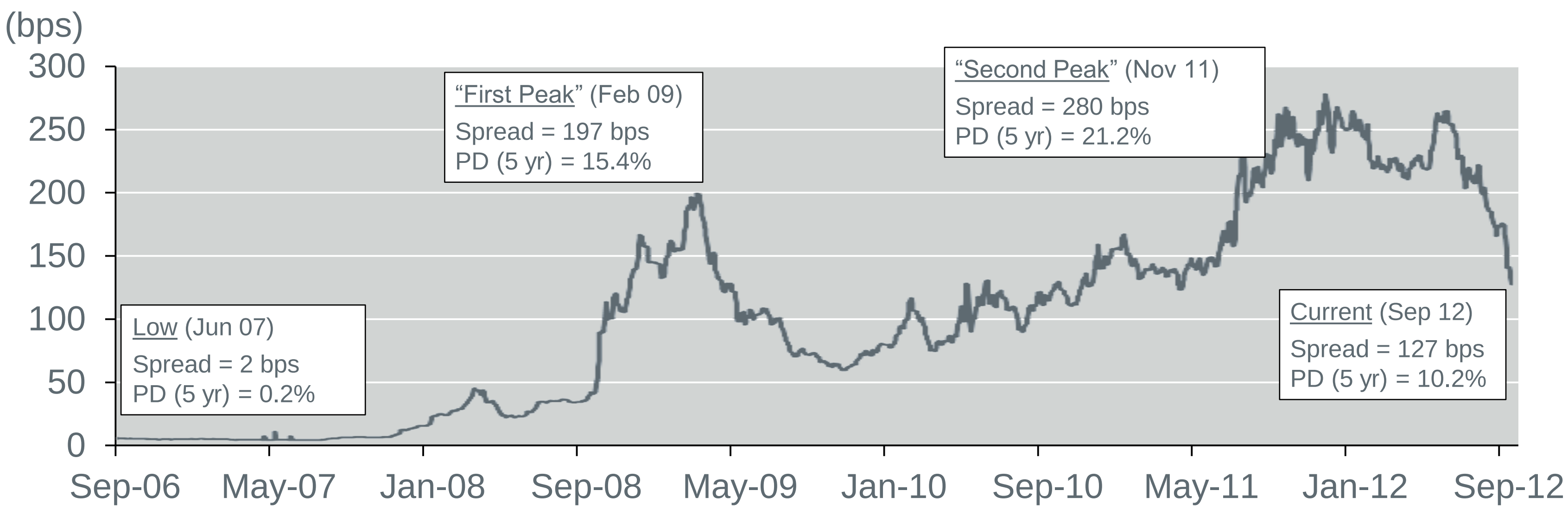
European CDS Indices – Banks and Corporates



- At 2011 peak, CDS indicated **one-third** of European banks would default within 5 yrs
- Recent tightening, but spreads still imply **one-fifth** will default (over next 5 yrs)

Sovereign CDS Volatile Since September 2008

Developed Sovereigns (ex. Greece) – CDS Spreads

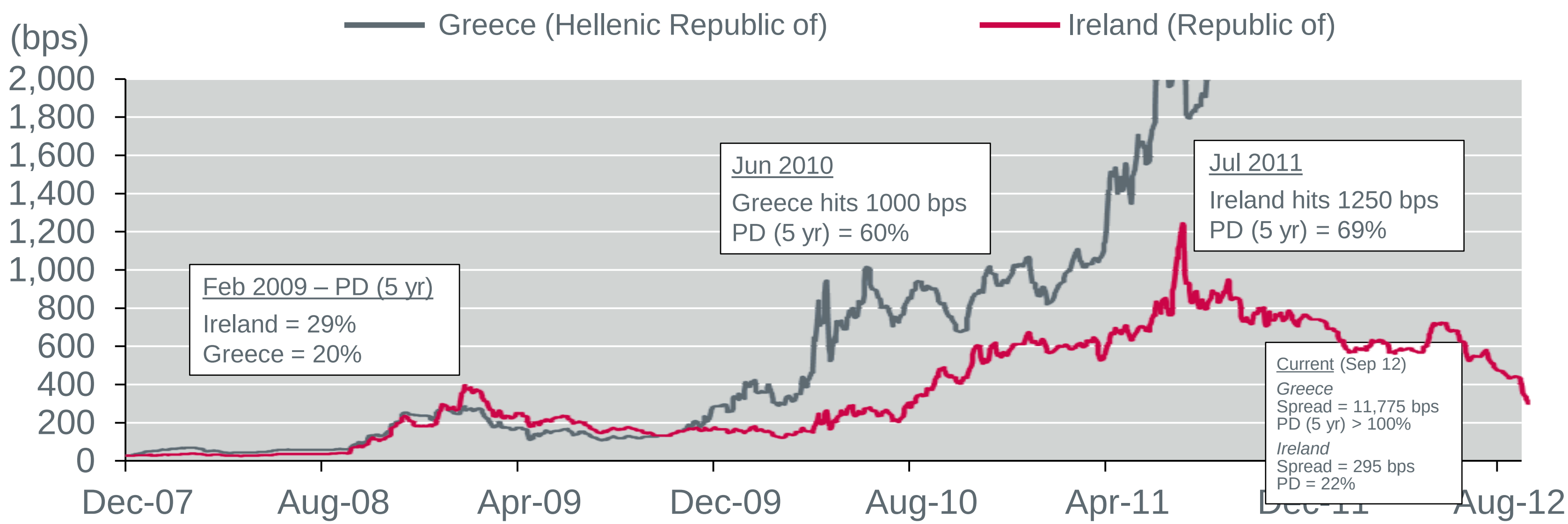


- Over past year, 5-yr. CDS-implied PD has roughly halved (~20% down to ~10%)
- Difficult to backtest historically, given low incidences of sovereign default

Source: Fitch Solutions

Distressed Spread Levels: Greece vs. Ireland

Greece vs. Ireland – CDS Spreads



- Both reached "distressed" trading levels of 1,000 bps
- Ireland was an apparent "false positive" – subsequent sharp tightening of spreads

Source: Fitch Solutions

Future Events that May Affect Sovereign CDS

Several Decision Points Within Eurozone

Oct. 18–19	European Council (banking union, Greece)
Nov. 12–13	Eurogroup/ECOFIN (EU finance ministers)
Dec. 3–4	Eurogroup/ECOFIN (EU finance ministers)
Dec. 13–14	European Council (vote on banking union)
December	Single-supervisory mechanism plan
Spring 2013	Italian elections
Sept. 2013	German elections

Drivers of ‘Disconnects’ in Spreads vs. Fundamentals

Total return orientation of market participants

- Focus on MTM value of CDS positions
- Not necessarily reflective of longer-term credit risk

CDS pricing can be driven by factors not directly related to credit fundamentals

- **Liquidity** conditions
- **Counterparty risk**
- **Risk aversion** of market participants (i.e., ‘risk-neutrality’ assumption)
- **Leverage** (i.e., function of margin)

“As the markets came under increasing strain on account of the financial turmoil, liquidity in the CDS markets also began to dry up, raising doubts as to their value as an indicator of risk and funding costs.”

European Central Bank, August 2009

Risk Management Implications

CDS spreads can provide timely, market-based indicators of risk

- Valuation, active portfolio management, and assessing funding conditions
- In some cases, spreads lead observable credit deterioration (Monolines)
- Useful informational content relative to other analytical tools (e.g., identifying outliers)

However, important to recognize the potential for:

- False positives (REITs)
- False negatives (Financial Institution credit events)
- Volatility

Costs of false positives

- Expensive hedge
- Opportunity cost, if sold off positions

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