

# **Effective Credit Risk Pricing: Application for Treasurers**

**Ernest Breitschwerdt, CFA**  
**Application Specialist**

**Silvina Aldeco-Martinez**  
**Managing Director, Product & Market Development**

Wednesday, 11<sup>th</sup> June 2014

# Topics

---

- **Introduction**
- **Splitting credit risk from pricing**
- **Exploring top three uses of credit pricing**
- **Credit scores and pricing: Case study**
- **Industry trend observations: What constitutes a good benchmark?**

2014

# Europe's bad debts hit €360bn

Late payments threaten competitiveness

Smaller companies under heavy strain

By Sarah Gordon in London

The debt written off by Europe's companies due to late payment or non-payment of bills has swelled to €360bn despite the pick-up in economic activity in the region.

"The late payment consequences for businesses pose a real threat to Europe's competitiveness and social wellbeing," Lars Wollung, president of

credit management group Intrum Justitia, said. "Hardest hit by the problem... are small and medium enterprises."

Justitia surveyed more than 10,000 business managers in 33 European countries, including Russia, for the annual European Payment Index.

Bad debts – bills or invoices that companies have written off due to late or non-payment – grew from 3 per cent of annual revenues in 2013, or €350bn, to 3.1 per cent this year, or €360bn.

Nearly three-quarters of companies taking part in the research reported no improvement on the issue in the past three months despite the eco-

nomical pick-up, and 46 per cent believed late and non-payment risks were rising.

Graeme Fisher, head of policy at the UK's Federation of Small Businesses, said that although the public sector had upped the speed with which it paid suppliers, the private sector still faced a serious problem.

He said: "Even when the public sector pays promptly, the money doesn't sloosh down the system promptly because of the culture of late payment."

Of the groups taking part in the research, 40 per cent said the severity of the problem was preventing them hiring staff. Unemployment in the eurozone was

nearly 12 per cent of the labour force in March, according to Eurostat. Suppliers are often unwilling to go public about late payment problems for fear of jeopardising relationships with their most important customers.

"Late payments can be a massive problem, mainly for cash flow reasons," one small business owner, based in Gloucester, England, who spoke to the FT on condition of anonymity, said.

"If [our] main contractors start holding back payments, we normally have quite a lot of capital tied up in projects. The main way for me to deal with that is not to pay myself for a month or two."

A 2011 EU directive sets limits on how long public and private sector companies can keep their suppliers waiting – 30 and 60 days respectively.

The directive has been adopted by the UK, but that does not mean large groups stick to its provisions. Marks and Spencer, for example, extended its window of payment from 60 to 75 days.

"Companies are deliberately not sticking to the provisions of the EU directive as a way of managing their cash flow," Mr Fisher said. "It's a way of borrowing off smaller companies."

Late payers, Page 17

## Suppliers lend £327bn to businesses in form of late payments

By Norma Cohen [Author alerts](#) ▾

The sums lent to [UK businesses](#) by suppliers in the form of [late payments](#) are the biggest source of credit in the economy, a study shows.

At about £327bn, trade credit between non-financial companies is 20 per cent bigger than [outstanding bank credit](#), according to Charting the Trade Credit Gap, a report by Professor Nick Wilson of the Credit Management Research Centre at Leeds University and Taulia, the credit research group.



### More

#### ON THIS STORY

[BoE urges revival of business register](#)

[Cable acts to shame business late-payers](#)

[UK economy headlines](#)

#### ON THIS TOPIC

[Challenger banks in current accounts push](#)

[Premium Bonds limit rises to £40,000](#)

[Lombard Banks will have to make canny choices](#)

[UK in race to issue Islamic bond](#)

#### IN UK BUSINESS

[Business welcomes focus on](#)

“We believe this is a serious threat to the [UK economy](#),” said Jon Keating, European managing director at Taulia. “Trade credit is being used as a blunt instrument by many companies, with outdated practices poorly adapted to today’s new economic environment.”

Prof Wilson said although companies often provide goods and services to each other, allowing for a lag between delivery and payment, there are few tools available, particularly to small businesses, when counterparties fail to live up to terms. His study found that the delays between delivery of goods and receipt of payments were widening, despite the economic recovery.

At the end of 2012, companies in aggregate owed each other £75bn more than they were extending to their own customers in the hope of gaining more business.

## Suppliers lend £327bn to businesses in form of late payments

By Norma Cohen [Author alerts](#) ▾

The sums lent to UK businesses by suppliers in the form of late payments are the biggest source of credit in the economy, a study shows.

At about £327bn, trade credit between non-financial companies is 20 per cent bigger than outstanding bank credit, according to Charting the Trade Credit Gap, a report by Professor Nick Wilson of the Credit Management Research Centre at Leeds University and Taulia, the credit research group.

**“We believe this is a serious threat to the UK economy,” said Jon Keating, European managing director at Taulia. “Trade credit is being used as a blunt instrument by many companies, with outdated practices poorly adapted to today’s new economic environment.”**

between delivery and payment, there are few tools available, particularly to small businesses, when counterparties fail to live up to terms. His study found that the delays between delivery of goods and receipt of payments were widening, despite the economic recovery.

At the end of 2012, companies in aggregate owed each other £75bn more than they were extending to their own customers in the hope of gaining more business.

### ON THIS TOPIC

Challenger banks in current accounts push

Premium Bonds limit rises to £40,000

Lombard Banks will have to make canny choices

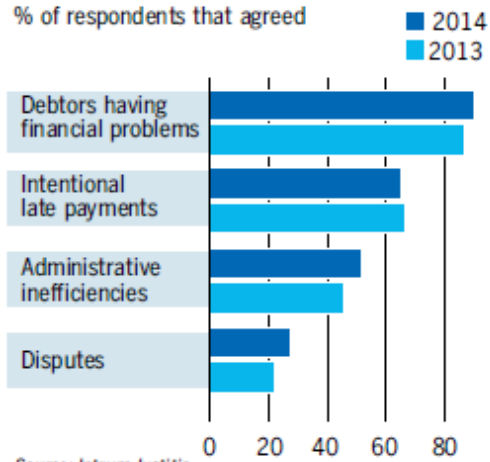
UK in race to issue Islamic bond

### IN UK BUSINESS

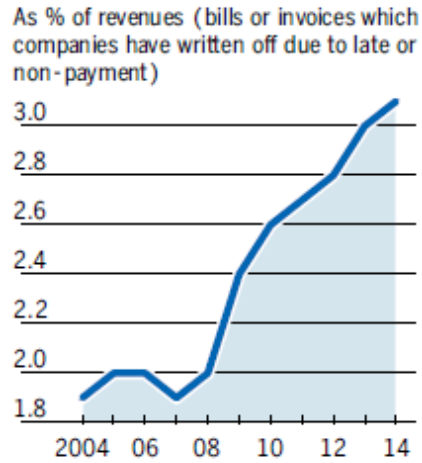
Business welcomes focus on

# Introduction

## Main causes of late payments

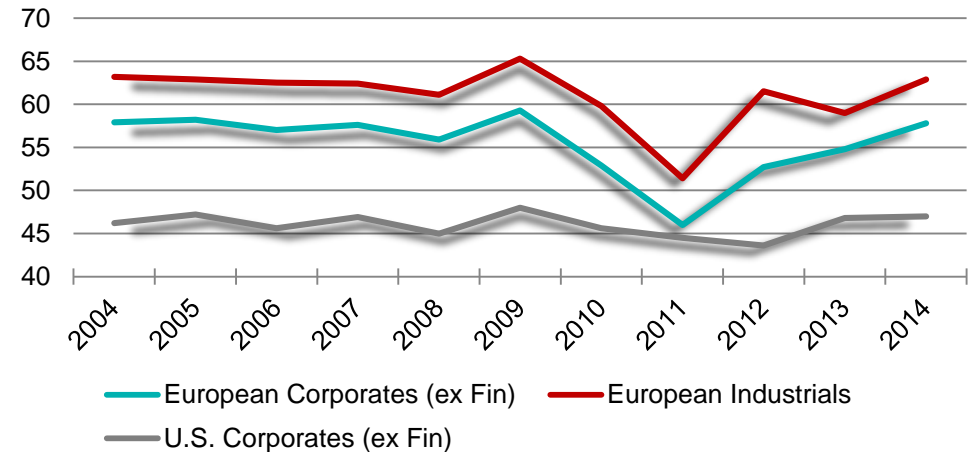


## Bad debts



Source: Financial Times, 12<sup>th</sup> May 2014.

## Median Average DSO



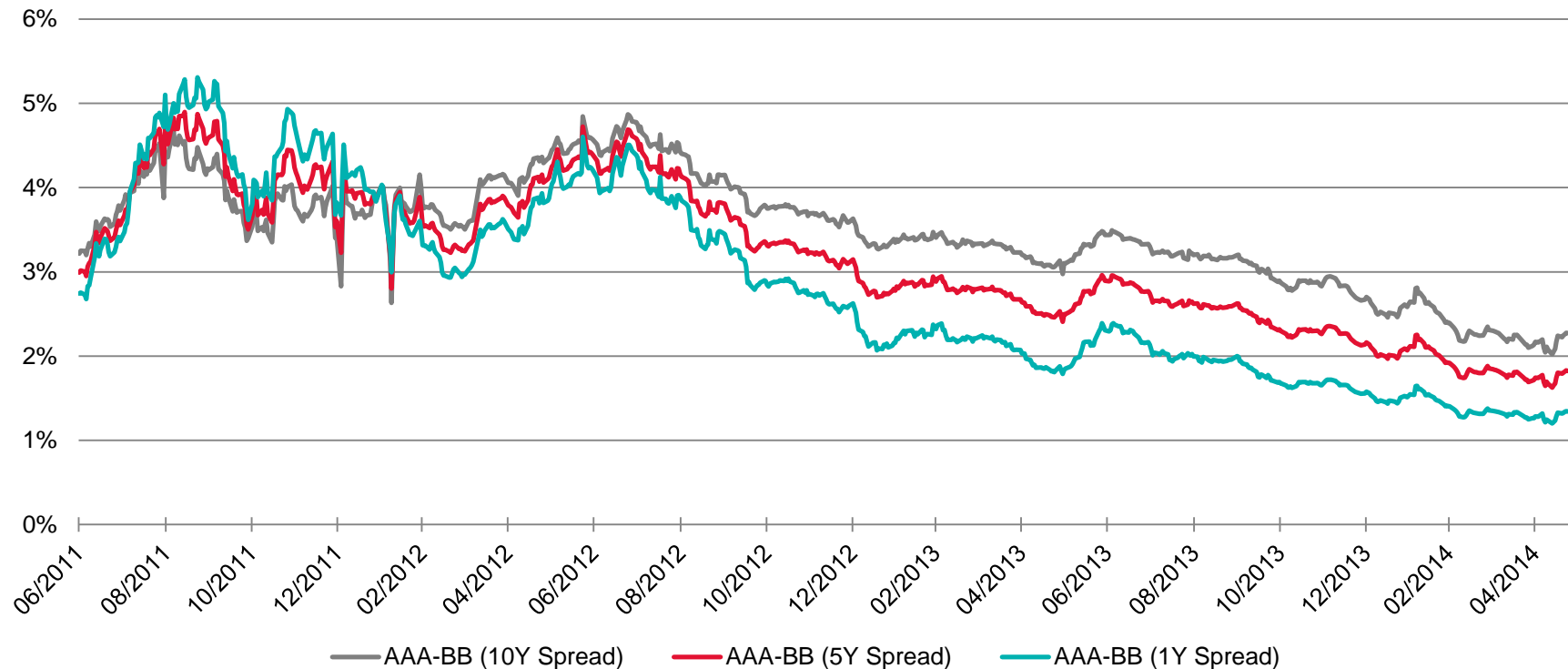
Source: S&P Capital IQ. As of 23<sup>rd</sup> May 2014.

# Introduction

---

- Even though times are getting tougher, spreads of high yield corporates in comparison to AAA corporates have tightened across all maturities:

## All Corporates (EUR) – Historical Yields



Source: S&P Capital IQ – Corporate Yield Curves. As of 23<sup>rd</sup> May 2014.




# Splitting Credit Risk from Pricing

---

## Definition:

*Credit risk management* is considered to be the correcting element for the general profit-oriented credit management within a corporate.




## Three options...

-  ***On-board Credit Risk***
-  ***Outsource Credit Risk***
-  ***Reject Credit Risk***

e.g.

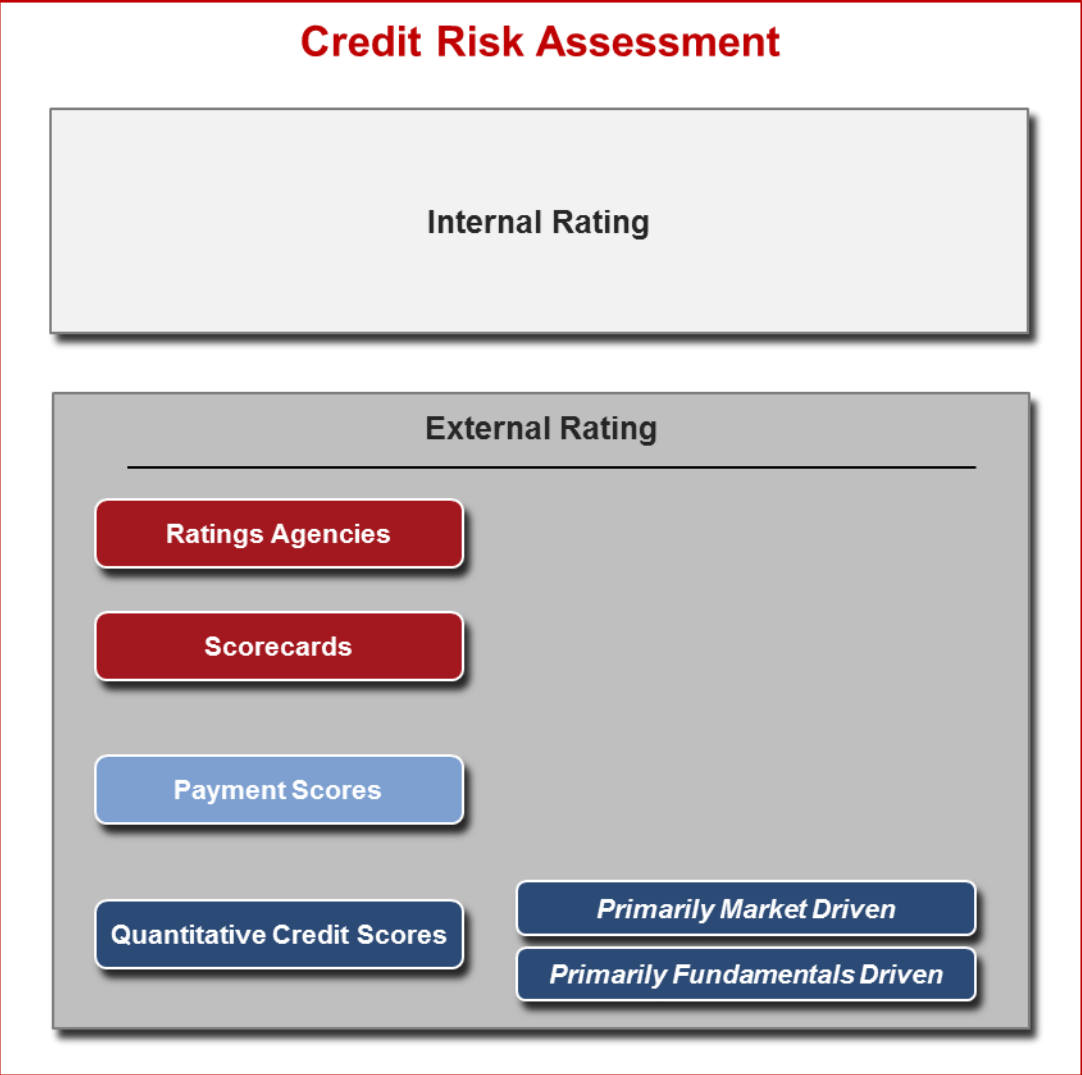
- Am I capturing the bad debt risk? Or are my commercial terms high vs. the market?
- Is the pricing of my insurance policy overstating the risk I am outsourcing?

## ... on three typical use cases

-  ***Transfer pricing of loans, cash pools & guarantee fees***
-  ***Customer credit management***
-  ***Optimising debt funding***

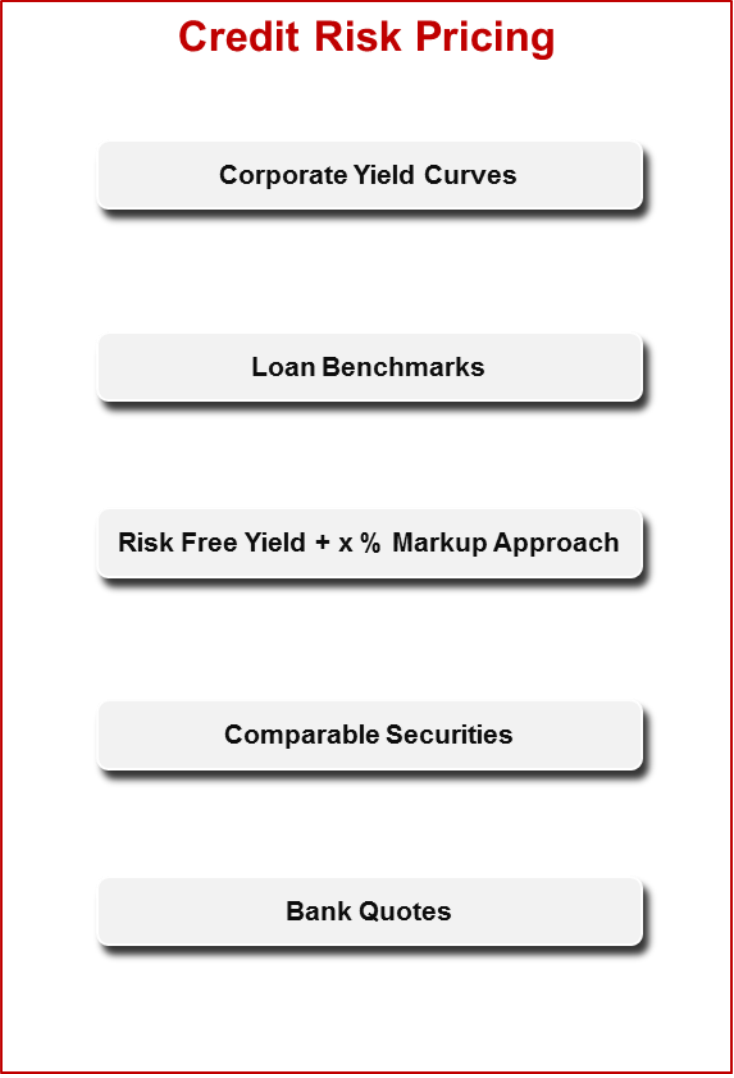
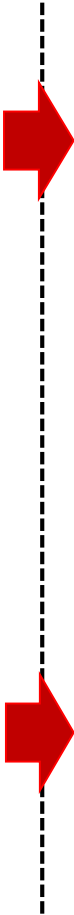


# Splitting Credit Risk from Pricing



For illustrative purposes only.

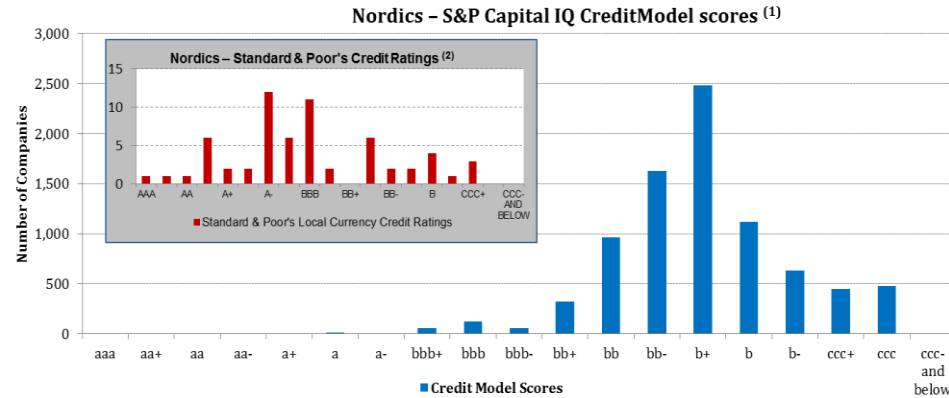
# Splitting Credit Risk from Pricing



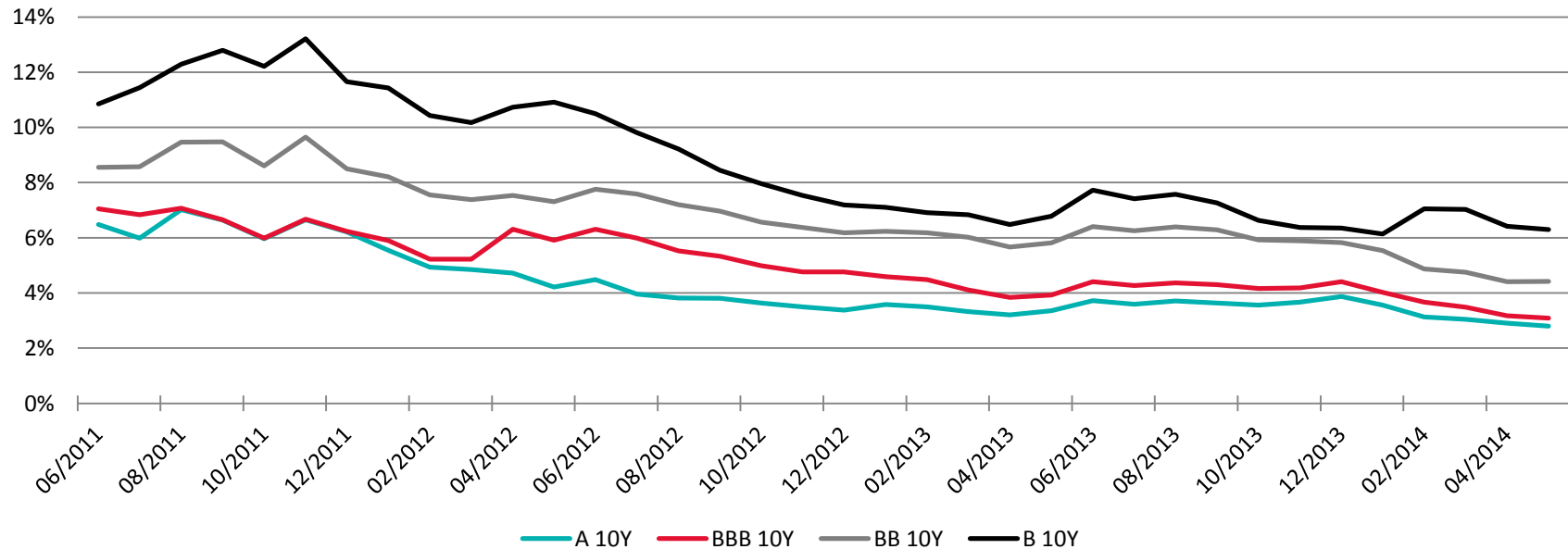
For illustrative purposes only.

# Splitting Credit Risk from Pricing

The interest rate differential illustrates the importance of accurately pricing credit risk to maintain a competitive position.



## All Corporates (EUR) – Historical Yields



Source: Top chart: S&P Capital IQ, Credit Analytics and RatingsDirect. As of 2<sup>nd</sup> May 2014. Bottom chart: S&P Capital IQ – Corporate Yield Curves. As of 23<sup>rd</sup> May 2014. For illustrative purposes only.

# Exploring The Top Three Uses of Credit Pricing

---

## I Transfer pricing of loans, cash pools & guarantee fees

- More than 40 countries have adjusted their transfer pricing regulation recently
- Regulations generally dictate that your interest rate should equal the rate charged in an independent transaction with unrelated parties under similar circumstances

# Exploring The Top Three Uses of Credit Pricing

---

## I Transfer pricing of loans, cash pools & guarantee fees

- More than 40 countries have adjusted their transfer pricing regulation recently
- Regulations generally dictate that your interest rate should equal the rate charged in an independent transaction with unrelated parties under similar circumstances, therefore...

### Stylised Process

**Determine the credit risk  
of the borrower**  
*(standalone credit risk assessment)*

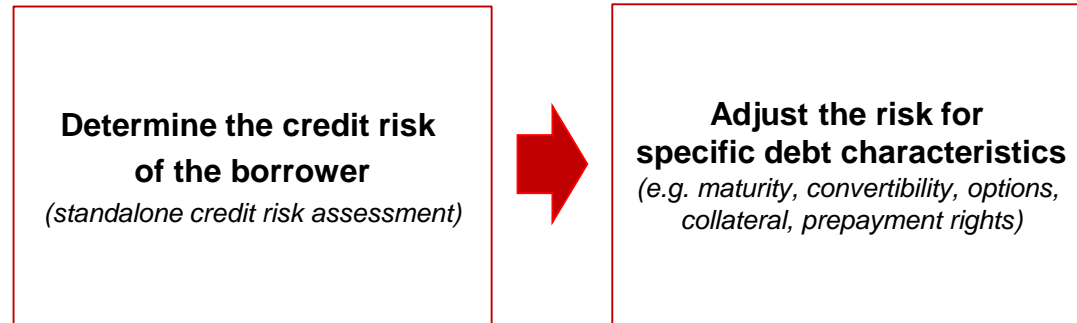
# Exploring The Top Three Uses of Credit Pricing

---

## I Transfer pricing of loans, cash pools & guarantee fees

- More than 40 countries have adjusted their transfer pricing regulation recently
- Regulations generally dictate that your interest rate should equal the rate charged in an independent transaction with unrelated parties under similar circumstances, therefore...

### Stylised Process

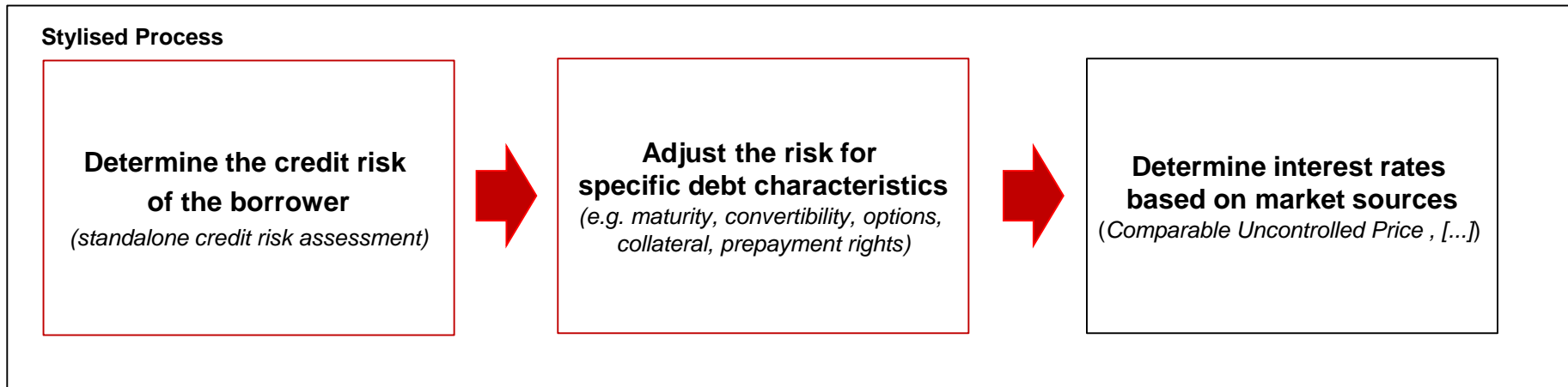


# Exploring The Top Three Uses of Credit Pricing

---

## I Transfer pricing of loans, cash pools & guarantee fees

- More than 40 countries have adjusted their transfer pricing regulation recently
- Regulations generally dictate that your interest rate should equal the rate charged in an independent transaction with unrelated parties under similar circumstances, therefore...

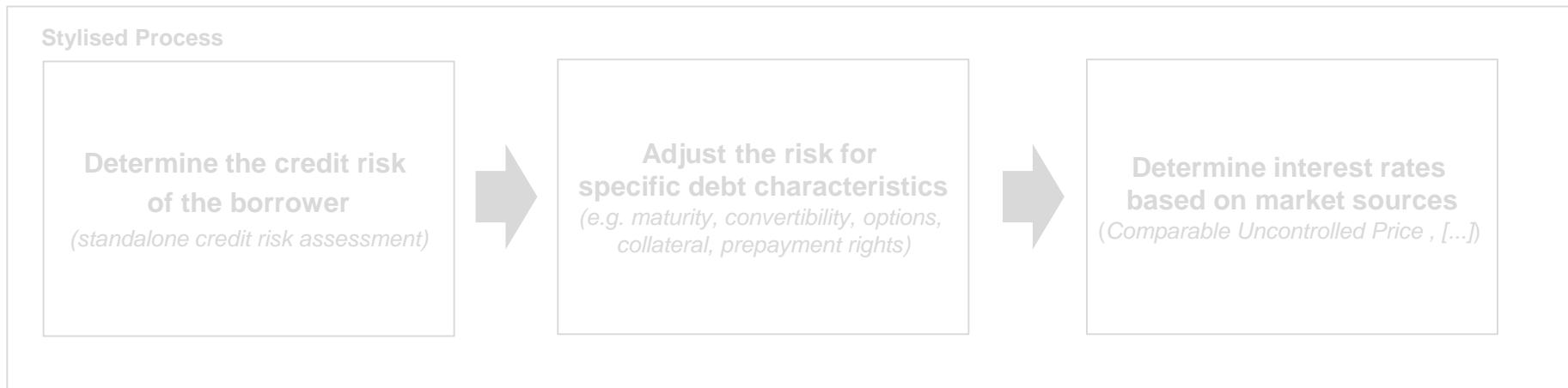


# Exploring The Top Three Uses of Credit Pricing

---

## I Transfer pricing of loans, cash pools & guarantee fees

- More than 40 countries have adjusted their transfer pricing regulation recently
- Regulations generally dictate that your interest rate should equal the rate charged in an independent transaction with unrelated parties under similar circumstances, **therefore...**



- Most Transfer Pricing disputes are due to disagreement in determining arm's length prices by:
  - Using interest rates / guarantee fees without compelling evidence
  - Basing interest rates / guarantee fees on informal analysis
  - Using stale interest rates



# Exploring The Top Three Uses of Credit Pricing

---

## II Customer Credit Management

- Trade credit is more than *financing*
  - Means of price discrimination
  - Marketing instrument
  - Screening mechanism to gauge buyer default risk
  - Assuring buyers of product quality

# Exploring The Top Three Uses of Credit Pricing

---

## II Customer Credit Management

- Trade credit is more than *financing*
- Typically no co-movement with market interest rates
- Empirically, firms that are more creditworthy and have some buyer market power receive
  - larger early payment discounts\*
  - longer maturities\*\*

---

\* Gianetti, Burkart, Ellingson, 2011, What You Sell Is What You Lend? Explaining Trade Credit Contracts, *Review of Financial Studies* 24, 1261 – 1298

\*\* Klapper, Laeven, Rajan, 2010, Trade Credit Contracts, *The World Bank Policy Research Working Paper* 5328

# Exploring The Top Three Uses of Credit Pricing

---

## II Customer Credit Management

- Trade credit is more than *financing*
- Typically no co-movement with market interest rates
- Empirically, firms that are more creditworthy and have some buyer market power receive
  - larger early payment discounts\*
  - longer maturities\*\*
- With longer term contracts, the Capital Goods industry starts to explicitly incorporate credit risk pricing in T&C (beyond captive finance subsidiaries)

### Stylised Process

**Determine the credit risk  
of the customer**

# Exploring The Top Three Uses of Credit Pricing

---

## II Customer Credit Management

- Trade credit is more than financing
- Typically no co-movement with market interest rates
- Empirically, firms that are more creditworthy and have some buyer market power receive
  - larger early payment discounts\*
  - longer maturities\*\*
- With longer term contracts, the Capital Goods industry starts to explicitly incorporate credit risk pricing in T&C (beyond captive finance subsidiaries)

### Stylised Process

**Determine the credit risk  
of the customer**



**Adjust the risk for  
specific commercial terms**  
*(e.g. maturity, collateral,  
prepayment rights)*

# Exploring The Top Three Uses of Credit Pricing

---

## II Customer Credit Management

- Trade credit is more than financing
- Typically no co-movement with market interest rates
- Empirically, firms that are more creditworthy and have some buyer market power receive
  - larger early payment discounts\*
  - longer maturities\*\*
- With longer term contracts, the Capital Goods industry starts to explicitly incorporate credit risk pricing in T&C (beyond captive finance subsidiaries)



# Exploring The Top Three Uses of Credit Pricing

---

## III Optimising Debt Funding

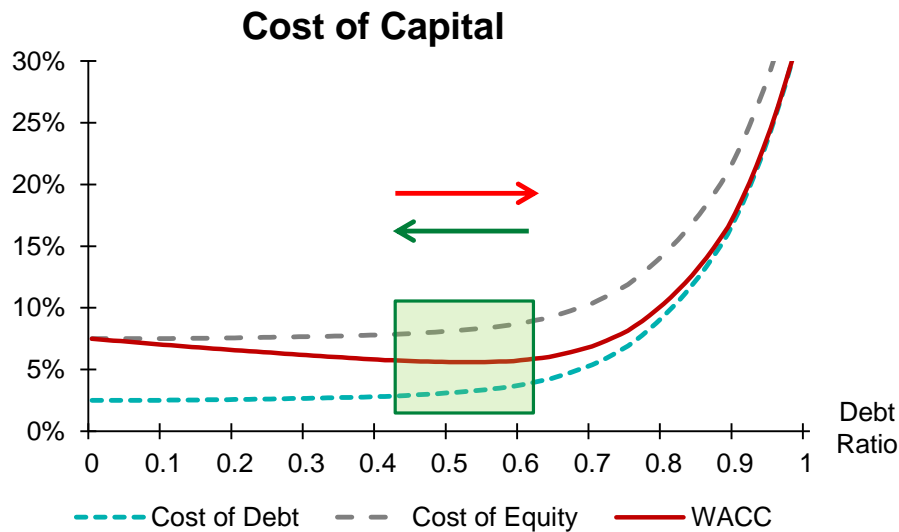
- Three primary factors
  - Debt maturity
  - Movements in interest rates
  - Changes in the company's credit quality

# Exploring The Top Three Uses of Credit Pricing

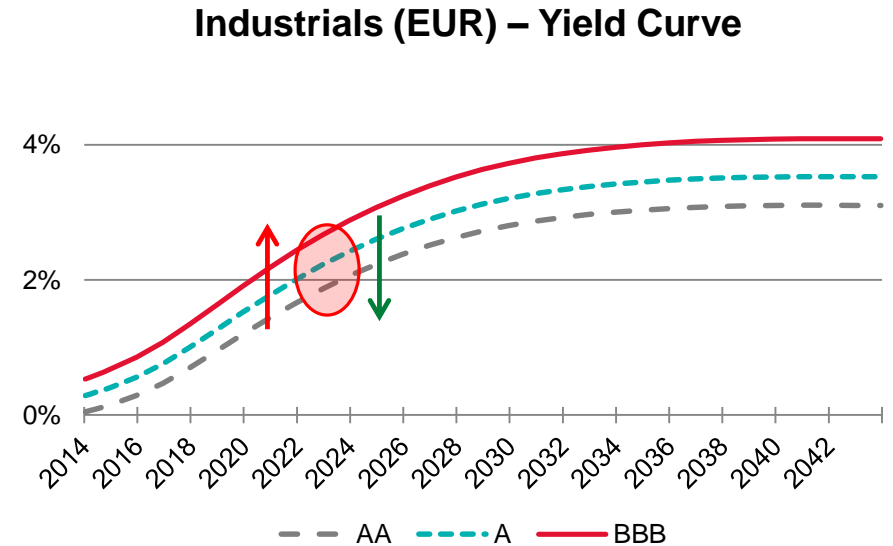
## III Optimising Debt Funding

– Three primary factors

- Debt maturity
- Movements in interest rates
- Changes in the company's credit quality



Source: Own chart. For illustrative purposes only.



Source: S&P Capital IQ – Corporate Yield Curves. As of 23rd May 2014.

# Exploring The Top Three Uses of Credit Pricing

---

## III Optimising Debt Funding

– Three primary factors

- Debt maturity
- Movements in interest rates
- Changes in the company's credit quality





# Credit Scores & Pricing: Case Study

---

## Setting the scene...

- Global operating software company which designs, develops, and sells Enterprise Resource Planning (ERP) software solutions for the construction industry worldwide
- Full software package with annual subscription fees of up to 1,5 Mio. EUR
- **Task:** *Create a differentiated pricing schedule for its Top 10 customers.*

# Credit Scores & Pricing: Case Study

---

<b>Construction &amp; Engineering</b>		
	<b>Country</b>	<b>Total Revenue [LTM] (MM €)</b>
VINCI S.A.	France	40.942
Bouygues SA	France	33.631
Hochtief AG	Germany	25.552
Koninklijke Volker Wessels Stevin NV*	Netherlands	4.506
Royal Imtech N.V.	Netherlands	4.881
Fluor Corporation	USA	18.543
Jacobs Engineering Group Inc.	USA	9.068
URS Corporation	USA	7.826
CH2M HILL Companies, Ltd.*	USA	4.144
Granite Construction Incorporated	USA	1.646

*\*private company, Data as of May, 23rd 2014*

Source: S&P Capital IQ. As of 23<sup>rd</sup> May 2014. For illustrative purposes only.

---

# Credit Scores & Pricing: Case Study

<b>Construction &amp; Engineering</b>			
	Country	Total Revenue [LTM] (MM €)	S&P Credit Rating
VINCI S.A.	France	40.942	A-
Bouygues SA	France	33.631	BBB+
Hochtief AG	Germany	25.552	-
Koninklijke Volker Wessels Stevin NV*	Netherlands	4.506	-
Royal Imtech N.V.	Netherlands	4.881	-
Fluor Corporation	USA	18.543	A-
Jacobs Engineering Group Inc.	USA	9.068	-
URS Corporation	USA	7.826	BBB-
CH2M HILL Companies, Ltd.*	USA	4.144	-
Granite Construction Incorporated	USA	1.646	-

\*private company, Data as of May, 23rd 2014

Source: S&P Capital IQ. As of 23<sup>rd</sup> May 2014. For illustrative purposes only.

# Credit Scores & Pricing: Case Study

Construction & Engineering			Credit Risk		
	Country	Total Revenue [LTM] (MM €)	S&P Credit Rating	Credit Model Score	PD Market Signals - Implied Score
VINCI S.A.	France	40.942	A-	bbb+	aa+
Bouygues SA	France	33.631	BBB+	bbb+	bbb+
Hochtief AG	Germany	25.552	-	bbb-	a
Koninklijke Volker Wessels Stevin NV*	Netherlands	4.506	-	bb	--
Royal Imtech N.V.	Netherlands	4.881	-	b+	b
Fluor Corporation	USA	18.543	A-	a	aa-
Jacobs Engineering Group Inc.	USA	9.068	-	a-	aa-
URS Corporation	USA	7.826	BBB-	bbb	aa
CH2M HILL Companies, Ltd.*	USA	4.144	-	bb+	--
Granite Construction Incorporated	USA	1.646	-	b+	a+

\*private company, Data as of May, 23rd 2014

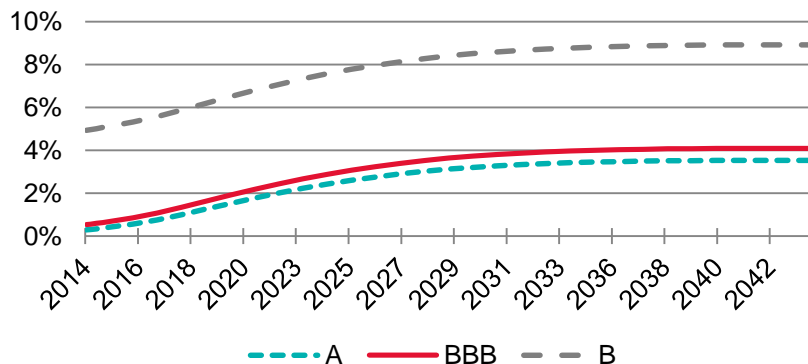
Source: S&P Capital IQ. As of 23<sup>rd</sup> May 2014. For illustrative purposes only.

# Credit Scores & Pricing: Case Study

Construction & Engineering			Credit Risk			Yields (annualized)		
	Country	Total Revenue [LTM] (MM €)	S&P Credit Rating	Credit Model Score	PD Market Signals - Implied Score	1M	3M	1Y
VINCI S.A.	France	40.942	A-	bbb+	aa+	0,29%	0,31%	0,40%
Bouygues SA	France	33.631	BBB+	bbb+	bbb+	0,53%	0,56%	0,67%
Hochtief AG	Germany	25.552	-	bbb-	a	0,53%	0,56%	0,67%
Koninklijke Volker Wessels Stevin NV*	Netherlands	4.506	-	bb	--	1,92%	1,97%	2,21%
Royal Imtech N.V.	Netherlands	4.881	-	b+	b	4,94%	4,97%	REJECT
Fluor Corporation	USA	18.543	A-	a	aa-			
Jacobs Engineering Group Inc.	USA	9.068	-	a-	aa-			
URS Corporation	USA	7.826	BBB-	bbb	aa			
CH2M HILL Companies, Ltd.*	USA	4.144	-	bb+	--			
Granite Construction Incorporated	USA	1.646	-	b+	a+			

\*private company, Data as of May, 23rd 2014

## Industrials (EUR) – Yield Curve



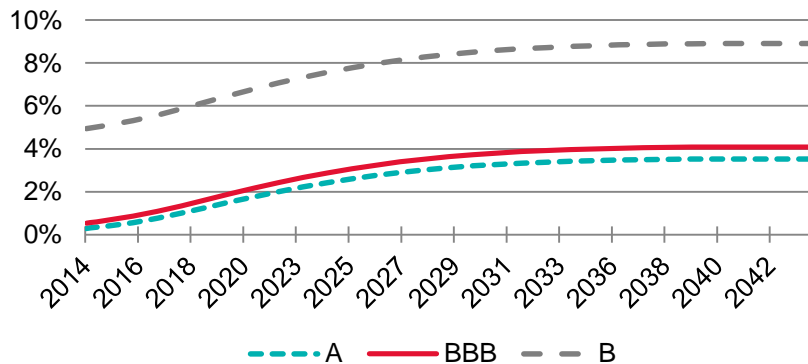
Source: Top Diagram: S&P Capital IQ. As of 23<sup>rd</sup> May 2014. Bottom Chart: S&P Capital IQ – Corporate Yield Curves. For illustrative purposes only.

# Credit Scores & Pricing: Case Study

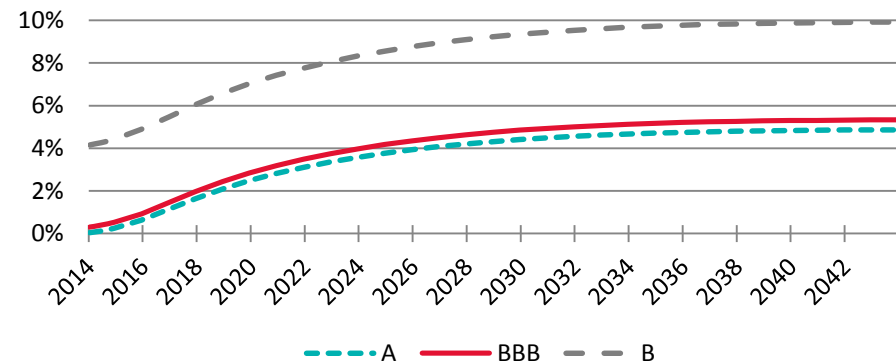
Construction & Engineering			Credit Risk			Yields (annualized)		
	Country	Total Revenue [LTM] (MM €)	S&P Credit Rating	Credit Model Score	PD Market Signals - Implied Score	1M	3M	1Y
VINCI S.A.	France	40.942	A-	bbb+	aa+	0,29%	0,31%	0,40%
Bouygues SA	France	33.631	BBB+	bbb+	bbb+	0,53%	0,56%	0,67%
Hochtief AG	Germany	25.552	-	bbb-	a	0,53%	0,56%	0,67%
Koninklijke Volker Wessels Stevin NV*	Netherlands	4.506	-	bb	--	1,92%	1,97%	2,21%
Royal Imtech N.V.	Netherlands	4.881	-	b+	b	4,94%	4,97%	REJECT
Fluor Corporation	USA	18.543	A-	a	aa-	0,05%	0,08%	0,25%
Jacobs Engineering Group Inc.	USA	9.068	-	a-	aa-	0,05%	0,08%	0,25%
URS Corporation	USA	7.826	BBB-	bbb	aa	0,31%	0,34%	0,53%
CH2M HILL Companies, Ltd.*	USA	4.144	-	bb+	--	1,91%	1,96%	2,23%
Granite Construction Incorporated	USA	1.646	-	b+	a+	4,16%	4,20%	REJECT

\*private company, Data as of May, 23rd 2014

### Industrials (EUR) – Yield Curve



### Industrials (USD) – Yield Curve



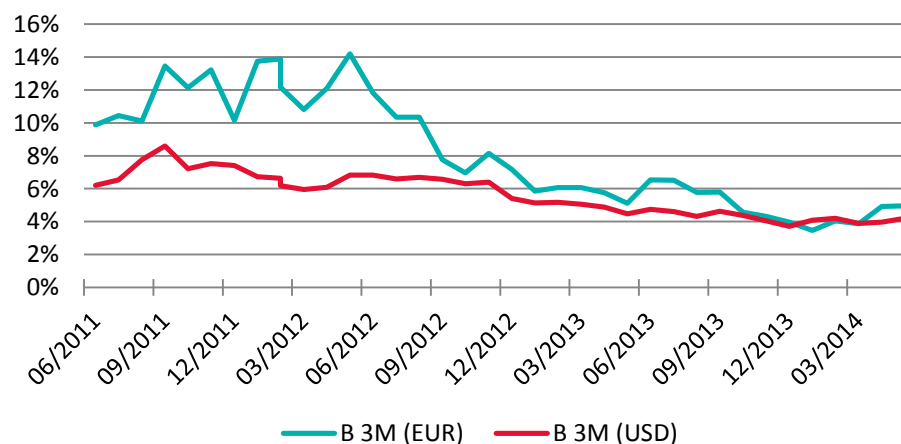
Source: Top Diagram: S&P Capital IQ. As of 23<sup>rd</sup> May 2014. Bottom Charts: S&P Capital IQ – Corporate Yield Curves. As of 23<sup>rd</sup> May 2014. For illustrative purposes only.

# Credit Scores & Pricing: Case Study

Construction & Engineering			Credit Risk			Yields (annualized)		
	Country	Total Revenue [LTM] (MM €)	S&P Credit Rating	Credit Model Score	PD Market Signals - Implied Score	1M	3M	1Y
VINCI S.A.	France	40.942	A-	bbb+	aa+	0,29%	0,31%	0,40%
Bouygues SA	France	33.631	BBB+	bbb+	bbb+	0,53%	0,56%	0,67%
Hochtief AG	Germany	25.552	-	bbb-	a	0,53%	0,56%	0,67%
Koninklijke Volker Wessels Stevin NV*	Netherlands	4.506	-	bb	--	1,92%	1,97%	2,21%
Royal Imtech N.V.	Netherlands	4.881	-	b+	b	4,94%	4,97%	REJECT
Fluor Corporation	USA	18.543	A-	a	aa-	0,05%	0,08%	0,25%
Jacobs Engineering Group Inc.	USA	9.068	-	a-	aa-	0,05%	0,08%	0,25%
URS Corporation	USA	7.826	BBB-	bbb	aa	0,31%	0,34%	0,53%
CH2M HILL Companies, Ltd.*	USA	4.144	-	bb+	--	1,91%	1,96%	2,23%
Granite Construction Incorporated	USA	1.646	-	b+	a+	4,16%	4,20%	REJECT

\*private company, Data as of May, 23rd 2014

## Industrials – Historical Yield Comparison



Source: S&P Capital IQ – Corporate Yield Curves. As of 23<sup>rd</sup> May 2014.

# Industry Trend Observations:

---

## What Constitutes a Good Benchmark?

- No-Arbitrage Condition



# Industry Trend Observations:

---

## What Constitutes a Good Benchmark?

- No-Arbitrage Condition
- **Coverage**
  - True executable prices
  - Daily
  - Different risk characteristics (AAA – CCC)
  - Across various maturities (1M – 30Y)
  - Illiquid segments

# Industry Trend Observations:

---

## What Constitutes a Good Benchmark?

- **No-Arbitrage Condition**
- **Coverage**
  - True executable prices
  - Daily
  - Different risk characteristics (AAA – CCC)
  - Across various maturities (1M – 30Y)
  - Illiquid segments
- **Transparency**
  - Provide auditable list of input data points

# Contact Us

---

**Ernest Breitschwerdt, CFA**  
**Application Specialist, EMEA**  
**[ernest.breitschwerdt@spcapitaliq.com](mailto:ernest.breitschwerdt@spcapitaliq.com)**

**Silvina Aldeco-Martinez**  
**Managing Director, Product and Market Development, EMEA**  
**[s.aldeco-martinez@spcapitaliq.com](mailto:s.aldeco-martinez@spcapitaliq.com)**

**For more information about S&P Capital IQ,  
visit [www.spcapitaliq-credit.com](http://www.spcapitaliq-credit.com)  
or e-mail [emea-marketing@spcapitaliq.com](mailto:emea-marketing@spcapitaliq.com).**



**S&P  
CAPITAL IQ**

**McGRAW HILL FINANCIAL**

[www.spcapitaliq.com](http://www.spcapitaliq.com)

---

Copyright © 2014 by Standard & Poor's Financial Services LLC (S&P). All rights reserved. No content (including ratings, valuations, credit-related analyses and data, model, software or other application or output therefrom) or any part thereof (Content) may be modified, reverse engineered, reproduced or distributed in any form by any means, or stored in a database or retrieval system, without the prior written permission of Standard & Poor's Financial Services LLC or its affiliates (collectively, S&P). The Content shall not be used for any unlawful or unauthorized purposes. S&P, its affiliates, and any third-party providers, as well as their directors, officers, shareholders, employees or agents (collectively S&P Parties) do not guarantee the accuracy, completeness, timeliness or availability of the Content. S&P Parties are not responsible for any errors or omissions, regardless of the cause, for the results obtained from the use of the Content, or for the security or maintenance of any data input by the user. The Content is provided on an "as is" basis. S&P PARTIES DISCLAIM ANY AND ALL EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, ANY WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OR USE, FREEDOM FROM BUGS, SOFTWARE ERRORS OR DEFECTS, THAT THE CONTENT'S FUNCTIONING WILL BE UNINTERRUPTED OR THAT THE CONTENT WILL OPERATE WITH ANY SOFTWARE OR HARDWARE CONFIGURATION. In no event shall S&P Parties be liable to any party for any direct, indirect, incidental, exemplary, compensatory, punitive, special or consequential damages, costs, expenses, legal fees, or losses (including, without limitation, lost income or lost profits and opportunity costs) in connection with any use of the Content even if advised of the possibility of such damages.

Credit-related and other analyses, including ratings, and statements in the Content are statements of opinion as of the date they are expressed and not statements of fact or recommendations to purchase, hold, or sell any securities or to make any investment decisions. S&P assumes no obligation to update the Content following publication in any form or format. The Content should not be relied on and is not a substitute for the skill, judgment and experience of the user, its management, employees, advisors and/or clients when making investment and other business decisions. S&P's opinions and analyses do not address the suitability of any security. S&P does not act as a fiduciary or an investment advisor except where registered as such. While S&P has obtained information from sources it believes to be reliable, S&P does not perform an audit and undertakes no duty of due diligence or independent verification of any information it receives.

S&P keeps certain activities of its business units separate from each other in order to preserve the independence and objectivity of their respective activities. As a result, certain business units of S&P may have information that is not available to other S&P business units. S&P has established policies and procedures to maintain the confidentiality of certain non-public information received in connection with each analytical process.

S&P may receive compensation for its ratings and certain credit-related analyses, normally from issuers or underwriters of securities or from obligors. S&P reserves the right to disseminate its opinions and analyses. S&P's public ratings and analyses are made available on its Web sites, [www.standardandpoors.com](http://www.standardandpoors.com) (free of charge), and [www.ratingsdirect.com](http://www.ratingsdirect.com) and [www.globalcreditportal.com](http://www.globalcreditportal.com) (subscription), and may be distributed through other means, including via S&P publications and third-party redistributors. Additional information about our ratings fees is available at [www.standardandpoors.com/usratingsfees](http://www.standardandpoors.com/usratingsfees).

STANDARD & POOR'S, S&P, CAPITAL IQ and GLOBAL CREDIT PORTAL are registered trademarks of Standard & Poor's Financial Services LLC.