

# Some Thoughts on SME Access to Finance

**Conference on SMEs' Access to Finance:  
The Role of Financial and non-Financial  
Intermediaries and Capital Markets**

*European Central Bank, 11 December 2014*

**Gregory F. Udell**



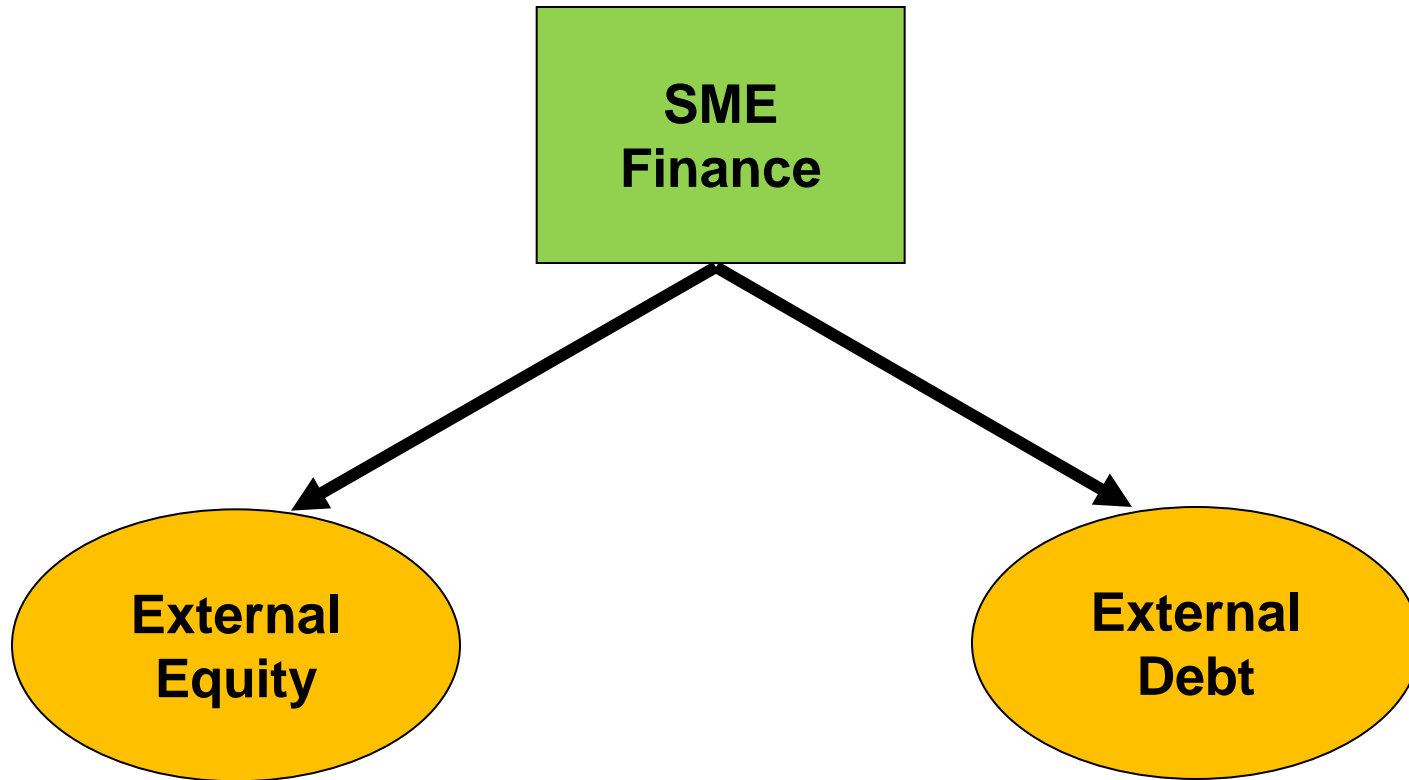
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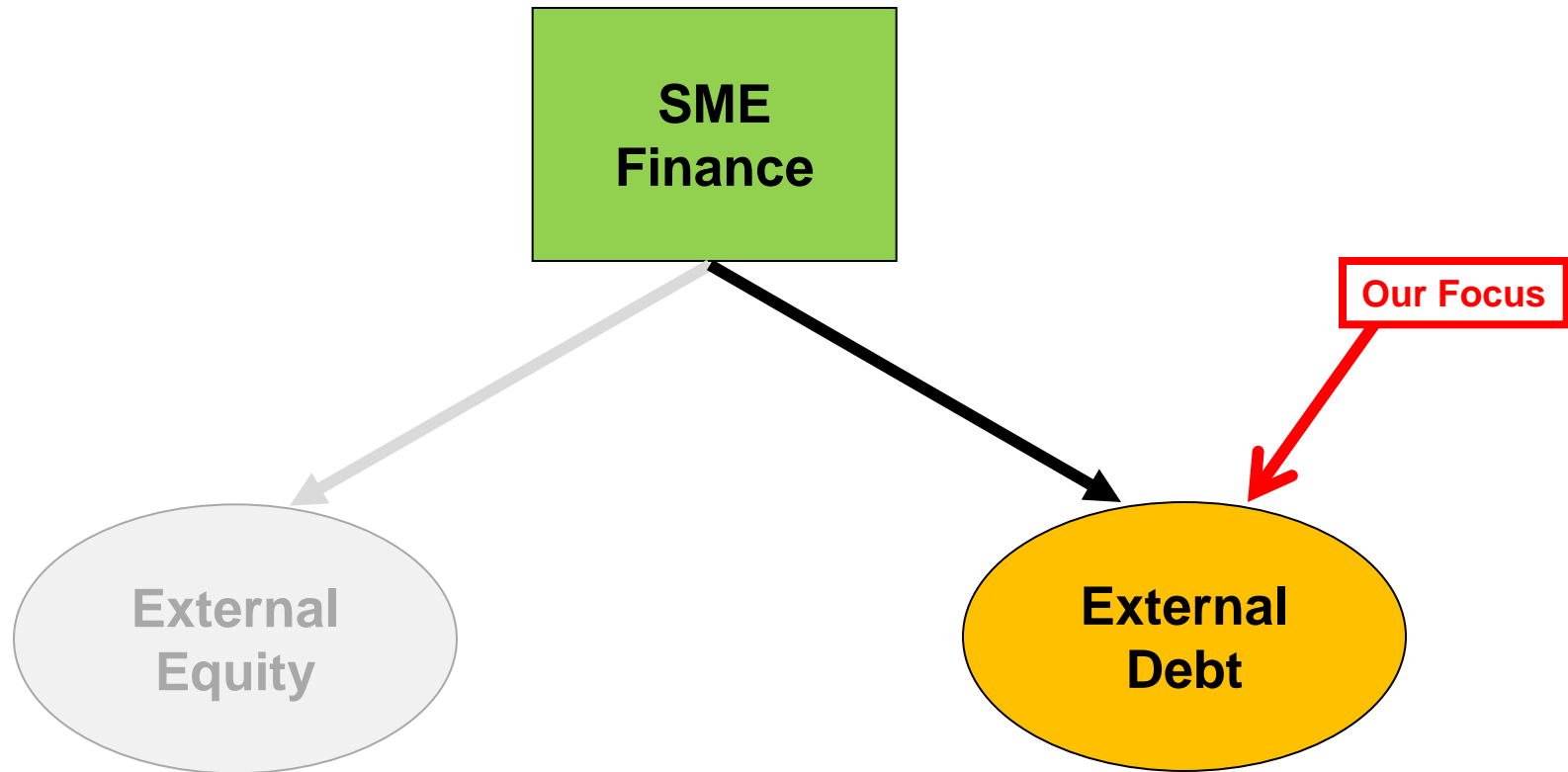
# Presentation Overview

- **SME access to finance: a framework**
- **Some quick thoughts on SME research in the context of this framework**
- **SMEs and the capital markets**
  - **Securitization**

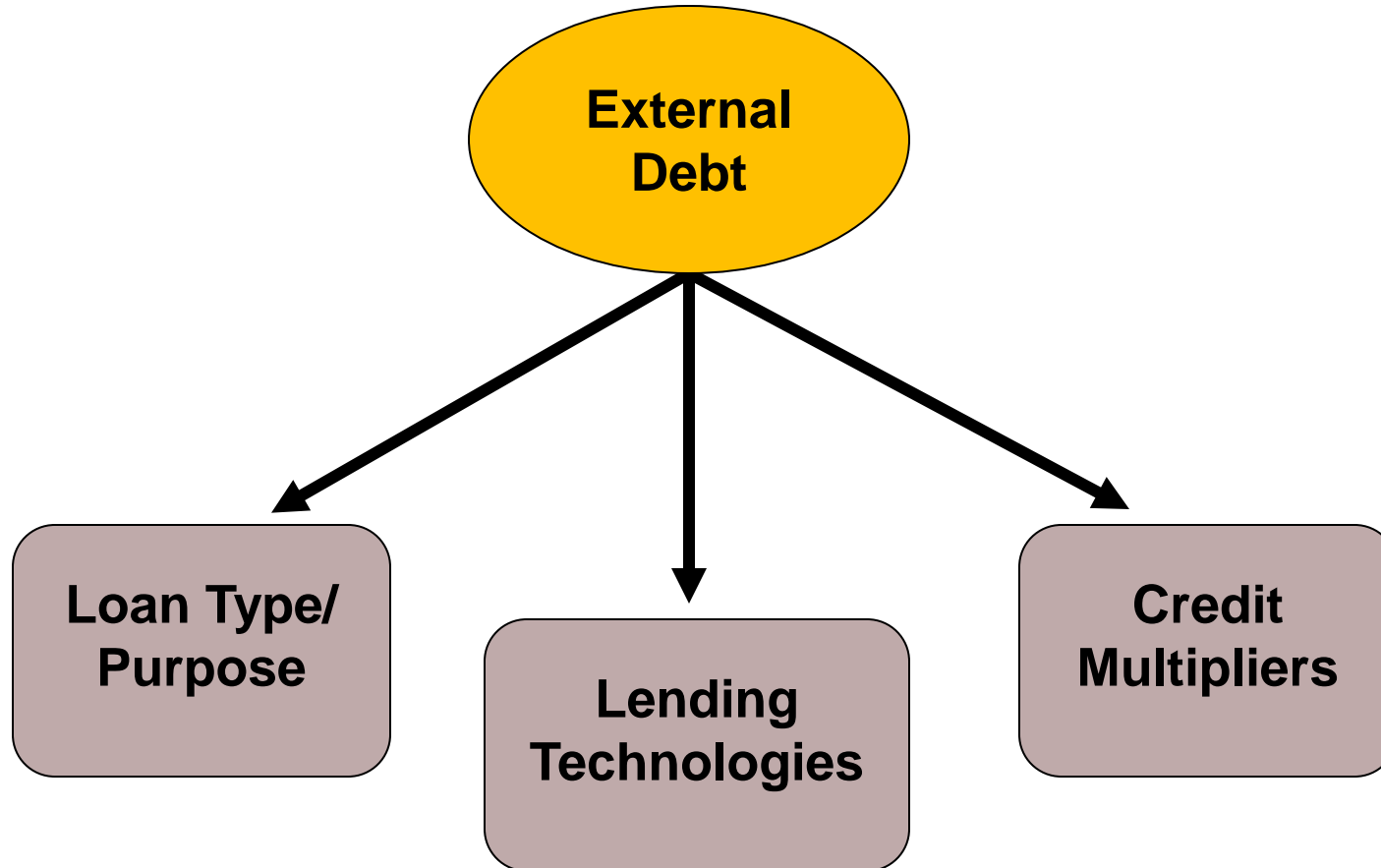
# SME Access to Finance: A Framework



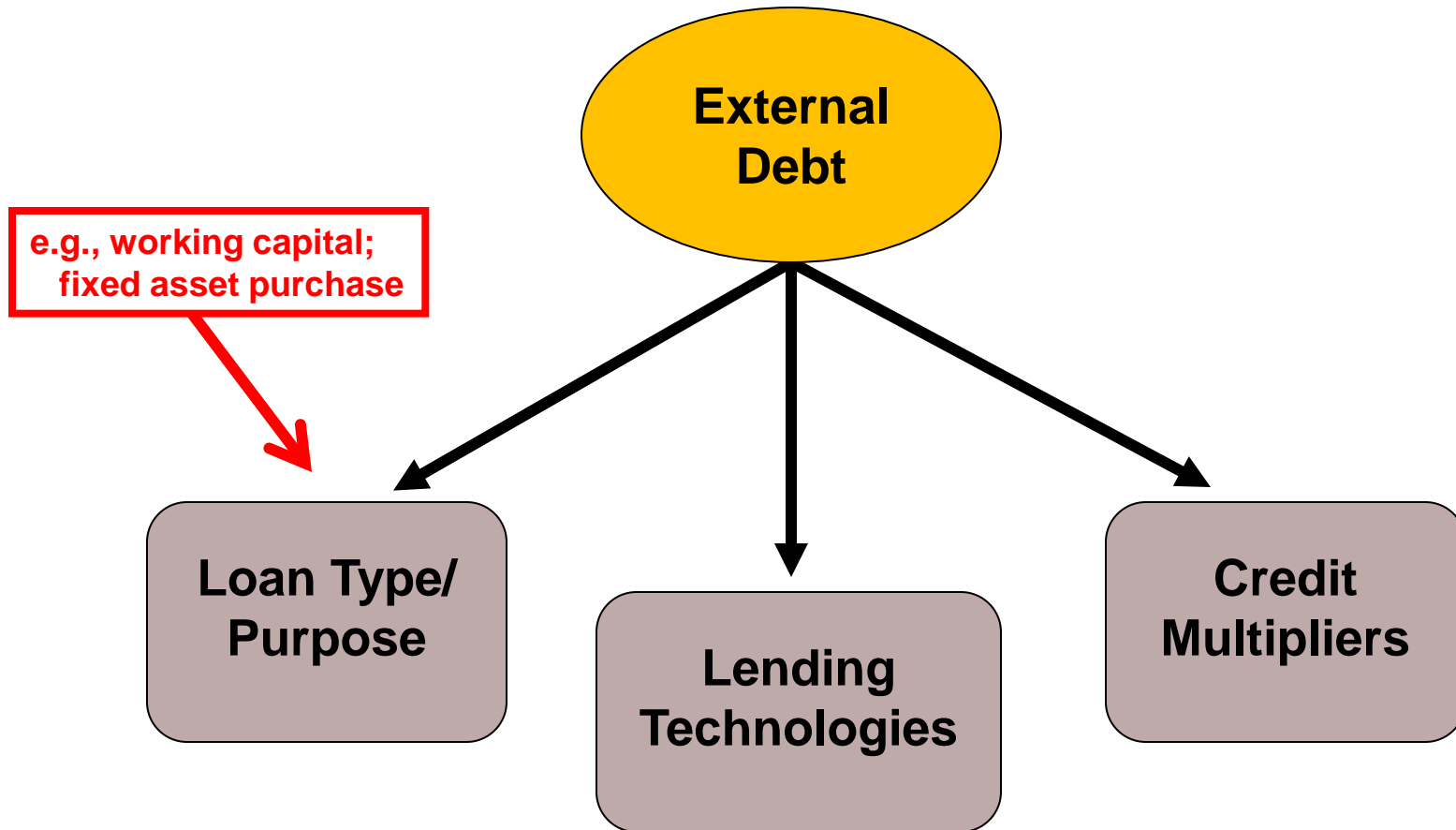
# SME Access to Finance: A Framework



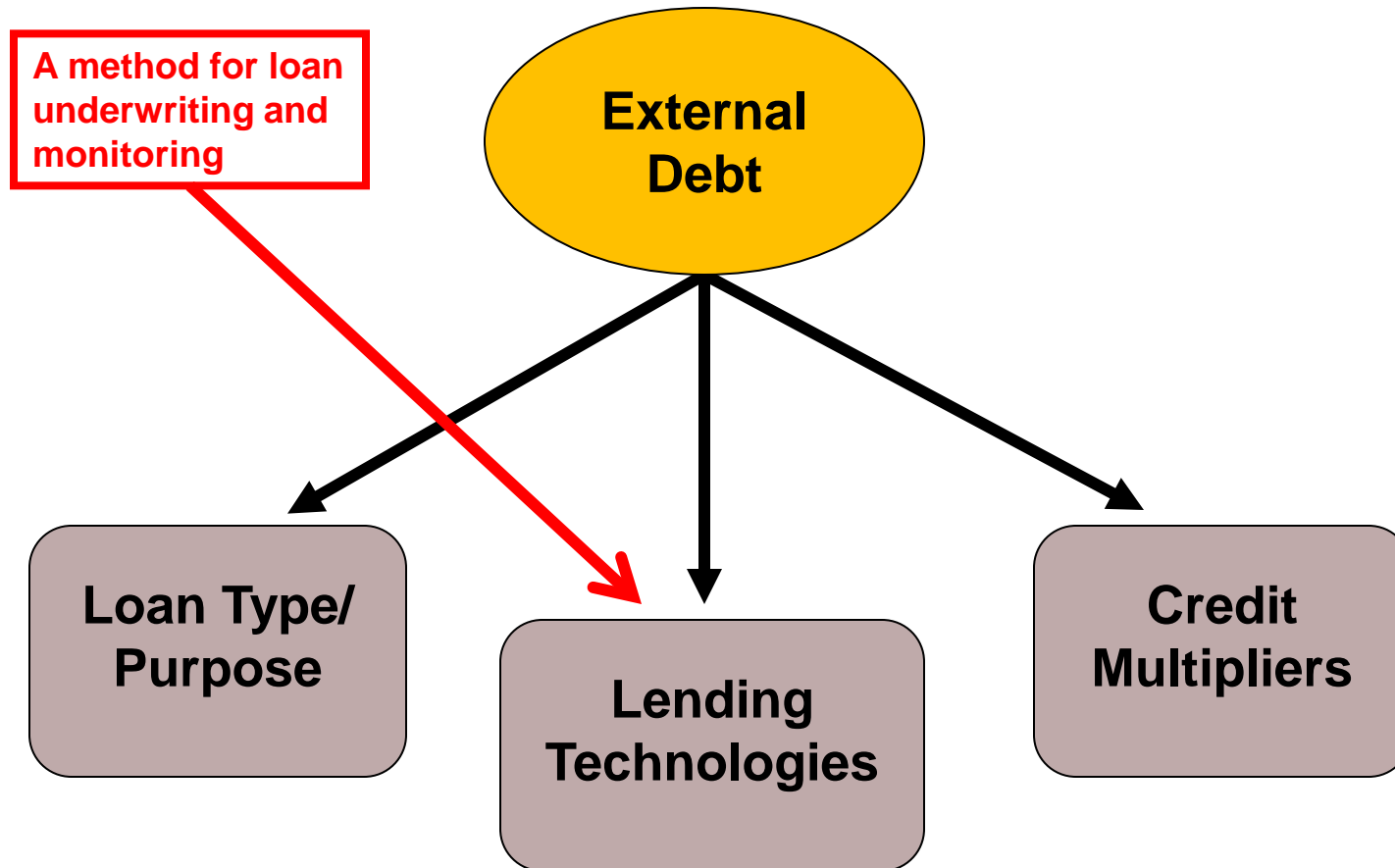
# SME Access to Debt: Three Dimensions



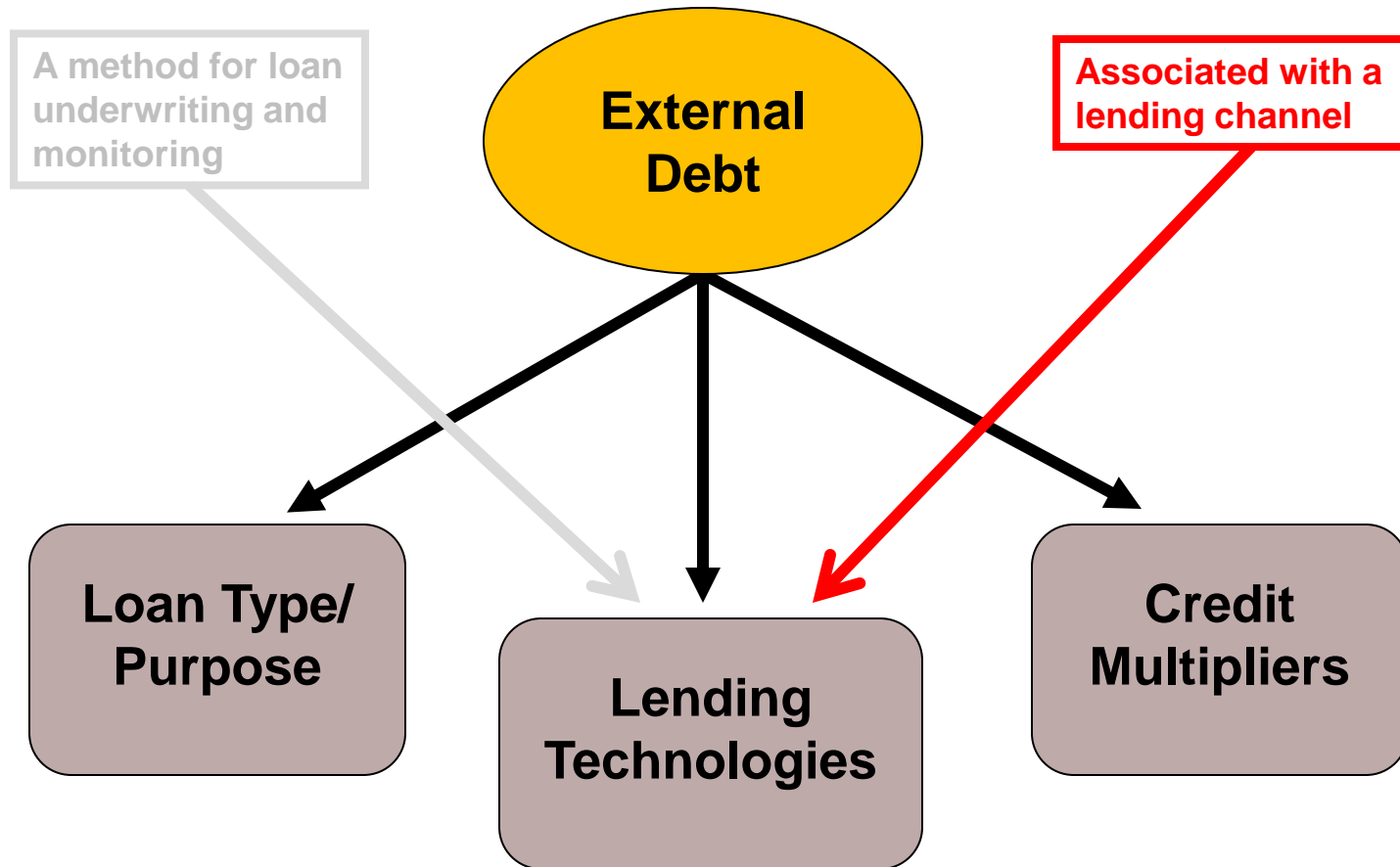
# SME Access to Debt: Three Dimensions



# SME Access to Debt: Three Dimensions

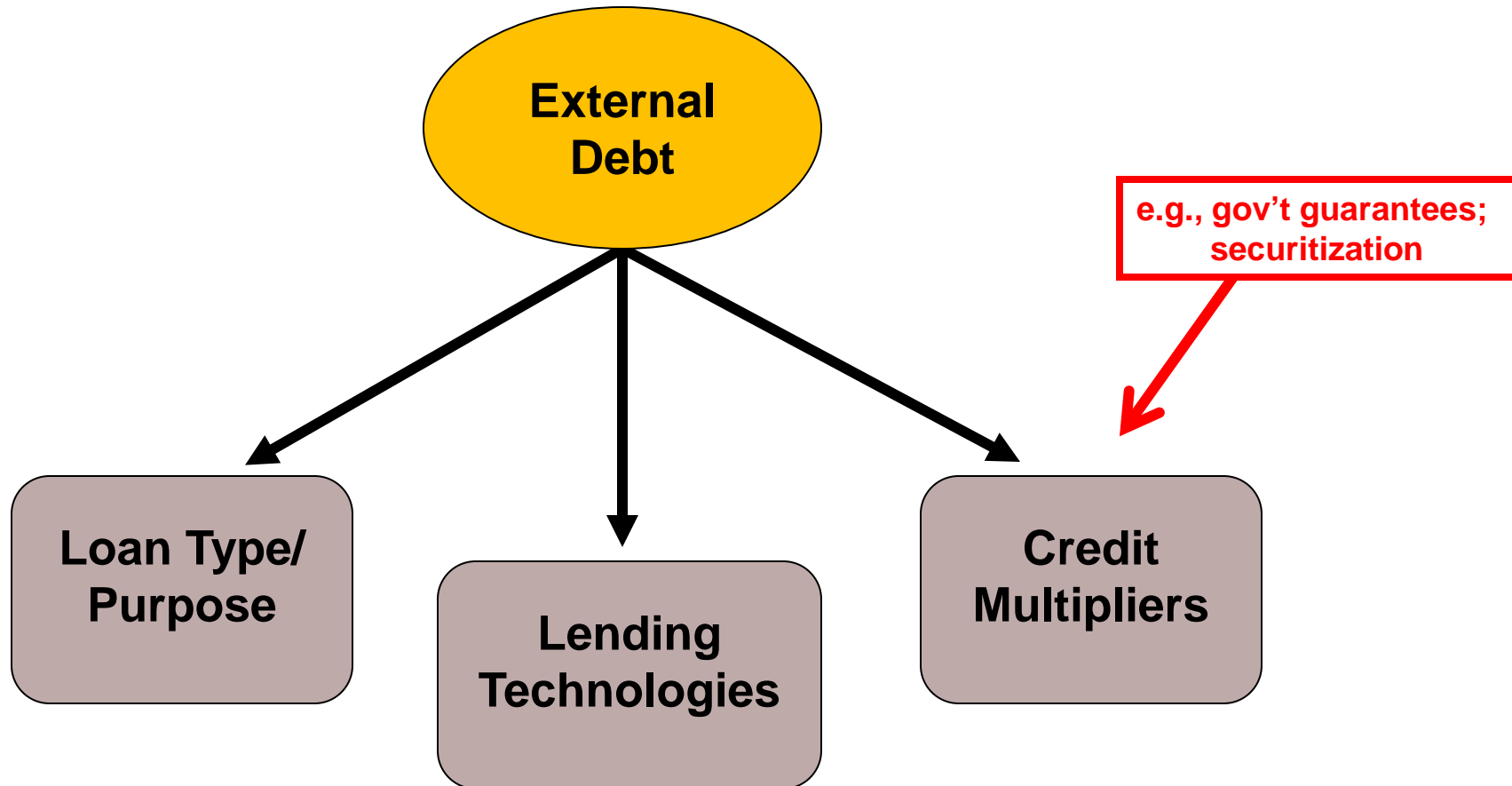


# SME Access to Debt: Three Dimensions





# SME Access to Debt: Three Dimensions



# Lending Technologies

- **Lending technology**
  - A ***lending technology*** is comprised of a combination of
    - **Screening mechanisms (i.e., underwriting due diligence)**
    - **Contract structures**
    - **Monitoring strategies**
  - **Either transactions-based and/or relationship-based**

# Lending Technologies

<b>Relationship Lending</b>
<b>Financial Statement Lending</b>
<b>Asset-Based Lending/Discounting</b>
<b>Factoring</b>
<b>Equipment Lending</b>
<b>Leasing</b>
<b>Real Estate-Based Lending</b>
<b>Small Bus. Credit Scoring</b>
<b>Trade Credit</b>

# Lending Technologies

- Lending technology
  - A *lending technology* is comprised of a combination of
    - Screening mechanisms (i.e., underwriting due diligence)
    - Contract structures
    - Monitoring strategies
  - Either transactions-based and/or relationship-based
- Lending channel
  - A *lending channel* is a two dimensional concept
    - Lending technology offered by a type of financial institution/lender

# Lending Channels

## U.S. (today)

	Large Banks	Small Banks	Coops	Large Com Fin Cos	Small Com Fin Cos	Corps
Relationship Lending		o	o			
Financial Statement Lending	o	o	o			
Asset-Based Lending/Discounting	o	o		o	o	
Factoring	o	o		o	o	
Equipment Lending	o	o	o	o	o	
Leasing	o	o	o	o	o	
Real Estate-Based Lending	o	o	o			
Small Bus. Credit Scoring	o					
Trade Credit						o

# Lending Channels

- **Not constant over time**
  - **Lending technologies adopted**
  - **Changing institutional landscape**

# Lending Channels U.S. (1987)

	Large Banks	Small Banks	Coops	Large Com Fin Cos	Small Com Fin Cos	Corps
Relationship Lending		o				
Financial Statement Lending	o	o				
Asset-Based Lending/Discounting	o	o		o	o	
Factoring	o	o		o	o	
Equipment Lending	o	o		o	o	
Leasing	o	o		o	o	
Real Estate-Based Lending	o	o				
Small Bus. Credit Scoring						
Trade Credit						o

# Lending Channels U.S. (1987)

Credit unions couldn't make SME loans

	Large Banks	Small Banks	Coops	Large Com Fin Cos	Small Com Fin Cos	Corps
Relationship Lending		o				
Financial Statement Lending	o	o				
Asset-Based Lending/Discounting	o	o		o	o	
Factoring	o	o		o	o	
Equipment Lending	o	o		o	o	
Leasing	o	o		o	o	
Real Estate-Based Lending	o	o				
Small Bus. Credit Scoring						
Trade Credit						o

Not invented



# Lending Channels

- Not constant over time
  - Lending technologies adopted
  - Changing institutional landscape
- **Varies by country**
  - **Countries may not have all lending technologies**
  - **Differences in lending technologies adopted**

# Italy

	Large Banks	Small Banks	Coops	Large Com Fin Cos	Corps
Relationship Lending		o	o		
Financial Statement Lending	o	o	o		
Factoring	o	o		o	
Equipment Lending	o	o	o	o	
Leasing	o	o	o	o	
Real Estate-Based Lending	o	o	o		
Small Bus. Credit Scoring	o				
Trade Credit					o

# Japan

	City Banks	Regional Banks	Shinkin Banks	Gov't Affil. Banks*	Non-Bank Shoko	Corporations
Relationship Lending		o	o	o	o	
Financial Statement Lending	o	o	o	o		
Factoring	o	o	o	o		
Leasing	o	o	o	o	o	
Small Bus. Credit Scoring	o					
Equipment Lending	o	o	o	o	o	
Real Estate-Based Lending	o	o	o	o	o	
Trade Credit						o
Sogo Shosha Lending						o

# Croatia

	Small Banks	Foreign Banks	Com. Fin. Cos.	Corporations
Relationship Lending	0	0		
Financial Statement Lending	0	0		
Factoring	0	0	0	
Leasing	0	0	0	
Real Estate-Based	0	0		
Trade Credit				0

# Lending Channels

- Not constant over time
  - Lending technologies adopted
  - Changing institutional landscape
- Varies by country
  - Countries may not have all lending technologies
  - Difference in lending technologies
- **Affected by macro shocks**
  - **Credit crunches close channels**
  - **But not necessarily all channels**

# U.S. 1990-1992

	Large Banks	Small Banks	Coops	Large Com Fin Cos	Small Com Fin Cos	Corps
Relationship Lending		~				
Financial Statement Lending	x	~				
Asset-Based Lending/Discounting	x	~		o	o	
Factoring	x	~		o	o	
Equipment Lending	x	~		o	o	
Leasing	x	~		o	o	
Real Estate-Based Lending	x	~				
Small Bus. Credit Scoring						
Trade Credit						o

# U.S. 2007-2012

	Large Banks	Small Banks	Coops	Large Com Fin Cos	Small Com Fin Cos	Corps
Relationship Lending		X	O			
Financial Statement Lending	X	X	O			
Asset-Based Lending/Discounting	X	X		X	?	
Factoring	X	X		X	?	
Equipment Lending	X	X	O	X	?	
Leasing	X	X	O	X	?	
Real Estate-Based Lending	X	X	O			
Small Bus. Credit Scoring	X					
Trade Credit						O

# Spain 2010

	Large Banks	Small Banks	Cajas	Large Com Fin Cos	Corps
Relationship Lending		?	X		
Financial Statement Lending	~	~	X		
Factoring	~	~		?	
Equipment Lending	~	~	X	?	
Leasing	~	~	X	?	
Real Estate-Based Lending	~	~	X		
Small Bus. Credit Scoring	~				
Trade Credit					o



# Research in the Context of Framework: Determinants of the Existence and Size of Channels

- The effect of innovation on lending technologies
  - e.g., small business credit scoring
- Regulatory changes
  - e.g., single European banking license affects multi-national channels
- Differences across countries
  - Differences in legal, credit, and information infrastructures
  - Often these are policy choice variables
    - e.g., introduction of modern laws on security interests in moveable assets could introduce ABL channels
- Impact and propagation of macro-shocks
  - Can be seen through the lens of contracting (and expanding) lending channels
    - e.g., propagation thru multinational bank channels
    - e.g., expanding trade credit channel offsetting contracting bank lending channels

# Securitization of SME Loans

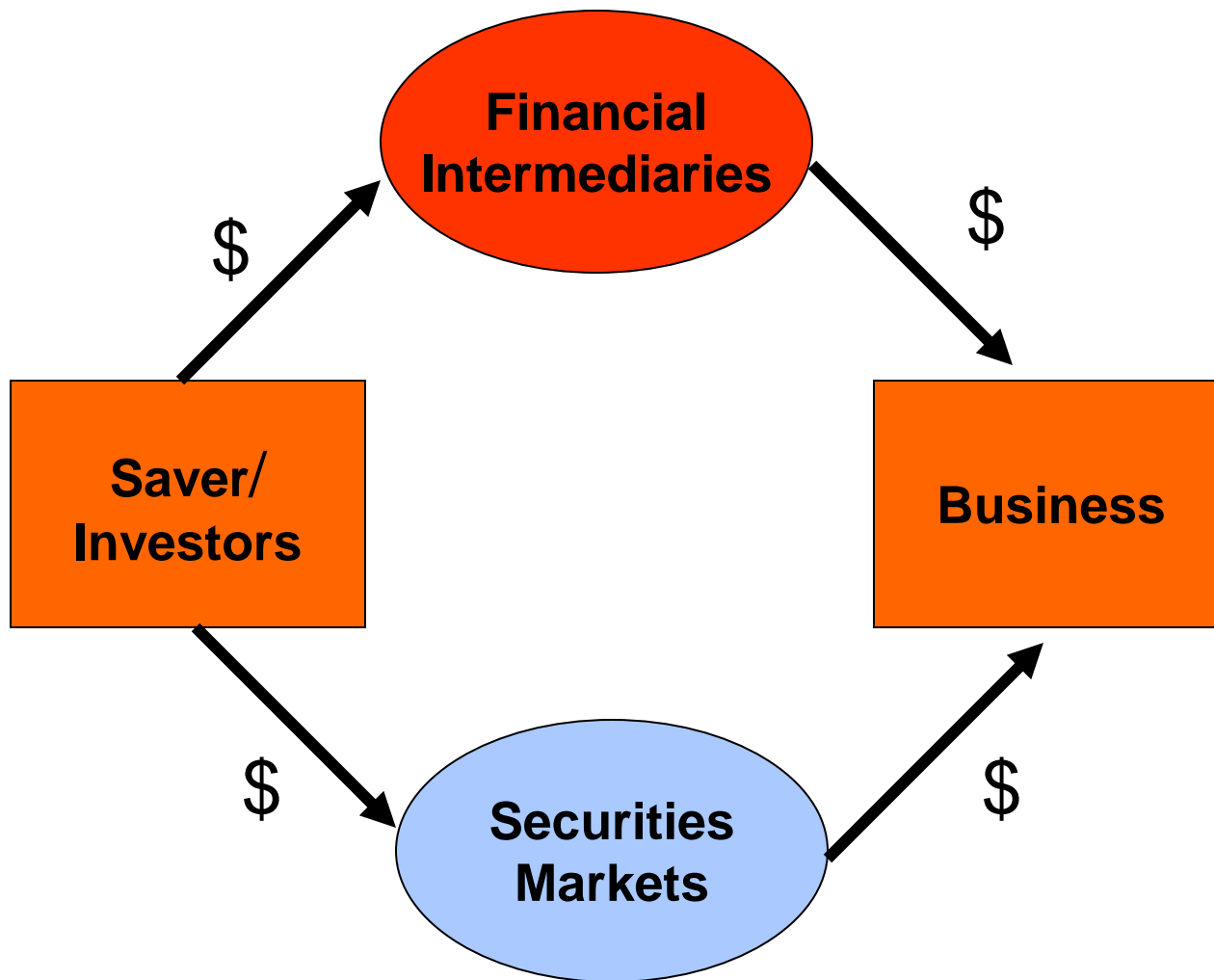
- The nature and value of securitization
- SME securitization activity in Europe
- Are there limits to SME securitization?
  - Insights from the U.S.(?)
  - Insights from the “framework”

# Securitization of SME Loans

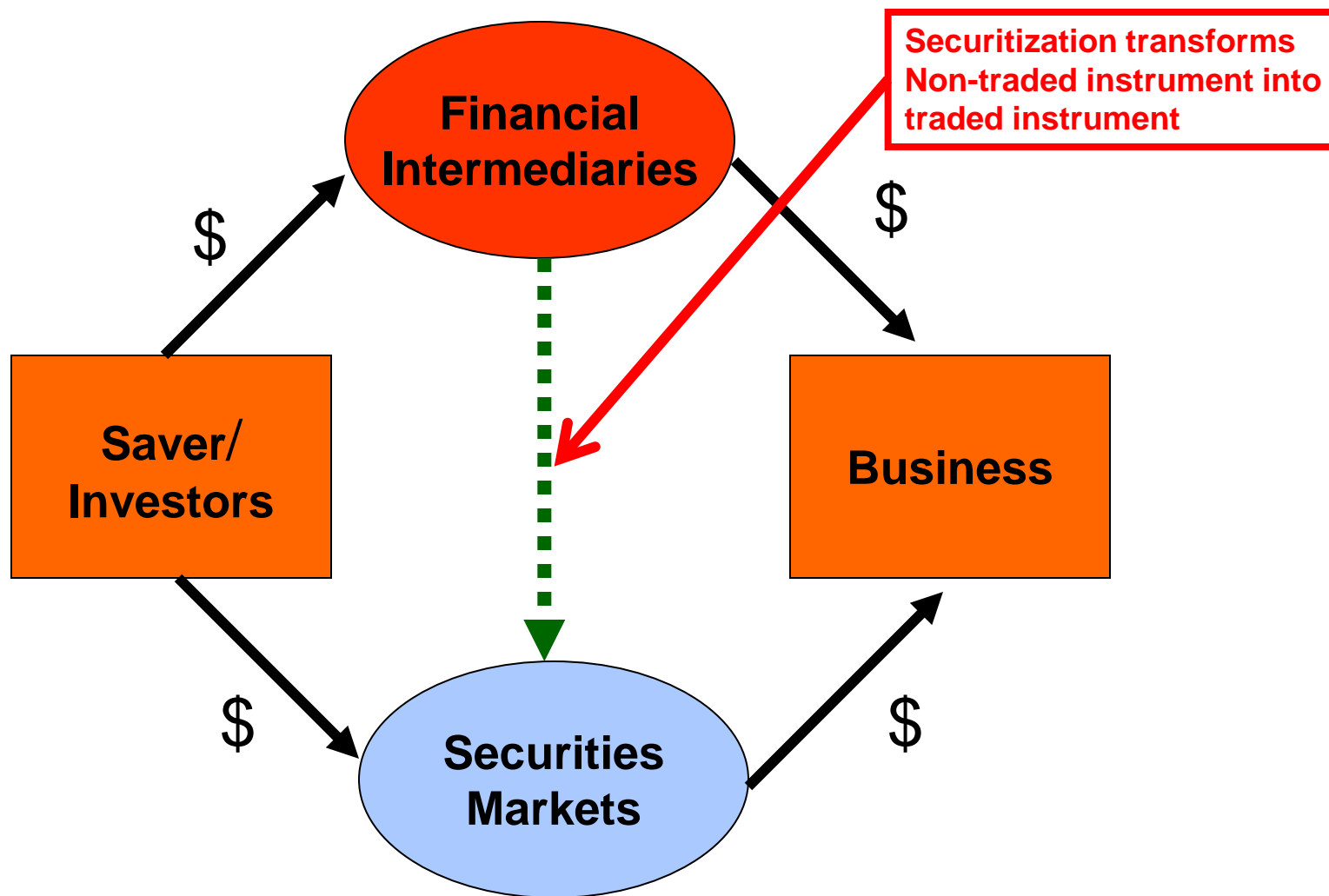
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- Are there limits to SME securitization?
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 ECB's 19 Nov 2014 decision to initiate new “asset-backed securities purchase program” (ABSPP)

## Financial System Architecture



## Financial System Architecture



# e.g., Italy

	Large Banks	Small Banks	Coops	Large Com Fin Cos	Corps
Relationship Lending		o	o		
Financial Statement Lending	o	o	o		
Factoring	o	o		o	
Equipment Lending	o	o	o	o	
Leasing	o	o	o	o	
Real Estate-Based Lending	o	o	o		
Small Bus. Credit Scoring	o				
Trade Credit					o

# e.g., Italy

	Large Banks	Small Banks	Coops	Large Com Fin Cos	Corps
Relationship Lending		o	o		
Financial Statement Lending	o	o	o		
Factoring	o	o		o	
Equipment Lending	o	o	o	o	
Leasing	o	o	o	o	
<b>Real Estate-Based Lending</b>	o	o	o		
Small Business Lending					
Trade Credit					o

An example: securitization of this "channel"

# e.g., Italy

	Large Banks	Small Banks	Coops	Large Com Fin Cos	Corps
Relationship Lending		o	o		
Financial Statement Lending	o	o	o		
Factoring	o	o		o	
Equipment Lending	o	o	o	o	
Leasing	o	o	o	o	
<b>Real Estate-Based Lending</b>	↑	o	o		
Trade Credit					o

**“Credit Multiplier”:** *more euros flowing through channel*



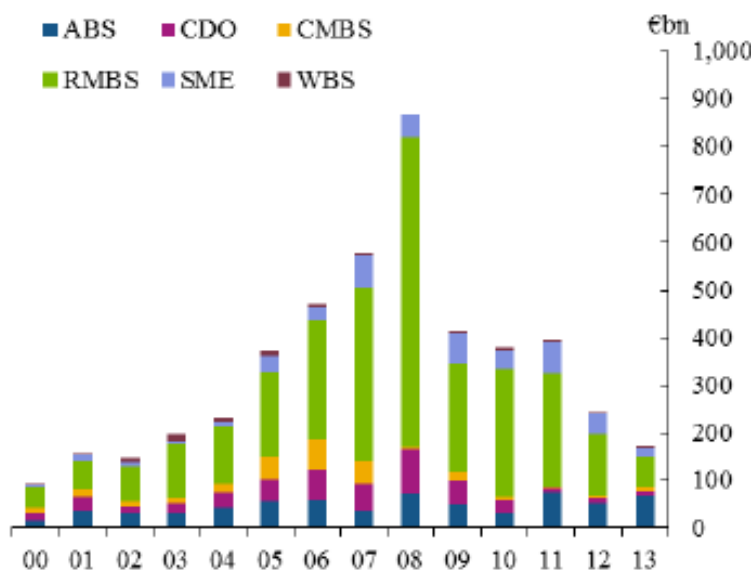
# Potential Benefits to Securitization

- Transforming illiquid loans into liquid assets
  - **Reduction of liquidity premium**
- Funding tool for banks
- Enhanced institutional A-L management
- Diversification
- Support monetary policy transmission when bank “lending channel” impaired

Source: BoE/ECB 2014

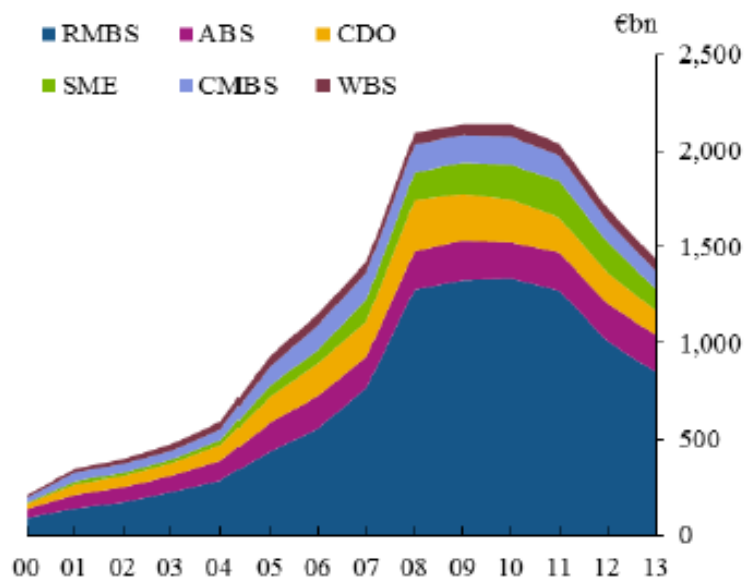
# Securitization in Europe

European securitisation issuance (a)



Sources: SIFMA and Bank calculations.  
(a) Includes retained issuance

European securitisation outstanding (a)



Sources: SIFMA and Bank calculations.  
(a) Includes retained deals

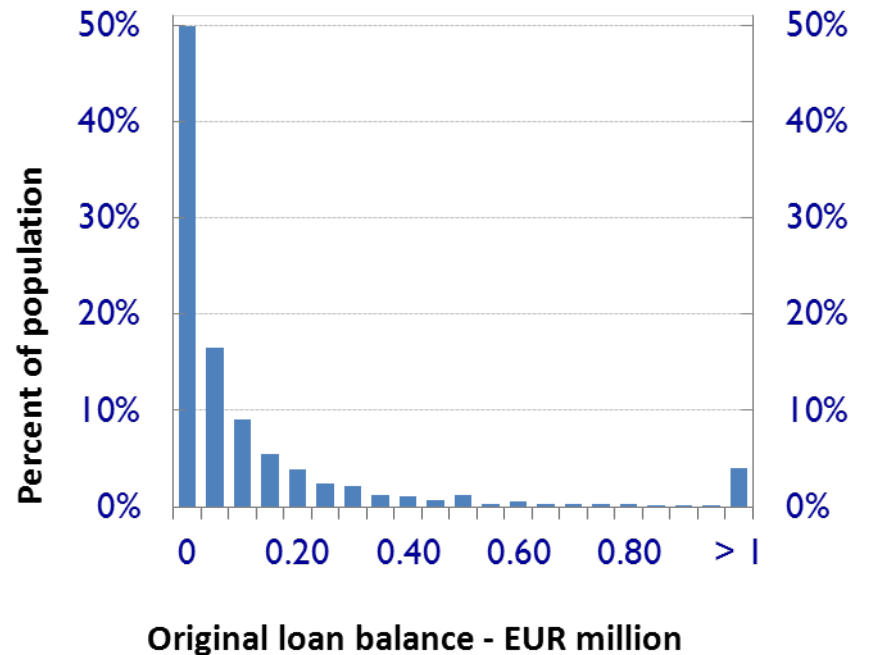
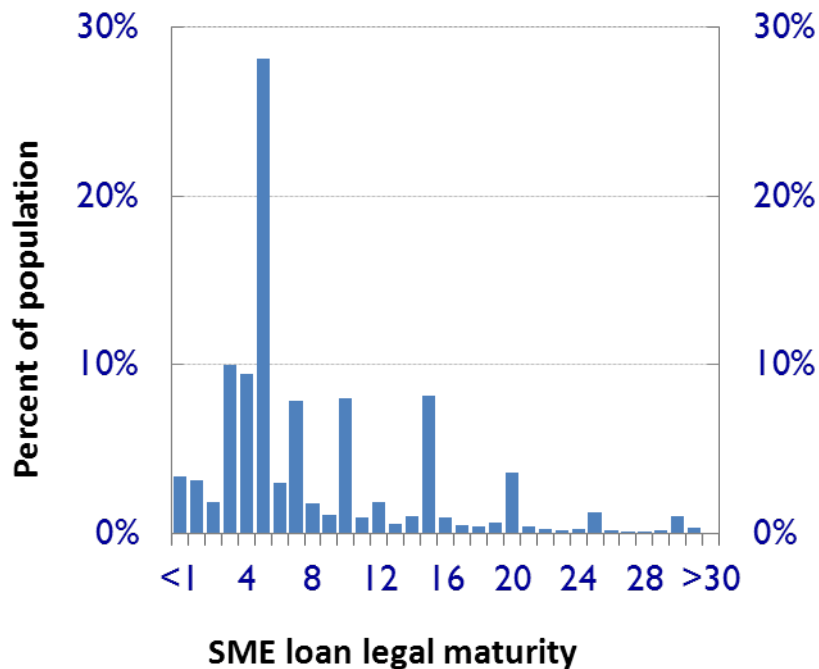
Source: BoE/ECB 2014

# EU SME ABS: Loan-level Characteristics

- **Loan size**
  - **Median loan size: €50,000**
  - **97% less than €1,000,000**
- **About 30% of loans secured by real estate**
- **Mostly amortized with equal monthly payments**
  - **Only a small fraction not amortized (e.g., revolving)**
- **Loan purpose usually “other” or for “purchase”**
  - **Smaller fraction for “working capital”**
  - **Only a tiny fraction are “overdrafts”**
- **About 8% of SME loans securitized but varies, e.g.,**
  - **Belgium (25%)**
  - **Portugal (20%)**
  - **Spain (19%)**
  - **France (1%)**
  - **Germany (2%)**

# EU SME ABS: Loan-level Characteristics (cont.)

- Most loans have a maturity below 10 years and about 1/2 below 5 years.
- Relatively small loans: over 40% having an original balance below €50,000 of which 60% have an original balance below €25,000



Source: Eurosystem loan-level data

# Some EU SME ABS: Security Characteristics

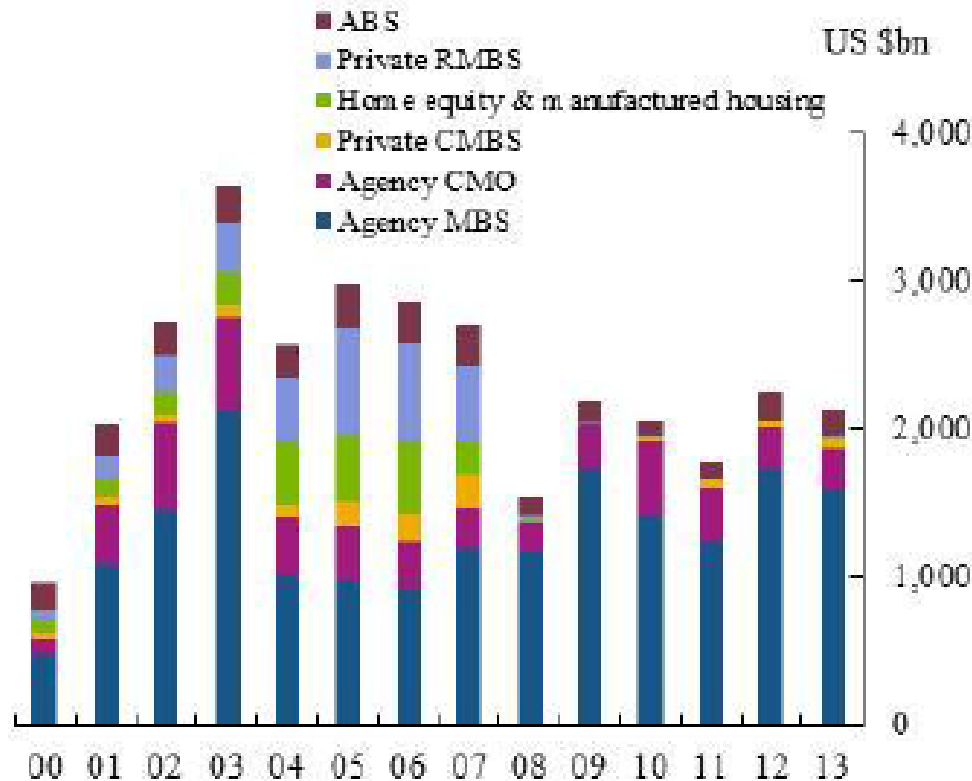
- **Performance**
  - Spreads rose during crisis period, declined afterwards
  - Loan level defaults increased during the crisis
    - Eligible SME ABS defaults comparable to consumer loans
    - No losses at senior tranche level
- **Issuance concentration**
  - About 150 have issued SME ABS, but highly concentrated in small number of banks
  - Led by Spain and Germany in early years fueled by support programs
    - Broadened later with other countries particularly Belgium, Netherlands, Denmark and the UK
- **Liquidity**
  - Secondary market moribund since crisis
  - Majority retained by issuing banks for collateral with central

# The U.S. Experience

- **Long history – characterized by gov't involvement in RMBS**
  - **1968: first modern securitization – the GNMA pass-through**
  - **1983: first CMO – Freddie Mac**
  - **Subprime mortgages and subprime MBS took off in mid-1990s**
  - **Fannie and Freddie had majority share of all issuance (including subprime) until just before crisis**

# The U.S. Experience (cont.)

## US securitisation issuance

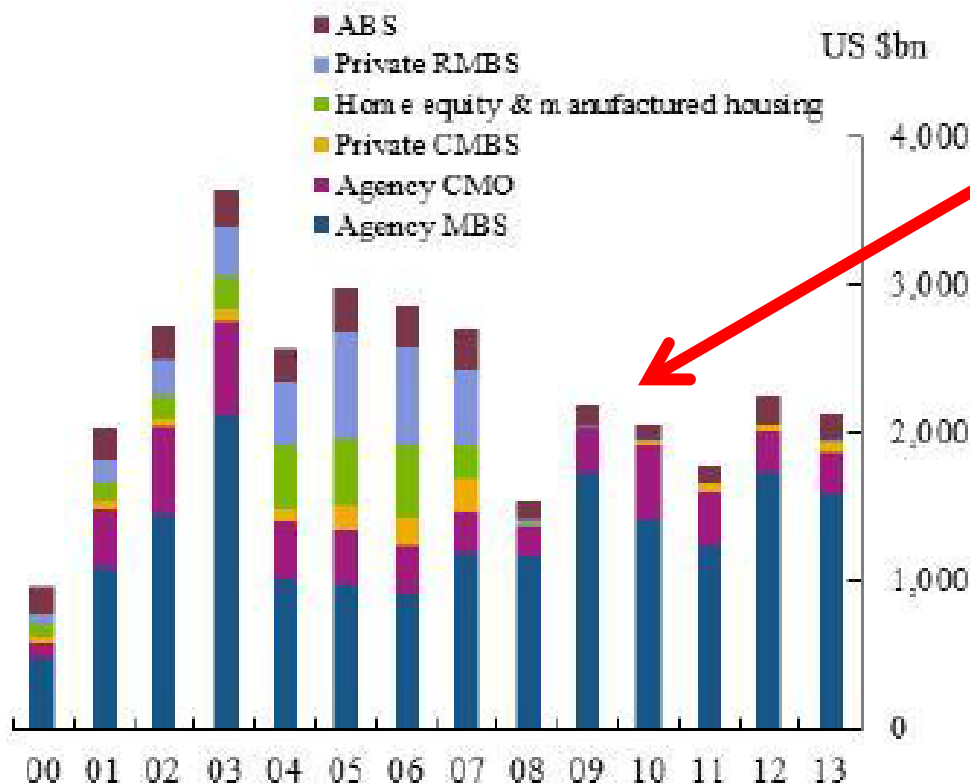


Sources: SIFMA.

Source: BoE/ECB 2014

# The U.S. Experience (cont.)

## US securitisation issuance



**Big changes after crisis:**

1. Significant contraction
2. Dominated by GSEs
3. Subprime contracted dramatically (not shown)

Sources: SIFMA.

Source: BoE/ECB 2014



# Securitization During the Crisis

- **Massive contraction of the private label market**
  - **Gov't became the *entire* “buy side”**: Fannie, Freddie and FHA
- **Huge renegotiation problems in the subprime ABS space**
  - **Subprime mortgages most complex (e.g., teaser rates, HELOCs)**
  - **Most opaque – “low doc loans”**
  - **Securitization made renegotiation more difficult**
    - **Produced a “foreclosure bias” (Piskorski, Seru and Vig 2010)**
  - **Government intervention (e.g., 2009 Home Affordable Modification Program) had only limited effect (Agarwal et al. 2013).**

# SME Securitization in the U.S.

- Not much!
  - Despite predictions in the 1980s and 1990s
- “Direct” SME securitization is mostly limited to the federal gov’t’s Small Business Administration (SBA) loans, particularly the SBA’s 7(a) guarantee program (Berger and Frame 2005)
  - “In contrast to the widespread securitization of consumer credit, securitized pools consisting solely of small business loans (SBLs) are relatively rare.” (Wilcox 2011)
  - “The[se] SBA loans are the most amenable to securitization because of the *federal guarantee* as well as *standardized underwriting, loan characteristics* and *collateral.*” (my italics)
- “Indirect” SME securitization is important
  - Indirect =
    - commercial real estate, vehicle and credit card loans
    - Packaged in ABS with non-SBA loans
    - Hard to estimate but could be over 20% SME debt (Wilcox 2011)

# Insights from the U.S. and Our Framework on SME Securitization

1. **Government involvement is important**
  - **Government guarantees essential in the U.S.**
  - **Important (though appear less so in Europe)**
2. **Securitization's role as a "credit multiplier" significantly less effective in crises with collapse of secondary market**
  - **Probably affects the large bank lending channels the most, particularly in Europe given issuance concentration by large banks**
  - **Government even more critical in both U.S. and Europe**
    - **Fannie and Freddie became the "buy side" in the U.S.**
    - **Central bank purchase of eligible ABS in Europe**

## Insights from the U.S. and Our Framework (cont.)

### 3. Renegotiation of complex loans problematic

- Renegotiation difficult when extruded through securitization platform
  - Agency problems associated with dispersed ownership
  - Analogous to syndicated loan market and corporate bond markets (Carey et al. 1993)
- Evidence that opacity drives structure in securitized mortgage market (Hartman-Glaser, Piskorski and Tchisty 2012)
- SME renegotiation/restructuring for distressed borrowers
  - Legal framework may make it more difficult in some EU countries (Lugaresi 2014)

## Insights from the U.S. and Our Framework (cont.)

- Renegotiation for ***healthy*** borrowers
  - Borrowers with the most moral hazard and risk (Berlin and Mester 1993)
  - Strict covenants need to be frequently renegotiated when strategic opportunities present themselves (Berger and Udell 1998, Carey et al. 1993)
    - **These are least standardized loans (i.e., most complex)**
- Both in U.S. and Europe securitized SME loans don't look complex
  - US: SBA 7(a) guaranteed loans have monthly amortization
    - Not working capital L/Cs (i.e., not overdraft facility)
  - Europe: SME ABS loans skewed toward the standardized
    - Mostly small loans
    - Vast majority amortized
    - Small fraction for working capital (i.e., overdrafts)
    - Performed like consumer loans in the crisis

## Insights from the U.S. and Our Framework (cont.)

4. Lending environment likely different in Europe from U.S, and different among countries across Europe
  - Leads to less complex SME lending EU, i.e., fewer “complex” loans underwritten
  - Relatively problematic legal, information, and lending infrastructure, may produce more standardized lending in EU
    - e.g., covenant and collateral enforcement may be more problematic (e.g., Davydenko and Franks 2008)
  - Less emphasis on complex lending technologies in EU
    - Financial statement lending (dependent on audited statements)
    - Asset-based lending (needs modern laws on security interests in moveable assets)
  - More emphasis amortized loans in EU – least complex repayment structure
    - In U.S. 56% of SME lending (\$ amount) extended in L/Cs (i.e., overdraft facilities) (Berger and Udell 1998)
  - Suggests that securitization may be more important in Europe now
    - **But importance may diminish with infrastructure improvement**

# Conclusions on SME Securitization

1. **Lack of endogenous emergence of a vibrant (non-gov't guaranteed) SME ABS market in complex SME loans in the U.S. suggests limits to SME securitization.**
2. **Significant securitization of transactions-based SME loans in dedicated ABS in Europe and bundled ABS in the U.S. suggest that this may be the best target market for SME ABS.**
3. **Contraction during the crisis suggest that the power of SME securitization as a “credit multiplier” diminishes during a credit crunch.**
4. **Potential differences in between lending technologies/ channels between EU and U.S., and differences among EU countries, suggest differences in the power of SME securitization as a “credit multiplier”.**