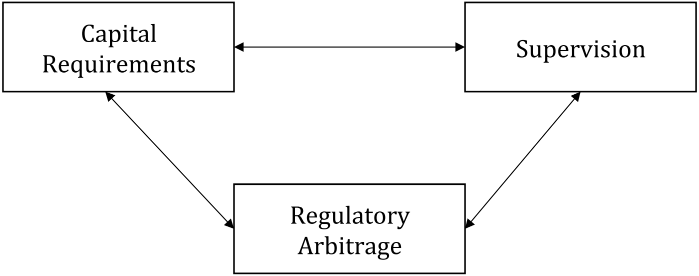
Capital Requirements, Supervision, and Regulatory Arbitrage: A Tale of Three

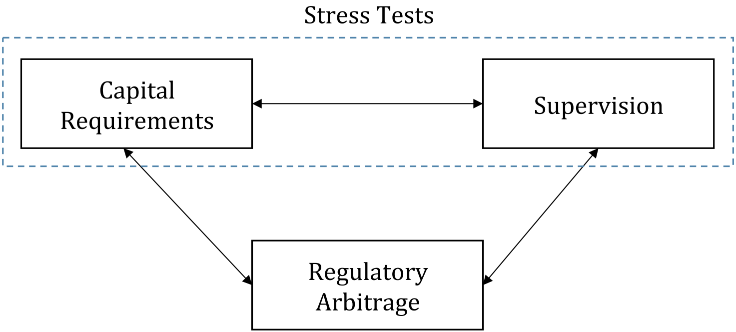
Diane Pierret, University of Luxembourg

ECB Macroprudential stress-testing Conference, February 2020

A Tale of Three

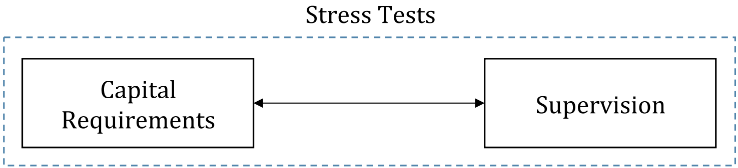


Stress Tests



Stress Tests: **higher capital requirements** and **enhanced supervision** at the same time for the same group of banks (SIFIs)

Evaluating Stress Tests

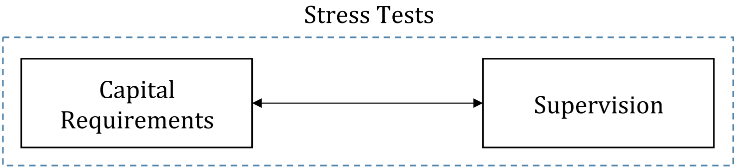


Pierret and Steri (2019): control for the capital structure channel to identify the "direct effect" of stress test supervision

1. No separation between capital structure and investment decisions (irrelevance of Modigliani-Miller for banks)
2. **Banks respond to increases in capital requirements**:
   - **more risk taking**: increase in cost of funding (Koehn and Santomero, 1980; Kim and Santomero, 1988; Rochet, 1992; Baker and Wurgler, 2015; Gale, 2017)
   - **less risk taking**: "skin in the game" (Cooper and Ross, 2002; Admati, DeMarzo, Hellwig, and Pfleiderer, 2013)

→ Basel capital requirements: **link capital requirements to asset riskiness** (risk weights)

Evaluating Stress Tests

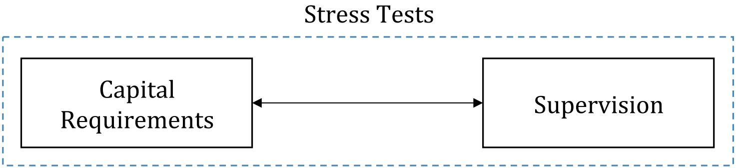


Pierret and Steri (2019): control for the capital structure channel to identify the "direct effect" of stress test supervision

1. No separation between capital structure and investment decisions (irrelevance of Modigliani-Miller for banks)
2. **Banks respond to increases in capital requirements**:
   - **more risk taking**: increase in cost of funding (Koehn and Santomero, 1980; Kim and Santomero, 1988; Rochet, 1992; Baker and Wurgler, 2015; Gale, 2017)
   - **less risk taking**: "skin in the game" (Cooper and Ross, 2002; Admati, DeMarzo, Hellwig, and Pfleiderer, 2013)

   → Basel capital requirements: **link capital requirements to asset riskiness** (risk weights)

Evaluating Stress Tests

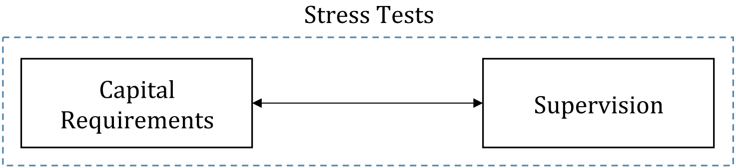


Pierret and Steri (2019): control for the capital structure channel to identify the "direct effect" of stress test supervision

1. No separation between capital structure and investment decisions (irrelevance of Modigliani-Miller for banks)
2. **Banks respond to increases in capital requirements**:
   - **more risk taking**: increase in cost of funding (Koehn and Santomero, 1980; Kim and Santomero, 1988; Rochet, 1992; Baker and Wurgler, 2015; Gale, 2017)
   - **less risk taking**: "skin in the game" (Cooper and Ross, 2002; Admati, DeMarzo, Hellwig, and Pfleiderer, 2013)

→ Basel capital requirements: **link capital requirements to asset riskiness** (risk weights)

Evaluating Stress Tests

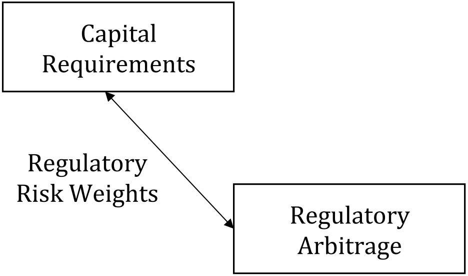


Pierret and Steri (2019): control for the capital structure channel to identify the "direct effect" of stress test supervision

1. No separation between capital structure and investment decisions (irrelevance of Modigliani-Miller for banks)
2. **Banks respond to increases in capital requirements**:
   - **more risk taking**: increase in cost of funding (Koehn and Santomero, 1980; Kim and Santomero, 1988; Rochet, 1992; Baker and Wurgler, 2015; Gale, 2017)
   - **less risk taking**: "skin in the game" (Cooper and Ross, 2002; Admati, DeMarzo, Hellwig, and Pfleiderer, 2013)

$\rightarrow$ Basel capital requirements: **link capital requirements to asset riskiness** (risk weights)

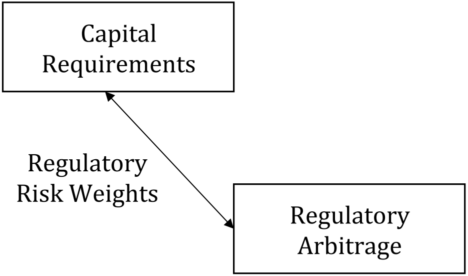
Why Does Supervision Matter?



Evidence of **regulatory arbitrage** (Acharya et al., 2013, Acharya and Steffen, 2015)

1. **Market measures of risk** are not subject to regulatory arbitrage
   $\rightarrow$ market-based measures like V-Lab SRISK useful to detect the "risk of regulatory risk weights" in stress tests (Acharya et al., 2014)
   - -0.238 correlation between "market risk weights" and regulatory risk weights in EBA 2011 stress test (-0.359 EBA 2014, -0.166 EBA 2016)
2. **Reliance of capital requirements on risk weights** $\uparrow$ risk-taking incentives (Pierret and Steri, 2019)

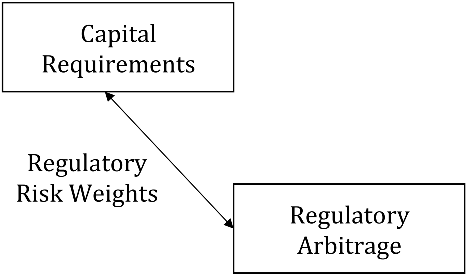
Why Does Supervision Matter?



Evidence of **regulatory arbitrage** (Acharya et al., 2013, Acharya and Steffen, 2015)

1. **Market measures of risk** are not subject to regulatory arbitrage
$\rightarrow$ market-based measures like V-Lab SRISK useful to detect the "risk of regulatory risk weights" in stress tests (Acharya et al., 2014)
    - -0.238 correlation between "market risk weights" and regulatory risk weights in EBA 2011 stress test (-0.359 EBA 2014, -0.166 EBA 2016)
2. **Reliance of capital requirements on risk weights** ↑ risk-taking incentives (Pierret and Steri, 2019)

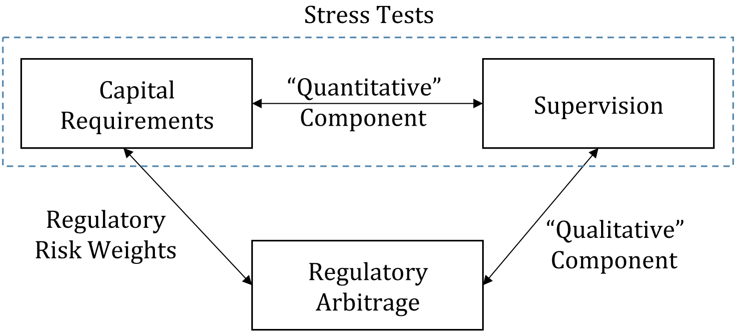
Why Does Supervision Matter?



Evidence of **regulatory arbitrage** (Acharya et al., 2013, Acharya and Steffen, 2015)

1. **Market measures of risk** are not subject to regulatory arbitrage
   $\rightarrow$ market-based measures like V-Lab SRISK useful to detect the "risk of regulatory risk weights" in stress tests (Acharya et al., 2014)
   - -0.238 correlation between "market risk weights" and regulatory risk weights in EBA 2011 stress test (-0.359 EBA 2014, -0.166 EBA 2016)
2. **Reliance of capital requirements on risk weights** $\uparrow$ risk-taking incentives (Pierret and Steri, 2019)

Why Does Supervision Matter NOW?



Before the crisis: regulatory arbitrage **opportunities** (Basel I)

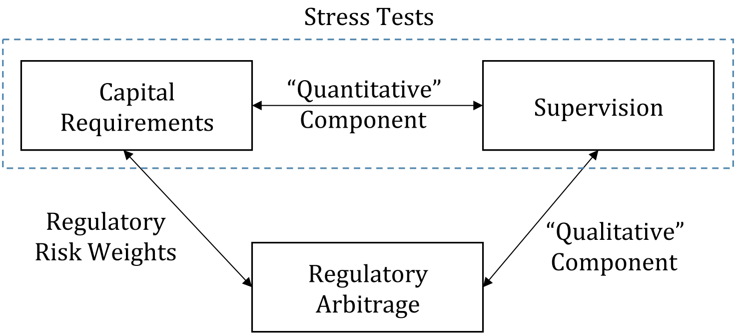
Now: more precise risk weights, more stringent capital requirements

- less regulatory arbitrage opportunities but still a role for "qualitative" supervision (Pierret and Steri, 2019; Kok, Muller, and Pancaro, 2019)

Open questions:

- how did banks' **incentives to engage in regulatory arbitrage** change?
- when does supervision matter the most (high vs. low capital requirements)?

Why Does Supervision Matter NOW?



Before the crisis: regulatory arbitrage **opportunities** (Basel I)

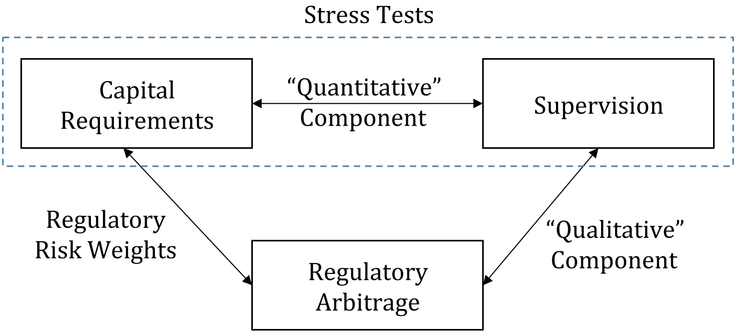
Now: more precise risk weights, more stringent capital requirements

- less regulatory arbitrage opportunities but still a role for "qualitative" supervision (Pierret and Steri, 2019; Kok, Muller, and Pancaro, 2019)

Open questions:

- how did banks' **incentives to engage in regulatory arbitrage** change?
- when does supervision matter the most (high vs. low capital requirements)?

Why Does Supervision Matter NOW?



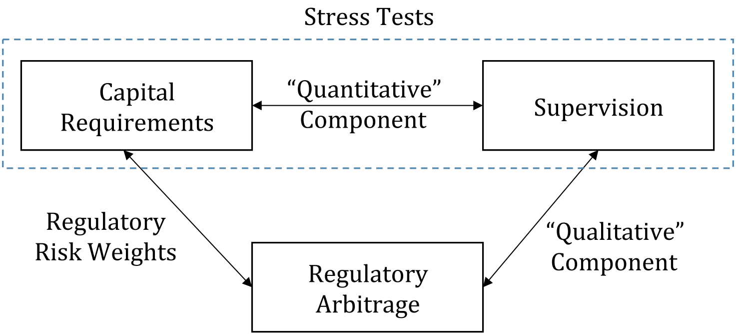
Before the crisis: regulatory arbitrage **opportunities** (Basel I)
Now: more precise risk weights, more stringent capital requirements

- less regulatory arbitrage opportunities but still a role for "qualitative" supervision (Pierret and Steri, 2019; Kok, Muller, and Pancaro, 2019)

Open questions:

- how did banks' **incentives to engage in regulatory arbitrage** change?
- when does supervision matter the most (high vs. low capital requirements)?

Why Does Supervision Matter NOW?



Before the crisis: regulatory arbitrage **opportunities** (Basel I)

Now: more precise risk weights, more stringent capital requirements

- less regulatory arbitrage opportunities but still a role for "qualitative" supervision (Pierret and Steri, 2019; Kok, Muller, and Pancaro, 2019)

Open questions:

- how did banks' **incentives to engage in regulatory arbitrage** change?
- when does supervision matter the most (high vs. low capital requirements)?