... based on

- Euro and the Battle of Ideas
  - With Harold James & Jean-Pierre Landau

- The I Theory of Money
  - With Yuliy Sannikov

- Financial Dominance
  - Baffi Lecture 2015

- Safe Assets
  - With Valentin Haddad

- Euronomics Group
GDP accumulated since Euro

Source: EuroStat
Overview

- Power shift – watershed moments
  - Rationale for focus on Germany and France

- Cultures Clash

- Different economic philosophies
  - Ideas versus interest
  - Shifts and reversals are possible

- Maastricht’s Ghost: Monetary and fiscal stability

- Maastricht’s Stepchild: Financial stability
  - Paradox of Prudence
  - Redistributive Monetary Policy
  - Diabolic loop, flight to safety, ESBies
Watershed Moments/Turning Points

- 2010, May: EFSF, IMF involvement
- 2010, Oct: Deauville PSI: contagion

2 Power shifts

- 2012: Draghi’s “Whatever it takes” Speech in London
- 2013: Cyprus Bail-in
German-French differences

- Interests are interpreted through the lens of ideas ≈ models
Difference in eco-philosophies: Historical roots

- Walter Bagehot (1869)
  - “In that case, there would be one Teutonic money and one Latin money; the latter mostly confined to the West of Europe, and the former circulating through the world. Such a monetary state would be an immense improvement on the present. Yearly one nation after another would drop into the union which best suited it; and looking to the commercial activity of the Teutonic races, and the comparative torpor of the Latin races, no doubt the Teutonic money would be most frequently preferred.”
Ghost of Maastricht “Rhine Divide”

1. Discretion

2. Solidarity
   - Fiscal union

3. Liquidity/contagion

4. Keynesian Stimulus

“French”

“German”

Rules

Liability

No-bailout clause/rule

Solvency

Austerity/Reform
Unchangeable or fickle?

- Historic breaks and reversals in 1945
  - Germany moves from cameralism and state tradition to Ordo-liberalism
  - France moves from laissez faire to planisme

- Alexis de Tocqueville:
  - “a people so unchangeable in its leading features that it may be recognized by portraits drawn two or three thousand years ago, and yet so fickle in its daily opinions and tastes that it becomes at last a mystery to itself.” *The Ancien Regime and the French Revolution*
Ghost of Maastricht “Rhine Divide”
“Black-white” Organizing Principle

“French”

1. Discretion
   - flexible crisis management

“German”

   vs.

   Rules
   “ad hocery”
Ghost of Maastricht “Rhine Divide”
“Black-white” Organizing Principle

“French”

1. Discretion vs. Rules
   - flexible crisis management

“German”

- “ad hocery”

- Problem with flexibility: Time-inconsistency
  ex-post <-> ex-ante
  efficiency
Ghost of Maastricht “Rhine Divide”
“Black-white” Organizing Principle

<table>
<thead>
<tr>
<th>“French”</th>
<th>“German”</th>
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<tbody>
<tr>
<td>1. Discretion</td>
<td>vs. Rules</td>
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</tbody>
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- Problem with flexibility: Time-inconsistency
  - ex-post efficiency
  - ex-ante efficiency

- Price stability
  - promise not to inflate in the future

- Financial stability
  - promise only to provide liquidity but not to bail-out (redistribute) insolvent institutions

- Fiscal sustainability
  - promise not to default on debt to spend in recessions (now) but consolidate (later)
Ghost of Maastricht “Rhine Divide”
“Black-white” Organizing Principle

“French” vs. “German”

1. Discretion vs. Rules
   - flexible crisis management
   - “ad hocery”

- Problem with flexibility: Time-inconsistency

- Rules should fix commitment problems, but can’t deal with unforeseen contingencies
  - Aristotle: Nicomachean Ethic V
    - “When the law speaks universally, and a case arises on it which is not covered by the universal statement, then it is right, where the legislator fails us and has erred by oversimplicity, to correct the omission-to say what the legislator himself would have said had he been present, and would have put into his law if he had known.”

- Delegation: Institutional Design
1. Discretion vs. Rules
   - Time-inconsistency problem btw ex-post vs. ex-ante efficiency

- Rules, but unforeseen contingencies
- Institutional Design (mechanism design)

- Fiscal dominance
- Monetary dominance
- “Financial dominance”
  - Be strategically weak!
Ghost of Maastricht “Rhine Divide”
“Black-white” Organizing Principle

“French”

1. Discretion vs. Rules
   - Time-inconsistency problem btw ex-ante and ex-post efficiency

- Institutional Design (mechanism design)

- Fiscal authority
- Central Bank
- Financial Sector

Game of chicken split

2nd Game of chicken

Redistributive MoPo (i, QE, ....)
Ghost of Maastricht “Rhine Divide”
“Black-white” Organizing Principle

“French”
1. Discretion
2. Solidarity
   - Fiscal union
   - Illusion of default free bonds

“German”
Rules
Liability
- No-bailout clause/rule
- SDRM/insolvency procedures

Deauville
Ghost of Maastricht “Rhine Divide”
“Black-white” Organizing Principle

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   • Illusion of default free bonds

“German”
Rules
Liability
• No-bailout clause/rule
• SDRM/insolvency procedure

![Graph showing yield spread (%)](image-url)
Ghost of Maastricht “Rhine Divide”
“Black-white” Organizing Principle

“French”
1. Discretion

2. Solidarity
   • Fiscal union
   • Illusion of default free bonds
   • Eurobonds with joint liability

“German”

Rules

Liability

• No-bailout clause/rule
• SDRM/insolvency procedure
• ESBies without joint liability
Ghost of Maastricht “Rhine Divide”
“Black-white” Organizing Principle

“French”
1. Discretion
2. Solidarity
3. Liquidity/contagion
   • multiple equilibria
     “big bazooka”

“German”
Rules
Liability
Solvency
E[NPV] > 0, at what discount rate?

Draghi speech
Ghost of Maastricht “Rhine Divide”
“Black-white” Organizing Principle

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Rules
Liability
Solvency
E[NPV]>0, at what discount rate?

Draghi speech

Graph: 10Y Bond Yield Spread (%)
Ghost of Maastricht “Rhine Divide”
“Black-white” Organizing Principle

“French”
1. Discretion
2. Solidarity
3. Liquidity/contagion
   - multiple equilibria
     “big bazooka”
   - amplification/spirals
     - $E[NPV \text{ bailout}] > 0$
     - $E[ PV \text{ bailout} - PV \text{ no bailout}] > 0$

“German”
Rules
Liability
Solvency
$E[NPV] > 0$, at what discount rate?

contagion/systemic

Bail-out/LLRin
- Countries
- Financial Sector

Bail-in

Cyprus

$\text{p}$
Ghost of Maastricht “Rhine Divide”
“Black-white” Organizing Principle

“French”
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Solvency

“Rhine-divide”
4. Keynesian Stimulus Demand
   • Output gap
   • Reforms in boom

Austerity/Reform Supply
unsustainable credit boom
Reforms in crisis (political economy)
Anglo-American Thinking

- Close to French view, but ...
  - Role of the government
    - French Planning vs. US crisis management
  - Default free debt vs. contingent debt
    - smoothing vs. smoothing + insurance
    - Bankruptcy law

- Main difference to German view
  - Demand vs. Supply: Reforms during booms vs. in crisis
    - Political economy difference
  - Contingent debt – on bad vs. extremely bad crisis states
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I Theory: “Money and Banking”

- Intermediaries
  - Can hold outside equity & diversify within sector $b$
  - Monitoring
  - Create inside money
  - Maturity/liquidity transformation
I Theory: “Money and Banking”

- Money: store of value (less transaction role, unit of account)
- Banking: “diversifier”
  - holds risky assets, issues inside money
  - Amplification/endogenous risk dynamics
  - Value of capital declines due to Liquidity spiral
    - Fire-sales
    - Flight to safety
  - Value of money rises
    - Disinflation spiral a la Fisher
      - Demand for money rises – less idiosyncratic risk is diversified
      - Supply for inside money declines – less creation by intermediaries
  - Endogenous money multiplier = f(capitalization of critical sector)
  - Paradox of Thrift (in risk terms)

- Monetary Policy (redistributive)
I Theory: “Money and Banking”

- Money store of value
- Banking “diversifier” holds risky assets, issues inside money

Amplification/endogenous risk dynamics

- Value of capital declines due to **Liquidity spiral**
  - Fire-sales
  - Flight to safety
- Value of money rises **Disinflation spiral** a la Fisher
  - Demand for money rises – less idiosyncratic risk is diversified
  - Supply for inside money declines – less creation by intermediaries
  - Endogenous money multiplier = f(capitalization of critical sector)
Shock impairs assets: 1st of 4 steps
Shrink balance sheet: 2\textsuperscript{nd} of 4 steps
Liquidity spiral: asset price drop: 3rd of 4
Disinflationary spiral: 4th of 4 steps

- Money
- Risky Claim
- Inside equity
- B1
- Inside Money (deposits)
- Net worth
- Losses
- Deleveraging
- Pass through
- HH Net worth
- A1
Paradox of Prudence

- Money store of value
- Banking “diversifier” holds risky assets, issues inside money

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- Paradox of Thrift (in risk terms)
Paradox of Prudence

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Paradox of Prudence

Paradox of Thrift (in risk terms)

- Each bank tries to reduce risk – to be micro-prudent
- Leads to more endogenous macro-risk
Introducing a “Safe asset”

- Safe asset = good friend
  - “It’s there when you need it.”
  - In bad times:
    - risky claims lose in value
    - “safe asset” appreciates exactly then – wouldn’t it be nice?
      - Long-term (default-free) government bond
      - & appropriate MoPo

there = liquid/high price
Ex-post: Redistributive MoPo

- Adverse shock → value of risky claims drops
- Monetary policy
  - Interest rate cut ⇒ long-term bond price
  - Asset purchase ⇒ asset price
  - ⇒ “stealth recapitalization” - redistributive
  - ⇒ risk premia
- Liquidity & Deflationary Spirals are mitigated
Ex-ante: MoPo as insurance → MacroPru

- Ex-ante: insurance
  - Negative shock: positive wealth transfer to bottleneck
  - Positive shock: negative “

- MoPo substitutes in for “missing market”
- But moral hazard – excessive risk taking

- A case for macro-prudential regulation
Role of Government bond

- Special MoPo Role: Default-free long-term gov. bond
  - Interest rate policy leads to income/wealth effects (not only substitution effects)
- Insurance role for extreme crisis states
  Defaultable bond – contingent debt
Role of Government bond

- Special MoPo Role:
  - Default-free long-term gov. bond
    - Interest rate policy leads to income/wealth effects (not only substitution effects)
  - Insurance role for extreme crisis states
    - Defaultable bond – contingent debt

- "French view"
  - never default (straight jacket commitment)
    - (use banks as hostage)

- "German view"
  - Default in extreme circumstances
  - Limit banks’ sovereign risk taking

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Brunnermeier
Government Debt: Toy Model

- $t = 1$ Refinance outstanding debt (from $t = 0$)
  - Determines face value of new debt
  - Default costs

- $t = 2$ uncertainty realizes -- state space
  1. $x = \text{GDP: Economic activity} – \text{income of citizens}$
  2. $x = \text{Primary surplus: absent austerity measures/extra taxes}$

- Repay debt
- Extra austerity measures/taxes to cover shortfall
- Default decision
Government Debt

- Limited commitment: verification cost
- Risk-neutral investors

\[
\text{Payoff of debt claim in } t = 2 = \frac{1}{x} \cdot x
\]
Government Debt

- Limited commitment: verification cost
- Risk-neutral investors

\[
\text{Payoff of debt claim in } t = 2 = \frac{1}{x}
\]

- Face value
- Tax revenue (normal regime)

\[
\text{default probability } \frac{1}{x}
\]
Government Debt

- Limited commitment: verification cost
- Risk-neutral investors

Contingent debt
- Partial default in bad states

Payoff of debt claim in $t = 2$
Government Debt

- Limited commitment: verification cost
- Risk-neutral investors

\[
\text{Payoff of debt claim in } t = 2 = \frac{1}{x} 
\]

\[
\text{Face value} \quad \text{Tax revenue (normal regime)} \quad \frac{1}{x} 
\]

\[
\text{Face value} \quad \text{Face value} \quad \text{Verification cost} \quad \text{default probability} 
\]

\[
\text{Refinancing Potential } t = 1 
\]
Government Debt

- Limited commitment: verification cost
- Risk-neutral investors

\[ \frac{1}{x} \]

Payoff of debt claim in \( t = 2 \)

Face value

\[ \frac{1}{x} \]

Refinancing Potential \( t = 1 \)

Tax revenue (normal regime)

Face value

Verification cost

Defaul probability

\( x \)
Government Debt

- Limited commitment: verification cost
- Risk-neutral investors

Payoff of debt claim in $t = 2$

Face value

Verification cost

Tax revenue (normal regime)

$1/\bar{x}$

Face value

Refinancing Potential $t = 1$

solvent

insolvent
Government Debt

- Limited commitment: verification cost
- Risk-neutral investors

![Graph showing the payoff of debt claim in t = 2 and tax revenue (normal regime)]
Government Debt

- Limited commitment: verification cost
- Risk-neutral investors

Payoff of debt claim in $t = 2$

Face value

Verification cost

Tax revenue (normal regime)

Refinancing Potential $t = 1$

solvent

illiquidity

insolvent

$\text{Refinancing Potential } t = 1$

$\text{solvent}$

$\text{illiquidity}$

$\text{insolvent}$

$\text{Verification cost}$

Payoff of debt claim in $t = 2$

Face value

Verification cost

Tax revenue (normal regime)

Refinancing Potential $t = 1$

solvent

illiquidity

insolvent
"Straight Jacket" Commitment

Face value

Face value

0 0 1

Tax revenue (normal regime)

\[
\frac{1}{x}
\]

\[
\frac{1}{\tilde{x}}
\]
“Straight Jacket” Commitment

- Face value
- Tax revenue (normal regime)
- Refinancing Potential $t = 1$
- Solvent
- Insolvent
- Always liquidity

No liquidity problem
“Straight Jacket” Commitment

- ... but tax short-fall
- Needs to raise taxes/austerity: distortionary costs

\[ \frac{1}{x} \]

Tax revenue (normal regime) \( \bar{x} \)

Refinancing Potential \( t = 1 \)

Always liquidity

in catastrophe states

No liquidity problem
“Straight Jacket” Commitment

- Shortfall needs to be financed through
  - Austerity measures
  - Emergency tax hikes

\[ \tau(x - F) \]

- For very low realizations of \( \bar{x} \) these costs might go to infinity
“Costly” Commitment

- Default if austerity costs + repayment exceed $C + x$
  - Default if $\tau(x - F) + F > C + x$
Bailout Diabolic Loop

- Trigger: fiscal or financial

\[ \text{Sovereign debt risk} \]
\[ \text{Bailout cost} \]

A \rightarrow \text{Banks} \rightarrow L

- Sovereign debt
- Loans to economy
- Deposits
- Equity

Change in CDS Premia of Average Banks
Change in Sovereign CDS Premia
“Bank Hostage” Commitment

- Default if austerity costs + repayment exceed $C + x$
  - Default if $\tau(x - F) + F > C + x$
- Increase commitment costs $C$

\[ \frac{C}{x} \]

\[ \tau(x - F) \]

\[ C + x - F \]

\[ F \]

\[ 1/\bar{x} \]

\[ \bar{x} \]

\[ \text{default austerity} \]

\[ \text{default probability} \]

\[ \text{Lower default probability} \]
“Bank Hostage” Commitment

- Default if austerity costs + repayment exceed $C + x$
  - Default if $\tau(x - F) + F > C + x$

- Increase commitment costs $C$

- Lower default probability
- Lower verification cost
- Lower face value $F$
- Lower interest rate
“Bank Hostage” Commitment

- Default if austerity costs + repayment exceed $C + x$
  - Default if $\tau(x - F) + F > C + x$
- Increase commitment costs $C$

- Lower default probability
- Lower verification cost
- Lower face value $F$
- Lower interest rate

Again
- Lower default probability
“Bank Hostage” Commitment

- Default if austerity costs + repayment exceed $C + x$
  - Default if $\tau(x - F) + F > C + x$
- Increase commitment costs $C$

- Default prob ↓, but if: higher cost $C$ & higher austerity $\tau$
- “doubling up strategy”

- Lower default probability
- Lower verification cost
- Lower face value $F$
- Lower interest rate

Again
- Lower default probability
Credit Diabolic Loop: overturns argument

- Less lending to real economy

- GDP and tax revenue declines by $\tau \psi L_0$

![Diagram showing the Credit Diabolic Loop with arrows indicating the flow of economic variables such as sovereign debt, deposits, equity, economic growth, tax revenue, and bailout cost.]
Credit Diabolic Loop

- Default if austerity costs + repayment exceed $C + x$
  - Default if $\tau(x - F) + F > C + x$
- Increase commitment costs $C$

Lowers GDP, $x$
Credit Diabolic Loop

- Default if austerity costs + repayment exceed $C + x$
  - Default if $\tau(x - F) + F > C + x$
- Increase commitment costs $C$

$\tau(x - F)$

$Lowers GDP, x$
$\Rightarrow$ Default probability rises

$C + x - F$

default
austerity

$F$

$\frac{1}{x}$

$1/x$

$x$
Credit Diabolic Loop

- Default if austerity costs + repayment exceed $C + x$
  - Default if $\tau(x - F) + F > C + x$
- Increase commitment costs $C$

- Lowers GDP, $x$
- Default probability rises
- Verification costs rise
- Face value $F$ rises
- Interest rate rises
Credit Diabolic Loop

- Default if austerity costs + repayment exceed \( C + x \)
  - Default if \( \tau (x - F) + F > C + x \)
- Increase commitment costs \( C \)

- 2\(^{nd}\) “Credit/GDP Diabolic Loop” can undo all the benefits
  - Bank hostage is not even a doubling up strategy
“Bank Hostage” Commitment

- Extremely high commitment cost \( C \) due financial dominance
  - “straight jacket commitment”

- Reduces illiquidity problems

- Lower default prob., lower interest rate, but if failure then much worse “doubling up strategy”

- &... but 2\textsuperscript{nd} Diabolic Loop goes in opposite direction

- No safety valve
The two “safe asset challenges”

- **Challenge 1:**
  Safe asset + sovereign debt restructuring w/o diabolic loop
  - French
  - IMF/Anglo-American/German

- **Challenge 2:**
  No asymmetrically supplied safe asset
  - German Bund
Cross-border flight to safety

- Today: asymmetric shifts across borders
  - Value of German debt increases
    - German CDS spread rises, but yield on bund drops (flight to quality)
  - Value of Italian/Spanish/Greek... sovereign debt declines
Solution: ESBies

- **Today:** asymmetric shifts across borders
  - Value of German debt increases
    - German CDS spread rises, but yield on bund drops (flight to quality)
  - Value of Italian/Spanish/Greek... sovereign debt declines

- **With ESBies:** Negative co-movement across tranches
  - Value of ESBies expands – due to flight to quality
  - Value of Junior bond shrinks – due to increased risk
  - Asset side is more stable
Maastricht’s Ghost: Fiscal & Monetary

1. Discretion
   “French”
   1. Rules
2. Solidarity
   • Fiscal union
   • Illusion of default free bonds
   • Eurobonds with joint liability
   “German”
   Liability
   No-bailout clause/rule
   SDRM/insolvency procedure
   (ESBies) without joint liability
3. Liquidity/contagion
   “Rhine-divide”

4. Keynesian Stimulus
   Demand
   • Output gap
   • Reforms in boom
   “Rhine-divide”
   Solvency
   Austerity/Reform
   Supply
   unsustainable credit boom
   Reform in crisis (political economy)
Maastricht’s Stepchild: Financial

5. Bailout banks
   illiquidity

“French”

6. No default illusion

zero risk weights
   diabolic loop as straight
   jacket commitment
   “banks as hostage”

“Rhine-divide”

“German”

Bail-in
   insolvency

Debt restructuring

positive Basel risk weights
   avoid diabolic loop
   with sufficient equity
Conclusion – policy implications

- Transfers without Politics: Insurance as a way of making automatic stabilizers?
  - The insurance principle and predictability
  - Support and solidarity need to be credible, i.e. based on consistent rules

- Sovereign Debt restructuring mechanism for Europe

- ESBies as safe asset for Europe
  - Without default risk
  - Without joint liability

- Break diabolic loop

- European Banking charter
  - Tax revenue for European budget
  - European bailout