

Hyman P. Minsky Summer International Conference

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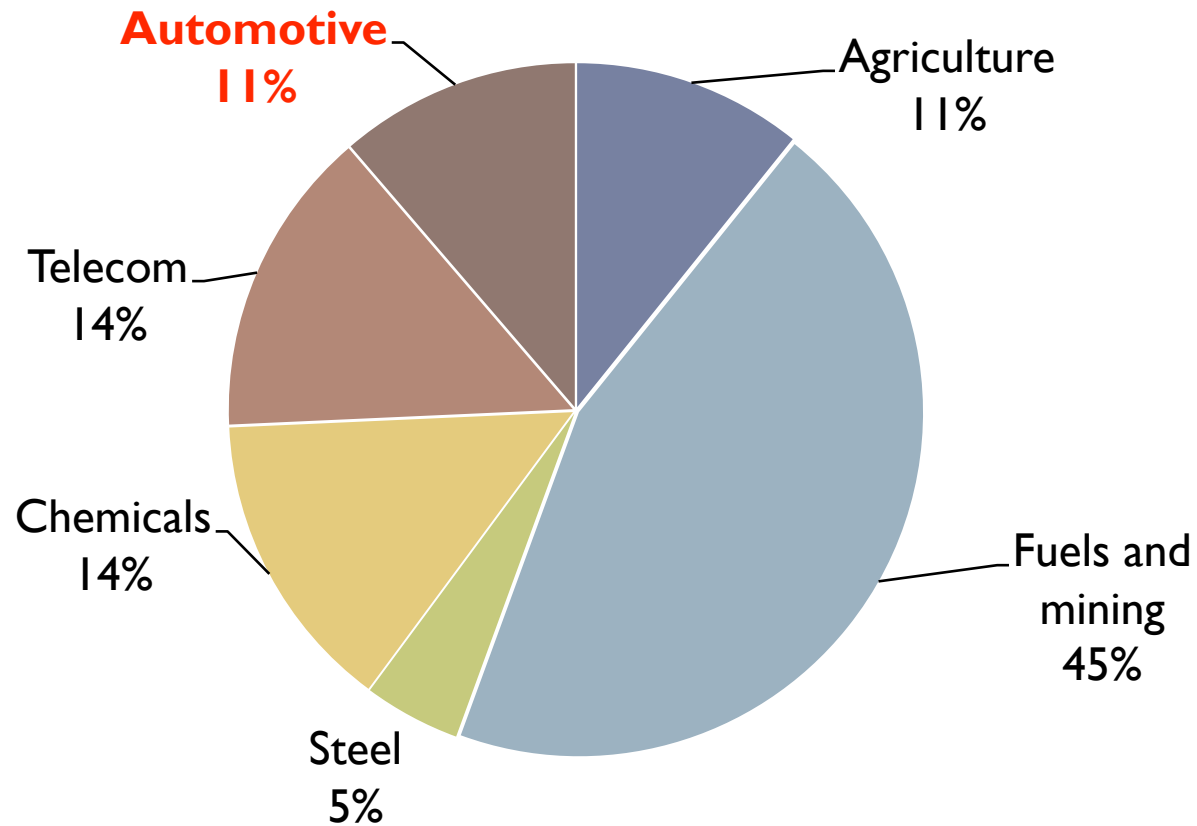
Financial fragility in the automotive sector: is the French automotive sector "Ponzi" in the sense of Minsky?

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Introduction: context

- ▶ **From the financial crisis to the economic crisis**
 - ▶ All industrial sectors have been affected
 - ▶ A particularly affected sector: the automotive industry
- ▶ **The automotive industry crisis has been particularly discussed**
 - ▶ Difficulties anterior to the financial crisis
 - ▶ Economically and politically sensitive : "*too big to fail*"
 - ▶ concentration / very large companies
 - ▶ large amounts involved in public help
 - ▶ huge economic stake * (OECD : 2.5% of GDP, 1% of employment, 11% of the world exports, 14% of private research in France)

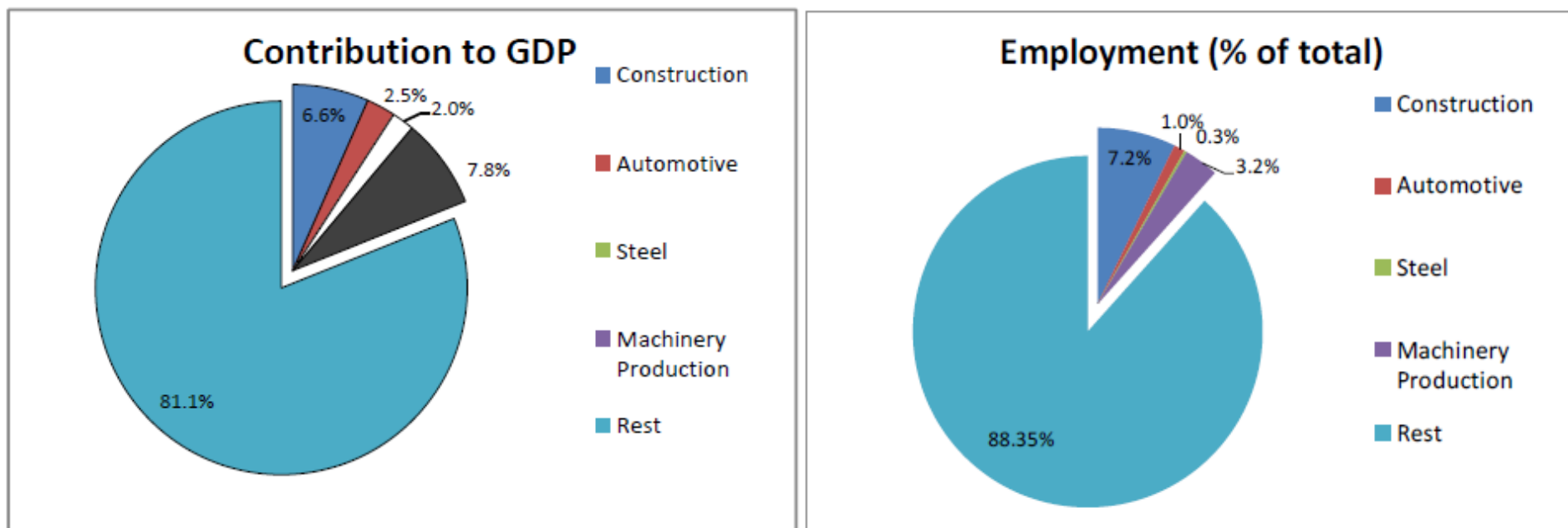
Shares of automobile in World trade (2007)



Source: WTO 2008.



Shares of OECD GDP and employment (2007 or latest available)



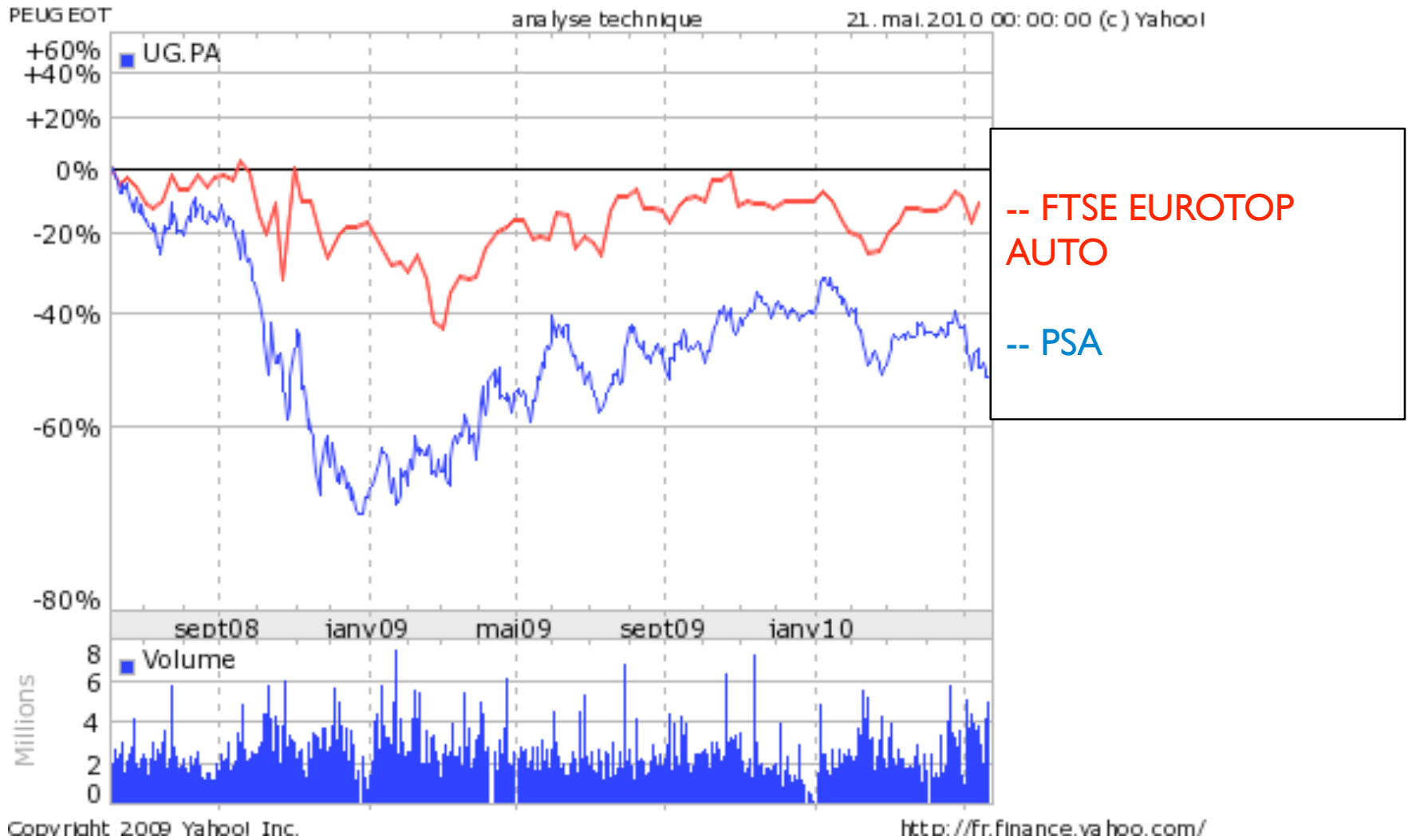
Source: OECD STAN Database.

Introduction (2)

Some key observations

- ▶ Stock prices krach
- ▶ Drop in Sales
- ▶ Decreasing / negative operating results

Crisis impact : Stock price





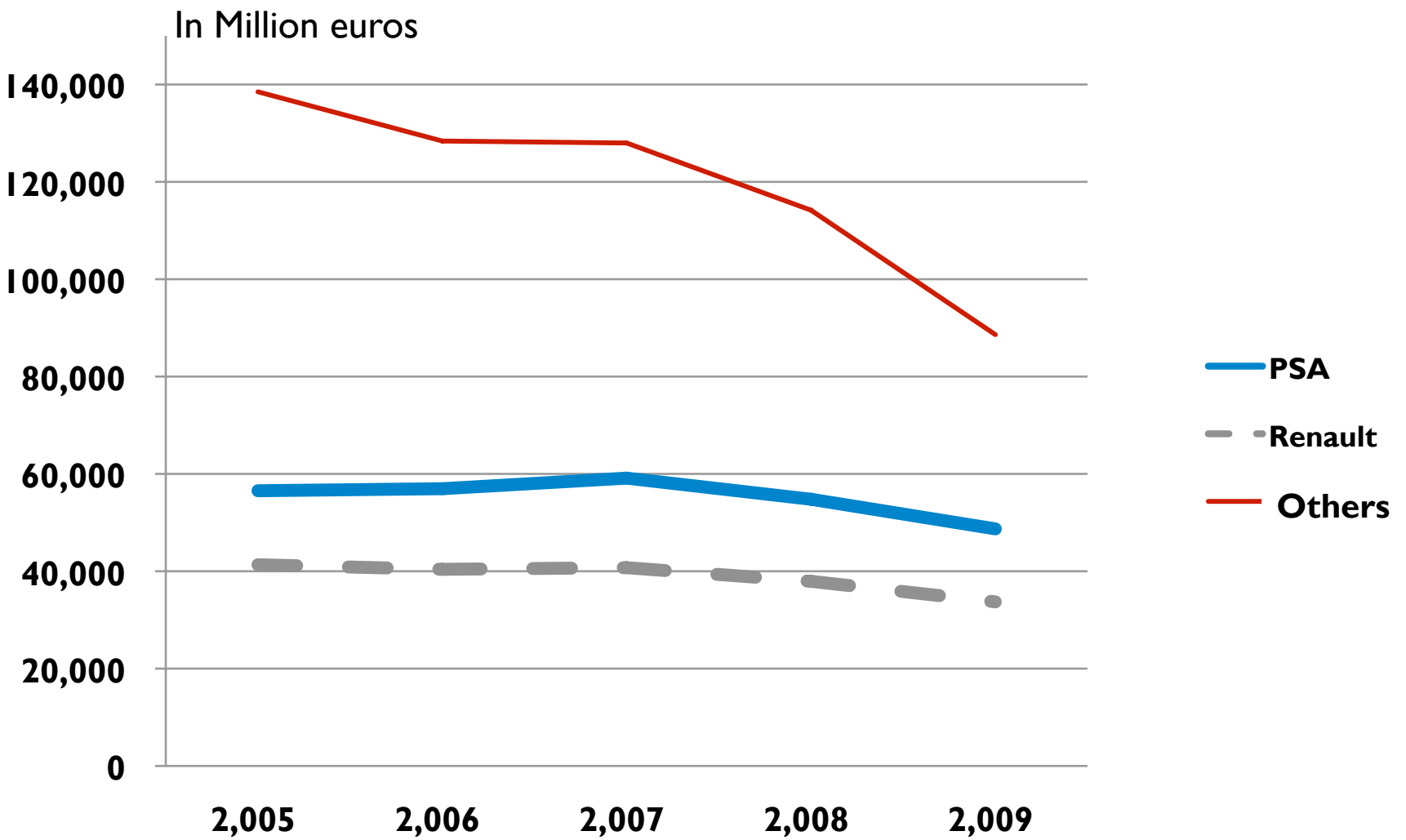
Crisis impact : Stock price



Source : www.boursorama.com



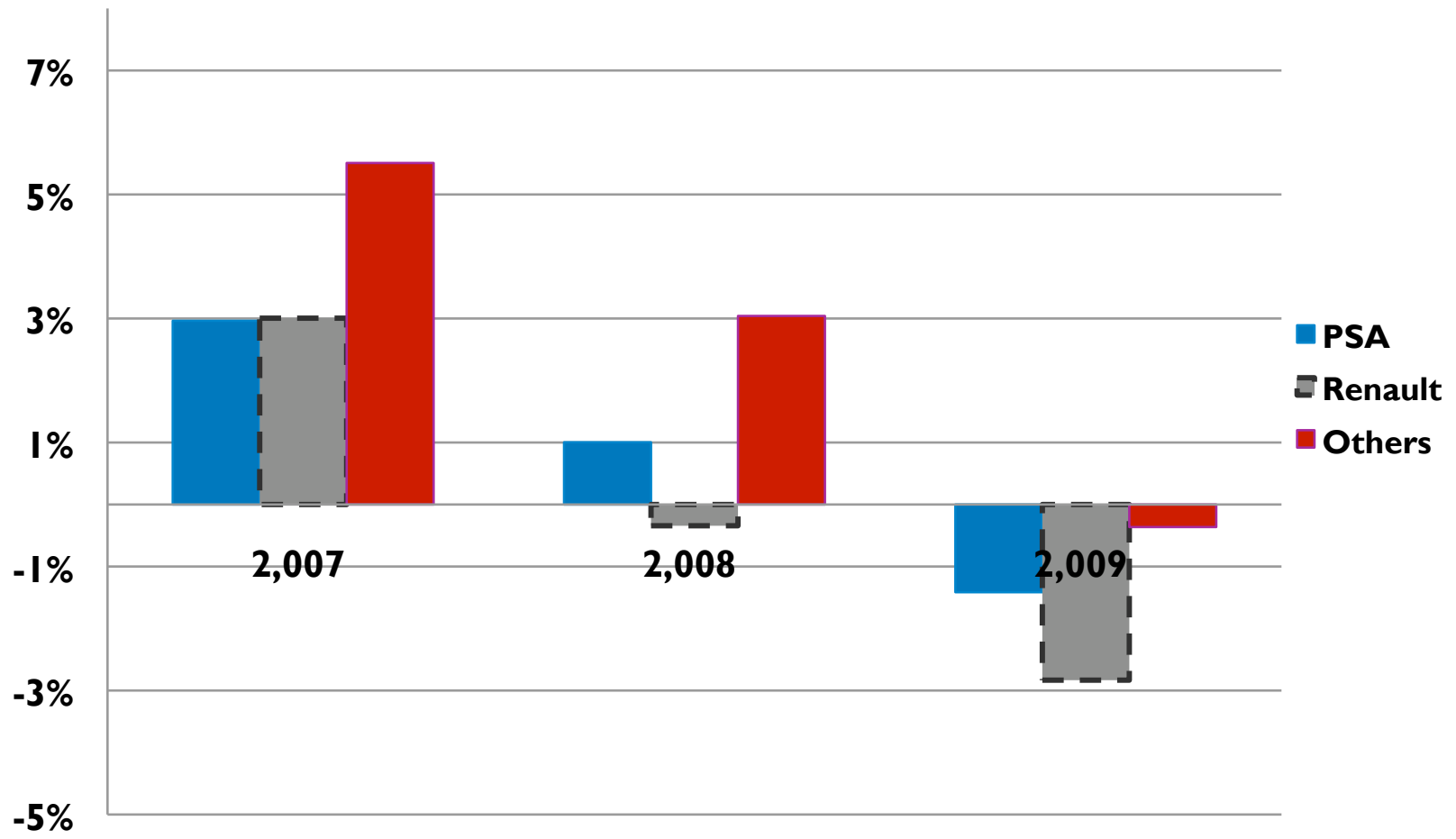
Crisis impact : Drop in sales





Crisis impact : Loss of profitability

Profit margin growth rate



Introduction (2)

Some key observations

- ▶ Stock prices krach
- ▶ Drop in Sales
- ▶ Decreasing / negative operating results
- ▶ **Large scale public help** : vehicle scrapping schemes, investment in green technology, low interest loans (only in France)

Research question

=> *A paradoxal French case?*



- ▶ Crisis effect significant and important on automotive sector's sales for all countries except France
- ▶ Lower drop in Sales' growth in France than in the rest of the OECD



- ▶ Stock price more severely affected
- ▶ Deeper drop in operating profit
- ▶ Specific public help schemes (LLR)

The automotive industry in the crisis : a French case ?

Literature review

Causes :

- ▶ Structural causes => in difficulty for several years
 - ▶ OECD overcapacity / saturated markets
 - ▶ Huge fixed capital and labour costs, High debt burden, High pension and health commitments (US)
- ▶ Global crisis effects
 - ▶ Sector specific: Rise in oil prices up to mid-2008
 - ▶ Economic crisis: unemployment, consumption drop
 - ▶ Financial crisis: tightening credit conditions

The automotive industry in the crisis : a French case ?

Litterature review

Crisis effect	Explanatory power		Reference
	OECD countries (except France)	France	
Oil Price <i>In sales growth</i>	Stastically significant ; impact lower than expected		OCDE (2009 a)
Revenue effect <i>In sales growth</i>	Stastically significant ; impact lower than expected		OCDE (2009 a)
<i>car sales / private consumption correlation coeff.</i>	raising or stable	Decreasing	OECD (2009b)
Credit tightening <i>effectiveness</i>	significant	significant	Guichard, Haugh, Turner (2009)
<i>In sales growth</i>	Significant; important (80%)	Non significant	OECD (2009a)

Proposal

- ▶ Hypothesis : an effect of the rising financial activity within the automobile industry
 - ▶ From a car manufacturer to a Bank - specificity of the French case
- ▶ An analysis following Minsky's Financial Instability Hypothesis
- ▶ "Big 6" car manufacturers (OECD) + Renault
(GM – data available till 2008, Ford, Toyota, Daimler, VAG, PSA)

Analysis

Theoretical framework : Minsky's instability hypothesis

- ▶ Hedge / Speculative / Ponzi finance
 - ▶ Cyclical increase in the portion of speculative finance
 - ▶ Endogenous rise in interest rate & liquidity crisis
 - ▶ Speculative entities become Ponzi / default
 - ▶ Self – fulfilling crisis, towards cumulative debt deflation

- ▶ Required solutions
 - ▶ Big Bank : prudential supervision & LLR
 - ▶ Big Government : public investment
 - ▶ Institutional reforms

Analysis

Speculative/ponzi criteria assessment

Criteria : the functioning of the entity relies upon its capacity to roll over debt

Assesment :

- ▶ **Liquidity principle** (Minsky, 1986, 1992)
 - ▶ Hedge : $CFO > i + D \text{ repayment}$ \Rightarrow *no liquidity risk*
 - ▶ Speculative : $D \text{ repayment} + i > CFO > i$
 \Rightarrow *roll over debt / sensitive to liquidity shortage*
 - ▶ Ponzi : $i > CFO$ \Rightarrow *increase in debt till default*
- ▶ **Potentially speculative** (Arestis & Glickman, 1999)
 - ▶ Sensitive to liquidity shortage
Currency & maturity mismatch

Results

a/ Relevance of the hypothesis : a change in business model in French automobile sector

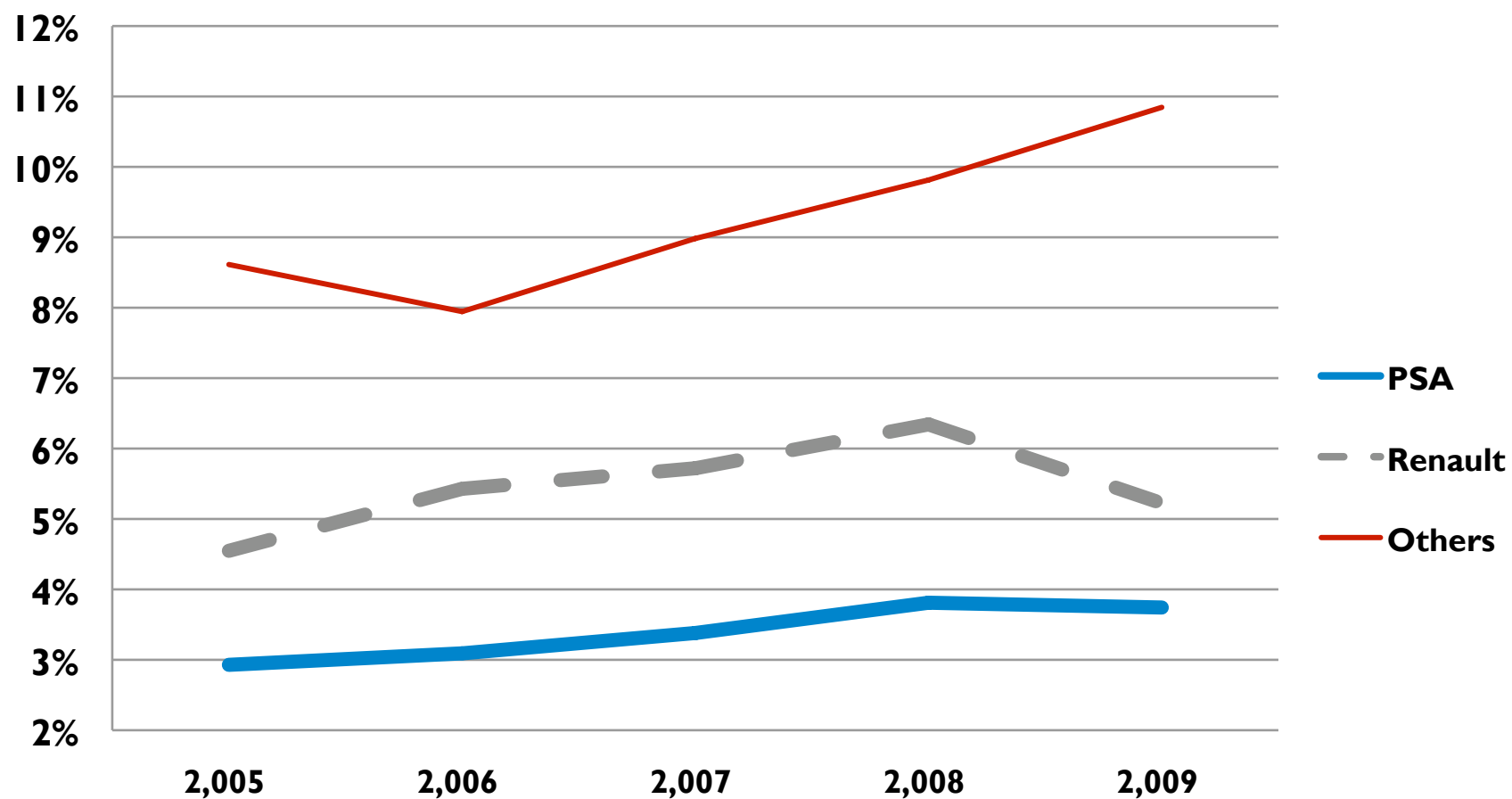
Characteristics of automotive financial divisions

- ▶ Development of the credit activity of automotive's financial subsidiaries : a still going on process
- ▶ Bank status : a specific French situation

Dependency upon the Banking activity :

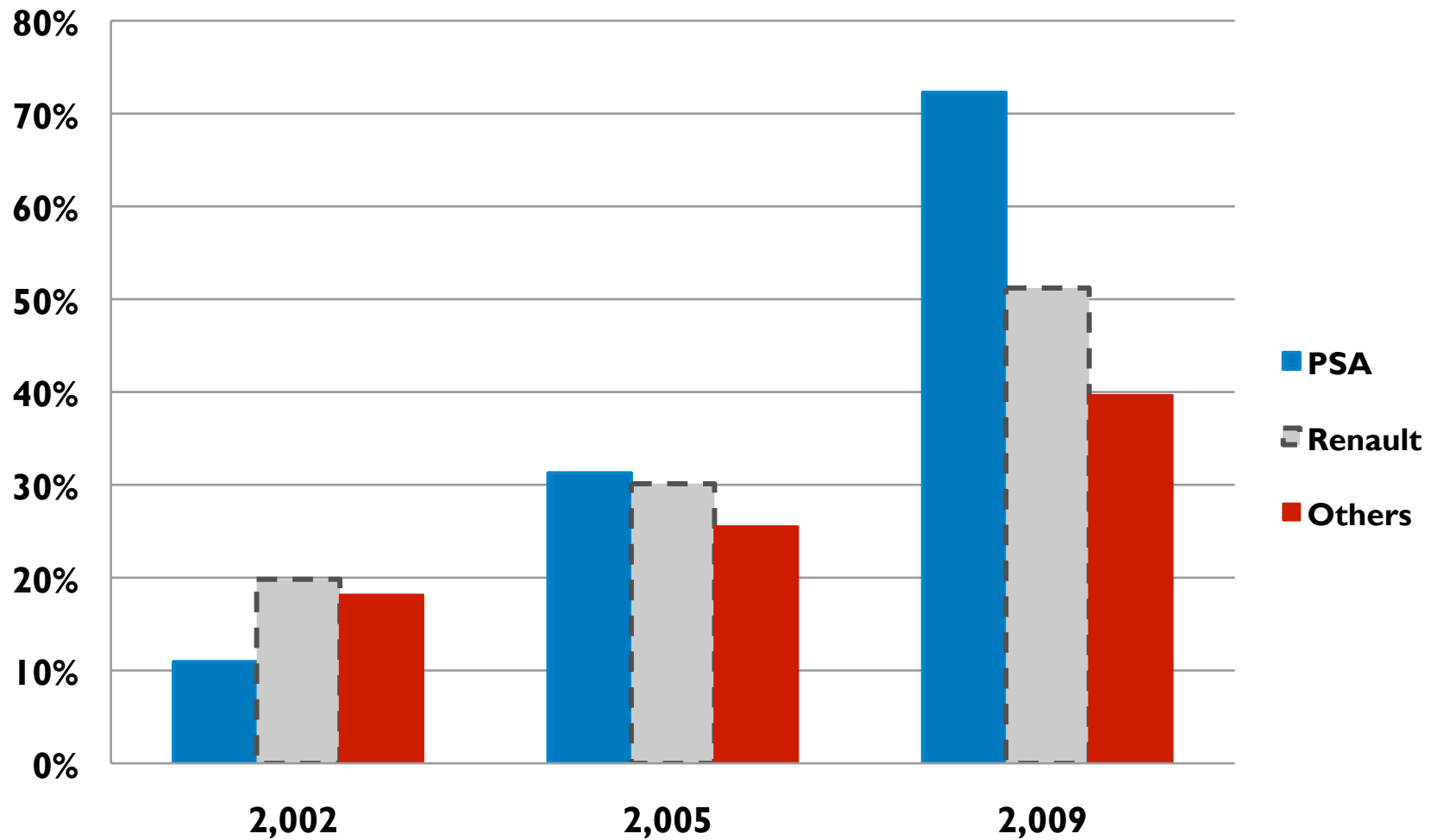
- ▶ A growing weight of financial activity in sales and op. profit *

Weight of the Banking activity in Sales





Weight of the Banking activity in Operating profit



Results

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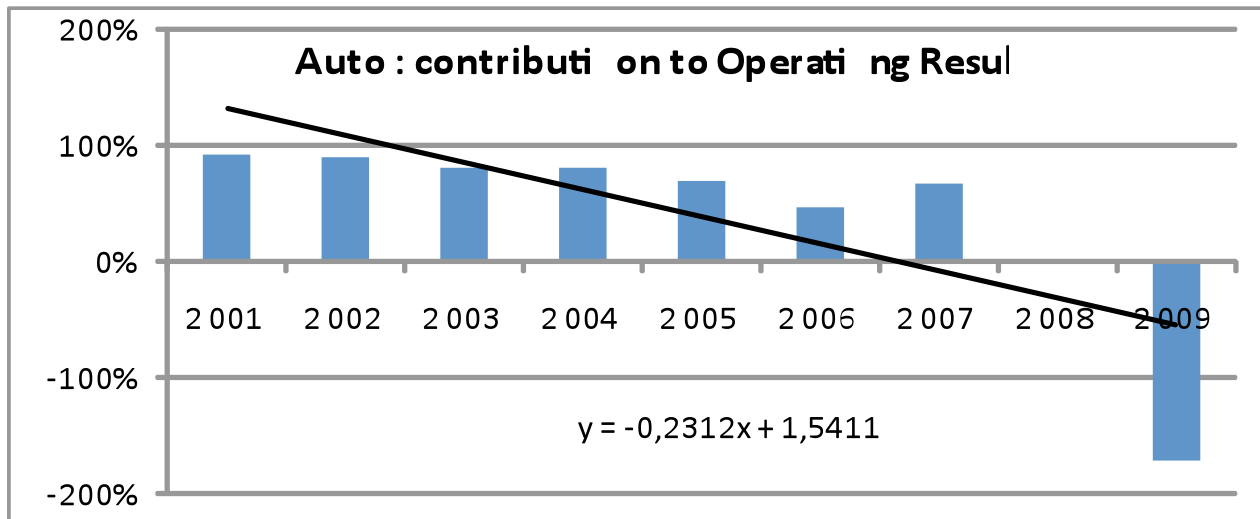
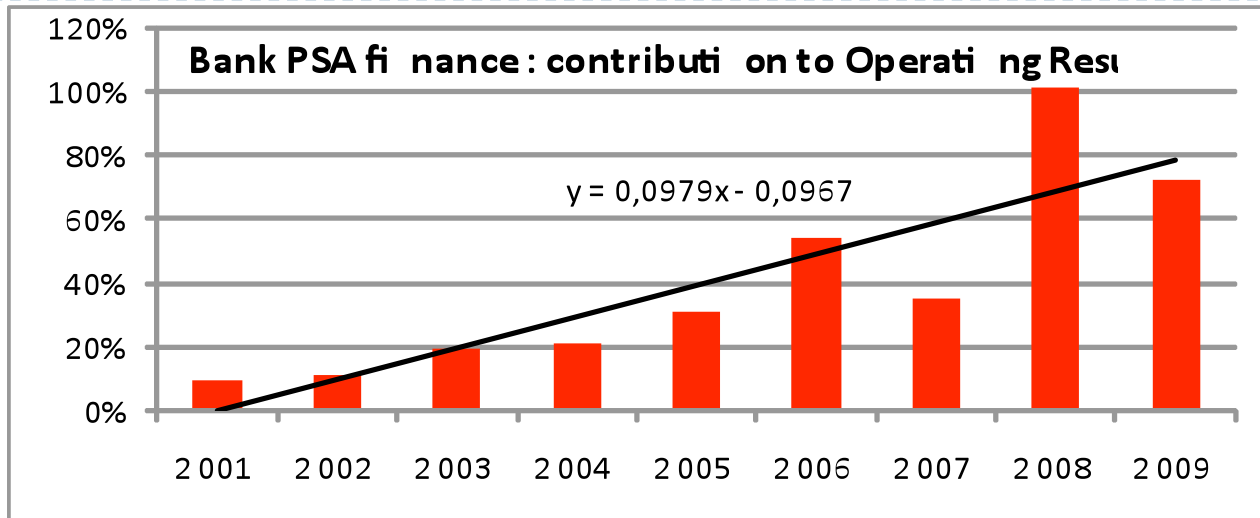
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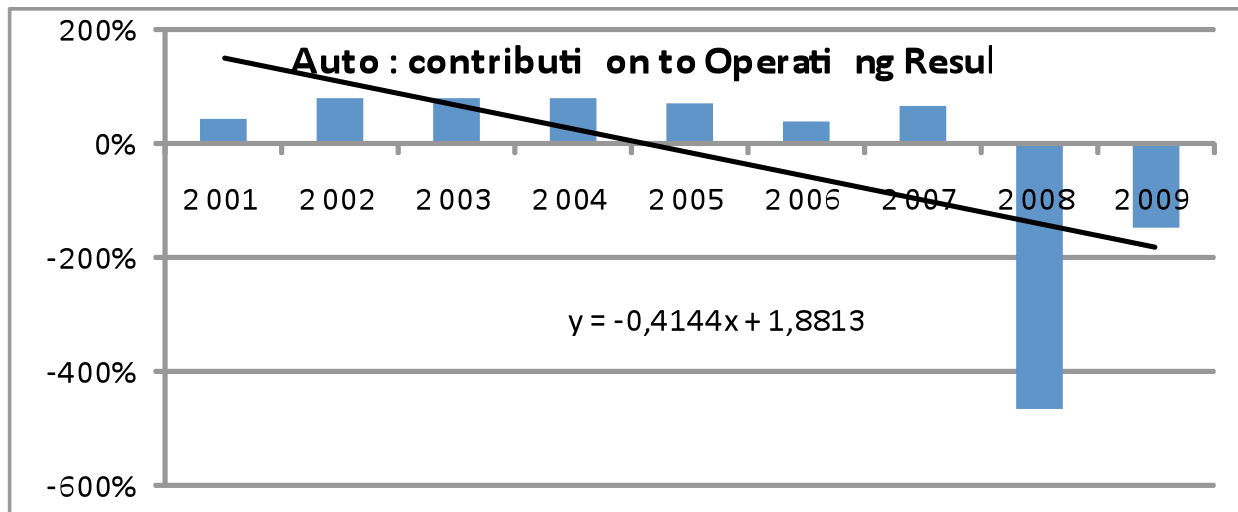
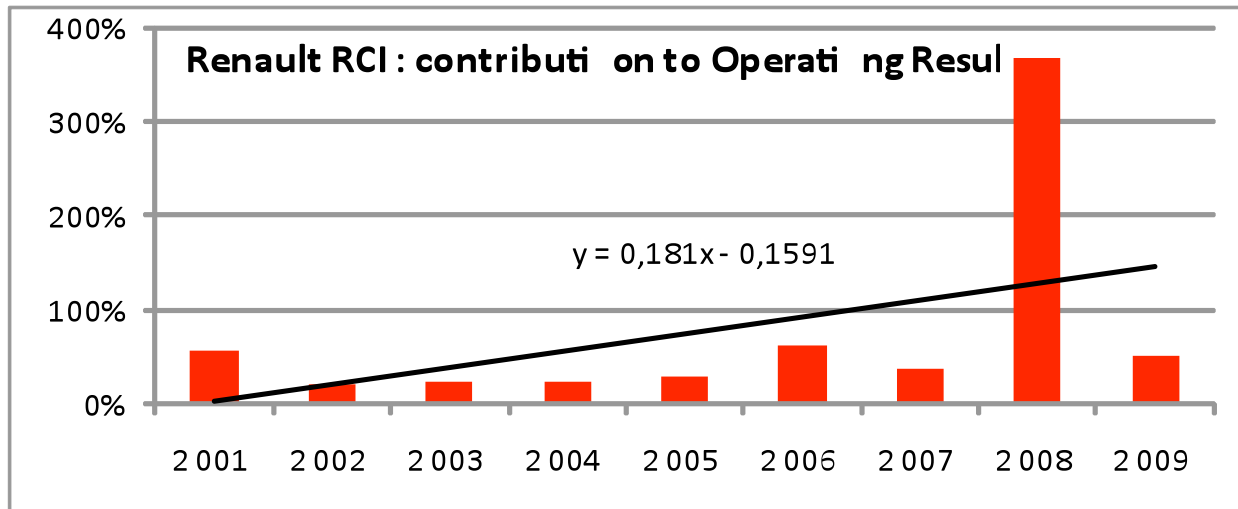
- ▶ A growing weight of financial activity in sales and op. profit *
- ▶ Dependency of the firm's revenues * ?
 - ▶ On Sales => non significant
 - ▶ On Operating result => strong dependency since 2006 for French companies

Dependency of the Banking activity in PSA's Operating profit





Dependency of the Banking activity in Renault's Operating profit



Results

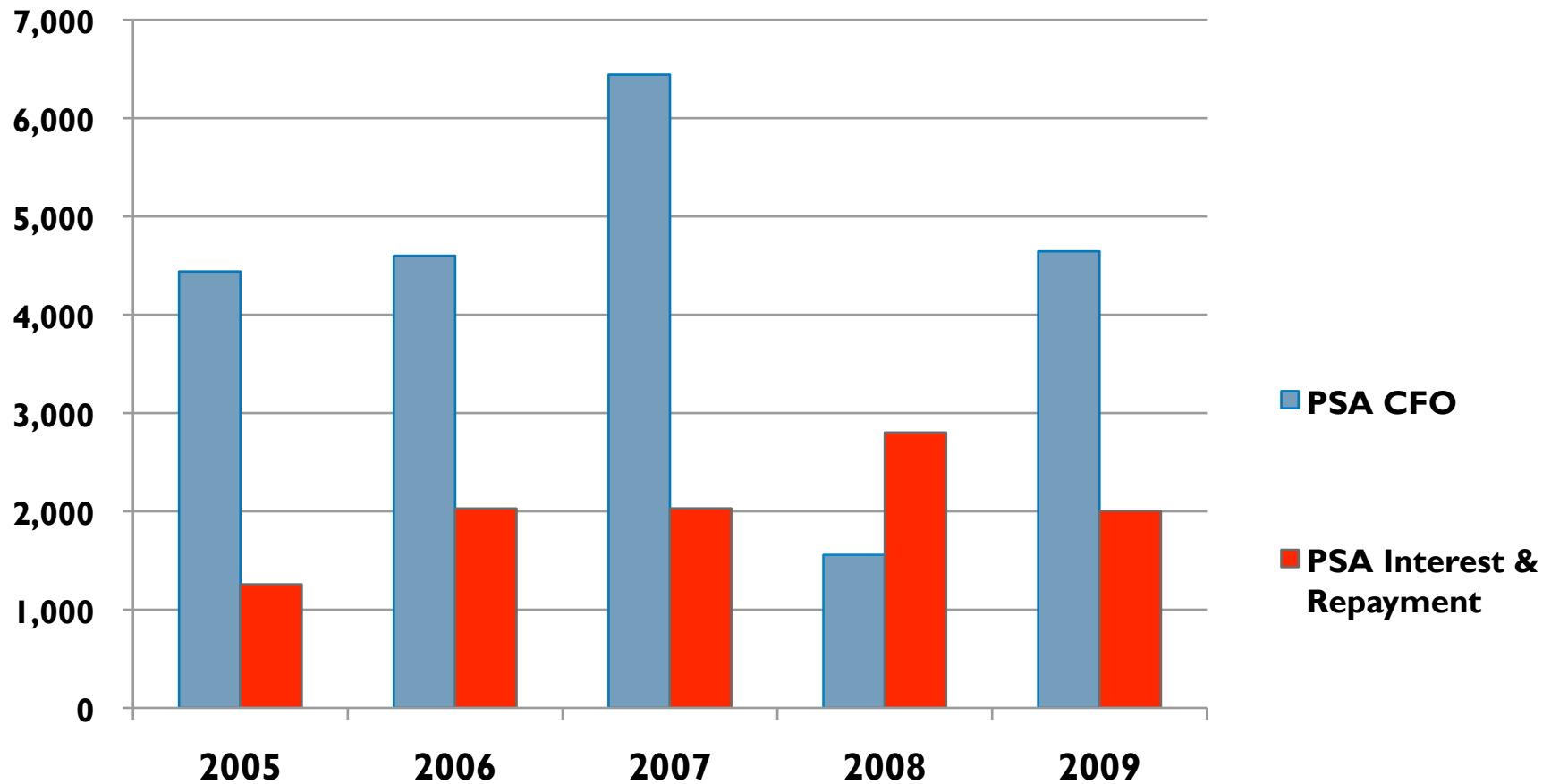
*b/ French banking subsidiaries :
Speculative / ponzi?*

- ▶ Liquidity : No convincing a priori Speculative situation
 - ▶ CFO > i+D till 2008 ; Ponzi in 2008 , yet temporary *

"a priori speculative"?

PSA : Cash from Operation / Interest expenses & Repayment in capital

Millions euros

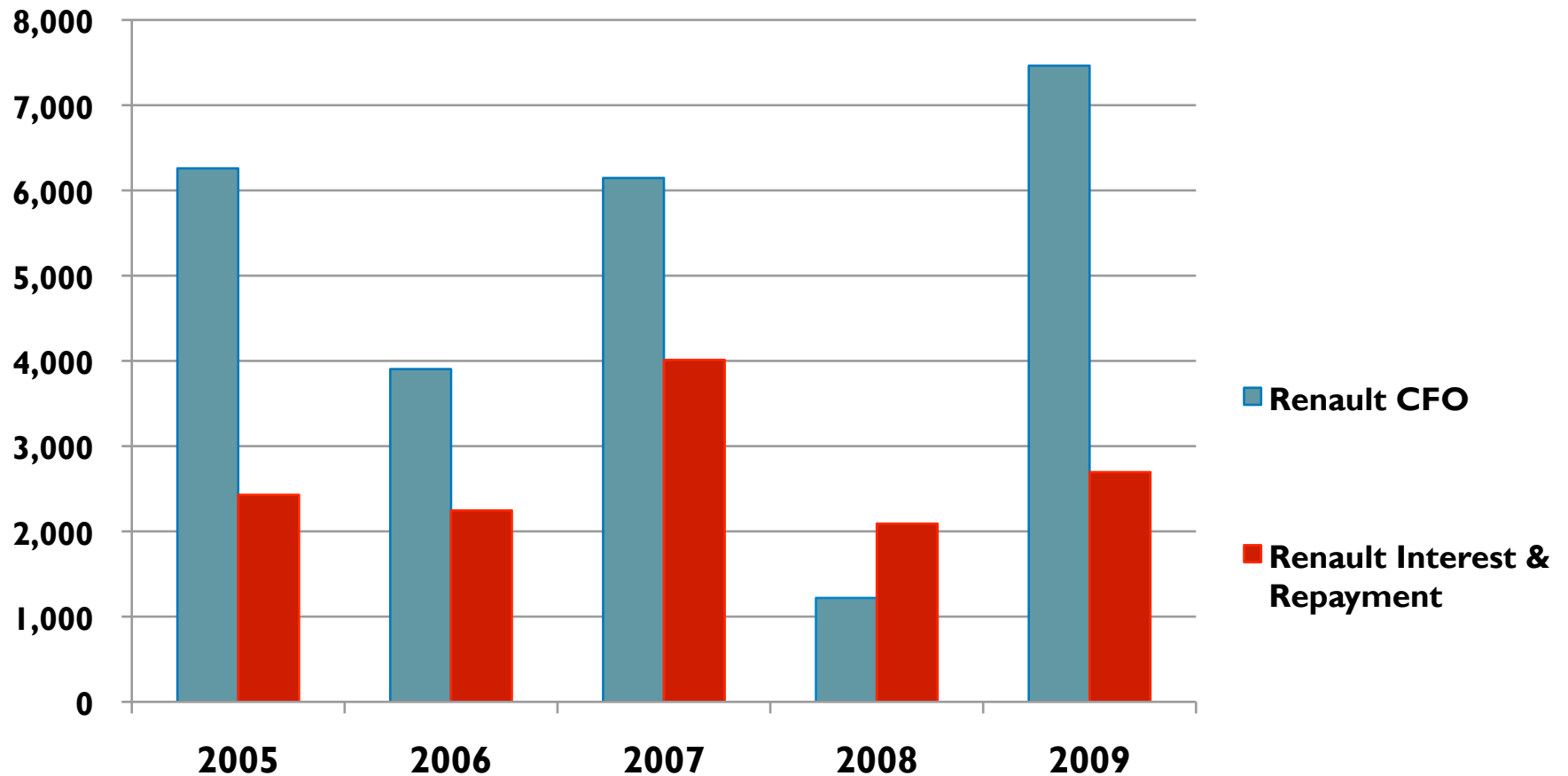




"a priori speculative"?

Renault : Cash from Operation / Interest expenses & Repayment in capital

Millions euros



Results

*b/ French banking subsidiaries :
Speculative / ponzi?*

- ▶ Liquidity : No convincing a priori Speculative situation
 - ▶ CFO > i+D till 2008 ; Ponzi in 2008 , yet temporary *
- ▶ "Potentially" Ponzi ?
 - ▶ No maturity mismatch in the bank division
 - ▶ Limited currency mismatch + Systematic hedging

Results

*b/ French banking subsidiaries :
Speculative / ponzi?*

- ▶ YET :
 - ▶ Functioning of the activity depends on the banking activity
 - very strong dependency of Op Profit to the banking activity (credit production)
 - ▶ Specific sensitivity to market liquidity
 - Refinancing cost depending upon rating
 - Securitization of Banking financing

=> Sensitivity to market's liquidity shortage

=> A specific form of "potentially speculative" financing

Concluding remarks

- ▶ A sector particularly hit by the crisis, but a specific French case
 - ▶ Financialisation of the whole sector
 - ▶ the French situation : a specific form of potentially speculative situation "*à la*" Minsky
- ▶ Political economy implications
 - ▶ Complementary justification to the French public intervention as LLR
 - ▶ Regulation of non financial companies involved in financial activity (credit creation, securitization)
- ▶ Future research development
 - ▶ Quantitative assesment of the liquidity crisis effect on CF/ Profit : reshaping OECD (2009a) model

Main references

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