

*Hyman P. Minsky Summer International Conference*

*Levy Economics Institute of Bard College, Annandale-on-Hudson, New York*

*June 27–29, 2010*

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

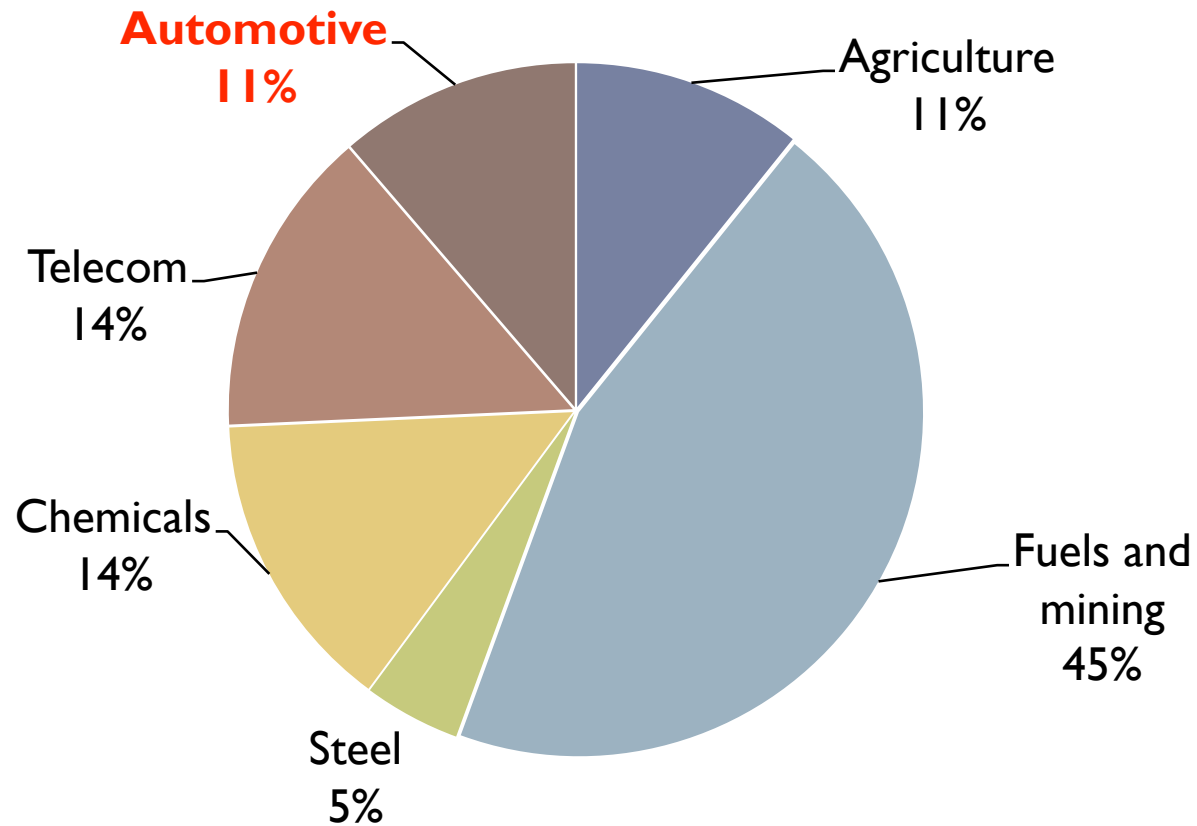
**Marie-Pierre JACQUIN & Christine SINAPI**, Burgundy School of Business

# Introduction: context

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- ▶ **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)

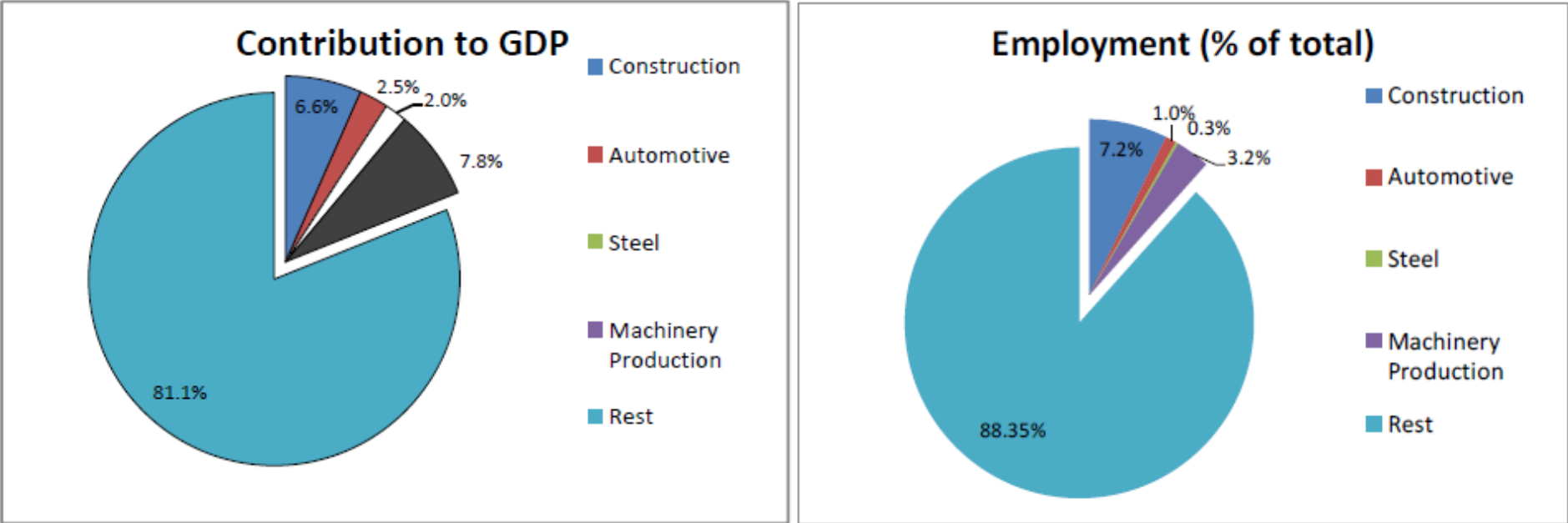
## Shares of automobile in World trade (2007)



Source: WTO 2008.



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



Source: OECD STAN Database.

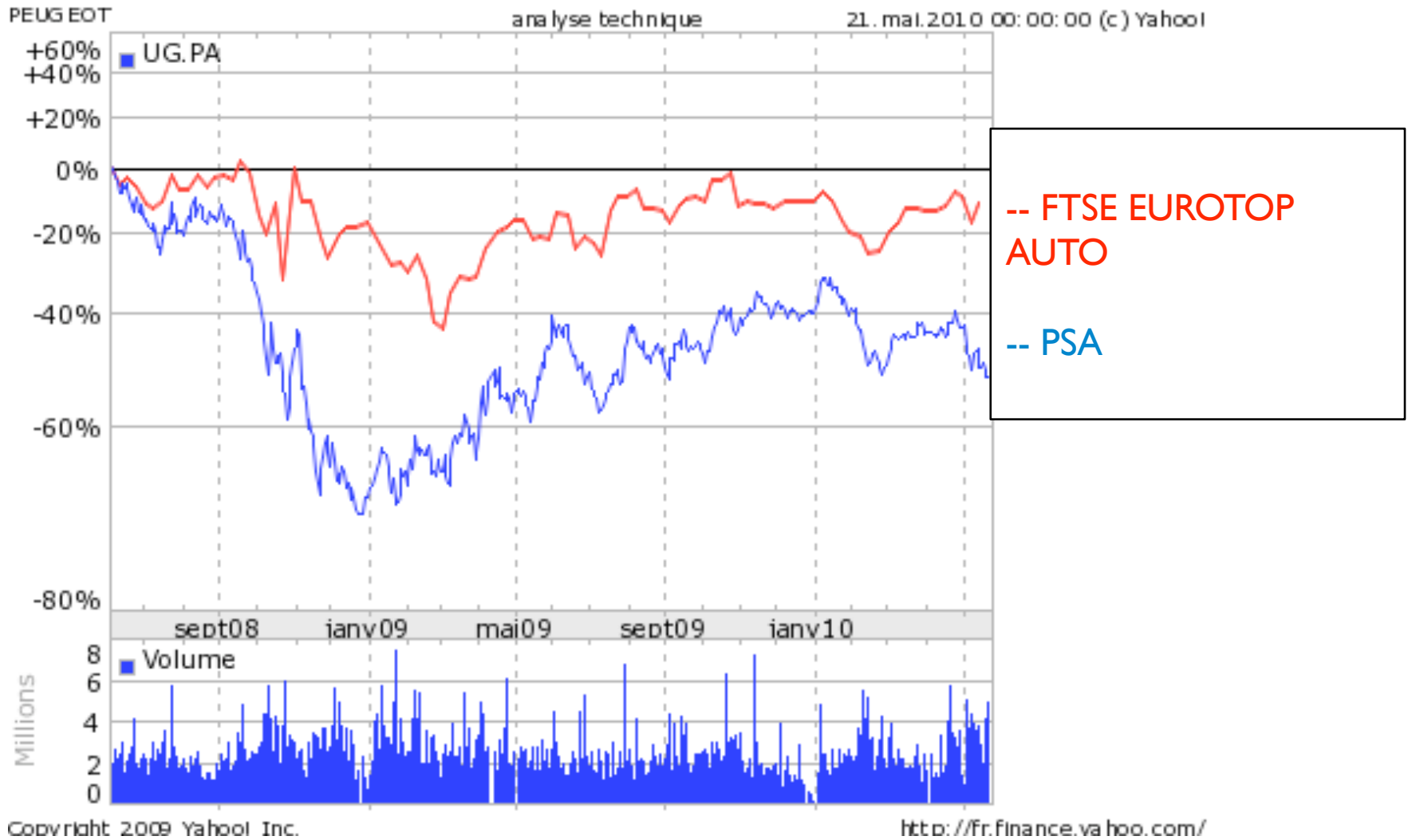
# Introduction (2)

## *Some key observations*

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

# Crisis impact : Stock price





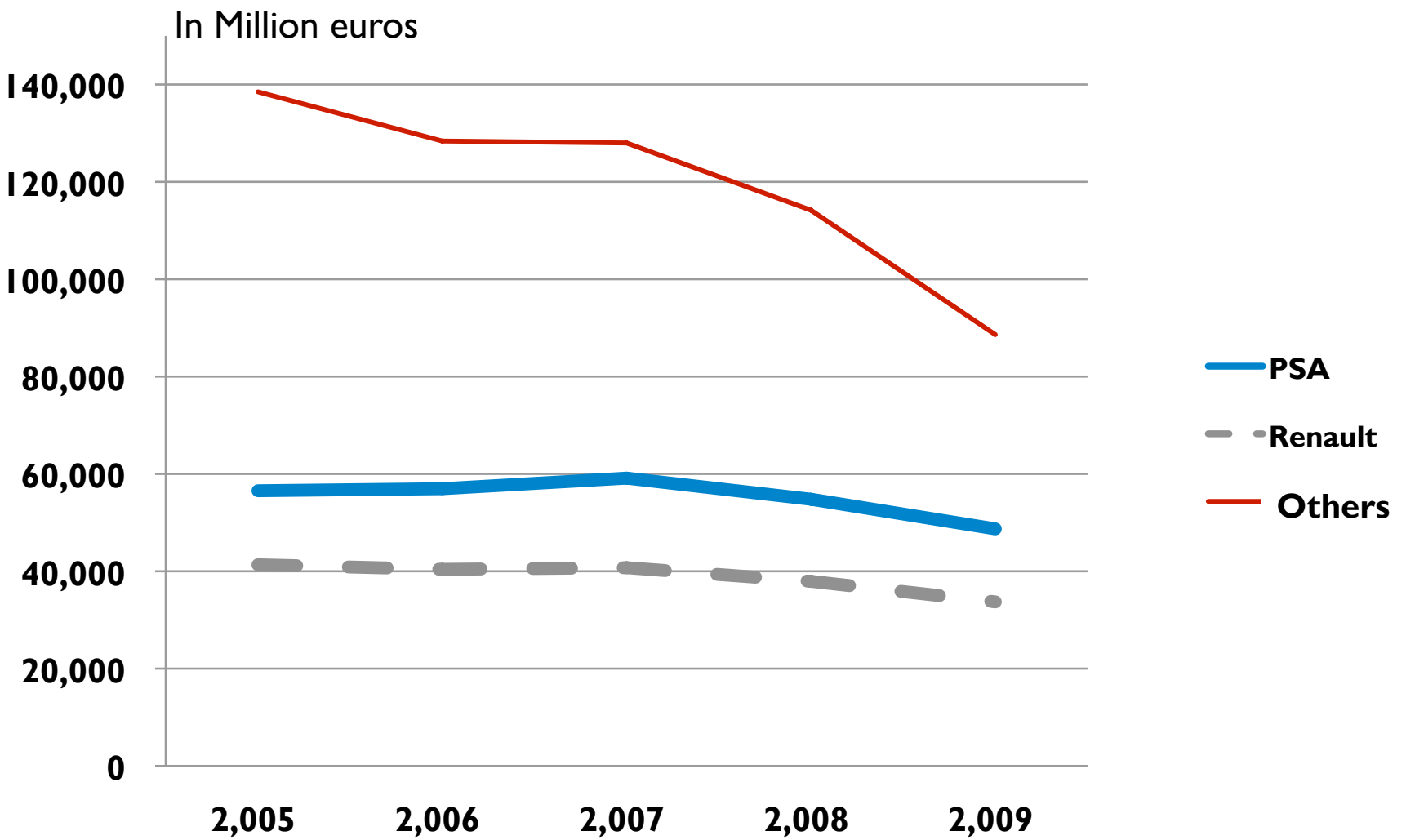
# Crisis impact : Stock price



Source : [www.boursorama.com](http://www.boursorama.com)



# Crisis impact : Drop in sales

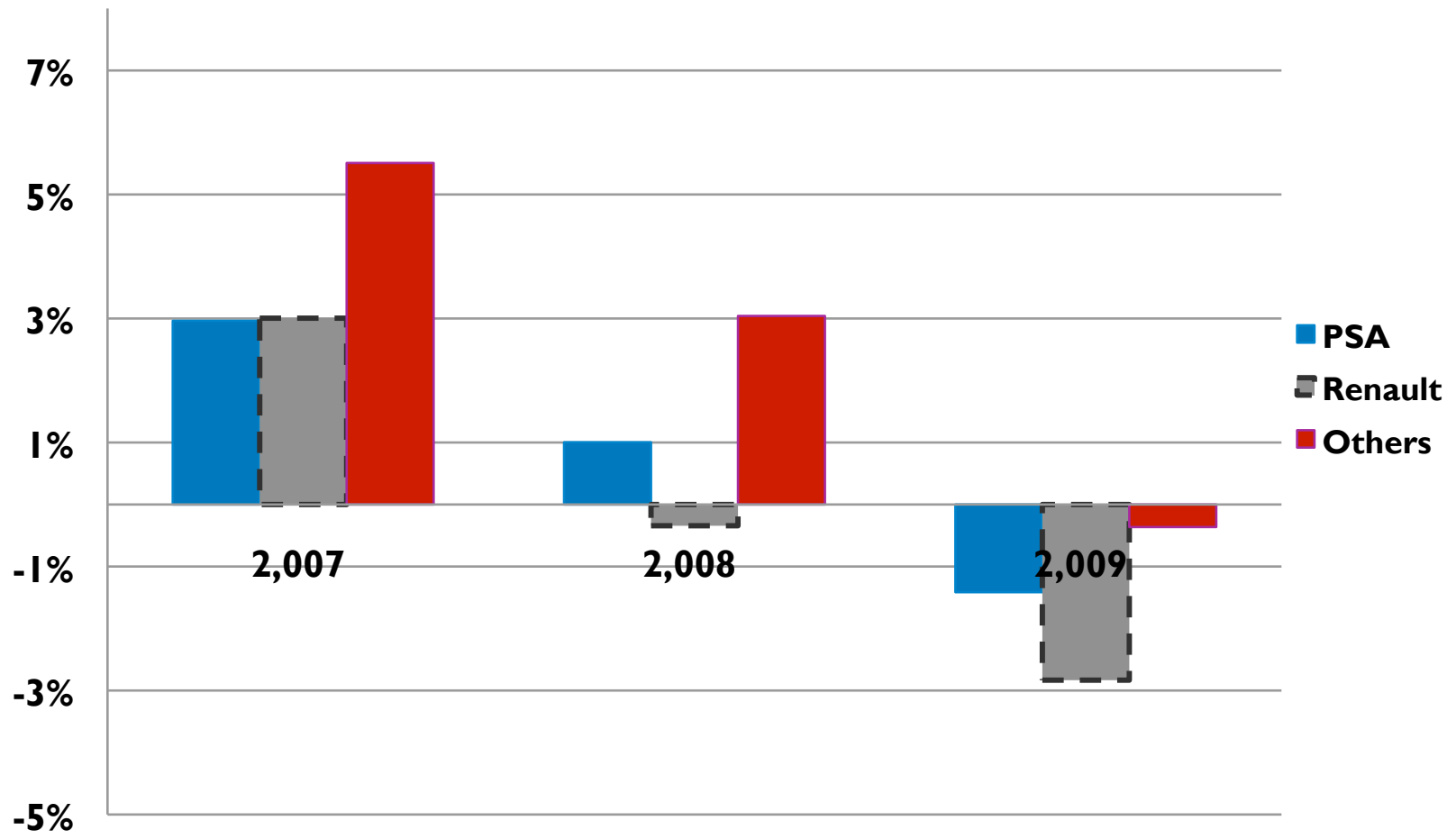






# Crisis impact : Loss of profitability

Profit margin growth rate



# Introduction (2)

## *Some key observations*

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- ▶ 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

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=> *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 ?

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## *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

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- ▶ 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

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## *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*

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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

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

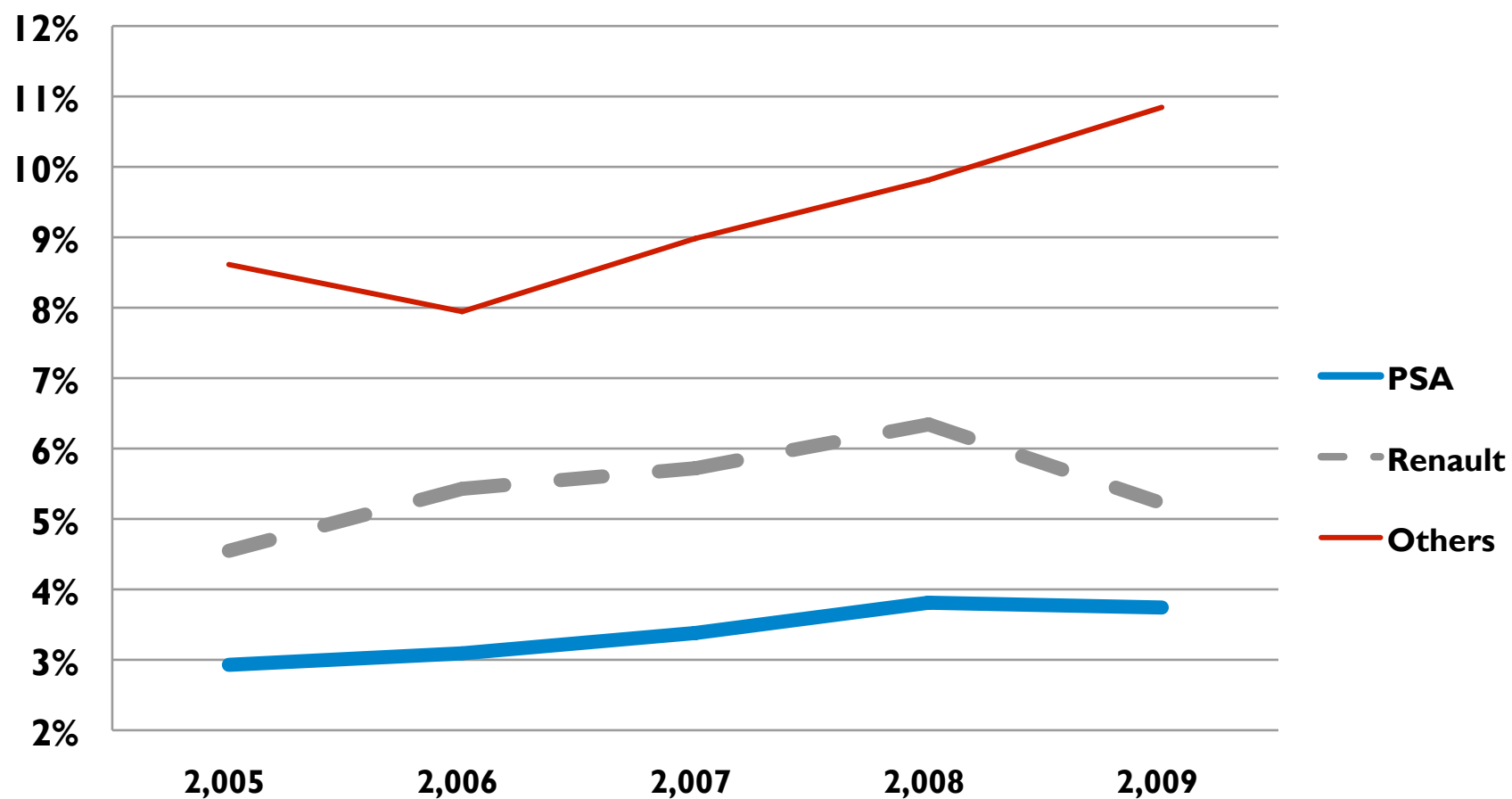
## Characteristics of automotive financial divisions

- ▶ 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 :

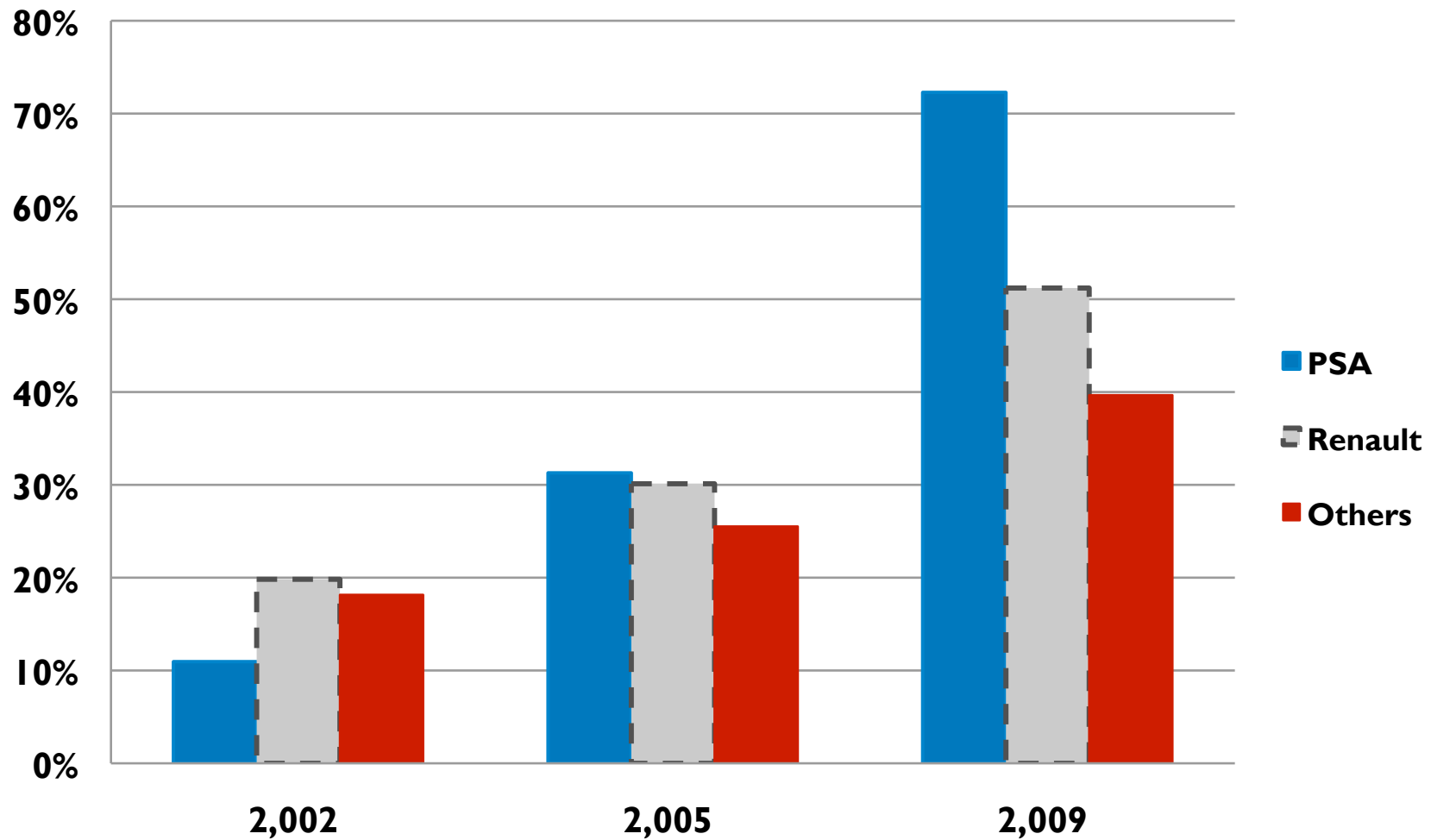
- ▶ A growing weight of financial activity in sales and op. profit \*

# Weight of the Banking activity in Sales





# Weight of the Banking activity in Operating profit



# Results

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

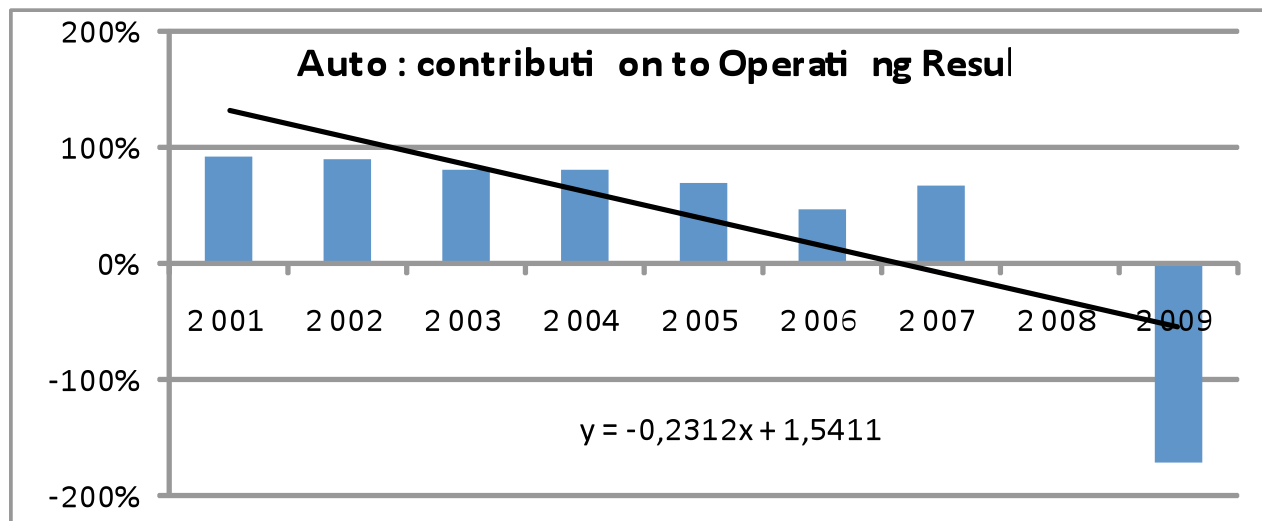
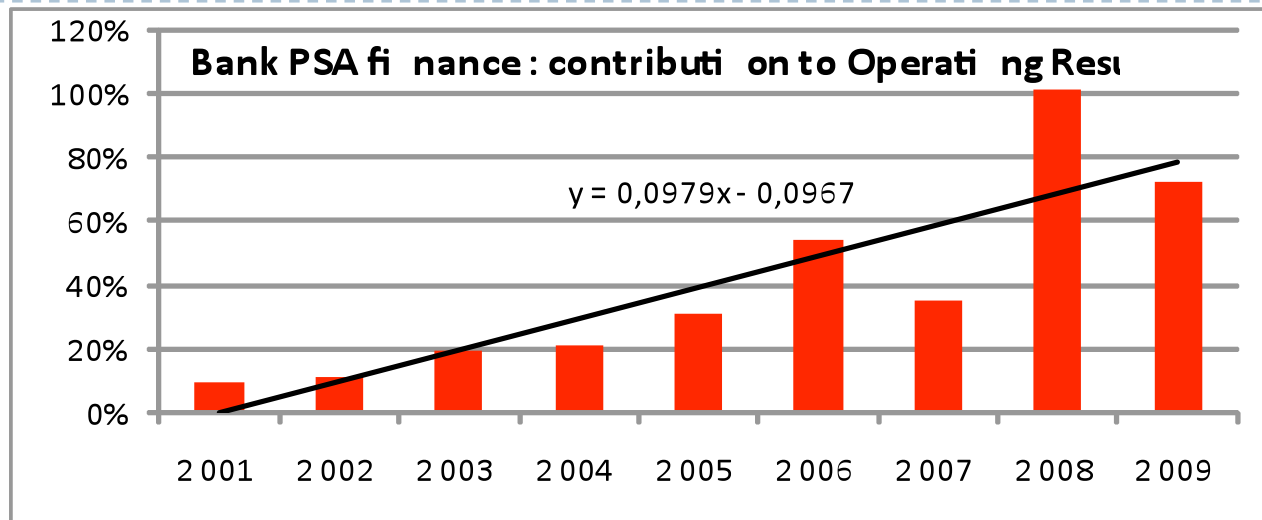
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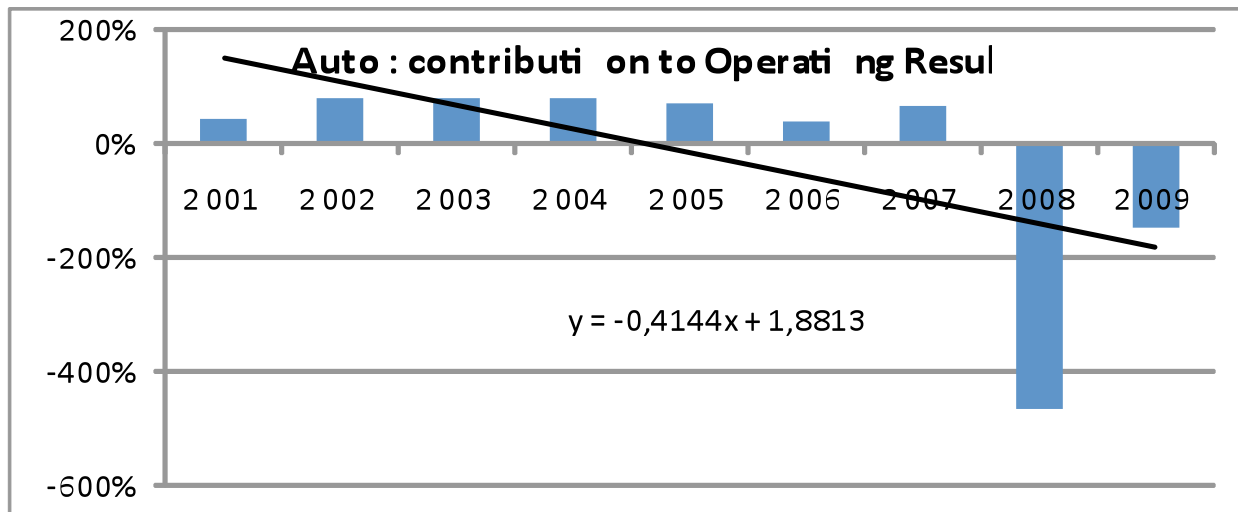
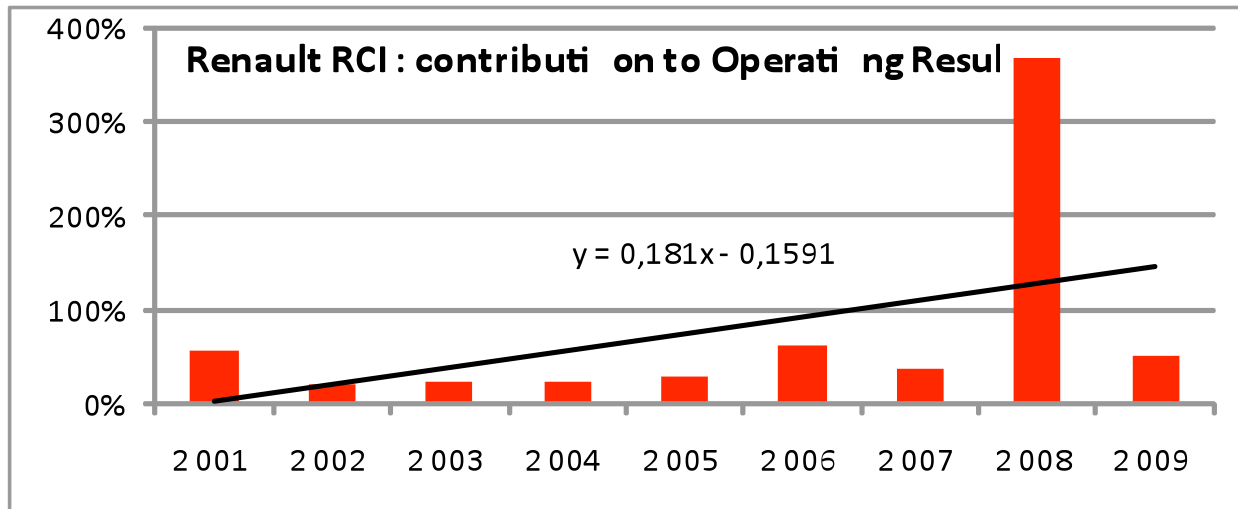
- ▶ A growing weight of financial activity in sales and op. profit \*
- ▶ Dependency of the firm's revenues \* ?
  - ▶ On Sales => non significant
  - ▶ On Operating result => strong dependency since 2006 for French companies

# Dependency of the Banking activity in PSA's Operating profit





# Dependency of the Banking activity in Renault's Operating profit



# Results

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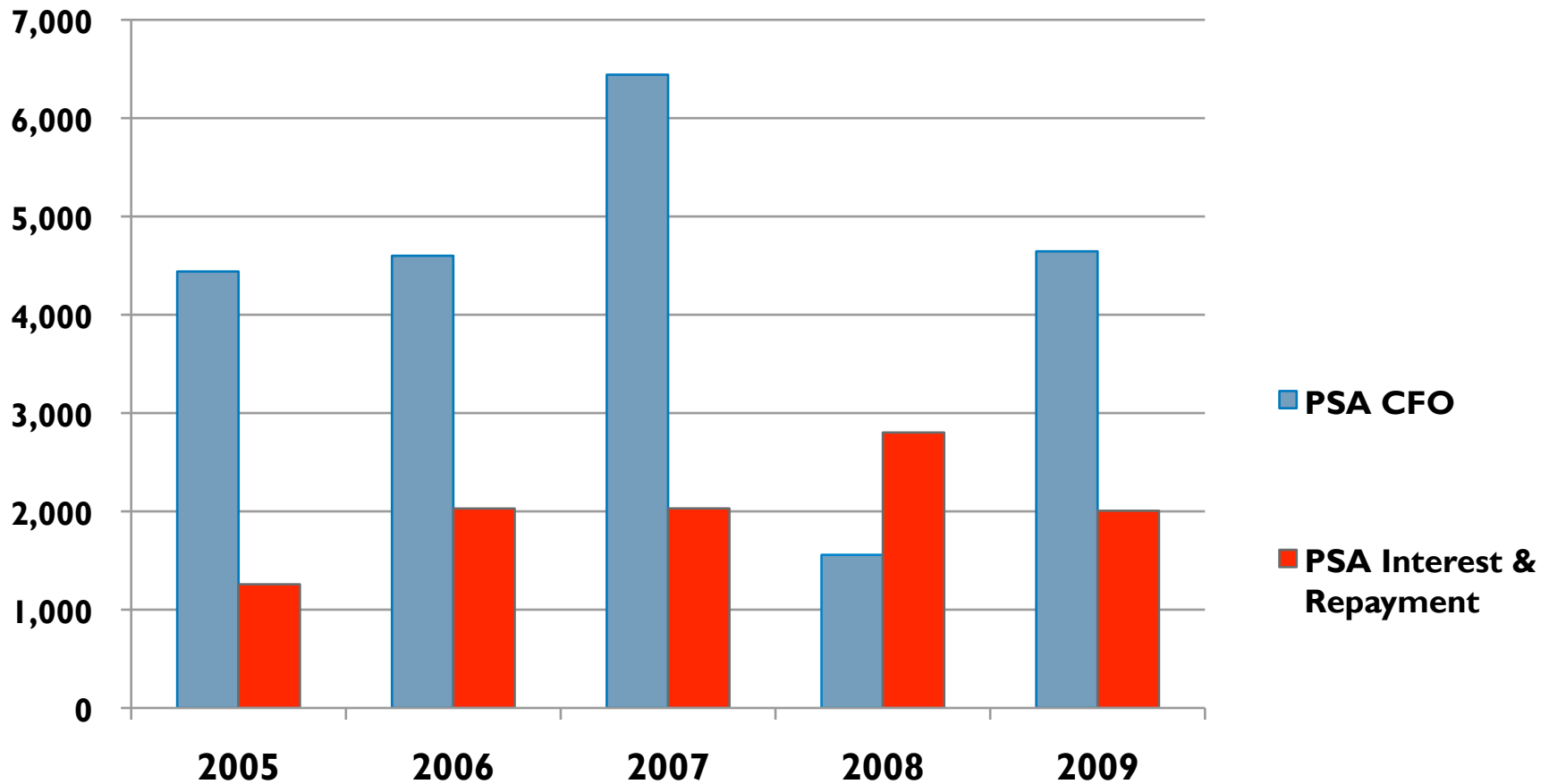
*b/ French banking subsidiaries :  
Speculative / ponzi?*

- ▶ 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



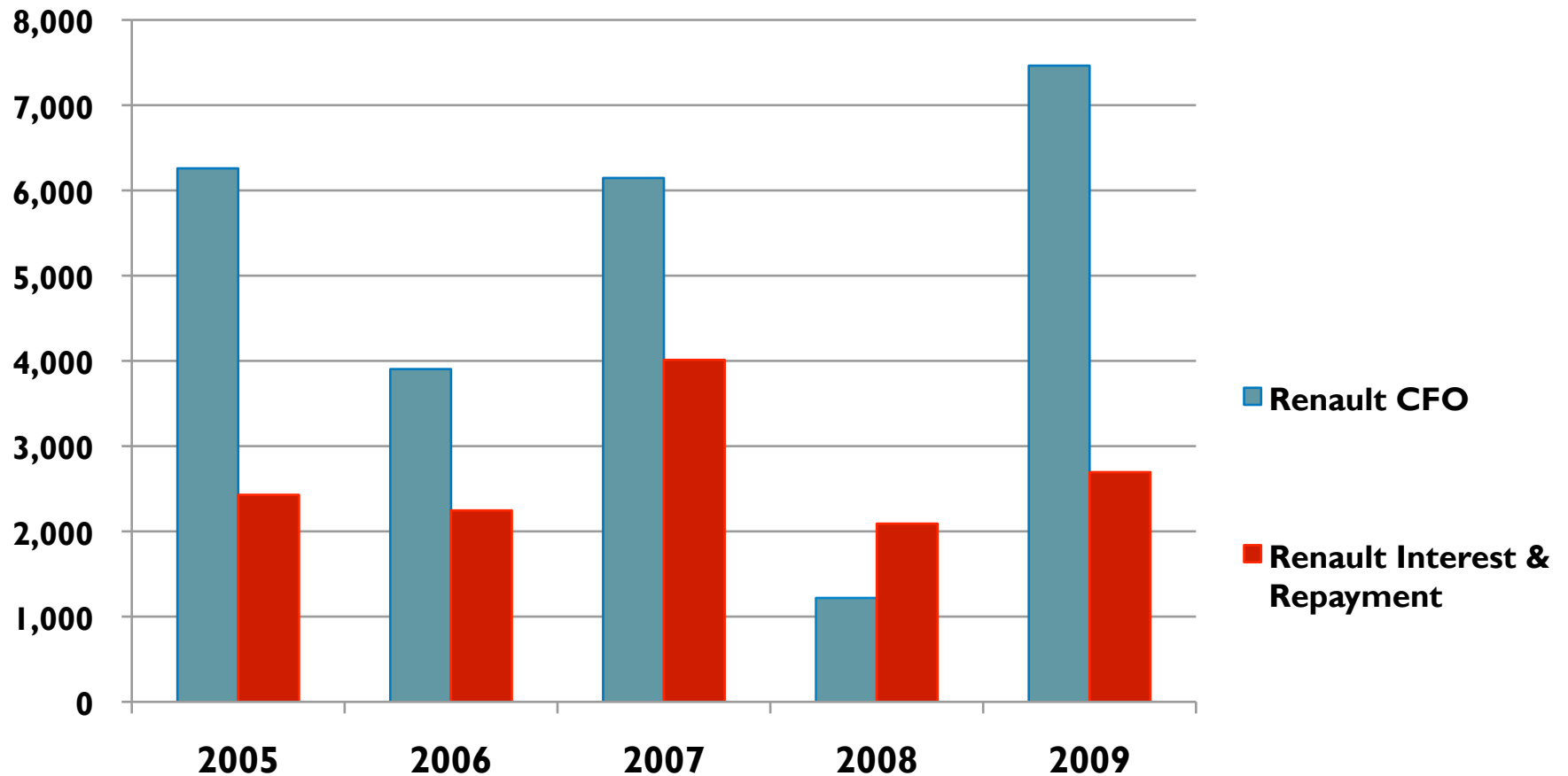




# "a priori speculative"?

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

Millions euros



# Results

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*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

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*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

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- ▶ 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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- ▶ ARESTIS P. & GLICKMAN M. "Financial Crisis In South-East Asia: Dispelling The Illusion The Minskyan Way", *Cambridge Journal Of Economics*, Vol.26, N° 2, Mars 2002, P. 237-260.
- ▶ GUICHARD S., HAUGH D. & TURNER D. [2009], "Quantifying the Effect of Financial Conditions in the Euro Area, Japan, UK and US", *OECD Economics Department WP*, N° 677.
- ▶ IXIS-CIB, "Les financières captives automobiles", *IXIS Credit Research*, 2006.
- ▶ JACKSON T, HUGHES C., BRICKLEY J., TABAS J., SMITH C. [2009], *University of Rochester Roundtable on Banckruptcy and Bailouts: the case of the US Auto Industry*, The GeVa Theatre Rochester, NY, Febr.
- ▶ MINSKY H.P. [1986], *Stabilizing the Unstable Economy*, New Haven: Yale University Press.
- ▶ MINSKY H.P. [1992 b], "The Financial Instability Hypothesis", *The Levy Economics Institute Working Paper Collection*, n° VWP74.
- ▶ OECD [2009 a], *OECD Economic Outlook*, N°86, Paris.
- ▶ PRICE WATERHOUSE COOPERS [2010], "Preparing to Compete", *Global Automotive Perspectives*, n° 1.