

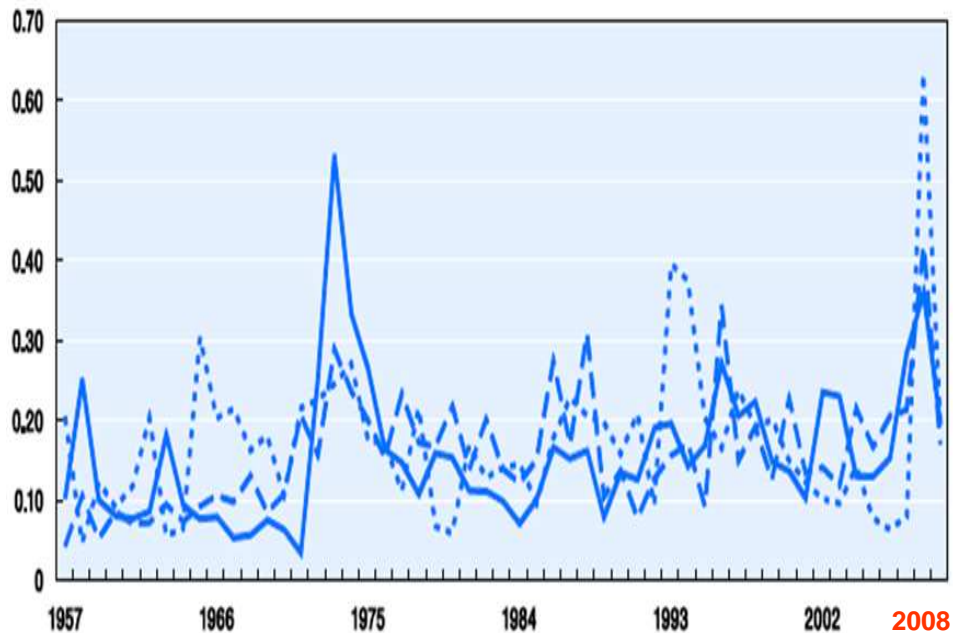
**Impact of commodity funds
on sugar and ethanol prices
Must we regulate?**

Jean Cordier, Professor, Agrocampus Ouest
cordier@agrocampus-ouest.fr

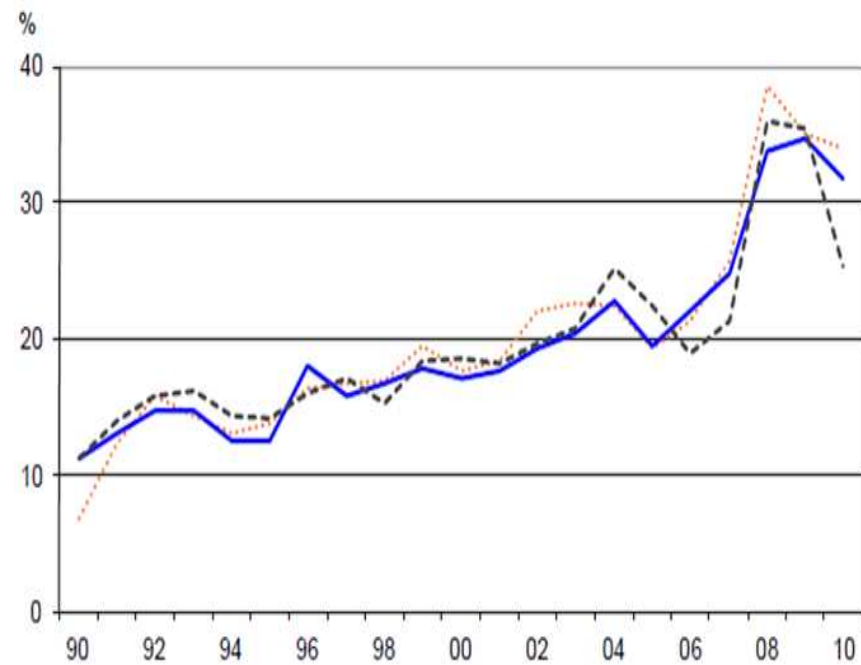
**WABCG/ISO Congress
London, 28 November 2011**

Ag. price level and volatility, what is wrong ?

Grain historical volatility (FAO):



Implied volatility (FAO):



Adverse consequences for consumers as well as for producers

A world political issue => the G20 agenda

Price Volatility in Food and Agricultural Markets: Policy Responses

Policy Report including contributions by

FAO, IFAD, IMF, OECD, UNCTAD, WFP, the World Bank,
the WTO, IFPRI and the UN HLTF

2 June 2011



Producers are directly concerned

- price levels are economical signals for production choice (commodity price but also input prices)
- price volatility is inducing ways of production
- price volatility is reducing the willingness to produce

An impact on productive investments, therefore

- on total world food supply
- on production costs and food access to all populations

**A very popular cause to instability:
« speculation »**

and a very traditional idea :

forbid or limit speculation on agricultural markets

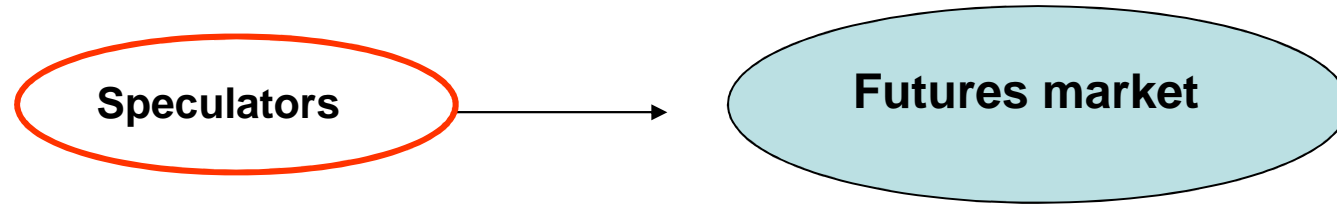
but looking carefully, my advice :

« Be careful with reactive public regulation on price volatility issue »

1. The financialisation of agricultural-commodity markets:

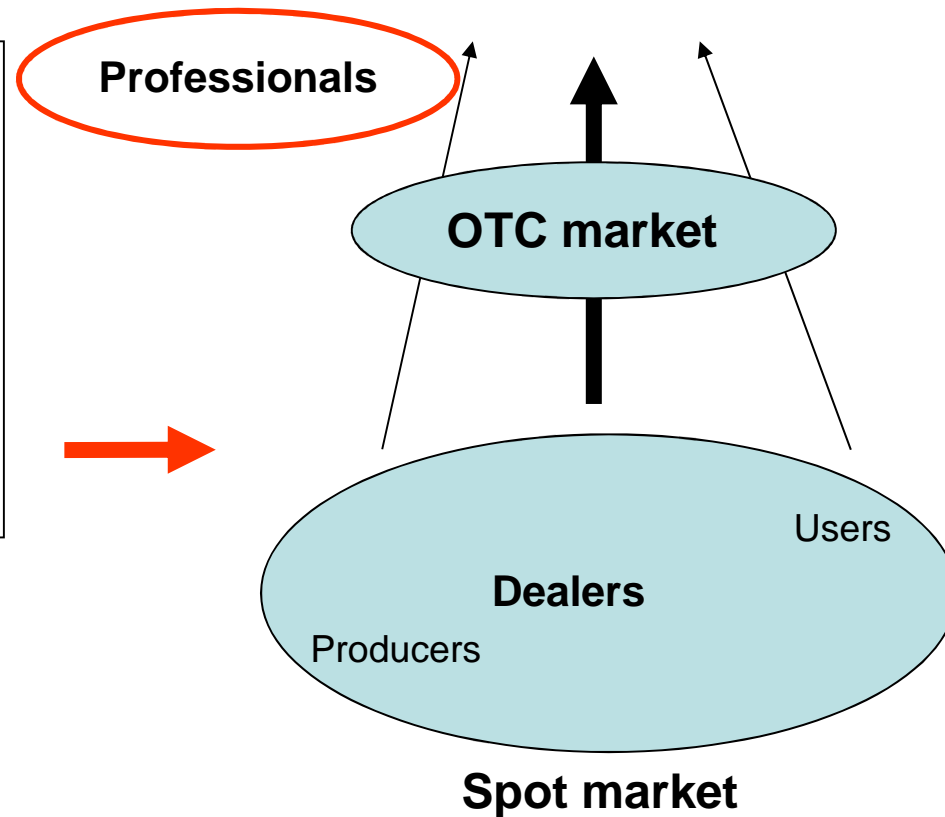
- an old story**
- with new developments**

An old story: futures markets since 1850



The financialisation of commodity markets:

1. Market involvement by non-professionals in the commodity market
2. Financial markets dominate over the physical commodity



Speculation on agricultural-commodity markets

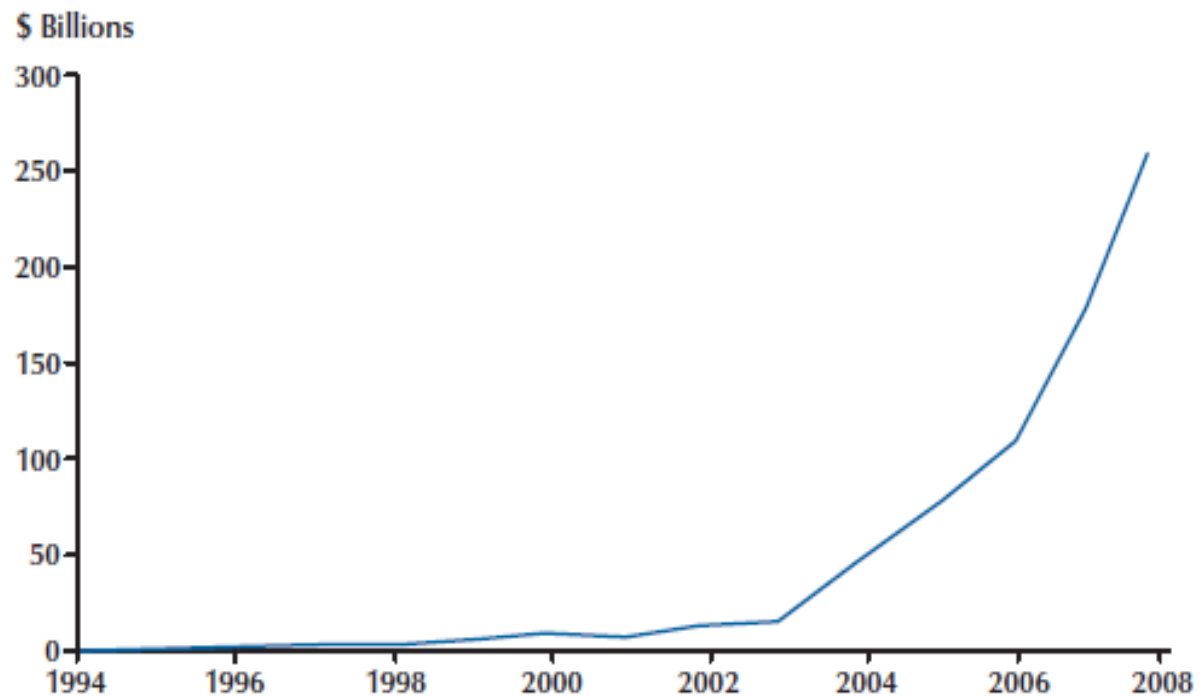
- 1850 to 1975: speculation is a "necessary evil"
=> speculation needs to be regulated
- 1975/80: modern financial thinking transformed the **speculator** into an "**investor**", managing an assets portfolio

Leuthold R., Lee C. et Cordier J. (1985), " The Stock Market and the Commodity Futures Market : Diversification and Arbitrage Potential ", *Financial Analyst Journal*, Vol. 16, p 53-61

=> The market should be left to look after itself, with just prevention of fraud and market manipulation

The new development: a boom in investment funds thanks to new, highly-efficient instruments

Commodity Index-Fund Investment (year-end)



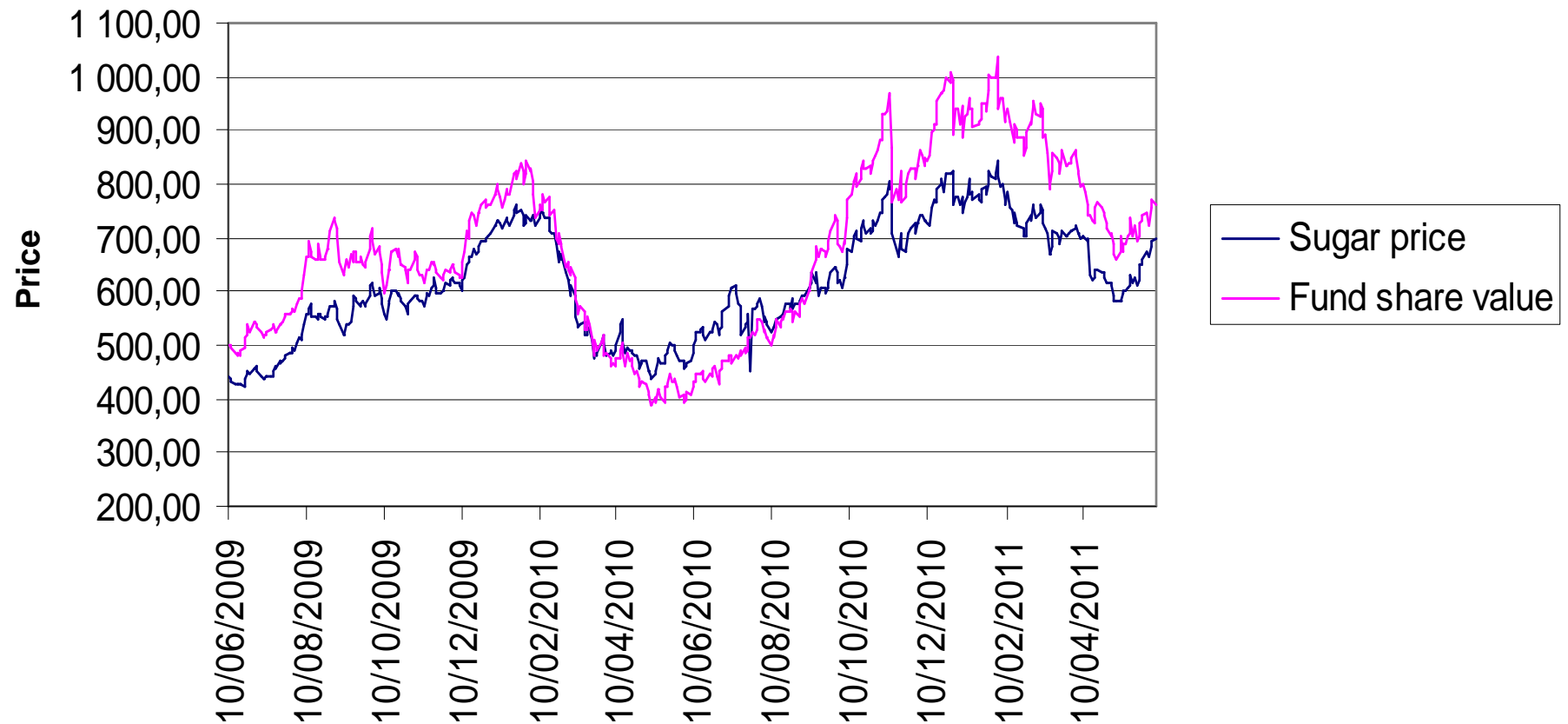
NOTE: 2008 data are through March only.

SOURCE: Masters (2008, Chart 1).

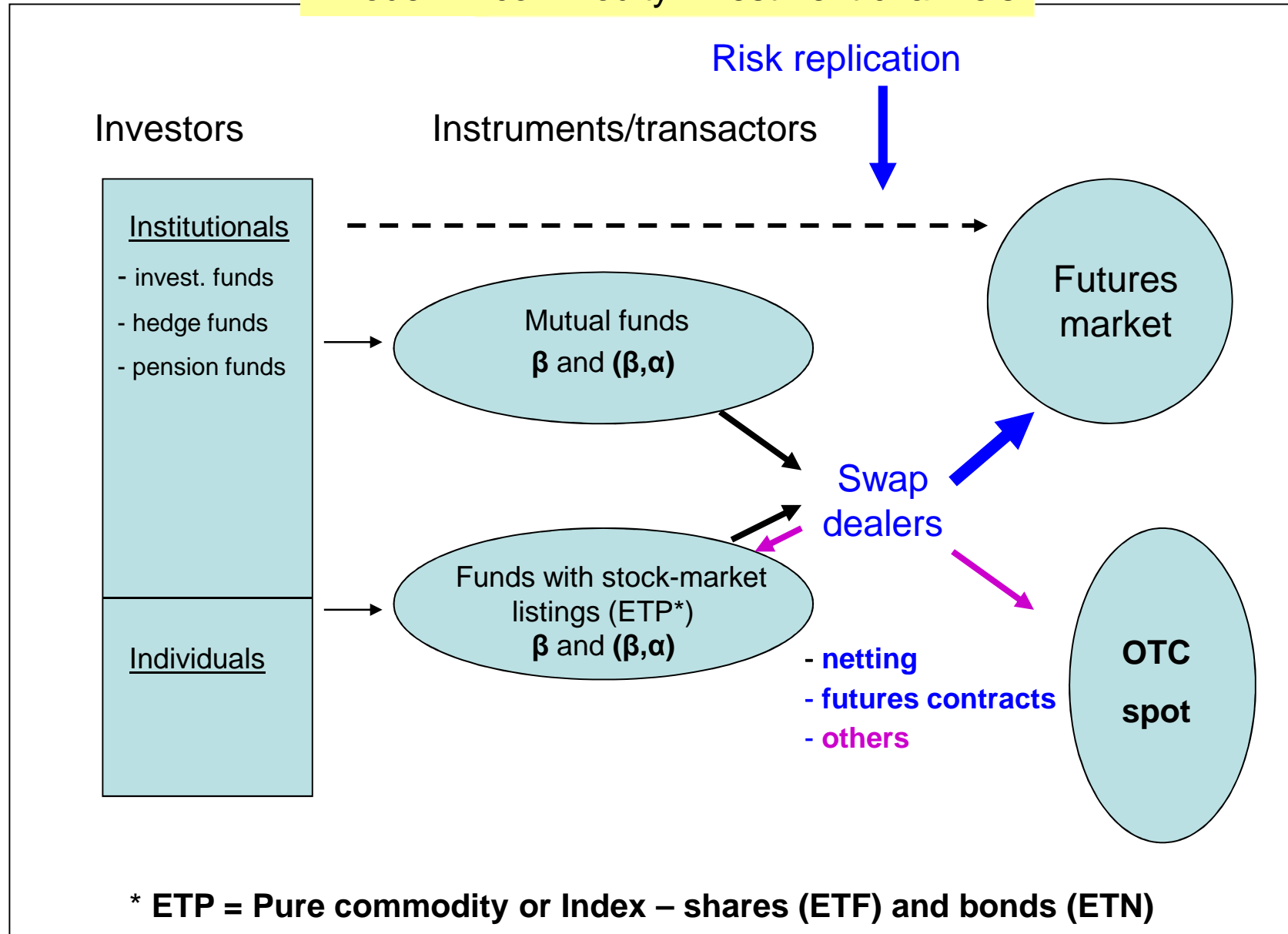
The commodity funds and price-tracking index funds

- mutual funds and Exchanged Traded Products – ETP

e.g. SUGA ETF Securities tracking the sugar price ($\rho = 0.94$)



"Modern" commodity investment channels



Capitalisation of listed investment funds in 2010 (70% of the total in 2011)

- USD 170 bn invested in "commodity" ETPs
 - 57% precious metals (chiefly gold)
 - 25% energy
 - 10% diversified indices
 - 8% agriculture

- USD 20 to 25 bn invested in agricultural commodities
 - 42% in general index ETPs
 - 48% in specialised index ETPs
 - 10% in single-commodity ETPs ... making USD 40 bn in all (?)

2. Issues since 2008:

- what is the impact of speculative commodity funds?**
- should agricultural-commodity and energy markets be regulated?**
- and how?**

Issues raised in 2008

What is the impact of the "new" investors on commodity prices?

1. Is the price as formed **too high** set against the market fundamentals?
1. Does the action of the funds increase short- and medium-term volatility?
2. Is that volatility excessive?

Controversy: "Masters versus Irwin"

Masters (2008), de Schutter - UNCTAD (2010), Gilbert (2009), Singleton (2011) ...

Irwin & Sanders (2009), Brunetti (2009), Stoll (2010), Buyuksahin (2011), Gilbert (2011) ...

With **Michael Masters**, it could be thought that:

- "long only", so-called β funds shift the demand curve rightwards => **and so cause price levels to rise**
- the demand curve becomes more inelastic since the demand for diversification is price-insensitive => **increased volatility**
- demand is correlated owing to the management of indices
=> **commodity prices are co-integrated**

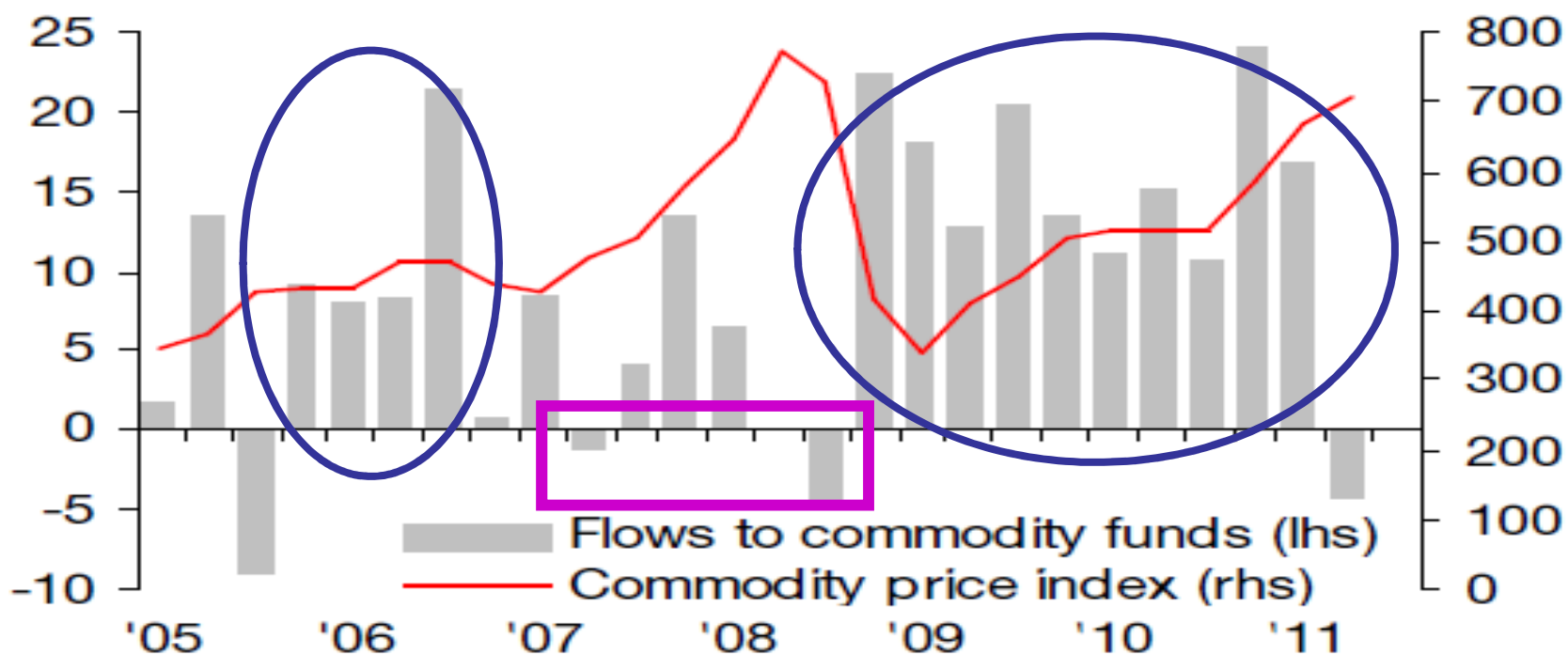
However, with **Scott Irwin**, the **absence of impact** can be explained by the following:

- commodity funds are both long and short on markets
- they have heterogeneous expectations
- and they increasingly incorporate "alpha" in their management policy

**A strong increase in commodity investment,
but the true pattern of developments is hard to discern**

Total Commodity Investment Inflows

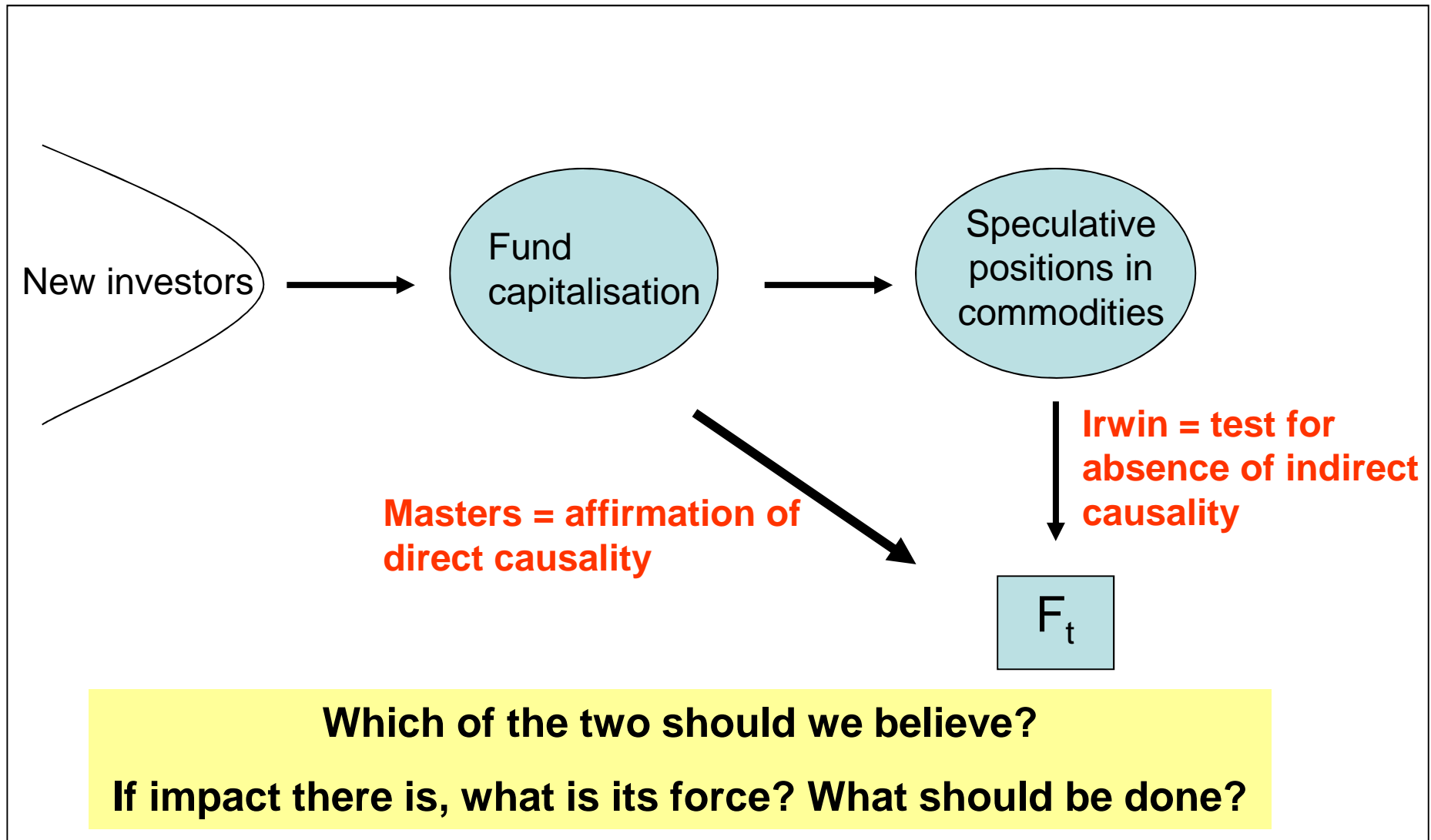
USD billions



Source: Barclays Capital, Bloomberg

 : sharp growth and  : decline in flows

Illustrating the "Masters versus Irwin" controversy



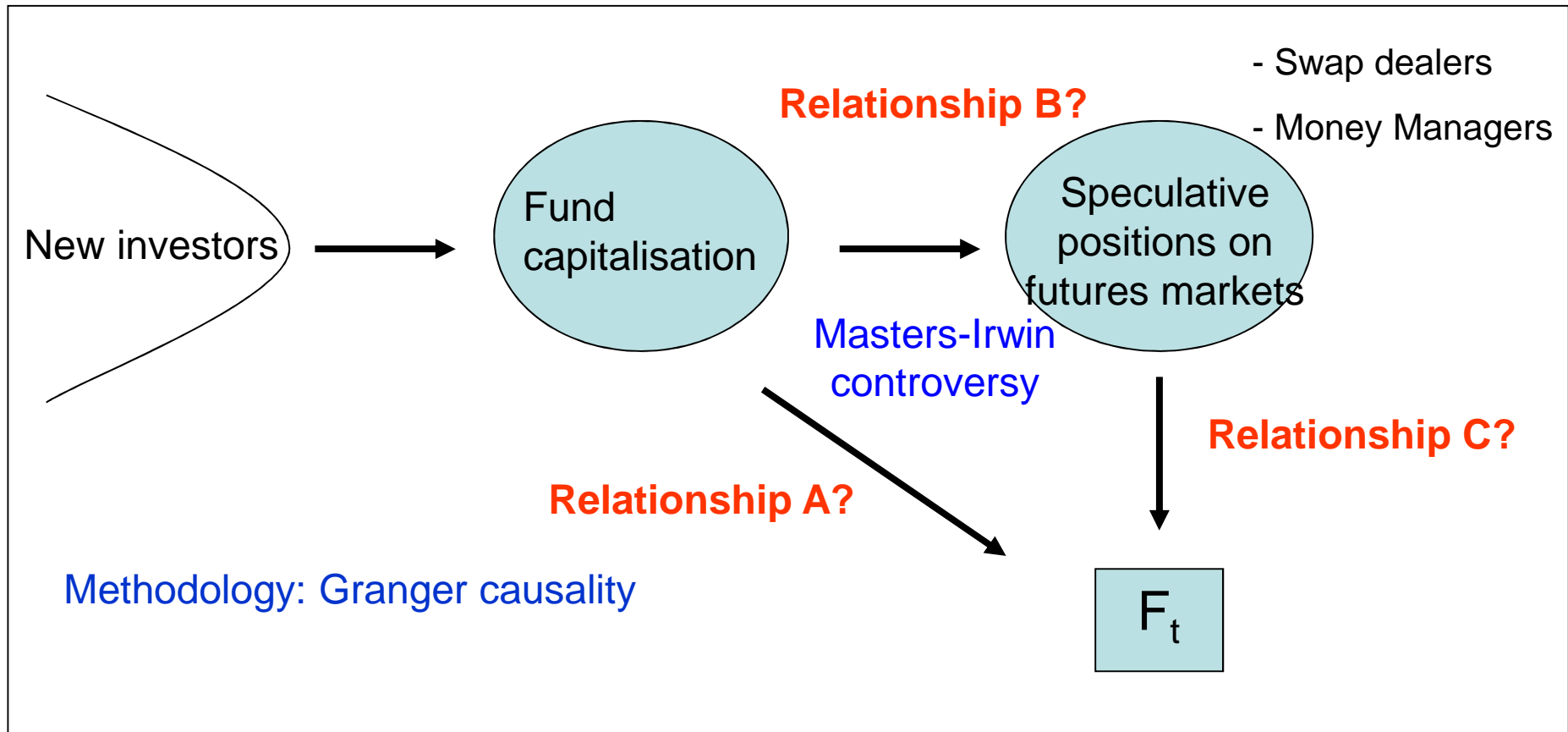
source: J. Cordier, Pluriagri 2011 study

3. A Pluriagri – WACBG study

- January – November 2011

- Study the impact of the funds on agricultural commodity prices on the basis of
 - capitalisation-flow information, and
 - information on futures-market trader positions
- Study the cross-impact of "heavyweight" commodity funds (metals, oil and indices) on agricultural-commodity prices

Scope of the Pluriagri-WACBG study



source: J. Cordier, Pluriagri 2011 study

1. What are the A, B and C relationships for agricultural commodities?
2. What is the impact of indices, gold and oil on agricultural-commodity prices?

Commodity funds chosen as representative of OTC flows

Index tracker funds chosen as representative of OTC flows

Index tracker fund	Code	Name	Creation date	Issuer - Clearer	Capitalisation USD million
Indices					
DBIQ Commodities*	DBC	PowerShare DB Commodity	Sept 2006	Deutsche Bank	6,500
GSCI*	GSG	iShares GSCI Commodity	Jul 2006	Barclays Bank	2,000
DBIQ Agriculture *	DBA	PowerShare DB Agriculture		Deutsche Bank	4,000
DJ UBS Grains Index*	AIGGP	ETF Securities	Feb 2008	UBS AG et Merrill Lynch	300
Commodities					
Gold	GLD	SPDR Gold Shares	Nov 2004	World Gold Trust	72,300
Oil	USO	US Oil Fund	Oct 2006	US Oil Fund	1,220
Maize	CORN	Teucrium Fund	Juin 2010	Teucrium Comm. Trust	125
Sugar	SUGA	ETF Securities	Jun 2008	UBS AG and Merrill Lynch	40
Cotton	COTN	ETF Securities	Jun 2008	UBS AG and Merrill Lynch	10
Coffee (DJ-UBS index)	COFF	ETF Securities	Jun 2008	UBS AG and Merrill Lynch	23

* DBIQ Commodities = DBIQ Optimum Yield Diversified Commodity Index (50% energy, 24% metals and 26% agriculture)

* GSCI = Goldman Sachs Commodity Index (24 energy commodities among energy, metals and agriculture)

* DBIQ agriculture = DBIQ Optimum Yield Diversified Agriculture Index Excess Return (50% grains, 25% animal products and 25 % coffee, cocoa and cotton)

* DJ UBS Grains Index (soy 40 %, maize 38% and wheat 22%)

Source: Bloomberg

Summary of relationship A causality analysis (from capitalisation to price)

	Fonds Maïs	Fonds Sucre	Fonds Coton	Fonds Café	Fonds Or	Fonds Pétrole	Fonds DBC	Fonds DBA
P Maïs	-	**	-	*	*	**	**	-
P Sucre	*	-	-	-	*	-	*	-
P Coton	-	*	*	*	-	-	-	*
P Café	-	*	*	*	*	-	*	-

*** and **: significant causality at 5 and 10% of capitalisation flow towards the agricultural-commodity price

Therefore

Many cases of causality exist from capitalisation flows to the price of agricultural commodities

- no systematic causality « within » agricultural commodities
- but rather, cross-causality between commodities
e.g. capitalisation flows for "gold", "oil" and "DBC indices" are causative of prices for maize, sugar and coffee

AHW4

Diapositive 21

AHW4

difficile de percevoir la pensée du rédacteur, et partant, d'articuler ce bout de phrase avec le contexte.

Adam; 26/11/2011

Therefore Michael Masters is right ...
but from his intuition can be drawn
no particular financial regulation
(or worse, it could lead to counter-productive
"blanket" regulation).

Summary of relationship B causality analysis (from capitalisation to positions)

« Complex" causality relationships:

- causalities from flows to Swap Dealers, as well as to Money Managers and to Commercial interests
- causalities from flows to Long, Short and Spread positions

Severe doubts are raised concerning the classification of transactors:

- is the US method of classification appropriate?
- transactors may well be multi-class, wearing several hats with potential for optimisation. Interest conflicts ?

Summary of relationship C causality analysis (from positions to price)

AHW8

... in general, few C causality relationships

Results may be due to the low information level of the CFTC classification

Diapositive 24

AHWS

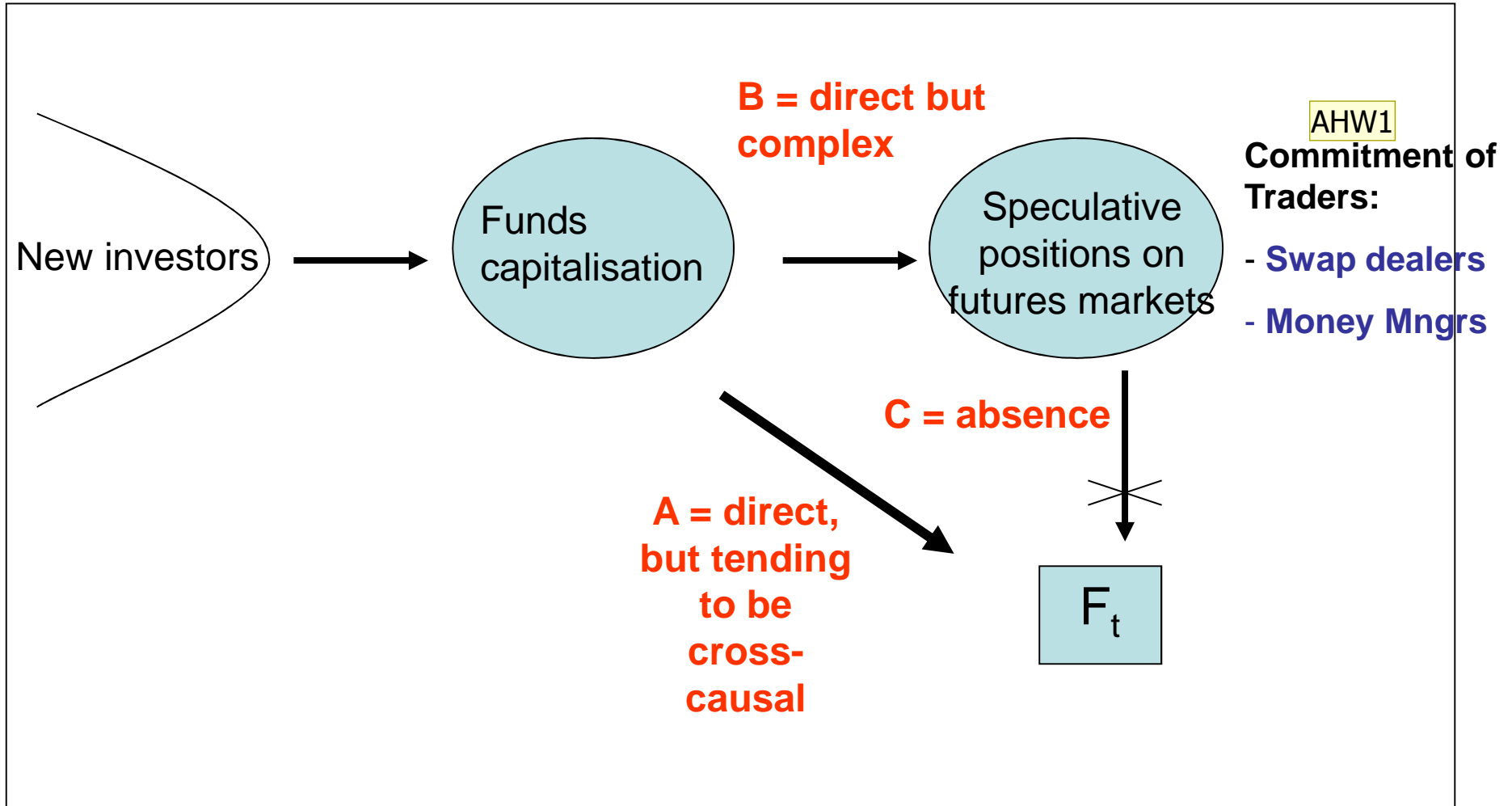
Virgules décimales deviennent points décimaux

Adam; 26/11/2011

Therefore Scott Irwin is right ... but his approach is limited:

- no cross-study
- uses CFTC classification

Overall research finding:



Diapositive 26

AHW1

Does COT here mean Fr. "cotation"?

Adam; 26/11/2011

Specific results for sugar and ethanol:

- The main sugar fund does not impact the sugar price level
- But the DBC index tracker fund impacts the sugar price level
- The oil fund and the DBC fund impact the ethanol price
- The price volatilities are also impacted, more for sugar than for ethanol
- Causality entails time lags (2 to 3 days)

Therefore

- Cross-impact, and a real, but slight impact from index-tracking funds
- Sugar and ethanol straddle two worlds, soft commodities and energy
- Time lags raise questions regarding the funds' risk-replication methods and the impact of the indices

4. Implications of the study for appropriate financial-regulation measures

Premise: regulation is the difficult art of striking a balance

4.1. The "Masters versus Irwin" controversy has a bright future ahead of it

1. Causalities found for relationship A = real but cross-causal
=> If there is to be regulation, it must be innovative (e.g. as for sugar)

Hence, regulation of futures markets through conventional position limits is a bogus issue. To be careful on alternative methods

2. Causalities found for relationship B => OTC risk replication methods are more complex than the basic model (replication on futures markets)

Risks replication = the true issue in regulation, particularly for index-tracking funds

3. The absence of direct causality of relationship C and associated with the causalities of B challenges the quality of the CFTC classification of futures market operators ²

No regulation is appropriate without this information base.
Regulation must be implemented world-wide as a matter of urgency

In conclusion

1/. Is the price as formed too high? Does it correspond to the market fundamentals?

A slight cross-impact is found from fund capitalisation flows on agricultural-commodity price levels => preventive innovative regulations are required (including indices within their ambit)

2/. Does the action of the funds increase short- and medium-term volatility?

There is a real impact on short-term volatility.

... theoretical discussion on whether and on what conditions speculation can be stabilising = The « stock level » versus « production adjustments »

3. Is volatility excessive?

- volatility attributable to investors is currently "non-excessive"
- that volatility can always overstep the mark, viz. by poorly-controlled replication

But care should be taken to avoid the wrong approach to regulation

In conclusion

Care should be taken nevertheless to avoid the wrong approach to regulation

- much remains to be done for the Dodd-Franck Act in the United States,
- and still more so, for the MiFID in the European Union

The case is far from closed on this international issue

"Producers" must invest themselves in the subject, since it concerns them:

- volatility is communicable => new commercial strategies for commodity and inputs
- misdirected regulation can have unintended effects (lower prices to producers by increased transaction costs, increased volatility)
- well-designed regulatory schemes need to be devised for the OTC market, which is the main 'professionals' market

Merci de votre attention