

21 International Capital Markets

Gains from trade

1- $\left[\begin{array}{c|c} H & F \\ \hline GS & GS \\ \hline A & A \end{array} \right]$ Fundamentally the gains from exchange

$\Delta Y \approx X(P_F - P_H)$ or $M(P_H - P_F)$

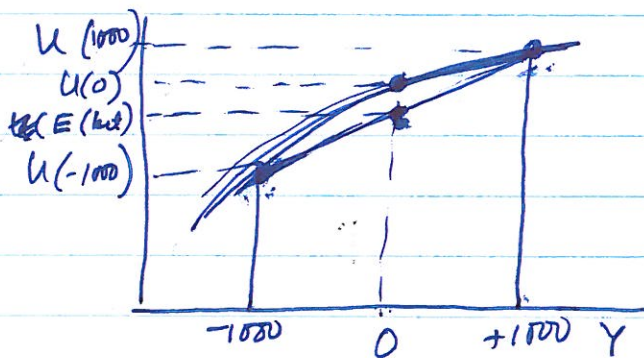
or the Δ 's (triangles) in the case of output are allocative gains

2- Gains from diversification

- if you are risk averse

$$\frac{1}{2}(1000) + \frac{1}{2}(-1000) = 0 \text{ expected income}$$

- won't take it if you are risk averse - your ^{marginal} value the gains is less than the marginal value of the losses.



$$E(\text{bet}) = \frac{1}{2} \pi \dots$$

$$= \pi \cdot 1000 + (1-\pi)(-1000)$$

- Then by diversifying you reduce your risk

H: 100_{t+1} 50_{t+1} prefer a certain 75 each period

F: 50_{t+1} 100_{t+1}

Risk Pooling

which have same means & variance

n individuals with incomes y_i $i = 1, \dots, n$

* Variance of each person's income is $\text{Var}(y_i)$.

If incomes are independent, an n individual pool their

income $\cdot \left[y_1 + y_2 + y_3 + \dots + y_n \right] \cdot \frac{1}{n} = \underline{\text{what each gets from the pool}}$

$$\text{Variance} \left[\frac{y_1}{n} + \frac{y_2}{n} + \dots + \frac{y_n}{n} \right] = n \text{Var} \left(\frac{y}{n} \right) = \frac{n}{n^2} \text{Var} y = \frac{1}{n} \text{Var} y$$

\therefore each individual has income with ~~mean~~ \bar{y} with ~~variance~~ ~~$\frac{1}{n} \text{Var} y$~~

* Variance $\frac{1}{n} \text{Var} y$.

International Assets

Debt: bonds & bank deposits - fixed defined return + principle

Equity: claims on shares of profits - more variable ... not really as recent experience reminds us.

3) Gains from growth

Players

Commercial banks, Corporations, Non-bank financial institutions
Central banks & gov agencies.

Since 1970s, capital markets have become freer.

Banking & Offshore Currency Trading has grown enormously since the 1970s. Mechanisms:

- 1 - agency: arranges loans & transfers funds but does not accept deposits
- 2 - subsidiary: local bank owned by foreign entity (regulated locally)
- 3 - foreign branch: office of foreign bank subject to reg by both. home & foreign.

Eurocurrency (dollar) trade

Eurodollar

Late 1950's European firms wanted to hold US \$.

- (1) UK in 1957 stopped their banks from loaning £'s to finance non-UK trade (BdP crises). UK banks borrowed + lent dollars instead of £'s.
- (2) USSR didn't want \$ deposits in US banks, but wanted \$ deposits (held in non-US banks)
- (3) US regulators tried to discourage \$ lending by US banks to foreigners. (1960)
=> Euro\$ were US \$ deposits held "abroad"
- (4) Reg Q (until 1980) limited interest paid on accounts in US to 6%. US branch banks were not restricted since they were abroad.
 - Deregulation in US limited the market of Euro\$ growth
 - Political factors, confiscation, keeps the market alive as want \$ deposits but not in US banks.

Regulatory asymmetries keep these markets alive & least regulated tend to get more deposits so long as ~~trade~~ confidence in enforcement of contracts: London, Luxembourg, Bahrain, HK.

Shadow Banking System

More financial institutions than banks. Money market Funds, Investment banks - less heavily regulated as their position not seen as central as banks.

Regulating International Banking

- Banks borrow short term + lend (short & long terms).
∴ can be illiquid even if solvent.
- Runs on banks when people lose confidence can collapse banks & banking systems.
- Collapse of system is considered sufficiently undesirable that gets regulated in many dimensions

1- deposit insurance

2- reserve requirements

3- capital requirements + asset restrictions:

- $A - L = NW = \text{bank capital}$; this is what is owned by shareholders. Gives a safety margin when loans go bad.

- assets are assessed by risk. Can't hold common stock (in US + Canada + some others); can't lend too much to a single borrower,

4- Bank examination

5- lender of last resort facilities: role of the Central Bank. (Fed)

6- Govt bailouts - reorganization arrange purchase by other banks.

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* Predator - Prey & the regulatory chase.

* Moral hazard and regulation

- Too big to fail

- Investor protection - raise risk banks can take to raise returns

How to Regulate International Banking?

- 1- Deposit insurance generally applies to local (national) banks - interbank deposits are "never" protected
- 2- No reserve requirements
- 3- Who monitors international banks?
 - less monitoring of ~~branches~~ affiliates + subsidiaries
- 4- Is there a LLR Fed, B of England, European central Bank?
- 5- Who has responsibility for a "rescue" if have assets + liabilities in many different countries? (599)

Basel Committee in context of large E&F deposits + flex rates

11 industrialized countries

1975 concordat

(1) sharing information between home + foreign regulators
 (Basel I) 1988 (2) "prudent" level of bank capital at 8% of assets
 + a definition of qualifying assets

(Basel II) 2004 (3) revised

1997-99 emerging markets: led to severe financial crisis in Thailand + spread to others

1997 - Basel defined 'core principles' of effective banking supervision. revised in 2006.

2007 - crisis

Basel III 2010 -

problems w/ securitization and derivatives revealed the difficulty of regulating these 'new' instruments that left banks unexpectedly fragile.

> examples of the regulatory chase, LTCM (1998)

Efficiency

- (1) Spreads on similar assets in Euro & markets are low ~~traded~~ US interest rates until 2007 when they diverge suggesting US investments are better insured than Euro & rates (rose to 1% differential from generally less than 0.1) on basis points to 1000.

(2) Interest parity studies

$$R_t - R_t^* = (E_{t+1}^e - E_t) / E_t$$

How well do $R - R^*$ predict actuals

* bad predictor of future movements!

$$\begin{aligned} \text{Further } u_{t+1} &= \left(\frac{E_{t+1} - E_t}{E_t} \right) - \left(\frac{E_{t+1}^e - E_t}{E_t} \right) \\ &= \left[\left(\frac{E_{t+1} - E_t}{E_t} \right) - (R_t - R_t^*) \right] \end{aligned}$$

should contain all the information about expected future prices and $\therefore u_{t+1}$ should be random.

"Sadly" $u_{t+1} = [] + u_t$ and adding past errors improves the fit!

Adding risk aversion & other concerns doesn't help all that much.

Need more subtle theories explaining how information about central bank behavior is incorporated into the theory. At present random walk sometimes outperforms theory.

How well have international markets allocated capital + risk?

(1) Extent of portfolio diversification

1962: US residents held 6.2% of assets in foreign

Foreigners held claim on US assets of 4% of US assets

2008: 56% A_F/A_{US} owned by US (129% of US GDP)

66% A_{US} owned by foreigners / A_{US} (148% ")

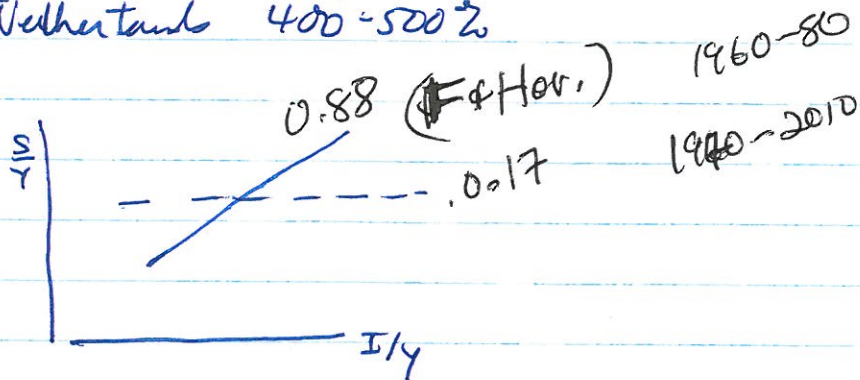
Low since US ~~assets are about~~ ^{'should own'} 80% A_F/A_{US}

and foreigners should own 80% of US assets

UK + Netherlands 400-500%

(2) We also observe

which implies that domestic saving and investment is still highly correlated



World Capital Flow Statistics

<http://cpis.imf.org/>

<http://elibrary-data.imf.org/Report.aspx?Report=9492646>

Table 9 : Portfolio Investment Assets: TOP TEN ECONOMIES BY SIZE OF HOLDINGS

(millions of US \$)		Equity Securities	Total Debt Securities	Total
1	United States	4,646,908	2,091,098	6,738,006
2	Japan	678,481	2,667,349	3,345,830
3	United Kingdom	1,164,345	2,087,716	3,252,062
4	Luxembourg	1,225,702	1,650,757	2,876,459
5	France	682,105	2,123,521	2,805,625
6	Germany	739,718	1,815,968	2,555,686
7	Ireland	606,254	1,315,815	1,922,069
8	Netherlands	640,234	836,716	1,476,950
9	Italy	454,320	700,310	1,154,630
10	Switzerland	441,374	676,407	1,117,781
Other		4,183,433	8,861,729	13,045,161
Total Value of Investment		15,462,872	24,827,387	40,290,259

FDI Inflows (billions of US dollars)

(Billions of dollars)

Region or Country

World

Developed Economies

Europe

United States

Japan

Developing Economies

Africa

Latin America and the Caribbean

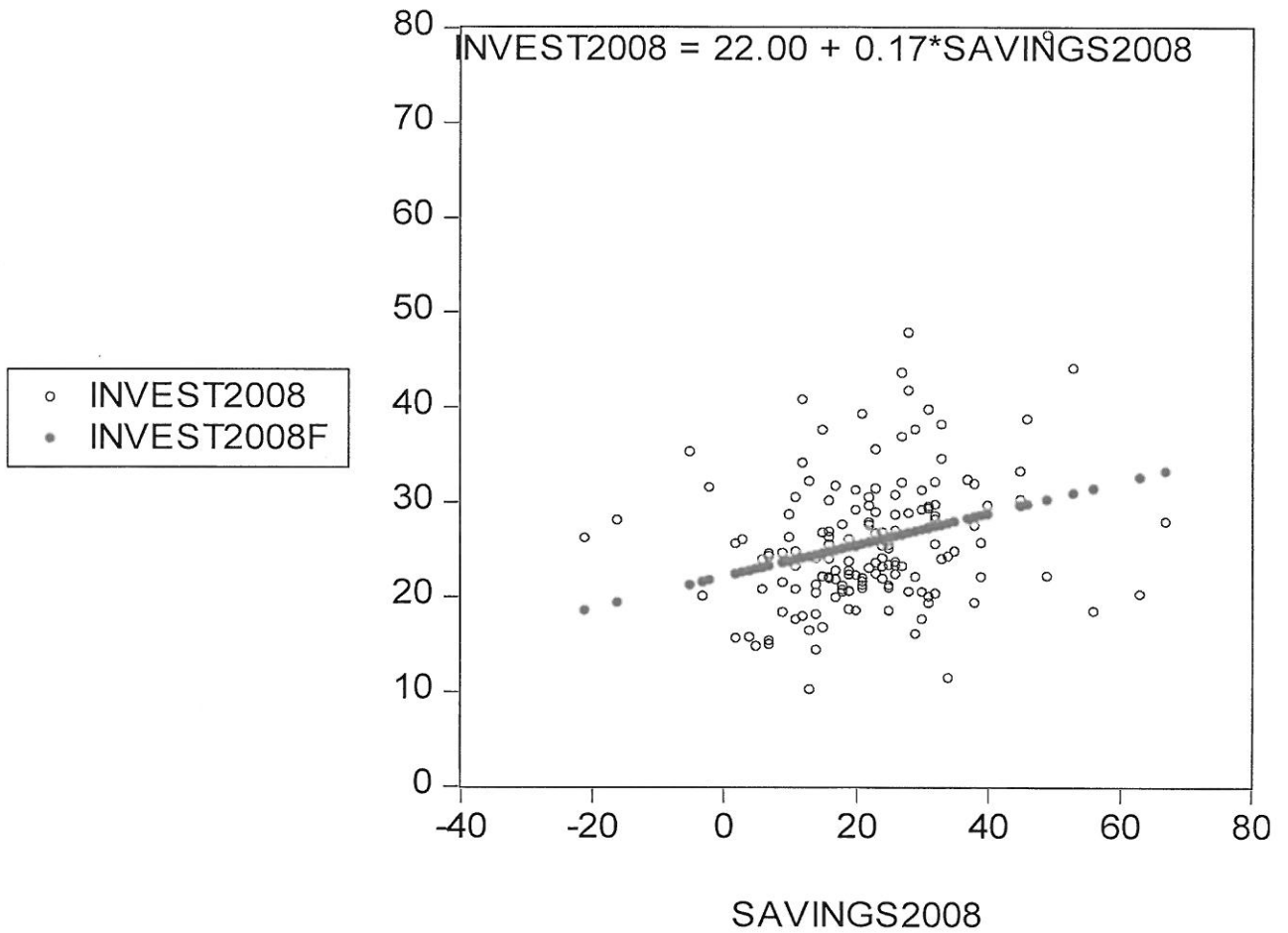
Asia and Oceania

West Asia

South, East and South-East Asia

Transitional Economies

	Foreign Direct Invest		Mergers & Acquisitions	
	2007	2008	2007	2008
World	1941	1658	1699	1205
Developed Economies	1342	1002	1504	998
Europe	920.9	559	859.4	561.4
United States	232.8	320.9	389.2	318.2
Japan	22.5	19	24.6	19.5
Developing Economies	512	549	161	184
Africa	53.5	72	12.5	27
Latin America and the Caribbean	127.3	139.3	31.1	32.8
Asia and Oceania	331.4	337.8	118.1	122.3
West Asia	71.5	61.4	33.8	31.6
South, East and South-East Asia	275.2	6.4	90.4	7.6
Transitional Economies	87	107	34	25



More on Feldstein-Horioka

INVESTMENT=C+s*SAVINGS

Year	Slope s
1970	0.43
1980	0.37
1990	0.54
2000	0.28
2005	0.07
2006	0.03
2007	0.13
2008	0.16
2009	0.44