INSTITUTIONAL INVESTORS, FINANCIAL MARKET EFFICIENCY AND FINANCIAL STABILITY

E Philip Davis

Brunel University

West London

e_philip_davis@msn.com

www.geocities.com/e_philip_davis

groups.yahoo.com/group/financial_stability

Introduction

- Rapid growth of institutional investors – expansion faster than financial sector
- Underlying supply and demand factors
- Scope for further growth, notably in Europe, making study of financial implications timely
- Analysis of financial efficiency and stability drawn largely from global experience and theory
- Financial efficiency – ability to fulfil functions of financial system:

- Clearing, settlement, liquidity
- Pooling of funds
- Transfer economic resources
- Manage uncertainty and control risk
- Provide price information
- Deal with incentive problems

- Financial stability aspects
  - Market dynamics, asset pricing and risk management
  - Systemic consequences of herding
  - Life insurance issues
  - Prudential regulation

Size of institutions

- Growth in financial superstructure…
- …also in financial intermediation…
- …and institutional investors therein
- Relative size of sectors in G-7 and EU

Size of financial sector

	1970	1980	1990	2000	Change 1970–2000
United Kingdom	4.7	4.9	8.9	11.0	6.2
United Kingdom excluding Euromarkets	4.7	4.2	7.9	9.7	5.0
United States	4.1	4.1	5.9	8.4	4.4
Germany	2.9	3.6	4.7	7.9	5.0
Japan	3.8	5.1	8.5	11.9	8.1
Canada	4.7	5.1	5.8	6.6	2.0
France	4.4	4.8	6.9	11.4	7.0
Italy	3.4	3.9	4.3	7.1	3.7
G7	**4.0**	**4.4**	**6.3**	**9.0**	**5.0**

Financial intermediation

	1970	1980	1990	2000	Change 1970–2000
United Kingdom	0.32	0.42	0.47	0.58	0.26
United Kingdom excluding Euromarkets	0.32	0.34	0.40	0.52	0.20
United States	0.33	0.37	0.34	0.44	0.11
Germany	0.44	0.45	0.43	0.45	0.01
Japan	0.39	0.42	0.42	0.52	0.14
Canada	0.29	0.34	0.37	0.47	0.18
France	0.34	0.62	0.41	0.39	0.05
Italy	0.36	0.32	0.31	0.35	-0.01
G-7	**0.35**	**0.41**	**0.38**	**0.45**	0.10

Bank/institutional intermediation

		1970	1980	1990	2000	Change 1970–2000
United Kingdom	Bank	0.58	0.64	0.55	0.44	-0.13
	Institutional	0.28	0.26	0.32	0.38	0.10
United States	Bank	0.58	0.58	0.42	0.21	-0.37
	Institutional	0.31	0.31	0.40	0.44	0.13
Germany	Bank	0.84	0.86	0.83	0.73	-0.12
	Institutional	0.10	0.12	0.17	0.23	0.14
Japan	Bank	0.45	0.36	0.38	0.24	-0.21
	Institutional	0.10	0.10	0.16	0.17	0.06
Canada	Bank	0.45	0.55	0.44	0.38	-0.07
	Institutional	0.23	0.19	0.25	0.35	0.12
France	Bank	0.94	0.68	0.82	0.65	-0.29
	Institutional	0.05	0.04	0.19	0.27	0.22
Italy	Bank	0.98	0.98	0.95	0.64	-0.34
	Institutional	0.06	0.05	0.11	0.31	0.25
G7	**Bank**	**0.69**	**0.66**	**0.63**	**0.47**	**-0.22**
	Institutional	**0.16**	**0.15**	**0.23**	**0.31**	**0.15**

Institutional investors/GDP

	1970	1980	1990	2000	Change 1970–2000
United Kingdom	0.42	0.37	1.02	1.93	1.51
United States	0.41	0.47	0.79	1.62	1.21
Germany	0.12	0.20	0.33	0.84	0.71
Japan	0.15	0.21	0.58	1.03	0.88
Canada	0.32	0.32	0.52	1.10	0.79
France	0.07	0.12	0.52	1.20	1.13
Italy	0.07	0.06	0.15	0.76	0.69
G7	**0.23**	**0.25**	**0.56**	**1.21**	**0.99**
Anglo-Saxon	**0.39**	**0.39**	**0.78**	**1.55**	**1.17**
Europe and Japan	**0.11**	**0.15**	**0.40**	**0.96**	**0.85**

Institutional investors in the G-7

	Life Insurance		Pension Funds		Mutual Funds		Total	
	($ billion)	% of GDP	($ billion)	% of GDP	($ billion)	% of GDP	($ billion)	% of GDP
United Kingdom	1294	93	1163	83	284	20	2742	197
United States	2770	33	7110	84	5087	60	14,967	176
Germany	531	24	72	3	195	9	798	35
Japan	1666	39	688	16	372	9	2727	63
Canada	141	24	277	47	197	34	615	105
France	658	43	91	6	624	41	1373	90
Italy	151	12	77	6	436	35	664	54
G-7	**7212**		**9479**		**7195**		**23,886**	

Institutional investors in the EU

	Pension funds	Investment funds	Insurance
Belgium	**6**	**30**	**42**
Denmark	**24**	**20**	**78**
Germany	**16**	**12**	**43**
Greece	**4**	**25**	**1**
Spain	**7**	**30**	**13**
France	**7**	**55**	**61**
Ireland	**51**	**144**	**45**
Italy	**3**	**39**	**21**
Luxembourg	**1**	**3867**	**117**
Netherlands	**111**	**25**	**65**
Austria	**12**	**40**	**24**
Portugal	**12**	**16**	**20**
Finland	**9**	**10**	**57**
Sweden	**57**	**34**	**90**
UK	**81**	**27**	**107**

Pressures for institutional growth in the EU

- Population ageing with generous pension systems, leading to reform and/or precautionary saving
- EMU aspects
  - Fiscal integration and pension reform
  - German companies shifting from book-reserves
  - Macroeconomic conditions in EMU
  - Evolution of financial markets
  - Easing of matching regulations

- Complementary role of Single Market, leading to internationalisation of asset management
- Stimuli for banks to focus on asset management
- Autonomous factors

Portfolio behaviour of institutional investors

- Common features
  - Risk pooling
  - Liquidity preference
  - Information processing
  - Size of institutions
  - Process of asset management – fiduciary and principal-agent aspects

- Main types of institutional investor
  - Differ in contractual relations between owners and managers, rules of risk and return distribution, regulation and in liabilities – implications for Europe
- Pension funds
  - Key issue is liabilities set in real terms and highly illiquid so focus on equities, property, foreign
- Life insurers
  - Liabilities vary between money fixed (matched by bonds) and variable (scope for equity finance)
- Mutual and hedge funds
  - Portfolio as set out in prospectus, public demand drives overall asset allocation

Portfolios of pension funds

percent	Liquidity	Loans	Domestic Bonds	Domestic Equities	Property	Foreign Assets
United Kingdom	4	0	14	52	3	18
United States	4	1	21	53E	0	11E
Germany	0	33	43	10	7	7
Japan	5	14	34	23	0	18
Canada	5	3	38	27	3	15
France	0	18	65	10	2	5
Italy	0	1	35	16	48	0

Portfolios of life insurers

Percent	Liquidity	Loans	Domestic Bonds	Domestic Equities	Property	Foreign Assets
United Kingdom	5	1	25	48	6	13
United States	6	8	52	26	0	1
Germany	1	57	14	17	4	0
Japan	5	30	36	10	0	9
Canada	7	28	55	26	7	3
France	1	2	74	15	7	0
Italy	0	1	75	12	1	0

Portfolios of mutual funds

Percent	Liquidity	Loans	Domestic Bonds	Domestic Equities	Property	Foreign Assets
United Kingdom	**4**	**0**	**8**	**56**	**2**	**33**
United States	**17**	**0**	**30**	**51**	**0**	**N.A.**
Germany	**10**	**0**	**22**	**18**	**0**	**29**
Japan	**23**	**18**	**27**	**9**	**0**	**22**
Canada	**20**	**3**	**18**	**31**	**0**	**23**
France	**29**	**0**	**37**	**20**	**0**	**14**
Italy	**19**	**0**	**54**	**22**	**0**	**0**

- Locus of risk bearing shifting towards household (defined contribution pension funds, variable life policies)
- Household influence on asset allocation
- Blurring of distinctions between types of institution

Institutions, saving and investment

- Financial function of resource transfer
- General considerations – the life cycle and saving in countries where institutions large
- Avenues for influence on saving
  - Illiquidity of claims
  - Liquidity constraints on households
  - Retirement income and retirement behaviour
  - Unfunded social security and saving
  - Tax aspects
  - Offsetting effects on government saving

- Some key results
  - 30-50% of US defined benefit funds are new saving
  - Effects on saving from DC - US 401(k)s
  - No benefit from short maturity instruments
  - Pension reform and saving in emerging market economies
  - Unfunded social security cuts saving, notably with imperfect capital markets
  - Institutional investment and financial liberalisation
  - Compulsory saving and low income persons
  - Ageing and saving – institutions not causal

- Institutions and long term saving
  - Contrast of portfolios with households
  - Do households offset institutions’ portfolio choices?
  - Implications for risk premium
  - Effects would be to reduce cost and raise availability of long term finance – and capital formation, if there is adequate corporate governance. Possibly more beneficial to EU than more saving per se
  - Benefits to economic growth….
  - ….also access to bond finance and robustness of companies in EMU
  - Benefits absent if governments oblige institutions to buy their bonds (prudent person rules vital, as per Pensions (IORP) Directive)

Household asset portfolios

		1970	1980	1990	2000	Change 1970-2000
UK	Deposits	0.34	0.43	0.31	0.22	-0.12
	Bonds	0.07	0.07	0.01	0.01	-0.06
	Equities	0.24	0.12	0.12	0.17	-0.07
	Instits	0.23	0.30	0.48	0.56	0.33
US	Deposits	0.28	0.33	0.23	0.12	-0.16
	Bonds	0.13	0.10	0.11	0.07	-0.06
	Equities	0.36	0.21	0.14	0.25	-0.11
	Instits	0.22	0.28	0.39	0.49	0.28
Germany	Deposits	0.59	0.59	0.48	0.34	-0.25
	Bonds	0.08	0.12	0.16	0.10	0.03
	Equities	0.10	0.04	0.07	0.16	0.06
	Instits	0.15	0.17	0.21	0.34	0.19
Japan	Deposits	0.55	0.69	0.60	0.54	-0.01
	Bonds	0.06	0.09	0.09	0.08	0.02
	Equities	0.12	0.07	0.09	0.03	-0.09
	Instits	0.14	0.13	0.21	0.31	0.17
Canada	Deposits	0.31	0.38	0.36	0.25	-0.06
	Bonds	0.14	0.08	0.05	0.05	-0.09
	Equities	0.27	0.24	0.21	0.27	0.00
	Instits	0.22	0.21	0.28	0.41	0.19
France	Deposits	0.49	0.59	0.38	0.25	-0.23
	Bonds	0.06	0.09	0.04	0.02	-0.04
	Equities	0.26	0.12	0.26	0.37	0.12
	Instits	0.06	0.09	0.26	0.23	0.18
Italy	Deposits	0.45	0.58	0.35	0.25	-0.21
	Bonds	0.19	0.08	0.19	0.19	-0.01
	Equities	0.11	0.10	0.21	0.26	0.14
	Instits	0.08	0.06	0.08	0.30	0.22
G7	**Deposits**	**0.43**	**0.52**	**0.39**	**0.28**	**-0.15**
	Bonds	**0.10**	**0.09**	**0.09**	**0.07**	**-0.03**
	Equities	**0.21**	**0.13**	**0.16**	**0.22**	**0.01**
	Instits	**0.16**	**0.18**	**0.27**	**0.38**	**0.22**

Corporate liabilities

		1970	1980	1990	2000	Change 1970-2000
UK	Bond	0.07	0.02	0.00	0.07	0.00
	Equity	0.49	0.37	0.53	0.67	0.17
	Loan	0.15	0.22	0.21	0.21	0.06
US	Bond	0.14	0.17	0.18	0.14	0.00
	Equity	0.55	0.49	0.39	0.63	0.08
	Loan	0.15	0.13	0.18	0.10	-0.04
Germany	Bond	0.03	0.02	0.02	0.01	-0.02
	Equity	0.27	0.20	0.31	0.49	0.22
	Loan	0.47	0.52	0.42	0.37	-0.09
Japan	Bond	0.02	0.03	0.06	0.10	0.07
	Equity	0.16	0.22	0.29	0.29	0.13
	Loan	0.48	0.45	0.45	0.40	-0.08
Canada	Bond	0.12	0.08	0.13	0.18	0.07
	Equity	0.46	0.41	0.41	0.54	0.08
	Loan	0.15	0.22	0.22	0.12	-0.03
France	Bond	0.03	0.04	0.04	0.04	0.01
	Equity	0.41	0.34	0.56	0.70	0.29
	Loan	0.54	0.60	0.38	0.14	-0.40
Italy	Bond	0.08	0.04	0.03	0.01	-0.07
	Equity	0.32	0.52	0.48	0.52	0.20
	Loan	0.60	0.43	0.41	0.30	-0.29
G7	**Bond**	**0.07**	**0.05**	**0.07**	**0.08**	**0.01**
	Equity	**0.38**	**0.36**	**0.43**	**0.55**	**0.17**
	Loan	**0.36**	**0.37**	**0.32**	**0.24**	**-0.13**

Institutional investors and corporate governance

- Function of overcoming incentive problems
- Growing share of equity held by institutions
- The overall issue of corporate governance – asymmetric information, agency costs and lack of complete contracts
- Conventional instruments of shareholder control – boards and voting rights

Institutions’ share of equity

		1970	1980	1990	1998
Germany	Life and pension	0.04	0.07	0.12	0.14
	Foreign	0.15	0.17	0.14	0.16
Italy	Life and pension	0.02	0.01	0.02	0.02
	Foreign	0.18	0.05	0.07	0.15
France	Life and pension	0.02	0.04	0.02	0.04
	Foreign	0.08	0.13	0.12	0.18
Japan	Life and pension	0.09	0.08	0.09	0.12
	Foreign	0.09	0.06	0.04	0.13
Canada	Life and pension	0.05	0.06	0.11	0.14
	Foreign	0.08	0.07	0.04	0.06
US	Life and pension	0.13	0.24	0.33	0.34
	Foreign	0.04	0.06	0.08	0.10
UK	Life and pension	0.14	0.45	0.47	0.46
	Foreign	0.13	0.15	0.34	0.33
G-7	**Life and pension**	**0.07**	**0.13**	**0.17**	**0.18**
	Foreign	**0.11**	**0.10**	**0.12**	**0.16**

- Four paradigms of corporate governance
  - Market control via equity (takeovers)
  - Market control via debt (LBOs)
  - Direct control via equity (“corporate governance movement”)
  - Direct control via debt (relationship banking) – EU issues and possible transformation – loss of “time series risk sharing”?
- Empirical results on governance
  - Benefits of takeovers mainly to target shareholders?
  - Is there short termism?
  - Governance action changes management structures but not performance
  - Some macro effects detectable of institutions – boost dividends, restrain investment, raise productivity
- EU regulatory initiatives

Other efficiency aspects

- Demand for liquidity helps generate it by various channels – lower volatility, easier transfer of liquidity, lower cost of capital
- Manage risk via tailored financial innovations
- Ability to employ price information – render markets efficient domestically and cross border, ensuring efficient capital allocation
- All likely to benefit EU capital markets as institutions develop further

Asset allocation, risk management, market dynamics

- Financial system with institutions predominant should be more stable than bank based in many cases (especially if mispriced safety net protection of banks)
- Securitised financial markets have stabilising features (marking to market, matching of assets and liabilities, distance from safety net, multiple channels)

- But principal-agent problems could give rise to volatility
  - Possibility of “rational herding”, all buy and sell at once, which may be “positive feedback”
  - Means of control – short mandates and performance measurement
  - Reputation and desire to show of good quality may lead to herding as cling to benchmark – or follow successful
  - Direct effects of performance checks
  - Short time horizons and information acquisition
- Risk management, shortfall risk, dynamic hedging and VaRs
- Style management and herding
- Sales by households
- Benchmark matching
- Limits on contrarian positions

Systemic consequences

- Sporadic market disruption:
- (1) Price volatility following shift in expectations (1987 crash, ERM, 1994 bonds)
- (2) Market liquidity crises (junk bonds, Russia/LTCM)
- Threat to EMEs, banks, non financial sector countries lacking institutions – but even institutions may be constrained to sell further (e.g. if solvency limits)
- Points mitigating systemic concerns
- Further risks for the banking sector in an institutionalised financial system

Financial stability and life insurance

- Note predominance of sector in most EU countries
- Errors in mortality projections
- Errors in asset return projections
- Increased credit risk
- Possible links to banks
- Population ageing and life insurance
  - Credit risks and credit cycles
  - Asset prices and ageing
- Issues in Japan – errors in management. Poor regulation, accounting and links to banks

Aspects of prudential regulation

- Differing regulation of types of institution – varies with solvency risk
- Institutions and lender of last resort
- International LOLR and institutional herding
- Liquidity failure and market robustness – EMU-related integration should aid in Europe
- Accounting, regulation and forbearance in Japan
- Can herding be reduced?
  - Longer mandates and holding periods?
  - Move to defined contribution?
  - Prudent person rules?
  - How to reintroduce contrarian behaviour
  - Transparency of hedge funds

Conclusions

- Institutions are major financial innovation, becoming pervasive
- Likely impact on Continental Europe of particular interest
- Impacts on financial structure and efficiency – but some unfamiliar risks to stability
- Need for continuing attention to appropriate regulation