

FINANCIAL DEVELOPMENT, INSTITUTIONAL INVESTORS AND ECONOMIC PERFORMANCE

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

- Institutional investors defined as pension funds, mutual funds and insurance companies
- Rapid growth in OECD and some EMEs, notably following pension reform
- Likely future growth following ageing
- Hence helpful to analyse possible impact on economic performance

Structure

- The evolution of financial structure
- Benefits of large size of the financial system
- Benefits of market or bank orientation
- Benefits from existence of institutional investors
- Developments in Chile
- Econometric work 1 – institutions and corporate sector performance
- Econometric work 2 – institutions and growth

The evolution of financial structure

- Stages of development of financial system
 - Bank
 - Market
 - Securitised
- Issue of path dependence
- Banks, non banks and markets larger in richer countries
- Shift to market notably in Common Law countries
- Financial development not monotonic (1913-50 reversal)

Benefits of large size of the financial system

- King/Levine – bank related variables link to growth, productivity, investment
- Levine/Zervos – stock market variables
- Legal aspects
- Overall development of financial system more crucial than bias?
- Most work ignores institutional investors, although link to market size/activity

Benefits of market or bank orientation

- Bank oriented provide debt and monitor – but may entail over investment
- Time series risk sharing (Allen and Gale)
- Market oriented better at control of investment at cost of liquidity crises (only cross sectional risk sharing)
- Investment in established companies versus venture capital
- Can market and relationship banks coexist?
- Financial crises – collapse of relationship banks versus “multiple avenues of intermediation”

Benefits from the existence of institutional investors

- Conventional literature noted above does not highlight role of institutions
- Issue – does it matter whether securities are held by individuals or institutions?
- Background – functions of financial system
 - Clearing and settling
 - Pooling and subdivision of shares
 - Transfer of resources over time and space
 - Manage uncertainty and control risk
 - Price information
 - Deal with incentives

- Do institutions enable functions to be undertaken more efficiently
- Pooling
 - comparative advantage over direct holdings via diversification and lower transactions costs
- Transfer of resources
 - Do institutions increase saving? Illiquidity of pension assets, liquidity constraints, tax incentives, cuts in social security
 - Empirical work suggests an effect but largely offset by decline in discretionary saving
 - Largest effect when credit constraints exist and low income workers forced to save

- Qualitative effects – institutions' longer time horizons hence larger share and bond holding
- Rapid build up of assets feasible in pension reform
- Hence switch to funding raises long term fund availability – unless households offset
- Entails lower cost /higher availability of long term funds, possibly aiding productive investment
- Increase also feasible in international investment, reducing risk – uncertain effects on growth

- Managing uncertainty and controlling risk
 - Development of derivatives markets as required by institutional investors
 - But institutional competition may weaken banking system, leading to greater risk taking and banking crises
- Improving price information
 - Pressure for improved accounting, disclosure, auditing
 - But possible negative effects via generation of volatility (volatility of stocks and overall market volatility)
- Clearing and settlement
 - Modernising capital market infrastructure – footloose institutions increase market competition

- Dealing with incentive problems
 - Issue of corporate governance, as borrowing/issuing firms adapt to institutions’ “shareholder value” requirements
 - Sustained dividends, more profitable investment, primacy of equity holders, better information
 - Corporate governance movement led by public and index funds – firm level evidence on its efficacy equivocal
 - But institutions reticent investing in small firms
 - And possible issue of “short termism”

Portfolio distributions of pension fund sectors

	Bonds	o/w Public	o/w Private	Shares	Property	Loans and mortgages	Short term assets	Foreign assets
Chile (1994)	45	39	6	33	2	13	6	1
Singapore (1996)	70	70	0	0	0	0	28	0
Malaysia (1996)	55	34	21	16	1	0	30	0
Switzerland (1994)	28	-	-	14	16	41	2	0
Australia (1995)	15	13	2	41	9	0	20	14
UK (1996)	14	n/a	n/a	78	5	0	4	27
Netherlands (1996)	63	n/a	n/a	26	8	n/a	3	23

Characteristics of pension fund sectors

	Real returns 1970-95	less average earnings	less global portfolio	Assets (% of GDP)	Coverage
Chile	13.0 (9.5) (1980-95 only)	+9.8	+4.1	39% (1995)	99% members; 58% contribute
Singapore	1.3 (2.0)	-5.6	-3.8	56% (1996)	90% members, 67% contribute
Malaysia	3.0 (3.9)	-1.4	-3.7	47% (1996)	86% members, 50% contribute
Switzerland	1.7 (7.5)	+0.2	-2.0	73% (1994)	90%
Australia	1.8 (11.4)	+0.8	-4.3	56% (1996)	92%
Netherlands	4.6 (6.0)	+3.2	-0.2	85% (1996)	89%
UK	5.9 (12.8)	+3.1	0.0	76% (1996)	75%

Indicators of financial development

Percent of GDP	Stock market capitalisation	Stock market turnover	Listed companies (no.)	Bank credit
Chile	149	22	284	63
Singapore	174	71	212	61
Malaysia	255	88	529	129
Switzerland	141	101	233	183
Australia	69	28	1178	83
Netherlands	90	63	387	118
UK	127	92	2078	125

Developments in Chile

- Illustration of benefits of institutional investors in EME after pension reform
 - Rise in private saving
 - Growth in overall asset/GDP
 - Longer debt maturities
 - Growth in debt and equity stock
 - Possible impact on TFP, investment, growth (Holzmann)
 - Internal resource transfers
 - Disclosure, rating, corporate governance aspects

Developments in Chile

Percent of GDP	1980	1986	1992
Fixed income instruments	0.2	26	60
Stock market capitalisation	30	24	88
Corporate bonds	0.2	0.4	5
Mutual funds	3	1	2
Foreign capital country funds	0	0	3
Insurance company reserves	n/a	3	7
Pension funds	0	13	32

Econometric work 1 – institutions and corporate sector performance

- Test impact of institutional investment on macroeconomy via proportion of equities held
 - Level of dividends
 - Fixed investment
 - TFP
 - R and D investment
 - Volatility of share prices
- Complement firm level studies and show possible wider impact of corporate governance

- G-7 plus Australia – four bank and four market countries – over 1970-99
- Institutional share independent of share prices
- Look at domestic long term (life plus pension - LP) and at foreign investment (largely institutional - FR)
- Variables all $I(1)$ except volatility in sample
- Error correction structure with difference and lagged levels
- Share terms combined with “conventional” variables for determining LHS, such as GDP, capital stock, real interest rate for investment
- Cross section weighed GLS panel, fixed effects and cross section weights

Results of panel estimation for log-difference of real dividends

	G-7+	Anglo-Saxon	CEJ
DEQLPS	-0.132 (0.075)*	-0.046 (0.124)	1.04 (0.71)
DEQFRS	0.457 (0.229)**	0.032 (0.43)	0.06 (0.43)
EQLPS(-1)	0.038 (0.04)	0.173 (0.064)**	0.606 (0.34)*
EQFRS(-1)	0.43 (0.093)**	0.359 (0.144)**	0.035 (0.41)
DLGDP	1.55 (0.098)**	1.55 (0.11)**	2.21 (0.54)**
DLGDP(-1)	0.72 (0.095)**	0.616 (0.108)**	1.96 (0.56)**
LRDIV(-1)	-0.199 (0.028)**	-0.163 (0.036)**	-0.27 (0.058)**
LGDP(-1)	0.062 (0.019)**	-0.021 (0.023)	0.197 (0.047)**
R-bar-2	0.414	0.49	0.37
SE	0.127	0.082)	0.154
Observations	216	112	108

Results of panel estimation for log-difference of real fixed investment

	G-7+	Anglo-Saxon	CEJ
DEQLPS	-0.21 (0.21)	-0.23 (0.1)**	-0.088 (0.3)
DEQFRS	00076 (0.11)	0.019 (0.23)	0.09 (0.075)
DEQMFS			
EQLPS(-1)	0.006 (0.08)	0.008 (0.046)	0.37 (0.17)**
EQFRS(-1)	0.016 (0.072)	-0.135 (0.08)**	0.06 (0.082)
EQMFS(-1)			
DLGDP	1.19 (0.17)**	0.05 (0.12)	1.78 (0.19)**
DLGDP(-1)	0.17 (0.15)	-0.66 (0.21)**	0.48 (0.16)**
LKS(-1)	0.023 (0.007)**	0.09 (0.013)**	0.01 (0.006)*
LI (-1)	-0.22 (0.032)**	-0.43 (0.053)**	-0.18(0.03)**
LGDP (-1)	0.3 (0.043)**	0.54 (0.08)**	0.22 (0.04)**
RLR(-1)	-0.003 (0.001)**	-0.0018 (0.0011)	0.00018 (0.0017)
R-bar-2	0.32	0.63	0.59
SE	0.046	0.052	0.04
Observations	216	112	108

Results of panel estimation for log-difference of total factor productivity

	G-7+	Anglo-Saxon	CEJ
DEQLPS	0.003 (0.017)	-0.037 (0.02)*	0.119 (0.048)**
DEQFRS	-0.04 (0.027)	0.043 (0.08)	-0.062 (0.027)**
EQLPS(-1)	0.034 (0.007)**	0.025 (0.0086)**	0.153 (0.042)**
EQFRS(-1)	-0.054 (0.014)**	-0.045 (0.017)**	-0.044 (0.027)*
DGDP	0.61 (0.027)**	0.537 (0.034)**	0.697 (0.043)**
DGDP(-1)	-0.17 (0.022)**	-0.153 (0.037)**	-0.184 (0.024)**
LTFP(-1)	-0.071 (0.0085)**	-0.132 (0.04)**	-0.0396 (0.012)**
LGDP(-1)	0.025 (0.0049)**	0.049 (0.013)**	0.009 (0.008)
R-bar-2	0.802	0.7	0.892
SE	0.009	0.009	0.0096
Observations	216	112	108

Results of panel estimation for log-second-difference of R and D capital

	G-7+	Anglo-Saxon	CEJ
DEQLPS	0.018 (0.009)**	0.03 (0.009)**	-0.014 (0.03)
DEQFRS	-0.025 (0.012)**	-0.028 (0.02)	-0.0078 (0.016)
EQLPS(-1)	-0.0056 (0.003)*	-5.38E-05 (0.004)	-0.0033 (0.023)
EQFRS(-1)	-0.0075 (0.005)	-0.0038 (0.006)	-0.011 (0.014)
DDLSDK(-1)	0.26 (0.06)**	0.19 (0.11)*	0.24 (0.08)**
LGDP(-1)	0.021 (0.003)**	0.018 (0.004)**	0.03 (0.006)**
DLSDK(-1)	-0.21 (0.025)**	-0.16 (0.034)**	-0.25 (0.04)**
LRSDK(-1)	-0.017 (0.002)**	-0.017 (0.005)**	-0.022 (0.004)**
RLR(-1)	0.00025 (0.0001)**	0.00024 (0.0001)	0.00039 (0.0002)*
DLGDP	-0.0036 (0.008)	0.0074 (0.009)	-0.022 (0.017)
DLGDP(-1)	-0.023 (0.01)**	-0.026 (0.011)**	-0.016 (0.02)
R-bar-2	0.47	0.25	0.53
SE	0.0043	0.0036	0.005
Observations	216	112	108

Results of panel estimation for equity price volatility

	G-7+	Anglo-Saxon	CEJ
DEQLPS	0.53 (0.18)**	0.47 (0.2)**	0.57 (0.49)
DEQFRS	-0.1 (0.19)	0.21 (0.3)	-0.27 (0.24)
EQLPS(-1)	-0.008 (0.08)	-0.09 (0.1)	0.41 (0.13)**
EQFRS(-1)	-0.072 (0.074)	-0.004 (0.08)	-0.08 (0.13)
RLR	-0.005 (0.002)**	-0.005 (0.002)**	-0.003 (0.002)
RLR(-1)	0.002 (0.001)	0.003 (0.002)*	0.0006 (0.002)
DLGDP	-0.124 (0.158)	-0.33 (0.21)	0.21 (0.2)
DLGDP(-1)	0.36 (0.17)**	0.3 (0.25)	0.42 (0.2)**
R-bar-2	0.16	0.22	0.09
SE	0.043	0.04	0.044
Observations	216	112	108

Summary of results for institutional shares of equity

Equation	Difference of log real dividends	Difference of log TFP	Difference of fixed investment	Second difference of R&D capital	Real share price volatility
G-7+					
DEQLPS	Negative			Positive	Positive
DEQFRS	Positive			Negative	
EQLPS(-1)		Positive		Negative	
EQFRS(-1)	Positive	Negative			
Anglo Saxon					
DEQLPS		Negative	Negative	Positive	Positive
DEQFRS					
EQLPS(-1)	Positive	Positive			
EQFRS(-1)	Positive	Negative	Negative		
CEJ					
DEQLPS		Positive			
DEQFRS		Negative			
EQLPS(-1)	Positive	Positive	Positive		Positive
EQFRS(-1)		Negative			

Overview

- Results consistent with disciplining effect of institutions, especially domestic long term institutions in Anglo-Saxon countries
- Some impact on volatility detectable
- Likely future growth of institutional shares highlights relevance
- Shortcomings of econometrics include:
 - Ownership cannot exceed 100%
 - Unsophisticated estimation procedure

Econometric work 2 – institutions and growth

- Tentative work to assess impact of institutions on overall growth
- 17 OECD countries, 5 year periods 1980-2000
- Institutional impact on growth in later stages of development?
- Initial income, schooling etc similar across OECD
- Results do not favour strong impact on growth
- Results on banking sector size (negative) of interest

Results of growth estimation for OECD countries (1980-2000 five year period averages)

Equation	1	2	3	4	5
Constant	0.033**	0.033**	0.032**	0.033**	0.03**
Bank lending/GDP	-0.0093	-0.01*	-0.016*	-0.018**	-0.01**
Stock market turnover		0.0056	0.006*	0.006	0.007*
Institutional assets/GDP			0.0053	-0.007	
Equity market capitalisation/GDP				0.023**	
Share of institutions in financial assets					0.004
R-bar squared	0.016	0.023	0.006	0.013	0.031
SE	0.014	0.014	0.012	0.011	0.012
Observations	68	65	59	59	59

Conclusions

- Existing finance and growth literature does not directly address impact of institutional investors on performance
- Nonetheless rich “partial” literature suggesting largely beneficial effects on functioning of financial system
- Impact on corporate sector performance detected in panel work, but not on overall growth