

**PENSION REGIMES AND FINANCIAL SYSTEMS:
BETWEEN FINANCIAL COMMITMENT, MARKET LIQUIDITY, AND
CORPORATE GOVERNANCE**

Gregory Jackson and Sigurt Vitols

This paper examines the linkages between pension regimes and national financial systems. Welfare state regimes shape the accumulation of pension savings by shaping the mix of public and private pension provision, as well as by regulating investment policies of private pension capital. We compare *market-based pension regimes* in Britain and the USA (combining low public pensions and externalised private pension provision) with *solidaristic regimes* in Germany and Japan (combining high public pensions and organisationally-embedded private pensions). The theoretical background concerns the distinction between bank-based (Germany-Japan) versus securities-based financial systems (UK-USA) in different ‘varieties of capitalism’ (Albert 1993; Crouch and Streeck 1997), as well as stakeholder versus shareholder-oriented corporate governance.

The paper looks at welfare state regimes as an *independent variable* shaping political economy, particularly financial systems and corporate governance. This perspective is common in studying labour markets, by looking at how welfare state policies impact labour force participation and other labour market outcomes. Despite many econometric studies on pension finance, the literature on welfare states offers no general formulation of how pension regimes impact national financial systems and hence different varieties of capitalism (Davis 1995). The linkages between pension regimes and corporate

finance are manifold. Policy choices balancing the three pillars of pension regimes (public, occupational, and individual) impact the *supply-side* of national savings. The regulation of private pensions (second and third pillars) shape how savings are channelled into capital markets through investments in stocks, bonds, loans, or internal company reserves. Conversely, pension regimes impact the *demand-side* for different financial assets by shaping the personal sector's portfolio distribution between bank deposits and securities. This paper will specify major dimensions along which pension regimes differ that, in turn, impact financial systems.

Pension regimes and financial systems: interactions and interdependence

The largest source of savings in economies is generally the household sector and the largest deficit sector is the productive (or non-financial company) sector. Whereas in pre-industrial societies the household and productive sectors were directly fused (e.g. through obligations and privileged of serfdom or the lack of separation between 'firm' and 'household' in the case of the artisan), industrialisation involves the development of an autonomous financial system comprised by specialised institutions for mediating the flow of household savings into productive investment. Financial systems have offered two major alternative modes of financial mediation (Gerschenkron 1962; Zysman 1983). One alternative is *bank-based finance* – i.e. mediation through a banking system which takes deposits from households and channels this savings into loans made directly to companies. Another alternative is *market-based finance*, in which households directly or indirectly invest in securities issued by companies. These securities generally can be

exchanged on the market without the express permission of the issuer and, in the ideal case, have a high degree of liquidity (i.e. can be sold with little or no losses in price).

One of the most striking differences between countries – despite liberalisation and the globalisation of capital markets – is the large variation in the structure of national financial systems. When examining the US, UK, Germany and Japan, one can see a broad distinction between the first and the last two countries in terms of basic measures of financial system structure, corporate liabilities and household savings patterns (Table 1). Banks in the US and UK are only one of a plurality of financial institutions, accounting for about one quarter of total financial system assets, whereas banking systems in Japan and Germany account for the majority of financial system assets (64 and 74 per cent, resp.). In contrast, stock market capitalisation, a rough measure of the importance of external equity finance for companies, is higher in both the US and UK (122 and 152 per cent of GDP, resp.) than in Germany and Japan (27 and 63 per cent of GDP, resp.).

Furthermore, the distinction between market-based and bank-based financial systems can be seen in both the structure of company liabilities and household assets. The relative importance of equity market finance versus non-securitised finance (mainly bank loans) is reflected in the relative proportions of total company liabilities. In both the US and UK, securitised liabilities make up a majority of company sector liabilities (61 and 67 per cent, resp.), whereas in Germany and Japan they account for a minority (21 and 15 per cent, resp.). The household sector, which provides the bulk of savings, also shows wide variation. In the US and UK, currency and bank accounts total 21 and

25 per cent, resp., of total household sector assets versus 43 and 62 per cent in Germany and Japan.

In the past decade, a growing literature has explored linkages between financial systems and corporate governance regimes (Jackson 2000). This literature suggests that bank-based systems are better able to provide stable long-term finance to the corporate sector, which in turn enables companies to make long-term commitment to employees. Market-based systems, in contrast, subject companies to more pressure for short-term profits and less secure employment policies, but may be more supportive of radical innovations and science-based industry (Vitols et al. 1997).

The ‘savings side’ of financial systems, the link between the household sector and types of financial systems, remains under-researched (Vitols 1996). This is an important ‘black box’ to open, since the household sector is generally the largest net saver in economies. Household savings levels and patterns – particularly longer-term savings motivated by provision for retirement – and the policies that influence them are thus crucial in determining: 1) which type of savings vehicles and financial institutions receive ‘preferential’ access to household savings, and 2) the incentives and investment policies of financial institutions (including pension funds). These factors influence corporate governance through the capacity of financial systems to provide different kinds of finance. Finally, since pension assets constitute a large portion of household financial claims and since pensions often differ in their coverage of different groups, 3) pension policies are a key factor influencing the ‘politics of reform’ in capitalist

economies, including the reform of financial systems, corporate governance systems and, ultimately, welfare state policies.

This paper explores three hypotheses regarding the links between pension regimes and financial systems with regard to Germany, Japan, Britain, and the US:

1) Pension regimes with a greater emphasis on public pension provision are more supportive of bank-based financial systems; pension regimes stressing private (both occupational and personal) pension provision favour market-based financial systems.

While the aggregate impacts of pension systems on levels of national savings are difficult to estimate, pension regimes influence the structure of savings and capital investment portfolios (Mackenzie 1997). Public pensions are usually pay-as-you-go (PAYG) systems financed by employer/employee contributions or taxes; thus, the financial assets accumulated by public pension systems are generally small. Second and third pillar private pensions, on the other hand, are generally funded and accumulate considerable financial assets. Public and private pillars are interdependent, such that generous public pensions tend to ‘crowd out’ private pensions. Strong public provision will, other things equal, channel fewer financial assets to institutional investors such as pension funds and thus increase the relative proportion administered directly by the household.

The public-private mix, in turn, exerts a strong indirect effect (or ‘conditional causal linkage’) on financial systems by altering the distribution of financial assets between

households and financial intermediaries. This mix is so significant due to the differences in the portfolio preferences of households relative to institutional investors. The differences are evident by comparing the asset portfolios of pension funds (Table 5) and households (Table 6).¹ Pension funds tend to hold greater levels of long-term and risky assets, such as corporate stocks, than households. Households favour more liquid and less risky assets due to their shorter time horizons. These different portfolios reflect the fact that large institutional investors have a greater capacity to effectively diversify investment risks across different types of assets and pool risks on their liabilities side that might require unexpected payments. Thus, private pension provision increases the supply of finance to capital markets, particularly to equity markets. Conversely, the more significant public pension provision is, and thus the direct accumulation of savings by households, the greater the supply of liquid assets to the banking system will be.

2) Private pension regimes that are large, externally administered, and/or have defined-contribution obligations are more supportive of market-based financial systems; conversely, private pension regimes that are smaller, internally administered, and/or have defined-benefit obligations are less supportive of market-based financial systems.

Several dimensions of private pension schemes are relevant to financial systems: their size, form of administration, and benefit scheme. First, converse to the argument above, large private pension schemes accumulate more assets and channel them into equity markets. Second, private pension schemes differ as to whether they are internally administered by the sponsoring company (for example, through book reserve methods) or externally administered by independent organisations. Private funds face ‘moral

hazard' problems associated with the danger of default on pension obligations due to company bankruptcy. Pension reserves, insofar as they were reinvested in company assets, could be considered a direct loan from employees or a form of employee equity in the company. However, regulators have increasingly forced companies to establish fully-funded pensions that lessen the dependence of employees upon their employer. Therefore, internal or external administration reflects the degree of employer--employee trust in industrial relations, as well as different strategies for institutionalising risks. Third, private pension schemes differ as to whether obligations are defined-contribution or defined-benefit. Private pension claims historically have been defined-benefit, although in a number of countries such as the US, a shift toward defined contribution plans can be seen in the past two decades. Whereas defined-benefit plans tend to invest in fairly conservative investments with a safe minimum return (such as real estate or municipal bonds), defined-contribution plans appear to put a higher emphasis on marketable securities and are more willing to invest in higher-risk assets such as equities.

External funds tend to increase the demand for liquid financial assets. The existence of independent pension funds also tends to encourage a dynamic of competition between potential fund managers, who are often re-appointed annually on the basis of their short-term (one year) performance. To the extent that pension schemes are funded on a defined contribution basis, the demand for high return equities is likely to grow, as well as shifting the capital market risks associated with pension savings further from firms to employees. Pension regimes with a greater emphasis on private provision thus tend to support market-based financial systems in general and a higher-risk, shorter-term

investment orientation. A feedback effect of defined contribution schemes is to, in turn, pressure companies for higher short-term returns and become less willing to collectivise pension risks of their employees.

3) Solidaristic pension regimes support political alliances between the lower- and middle-income groups to a greater extent than systems with a higher degree of private pension provision, which are more supportive of alliances between middle- and upper-income groups. Differences in alliances are significant in influencing the direction of political reform, including financial system, corporate governance and welfare state policies.

The group most affected by differences in pension regimes is the middle-income group.² Lower-income households in all systems are almost entirely dependent upon public pensions. Similarly, upper-income households in all systems rely more upon private provision for retirement income. The mix of retirement income sources for middle-income households, by contrast, varies greatly with the nature of the pension regime.³ Retirement income for middle-income households in solidaristic regimes is mainly financed by taxes or employer/employee contributions, thus aligning the interests of middle-income and lower-income households regarding the viability of welfare states and the rights of employees. Retirement income for the middle-income group in private pension regimes, however, tends to come from capital income (particularly equity income), thus creating a sort of ‘people’s capitalism’ aligning the interests of middle- and upper-income groups. This coalition has an interest in increasing the profitability of

companies through reducing taxes and social contributions and through the introduction of shareholder value (and the associated weakening of employee rights).

The public--private mix

A basic distinction exists between Germany and Japan as countries with pension regimes emphasising the public dimension in pension funding, and the US and UK, where private pensions play a more significant role. Actually, the distinction between public and private pension provision is a difficult one that involves many dimensions (Shalev 1996; Kangas and Palme 1992; Rein and Rainwater 1986). The public versus private distinction may be made according to the different *carriers* of pension provision such as the state, firms, families, labour unions, insurance companies, etc. Here only state administered funds would be considered public, but neglect statutory schemes administered by the social partners. Others distinguish according to the sort of *benefits* received, such as the degree to which market principles versus social entitlements are involved or the degree to which pensions orient toward minimum social standards versus replacing past labour market earnings beyond that minimum. Finally authors distinguish according to the *regulation* of pension regimes, i.e. whether schemes are mandatory versus voluntary, entail universal versus selective coverage, or have a statutory versus contractual basis. Most real world pension regimes use a complex combination of principles such as the market, distributive justice, and the insurance of risks. Self-organisation by the private sector often occurs in the shadow of state hierarchy, and subjected to public standards and oversight. Given the focus here on

financial systems, we define public pensions in relation to state versus private control over pension savings.

International differences in public versus private pension provision can be summarised by several measures. First, levels of *expenditures* are largely determined by demographic structures, as well as the generosity of benefits. For this reason, we measure the relative shares of public and private sources in total expenditure. Table 2 shows a higher share of public expenditures in Germany and Japan (roughly 80 to 20 per cent), than in Britain and the US (roughly 60 to 40 or 70 to 30 per cent).⁴ Table 2 also shows that private schemes account for higher shares pension contributions in Britain and the US. Second, based on *income*, Table 3 shows replacement rates of pension schemes based on two income levels.⁵ Germany has the highest replacement rate, representing the most generous of the public pension systems. The US is also generous at lower salary levels, but less comprehensive at higher income levels. Public pensions in Britain are the least generous. Table 3 also shows that elderly households in Germany rely more on public pensions for the overall income than either Britain or the USA. Third, given the less comprehensive public system, a higher percentage of employees are covered by private schemes in Britain and the US (see Table 4).

Four Systems

In Germany, nearly all employees are covered by a compulsory general PAYG pension insurance system. Contributions from employers and employees each amount to 8.85 per cent of gross earnings, up to a DM 6,500 maximum. A number of different insurers with

parity representation for employers and employees administer the system: the Federal Insurance Agency for White Collar Employees, 18 regional state insurance institutes, and other special institutions for seamen, railway employees, farmers and coal miners.⁶ Insurers are regulated by either the Federal Insurance Agency (*Bundesversicherungsanstalt*) and the Minister of Labour and Social Affairs, or directly by the *Länder*. In addition to earnings-related contributions, a general subsidy is paid from the general budget of the federal government amounting to 20 per cent of expenditures in 1995. Together, the Association of Pension Insurance Carriers (*VDR*) administer a reserve fund. The fund has shrunk from 9.3 to 1.5 months expenditures between 1972 and 1994 - amounting to 1.1 per cent of GDP (*VDR* 1994). The reserve fund portfolio consists primarily of bank deposits (72 per cent), short-term loans (15 per cent) and short-term securities (4 per cent). The public system accumulates little capital and contributes to the financial system via bank deposits.

In Japan, the public pension system makes a major contribution to the bank-based financial systems. The Pension Insurance Amendments of 1985 transformed the existing National Pension Plan into a national retirement system for all employees. Employees receive a flat-rate benefit from the National Pension Plan, and participate in an additional statutory plan with an earnings-related scheme (the Employees' Pension Insurance System, or EPS). The EPS is funded exclusively through equal employer-employee contributions totalling 16.5 per cent of gross earnings in 1995 (Clark 1998: 106). These statutory pensions are *partially funded*. The programme evolved from full funding to partial funding, but still has substantial reserves. Funds collected under both the NPS and EPS plans are deposited in the Trust Fund Bureau of the Ministry of

Finance (Estevez-Abe, this volume).⁷ In 1999, both funds totalled roughly 139 trillion Yen or roughly 28 per cent of GDP. The funds receive an interest rate set by the Ministry of Finance (MOF), and are then pooled with postal savings as part of the Fiscal Investment and Loan Programme (FILP). Public pension assets are managed as a tool of extended fiscal policy by ensuring the availability of large sums of capital to finance public works investment.

In Britain, state pensions historically aimed at compensating voluntary pension schemes in providing minimum social security for the poor (see Manow 1997). Unlike welfare models oriented to upgrading the earnings-related component for mainstream workers in Germany and Japan, British welfare sought to provide basic minimum income. Pension policy was linked to the goals of reducing poverty among the elderly and thus targeted to populations outside the mainstream wage-earners. The Social Security Pension Act in 1975 introduced a state earnings-related pension scheme (SERPS) alongside the basic pension, but also gave the option of contracting out to an occupational scheme provided a minimum guarantee of benefits. In light of the degenerating contribution ratio that creates financial troubles under a PAYG system, the Thatcher government cut benefits provided by SERPS. The past two decades have been characterised by increasing 'opting out' from the public system.

In the US, the first national pension system (Social Security) was established in 1935 as part of the New Deal. Unlike tax-financed flat-rate schemes, Social Security is an earnings-related system financed by payroll taxes. President Franklin D. Roosevelt favoured the earnings component in order to ensure a vested interest among the broad

wage earning public and thus mass political support for Social Security. Initial benefits were not particularly generous, and one of the major demands of the trade unions and the progressive wing of the Democratic party since the New Deal has been to increase Social Security. Due to the strength of the conservative opposition (in part related to the disproportionate strength of small rural states have in the US Senate), trade unions focused on establishing and extending pension benefits through collective bargaining in the 1940s and 1950s. Although the generosity of Social Security has considerably increased, the system remains less comprehensive at upper-middle income levels. Since around 1984, social security has gradually moved from PAYG to a partially-funded system in anticipation of demographic changes. In 1997, the Old-Age and Survivors Insurance (OASI) and Disability Insurance (DI) trust funds had surplus assets of \$ 655 billion or around 8.4 per cent of GDP. This sum remains relatively small compared to Japan. Fund assets are invested entirely in low yield government bonds, and have little direct impact on the financial system.

In sum, the public--private mix of pension provision has both direct and indirect impacts on financial systems. The *direct effects* of state system relate to the size and structure of assets accumulated by the state. Here the major differences are between pay-as-you-go systems (Germany, Britain) and partially funded systems (Japan and the United States). Partial or full funding potentially gives the state increased control over financial markets. However, as the US example shows, the impact of accumulated pension reserves can be limited to general fiscal effects by financing public debt. While this reduces the supply of government debt offered to the private sector, the impacts on the financial system are small and consistent with the market mechanism, since no state

intervention in the allocation of credit exists. Japan is more similar to Sweden, where the state plays an active role in credit allocation. State allocation of credit occurs through the use of a public banking system, and hence creates a source of patient capital for private industry, in addition to sponsoring public works.

An *indirect impact* of the public-private mix relates to the ‘crowding out’ effect on private pensions through generous public schemes. Cross-national research has demonstrated a strong negative correlation between the levels of private and public pension expenditures (see Kangas and Palme 1992; Esping-Andersen 1987). Strong negative correlations exist between the replacement rates and the level of private expenditures, suggesting that public pensions ‘crowd out’ private pensions by reducing the demand for private funds. Where public pensions display weak income gradation, earnings-related pensions components have been provided in the private sector. This pattern is illustrated across the four cases examined here: private pensions are low in Germany and Japan (corresponding to high levels of public pensions) and high in Britain and the US (corresponding with lower levels of public provision) especially for higher income groups. Such demand-side effects may be partially countered by other state-incentives such as tax breaks to implement private pension plans.

Private pension accumulation:

organisationally-embedded versus market-based regimes

Unlike public schemes implicitly guaranteed by the state’s power of taxation, private schemes rely on contractual mechanisms and insurance to guarantee that pension

benefits will be paid. Thus, most private pension regimes are fully or partially funded and accumulate large sums of capital. With the ageing populations of OECD countries, pension capital has become a fast-growing source of savings and investment capital. For example, Table 4 compares the assets of private pension funds. Converse to their less comprehensive public sectors, British and US private pensions assets are large relative to Germany and Japan.⁸ As already shown in Table 5, pension fund portfolios are dominated by equities. Their importance to domestic stock markets can be shown by the fact that 33 per cent of UK and 25 per cent of US stocks were owned by pension funds in 1995, compared to only 1 per cent in Germany and around 2 per cent in Japan.

This section compares institutional differences in the organisation and regulation of private pension accumulation. These factors influence who controls private pension resources and how they are channelled into national financial systems. Company-sponsored pensions were historically an element of welfare that served to transform workers into members of a paternalistic firm-community. Company insurance systems created risk pools at the company level, creating an organisationally bounded community of fate among members that might reinforce company rather than class identification. Employers used pension benefits as a selective incentive to reward company loyalty and reduce the problems of labour turnover. Yet financially, pension benefits remained at risk through the employer's default or subject to breach of trust. For this reason, most pension regimes secure assets in separate funds, or sometimes guarantee direct commitments by compulsory insurance as in Germany. The principle of separation can also be found in the regulation of investments. Pension funds usually have formal or informal portfolio rules, as well as limits on self-investment in

sponsoring firms. Last, along with regulating risks, pension regimes differ in how the beneficiaries' rights to pension assets, particularly surplus' generated by investment. Historically, international differences have arisen in the institutional arrangements to address the financing methods, as well as rights and obligations of private pension funds.

Our typology groups private pension regimes according to whether assets are *internalised in organisationally-embedded* forms of investment or *externalised in market-based* forms of investment. Ideal-typically, organisationally-embedded regimes internalise capital allocation within the firm (e.g. through the internally-held pension reserves) or indirectly through the self-investment by formally external funds or through networks of firms linked by implicit contracts, such as Japanese life insurance firms. These systems are often associated with direct claims by employees on their sponsoring companies. Market-based regimes externalise capital accumulation outside the sponsoring firm or group of firms. These regimes are administered by company or independent pension funds, as well as through group insurance provided by life insurance firms. Pension claims thus normally fall on a legally independent organisation who hold the assets. These regimes are considered external because they are regulated to serve the best *financial* interests of policy holders by maximising market returns to capital.

In Germany, private pensions are voluntary supplements to the public system. In 1990, 32 per cent of firms provided occupational pensions covering 65 per cent of their employees (Statistisches Bundesamt 1995: 157). Defined-benefit plans dominate, while

only 2 per cent of firms offered defined contribution plans (Schmähl and Böhm 1994: 14). The accumulated assets of private schemes totalled 486 billion DM or 14.6 per cent of GDP in 1994. These assets are divided among four different types of schemes: 57 per cent of assets were in the form of direct commitments, 8 per cent support funds, 12 per cent direct insurance, and 22 per cent pension funds (Spengel and Schmidt 1997).

The majority of pension assets can be classified as organisationally-embedded through *direct commitments* and *support funds*. Direct commitments involve direct obligations by the employer, and hence the firm bears insurance risks directly. These are widespread among large firms, who calculate pension liabilities through book reserve methods and use reserves as internal finance for capital investments. Besides the strong tax advantages they offer (Manow 2000), firms are obligated to calculate pension liabilities at an interest rate of 6 per cent (Wartenberg 1992), thus being attractive for corporate finance when real interest rates are high. The building and diminishing of reserves can also be used by firms as a form of profit-smoothing to minimise taxable profits over time⁹ or sustain shareholder profits during temporary downswings. Support funds are held externally, but not supervised by the federal insurance agency. Thus, support often make loans to sponsoring firms although these plans are the least widespread sort of pension scheme. Market-based forms of pension accumulation, such as direct insurance and pension funds, constitute only a minority of assets and are widespread among small firms.

Direct insurance involves employer-sponsorship of a plan through an independent life insurance company. The advantages for smaller firms are simple administration, low

costs, and the bearing of risks by an external insurer. However, funds are channelled outside the firm, thereby lowering firm liquidity and reducing the level of funds available for internal investment. Most insurance assets are invested in credit markets to finance housing and public debt.¹⁰ Pension funds are organised by external mutual insurance associations financed by employer and employee contributions. Pension funds are allowed to loan a maximum of 1/3 of their assets to sponsoring firms if strict collateral requirements are met. Further pension funds are restricted to investing 30 per cent of their assets in stock and other equity, as well as owning a maximum of 5 per cent of the total capital of any one company. In practice, pension funds invest below the legal maximums in equities (see Table 5).

In Japan, three sorts of private pension schemes exist: lump severance payments, employee pension funds (EPF) and tax-qualified pensions (TQP). Japanese firms have traditionally provided lump sum severance payments equal to 3-4 years of salary. As in Germany, firms created book reserve liabilities to pay future pensions and used the interim cash as internal finance. However, reserves are tax-exempt only up to 40 per cent of their total value. Tax-exempt reserves totalled 10.9 trillion Yen in 1989, and total pension reserves was estimated at around 27 trillion Yen (Clark 1991). A growing number of firms have introduced two main types of private pensions.¹¹ EPFs pay a contracted-out portion of the public pension system, plus at least 30 per cent above the public benefit. They are managed by outside organisations such as trust banks and life insurance firms. In 1996, around 1,900 EPFs existed covering 12.1 million people and with assets of 41.6 trillion Yen (roughly 7 per cent of GDP). TQPs are separate from the public system: existing in 91,000 companies, covering 10.7 million members, and

holding assets of 17.8 trillion Yen. Pensions benefits are paid through either lump sum severance payments, annuities, or both.

Assets of TQPs and EFPs must be administered by a life insurance company or trust bank licensed by the Ministry of Finance. Pension funds are thus politically channelled to a relative small set of highly regulated organisations. Pension capital is strongly linked to both the horizontal corporate networks or *keiretsu*. The Japanese life insurance industry is the world's largest, with over 12 times as many assets as the UK or Germany (see Estevez-Abe, this volume; Table 4). The life insurers remained highly concentrated, given the MOF restricted market entry and guaranteed minimum interest rates. Trust banks had to follow 5:3:3:2 investment rules (low risk assets, stocks, currency related, and real estate). Thus, a smaller proportion of assets went into securities markets, and given the smaller size of trust funds themselves, pension funds have not yet had a dramatic impact on the Japanese financial system. Such regulations have now been abolished as part of the financial 'Big Bang'. Pension funds are managed by parity employer-employee representatives, and surpluses can only be withdrawn with approval of the Ministry of Health and Welfare.

In Britain, occupational pensions are coupled with the statutory system through the option of contracting-out the earnings-related benefit under SERPS. Contracting out is allowed when particular conditions are met to assure beneficiaries of higher benefits than under the state scheme (Blake 1992; Davis 1997).¹² Around 92 per cent of members in occupational schemes are covered by defined-benefit systems, with the remaining 8 per cent in defined-contribution schemes. British occupational pension

funds must be set up as *trusts*, having several important implications. Occupational schemes must be funded rather than PAYG, with the exception of state employees. Furthermore, funds must be separate from the employer. As shown in Table 5, their assets are primarily invested in marketable equities following diversified portfolios. The 1990 Social Security Act capped self-investment by pension funds into their sponsoring companies at 5 per cent of all fund assets (Blake 1995: 318). Trustee law dictates that trustees have the fiduciary responsibility to act in the best interests of their beneficiaries. The *Megarry Judgement* in a 1982 dispute over investments of a mineworkers' pension fund showed that the financial interests of the beneficiaries took precedent over other sorts of interests (Blake 1995: 319-320). In the judgement of the High Court:

When the purpose of the trust is to provide financial benefits for the beneficiaries, as is usually the case, the best interests of the beneficiaries are normally their best financial interests. In the case of a power of investment, as in the present case, the power must be exercised so as to yield the best return for the beneficiaries, judged in relation to the risks of the investments in question.

(Blake 1995: 319-320)

Taken together, the British regulatory environment discourages organisationally-embedded pension accumulation as hostile to the interests of beneficiaries. A conflict of interest is construed between the best interests of the sponsoring company and the financial interests of future pensioners for high capital market returns.

In the US, occupational pensions are particularly widespread to supplement statutory social security. Given the low replacement rates of social security among upper middle-income groups, private coverage spread from 19 per cent of private sector employees in 1945 to 46 per cent in 1987 (OECD 1990). Private pension assets are roughly evenly divided between defined-benefit and defined-contribution schemes. However, defined-contribution schemes have been growing rapidly since the 1980s due to the widespread popularity of 401-K plans. Roughly 2/3 of pension assets are operated by trust-fund plans, while the remaining 1/3 of assets are held by life insurance firms.

Since 1974, private-sector plans are governed by ERISA, the Employee Retirement Income Security Act of 1974. ERISA does not recognise direct commitments for tax benefits, but forces separation of assets onto separate funds and established duties for pension trustees: loyalty of beneficiaries, prudence, asset diversification, and various prohibitions of self-investment or transactions involving potential conflicts of interest. The prudent-man concept limits self-investment in sponsoring firms at 10 per cent of fund assets and mandates that assets are broadly diversified. However, no other concrete restrictions are applied. In practice, rules on under-funding lead to a high level of investment in fixed-interest securities to guarantee fund liquidity.¹³ As in Britain, fund managers are viewed as having fiduciary duties to act in the financial interests of their beneficiaries. Further incentives to maximising financial returns are institutionalised by the diffusion of defined-contribution schemes that place the risks and rewards of pension asset returns with the beneficiaries themselves. Pension funds thus form a major pillar of the contemporary market-oriented financial system.

Pension regimes and varieties of capitalism: institutional complementarity with financial systems, corporate finance and corporate governance

Organisationally-embedded versus market-based regimes of pension accumulation have wide ranging impacts on financial systems, corporate finance and corporate governance. Beyond contributing to the bank-based or market-based nature of the financial systems, these effects also have consequences for corporate finance and corporate governance. In particular, organisationally-embedded pension regimes increase the financial autonomy of corporations and limit pressures to generate shareholder returns relative to market-based systems. Such regimes create the supply of ‘patient’ capital relative to liquid capital, and provide sources of financial commitment to enterprises in Germany and Japan. Such patterns of ownership and control, in turn, have institutional complementarities with ‘stakeholder’ oriented management or non-liberal patterns of corporate governance as discussed in Germany and Japan (Jackson 2000). Conversely, the liquidity-orientation of UK and US pension funds increase stock market pressures on companies, and help give voice to shareholder interests and reinforce the exclusive focus on shareholder value found in those national systems of company law.

Sources of financial commitment

In Germany and Japan, substantial private pension assets are accumulated as internal reserves on the balance sheets of large firms and used as a means of internal company finance.¹⁴ Internal reserves can be used either to reduce external liabilities (capital substitution) or finance new investments in physical capital or financial instruments.

Thus, pension reserves increase the long-term financial autonomy of firms, reducing their dependence on external equity finance. Book reserves can be particularly effective for new, growing companies since liabilities won't mature for several decades. In Germany, pension reserves accounted for 19.9 per cent of corporate liabilities in 1990, compared to just 9.5 per cent in 1970 (Wartenberg 1992). Over the same period, equity declined from 26.7 per cent to just 18.5 per cent.

Likewise, the absence of large pension funds¹⁵ reinforces the existing patterns of financial commitment among corporate owners. German and Japanese stock markets are dominated by banks and inter-corporate shareholding motivated by strategic organisational interests (Jackson 2000a), while individual and portfolio-type institutional investors remain relatively small. In Japan, life insurance companies play a key role as stable shareholders, protecting firms from the threat of hostile take-overs. Japan has an additional feature in that the pension assets held in external pension funds or life insurers are linked to the system of cross-shareholding within company groups. Here, 'external' pension capital again becomes re-embedded within the company group as a source of stable, committed finance.

Sources of financial liquidity

Pension capital in the UK and the US are largely accumulated and controlled by external pension funds. Pension funds pool household savings and function to diversify risks in providing funds to financial markets. They channel large amounts of capital into equity markets (see Table 5), increasing the long-term supply of equity capital, but also

increasing volatility and capital market pressures on companies. Given their institutional trustee relation, pension funds pursue maximum shareholder returns in the interests of their members, subject to prudent rules concerning the diversification of assets. Institutional investors thus have a fundamental interest in market liquidity, the ability to transact in large size without moving the price against them and at low transaction costs. Pension funds also favour market-oriented regulatory institutions, such as market-based accounting rules, stringent disclosure requirements, take-over codes, restrictions on insider information, limiting special share voting rights, etc. Large pension funds and insurance companies has greatly improved capital market efficiency: liquidity is increased, prices better reflect market values, and pension funds largely hold to professional standards of trading.

Despite their strengths, pension funds have been criticised for contributing to the problem of *short-termism* of UK--US financial markets (Blake 1995). First, large pension funds tend not to invest in small companies (Blake 1995; Davis 1997), both because the costs of information gathering are greater and due to restrictions on holding maximum levels of equity in single firms (these limits are quickly reached with smaller firms). Second, pension funds invest little in venture capital markets, as these markets are characterised by direct investment rather than the portfolio approach of pension funds. Third, pension funds also increase the short-term volatility of securities markets. Fund trading strategies can easily lead to cascading sales or purchases causing markets to bubble or crash. Derivates trading may also have reinforcing effects on price swings. Volatility also results from the 'herd mentality' of investors: the performance checks of fund managers against the market that may induce similar behaviour among investors

who fear performing worse than the ‘average’ fund, or infer information from each others’ trades. Fourth, pension funds also create their own interests and may lead to inefficient practices, such as the churning of stocks to raise fees with the further consequence of increasing stock market volatility. Also, contestation arises over the often ill-defined ownership of funds surpluses during mergers and take-overs.

Market-oriented pension investment shape corporate governance by increasing pressures toward shareholder value on British and American corporations. Paradoxically, the growing size of private pension funds has helped partially overcome the fragmented nature of corporate ownership and increase the use of shareholder ‘voice’ in corporate governance. Pension funds own nearly 20 per cent of all stock in the US, compared to less than 1 per cent in both Germany and Japan (Jackson 2000). Due to their indexing strategies and large size, the liquidity of pension fund investments is sometimes quite limited. Furthermore, recent legal interpretations in the US suggest that fiduciary duties may include balancing indexing strategies with active monitoring and relationship investing. Shareholder activism has formalised corporate governance practices. Thus, while increasing the commitment of shareholders, it is important to remember that pension funds interests differ substantially from the *strategic organisational interests* pursued by banks and life insurers in Germany and Japan.

It remains to be seen whether the maturing of private pension funds will have destabilising impacts on capital markets. Stock market booms in both Britain and the US were fuelled by dramatic increases in pension funding. The inflow of new funds may slow, and over time fund liabilities will come due. As pension funds mature, their

optimal investment portfolio changes - funds need guard against the risks of default on liabilities, and may increase their share of fixed-interest securities. Portfolios may no longer easily be re-balanced by new inflows. A large-scale shift from equities to bonds may have a destabilising impact on asset prices, and hence the value of the pension funds themselves.

Conclusion

National pension regimes are an important factor shaping financial markets, as well as corporate finance and corporate governance. German pensions have the smallest impact on their financial system, since the public system is generous and organised on a PAYG basis, but contribute to providing patient capital to firms through small private schemes financed primarily through company book reserves. Japanese pensions also contribute to bank-based and 'patient' finance, both through the public trust funds and private provision through life insurance firms. British and US pension funds are largely organised around external pension funds that invest high proportions of their assets in equities. Pension funds thus increase the size of equity markets, as well as aggregating share ownership and providing some degree of institutional shareholder 'voice' within corporate governance.

Just as pension regimes displayed institutional complementarity with national patterns of financial markets and corporate governance in the past, the changes in pension regimes during the 1980s and 1990s have wide-reaching consequences for these national models of capitalism. The growth of pension funds are closely linked to the growing

size stock markets and the increased pressures for ‘shareholder-value’ oriented corporate governance. Companies now face pressures to improve shareholder returns that have far-reaching consequences for corporate organisation and the balance of power among stakeholders within the firm. Until recently, weaker pressures for shareholder value in Germany and Japan were associated with their smaller and organisationally-embedded regimes of private pension accumulation. Welfare state reform may be one of the driving forces changing patterns of corporate governance.

TABLES 1 TO 6 ABOUT HERE!

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1 For example, UK pension funds held 69 per cent of their assets in equities compared to 13 per cent for households.

2 We are grateful to Ron Dore for an extended note outlining these differences.

3 For example, German households in the top three income groups are 3 times more likely to receive

private pensions than those in the lowest quintile, and only half as likely to depend entirely upon the statutory system (BMA 1998).

- 4 These shares may be sensitive to the relative maturity of the public versus private pension systems or categories used. For example in Germany during 1995, 78 per cent of pensions paid came from the public schemes, only 5 per cent from private schemes and the remaining from occupational and civil service schemes (BMA 1998).
- 5 Replacement rates differ greatly by salary level. Given the different distributive effects of pension regimes, it is difficult to evaluate the generosity of public pensions with a single measure.
- 6 Details for the funding and contribution rates differ for these occupationally-specific schemes.
- 7 A major reform of FILP is planned for the year 2001 that would end mandatory deposit of pension reserves as part of FILP (see <http://www.mof.go.jp>).
- 8 In addition to public pensions, the size of private pensions is influenced through tax policies, the rates of return on pension assets, and the maturity of pension schemes.
- 9 This practice may viewed as a way of delaying tax payments and hence incurring an uncollateralised loan from the state. Real tax savings occur by way of minimising taxable assets (through incurring a liability).
- 10 According to the Association of Life Insurers, corporate stock accounts for only 2 per cent of the assets of life insurance companies (Wartenberg 1992: 149).
- 11 In 1993, 92 per cent of firms with over 30 employees offered private pension plans (Clark 1998). Around 58 per cent of EPI insured employees were covered by either an EPF or TQP in 1989 (Clark 1991: 86).
- 12 In 1991, 9.7 million employees were contracted-out of SERPS, while 1 million are 'contracted-in' where occupational pension benefits are paid only on top of the SERPS scheme (Davis 1997: 12).
- 13 Minimum funding standards were established for defined-benefit schemes. The law has greatly improved the funding status of pensions: the proportion of private pension funds with sufficient assets to cover liabilities increased from fewer than 35 per cent in 1974 to nearly 75 per cent in 1985 (OECD 1990). The Pension Benefit Guarantee Corporation (PBGC) was established to insure defined-benefit schemes against default.

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- 14 Some important differences do exist: German employees do not customarily contribute to occupational pension schemes, which would imply a financial participation on the direct commitments of the firm (Schmähl 1991: 52, 210), whereas in Japan firms and employees contribute equally to the schemes.
- 15 In Germany, pension funds and life insurers invest in equities below the legal maximums. However, German equities have not underperformed. But the small differences in returns between German bonds and stocks may not be large enough to justify the extra risk involved.

Table 1: Financial System Characteristics, 1995

	US	UK	Germany	Japan
Banking Sector Assets as a Proportion of Total Financial System Assets	24.6%	Ca. 25%	74.3%	63.6%
Stock Market Capitalization as Percentage of GDP	122%	152%	27%	63%
Securitized Liabilities as a Percentage of Total Non-Financial Enterprise Liabilities	61.0%	66.9%	21.1%	15.4%
Currency and Deposits as a Percentage of Total Household Sector Assets	20.9%	25.3%	43.3%	62.3%

Sources: (Bank of Japan, 1996) (Deutsche Bundesbank, 1997)

Table 2: The Balance of Private and Public Pension Expenditures

	Benefits as % GDP (% of pension benefits), 1980			Contributions as % Labor Costs (% of pension contributions), 1984		
	Total	Private	Public	Total	Private	Public
Germany	13.2	2.6 (20%)	10.6 (80%)	21.0	5.0 (24%)	16.0 (76%)
Japan	5.0	0.9 (18%)	4.1 (82%)	13.5	4.7 (18%)	6.8 (82%)
UK	10.9	4.6 (42%)	6.3 (56%)	15.0	7.0 (47%)	8.0 (53%)
US	10.2	3.3 (32%)	6.9 (68%)	18.0	9.0 (50%)	9.0 (50%)

Sources: Compiled from OECD (1988); Davis (1995); Shinkawa and Pempel (1997); Rein (1996). Contributions data for Japan, 1978.

Table 3: Public and Private Pension Income

	Target Replacement Rates of Public System	Social-security replacement rate (1992), based on final salary of \$20,000 and \$50,000	Percentage of Gross Household Income Provided by Private (Public) Pensions^b
Germany	70%	70-59%	12.8% (68%)
Japan	68%	54% ^a	na
United Kingdom	25%	50-26%	22% (48.7%)
United States	40%	65-40%	14.4% (33%)

Source: OECD (1998c; 1988) and Davis (1995: 43)

^a Ratio to average earnings in 1986.

^b Percentages don't total 100% due to income from other sources. Relates to households headed by those between ages 65 and 75. (Britain and USA 1986, Germany 1981).

Table 4: Private Pension Fund Assets, 1995

	Assets of Pension Funds as % GDP ^b	Private Pension Fund Coverage as % Employees	Assets of Life Insurance Companies as % GDP
Germany	2.7%	42%	19.4%
Japan	6.0% ^a	37%	33.9%
UK	68.8%	70%	63.4%
US	59.8%	50%	30.1%

Sources: OECD (1998a: 10; 1998b: 30; 1997)

^a 1994

^b For Germany and Japan, data does not include the large reserve funded pension plans with assets held directly on the sponsoring firm's balance sheet (see text).

Table 5 Pension Funds Portfolio Distribution, 1994

	Equity	Bonds and loans	Property	Liquidity and Deposits	<i>Of which, Percent Foreign</i>	Real Returns 1967-90
Germany	11%	75%	11%	3%	6%	5.1% (4.4)
Japan	27%	61%	2%	3%	7%	4.0% (9.0)
UK	80%	11%	6%	3%	30%	5.8% (12.5)
US	48%	38%	0%	7%	10%	2.2% (11.9)

Source: Davis (1996; 1995, p.150). Note: Mean and (standard deviation) over 1967-90 of annual real total returns on the portfolio in local currency.

Table 6 Household Sector Assets by Sector, % of Gross Financial Assets in 1994 (1975)

	Equities	Bonds	Institutions	Deposits
Germany	6 (7%)	14 (9%)	28 (15%)	45 (62%)
Japan	7 (15%)	6 (6%)	25 (13%)	62 (59%)
UK	12 (16%)	1 (8%)	54 (26%)	26 (40%)
US	19 (24%)	12 (13%)	44 (26%)	18 (36%)

Source: Davis 1996, p.49