accounting: of assets 172-3 liability 171-2 regulation 171-3 rules 176-7 standards 7 accumulated benefit obligation (ABO) 172 accumulation risk 4 additional years of service credits 180 adverse selection 143, 147, 157 after-tax contributions 194 ageing population 138 Albrecht, P. 7 Altonji, J. 12 altruism 12 annuities 25, 61, 234 Argentina 228 asset allocation 38 cost minimizing 212, 215-17 decisions 103-6 dynamic 174-5 asset managers, competition between 235-6 assets: accounting 172-3 foreign 31 uncertain values 19-20 see also equity automatic stabilizers 227 Average Indexed Monthly Earnings (AIME) 231 Bader, L. N. 75, 77 bankruptcy see insolvency Barro, R. 12, 31 below investment grade (BIG) 79-80, 170

Belt, Bradley 88 benefit restrictions 84 bequests 19-20, 25-6 Bethlehem Steel Corporation 77, 79, 80, 170, 177 Black, F. 91 Blake, D. 179 Bodie, Z. 92, 112, 175 Boender, G. 175 Bohn, H. 3-4 bonds: corporate 78-9 Covered Wage Bill (CWB) 179 prices 118-19 treasury 175 zero coupon 76 Borzi, P. C. 4 Burns, S. 16 Buser, S. 92 Bush, George W. 54, 71 call option 176, 218 capital market 25 cash balance plans 56 cash flow: excess 98, 101-2 rules 233 certainty equivalents 215-16 Chile 228, 235 claims: distribution of 121–3 pattern of 111 time profile 113 Clinton, Bill 14-15 Coche, J. 7 Cole, R. 92 collective bargaining 75-6 Collin-Dufresne, P. 110, 117, 119 companies see firms

conflict of interests 168 consumption: and income 20-3 pooling 17 contingency reserve 205 contributions: after-tax 194 catch-up 41 employer 53, 55, 191, 194 matching 191, 194 supplementary 205, 209, 212-14, 215-16, 218-19 Cooperstein, R. L. 111 Coronado, J. L. 5, 96 corporate bonds 78-9 corporations see firms costs: legacy 177 pension 168 Covered Wage Bill (CWB) 8, 179, 231, 232, 234, 236, 238-9 credit rating, below investment grade (BIG) 79-80 credit spreads 117-18 decision-making models 207 default frequency 96, 97, 99, 102 default rates 116-23 default risks 117, 119 deficit reduction contributions (DRCs) 77, 84 defined benefit (DB) plan 37, 204 actuarial view 74-5 asset allocation patterns 94, 95 changing use of 52 consumption-smoothing device 178 employer contributions 53 financial economics approach 174-5 as future cash flows 174 and intergenerational risksharing 32-3 liability measure 6 non-competitive 73 and pension insurance 5-6portable 7, 179-81 reform prospects 173-8 regulation 71-86

restructuring 167-82 risk-sharing 25 under-funded 3, 4, 8, 57 value of 38 versus DC 13-14 defined contributions (DC) plan 37, 204changing use of 52-3 characteristics of 53 costs 57 growing popularity 7 risk-sharing 25 value of 38 Denmark 174, 236 deposit insurance 92 Diamond, P. 18 Diamond model 29-30 disability benefits 148 discontinuance valuation method 208 distributions, rolled over 56-7 Eastern Airlines 79 EBRI/IC 401(k) Accumulation Projection Model 38-46 economist intelligence unit (EIU) 208 elective deferral 187 employee compensation 198 employer: contributions 53, 55, 191, 194 decision-making 188-9 promises 186 role in health care 142-7, 159-60 stock 58, 193, 194, 197 employment, continuous 37, 55 Enron 60 equity 238 market 117 return to 105 see also assets Euro area 208 Eurobond 118 Europe 7, 227 European Central Bank 205 expected default frequency (EDF) 96, 97, 99, 102

fee-for-service (PFFS) 141 Feldstein, M. S. 91 fertility 10, 23-5 financial expertise 234, 235 see also investment financial markets 234-6, 238 firms: charter value 92, 98, 101 closure 78-82 liquidation see insolvency restructuring 71, 73, 78-82 size 185, 195, 198 takeovers 168-9 fiscal policy 10, 12-13, 22-3, 33 Fore, D. 6 Fronstin, P. 149 FTSE 100 index 118 Fuller, B. 5 funding: decision 99-103 gap 177-8 meanings of 232-3 ratios 81, 93, 94, 99-100, 101-2 target 81, 82 funds, rolled over 55 General Motors 176 Germany 137, 222, 228 Gold, J. 75, 76 Goldstein, R. S. 110, 117, 119 Goode Report 110 government underwriting 73-4, 109 see also Pension Benefit Guaranty Corporation (PBGC); Trust Fund Greenspan, Alan 14 growth, endogenous 32 Gustman, A. 236 Hammond, B. 6 hardship withdrawals 56-7 health care 3 accessibility 149 employer role 159-60

entitlement 27

controlling 145-7

health care costs 33, 136-7

retiree 142, 147-56 self-funded 137-8, 145-6 health insurance 5, 27-8 health plan, high deductible (HDHP) 152, 155 health savings account (HSA) 152, 154 - 6Helman, R. 59 Holden, S. 4, 38, 41, 55 Holst, R. 228 Hooks, L. M. 92 housing market 19 Hsieh, S.-J. 92, 103 Huang, J.-Z. and M. 118-20 human capital 239 Hungary 228 Hurd, M. D. 59 hybrid pension plan 204-24 benefit structure 206-7 designing 205-10 Implicit Fiscal Liability (IFL) 228. 229 incentives 82-5, 191 for bad behavior 124 from PBGC 92-3 for saving 189, 200 tax-based 91, 186, 187, 199 income: and consumption 20-3 shocks 19 individual retirement accounts (IRAs) 4-5, 19, 37, 59 catch-up contributions 41 impact of saving in 42-5 rising 53 rollover 38 see also Section 401(k) information, outdated 170 insolvency 6, 71, 73, 78-82, 88, 89, 113, 226 and distribution 96-7 risk of 89, 99, 101 insurance industry 12, 25 intergenerational risk-sharing 10-35

defined contribution 145-6

intergenerational transfers 78

International Accounting Standards Board (IASB) 177 investment: expertise 57-8, 61-2, 234, 235 long-run 74-5 returns capping 7 risk 57-8 investment decisions: beneficiary 217-20 and plan costs 221 plan sponor 210-17 Ippolito, R. A. 188 irrational behavior 60 Japan 208, 226 Jin, L. 96 job change 38 Johnson, R. W. 158 Kotlikoff, L. 16 leakage 56-7 Lewis 91, 111 Liang, N. 5 liquidation see insolvency liquidity 191 loan feature 193 loans 56-7 long-run 171 long-term-care (LTC) 149 longevity 3, 4, 10, 25-7, 33, 59-60 LTV Steel 79, 80 McCall, N. 6 McCarthy, D. 6, 91 McGarry, K. 59 McGill, D. M. 74 Manzoni, K. 118 Marcus, A. J. 91, 111 market: discipline 75 failure 10 risk 12 market-based social security system 229-34, 234-6 Martin, S. J. 117 matching contributions 191, 194

Maurer, R. 7 Maxwell, Robert 110 Medicaid 12, 27, 137, 138-42 medical benefits 136-60 medical consumption, Diamond model 29-30 medical technology 3, 10, 28 medical-expense risk 15-16 Medicare 5, 12, 27, 136, 138-42, 237 + Choice 159 accessibility 157-8 Advantage 140-2 financial risks of 15-16 future of 158-9 premiums 149 problems with 157 review of 140-2 voucher system 16 Medigap 140, 149 Merton, R. C. 119 Mexico 228 minimum funding requirement (MFR) 110, 125 Mitchell, O. S. 7, 55, 56, 58 Moody's KMV 93, 97, 117 Moore, J. H. 56 moral hazard 73, 88-92, 110, 123-6, 222 test for 96-7, 98-106 Muller, L. A. 56 mutual funds 230, 234 Netherlands 176, 179, 236 Neuberger, A. 6, 91 non-discrimination rules 190 notional account 233 Obstfeld, M. 32 Orszag, M. J. 112 overlapping generations (OG) model 4, 18-19, 31 Pan American Airlines 79, 80 pay levels 196-7, 199

pay levels 196–7, 199 pay-as-you-go (PAYGO) 24, 78, 226 as public debt 228–9 tax 230–2 Pedrosa, M. 117 Pennacchi, G. G. 91, 111 Penner, A. G. 158 Pension Benefit Guaranty Corporation (PBGC) 169, 222 claims triggered 79-80 funding gap 71, 177-8, 169-70 incentives from 83-5, 92-3 need for government support 109 and pension fund finances 88-106 premium 114 pension benefits, vs. current wages 75-6 pension education 58 pension insurance: and DB 5-6 problems 169-70 value of 111 see also Pension Benefit Guaranty Corporation (PBGC) pension liabilities 112-13 pension plans: actuarial valuation 111-12 beneficiaries 215-17 costs 168, 221 as financial intermediaries 75-8 mandatory 159-60, 200 noncontributory 205 pay-as-you-go (PAYGO) 12 returns 171 risks 171 solvency dynamics 130-1 termination 81-2, 91, 168 under-funding 90 valuation 171-3 see also defined contribution benefit plan; hybrid pension plan; individual retirement accounts; defined benefit plan; Section 401(k); social security Pension Protection Fund (PPF) 114-16 Peru 228 Perun, P. 168 Plesko, G. A. 98 point-of-service (POS) 141 Poisson case 110, 114-16, 123, 127-32 political risk:

evidence on 227-8 and social security 226-9 portfolio, efficient 234-5 preferred provider organization (PPO) 141 prefunding 82 premium: determination 129 fair 121, 123, 125, 126 levels 111 risk 110.116 prescription drug plans (PDPs) 142 prescription drugs 157 principal-agent problem 167-9 productivity 3, 18-19, 20 projected benefit obligation (PBO) 172 projected unit credit (PUC) 172 provident funds 233 public debt 228-9 public pensions 8, 26 put option 222 Rappaport, A. 5 redistribution 236, 238 regime-switching model 208 regulation 168, 171-3 replacement rate 239 residual payroll tax 237-8, 239 retirement: age 4, 26-7 date 45 early 58-9, 148-9, 180 employer-provided health costs 142-7 expenses 149-52, 154, 156 health costs 142, 147-56 income adequacy 37 medical care 5 political strength 237 return caps 204 return guarantees 204, 206-7 risk accumulation 4 aversion 17, 211 bankruptcy 88, 89-92 default 117, 119

risk: (contd.) generational 226-40 investment 57-8 market 12 market price of 17 medical-expense 15-16 political 226-9 premium 116 sharing 226 shortfall 175 temporal 58 to taxpayer 85 tolerance 238 tracing 11 valuation 20 risk-sharing: equal 16-17 and fiscal policy 12-13, 22-3, 33 intergenerational 10-35 and public policy 10 rules 229-30 Robinson, K. J. 92 Rogalla, R. 7 Roll. R. 117 Russia 227 Salibury, D. 149 savings: health account 152, 154-6 impact on IRA 42-5 inadequate 54-5 incentives 189, 200 individual 37 Section 401(k) 4, 19, 37-46 automatic plans 54-5 based on average wages 7 and changing retirement date 45 growth of 37-8 move to 52-4 plan features 191-5 rationales evaluated 186-202 risks and rewards 54-6 unit of analysis 189 see also individual retirement accounts (IRAs) Seligman, S. 91 service cost 103

Sharpe, W. F. 91, 96 Shiller, R. J. 31, 239 social security 13-14, 37, 41 market-based system 229-34 and political risk 226-9 reform 14-15 see also pension plans solvency: dynamics 130-1 ratio 132, 209 rule 210 Standard & Poor (S&P) 93, 118 Steinmeier, T. 236 Steuerle, C. E. 168 stochastic model 110, 132-3, 175, 207-8 stock market 19 structural model 110, 116-23 Studebaker 72 Sturrock, T. 92 supplementary contributions 209, 212-14, 215-16, 218-19 Sweden 227, 233 Switzerland 137 takeovers 168-9 tax 12-14, 27, 146, 159-60 corporate 98, 101 explicit residual 230, 231 high 105 incentives 83, 91, 186, 187-8, 199 marginal rate 103 net lifetime 229 PAYGO as 230-2 residual payroll 237-8, 239 reversion 169, 176 rules 189–91 tax smoothing model 31 taxpayer, risk to 85 technology change 3, 10, 28 Tepper, I. 91 Thies, C. F. 92 transition effects 175 transparency 75, 228-9 treasury bonds 175 Treynor, J. L. 91 Trust Fund 14-15, 227, 229, 230-2

under-funding 90, 109, 112-13 United Airlines 79, 170, 177 United Kingdom: Accounting Standards Board (ASB) 176 **Financial Reporting Standard** (FRS) 176 Pension Protection Fund (PPF) 6, 109 - 33, 222Pensions Act 110 Treasury yields 118 United States 208 Bank of America 204 Economic Growth and Tax Relief (EGTRRA) 56 Economic Growth and Tax Relief Reconciliation Act 41 **Employee Retirement Income** Security Act (ERISA) 53-4, 72, 74-6, 83-4, 89, 168-9 Federal Welfare and Pensions Disclosure Act 72 **Financial Accounting Standards** Board (FASB) 88, 143, 171-2 Government Accountability Office (USGAO) 170 **Governmental Accounting Standards** Board (GASB) 144 Internal Revenue Code (IRC) 52, 72, 190; see also Section 401(k)

Internal Revenue Service (IRS) 168-9, 176 Medicaid 12, 27, 137, 138-42 Medigap 140, 149 Pension Funding Equity Act 76 Securities and Exchange Commission (SEC) 176 Supplemental Medical Insurance plan (SMI) 15–16 TIAA-CREF 232 see also Medicare; Pension Benefit Guaranty Corporation (PBGC); Section 401(k) US Airways Pilots 77 Utkus, S. P. 7, 58 Valdés-Prieto, S. 8, 179, 235 valuation risks 20 VanDerhei, J. 4, 38, 55 Wagoner, G. 5 wars 31 Warshawsky, M. 6 Watson Wyatt 93 workforce characteristics 186-7, 188, 196-8.199 Worth, J. D. 6 Yang, T, (S.) 7

Yeager, F. 5