

# An International Perspective on Pension Systems and Reforms

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**“WORLDWIDE AND JAPANESE PENSION -In order to  
think about pension reform with World Bank and OECD”**

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# Road Map

- **Reform Dynamics in the World's Regions**
- **Reform Directions and Lessons**
- **Selected Reform Issues:**
  - **How to deal with population aging and low or negative population growth**
  - **Non-Financial (or Notional) Defined Contribution (NDC) Plans**
- **References**
- **Annex Tables**



# *Reform dynamics in the world's regions*

- Pension reform dynamics in 2000s continues as in 1990s, with changes between regions and countries
- Movement toward multi-pillar schemes sustained, with some rethinking of pillar weight
- Importance of (some) funding recognized, but extended from private to public, and from mandated to voluntary
- Moving from Defined Benefit (DB) toward Defined Contribution (DC) in funded and unfunded schemes
- Regional highlights include:
  - **Latin America:** World-wide the lead reform region is taking stock and completing the reform gaps left
  - **Transition Economies in Europe and Central Asia:** Catching-up on reform dynamics with regional characteristics
  - **European Union:** Moving, but mostly slowly and with parametric reforms cum voluntary schemes
  - **South and East Asia:** First examples of fundamental reforms in a few countries
  - **Middle East and Northern Africa:** Moving from diagnosis to an integrated multi-pillar reform program project
  - **Sub-Saharan Africa:** Waking-up to the challenge and thread of unsustainable systems






# Latin America

- Systemic pension reform with a unfunded pillar legislated in 12 and introduced in 10 countries (i.e. except Nicaragua and Ecuador). Role model countries are undoubtedly Chile and Mexico.
- Each reform is unique in terms of the balance between the pillars, inclusion of contributors within the reform, the degree of competition among providers, arrangements for disability and survivors, institutional arrangements, etc.
- A critical feature of these reforms has been the creation of a single, unified national system from previously fragmented elements, except in Mexico (and to some degree in Colombia and Argentina)
- In those countries where structural reforms have not taken place, arrangements remain fragmented, impeding labor market functioning, aggravating inequity, and posing a thread to public finance



## *Transition Economies in Central and Eastern Europe (and Central Asia)*

- 
 Inherited large pension systems with essentially 100 percent coverage which needed to be adjusted with move toward market economy
  - Exception: Most had unified system
- 
 Most CCE countries adopted multi-pillar benchmark with introduction in 12 countries, and two more by January 2005
- 
 Reforms inspired by Latin America, but less radical and with regional spin on funded arrangements.
  - In most countries (except Kazakhstan and Kosovo) reduced first pillar/PAYG system remained.



# *Reform pressures in other regions ... ... and examples of directions*

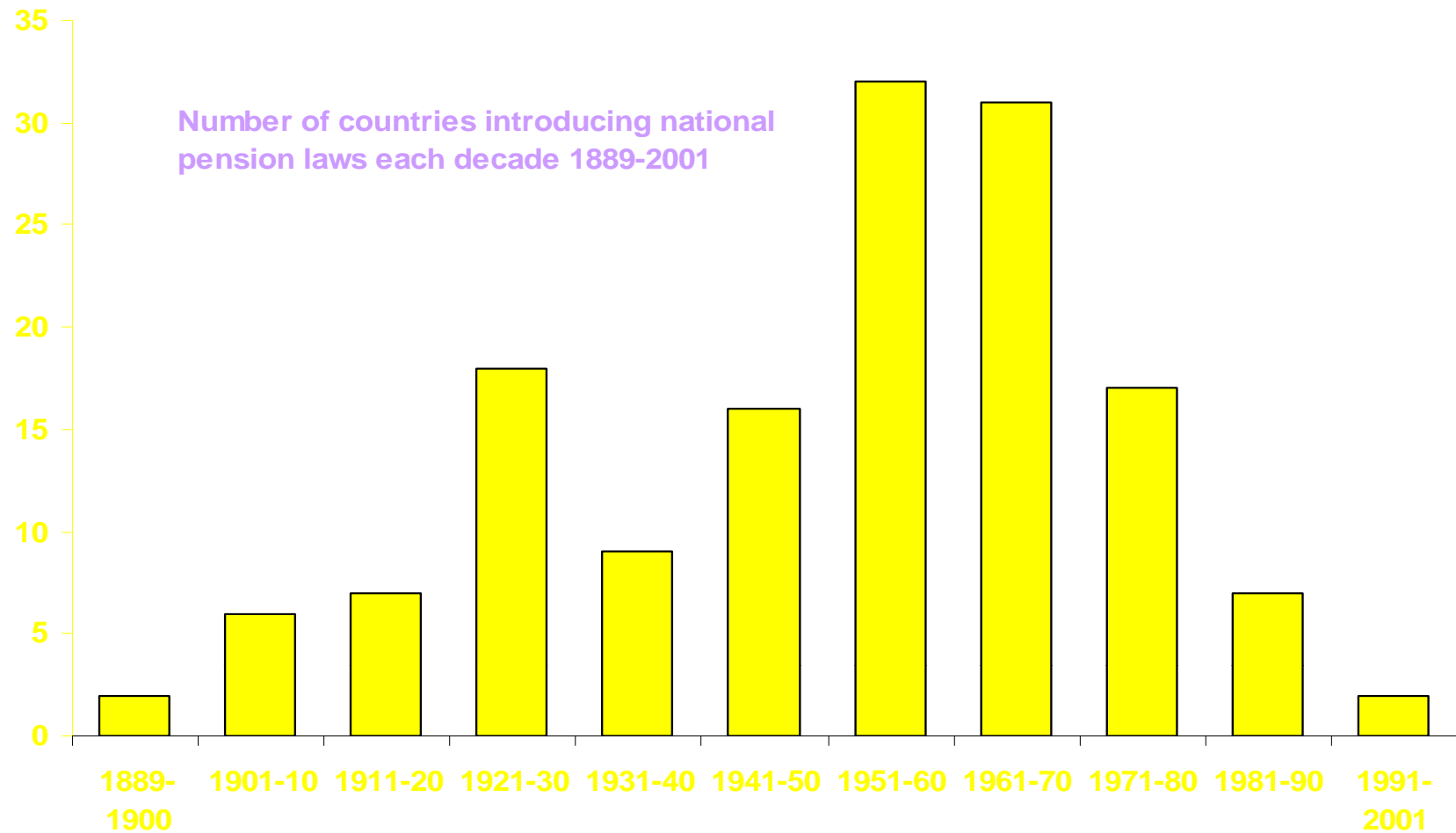
## ● **Reform examples:**

- **China:** 1997 reform with move toward DC-type system as second tier is substantiated by full funding in three pilot provinces, and a central National Social Security Fund financed from diverse government revenues to develop fiscal reserve in view of main population aging (US\$ 20 billion, and rapidly increasing). Strong interest in NDCs
- **India:** As of January 1, 2004 – a funded and contributory DC system for all new federal government hires with 10 plus 10 percent CR (instead of non-contributory DB system). Several states have announced intend to join system. Extension to private sector envisaged.
- **Egypt:** Reform concept under preparation envisages a move of the general (earnings-related) scheme with pseudo-investments in public sector toward an NDC-type scheme with tradable public bonds, and a reform of the some 600 corporate pension funds with improved governance and supervision.

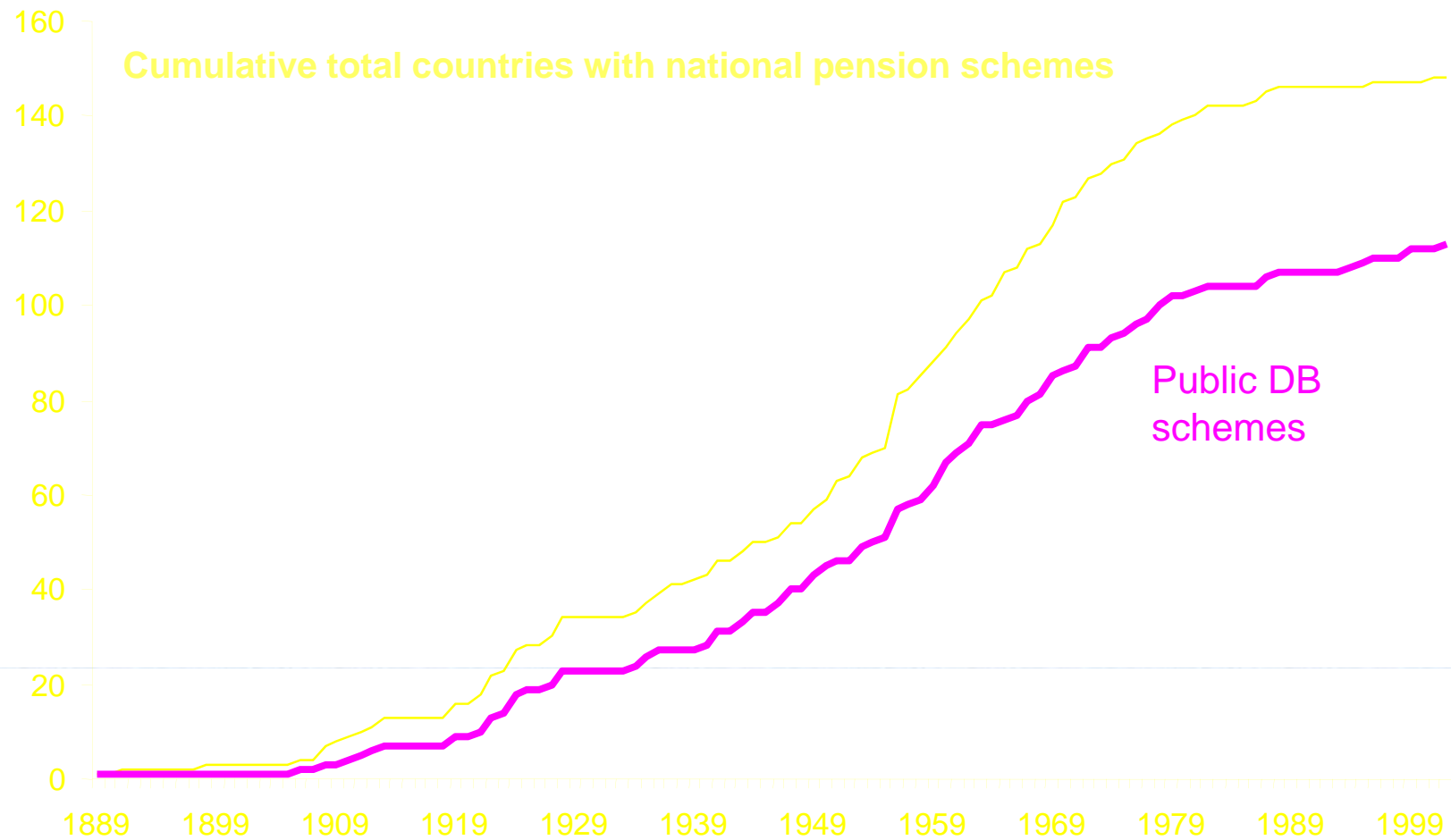




# *The global spread of pensions*

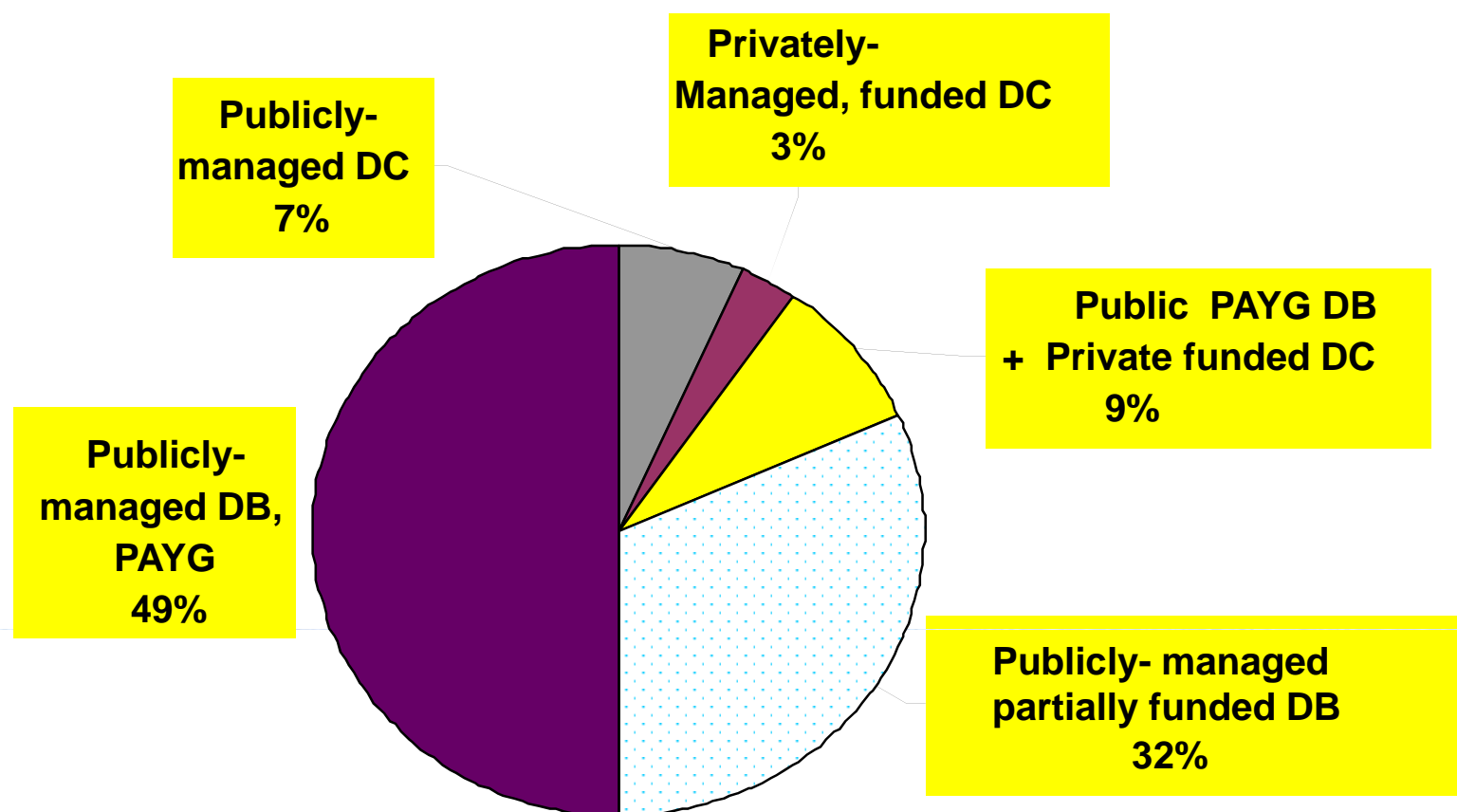


# *The dominance of public DBs*



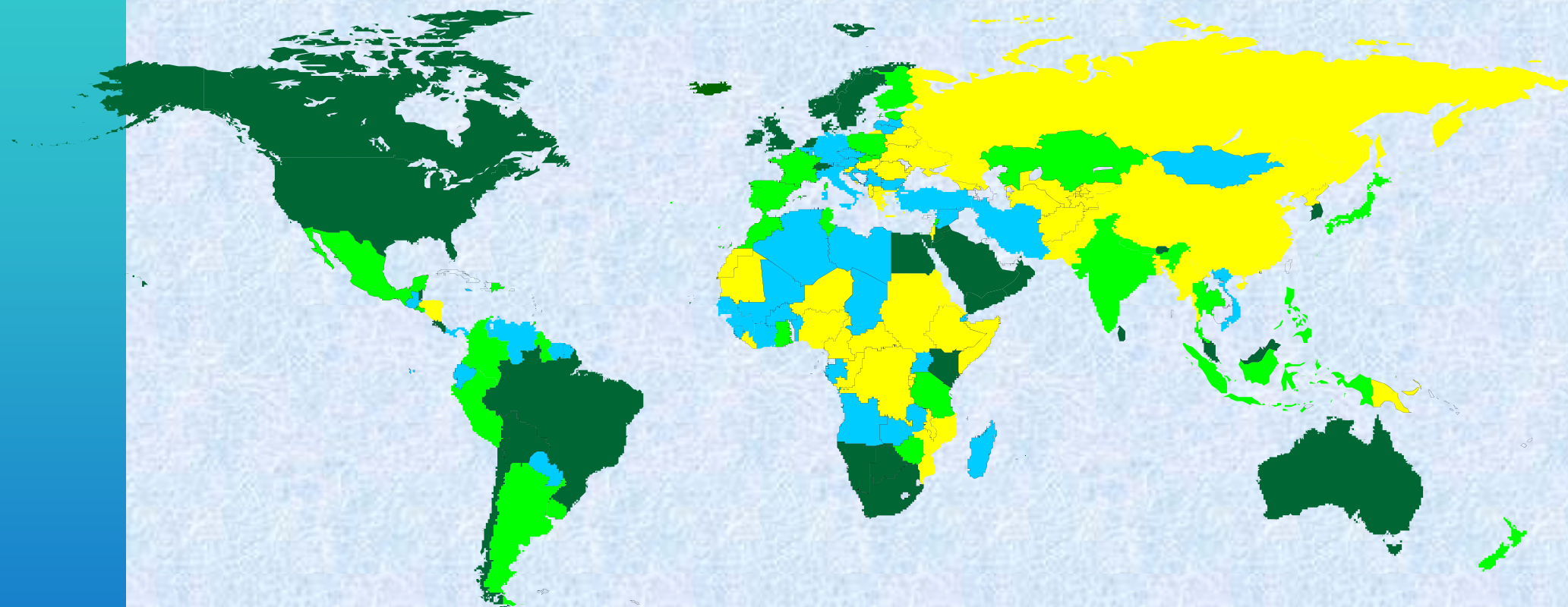


# *Mandated pensions today*



# Global Pension Fund Assets

*(by share of GDP)*

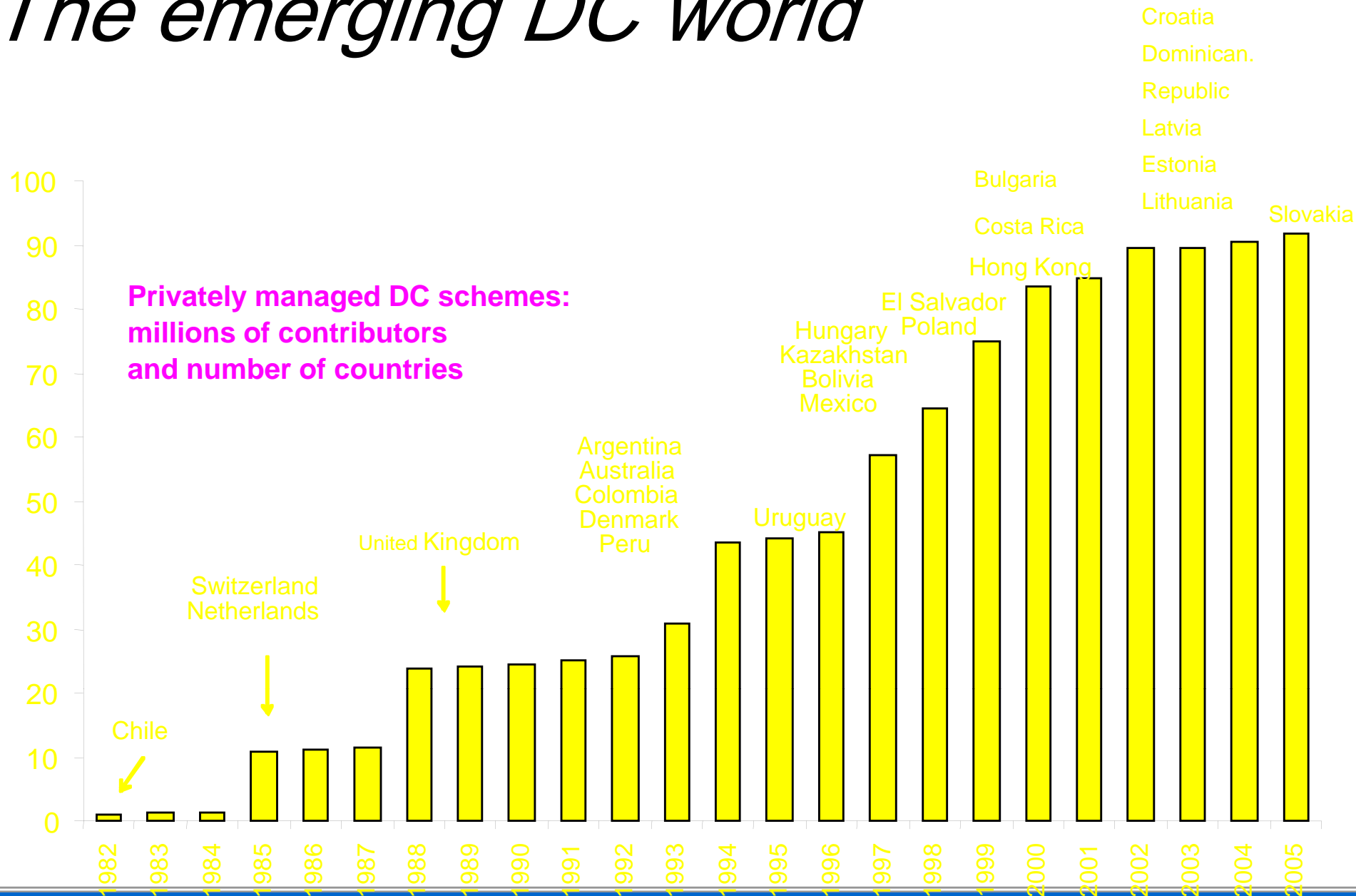


Pension Reserves as % of GDP




- 0.00 to 1.00
- 1.00 to 5.00
- 5.00 to 15.00
- 15.00 to 125.50



# The emerging DC world



# *Reform Directions and Lessons: Diversity of Reform Models and Systemic Reforms*

-  Moving toward an objective driven multi-pillar approach rendering structures secondary
  - Multi-pillar approach underlies essentially all reform considerations
  - Focus on objectives and outcomes, less on structures
  - No reform twins – multiplicity of approaches
-  Diversity of funding approaches
  - Mandated and/or voluntary (i.e. 2<sup>nd</sup> or 3<sup>rd</sup>) pillar
  - Private and/or public funding (CAN, NZ, IRL, N, etc.)
-  But move toward harmonization/coordination of schemes across occupations, sectors and countries
  - To achieve better oversight and enhance equity
  - To improve portability for human resource re-allocation



**Table 1. Multi-Pillar Pension Taxonomy**

<i>Pillar</i>	<i>Target groups</i>			<i>Main criteria</i>			
	<i>Lifetime poor</i>	<i>Informal sector</i>	<i>Formal sector</i>	<b>I.</b>	<b>Characteristics</b>	<i>Participation</i>	<i>Funding/collateral</i>
<b>0</b>	<b>X</b>	x	x		“Social pension,” at least social assistance, universal or means-tested	Residual	Budget/general revenues
<b>1</b>			<b>X</b>		Public pension plan, publicly managed, defined-benefit or notional defined-contribution	Mandated	Contributions, perhaps with financial reserves
<b>2</b>			<b>X</b>		Occupational or personal pension plans, funded defined-benefit or funded, defined-contribution	Mandated	Financial assets
<b>3</b>	X	<b>X</b>	<b>X</b>		Occupational or personal pension plans, funded defined-benefit or funded, defined-contribution	Voluntary	Financial assets
<b>4</b>	X	<b>X</b>	<b>X</b>		Homeownership, family support and so forth	Voluntary	Financial assets

*Note:* The size of x or **X** characterizes the importance of each pillar for each target group.

# Key Driver of Reform Direction

**Selected reform approach results from reform triggers, inherited system(s) and enabling environment**

## **Main reform triggers are**

- Short term fiscal pressure (and in a few cases long term fiscal considerations)
- Defaulting on promised replacement rate and lacking coverage expansion
- Social-economic changes (e.g.) rising female labor force participation and divorces)
- Challenges and opportunities of globalization (e.g. adjustment speed of economy)

## **Key Reform Design Options include**

- Parametric reform of existing system(s)
- Full market-based approach (i.e. funded accounts privately managed)
- Non-financial or notional defined contribution system
- Public pre-funding of existing/reformed system
- Multi-pillar reform

## **Enabling Environment, such as**

- Macroeconomic stability (e.g. inflation, budget deficit, and current account deficit)
- Fiscal and administrative capacity to support reform approach
- Readiness of financial sector to service funded pillar(s)
- Commitment by government and main stockholders, with reform champion





# *Country Innovations*

- **Notional Defined Contribution System to reform first (unfunded and earnings-related) pillar**
- Clearing house approach to reduce costs of funded schemes (Sweden, Argentina, Croatia)
- Transforming severance benefits into funded pensions combined unemployment/retirement benefits (Austria, Korea, Italy, Chile)





## *Central Challenges To Be Addressed*

- **How to increase coverage and deal with poverty among the elderly and in the population?**
- How to control the costs and fees of funded and privately managed pillar?
- Can the private sector deliver the appropriate retirement income products (annuities)?
- How to organize funded schemes in small and open economies?
- **How to organize and manage public pension funds?:  
Governance and Asset Management**



## *Selected Reform Issues*

- **How to deal with population aging and low or negative population growth**
- **Non-Financial (or Notional) Defined Contribution (NDC) Plans**



# *Population aging and low or negative population growth*



- 
 All countries in all regions are aging, i.e. experience an increase in the (i) share of elderly in population, (ii) old-age dependency ratio (65+/15-64), and average population age
- 
 In addition, in some countries and regions in the “North” population and labor force will be low or even negative during the next 45 years: Europe plus Russia, High Income Countries of East Asia and Pacific, China, and North America



Table A1. Dependency Ratios, by Region, 2005–50

<i>Ratio</i>	<i>2005</i>	<i>2015</i>	<i>2025</i>	<i>2050</i>
<i>Old-age dependency ratio<sup>a</sup></i>				
China	0.11	0.13	0.20	0.39
Europe and Russia	0.23	0.26	0.32	0.48
High-income East Asia and Pacific	0.24	0.32	0.41	0.63
North America	0.18	0.22	0.28	0.34
Latin America and Caribbean	0.10	0.11	0.15	0.29
Low- and middle-income East Asia and Pacific	0.08	0.09	0.13	0.26
Middle East, North Africa, and Turkey	0.07	0.08	0.10	0.22
South and Central Asia	0.08	0.09	0.11	0.20
Sub-Saharan Africa	0.06	0.06	0.06	0.08
<i>Total dependency ratio<sup>b</sup></i>				
China	0.41	0.39	0.46	0.65
Europe and Russia	0.47	0.48	0.55	0.74
High-income East Asia and Pacific	0.47	0.54	0.62	0.88
North America	0.49	0.51	0.57	0.62
Latin America and Caribbean	0.56	0.52	0.50	0.57
Low- and middle-income East Asia and Pacific	0.54	0.47	0.45	0.54
Middle East, North Africa, and Turkey	0.59	0.53	0.50	0.53
South and Central Asia	0.62	0.54	0.50	0.50
Sub-Saharan Africa	0.87	0.82	0.74	0.55

Table A2. Changes in Labor Force, 2005–25 and 2005–50

Millions




<i>Variant</i>	<i>2005–25</i>	<i>2005–50</i>
<i>Medium variant</i>		
China	19.1	–95.8
Europe and Russia	–37.5	–98.4
High-income East Asia and Pacific	–5.7	–25.0
North America	19.3	37.8
Latin America and Caribbean	77.6	110.3
Low- and Middle-income East Asia and Pacific	93.7	128.1
Middle East, North Africa, and Turkey	82.0	141.3
South and Central Asia	292.2	514.3
Sub-Saharan Africa	211.3	591.7
Total	751.8	1,304.3
<i>Zero-migration variant</i>		
China	24.4	–84.8
Europe and Russia	–45.7	–118.2
High-income East Asia and Pacific	–9.0	–32.3
North America	0.9	–8.8
Latin America and Caribbean	85.4	130.0
Low- and middle-income East Asia and Pacific	99.5	141.3
Middle East, North Africa, and Turkey	83.3	143.9
South and Central Asia	303.2	536.2
Sub-Saharan Africa	213.5	598.2
Total	755.6	1,305.5

# *Policy Options of dealing with Population Aging*

- Both unfunded and funded pension system need next generation to pay contributions and/or to buy accumulated assets
- Funding and international diversification helps at the margin, but does not solve problem
- Population aging is best solved by splitting increase in (remaining) life expectancy between more work and more leisure
- Later retirement requires, inter alia
  - Pension system which supports delay and does away with traditional sequence of school, work, retirement (i.e. DC)
  - Changes on the labor market, including life-long learning



# *Policy Options of dealing with low or negative Labor Force Growth*

-  Return to total fertility rate (TFR) at replacement level (around 2.1)
  - May not be sufficient and difficult to achieve
-  Stark increase in labor force participation (LFP) rate
  - May be sufficient but difficult to achieve
-  Enhanced immigration to compensate LF gap
  - Little supply but perhaps main absorption and integration problems





# Impact of Labor Force Growth on Rate of Return of Pension System

 Internal Rate of Return:  $i = g+n+a$

- g: labor force growth; n: productivity growth
- a: adjustment between pension assets and liabilities

Table 3. Annual Growth Rates of the Labor Force, 2005–50



Percent

<i>Country</i>	<i>Medium variant</i>	<i>Zero migration</i>	<i>Difference</i>
China	–0.28	–0.25	0.03
Europe and Russia	–0.68	–0.85	–0.17
High Income East Asia and Pacific	–0.56	–0.75	–0.19
North America	0.44	–0.12	–0.56
Latin America and Caribbean	0.83	0.95	0.12
Low and Middle Income East Asia and Pacific	0.79	0.86	0.07
Middle East, North Africa, and Turkey	1.36	1.38	0.02
South and Central Asia	1.25	1.29	0.04
Sub-Saharan Africa	2.32	2.34	0.02
Total	0.77	0.77	0.00

*Sources:* United Nations (2005); author's calculations.



## *NDC Schemes: The Beauty of Simplicity*

- 
 Non-financial Defined Contribution plans imitate the logic of funded individual account plans, but remains unfunded
  - Participants (or their employers) pay contributions on earnings during their whole career
  - Contributions are noted on an individual account
  - Account grows with contributions and is credited with rate of return (but remains unfunded/PAYG)
  - At retirement, the “notional” capital is converted into an annuity which takes account of life-expectancy
- 
 NDC is simple and transparent, but must respect some rules to deliver on promises, inter alia
  - Choice of appropriate interest rate, life expectancy and benefit indexation
  - A balancing mechanism against shocks
  - Creation of a reserve fund to deal with demographic or economic shocks
  - A financing mechanism to handle inherited commitments when moving from existing system



## *Promises of NDC (compared to NDB)*

### Handling short and long-term **fiscal pressures**

- Balancing mechanism (with notional interest rate and indexation of benefits as policy parameters) and reserve fund to deal with economic shocks
- Adjustment in initial pension in line with increase in cohort life-expectancy to deal with demographic shocks

### Dealing with **socio-economic changes**

- Female labor force participation and rising divorce rates
- Increasing divergence between old-age and disability risk

### Facilitating **opportunities of globalization**

- Benefit portability and flexibility across (national and international) labor markets
- Supporting life-long learning by allowing the mixing of education, work and leisure in a non-distortionary manner



# Experiences with NDC reforms

## ● Countries with NDC-reformed schemes

- Sweden, Latvia, Poland, and Italy

## ● Countries with NDC-type (point) systems

- Germany and France

## ● Countries with pseudo NDC systems

- China, Brazil, Russia

**⇒ Good design and implementation which respects the basic principles of NDC matters for results**



# Concluding Remarks

- Pension reform will remain on reform agenda in developing, emerging and developed economies alike
- Key challenges in years ahead include
  - Assuring timely and comprehensive decisions by policy makers
  - Creating conditions that the financial as well as public sector are able to deliver
  - Developing approaches in Northern countries to handle negative labor force growth
  - Extending coverage and providing efficient income support for the needy elderly in low and middle income countries
- Enhanced monitoring and evaluation of past and ongoing reform efforts – Crucial contribution to national and international development



# References

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- Holzmann, Robert, and Edward Palmer, eds. 2005. *Pension Reform: Issues and Prospect for Non-Financial Defined Contribution (NDC) Schemes*. Washington, DC: World Bank. In print.
- Holzmann, Robert. 2005. “Demographic Alternatives for Aging Industrial Countries: Enhanced Immigration, Labor Force Participation, or Total Fertility Rate”, Paper prepared for G-20 Workshop on Demographic Challenges and Migration, Sydney, 27-28 August 2005.
- [www.worldbank.org/sp](http://www.worldbank.org/sp) or pensions



# *Annex Tables*

- Social Security Reform in Latin America 1980s and 1990s
- Social Security Reform in Latin America 1990s and 2000s
- Social Security Reform in Europe and Central Asia in 1990s and 2000s





**Table Principal Features of Structural Reforms to Social Security Systems (Old Age Disability and Death) in Latin America During the 1980's and 1990's**

	Chile	Peru	Colombia	Argentina	Uruguay	Mexico	Bolivia	El Salvador
Year of reform	1981	1992/1993	1994	1994	1996	1997	1997	1998
Contribution-related PAYGO system?	closed	remains	remains	remains	remains	closed	closed	closed
Total payroll tax rate, pre-reform (%)	33	18	17.8	42	40	20	19	11.8
Total payroll tax rate, post-reform (%)	20	20.5/22 <sup>a</sup>	33.8	46 <sup>b</sup>	40	26	24	13.5
Participation of new workers?	mandatory	voluntary	voluntary	voluntary <sup>c</sup>	voluntary <sup>d</sup>	mandatory	mandatory	mandatory
Participation of self employed?	voluntary	voluntary	voluntary	mandatory	mandatory	voluntary	voluntary	voluntary
Remaining separate system for civil servants?	no	no <sup>e</sup>	yes	no <sup>e</sup>	no	yes	No	no
Dedicated fund managers	AFP	AFP	AFP	AFJP	AFAP	AFORE	AFP	AFP
Contribution to IRA (%) <sup>f</sup>	10	8	10	7.72	12.27	12.07	10	10
Fees & insurance premia (% of wage)	2.31	3.73	3.49	3.28	2.68	4.48	2.50	3
Switching between fund managers?	2 x annually	1 x annually	2 x annually	2 x annually	2 x annually	1 x annually	1 x annually	2 x annually
Pay-out options	Annuity or scheduled withdrawal	Annuity or scheduled withdrawal	Annuity or scheduled withdrawal	Annuity or scheduled withdrawal	Annuity only	Annuity or scheduled withdrawal	Annuity only	Annuity or scheduled withdrawal
Minimum return on investment?	relative to average	relative to average	relative to average	relative to average	relative to average	unregulated	unregulated <sup>g</sup>	relative to average
Minimum contributory pension?	yes	yes (only for affiliates born before 1945)	yes	yes	yes	yes	no	yes
Social assistance pension ?	yes	no	no	yes	yes	no	yes	no

**Table: Principal Features of Structural Reforms to Social Security Systems (Old Age Disability and Death) in Latin America During the 1990's and 2000's**

	Costa Rica	Nicaragua	Ecuador	Dominican Republic
Year of reform	1995/2000 <sup>h</sup>	2000, as yet unimplemented	2001, as yet unimplemented	2001 <sup>i</sup>
Contribution-related public PAYGO system?	remains	closed	remains	closed
Total payroll tax rate, pre-reform (%)	22	17		9.25
Total payroll tax rate, post-reform (%)	26	21.5	Varies, but no more than 20	20
Participation of new workers?	mandatory	mandatory	mandatory	Mandatory
Participation of self employed?	voluntary	voluntary	mandatory	Mandatory
Remaining separate system for civil servants?	-	no		No
Dedicated fund managers	OPC	AFP	EDAP	AFP
Contribution to IRA (%)	4.25	7.5	8.33	8
Fees & insurance premia (% of wage)	(j)	2.5	4.0	2.0
Switching between fund managers?	1 x annually	1 x annually		1 x annually
Pay-out options	Annuity or scheduled withdrawal	Annuity or scheduled withdrawal		Annuity or scheduled withdrawal
Minimum return on investment?	unregulated	unregulated	relative to average	relative to average
Minimum contributory pension?	yes	yes		Yes
Social assistance pension ?	yes	yes	yes	Yes

**Table: Characteristic of Pension Reforms in Transition Economies in Europe and Central Asia (ECA) Moving to a Multi-pillar System, as of April 2004**

Country	Starting Date	First Pillar	Size of second pillar as percent of payroll	Projected pension fund assets in 2020 as percent of GDP	Share of workforce in funded pillar in 2003	Switching strategy to new system
<b>Hungary</b> Operating	January 1998	PAYG DB	6 percent	31 percent	45 percent	Mandatory new entrants Voluntary others
<b>Kazakhstan</b> Operating	January 1998	Guaranteed Minimum	10 percent	30 percent	100 percent	Mandatory
<b>Poland</b> Operating	January 1999	NDC1/	7.2 percent	33 percent	70 percent	Mandatory <30, Voluntary 30–50
<b>Latvia</b> Operating	July 2001 (NDC January 1996)	NDC	2 percent growing to 9 percent	20 percent	72 percent	Mandatory <30, Voluntary 30–50
<b>Croatia</b> Operating	January 2002	PAYG DB	5 percent	25 percent–30 percent	60–70 percent	Mandatory <40, Voluntary 40–50
<b>Bulgaria</b> Operating	January 2002	PAYG DB	2 percent growing to 5 percent			Mandatory <42
<b>Slovakia</b> Legislated	January 2005	PAYG DB	9 percent			Mandatory New entrants
<b>Estonia</b> Operating	July 2002	PAYG DB	6 percent	20 percent	60 percent	Voluntary (opt-out +2 percent)
<b>Lithuania</b> Operating	January 2004	PAYG DB	2.5 percent			Voluntary
<b>Romania</b> Partially legislated then questioned	January 2003	PAYG DB	8 percent	30 percent		Mandatory >20 years from retirement
<b>Macedonia</b> Legislated	January 2005	PAYG DB	7 percent	26 percent		Mandatory New entrants
<b>Russia</b> Partially legislated and operating	January 2002	NDC	2 percent (<35) to 6 percent (36–50)			Mandatory <50
<b>Ukraine</b> Partially legislated	January 2003	PAYG DB	2 percent growing to 7 percent			Mandatory new entrants
<b>Kosovo</b> Partially legislated and operating	January 2002	Minimum	10 percent			Mandatory