



Fiscal planning in the Ministry of Finance, Denmark

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AGENDA

- **Brief history of fiscal planning and reforms**
- **Medium and long term forecasts**
- **The fiscal planning procedure**

BRIEF HISTORY OF DANISH MACROECONOMIC PLANNING (AND THE ROLE OF TECHNICAL "INFRASTRUCTURE")

1997- 2001 : First two medium term plans are introduced

- Gradually more focus on *intergenerational distribution and fiscal sustainability*. The principle that **future generations should be able to maintain the same level of public service and public transfers relative to the income in the economy** is introduced into the fiscal planning along with more focus on fiscal sustainability
- **Increased focus on demographics.** Ageing problem is initially seen mainly as a temporary phenomenon (post war generations) and a *savings strategy* is adopted
- DREAM develops important "infrastructure" by setting up generational accounts of public transfers and services
- 3 | DREAM develops demographic forecast methods

BRIEF HISTORY OF DANISH MACROECONOMIC PLANNING

2004 – 2006 The Welfare Commission and the indexation of pension age to life expectancy of the 60 years old

- Growth in life expectancy increases in 1995. DREAM/Welfare commission analysis suggest that this is permanent. Ageing problem is permanent implying that a savings strategy is *not* a solution
- The indexation of pension age is adopted by broad majority in parliament in 2006. The increase in age limits has a large lag so it takes effect in 2019 (early retirement) / 2024 (pension age). *A combination of savings strategy and gradual reform is adopted*
- DREAM model is used intensively in the Welfare Commission. Ministry of Finance develops long-term projections on ADAM (“simplified DREAM”)
- DREAM’s method of demographic forecast becomes the official forecast

BRIEF HISTORY OF DANISH MACROECONOMIC PLANNING

2008 – 2011 Economic crisis and advancing retirements reform

- Fiscal expansion was introduced in 2008 (both discretionary and automatic). Implying that the savings strategy effectively was abandoned
- Fiscal sustainability was ensured by advancing retirement reform by 5 years - increasing pension age by 2 years in 2019-22 and by shortening early retirement scheme by 2 years beginning in 2014. Furthermore the duration of unemployment benefits was reduced from 4 to 2 years in 2012.

2012 –

- Focus on linking short term fiscal policy better to medium term planning. Introduction of the "Budget law" that introduces expenditure ceilings in a 4 year period. "Fiscal compact" is included. Expenditure ceilings help to ensure that the limit to structural deficits (currently $\frac{1}{2}$ percent of GDP) is not exceeded

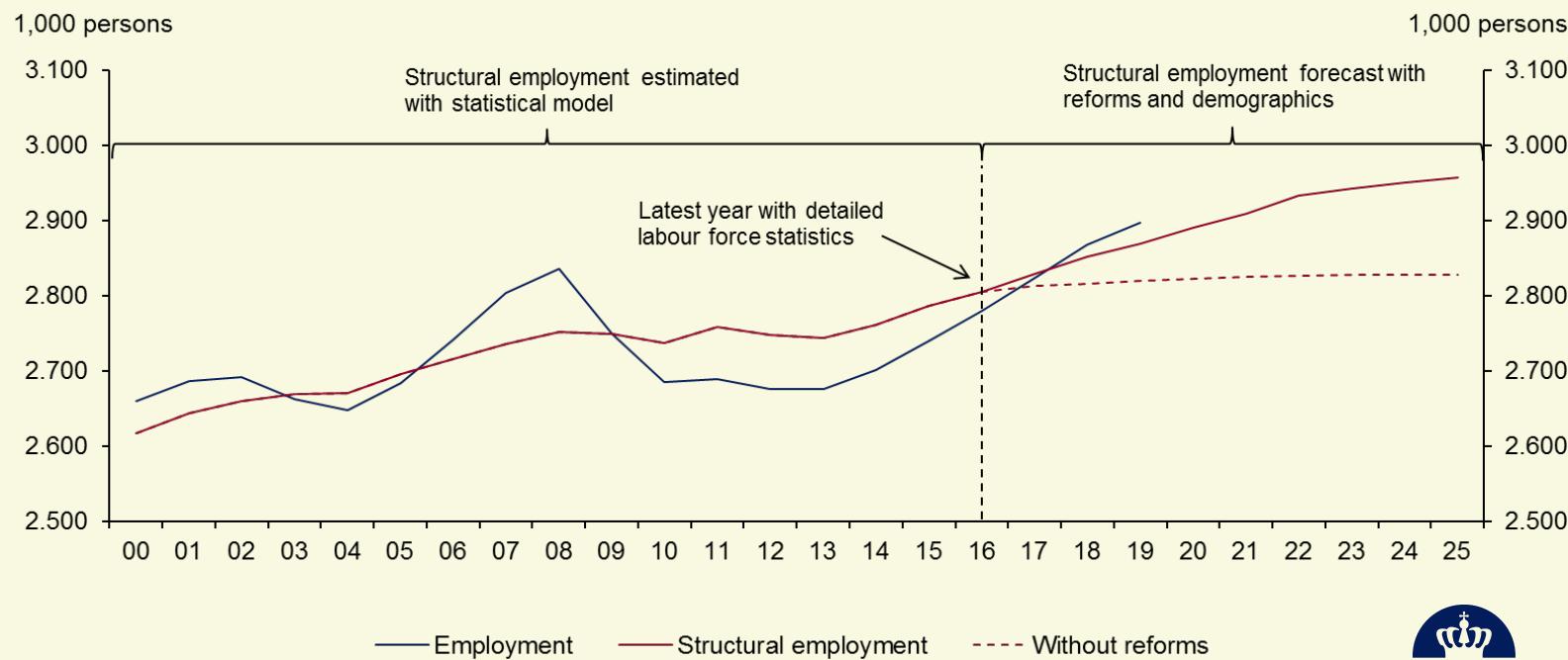
- **MEDIUM AND LONG TERM FORECASTS**

MEDIUM TERM PROJECTION

- Updated at least twice annually (and after an election)
- The central fiscal planning tool is "the medium term plan". Currently the 2025- plan. The horizon of the projection is determined by the end-year of the fiscal plan (and is typically kept fixed for 4-5 years)
- The projection includes a closing of the output and employment gaps (currently in 2022) and a structural projection for the rest of planning period.
- Contains a general political decision on the annual expenditures and revenues in the medium term period.
- The projection includes "reform effect" from previously adopted reforms (but not planned reforms).

STRUCTURAL LEVELS

- Structural levels for employment, unemployment, GDP are estimated in the historical period using statistical models (unobserved components/Kalman)
- Structural levels are projected using demographic forecast and expected effects of adopted reforms
- Reform effects are often based on microdata estimation and are exogenous to the forecast model.

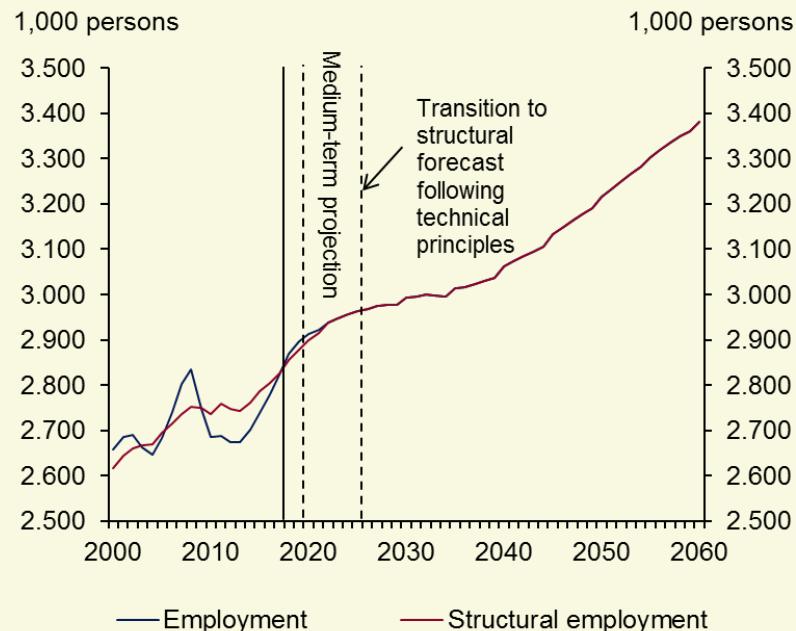


LONG TERM PROJECTION

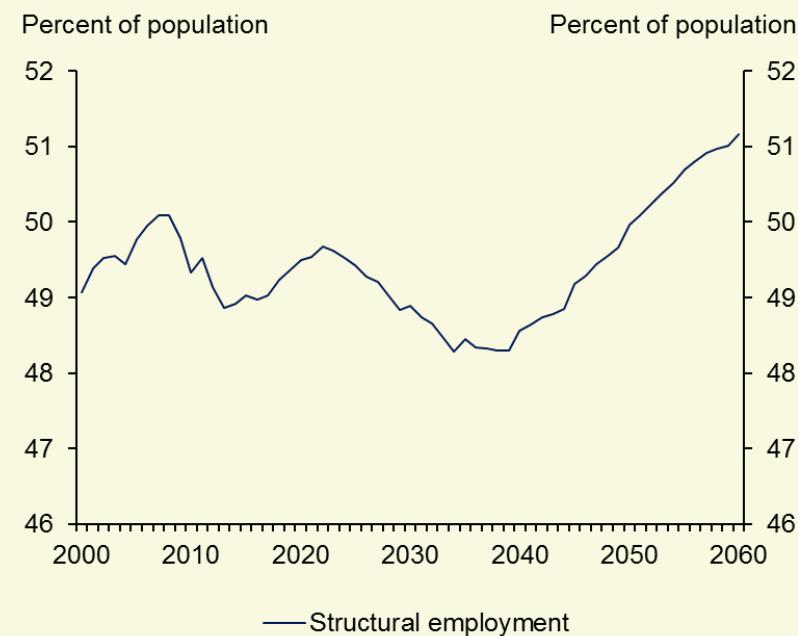
- Updated annually. Horizon: year 2100.
- Based on demographic projection and North Sea oil and gas projections
- a projection of the gradual maturing of the Danish fully funded contribution defined pension system (implying a gradual increase in tax revenues as a percent of GDP until 2060-70)
- Public expenditures and revenues are determined by a technical-rule which ensures that each generation receives the same level transfers and public services relative to the income in the economy and that each generation faces the identical rates for direct and indirect taxes
- Exceptions; Pension age is indexed to the life-expectancy of a 60 years old (with a lag). Energy efficiency grows at a technical rate – revenue share from fossil fuel taxes decline (but not zero in 2050)
- Health care expenditures are subject to healthy ageing (years-to-death)

LONG TERM PROJECTION OF EMPLOYMENT

Structural employment



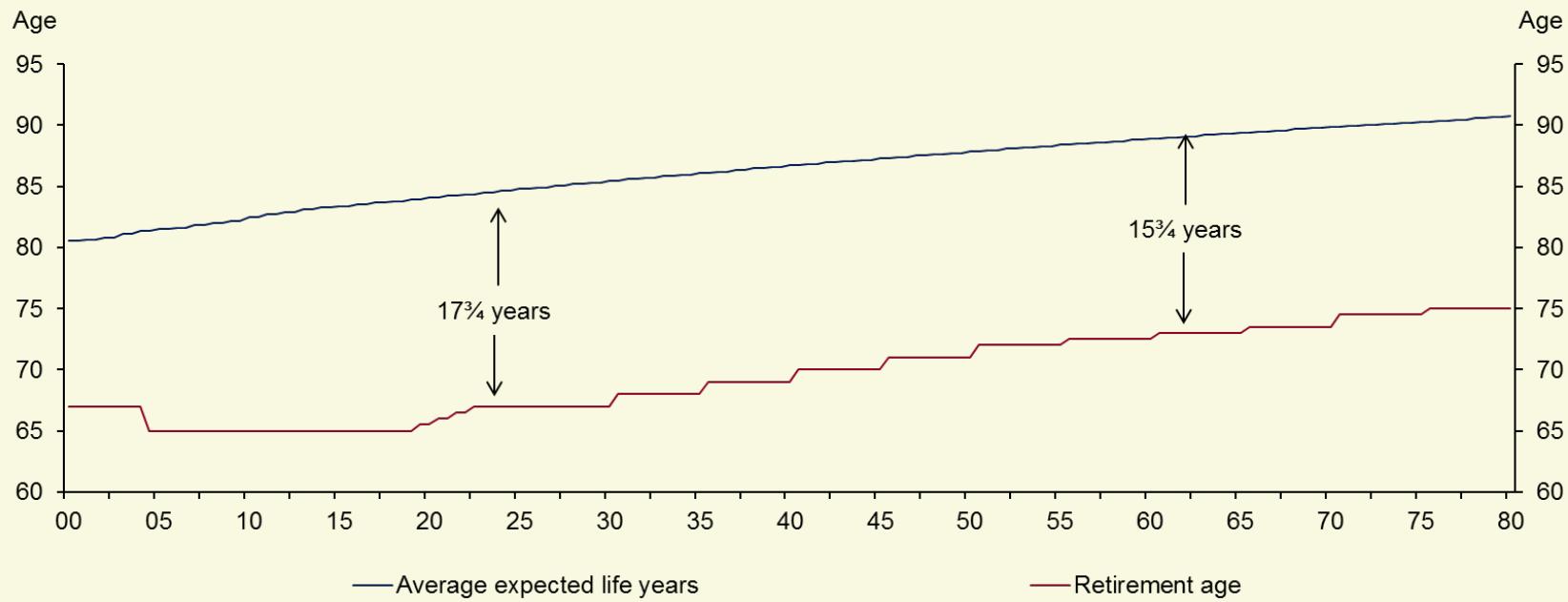
As a percentage of the population



INDEXATION OF STATUTORY PENSION AGE

- Every 5. year the statutory pension age is increased (either by 1 or by a $\frac{1}{2}$ year) from 2030. This implies that the expected pension period gradually is reduced from $18\frac{1}{2}$ years in 2019 to $15\frac{3}{4}$ years

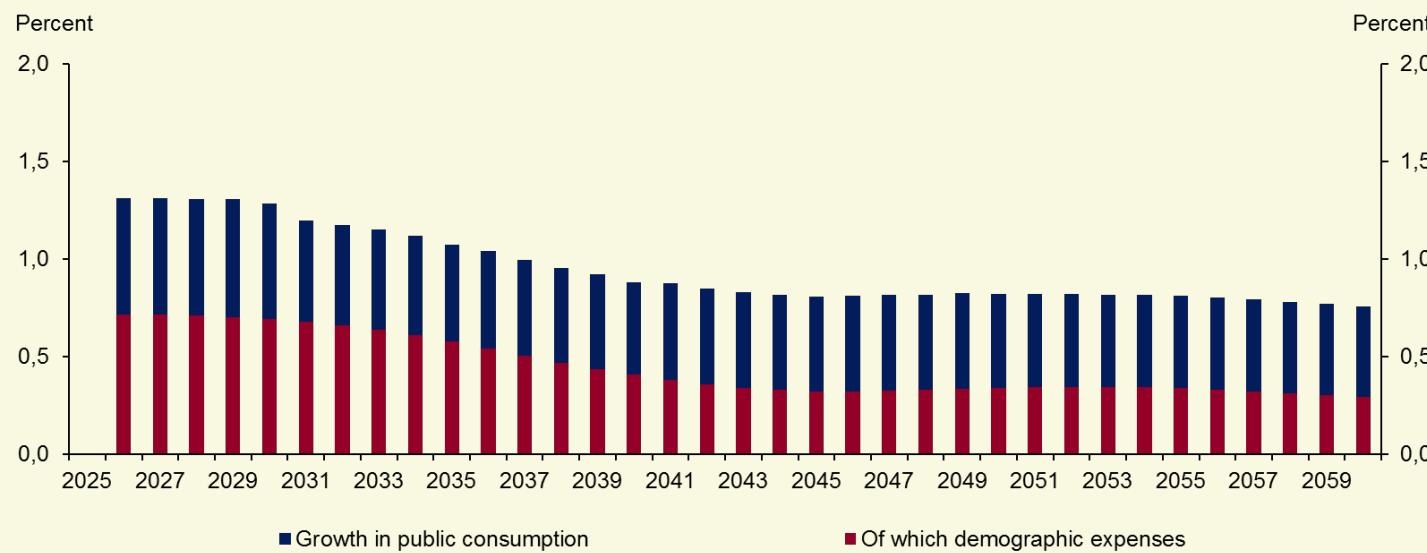
Expected life years and retirement age



LONG RUN GROWTH IN PUBLIC CONSUMPTION

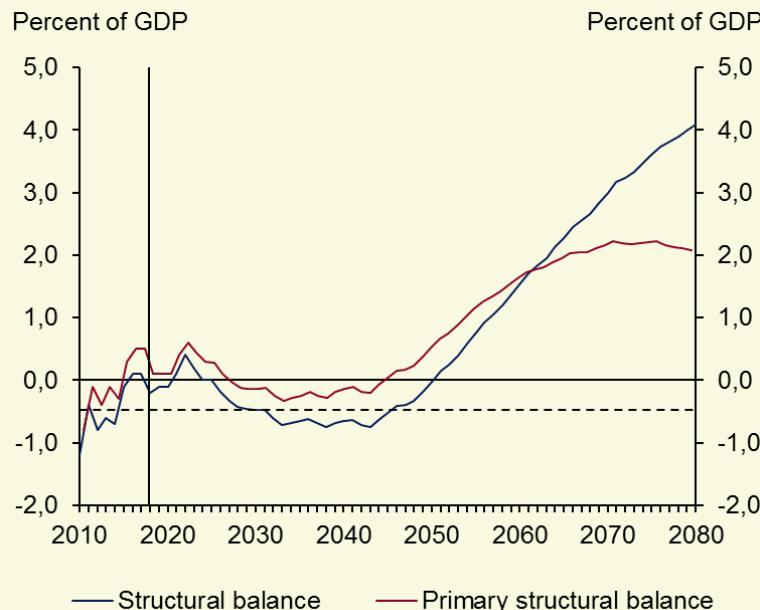
- **Public consumption:** Nominal expenditures per individual at a given age is indexed to the wage rate. The number of recipients (called demographic expenses) is determined by the population's distribution across age, gender and geographic origin.

Real growth in public consumption

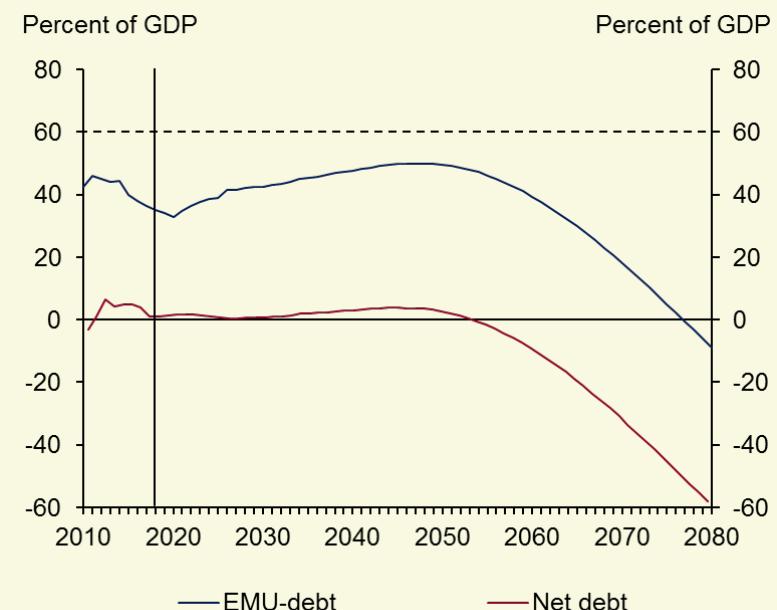


LONG RUN DEVELOPMENT IN PUBLIC BALANCE AND DEBT

Structural balance



Public debt

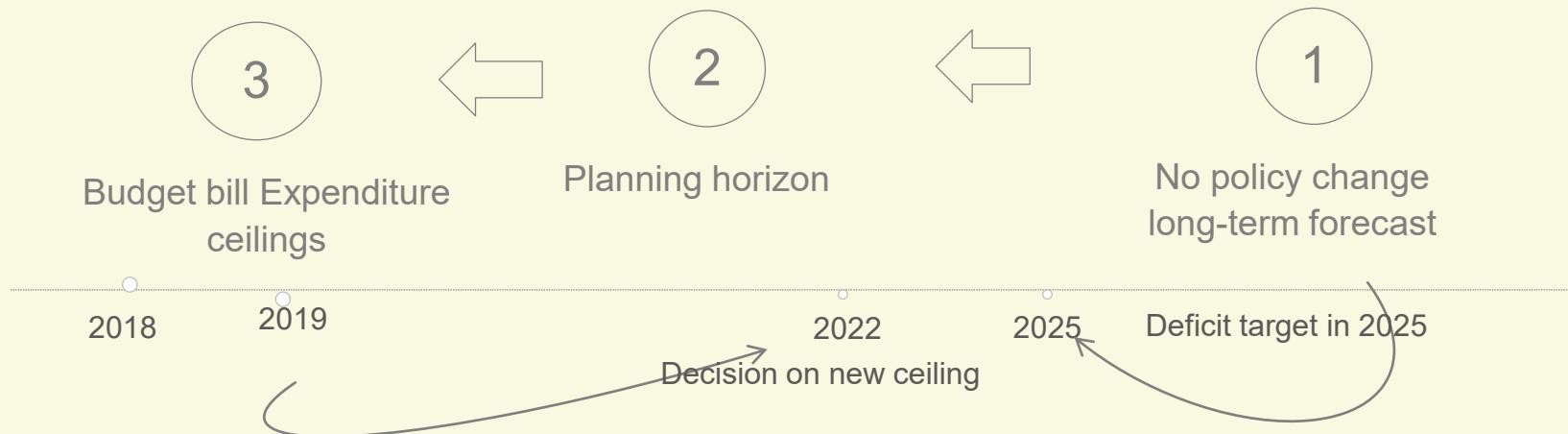


THE FISCAL PLANNING PROCEDURE

RULES FOR FISCAL PLANNING IN DENMARK

1. **Fiscal sustainability and a minimum target of structural balance in 2025**
2. **Yearly structural balance $\geq -\frac{1}{2}$ percent of GDP except in exceptional circumstances**
3. **Expenditure ceilings supported by sanctions and monitored by the Danish Economic Council**

FISCAL PLANNING PROCEDURE



- 1. Long run (after 2025):** Combined evaluation of the "hammock" deficits and long term fiscal sustainability is transformed into a *target for the public budget in 2025* (last year of the medium term horizon). Currently the target is structural balance in 2025.
- 2. Medium term (until 2025):** Structural deficit is kept below $\frac{1}{2}$ percent of GDP. The budget target from 1. determines the possible total growth in public consumption over the period for a given revenue profile.
- 3. Short run:** The expenditure ceiling is set such that the structural balance follows a planned path towards the budget target in 2025.

CONCLUSIONS

- The political focus on long term fiscal planning has implied that the structures in the Danish economy has improved significantly
- The long term focus implied that the public sector had fiscal space, when the economy was hit by the financial crisis
- European government debt crisis implied that Denmark obtained the position of "save heaven" with very low public interest rates as a consequence
- Risks:
- Current situation with fiscal sustainability may tend to reduce the focus on structural reforms
- The limit to structural fiscal deficit may be considered a "natural ??? target" implying too little fiscal space in a severe downturn. But room to deviate in exceptional circumstances (e.g. negative growth)

EXTRA

PRODUCTIVITY GROWTH

1. Productivity growth: Exogenous annual growth in production per hour of 1 percent in the private sector. In addition productivity is increased due to a higher level of education in the labor force.(Approximately an additional ¼ percent, (the effect is gradually reduced)).

Tabel: Growth in GDP from 2010 to 2050

	2010-2020	2020-2030	2030-2050
Contribution from:			
Hourly productivity	0.8	1.2	0.9
Hours worked	0.6	0.4	0.3
- Number of employed	0.6	0.3	0.4
- Average working hours	-0.1	0.0	0.0
Potential GDP			
- Contribution from closing of outputgap	0.3	-0.1	-
Actual GDP	1.7	1.4	1.2