



Unlocking the Finance for Tomorrow's Clean Energy Future

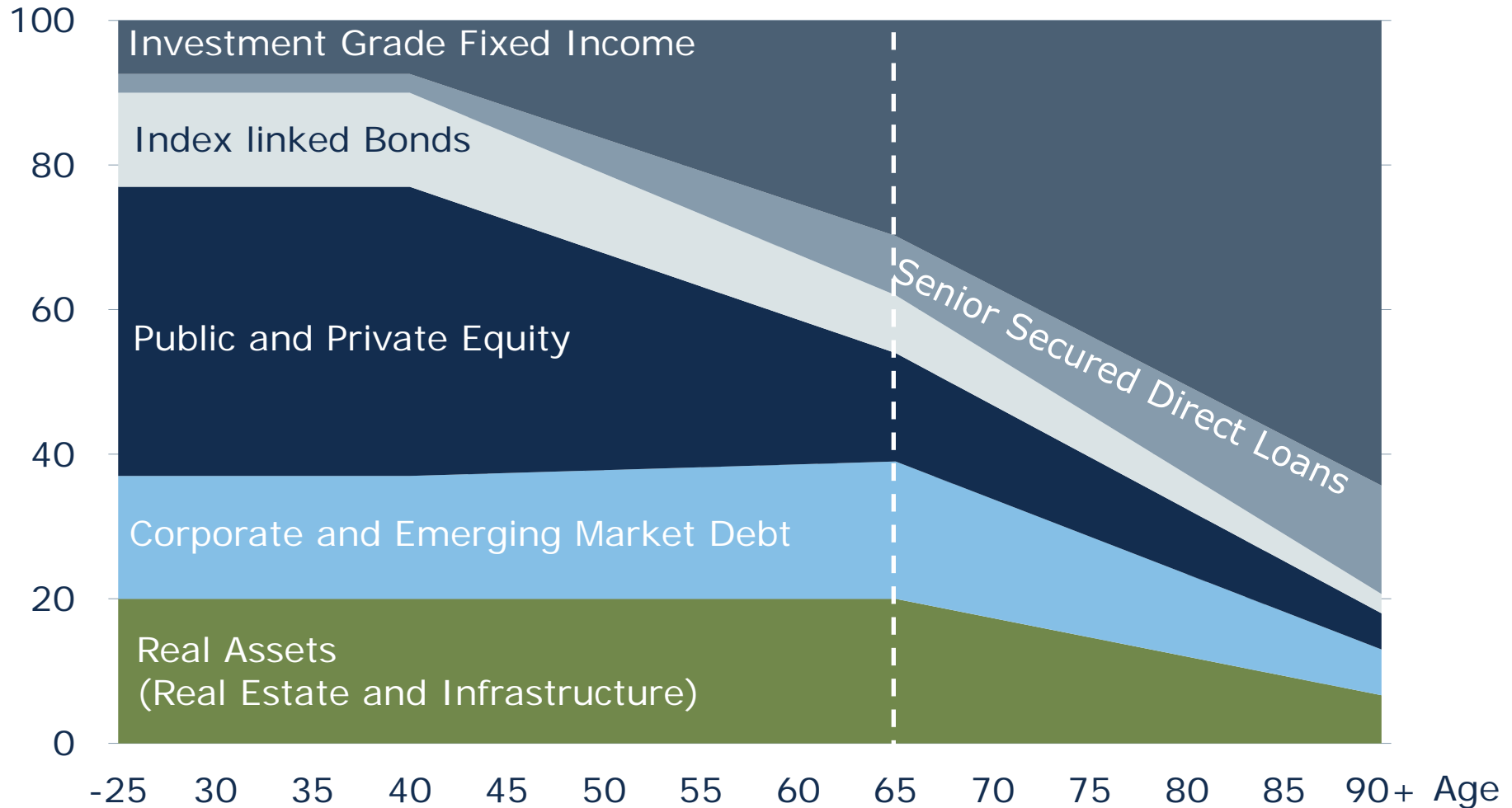
Global Climate Finance 2012 | CPI & EDF | Doha

PensionDanmark at a Glance

- › Industry-wide pension fund established in the early 1990's
- › 629,000 members working in 26,700 companies
- › Total asset: €18 billion – and growing fast (2017: €26 billion)
- › Target:
 - › 10 per cent of assets ~ direct investments in renewable energy assets (equity)
 - › 10 per cent in loans/debt to infrastructure projects

PensionDanmark is working with a life-cycle product

Per cent




The Challenge:

New Ways of Funding Investments in Renewables

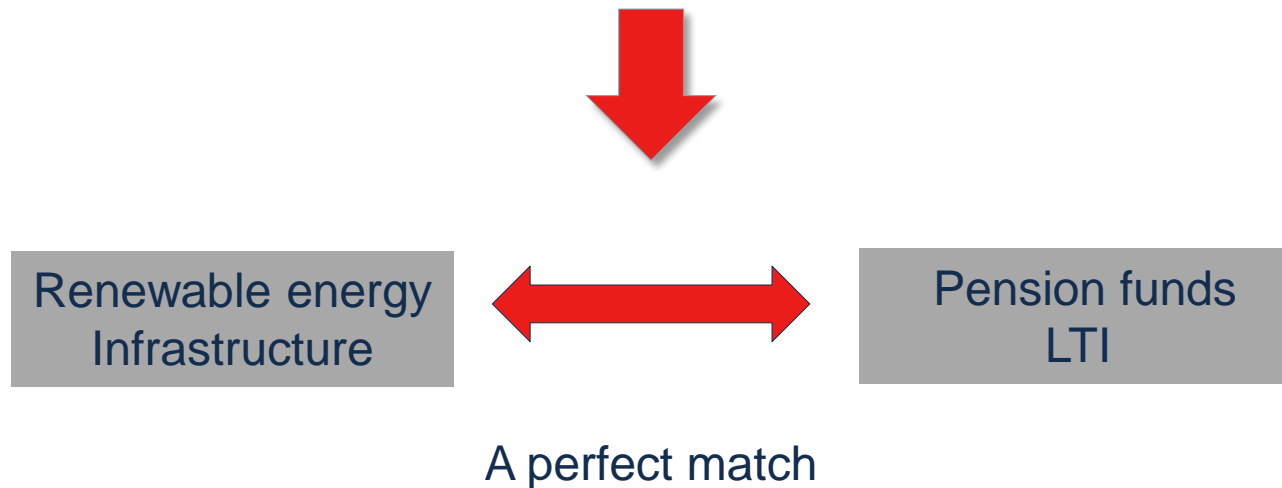
- › Global need for large scale investments in renewables and infrastructure

But

- › Government financing is not an option due to budget deficits and rising debt levels
 - › The banking sector is much more cautious due to economic crisis and increasing capital requirements (Basel III)
 - › Utilities are reducing balance sheets and unable to fund large-scale investments
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- › Need for alternative sources of capital, new models for financing and a different approach to risk-sharing

New Investment Opportunities

- › Pension funds are looking for alternative investments due to
 - › Interest rates are lower than inflation (~ negative real rates of return)
 - › Equity markets are volatile



Investment Criteria

For Direct Investments in Infrastructure Assets

- › Stable and predictable earnings
 - › Low demand risk and correlation to the business cycles (e.g. regulated income)
 - › Long term investment horizon (+20 years)
- › No/negligible construction risk
- › Limited pricing risk (e.g. power price)
- › Limited political risk
- › Partnering with experienced industrial players (constructor/operator)
- › Alignment of interest
 - › E.g. through significant ownership stake for the duration of the investment
- › No or limited leverage
- › Adequate SRI policies

Preferences

- › Asset types:
 - › Wind and Solar Farms with government guaranteed fixed in tariffs
 - › Waste management/processing plants or biomass plants
 - › Sub sea cables
 - › Electricity grids
 - › Transmission networks
 - › Water companies
 - › PPP/PFI
- › Geographic focus
 - › Northern Europe
 - › North America (US, Canada)
- › Ticket size min. € 100m. equity



Case 1: Anholt Wind Farm

Joint Venture between PensionDanmark and DONG Energy

- › 800m EUR deal (for 50% of the park)
- › Construction started late 2011 and will be completed late 2013
- › 111 Siemens 3.6MW turbines = 400 MW
- › DONG Energy responsibilities
 - › Operation & Maintenance
 - › Balance responsibility
 - › Reporting and accounting
- › Governance
 - › Equal board representation (budgets, major repairs, repowering etc.)
 - › Strategic forum at senior management level



Case 1: Anholt Wind Farm

Investment model

- › Stable returns
 - › High guaranteed minimum power prices until 2025
 - › Concession until 2037
 - › Significant share of operating costs are fixed
- › Limited risk
 - › “Turn-key” contract to deliver a fully operational park in April 2014
 - › Limited power price risk
 - › 5Y availability guarantee from Siemens
 - › DONG Energy has as a co-owner an interest in keeping costs low
 - › Relatively fast pay-back of investment



Case 2: On-Shore Wind Farms in USA

Joint Venture with E.ON

- › PensionDanmark acquired a 50% stake in three operational US wind farms from the German utility E.ON
- › The assets:
 - › Papalote Creek I+II (Texas): 109 Vestas turbines and 87 Siemens turbines
 - › Stony Creek (Pennsylvania): 35 General Electric turbines
 - › In total 433MW with COD in 2009/2010
- › E.ON responsibilities:
 - › Operation & Maintenance
 - › Power and REC sales
 - › Reporting and Accounting



Case 2: On-Shore Wind Farms in USA

Investment model

- › Stable returns
 - › 90% of the power is sold under long-term PPA's with strong counterparties
 - › Fixed power price under the PPA's
 - › Operating assets with a strong operational track record

- › Limited risk
 - › E.ON have a large US wind portfolio under management and as such is a very experienced O&M provider
 - › E.ON retains a significant ownership share of the investment which ensures alignment of interest
 - › O&M agreement provides sufficient comfort in terms of operating costs and availability



Case 3: Funding Danish Export orders with EKF

Framework Agreement with Danish Export Credit Agency EKF

- › Framework agreement
 - › PensionDanmark commits DKK 10bn in long term funding for projects with substantial Danish export content
 - › Expected to be fully utilised in three years
- › Return to PensionDanmark is substantially higher than government bonds, with EKF (Danish State) guaranteeing the principle
- › First deal: 66 Vestas-turbines for on-shore wind farm in Sweden (DKK 1bn)



Case 4: Senior Secured Infrastructure Debt

Largest Institutional mandate on Infrastructure Debt

- › PensionDanmark has given JP Morgan Asset Management a segregated mandate of USD 750m to build and manage a portfolio of infrastructure loans
- › Focus on core infrastructure projects in Northern Europe and North America in the operational phase
- › Mandate expected to be executed within 12 months
- › First portfolio of £225m UK infrastructure loans bought from Bank of Ireland





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Torben Möger Pedersen | cell +45 2016 4585 | tmp@pension.dk