



THE LAST GLACIER?

RETIREMENT PROSPECTS

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PENSION FUND EXPECTATIONS

- CONSIDER 25 YEAR OLD CHILDREN
- THEY WILL WORK 40 YEARS AND THEN LIVE 30 MORE TO 2090
- CLIMATE MODELS SAY DAMAGES ARE GREAT IN 50 YEARS AND MUCH GREATER IN 100.
- WILL DEFINED BENEFIT PENSIONS BE FUNDED BY STRESSED CORPORATIONS AND STATE PENSION RESERVES?
- WILL STOCK MARKETS COLLAPSE WITH THE WEIGHT OF CLIMATE MITIGATION SHRINKING DEFINED CONTRIBUTION PENSIONS?
- WHO BEARS THE RISK? OUR CHILDREN!!

CAN THESE CHILDREN SELF INSURE?

- IF THEY SUCCESSFULLY INVEST IN STOCKS THAT WILL DO ESPECIALLY WELL WHEN THE CLIMATE IS ESPECIALLY BAD, THEY WILL SMOOTH THEIR CONSUMPTION.
- ONCE SUCH STOCKS ARE IDENTIFIED, THEY WILL HAVE LOW (NEGATIVE?) RISK PREMIUMS AND HIGH PRICES.
- THESE FIRMS WILL HAVE A LOWER COST OF CAPITAL AND WILL EXPAND POTENTIALLY MITIGATING CLIMATE CHANGE.

DOES THIS SOLVE THE PROBLEM?

- IF CLIMATE HEDGE STOCKS CAN BE IDENTIFIED AND OUR CHILDREN HOLD THIS PORTFOLIO, WILL PENSIONS BE ADEQUATE?
- I DON'T THINK SO BECAUSE THERE IS THE DEAD WEIGHT LOSS OF THE EXTERNALITY. I THINK THIS WILL REDUCE THE RISK BUT WILL NOT ACHIEVE THE PLANNED PENSION. HOWEVER THIS IS A TOPIC FOR RESEARCH.
- IDEALLY, WE WILL FIND GOVERNMENTS PRICING CARBON AND INVESTING IN MITIGATION AND ADAPTATION. AT THE MOMENT, THIS DOES NOT LOOK PROMISING.

The background of the slide features a large, jagged glacier of light blue ice. In the foreground, there is a brown, textured surface that appears to be a rocky or sandy shore, possibly covered in a thin layer of snow or ice. The overall scene is a natural, cold landscape.

DO YOU REMEMBER THE “CLUB
OF ROME REPORT” OR
“PEAK OIL”?

PREVIOUS PREDICTED APOCALYPSES

- CLUB OF ROME REPORT REQUIRED ZERO POPULATION GROWTH BECAUSE POPULATION WAS GOING TO GROW EXPONENTIALLY WHILE AGRICULTURE COULD ONLY GROW LINEARLY. POPULATION WOULD OVERRUN THE PLANET'S CAPACITY FOR MANY THINGS.
- PEAK OIL IS THE DATE ON WHICH WE MUST REDUCE ENERGY USE AS RESERVES ARE USED UP.
- WHAT HAPPENED?

WHY NO CRISIS?

- When oil became scarce, its price rose and technology discovered lots more and also how to use Hydraulic Fracturing to develop natural gas. Tax breaks for big oil probably helped. The market solved this problem although it has created other problems.
- Population growth has slowed globally and particularly in developed economies. This is partly a result of improved work and education conditions for women.
- Agricultural productivity has soared with genetic modifications and computerized monitoring.

WILL CLIMATE CHANGE BE A NON-EVENT?

- Possibly if dramatic technological breakthroughs happen quickly.
 - Carbon capture and sequestration
 - Geoengineering to reduce heat flow
 - Nuclear fusion or efficient wind and solar for electricity generation
- Unlikely unless GHG emissions are priced. This is not a crisis of scarcity, it is a crisis of surplus CO₂.

WHAT CAN WE EXPECT?

- Increased storms, rain, drought, wildfires
- Rising sea levels
- Migration of species to higher elevations and higher latitudes
 - This includes aggressive tropical insects and diseases
 - It also includes people moving to more fertile or prosperous locations
 - Migration across borders is likely to be a big political issue.
 - Migration can provoke wars for prime land.
- Massive costs to upgrade infrastructure
 - Power lines to reduce wildfires
 - Dams, Bridges, Roads, Airports
- Use your imagination

A large glacier with jagged blue icebergs melting into a rocky foreground. The ice is a vibrant blue color, and the rocks are dark brown and jagged. The sky is a pale, overcast grey.

CLIMATE CHANGE MAY BE THE
BIGGEST RETIREMENT ISSUE
FOR OUR CHILDREN.

UNLESS WE DO SOMETHING ABOUT IT.