An Analysis of New York Domestic Insurers’ Exposure to Transition Risks and Opportunities from Climate Change
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- Strategies for Mitigating Transition Risks
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Introduction

• DFS’s proposed [Guidance for New York Domestic Insurers on Managing the Financial Risks from Climate Change](#)
  
  • Comment period ends on June 23, 2021.

• Purpose of this report – support New York insurers to understand their transition risks on their investments
Climate Risks are Accelerating

• Worsening physical risks

• Worsening transition risks
  • Policy and regulation changes
  • Low-carbon technology advancement
  • Changing public sentiment and demands

• Companies, asset owners, and asset managers make net zero carbon emission pledges.
Financial Markets and Regulators’ Attention on Climate Risks

• Stranded assets
• Rating agencies’ actions
• Federal Reserves Board’s climate committees
• International regulators’ climate stress tests
Questions Answered in the Study

• What holdings are most exposed to transition risks and their sizes?
• How does my investee companies’ transition plans impact my risks?
• Which climate scenario is my portfolio aligned with?
• How does my portfolio compare to the market benchmarks and peers re: transition risk?
• How can I mitigate the transition risks?
Introduction to 2-Degrees Investing Initiative
Introduction to 2-Degrees Investing Initiative

- Founded in 2012
- Collaborate with financial institutions, nonprofits, universities, policymakers, and supervisors
- Non-profit, non-commercial
- Aligning financial markets & regulations with climate goals
2-Degrees Investing Initiative Research Themes

- **PACTA**: Climate scenario analysis
- **Retail investing**: Supporting consumers’ sustainability goals
- **Risk management**: Supporting long-term risk supervision
- **Impact**: Studying financial institutions’ impact in the real economy
Paris Agreement Capital Transition Assessment (PACTA) Methodology
PACTA Methodology

1) Exposure to High carbon sectors

2) Alignment of a portfolio is benchmarked against climate change scenarios and the market

Insurance Company

Physical Assets in the Real Economy

Climate Change Scenarios
Data Input

• Equity and corporate bond portfolios of 250 New York domestic insurers’ (“insurers”) 2019 Schedule D data.
• Investee companies’ physical asset-level data and production plans
• Climate scenario data
Climate Scenarios Considered

- Fossil Fuel Production and Power Generation
  - Current Policy Scenario (CPS)
  - Stated Policy Scenario (STEPS)
  - Sustainable Development Scenario (SDS) – Paris Agreement-Aligned

- Automotive
  - Reference Technology Scenario (RTS)
  - 2 Degrees Scenario (2DS)
  - Beyond 2 Degrees Scenario (B2DS) – Paris Agreement-Aligned
Market Benchmarks

• For corporate bonds – Bloomberg Barclays Global Aggregate Corporate Bond Index

• For equities – MSCI All Country World Index
Outputs – 1) Exposure to High Carbon Sectors

Percent of Investment Value in PACTA Sectors

- PC
- Life
- Health
- Market Benchmark

Corporate Bonds vs. Listed Equity
2) Scenario Alignment – Technology Mix

- Portfolio’s exposure to technology mix (%)
2) Scenario Alignment – Production Volume Trajectory

The amount of coal production allocated to the insurers’ corporate bond portfolios based on their holdings, based on the five-year capital plan of the investee companies.

The amount of coal production of the market benchmark.

Colored areas denote the production volume ranges that are compatible with different climate scenarios.

- The production volume range that is compatible with the >3.2°C scenario
  - CPS: 3.2°C
  - STEPS: 2.7°C

- The production volume range that is compatible with the 2 – 2.7°C scenario
  - SDS: 1.75-2°C

- Insurers’ portfolio
  - ≤2°C
  - 2°C-2.7°C
  - 2.7°C-3.2°C
  - ≥3.2°C

- Market benchmark
Analysis Results

- Exposure
- Peer comparison
- Alignment
  - Fossil Fuels
  - Power
  - Automotive
Summary

• Insurers’ investments in 2019 had meaningful exposure to carbon intensive sectors.

• The five-year forward-looking capital plans of most insurers’ investee companies in these sectors were not Paris-aligned,
  • except for natural gas production, natural gas-fired power generation, and electric vehicle production.

• Insurers’ portfolios often less Paris-aligned than market benchmarks
Investment Exposure

Percent of Investment Value in PACTA Sectors

- **PC**
  - Corporate Bonds: 15%
  - Listed Equity: 10%

- **Life**
  - Corporate Bonds: 20%
  - Listed Equity: 10%

- **Health**
  - Corporate Bonds: 12%
  - Listed Equity: 10%

- **Market Benchmark**
  - Corporate Bonds: 16%
  - Listed Equity: 10%
Distribution of Investments in PACTA Sectors

- **Market Benchmark**
- **PC**
- **Life**
- **Health**
- **Total**

**Percent Distribution of Investment Value in PACTA Sectors**

- **Equity**
- **Corporate Bonds**

**Categories**:
- Steel
- Cement
- Shipping
- Aviation
- Automotive
- Power
- Coal
- Oil&Gas

**Values**:
- 0%
- 25%
- 50%
- 75%
- 100%
Holdings in Fossil Fuel Production

Corporate Bonds

Equities

Holdings in Fossil Fuel-Based Power Generation
Coal Mining – Production Volume Trajectories

Coal Mining Production
(Corporate Bonds)

Coal Mining Production
(Equities)

Year
Normalized Production

≤2°C
2°C-2.7°C
2.7°C-3.2°C
≥3.2°C

SDS
STEPS
CPS

Insurers’ portfolio
Market benchmark
Natural Gas Production – Production Volume Trajectories

Gas Production (Corporate Bonds)

Gas Production (Equities)

Normalized Production

Year

2020 2021 2022 2023 2024 2025

≤2°C 2°C-2.7°C 2.7°C-3.2°C ≥3.2°C

SDS STEPS CPS

Insurers’ portfolio

Market benchmark
Power Sector – Technology Mix

Technology Mix for the Power Sector (Corporate Bonds)

- Portfolio 2020
- Portfolio 2025
- Target SDS 2025
- Market 2025

Technology Mix for the Power Sector (Equities)

- Portfolio 2020
- Portfolio 2025
- Target SDS 2025
- Market 2025

Legend:
- Coal Capacity
- Oil Capacity
- Gas Capacity
- Nuclear Capacity
- Hydro Capacity
- Renewables Capacity
Coal-Fired Power – Production Volume Trajectories

Coal-Fired Power Capacity in the Power Sector (Corporate Bonds)

Normalized Capacity

<table>
<thead>
<tr>
<th>Year</th>
<th>2020</th>
<th>2021</th>
<th>2022</th>
<th>2023</th>
<th>2024</th>
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<td>0.98</td>
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Coal-Fired Power Capacity in the Power Sector (Equities)

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≤2°C 2°C-2.7°C 2.7°C-3.2°C ≥3.2°C

Insurers’ portfolio Market benchmark
Renewable Power – Production Volume Trajectories

Figure 16. Renewable Power Capacity Trajectories Relative to Climate Scenarios
Automotive – Technology Mix

Technology Mix for the Automotive Sector (Corporate Bonds)

- Portfolio 2020
- Portfolio 2025
- Target B2DS 2025
- Market 2025

Technology Mix for the Automotive Sector (Equities)

- Portfolio 2020
- Portfolio 2025
- Target B2DS 2025
- Market 2025
Internal Combustion Engine – Production Volume Trajectories

ICE Vehicle Production (LDV) (Corporate Bonds)

ICE Vehicle Production (LDV) (Equities)

B2DS ≤1.75°C 1.75°C-2°C 2°C-3.2°C ≥3.2°C

Year

Normalized Production

Year

Normalized Production

Insurers’ portfolio

Market benchmark
Electric Vehicle – Production Volume Trajectories

Figure 20. Production Volume Trajectories of Electric Light-Duty Vehicles (LDV) Relative to Climate Scenarios
Strategies for Mitigating Transition Risks
Strategies for Mitigating Transition Risks

• Divestment
• Investment
• Exclusion
• Engagement
• Setting climate-related investment conditions
• Engage your third-party asset manager(s)
• Explore industry networks on climate risks and opportunities
Next Steps
Next Steps

• Individual Reports
• More information and mock reports accessible at Transition Monitor.com
• Webinar 2 (12th July)
  • Individual Reports
  • Q&A with 2DII
  • Additional Tools – Climate Action guide and stress test
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