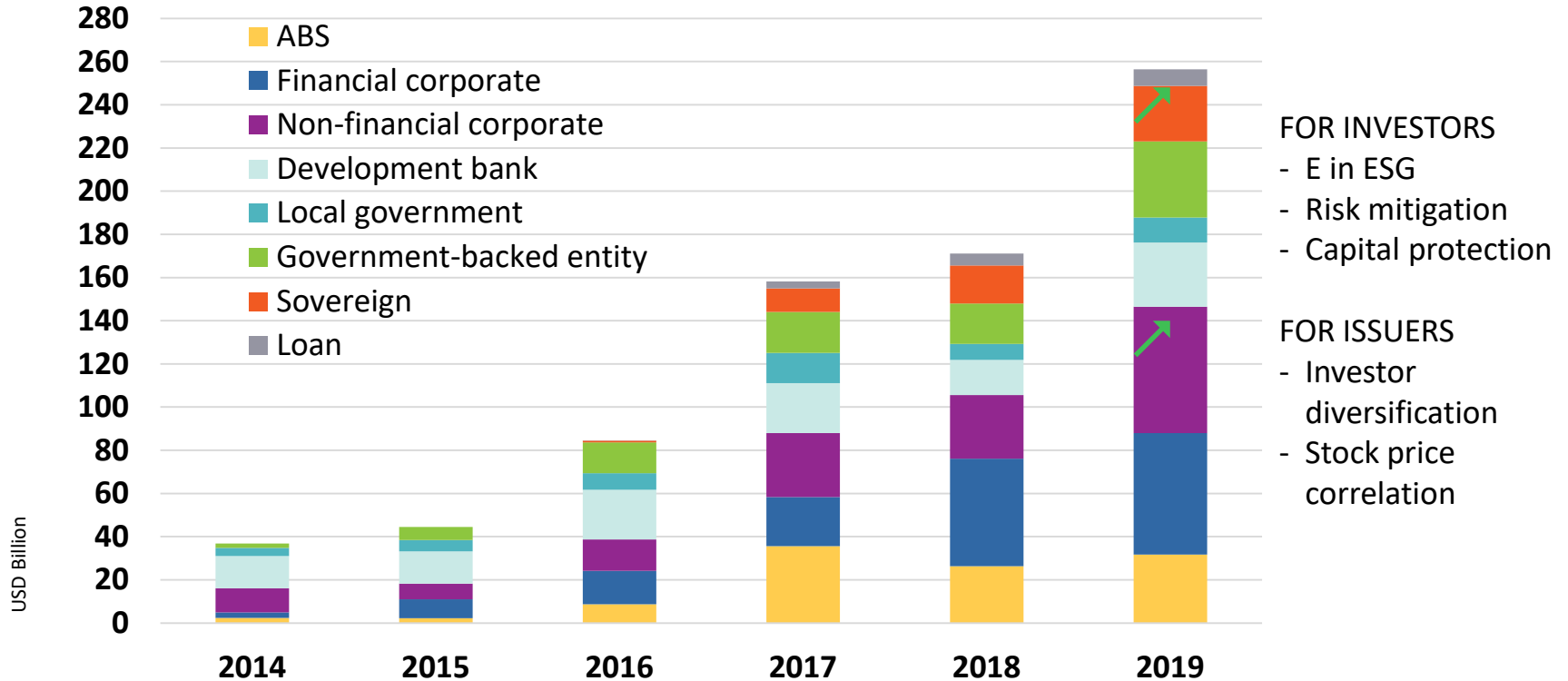


Green bonds & property



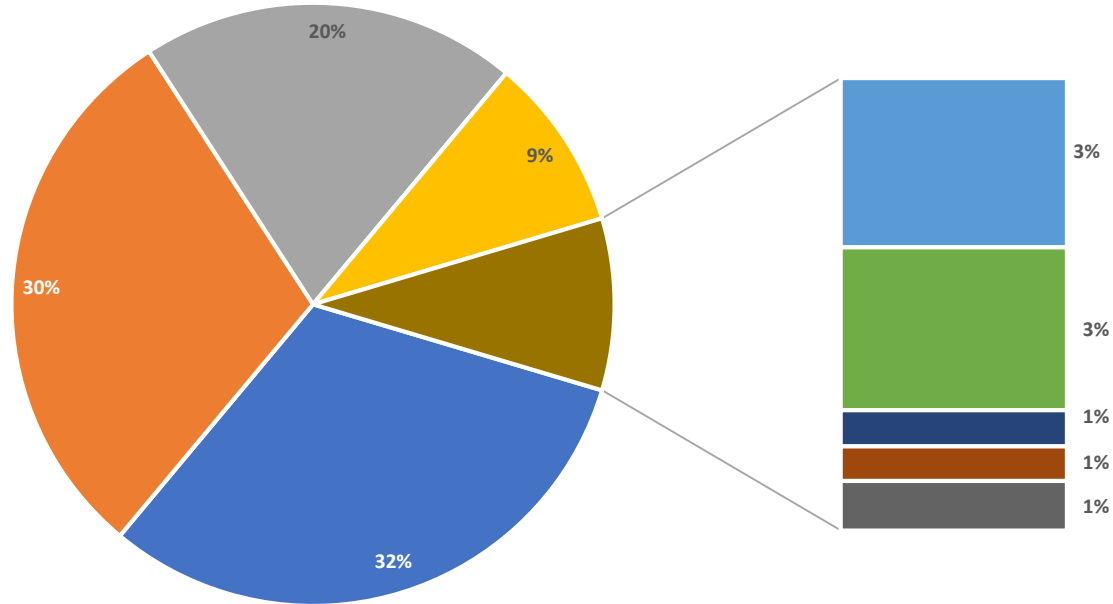
Sean Kidney

Green bonds growth



Source: Climate Bonds Initiative. Data as of 31st Dec 2019.

Green property bonds made up 30% of last year's total



■ Energy ■ Buildings ■ Transport ■ Water ■ Waste ■ Land use ■ Industry ■ ICT ■ Unalloc. A&R

Examples

Corporate	CDL - \$440m
	Vasakronan - \$3.4bn
	Japan REIT - \$250m
Bank	Barclays - \$500m
	LBBW - \$4.3bn
	Barclays - \$500m
	ABN AMRO - \$3bn
ABS	Obvion - \$2.6bn
	Fannie Mae - \$21bn
	BerlinHyp - \$4.5bn
Government	Canton of Geneva - \$1.27bn
	NY State Housing - \$1.8bn
	Republic of Lithuania - \$7.7m

EU Taxonomy - common language

Science-based
Leverage existing labels
Dynamic



Climate mitigation & adaptation
Circular economy
Protection of marine resources
Pollution prevention
Biodiversity restoration

1. Investors, corporations, banks
2. Corporates
3. EU Member States

Different layers of Taxonomy

Already **low carbon**

Very low, zero or net negative emissions
Compatible with net zero CO2 economy by 2050

Likely to be stable and long term

- Renewable energy
- Zero emissions transport
- Afforestation

Enabling emission reductions

...in the first two types of activities

Consistent with those activities being enabled

- Manufacture of wind turbines
- Installing efficient boilers in buildings

Contributing to **transition**

...to a net zero emissions economy in 2050

Likely to be revised regularly and tightened over time

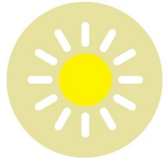
- Building renovation
- Electricity generation <100gCO2/kWh
- Cars <50g CO2/km

Adaptation & resilience

Adapting to survive climate change or supporting adaptation

- Infrastructure hardening
- Resilience measures
- Climate risk advisory services

Proposed rules



Electricity: 100gms Coe/KWh

Solar, wind, **geothermal**, hydro

Gas only if with CCS

Storage, transmission



Transport Zero tailpipe
& very low emissions:
electric, hydrogen



Energy efficiency, adaptation



Buildings

Top 15%, or 30% improvements

Supply chain / SMEs



ICT



Landuse



Maintaining carbon

Improving carbon

Best practice farming



Manufacturing

Transitions

Components

Aluminium

Steel

Concrete

Plastics



Thresholds

1. Ownership or acquisition: Energy performance is in top 15% of similar stock

Applies only to buildings built before 2021

1. Large non-residential buildings have to *also* have dedicated energy management systems
2. Proxies: **EPCs**
3. **CBI emission thresholds**
4. **LEED, BREEAM, etc.**



2. Renovations: Delivers 30% energy savings

Or, the renovation complies with the relevant 'major renovation' requirements EPBD

3. Newbuild: Near-Zero-Energy-Building (NZEB), less 20%

The net primary energy demand of new construction must be at least 20% lower than the primary energy demand resulting from the relevant NZEB requirements that are mandatory in Europe from 2021

Individual measures & professional services

Fabrizio Varriale, RICS, 27-3-2020

fvarriale@rics.org

Examples

Adding insulation; replacing windows or doors with new energy efficient ones.

Installing of low-flow kitchen in top two categories of the EU Water Label scheme.

Installing efficient LED lighting, zoned thermostats, smart thermostat systems and sensing equipment.

Building Management Systems and Energy Management Systems.

Charging stations for electric vehicles.

Smart meters for gas and electricity.

Solar PV, solar hot water, wind turbines, electric energy storage units

Installation and upgrade of heat pumps

Installation and replacement of HVAC and domestic hot water systems.

Replacement of old pumps with efficient circulating pumps

Technical consultations linked to individual measures; energy audits; building performance assessments.

Energy Management Services, energy performance contracts, or energy Services provided by ESCOs

Do No Significant Harm (DNSH) requirements

	Ownership	Renovations	Newbuild
Min. 80% of non-hazardous C&D waste diverted from landfill		✓	✓
*No asbestos		✓	✓
*Site has to be checked to make sure it isn't contaminated. If it is, an assessment is needed that meets national methodology	✓		✓
*Non-road mobile machinery used in construction process (covered by regulatory requirements in EU)			✓
*No building in protected natural areas or land of recognised high biodiversity value	✓		✓
Top 2 classes of EU Water label for new water appliances		✓	✓
Timber products: at least 80% certified FSC or PEFC		✓	✓
(Reducing material physical climate risks)	✓	✓	✓

Next

Making it simple: building labelling & EPCs

Jobs: recovery investment in energy efficiency

Incentives

Scale: municipal Opt-out schemes

EuroPACE



https://ec.europa.eu/info/publications/sustainable-finance-teg-taxonomy_en

Climate Bonds INITIATIVE