Package: tiltIndicatorAfter (via r-universe)

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Title Create user facing outputs of tiltIndicators

Version 0.0.0.9059

Description Create user facing outputs of tiltIndicators.

License GPL (>= 3)

URL https://2degreesinvesting.github.io/tiltIndicatorAfter/, https://github.com/2DegreesInvesting/tiltIndicatorAfter

BugReports https://github.com/2DegreesInvesting/tiltIndicatorAfter/issues

Depends R (>= 2.10)

Imports dplyr, glue, kableExtra, lifecycle, memoise, purrr, readr, rlang, stats, stringr, tibble, tidyr, tidyselect, tiltAddCO2 (>= 0.0.0.9000), tiltIndicator (>= 0.0.0.9094), tiltPolish (>= 0.0.0.9006), tiltToyData (>= 0.0.0.9002), tiltTransitionRisk (>= 0.0.0.9003), utils, withr

Suggests here, knitr, rmarkdown, testthat (>= 3.0.0)

VignetteBuilder knitr

Remotes 2DegreesInvesting/tiltAddCO2, 2DegreesInvesting/tiltIndicator, 2degreesinvesting/tiltPolish, 2degreesinvesting/tiltToyData, 2degreesinvesting/tiltTransitionRisk

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Repository https://2degreesinvesting.r-universe.dev

RemoteUrl https://github.com/2DegreesInvesting/tiltIndicatorAfter

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RemoteSha 7151858468d0887954b1dd513d915b3a280d4cca

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`profile_emissions` *Profile emissions and upstream emissions*

Description

These functions wrap the output of the corresponding function in tiltIndicator.

Usage

```
profile_emissions(
  companies,
  co2,
  europages_companies,
  ecoinvent_activities,
  ecoinvent_europages,
  isic,
  isic_tilt = lifecycle::deprecated(),
  low_threshold = 1/3,
  high_threshold = 2/3
)

profile_emissions_upstream(
  companies,
  co2,
  europages_companies,
  ecoinvent_activities,
  ecoinvent_inputs,
  ecoinvent_europages,
  isic,
  isic_tilt = lifecycle::deprecated(),
  low_threshold = 1/3,
  high_threshold = 2/3
)
```

Arguments

`companies, co2`	A dataframe like the dataset with a matching name in tiltToyData (see Reference).

`europages_companies`
: Dataframe. Companies from europages.

`ecoinvent_activities`
: Dataframe. Activities from ecoinvent.

`ecoinvent_europages`
: Dataframe. Mapper between europages and ecoinvent.

`isic`
: Dataframe. ISIC data.

`isic_tilt`
: **[Deprecated]**

`low_threshold`
: A numeric value to segment low and medium emission profile products.

`high_threshold`
: A numeric value to segment medium and high emission profile products.

`ecoinvent_inputs`
: Dataframe. Upstream products from ecoinvent.

Value

A data frame with the column `companies_id`, and the list columns `product` and `company` holding the outputs at product and company level.

The columns `co2e_lower` and `co2e_upper` show the lowest and highest value of `co2_footprint` within the group to which the product was compared, plus some randomness. Therefore, every benchmark can have different `co2e_lower` and `co2e_upper`, because every benchmark can contain a different set of products.

See Also

Other top-level functions: `profile_sector()`, `score_transition_risk()`, `transition_risk_profile()`

Other profile functions: `profile_emissions_impl()`, `profile_sector()`, `transition_risk_profile()`

Examples

```
library(tiltToyData)
library(withr)
library(readr, warn.conflicts = FALSE)

local_seed(1)
restore <- options(readr.show_col_types = FALSE)

companies <- read_csv(toy_emissions_profile_any_companies())
products <- read_csv(toy_emissions_profile_products_ecoinvent())
europages_companies <- read_csv(toy_europages_companies())
ecoinvent_activities <- read_csv(toy_ecoinvent_activities())
ecoinvent_europages <- read_csv(toy_ecoinvent_europages())
isic_name <- read_csv(toy_isic_name())

result <- profile_emissions(
  companies,
  products,
  europages_companies = europages_companies,
  ecoinvent_activities = ecoinvent_activities,
  ecoinvent_europages = ecoinvent_europages,
```

```
  isic = isic_name
)

result |> unnest_product()

result |> unnest_company()



inputs <- read_csv(toy_emissions_profile_upstream_products_ecoinvent())
ecoinvent_inputs <- read_csv(toy_ecoinvent_inputs())

result <- profile_emissions_upstream(
  companies,
  inputs,
  europages_companies = europages_companies,
  ecoinvent_activities = ecoinvent_activities,
  ecoinvent_inputs = ecoinvent_inputs,
  ecoinvent_europages = ecoinvent_europages,
  isic = isic_name
)

result |> unnest_product()

result |> unnest_company()

# Cleanup
options(restore)
```

`profile_sector` *Profile sector and upstream sector*

Description

These functions wrap the output of the corresponding function in tiltIndicator.

Usage

```
profile_sector(
  companies,
  scenarios,
  europages_companies,
  ecoinvent_activities,
  ecoinvent_europages,
  isic,
  isic_tilt = lifecycle::deprecated(),
  low_threshold = ifelse(scenarios$year == 2030, 1/9, 1/3),
  high_threshold = ifelse(scenarios$year == 2030, 2/9, 2/3)
)
```

```
profile_sector_upstream(
  companies,
  scenarios,
  inputs,
  europages_companies,
  ecoinvent_activities,
  ecoinvent_inputs,
  ecoinvent_europages,
  isic,
  isic_tilt = lifecycle::deprecated(),
  low_threshold = ifelse(scenarios$year == 2030, 1/9, 1/3),
  high_threshold = ifelse(scenarios$year == 2030, 2/9, 2/3)
)
```

Arguments

`companies`, `scenarios`, `inputs`
: A dataframe like the dataset with a matching name in tiltToyData (see Reference).

`europages_companies`
: Dataframe. Companies from europages.

`ecoinvent_activities`
: Dataframe. Activities from ecoinvent.

`ecoinvent_europages`
: Dataframe. Mapper between europages and ecoinvent.

`isic`
: Dataframe. ISIC data.

`isic_tilt`
: **[Deprecated]**

`low_threshold`
: A numeric value to segment low and medium emission profile products.

`high_threshold`
: A numeric value to segment medium and high emission profile products.

`ecoinvent_inputs`
: Dataframe. Upstream products from ecoinvent.

Value

A data frame with the column `companies_id`, and the list columns `product` and `company` holding the outputs at product and company level.

See Also

Other top-level functions: `profile_emissions()`, `score_transition_risk()`, `transition_risk_profile()`

Other profile functions: `profile_emissions()`, `profile_emissions_impl()`, `transition_risk_profile()`

Examples

```
library(tiltToyData)
library(readr, warn.conflicts = FALSE)
```

```
restore <- options(readr.show_col_types = FALSE)

companies <- read_csv(toy_sector_profile_companies())
scenarios <- read_csv(toy_sector_profile_any_scenarios())
europages_companies <- read_csv(toy_europages_companies()) |> head(3)
ecoinvent_activities <- read_csv(toy_ecoinvent_activities()) |> head(3)
ecoinvent_europages <- read_csv(toy_ecoinvent_europages()) |> head(3)
isic_name <- read_csv(toy_isic_name()) |> head(3)

result <- profile_sector(
  companies,
  scenarios,
  europages_companies = europages_companies,
  ecoinvent_activities = ecoinvent_activities,
  ecoinvent_europages = ecoinvent_europages,
  isic = isic_name
)

result |> unnest_product()

result |> unnest_company()



companies <- read_csv(toy_sector_profile_upstream_companies())
scenarios <- read_csv(toy_sector_profile_any_scenarios())
inputs <- read_csv(toy_sector_profile_upstream_products())
europages_companies <- read_csv(toy_europages_companies()) |> head(3)
ecoinvent_activities <- read_csv(toy_ecoinvent_activities()) |> head(3)
ecoinvent_inputs <- read_csv(toy_ecoinvent_inputs()) |> head(3)
ecoinvent_europages <- read_csv(toy_ecoinvent_europages()) |> head(3)
isic_name <- read_csv(toy_isic_name()) |> head(3)

result <- profile_sector_upstream(
  companies,
  scenarios,
  inputs,
  europages_companies = europages_companies,
  ecoinvent_activities = ecoinvent_activities,
  ecoinvent_inputs = ecoinvent_inputs,
  ecoinvent_europages = ecoinvent_europages,
  isic = isic_name
)

result |> unnest_product()

result |> unnest_company()

# Cleanup
options(restore)
```

score_transition_risk *Transition Risk Score*

Description

Calulate Transition Risk Score at product level and company level

Usage

```
score_transition_risk(
  emissions_profile_at_product_level,
  sector_profile_at_product_level
)
```

Arguments

emissions_profile_at_product_level	Dataframe. Emissions profile product level output
sector_profile_at_product_level	Dataframe. Sector profile product level output

Value

A dataframe

See Also

Other top-level functions: profile_emissions(), profile_sector(), transition_risk_profile()

Examples

```
library(dplyr)
library(readr, warn.conflicts = FALSE)
library(tiltToyData)

restore <- options(readr.show_col_types = FALSE)

emissions_companies <- read_csv(toy_emissions_profile_any_companies())
products <- read_csv(toy_emissions_profile_products_ecoinvent())
europages_companies <- read_csv(toy_europages_companies())
ecoinvent_activities <- read_csv(toy_ecoinvent_activities())
ecoinvent_europages <- read_csv(toy_ecoinvent_europages())
isic_name <- read_csv(toy_isic_name())

emissions_profile_at_product_level <- profile_emissions(
  companies = emissions_companies,
  co2 = products,
  europages_companies = europages_companies,
  ecoinvent_activities = ecoinvent_activities,
```

```
  ecoinvent_europages = ecoinvent_europages,
  isic = isic_name
) |> unnest_product()

sector_companies <- read_csv(toy_sector_profile_companies())
scenarios <- read_csv(toy_sector_profile_any_scenarios())

sector_profile_at_product_level <- profile_sector(
  companies = sector_companies,
  scenarios = scenarios,
  europages_companies = europages_companies,
  ecoinvent_activities = ecoinvent_activities,
  ecoinvent_europages = ecoinvent_europages,
  isic = isic_name
) |> unnest_product()

result <- score_transition_risk(emissions_profile_at_product_level, sector_profile_at_product_level)

result |> unnest_product()

result |> unnest_company()

# Cleanup
options(restore)
```

`transition_risk_profile`

Calculate the indicator "transition risk profile"

Description

Adds the risk classification to calculated transition risk scores from emission profile and sector profile indicator.

Usage

```
transition_risk_profile(
  emissions_profile,
  sector_profile,
  co2,
  all_activities_scenario_sectors,
  scenarios,
  for_webtool = FALSE
)
```

Arguments

`emissions_profile`
: Nested data frame. The output of `profile_emissions()`.

sector_profile	Nested data frame. The output of profile_sector().
co2	A dataframe
all_activities_scenario_sectors	A dataframe
scenarios	A dataframe
for_webtool	Logical. Is it output for webtool or not?

Value

A data frame with the column companies_id, and the nested columnsproduct and company holding the outputs at product and company level.

See Also

Other top-level functions: profile_emissions(), profile_sector(), score_transition_risk()

Other profile functions: profile_emissions(), profile_emissions_impl(), profile_sector()

Examples

```
library(readr, warn.conflicts = FALSE)
library(dplyr, warn.conflicts = FALSE)
library(tiltToyData, warn.conflicts = FALSE)
library(tiltTransitionRisk, warn.conflicts = FALSE)

set.seed(123)
restore <- options(list(
  readr.show_col_types = FALSE,
  tiltIndicatorAfter.output_co2_footprint = TRUE
))

toy_emissions_profile_products_ecoinvent <- read_csv(toy_emissions_profile_products_ecoinvent())
toy_emissions_profile_any_companies <- read_csv(toy_emissions_profile_any_companies())
toy_sector_profile_any_scenarios <- read_csv(toy_sector_profile_any_scenarios())
toy_sector_profile_companies <- read_csv(toy_sector_profile_companies())
toy_europages_companies <- read_csv(toy_europages_companies())
toy_ecoinvent_activities <- read_csv(toy_ecoinvent_activities())
toy_ecoinvent_europages <- read_csv(toy_ecoinvent_europages())
toy_ecoinvent_inputs <- read_csv(toy_ecoinvent_inputs())
toy_isic_name <- read_csv(toy_isic_name())
toy_all_activities_scenario_sectors <- read_csv(toy_all_activities_scenario_sectors())

toy_emissions_profile <- profile_emissions(
  companies = toy_emissions_profile_any_companies,
  co2 = toy_emissions_profile_products_ecoinvent,
  europages_companies = toy_europages_companies,
  ecoinvent_activities = toy_ecoinvent_activities,
  ecoinvent_europages = toy_ecoinvent_europages,
  isic = toy_isic_name
)

toy_sector_profile <- profile_sector(
```

```
  companies = toy_sector_profile_companies,
  scenarios = toy_sector_profile_any_scenarios,
  europages_companies = toy_europages_companies,
  ecoinvent_activities = toy_ecoinvent_activities,
  ecoinvent_europages = toy_ecoinvent_europages,
  isic = toy_isic_name
)

output <- transition_risk_profile(
  emissions_profile = toy_emissions_profile,
  sector_profile = toy_sector_profile,
  co2 = toy_emissions_profile_products_ecoinvent,
  all_activities_scenario_sectors = toy_all_activities_scenario_sectors,
  scenarios = toy_sector_profile_any_scenarios,
  for_webtool = FALSE
)

output |> unnest_product()

output |> unnest_company()
```

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