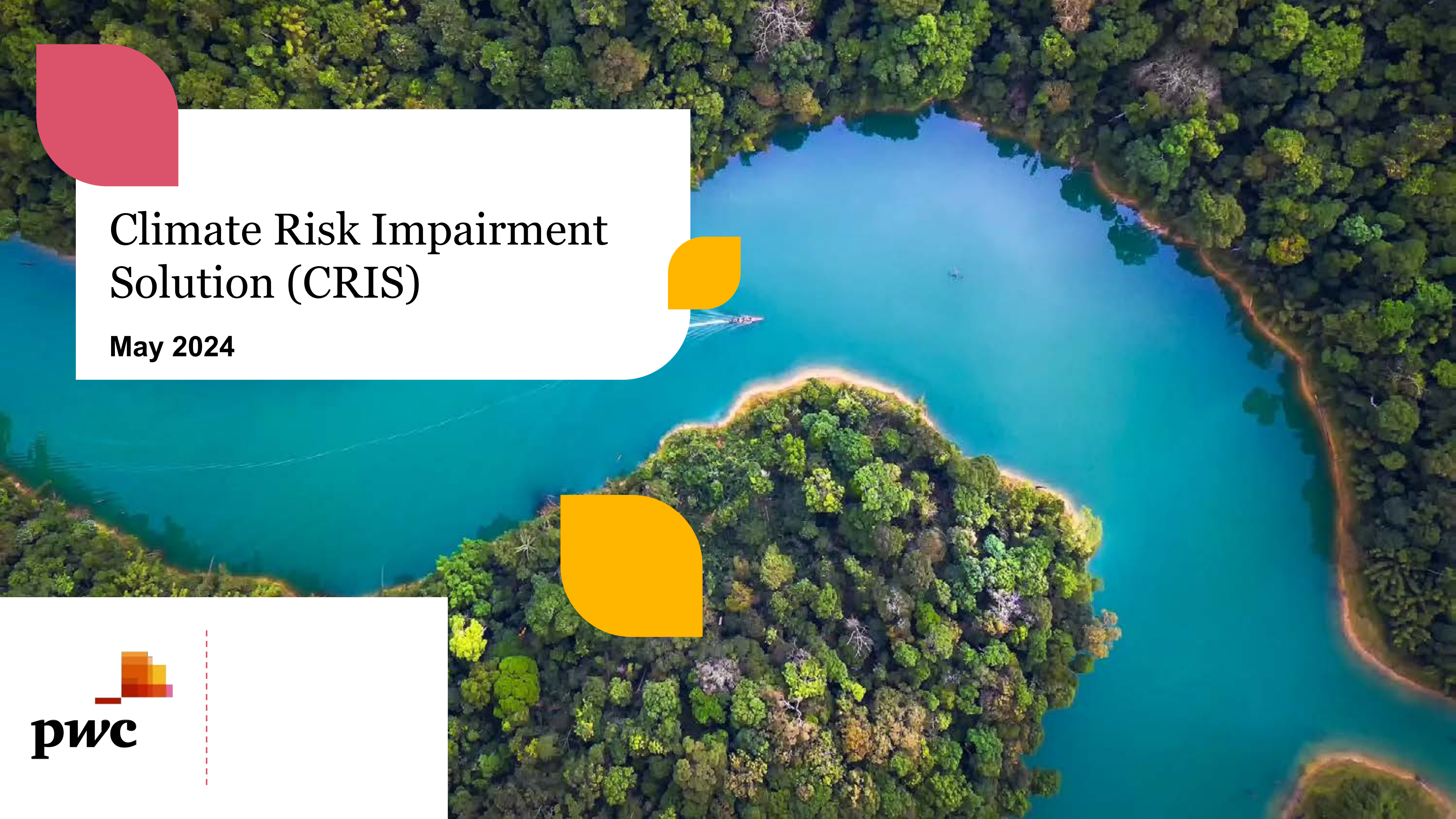
Climate Risk Impairment Solution (CRIS)

May 2024



PwC Climate Risk Impairment Solution (CRIS)

Supporting clients in measuring IFRS 9 impairments stemming from climate related risks

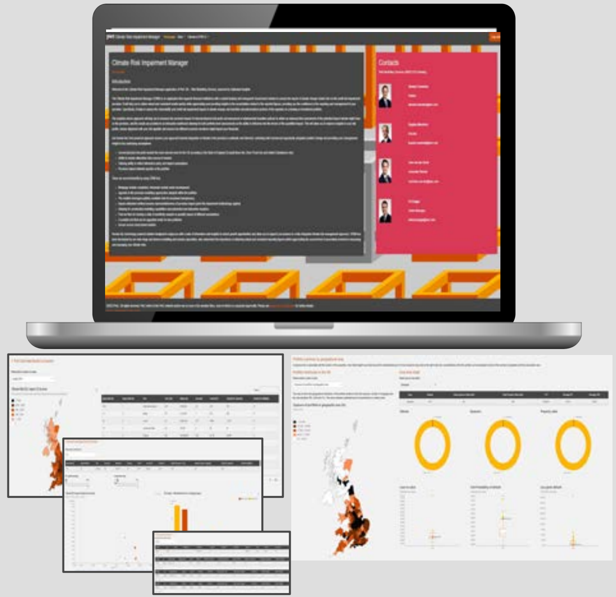
Key capabilities

- ✓ **Scenarios -** short, medium and long term real-world macro-economic and climate scenarios - event and shock-driven scenarios
- ✓ **Physical Risk Models** - best estimate and stress calibrations for Flood and Subsidence Risk
- ✓ **Transition Risk Models** - sector level macroeconomic projections, energy performance regulation, retrofitting costs, energy mix evolution and costs
- ✓ **Credit Risk Profile -** vulnerability assessment, climate adjusted climate risk profile - PD, LGD, Collateral Values and LTVs
- ✓ **Integration with IFRS 9 Models** - revised credit risk profile, Stage transitions - quantitative and qualitative. Compatible with any existing IFRS 9 modelling suite
- ✓ **Automated reporting solution and interactive dashboard** allowing for portfolio level and account level outputs
- ✓ **Retail and Commercial** portfolios

Benefits

- ✓ **Immediate insights in the portfolio risks** and vulnerabilities in your portfolio and Assess the impacts of climate transition on your investment and financing activities
- ✓ **Enhance your risk management strategies**, Risk Appetite and Limites and proactively mitigate climate-risk
- ✓ **Accelerate your roadmap for sustainability reporting** disclosures - Transition Planning, International Sustainability Standards Board (“ISSB”) and Corporate Sustainability Reporting Directive (“CSRD”)
- ✓ **Achieve alignment** with the **High Quality practices** as prescribed by the latest PRA Dear CFO letter
- ✓ **Full transparency on methodology** and assumptions powered by trusted and reputable data sources - enabling good **Model Risk Management** practices and **SS 1/23 alignment**
- ✓ **Cost efficient solution** and rapid turnaround of results

Outputs



Browser based

Pre-defined analytics

Secure access

Interactive analytics

Collaboration workbench

Trusted and Reputable sources

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Portfolio overview

Portfolio overview

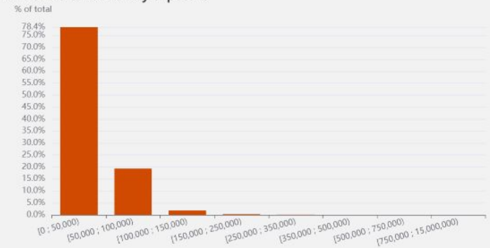
The portfolio has been successfully loaded in the application. This section provides the user with a general overview of the portfolio size, value, geographical distribution as well as key risk metrics such as loan to value, probability of default and loss given default.

Attribute	Value
Number of loans	100000
Total loan value	£18,808,333,600
Total collateral value	£32,024,230,866

Portfolio summary and distribution

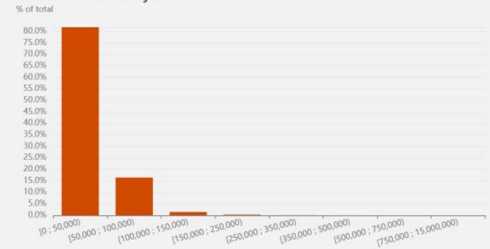
Histogram / Boxplot

Portfolio distribution by exposure



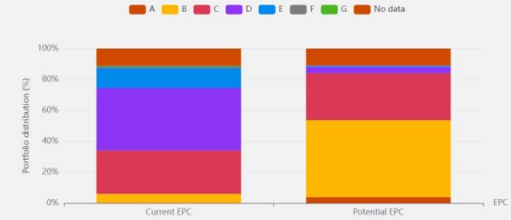
Histogram / Boxplot

Portfolio distribution by collateral value



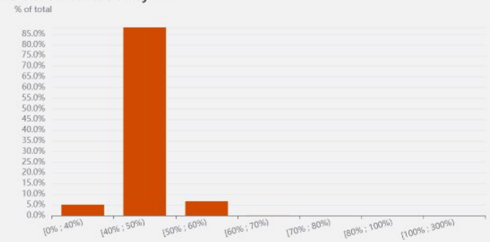
Distribution by: Mortgage value / Collateral value

Portfolio EPC distribution



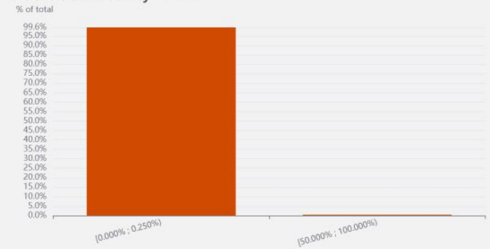
Histogram / Boxplot

Portfolio distribution by LTV



Histogram / Boxplot

Portfolio distribution by 12m PD



Histogram / Boxplot

Portfolio distribution by LGD

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Portfolio overview

Portfolio summary by geographical area

As physical risk is associated with the location of the properties, more initial insight is provided around the characteristics per UK Area Using the map chart on the right hand side, concentrations within the portfolio can be assessed in terms of the number of properties and their associated value.

Portfolio distribution in the UK

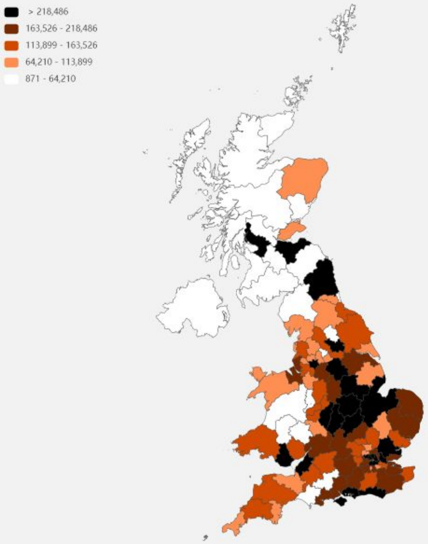
Please select a metric to plot

Exposure of portfolio in geographic area

The map will show the geographical distribution of the portfolio relative to the total exposure, number of mortgages and key risk indicators (PD, LGD and LTV). The colour indicate a potential level of concentrations in certain areas.

Exposure of portfolio in geographic area (£k)

Balance total



Area level detail

Select area to see detail

Aberdeen

Area	Volume	Total exposure Value (m£)	Total Property Value (m£)	LTV	Average PD	Average LGD
Aberdeen	516	98	166	58.92%	1.57%	4.03%

Volume

Exposure

Property value

Loan to value

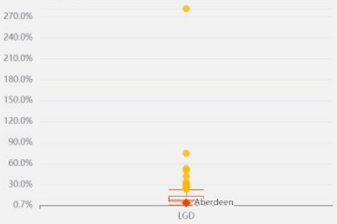
Distribution by region

12m Probability of default

Distribution by region

Loss given default

Distribution by region



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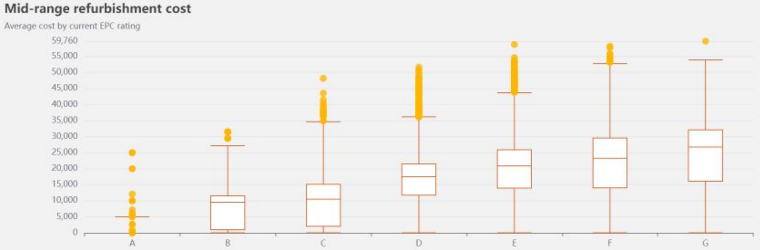
Portfolio overview

Refurbishment needs and activities on properties

Please select a metric to plot

Boxplot based on average cost



CURRENT_ENERGY_RATING	A	B	C	D	E	F	G	Missing
A	100	0	0	0	0	0	0	0
B	2,261	3,620	0	0	0	0	0	0
C	691	17,441	9,772	0	0	0	0	0
D	492	23,629	14,487	2,167	0	0	0	0
E	236	4,707	5,525	1,741	407	0	0	0
F	38	381	491	252	213	68	0	0
G	18	78	84	59	31	45	18	0
Missing	0	0	0	0	0	0	0	10,948

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Current EPC rating	Number of observations	Average refurb. costs (baseline)	Average refurb. costs (downturn)
A	82	5,348	6,488
B	4,521	7,826	9,596
C	26,540	9,953	12,550
D	40,629	16,164	20,915
E	12,591	18,999	24,799
F	1,438	20,954	27,331
G	333	23,733	31,140

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ECL impacts

Climate in IFRS 9 - ECL Impact Results

The portfolio has been successfully loaded in the application and Climate in ECL Impacts calculated. This section provides the user with the headline portfolio results as well as the ability to deep dive into the results at the granular account level.

100,000 Number of Loans	18,808.33 Total Current Balance (£m)	6.07 Current ECL (£m)
87,252 Current Stage 1 Accounts	12,335 Current Stage 2 Accounts	413 Current Stage 3 Accounts

Overall Climate Risk Provision Impact Results

Climate Change Impact	Accounts	Accounts %	Balance	Balance %	ECL Current	Climate Adjusted ECL - Central	Climate Adjusted ECL - Downside	Uplift Amount - Central	Uplift Amount - Downside	Uplift Percentage - Central	Uplift Percentage - Downside
No Impact	60,087	60.1%	11,325,166,607	60.2%	3,319,969	3,319,969	3,319,969	0	0	0.0%	0
Transition and Physical Risk	2,397	2.4%	446,529,647	2.4%	93,992	309,454	378,891	215,462	284,899	229.2%	3
Physical Risk Only	4,570	4.6%	944,950,970	4.5%	198,164	308,428	318,295	110,264	120,131	55.6%	1
Transition Risk Only	32,946	32.9%	6,191,684,376	32.9%	2,460,446	3,556,197	4,109,105	1,095,751	1,648,660	44.5%	1
Total	100,000	100.0%	18,808,333,600	100.0%	6,072,571	7,494,048	8,126,261	1,421,477	2,053,690	23.4%	0

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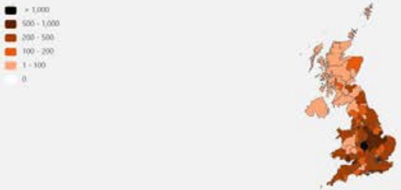
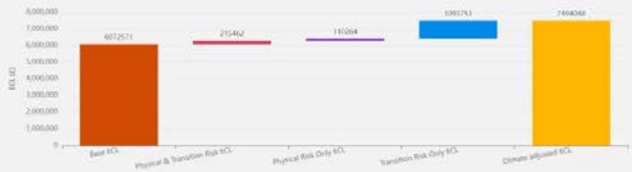
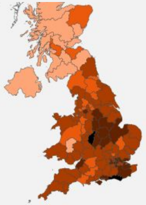
Accounts affected by Climate Risk



Impact on IFRS 9 provision

From current to climate adjusted ECL





Search:

						Current ECL	Climate ECL Impact (£)	Climate ECL Multiplier
						218	750	21
						108	524	5
						3,958	11,278	5
117	4	Llandrindod Wells	LD	712,861	5	20	61	4
1	5	Brighton	BN	148,629,845	799	20,705	64,009	3
75	6	Wakefield	WF	37,279,162	206	3,249	5,701	3
41	7	Walsall	WS	48,983,407	272	9,155	12,840	3
84	8	Darlington	DL	19,699,938	103	2,735	4,754	3
65	9	Stockport	SK	52,357,026	284	6,382	8,564	3
77	10	Worcester	WR	24,024,345	139	2,737	5,649	2

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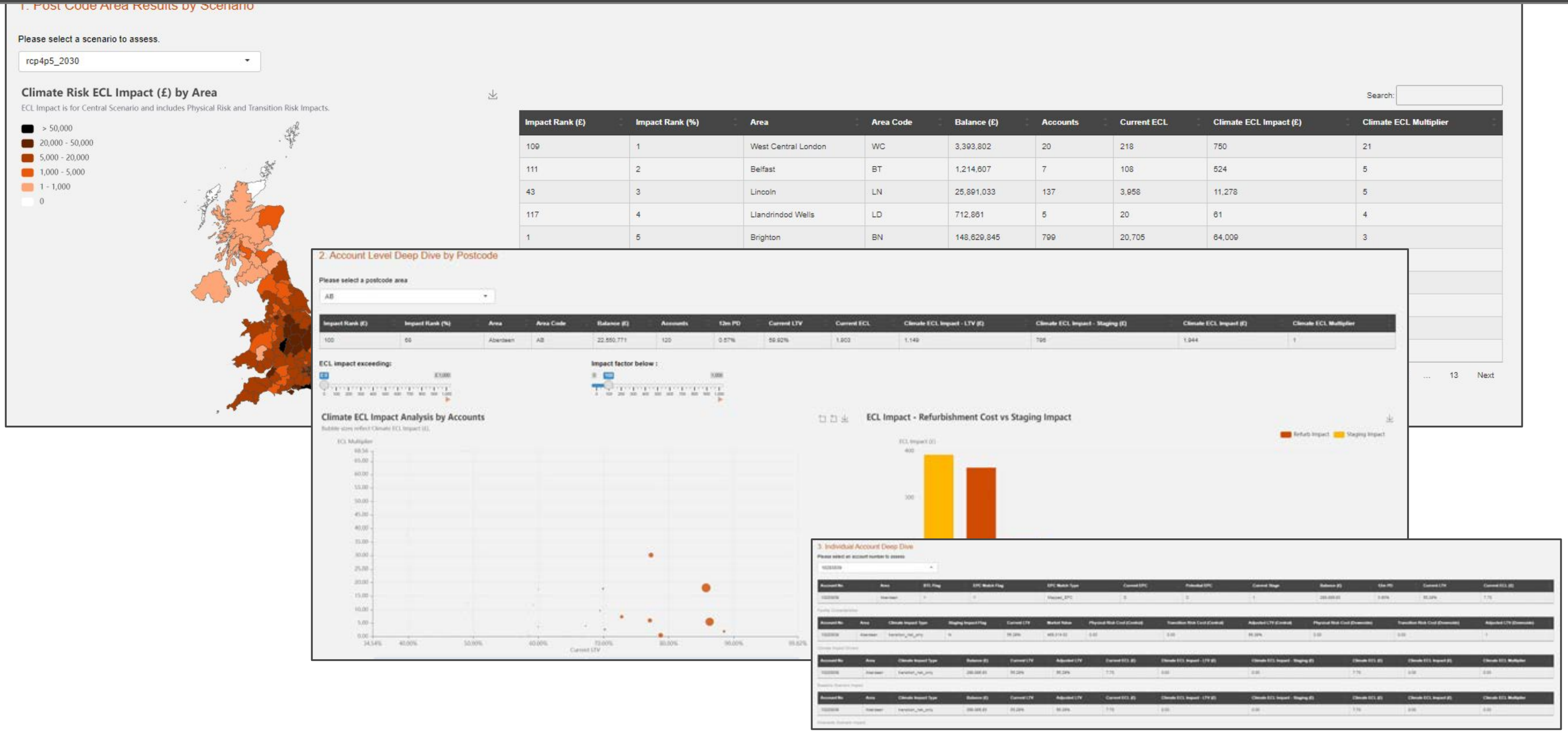
ECL Impacts - deepdive



Impact Rank (£)	Impact Rank (%)	Area	Area Code	Balance (£)	Accounts	Current ECL	Climate ECL Impact (£)	Climate ECL Multiplier
109	1	West Central London	WC	3,393,802	20	218	750	21
111	2	Belfast	BT	1,214,607	7	108	524	5
43	3	Lincoln	LN	25,891,033	137	3,958	11,278	5
117	4	Llandrindod Wells	LD	712,861	5	20	61	4
1	5	Brighton	BN	148,629,845	799	20,705	64,009	3

Impact Rank (£)	Impact Rank (%)	Area	Area Code	Balance (£)	Accounts	12m PD	Current LTV	Current ECL	Climate ECL Impact - LTV (£)	Climate ECL Impact - Staging (£)	Climate ECL Impact (£)	Climate ECL Multiplier
100	68	Aberdeen	AB	22,550,771	120	0.57%	59.92%	1,803	1,149	796	1,944	1