hiya

Global Call Threat Report

Insights into today's worldwide spam problem

Q2 2023

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The state of spam calls by country
(Countries are hyperlinked)

hiya

Section One

Phone spam is a global problem

No country is immune from phone spam

Introduction

In the second quarter of 2023, Hiya observed 6.5 billion suspected spam calls worldwide. That's more than 70 million calls every day.

Hiya's data shows that 1 out of every 4 calls from non-contacts in the United States is a suspected spam (unwanted) call, and in some European countries more than 40% of calls received from non-contacts are suspected spam. In other parts of the world the problem is even worse. In the Asia/Pacific region, spam rates in Indonesia and Hong Kong top 50%. In the Americas, Argentina has a spam rate of 56.0% and Chile leads the world with a spam rate of 56.9%.

This report compares spam and fraud call volumes in various countries throughout the world, and highlights the most common scams in select countries. Some of these scams take a shotgun approach, blasting out thousands of robocalls in hopes of scamming an unsuspecting Amazon user, while others are narrowly targeted to immigrants or the elderly. News reports in multiple countries tell of loved ones scams where fraudsters use artificial intelligence (AI) to clone a voice and then call a relative with an urgent plea for money. Could these be the scams of the future?

The good news is that AI is also being used to stop fraud calls, and to label nuisance calls so recipients can decide if they want to pick up. See the Solution section of this report to learn how Hiya is using Adaptive AI to fight back against unwanted calls.

Methodology

The data in this report is based on a representative sample of calls observed during Q2 of 2023 on the Hiya Voice Security Network, which includes Samsung Smart Call enabled devices and the Hiya mobile app. For the Top 10 US States section, results are derived from the Hiya mobile app only, using data from users who have provided their US area code.

Spam is defined as unwanted calls, and includes both fraud calls and nuisance calls. The spam flag rate in this report represents calls that Hiya has identified and flagged as either fraud or nuisance. Spam ratios represent the number of unwanted calls from "non-contacts," which are calls placed from numbers that are not in an individual's local address book.

Overall spam rates remain steady, but several countries experienced an increase in fraud calls

This is Hiya's third edition of the Global Call Threat Report, following the release of the Q4 2022 report and Q1 2023 report, which allows for comparisons.

Globally, overall spam volumes were down slightly in Q2 compared to Q1, falling from 6.7 billion in the first quarter to 6.5 billion in the second quarter. The data does, however, show an alarming trend: an increase in the percentage of fraud calls in many countries. These are not just nuisance telemarketing calls; these are illegal calls intended to steal money or personal information. Of the 39 countries examined in this report, 30 had an increase in fraud calls.

Over the course of Q2, spam call volumes hovered around 500 million calls each week, hitting a peak of 550 million calls during the week of April 10, 2023.
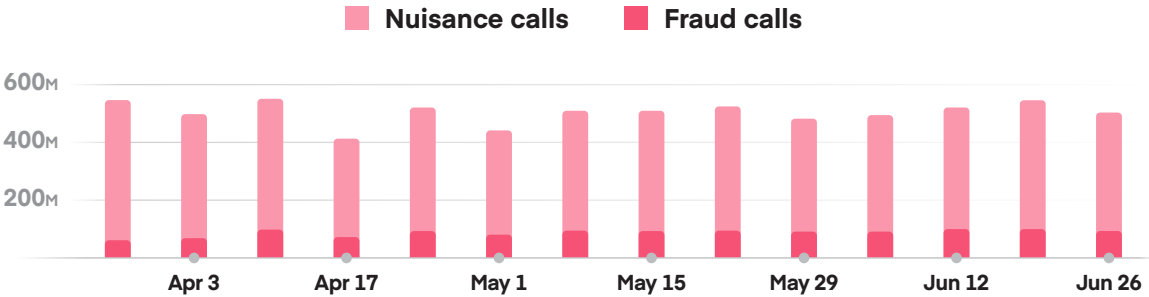
6.5B(Billion)
Global spam calls flagged in Q2 2023

550M(Million)
Spam call volumes in Q2 peaked during the week of April 10, 2023

Hiya's incoming unwanted call volume

■ **Nuisance calls**   ■ **Fraud calls**

Spam call volumes hovered around 500 million calls each week during Q2 2023, hitting a peak of 550 million during the week of April 10, 2023.

Phone spam is a problem around the world

Several of our featured countries experienced an increase in scams where fraudsters impersonate family members. While Hiya users have not reported AI-generated family member scams, we're seeing news reports of these in the US, Canada, and the UK.

1 out of every 4 calls is unwanted

In the US, one out of every four calls from a non-contact was flagged as spam. Popular scams in Q2 included Venmo scams, impersonation of family members, and a resurgence of auto warranty scams — which took a sharp dive in mid-2022.

Higher percentage of fraud calls

Canadians get fewer spam calls than Americans do, but they experience a higher percentage of fraud: 6.3% compared to the US's 1.3%. Impersonation scams are popular, with fraudsters pretending to be loved ones, government officials and Amazon.

Highest fraud call rate in Europe

In the UK, 28% of calls from non-contacts are spam. Of those, more than half – 15% – are fraud calls. That's the highest proportion of fraud in Europe. Common scams include Amazon, Her Majesty's Revenue and Customs, and family member impersonators.

Highest spam rates in Europe

Spain and France have the highest rates of unwanted calls in Europe. Spain's spam rate is 44.9% and France's rate is 42.5%. What's more, Spain has the second-highest rate of fraud in Europe. Bank scams are popular in both Spain and France.
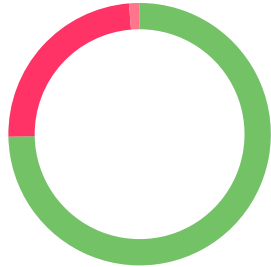
Germans experience average spam

Germany is near the middle of the pack of European countries, with a spam rate of 21.6% from non-contact calls. That's up 3% from the previous quarter. Common scams in Germany include fraudsters impersonating family members and the police.

United States

POPULATION

324 million

REGULATOR

FCC ⊙

25.30%
Spam flag rate

-2%
Spam flag rate Q2 2023 vs. Q1 2023

● **24.00%**
Nuisance calls

● **1.30%**
Fraud calls

● **74.70%**
Wanted calls

12 Calls/Month
Average spam calls
per person

Q2 brings a new mix of scam calls to the US

In the second quarter of 2023, the spam flag rate in the United States dipped just slightly from 25.7% in Q1 to 25.3% in Q2, a 2% drop.

Of the seven countries observed in North and South America, the US has the third-lowest spam rate. But even more interesting is the US's fraud rate. The United States has the lowest rate of fraud among 7 countries in the Americas: a rate of just 1.3%. That's significantly lower than Argentina's fraud rate of 31%, Mexico's 17% and Canada's 6.3%.

Last quarter, in Q1, the top scams in the US related to Medicare, insurance, and mortgage products, but Q2 brought a new mix of scams, including Venmo, vehicle service center, and scammers pretending to be family members.

Spam ratios represent the number of unwanted calls from "non-contacts," which are calls placed from numbers that are not in an individual's local address book.

United States

Top scam calls in the US

■ Family	■ Vehicle	■ Venmo
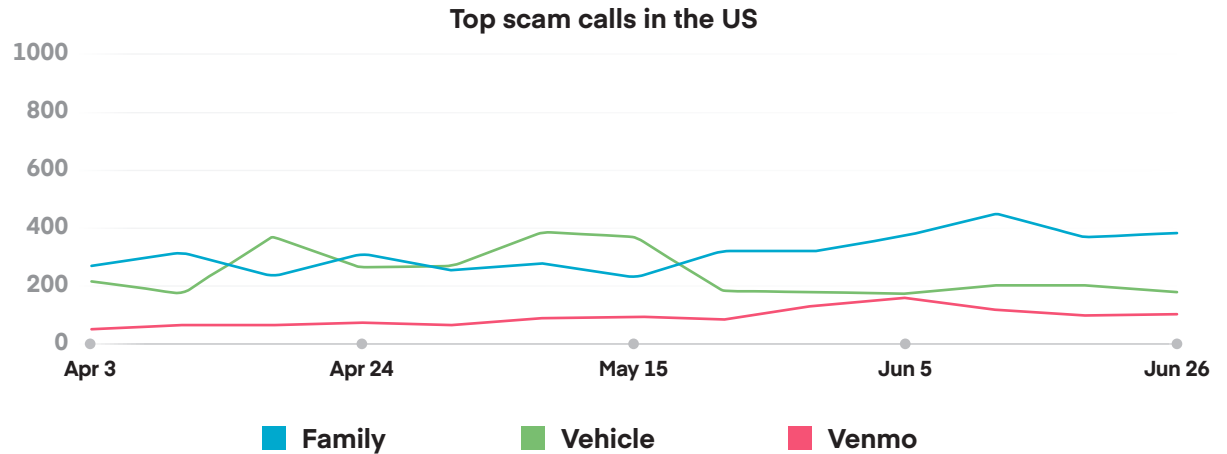
(!) **Family** – Family member scams were common in the US and other countries in Q2 2023. This scam involves fraudsters calling pretending to be a son, daughter, grandchild, etc. The distraught child insists that they are in trouble and begs the parent or grandparent to wire money immediately.

(!) **Vehicle** – The "vehicle service center" scam appears to be a resurgence of the long-running auto warranty scam that was the #1 scam in 2021 and half of 2022, but took a sharp dive after enforcement actions by the FCC.

(!) **Venmo** – There are a variety of scams that attempt to obtain someone's Venmo information, but commonly it will start with a call or text message explaining that there has been an unauthorized charge, or someone is trying to open an account using your phone number. The next step is to get the recipient to connect with a phony customer service rep who will ask you to verify your Venmo information.
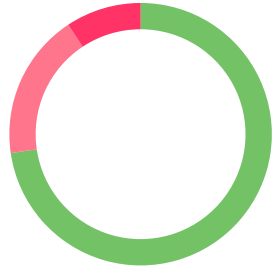
United Kingdom

POPULATION

65 million

REGULATOR

Ofcom ⊙
ICO ⊙

27.30%
Spam flag rate

-9%
Spam flag rate Q2 2023 vs. Q1 2023

🟥
18.00%
Nuisance calls

🟥
9.30%
Fraud calls

🟩
72.70%
Wanted calls

**4** Calls/Month
Average spam calls per person

UK has highest fraud call rate in Europe

In the UK, 27.3% of incoming calls from non-contacts are unwanted calls. But unlike other countries where most of the unwanted calls are simply nuisance calls, in the UK one-third of those unwanted calls are actually fraud. The UK's fraud rate is 9.3%, giving it the highest fraud rate in Europe for the past three quarters.

Amazon scams are popular in the UK, as they are in many other countries. Unique to the UK are HMRC scams, which impersonate officials from the UK's tax service Her Majesty's Revenue and Customs. The UK is also seeing a rise in scams impersonating family members. There have even been news reports of family member scams using AI-generated voice clones to convince parents their child has been kidnapped and they need to pay a ransom for the child's return.

Spam ratios represent the number of unwanted calls from "non-contacts," which are calls placed from numbers that are not in an individual's local address book.

United Kingdom

Top scam calls in the UK
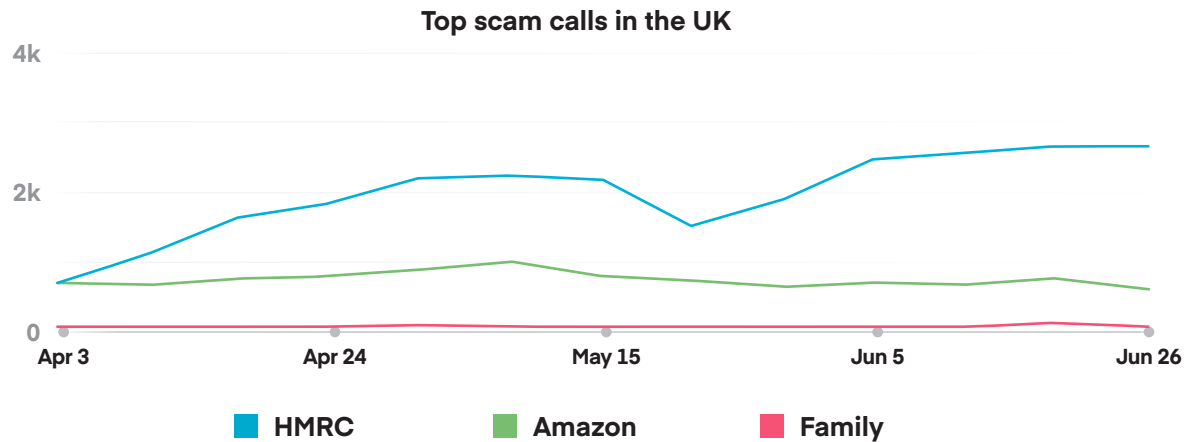
HMRC – **HMRC scams** impersonate agents from the UK's tax agency, Her Majesty's Revenue and Customs. Often a robocall will inform the recipient that they are being investigated for tax evasion or tax fraud by HMRC. Recently there has been an uptick in scams related to a **new tax credit** for low-income households to help with the cost of living.

Amazon – Since Amazon is an international retailer, it's not hard for a scammer to happen upon a victim who has an Amazon account. As in other countries, **Amazon impersonators** may say that they suspect an unauthorized purchase, or that the credit card linked to the account needs to be updated. Amazon has even issued a **warning to UK customers** to be on the lookout for imposter scams.

Family – Family member scams are on the rise in the UK and other countries. Reports from Hiya users in the UK show that a common tactic is for the fraudster to pretend to be a daughter who just lost her phone (that's why she's calling/texting from a different number) and needs to have money sent to her immediately.
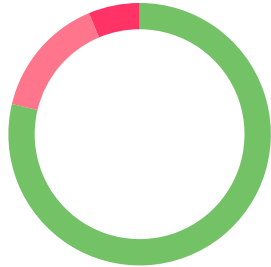
Canada

POPULATION

36 million

REGULATOR

CRTC ⊙

21.30%
Spam flag rate

+3%
Spam flag rate Q2 2023 vs. Q1 2023

● **15.00%**
Nuisance calls

● **6.30%**
Fraud calls

● **78.70%**
Wanted calls

3 Calls/Month
Average spam calls
per person

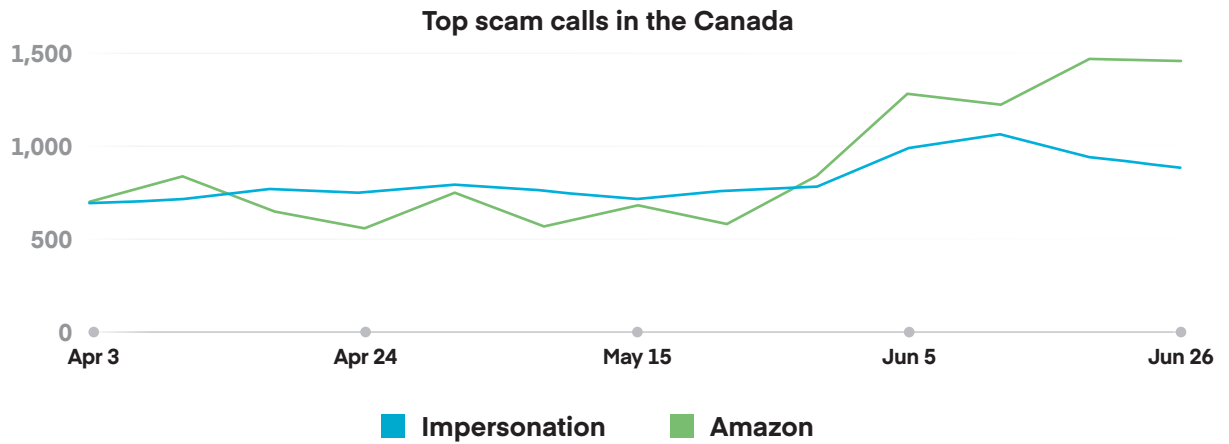## In Canada, spam calls are down overall but fraud calls increased

In Canada, the overall spam rate increased to 21.3% in Q2. That was a 16% increase compared to Q1, but is still low compared to other countries. Canada does, however, have a relatively high fraud rate, 6.3%, which is five times higher than the US.

Impersonation scams have long been popular in Canada: impersonating government officials, Amazon, and even the Chinese Embassy.

As we've seen in other countries, Q2 brought an increase in scams impersonating family members. Grandparent scams are especially popular in Canada.

Spam ratios represent the number of unwanted calls from "non-contacts," which are calls placed from numbers that are not in an individual's local address book.

Canada

Top scam calls in the Canada

Legend: ■ Impersonation   ■ Amazon

Y-axis: 1,500 / 1,000 / 500 / 0
X-axis: Apr 3 / Apr 24 / May 15 / Jun 5 / Jun 26

⚠ **Amazon** – Amazon scams are a perennial favorite in Canada, and Hiya observed a sharp increase in these scams in June. Amazon has dedicated websites in 13 countries, so it's no wonder that these scams are so common worldwide. Last year Amazon scams were the #1 scam in Canada and the UK, and #2 in the US.

⚠ **Impersonation** – Candaians reported a wide variety of impersonation scams in Q2 – pretending to be banks, business and government. Government impersonation scams are huge in Canada, with imposters impersonating Canada Border Services Agency, Department of Service Canada, and the Chinese Embassy.

Spain

POPULATION

46 million

REGULATOR

CNMC ⊙
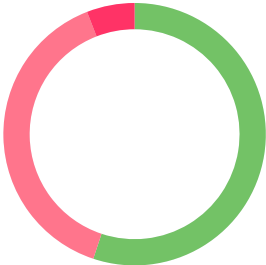
44.90%
Spam flag rate

-3%
Spam flag rate Q2 2023 vs. Q1 2023

39.00%
Nuisance calls

5.90%
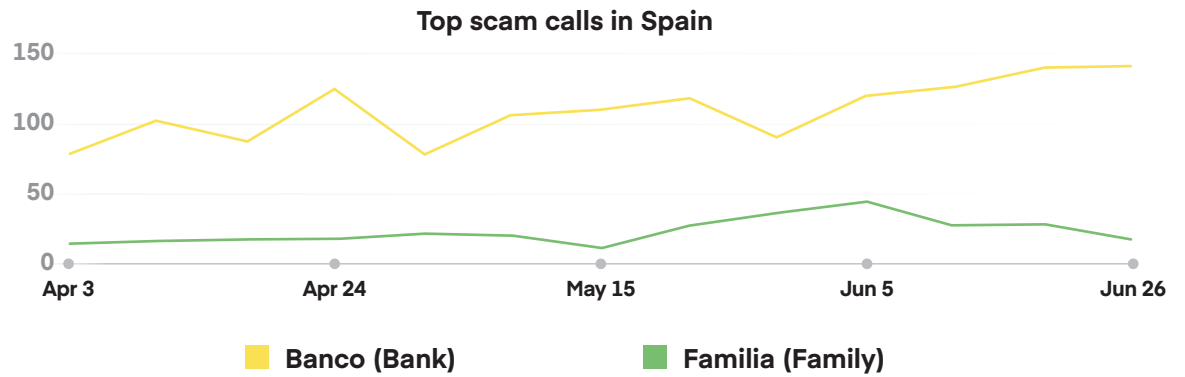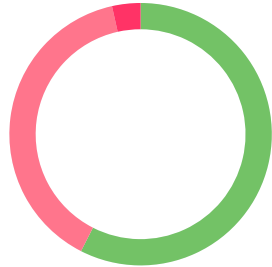Fraud calls

55.10%
Wanted calls

10 Calls/Month
Average spam calls
per person

Spain has highest spam rate, second-highest fraud rate in Europe

In Spain, nearly half the calls received from non-contacts (44.9%) are spam calls. That's the highest spam rate in Europe. Spain also has the second highest fraud rate in Europe, at 5.9%. It's the worst of both worlds. The two most common scams in the second quarter were bank scams and scams where the imposter pretends to be a son or daughter.

Interestingly, on the final day of Q2, June 29, the General Telecommunications Law 11/2022 went into effect in Spain, which prohibits unsolicited calls without prior consent. We will see if that makes any impact on spam and fraud rates in Spain in the coming quarter.

Spam ratios represent the number of unwanted calls from "non-contacts," which are calls placed from numbers that are not in an individual's local address book.

Top scam calls in Spain

150					
100					
50					
0					
Apr 3	Apr 24	May 15	Jun 5	Jun 26	

🟨 **Banco (Bank)**　　　🟩 **Familia (Family)**

⊘ **Banco (Bank)** – Q2 saw a rise in banking scams: impersonating bank representatives in order to gain access to victims' bank accounts. Banco Sabadell was the most commonly mentioned bank in Hiya user reports.

⊘ **Familia (Family)** – Spaniards continue to be bothered by "familia" scams, where imposters pose as a family member — usually a son or daughter — calling to ask the mother or father for immediate financial help. Hiya users report that a common ploy is a text message from the impersonated daughter saying her phone is broken and to text her back using WhatsApp.

France

POPULATION

67 million

REGULATOR

ARCEP ⊙

42.50%
Spam flag rate

-2%
Spam flag rate Q2 2023 vs. Q1 2023

■ **39.00%**
Nuisance calls

■ **3.50%**
Fraud calls

■ **57.50%**
Wanted calls

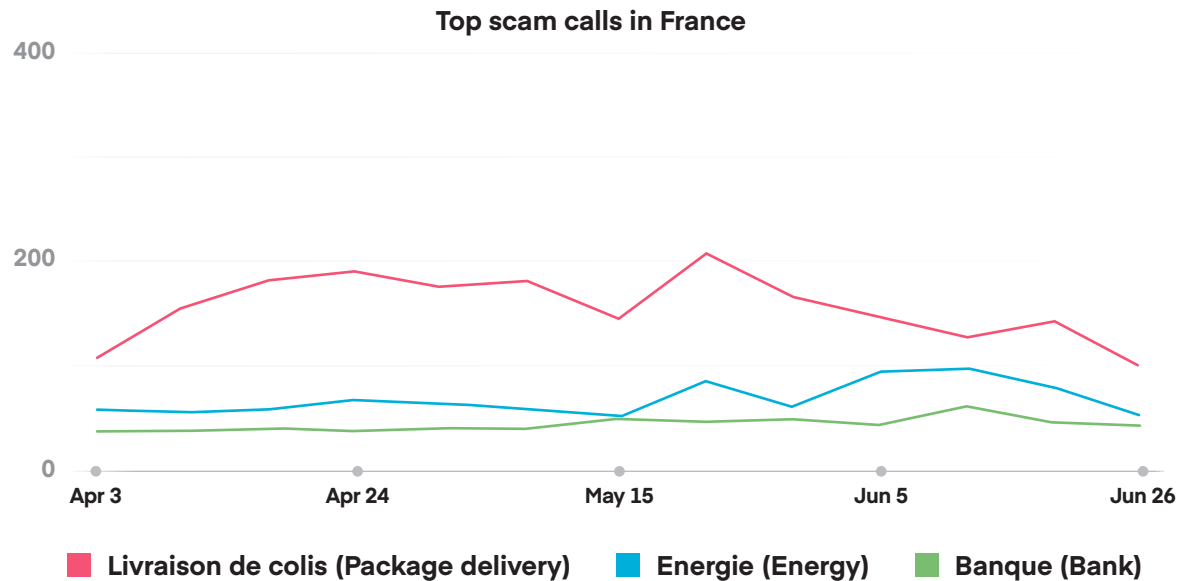**9** Calls/Month
Average spam calls
per person

France has second-highest spam rate in Europe, but less fraud

In Europe, Spain may have the highest spam rate (44.9%), but France is close second at 42.5%. One consolation is that the rate of fraud calls in France is comparatively low, with just 3.5% of all calls being fraud. Compare that with a 5.9% fraud rate in Spain and 9.3% fraud rate in the UK.

France has a new law that puts restrictions on telemarketers. Decree No. 2022-1313 allows telemarketing calls only between the hours of 10 a.m. to 1 p.m. and 2 p.m. to 8 p.m. Monday through Friday – unless the company has prior consent. The law also prohibits soliciting the same consumer more than four times a month. Fines for violations are 75,000 Euros for individuals and 375,000 Euros for corporations.

Spam ratios represent the number of unwanted calls from "non-contacts," which are calls placed from numbers that are not in an individual's local address book.

Top scam calls in France

Livraison de colis (Package delivery) — **Energie (Energy)** — **Banque (Bank)**

⚠ **Livraison de colis (Package delivery)** – With this scam, fraudsters call or send an SMS message saying that a package is awaiting delivery and the recipient needs to pay the delivery fee. Hiya users have reported fraudsters posing as DHL, Amazon, and even the local post office.

⚠ **Energie (Energy)** – Consumers in France can choose their energy supplier, so it's not unusual for residents to receive legitimate telemarketing calls from energy companies. Along with telemarketing calls, Hiya users in France have been reporting scams from callers pretending to be various energy companies. They're also reporting scams offering an energy rebate check, in which the caller asks for the person's bank account number in order to directly deposit the rebate check.

⚠ **Banque (Bank)** – Bank scams are common in France, as they are in other countries. Hiya users in France have been reporting calls from fraudsters pretending to be representatives of Banque de France, Banque Postale, and many other banks. Often the fraudster will say there has been an unauthorized charge and they need the customer's bank account details to clear up the matter.

Germany

POPULATION

82 million

REGULATOR

BNetzA ⊙
(Bundesnetzagentur)
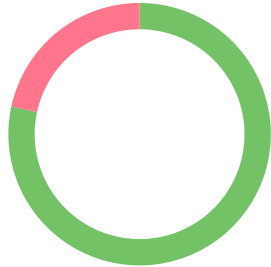
21.62%
Spam flag rate

+3%
Spam flag rate Q2 2023 vs. Q1 2023

21.62%
Nuisance calls

78.38%
Wanted calls

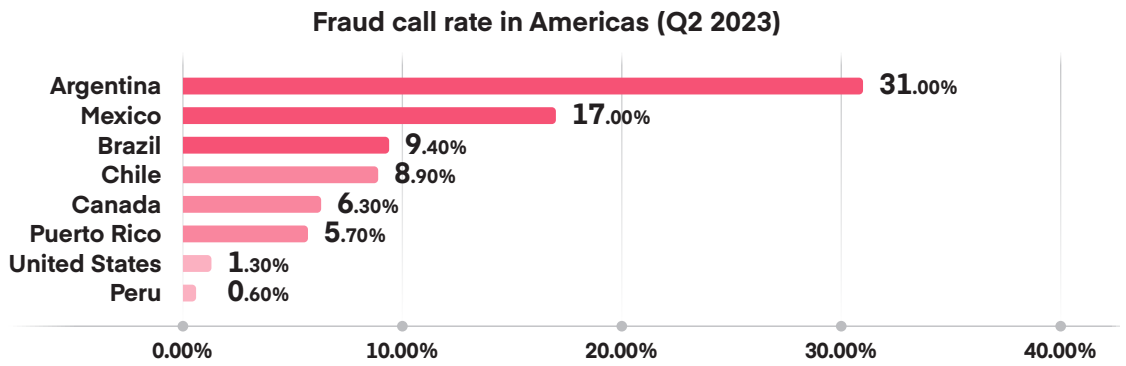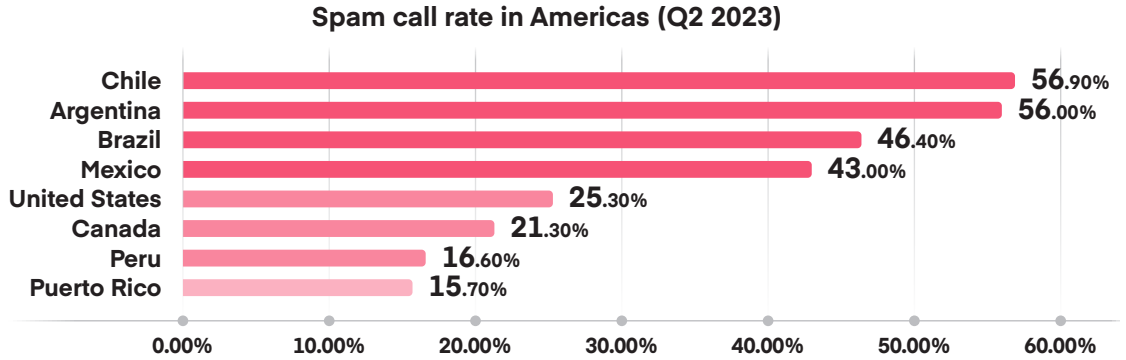**2** Calls/Month
Average spam calls
per person

Germany experiences average spam

Of the 20 countries tracked in Europe, Germany is #8 for its spam rate, a little higher than the average with spam making up 21% of non-contact calls. That was a 3% increase in spam calls compared to last quarter.

At the beginning of this year, sweepstakes scams and tech support scams were popular, but in Q2 the most commonly reported scams related to fake police officers and imposters pretending to be a child in need of assistance.

*Hiya uses a single 'spam' warning for both nuisance and fraud calls.

Spam ratios represent the number of unwanted calls from "non-contacts," which are calls placed from numbers that are not in an individual's local address book.

Top scam calls in Germany
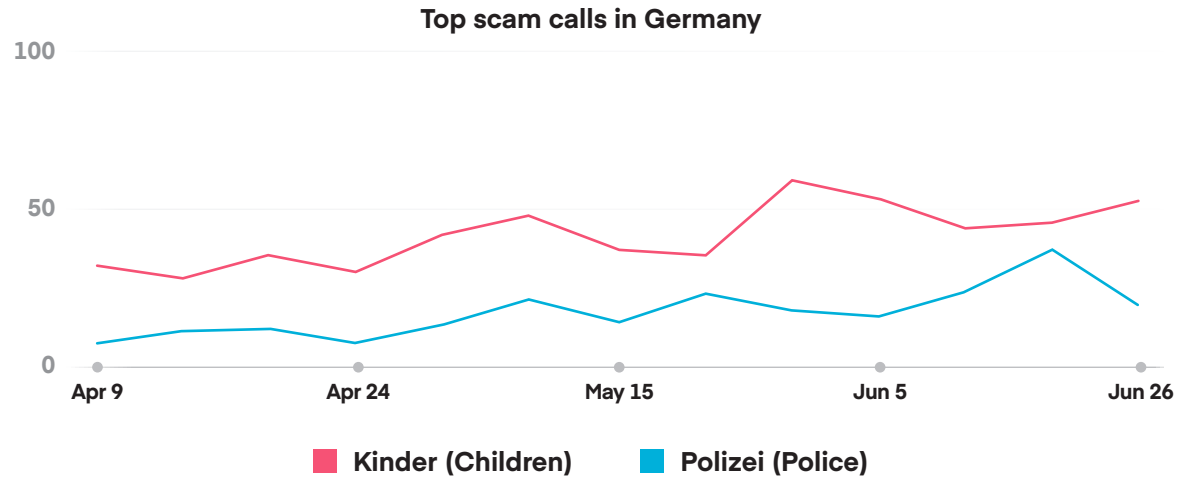
● Kinder (Children) – As we've seen in several other countries, Germany is also experiencing an uptick in scams where the caller pretends to be a child in need of immediate financial help.

● Polizei (Police) – Last summer Germany experienced a surge in Europol scams, where fraudsters pretended to be from the European Union's law enforcement agency. Those have faded, but Hiya users in Germany continue to report being contacted by fake police officers. Sometimes the incoming call will show the caller ID number 110, Germany's emergency line, in an effort to trick victims.

Americas

Chile tops the world with a 56.9% spam rate, while Argentina sees high rates of both spam and fraud

Spam call rate in Americas (Q2 2023)

Country	Rate
Chile	56.90%
Argentina	56.00%
Brazil	46.40%
Mexico	43.00%
United States	25.30%
Canada	21.30%
Peru	16.60%
Puerto Rico	15.70%

Fraud call rate in Americas (Q2 2023)

Country	Rate
Argentina	31.00%
Mexico	17.00%
Brazil	9.40%
Chile	8.90%
Canada	6.30%
Puerto Rico	5.70%
United States	1.30%
Peru	0.60%

Asia/Pacific

Indonesia receives the most spam calls in the Asia/Pacific region: 56.4%

Spam call rate in Asia/Pacific (Q2 2023)

Country	Rate
Indonesia	56.40%
Hong Kong	54.00%
Philippines	29.40%
Australia	28.30%
Singapore	20.20%
Malaysia	16.90%
Turkey	15.30%
India	12.50%
Thailand	10.30%
Israel	9.03%
New Zealand	7.90%

Fraud call rate in Asia/Pacific (Q2 2023)

Country	Rate
Hong Kong	12.00%
Philippines	8.40%
Turkey	8.40%
Singapore	8.20%
Australia	7.30%
India	5.80%
Malaysia	4.90%
Thailand	1.50%
Indonesia	1.40%
Israel	1.20%
New Zealand	1.10%
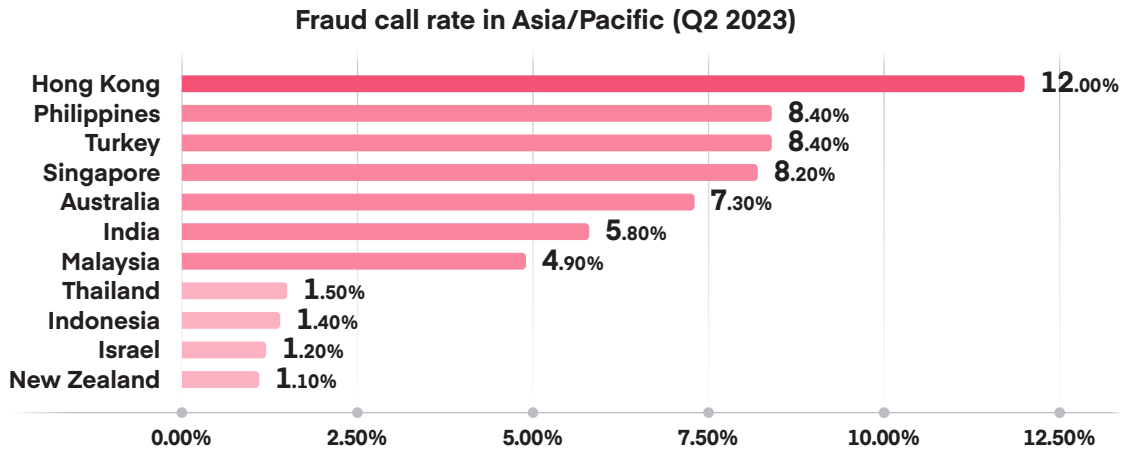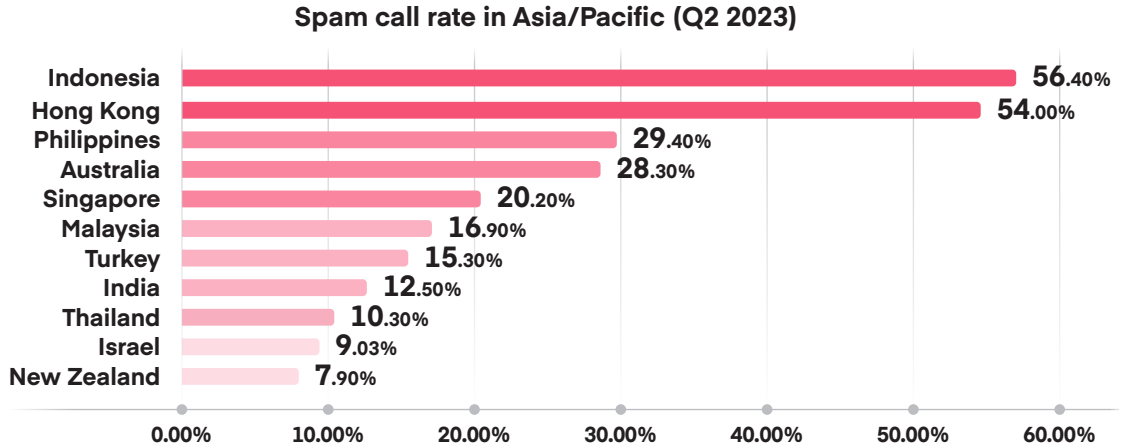
Europe

Spain leads Europe with highest spam rate, while the UK is experiencing more fraud than any other European country

Spam call rate in Europe (Q2 2023)

Country	Rate
Spain	44.90%
France	42.50%
Italy	40.00%
Poland	27.40%
Finland	27.40%
United Kingdom	27.30%
Sweden	26.80%
Germany	21.62%
Portugal	21.00%
Belgium	19.20%
Switzerland	19.00%
Denmark	15.70%
Norway	15.30%
Netherlands	13.30%
Czech Republic	12.83%
Greece	12.30%
Slovakia	10.37%
Austria	9.00%
Hungary	8.40%
Ireland	4.35%
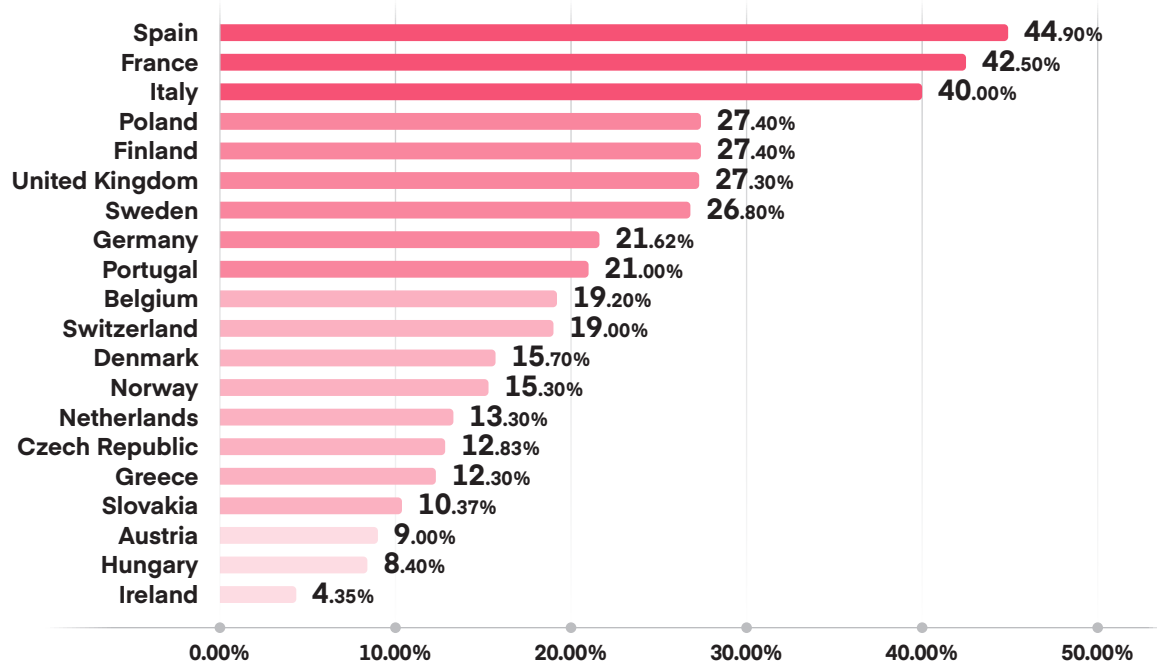
Fraud call rate in Europe (Q2 2023)

Hiya uses a single 'spam' warning for both nuisance and fraud calls in Germany and Italy

Country	Rate
United Kingdom	9.30%
Spain	5.90%
Sweden	5.80%
Poland	5.40%
Finland	4.40%
France	3.50%
Hungary	2.50%
Netherlands	2.30%
Norway	2.30%
Denmark	1.70%
Austria	1.40%
Greece	1.30%
Belgium	1.20%
Portugal	1.00%
Switzerland	1.00%
Slovakia	0.97%
Ireland	0.95%
Czech Republic	0.83%
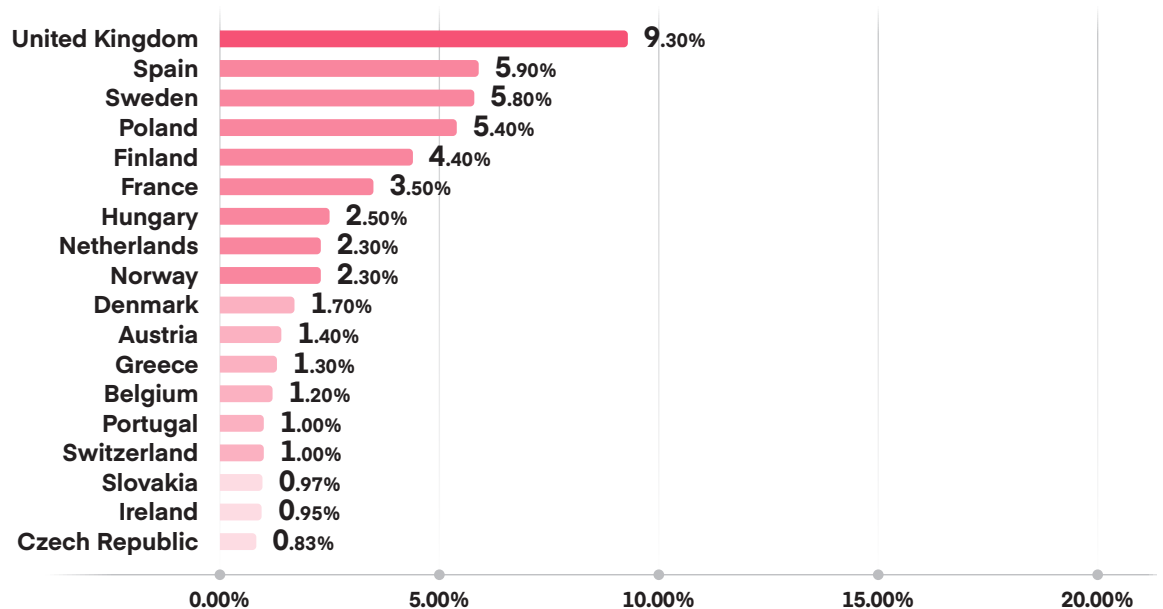
How carriers can fight back against spam

Hiya Protect is a complete call protection solution that enables mobile carriers to protect their subscribers by blocking fraud calls and labeling nuisance calls. It is used by carriers, device manufacturers, and network providers who are looking to create a differentiated voice offering and increase customer satisfaction.

Hiya Protect is powered by the industry's largest and most comprehensive real-time data set, with call event data from more than 250 million users across more than 60 countries.

Hiya Protect uses Adaptive AI, the industry's only self-learning spam protection system that adjusts to the latest fraud and nuisance calls. Unlike other solutions, it uses a multi-layer approach to analyze every aspect of a phone call, from the phone number to the call recipient, the enterprise making the call, and the characteristics of the call itself. For more information about Hiya Protect, visit our website, or send us a message.

Individuals who don't have network-based protection through their mobile carrier or device manufacturer can download the Hiya mobile app to their smartphone.

Section Two

Top 10 US states

Spam call rates in Q2

For the first time ever, Hiya is including US state data in our Global Call Threat Report. Below we list the top 10 states with the highest spam rates. Spam rates are per capita: based on the number of residents in each state. Data comes from the Hiya mobile app, from users who have provided their US area code. States with fewer than 1,000 active users were not included.
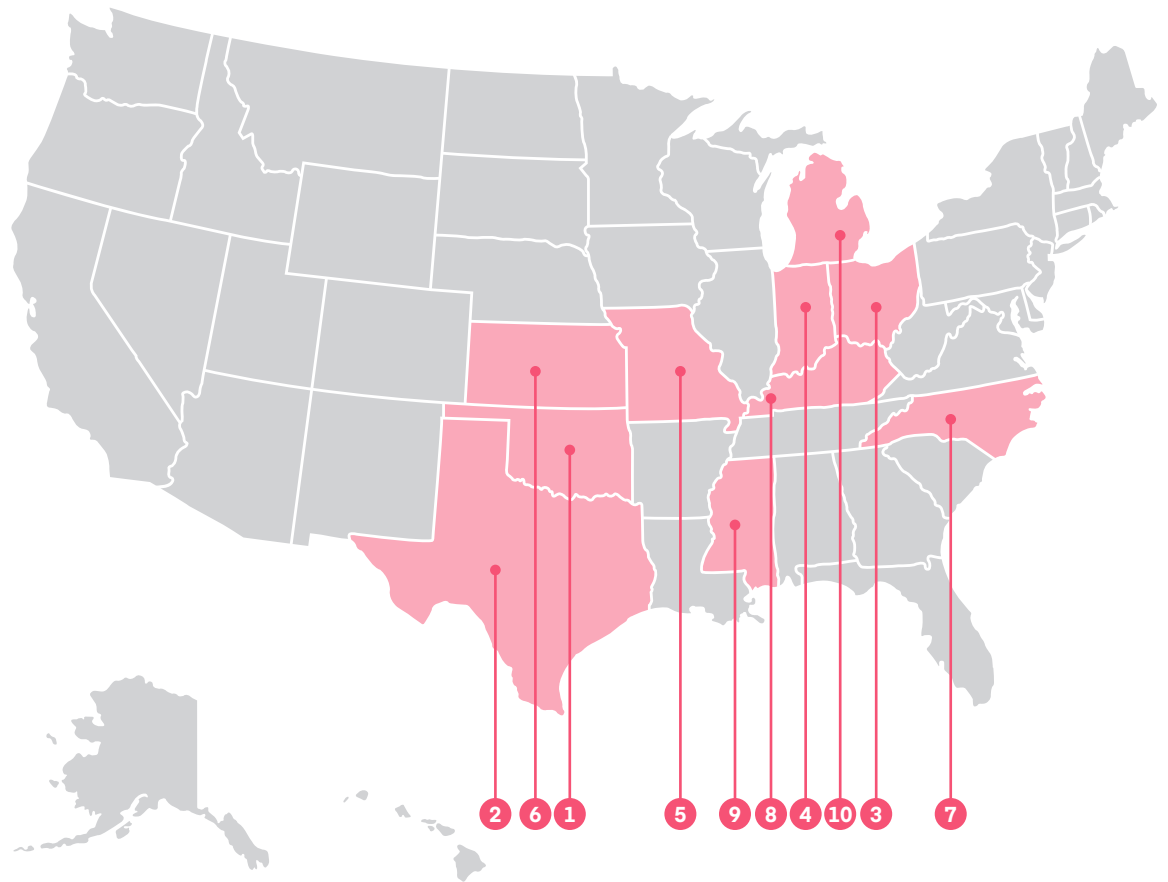
1	Oklahoma 24.75%	6	Kansas 22.91%
2	Texas 23.91%	7	North Carolina 22.75%
3	Ohio 23.90%	8	Kentucky 22.26%
4	Indiana 23.69%	9	Mississippi 22.04%
5	Missouri 22.98%	10	Michigan 21.92%

Spam call rates in Q2

Nuisance call rate for the top 10 US states Q2 2023

Spam (unwanted calls) can be broken down into two categories: nuisance and fraud calls. Nuisance calls are unwanted calls, but they're not illegal. Fraud calls are illegal calls, unusually with the intent of stealing money or personal information. Data below represents the number of unwanted calls from "non-contacts," which are calls placed from numbers that are not in an individual's local address book.

Top 10 nuisance call rate in US States (Q2 2023)

State	Rate
Oklahoma	24.10%
Texas	23.06%
Indiana	22.88%
Ohio	22.88%
Kansas	22.23%
Missouri	22.19%
North Carolina	21.78%
Kentucky	21.63%
Mississippi	21.24%
Michigan	21.11%
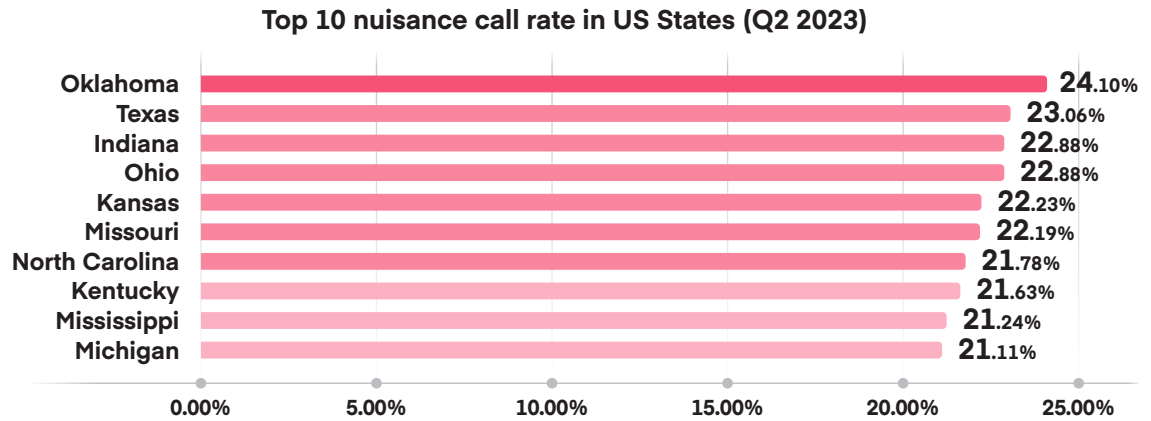
Fraud call rate for the top 10 US states Q2 2023

While Oklahoma tops the list for nuisance calls, the state that gets the highest percentage of fraud calls is Connecticut. That's followed by California and Ohio. In each of those three states, more than 1% of unwanted calls are fraud — which is still a relatively low rate of fraud compared with that seen in other countries in this report.

Top 10 fraud call rate in US States (Q2 2023)

State	Rate
Connecticut	1.40%
Califonrnia	1.26%
Ohio	1.02%
North Carolina	0.97%
Illinois	0.94%
Pennsylvania	0.93%
Massachusetts	0.93%
Washington	0.92%
Colorado	0.90%
Arizona	0.90%
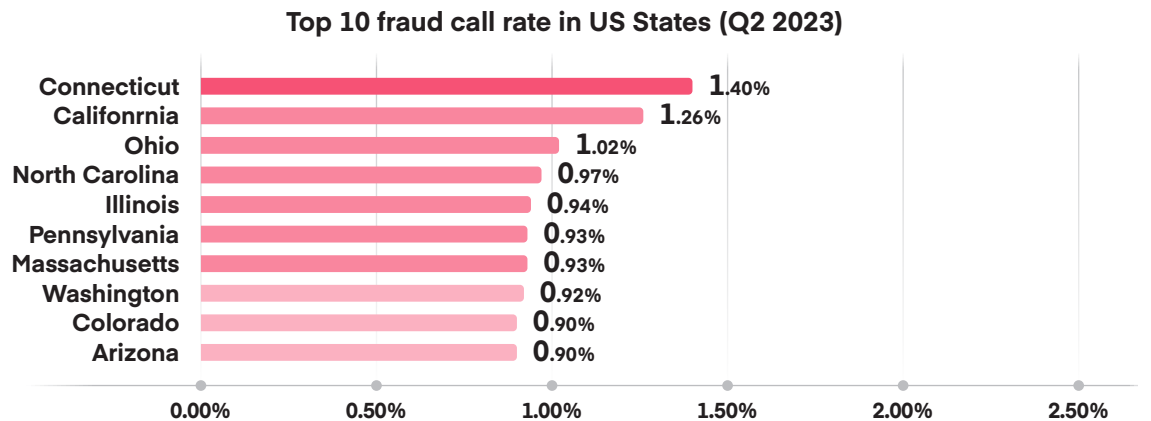
FEATURED US STATE

Oklahoma

POPULATION

3.9 million

REGULATOR

FCC ⊙
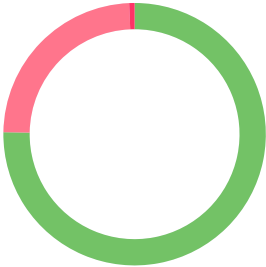
24.75%
Spam flag rate

🟥 **24.10%**
Nuisance calls

🟥 **0.66%**
Fraud calls

🟩 **75.25%**
Wanted calls

12 Calls/Month
Average spam calls
per person

Although Oklahoma is the 28th most populous state, it has the dubious distinction of having the highest spam rate in the United States — just under 25%. Residents of Oklahoma receive an average of 12 spam calls per month. The only good news is that most of those unwanted calls are nuisance calls rather than fraud calls.

Spam ratios represent the number of unwanted calls from "non-contacts," which are calls placed from numbers that are not in an individual's local address book.

Section Three

Spam calls by country

Argentina

PERIOD

Q2

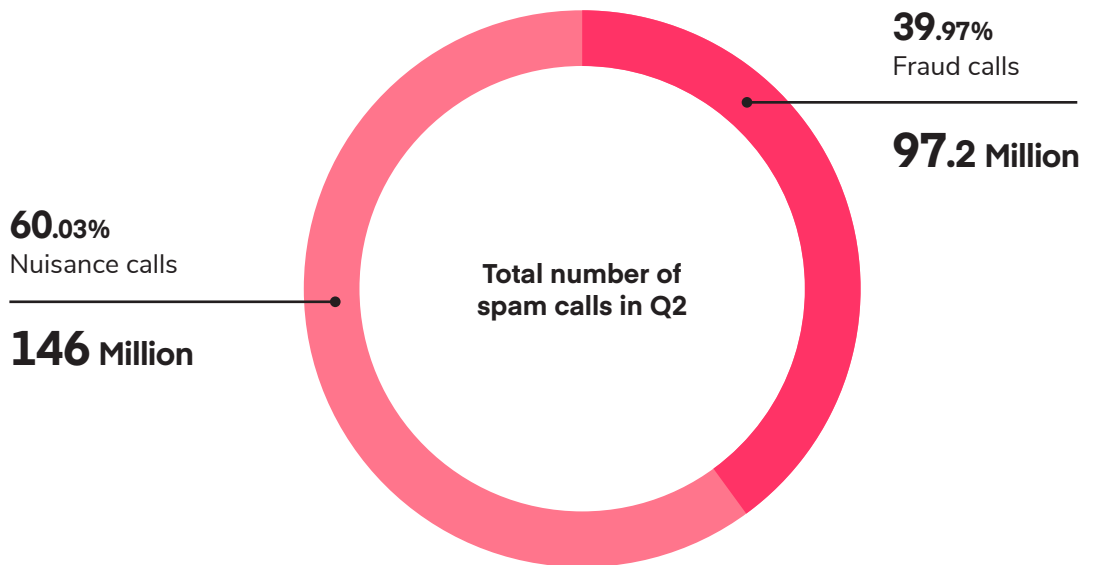Apr 2023 - Jun 2023
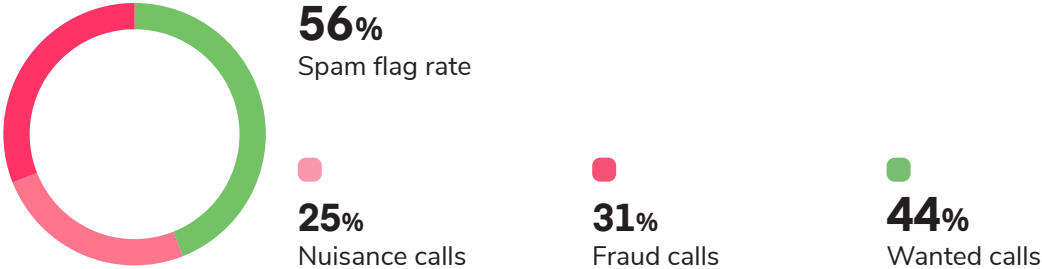
hiya

56% Spam flag rate

25% Nuisance calls

31% Fraud calls

44% Wanted calls

7 Calls/Month
Average spam calls per person

55% of all spam calls in Q2 were labeled as fraud

55.31% Fraud calls

42.7 Million

44.69% Nuisance calls

34.5 Million

Total number of spam calls in Q2
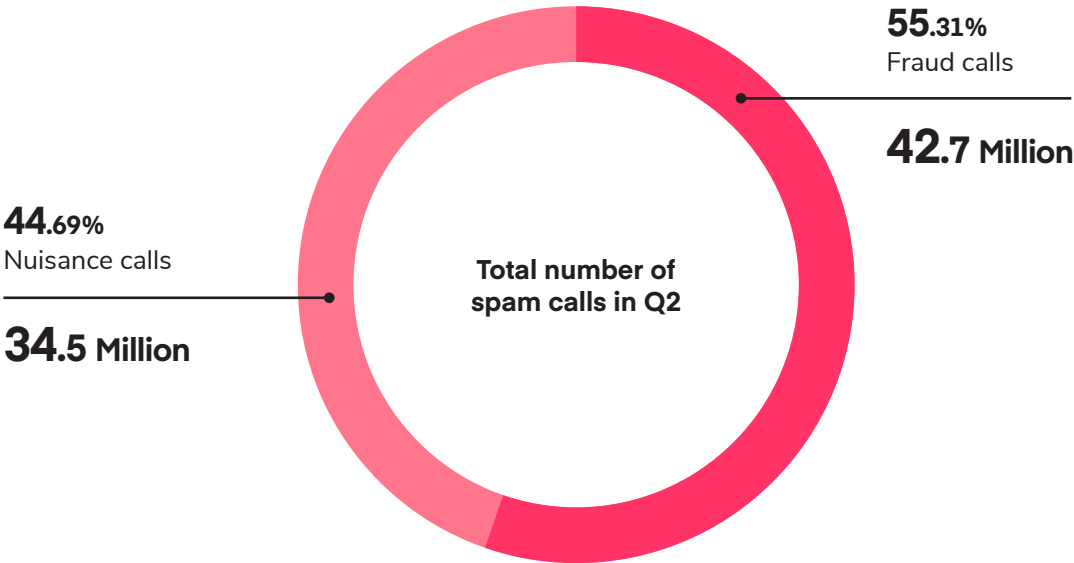
Spam ratios represent the number of unwanted calls from "non-contacts," which are calls placed from numbers that are not in an individual's local address book.

Source:
Samsung Smart Call users in Argentina

Brazil

PERIOD

Q2
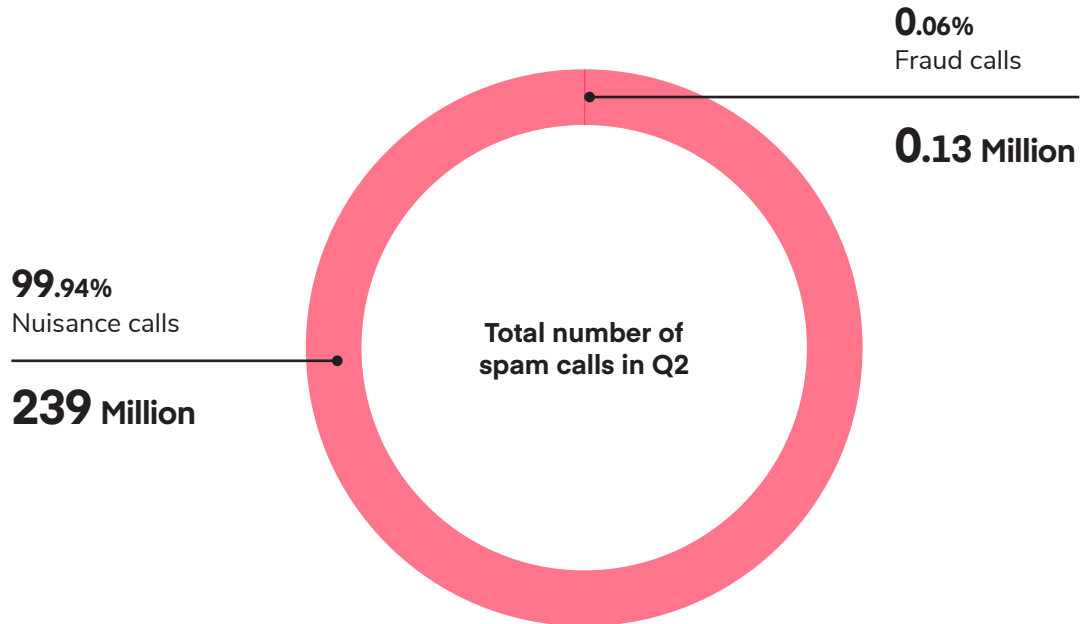**Apr 2023 - Jun 2023**
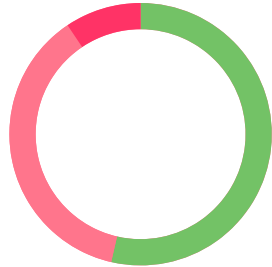
46.4%
Spam flag rate

37%
Nuisance calls

9.4%
Fraud calls

53.60%
Wanted calls

25 Calls/Month
Average spam calls
per person
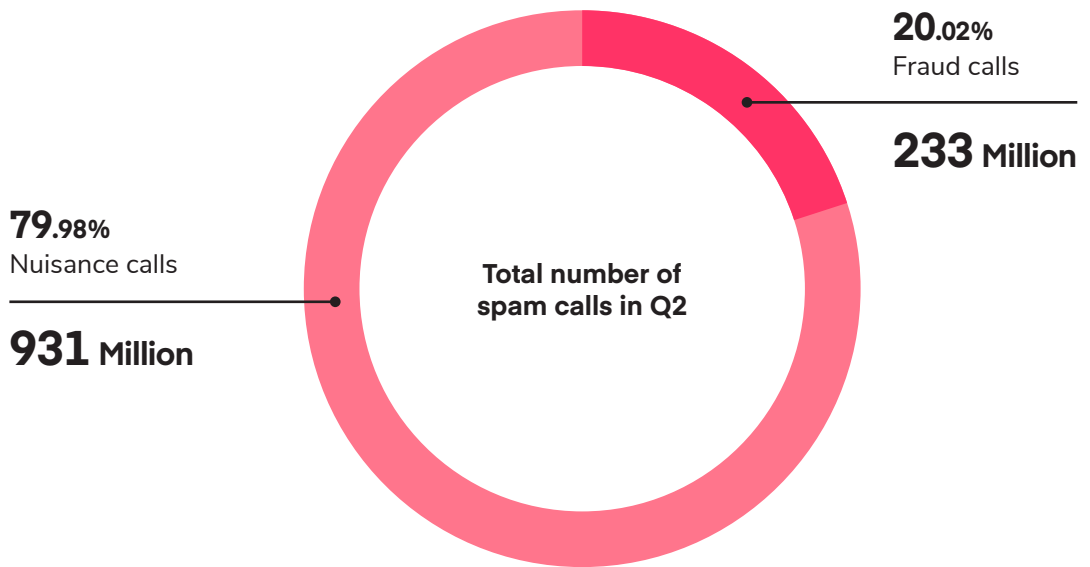
20% of all spam calls in Q2 were labeled as fraud

20.02%
Fraud calls

233 Million

79.98%
Nuisance calls

931 Million

Total number of spam calls in Q2

Spam ratios represent
the number of unwanted
calls from "non-contacts,"
which are calls placed
from numbers that are
not in an individual's local
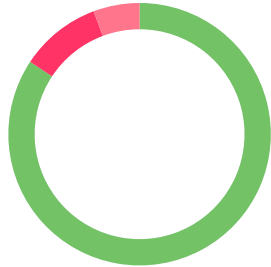address book.

Source:
Samsung Smart Call users
in Brazil

Canada

PERIOD

Q2
Apr 2023 - Jun 2023
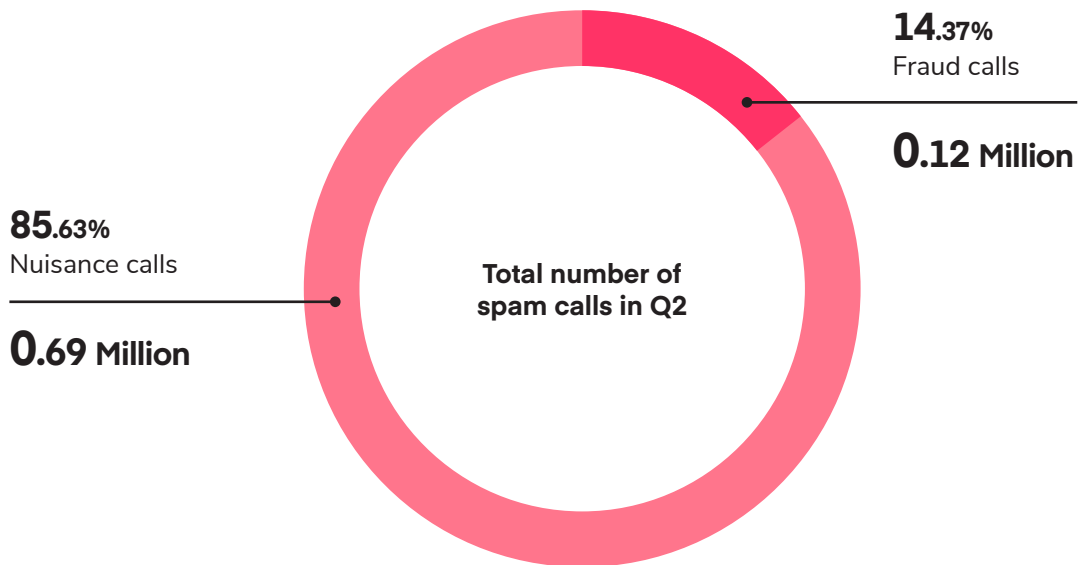
hiya
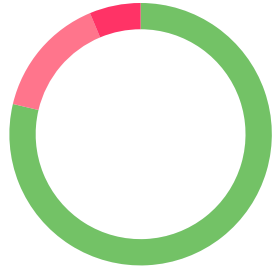
21.3%
Spam flag rate

15%
Nuisance calls

6.3%
Fraud calls

78.7%
Wanted calls

3 Calls/Month
Average spam calls
per person

32% of all spam calls in Q2 were labeled as fraud
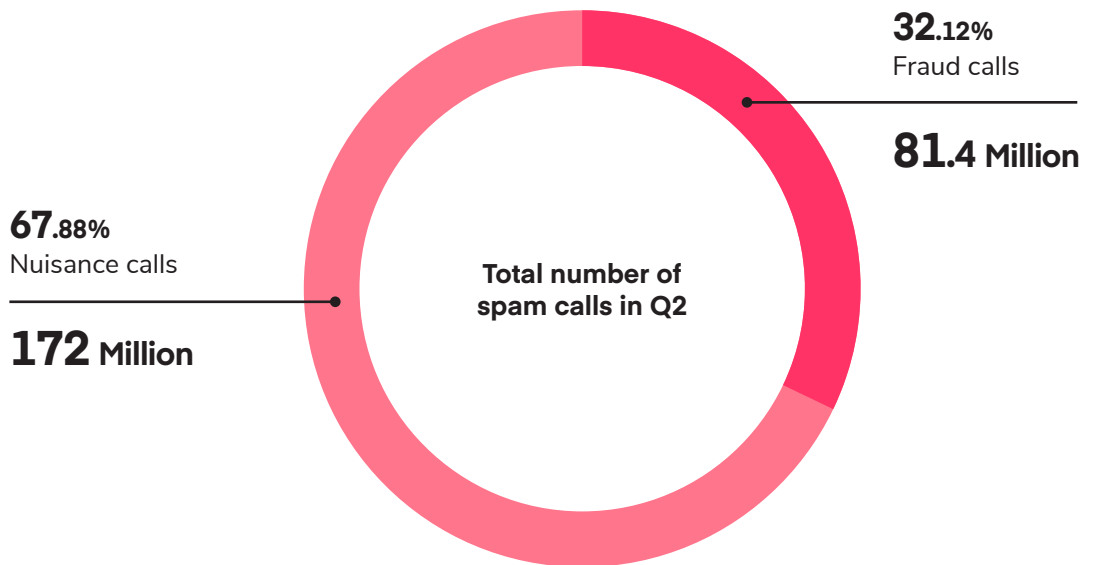
32.12%
Fraud calls

81.4 Million

67.88%
Nuisance calls

172 Million

Total number of
spam calls in Q2

Spam ratios represent
the number of unwanted
calls from "non-contacts,"
which are calls placed
from numbers that are
not in an individual's local
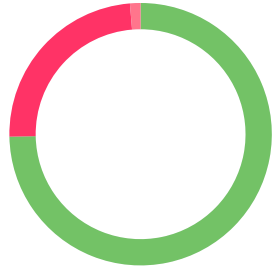address book.

Source:
Samsung Smart Call users
in Canada

Chile

PERIOD

Q2
Apr 2023 - Jun 2023

hiya
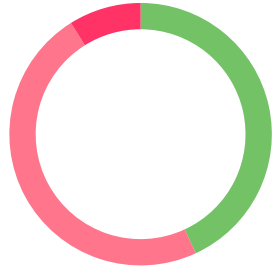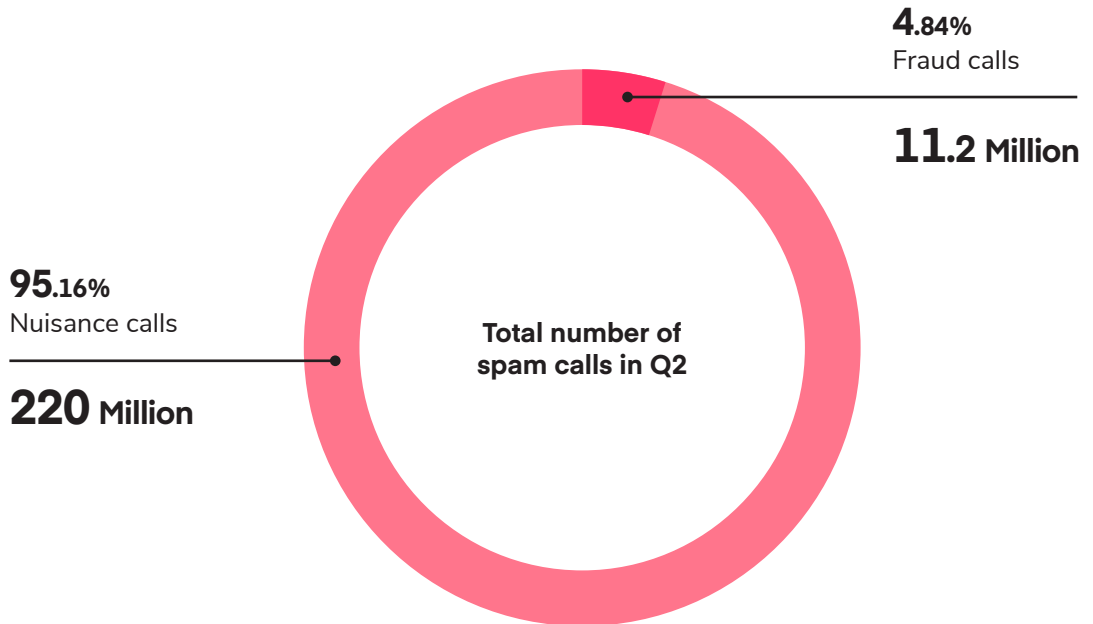
56.9%
Spam flag rate

48%
Nuisance calls

8.9%
Fraud calls

43.1%
Wanted calls

18 Calls/Month
Average spam calls
per person
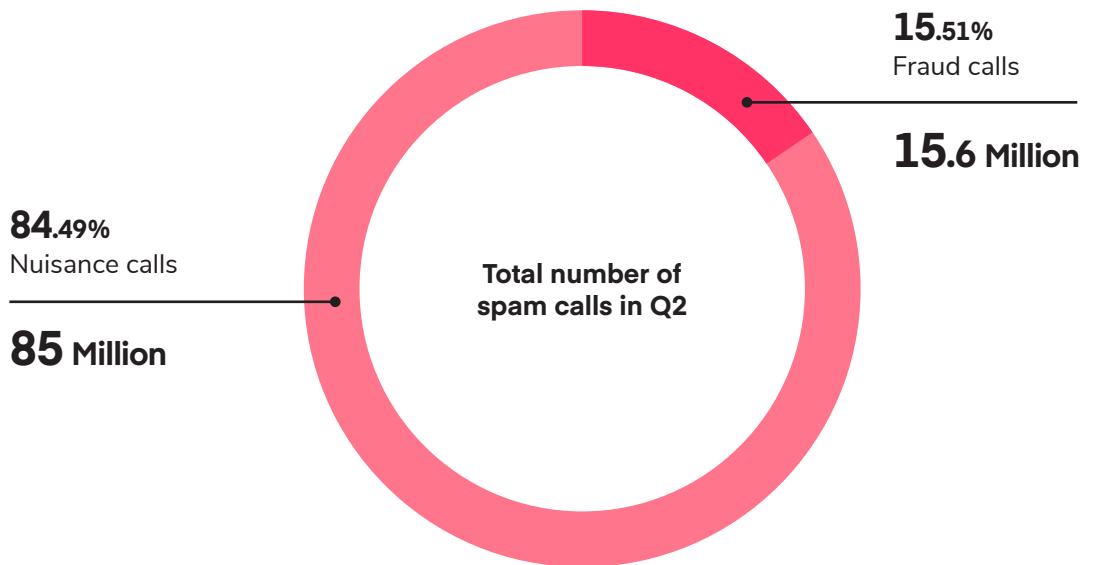
16% of all spam calls in Q2 were labeled as fraud

84.49%
Nuisance calls

85 Million

Total number of spam calls in Q2

15.51%
Fraud calls

15.6 Million

Spam ratios represent
the number of unwanted
calls from "non-contacts,"
which are calls placed
from numbers that are
not in an individual's local
address book.

Source:
Samsung Smart Call users
in Chile

Mexico
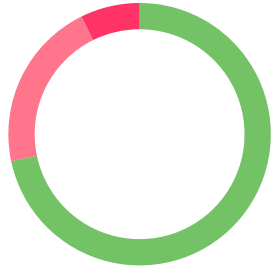
PERIOD

Q2
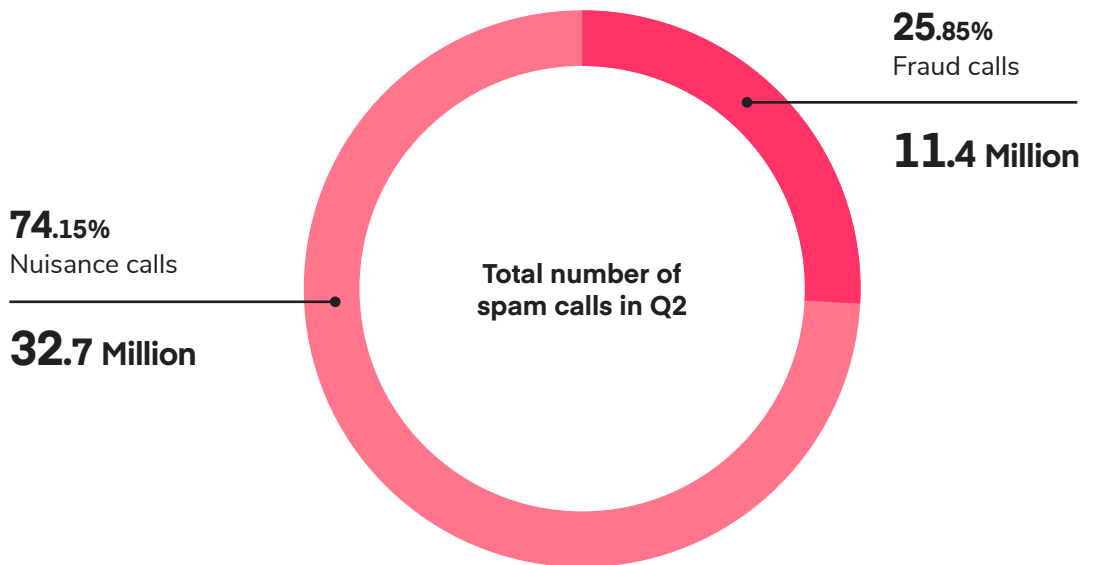**Apr 2023 - Jun 2023**

hiya
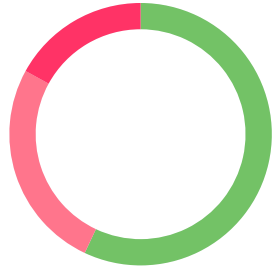
43%
Spam flag rate

■ **26%**
Nuisance calls

■ **17%**
Fraud calls

■ **57%**
Wanted calls

16 Calls/Month
Average spam calls
per person

40% of all spam calls in Q2 were labeled as fraud

39.97%
Fraud calls

97.2 Million

60.03%
Nuisance calls

146 Million

Total number of
spam calls in Q2

Spam ratios represent
the number of unwanted
calls from "non-contacts,"
which are calls placed
from numbers that are
not in an individual's local
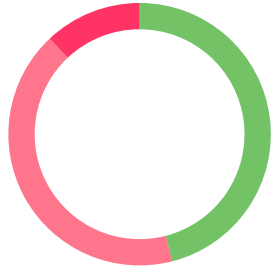address book.

Source:
Samsung Smart Call users
in Mexico

Peru

PERIOD

Q2

Apr 2023 - Jun 2023
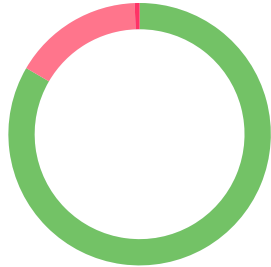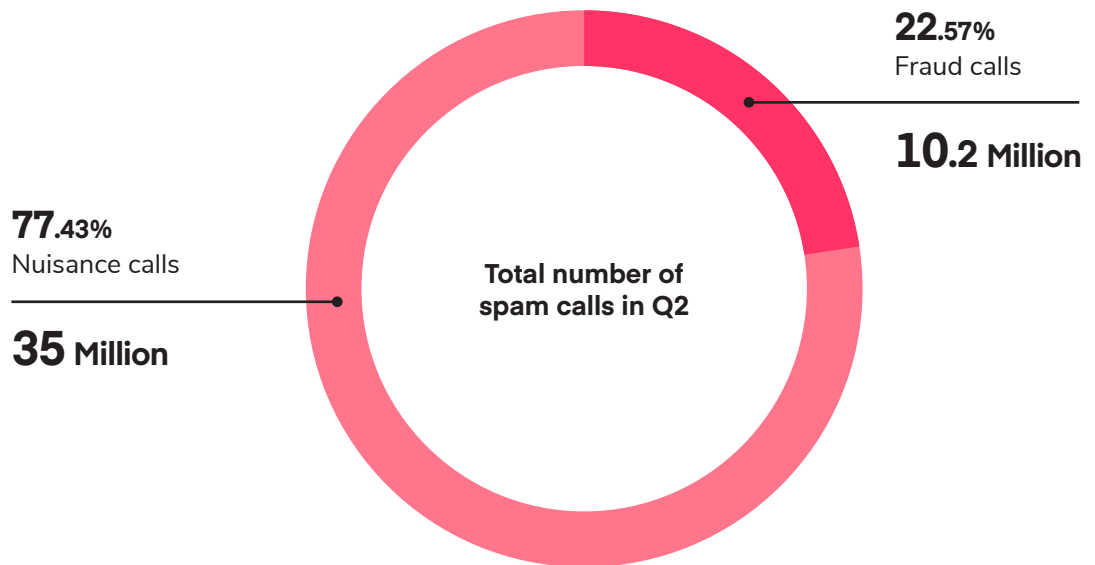
16.6%
Spam flag rate

🟥 **16%**
Nuisance calls

🟥 **0.6%**
Fraud calls

🟩 **83.4%**
Wanted calls

6 Calls/Month
Average spam calls
per person

0.1% of all spam calls in Q2 were labeled as fraud

0.06%
Fraud calls

0.13 Million

99.94%
Nuisance calls

239 Million

Total number of
spam calls in Q2

Spam ratios represent
the number of unwanted
calls from "non-contacts,"
which are calls placed
from numbers that are
not in an individual's local
address book.

Source:
Samsung Smart Call users
in Peru

Puerto Rico

PERIOD

Q2
Apr 2023 - Jun 2023

15.7%
Spam flag rate

🟥 **10%**
Nuisance calls

🟥 **5.7%**
Fraud calls

🟩 **84.3%**
Wanted calls

8 Calls/Month
Average spam calls
per person

14% of all spam calls in Q2 were labeled as fraud

14.37%
Fraud calls

0.12 Million

85.63%
Nuisance calls

0.69 Million

Total number of
spam calls in Q2

Spam ratios represent
the number of unwanted
calls from "non-contacts,"
which are calls placed
from numbers that are
not in an individual's local
address book.

Source:
Samsung Smart Call users
in Puerto Rico
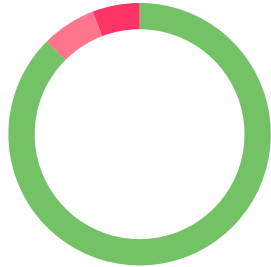
United States

PERIOD
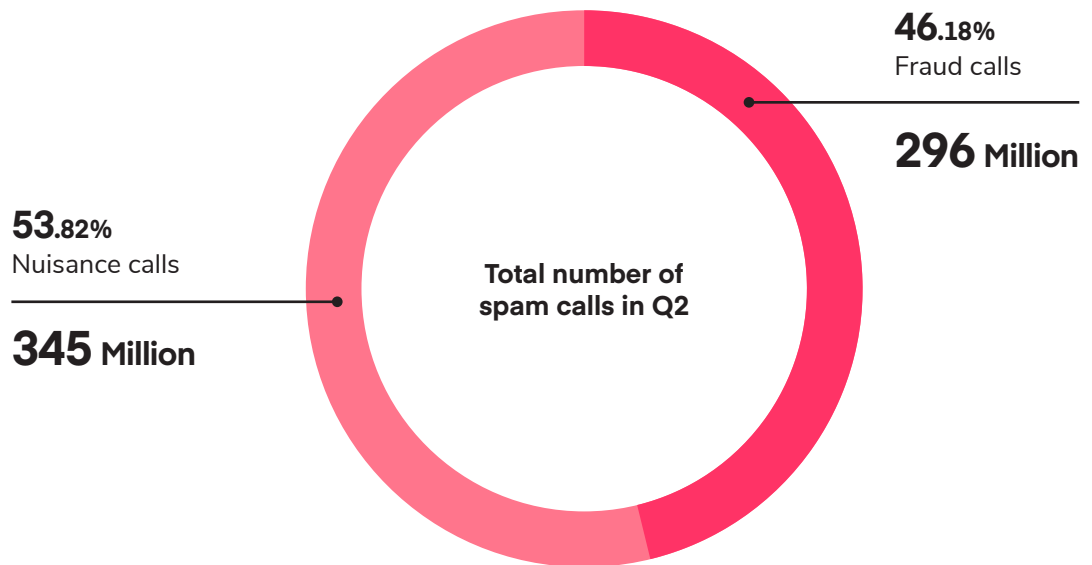
Q2
Apr 2023 - Jun 2023

25.3%
Spam flag rate

24%
Nuisance calls

1.3%
Fraud calls

74.7%
Wanted calls

12 Calls/Month
Average spam calls
per person

5% of all spam calls in Q2 were labeled as fraud

4.84%
Fraud calls

11.2 Million

95.16%
Nuisance calls

220 Million

Total number of
spam calls in Q2

Spam ratios represent
the number of unwanted
calls from "non-contacts,"
which are calls placed
from numbers that are
not in an individual's local
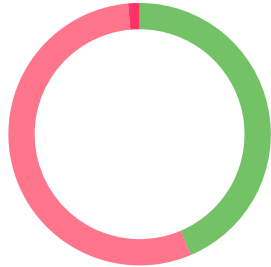address book.

Source:
Samsung Smart Call users
in United States

Australia

PERIOD

Q2
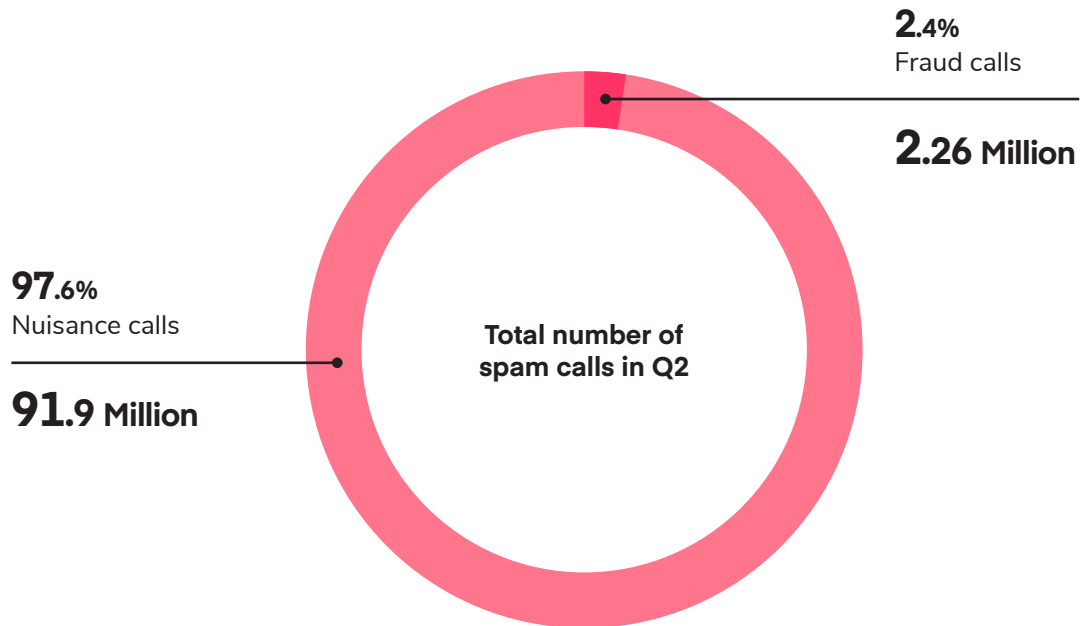**Apr 2023 - Jun 2023**

28.3%
Spam flag rate

21%
Nuisance calls

7.3%
Fraud calls

71.7%
Wanted calls

5 **Calls/Month**
Average spam calls
per person

26% of all spam calls in Q2 were labeled as fraud

25.85%
Fraud calls

11.4 Million

74.15%
Nuisance calls

32.7 Million

Total number of spam calls in Q2

Spam ratios represent
the number of unwanted
calls from "non-contacts,"
which are calls placed
from numbers that are
not in an individual's local
address book.

Source:
Samsung Smart Call users
in Australia
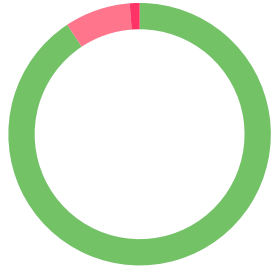
ASIA/PACIFIC

Hong Kong

PERIOD

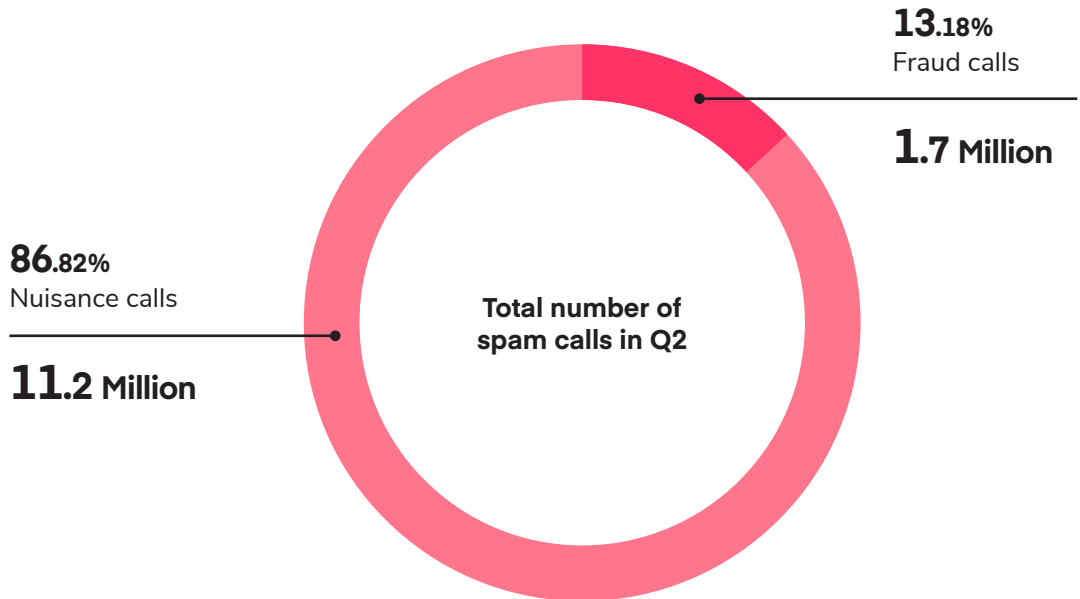## Q2
Apr 2023 - Jun 2023

54%
Spam flag rate

42%
Nuisance calls

12%
Fraud calls

46%
Wanted calls

20 Calls/Month
Average spam calls
per person

23% of all spam calls in Q2 were labeled as fraud

22.57%
Fraud calls

10.2 Million

77.43%
Nuisance calls

35 Million

Total number of
spam calls in Q2

Spam ratios represent
the number of unwanted
calls from "non-contacts,"
which are calls placed
from numbers that are
not in an individual's local
address book.

Source:
Samsung Smart Call users
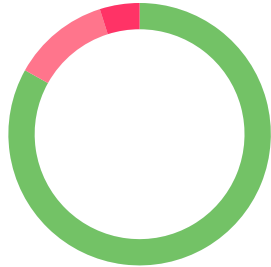in Hong Kong

India

PERIOD

Q2
Apr 2023 - Jun 2023

12.5%
Spam flag rate

■ **6.7%**
Nuisance calls

■ **5.8%**
Fraud calls

■ **87.5%**
Wanted calls

10 Calls/Month
Average spam calls
per person

46% of all spam calls in Q2 were labeled as fraud

46.18%
Fraud calls

296 Million

53.82%
Nuisance calls

345 Million

Total number of
spam calls in Q2

Spam ratios represent
the number of unwanted
calls from "non-contacts,"
which are calls placed
from numbers that are
not in an individual's local
address book.

Source:
Samsung Smart Call users
in India

Indonesia

PERIOD

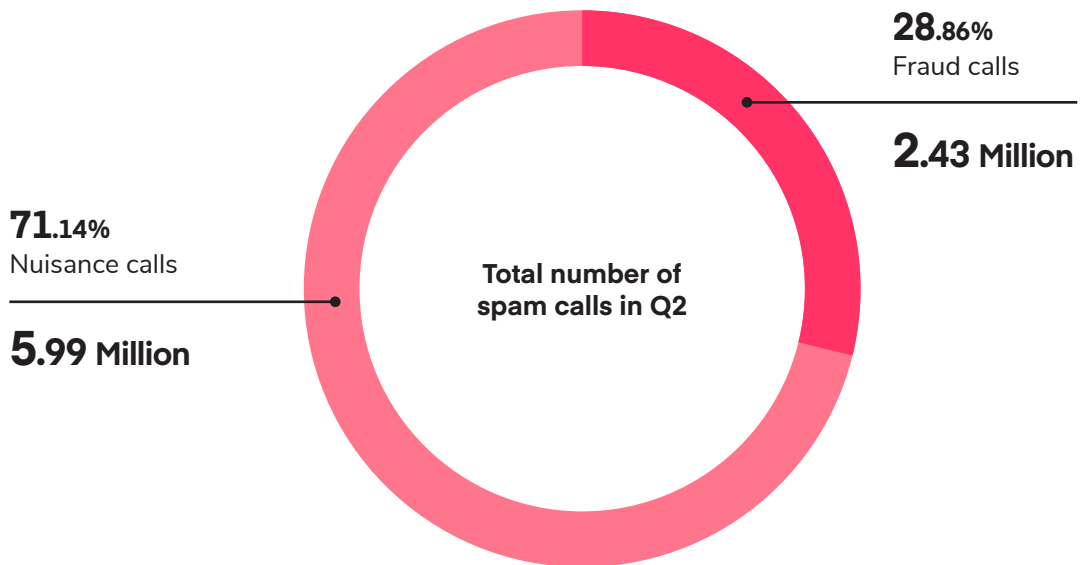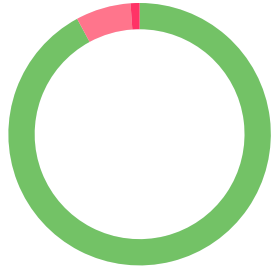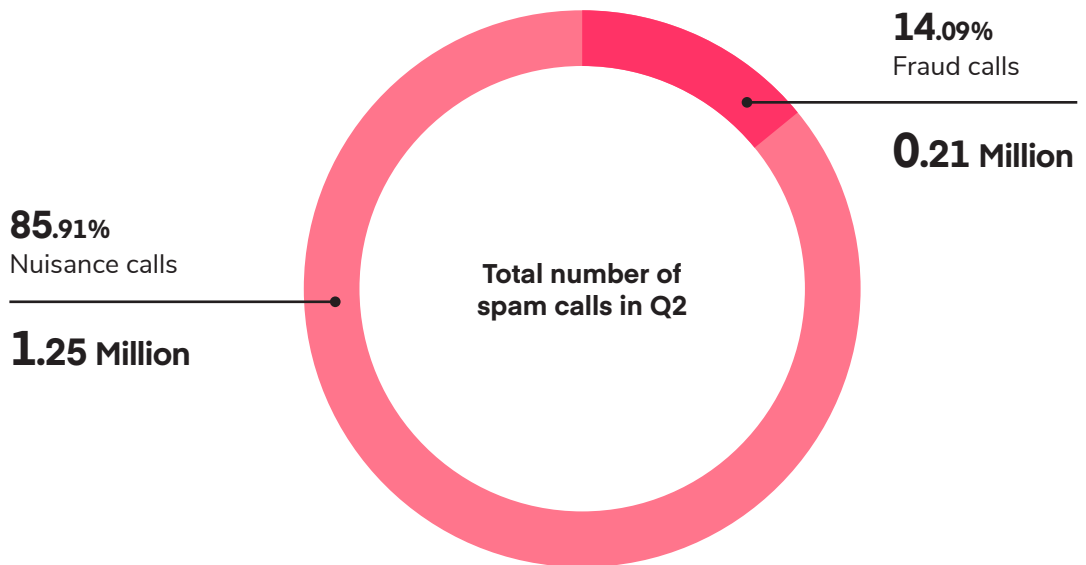## Q2
Apr 2023 - Jun 2023

56.4%
Spam flag rate

55%
Nuisance calls

1.4%
Fraud calls

43.6%
Wanted calls

7 Calls/Month
Average spam calls
per person

2% of all spam calls in Q2 were labeled as fraud

2.4%
Fraud calls

2.26 Million

97.6%
Nuisance calls

91.9 Million

Total number of
spam calls in Q2

Spam ratios represent
the number of unwanted
calls from "non-contacts,"
which are calls placed
from numbers that are
not in an individual's local
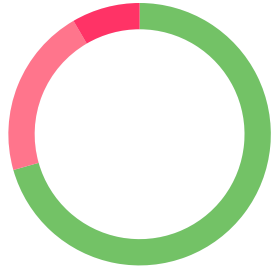address book.

Source:
Samsung Smart Call users
in Indonesia

Israel

PERIOD

Q2
Apr 2023 - Jun 2023

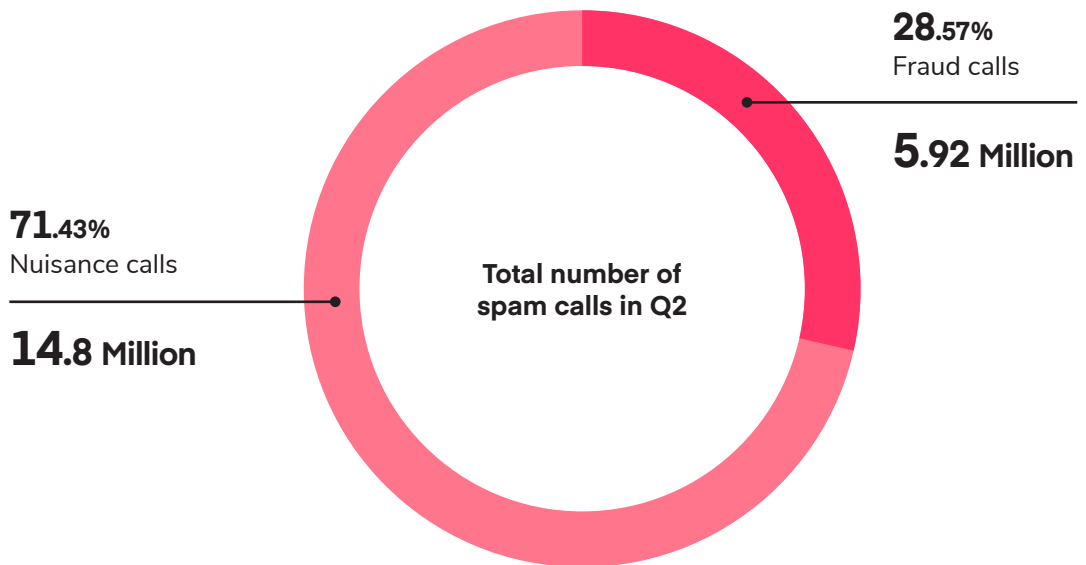**9.3%**
Spam flag rate

8.1%
Nuisance calls

1.2%
Fraud calls

90.7%
Wanted calls

4 Calls/Month
Average spam calls
per person

13% of all spam calls in Q2 were labeled as fraud

13.18%
Fraud calls

1.7 Million

86.82%
Nuisance calls

11.2 Million

Total number of
spam calls in Q2

Spam ratios represent
the number of unwanted
calls from "non-contacts,"
which are calls placed
from numbers that are
not in an individual's local
address book.

Source:
Samsung Smart Call users
in Israel

Malaysia

PERIOD

Q2
Apr 2023 - Jun 2023

hiya

16.9%
Spam flag rate

12%
Nuisance calls

4.9%
Fraud calls

83.1%
Wanted calls

3 Calls/Month
Average spam calls
per person

29% of all spam calls in Q2 were labeled as fraud

28.86%
Fraud calls

2.43 Million

71.14%
Nuisance calls

5.99 Million

Total number of
spam calls in Q2

Spam ratios represent
the number of unwanted
calls from "non-contacts,"
which are calls placed
from numbers that are
not in an individual's local
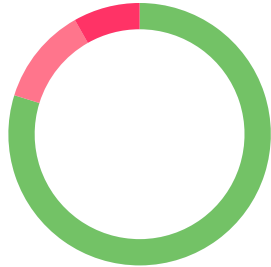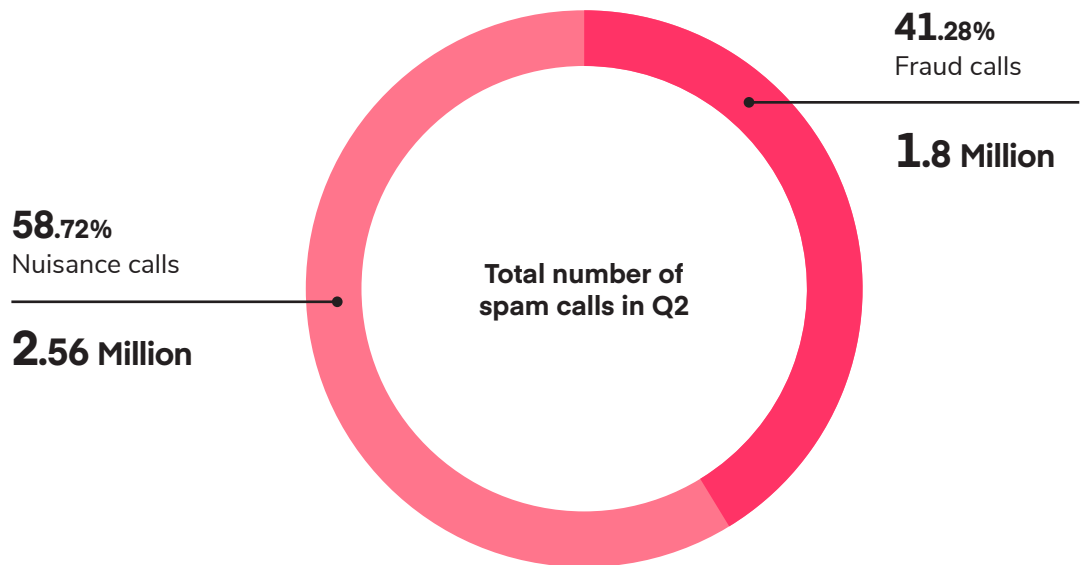address book.

Source:
Samsung Smart Call users
in Malaysia

ASIA/PACIFIC

New Zealand

7.9%
Spam flag rate

6.8%
Nuisance calls

1.1%
Fraud calls

92.1%
Wanted calls

1 Calls/Month
Average spam calls
per person

14% of all spam calls in Q2 were labeled as fraud

14.09%
Fraud calls

0.21 Million

85.91%
Nuisance calls

1.25 Million

Total number of
spam calls in Q2

Spam ratios represent
the number of unwanted
calls from "non-contacts,"
which are calls placed
from numbers that are
not in an individual's local
address book.

Source:
Samsung Smart Call users
in New Zealand
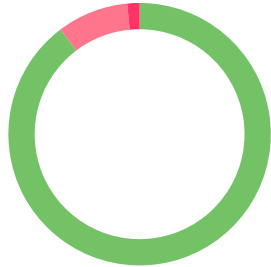
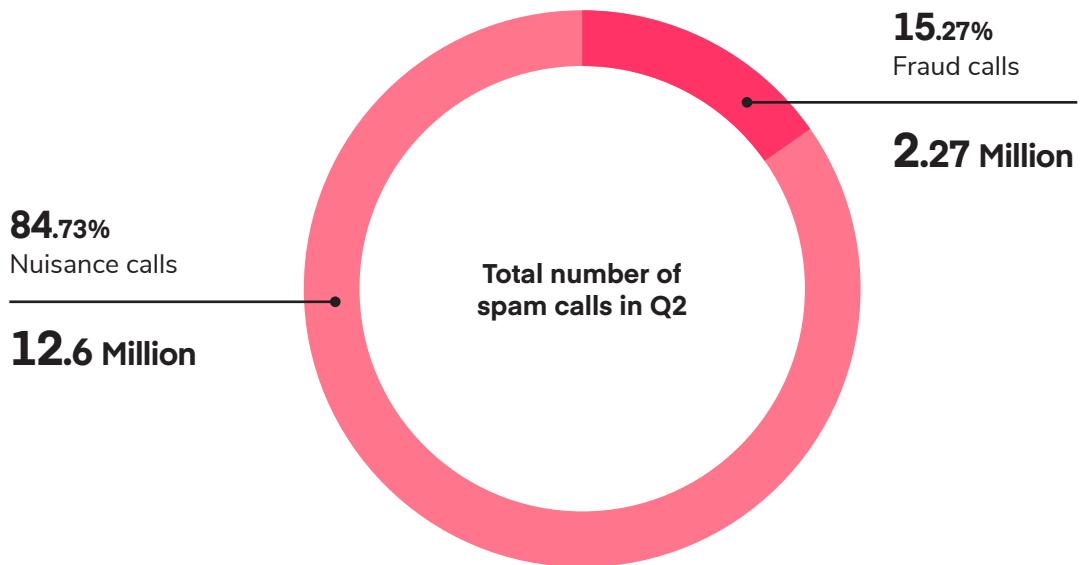# Philippines

hiya

29.4%
Spam flag rate

21%
Nuisance calls

8.4%
Fraud calls

70.6%
Wanted calls

7 Calls/Month
Average spam calls
per person

29% of all spam calls in Q2 were labeled as fraud

28.57%
Fraud calls

5.92 Million

71.43%
Nuisance calls

14.8 Million

Total number of
spam calls in Q2

Spam ratios represent
the number of unwanted
calls from "non-contacts,"
which are calls placed
from numbers that are
not in an individual's local
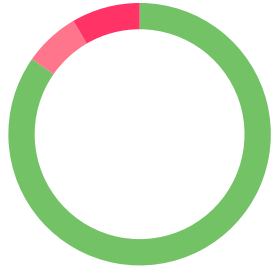address book.

Source:
Samsung Smart Call users
in Philippines

Singapore

PERIOD

Q2
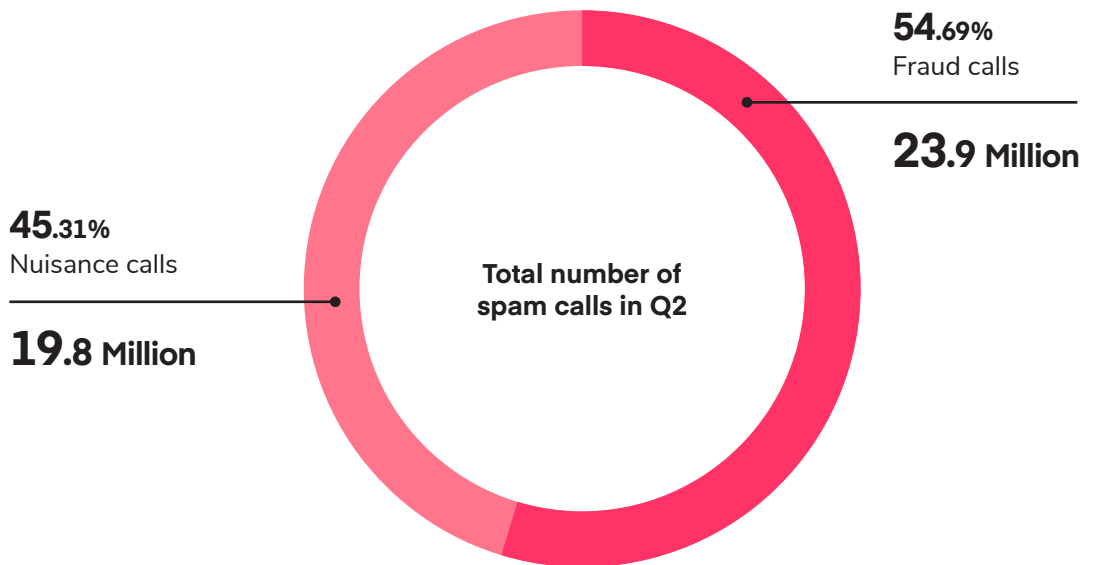**Apr 2023 - Jun 2023**

hiya

20.2%
Spam flag rate

12%
Nuisance calls

8.2%
Fraud calls

79.8%
Wanted calls

2 Calls/Month
Average spam calls
per person

41% of all spam calls in Q2 were labeled as fraud

41.28%
Fraud calls

1.8 Million

58.72%
Nuisance calls

2.56 Million

Total number of
spam calls in Q2

Spam ratios represent
the number of unwanted
calls from "non-contacts,"
which are calls placed
from numbers that are
not in an individual's local
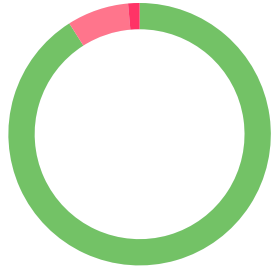address book.

Source:
Samsung Smart Call users
in Singapore

Thailand

hiya

Q2
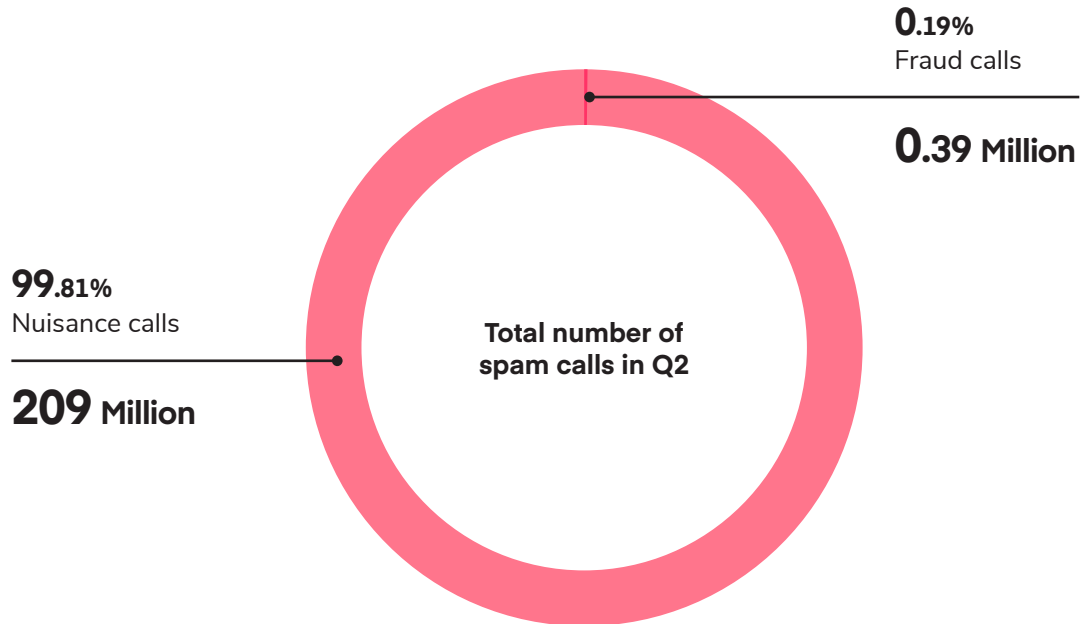**Apr 2023 - Jun 2023**

10.3%
Spam flag rate

8.8%
Nuisance calls

1.5%
Fraud calls

89.7%
Wanted calls

2 Calls/Month
Average spam calls
per person

15% of all spam calls in Q2 were labeled as fraud

15.27%
Fraud calls

2.27 Million

84.73%
Nuisance calls

12.6 Million

Total number of spam calls in Q2

Spam ratios represent the number of unwanted calls from "non-contacts," which are calls placed from numbers that are not in an individual's local address book.

Source:
Samsung Smart Call users in Thailand

ASIA/PACIFIC

Turkey

PERIOD

Q2
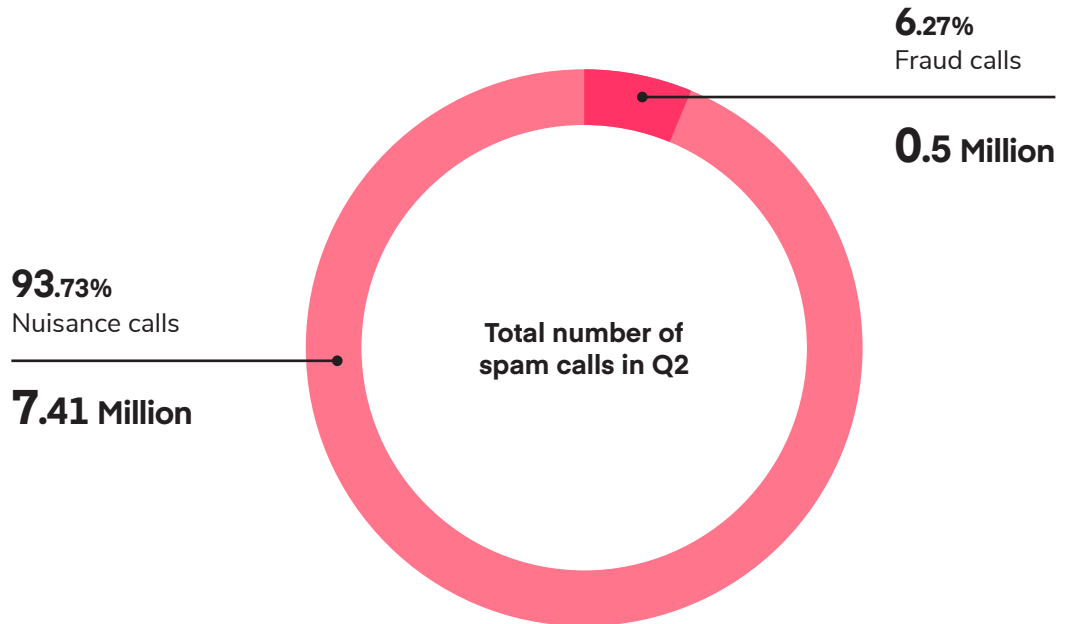Apr 2023 - Jun 2023

15.3%
Spam flag rate

■ **6.9%**
Nuisance calls

■ **8.4%**
Fraud calls

● **84.7%**
Wanted calls

4 Calls/Month
Average spam calls
per person

55% of all spam calls in Q2 were labeled as fraud

45.31%
Nuisance calls

19.8 Million

54.69%
Fraud calls

23.9 Million

Total number of
spam calls in Q2

Spam ratios represent
the number of unwanted
calls from "non-contacts,"
which are calls placed
from numbers that are
not in an individual's local
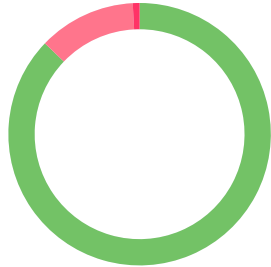address book.

Source:
Samsung Smart Call users
in Turkey

EUROPE

Austria

PERIOD

Q2
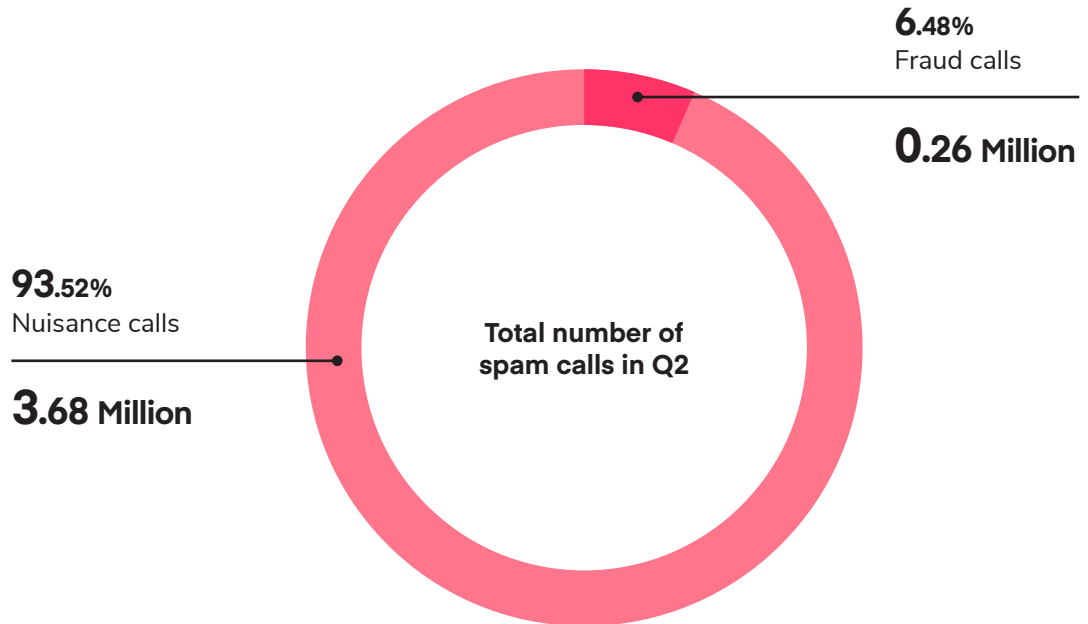**Apr 2023 - Jun 2023**

9%
Spam flag rate

7.6%
Nuisance calls

1.4%
Fraud calls

91%
Wanted calls

2 Calls/Month
Average spam calls
per person

0.2% of all spam calls in Q2 were labeled as fraud

0.19%
Fraud calls

0.39 Million

99.81%
Nuisance calls

209 Million

Total number of
spam calls in Q2

Spam ratios represent
the number of unwanted
calls from "non-contacts,"
which are calls placed
from numbers that are
not in an individual's local
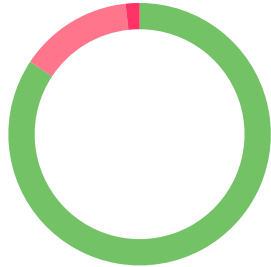address book.

Source:
Samsung Smart Call users
in Austria

Belgium

PERIOD

Q2
Apr 2023 - Jun 2023
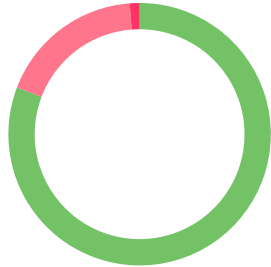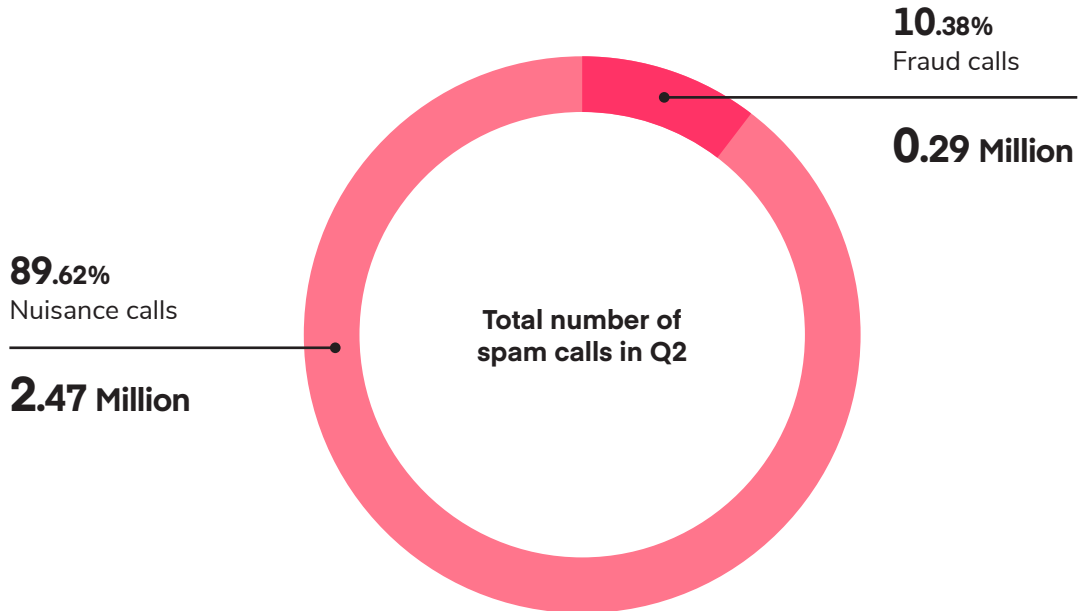
19.2%
Spam flag rate

18%
Nuisance calls

1.2%
Fraud calls

80.8%
Wanted calls

2 Calls/Month
Average spam calls
per person

6% of all spam calls in Q2 were labeled as fraud

6.27%
Fraud calls

0.5 Million

93.73%
Nuisance calls

7.41 Million

**Total number of
spam calls in Q2**

Spam ratios represent
the number of unwanted
calls from "non-contacts,"
which are calls placed
from numbers that are
not in an individual's local
address book.

Source:
Samsung Smart Call users
in Belgium

Czech Republic

PERIOD

Q2

Apr 2023 - Jun 2023

12.83%
Spam flag rate

12%
Nuisance calls

0.83%
Fraud calls

87.17%
Wanted calls

2 Calls/Month
Average spam calls
per person

6% of all spam calls in Q2 were labeled as fraud

6.48%
Fraud calls

0.26 Million

93.52%
Nuisance calls

3.68 Million

Total number of
spam calls in Q2

Spam ratios represent
the number of unwanted
calls from "non-contacts,"
which are calls placed
from numbers that are
not in an individual's local
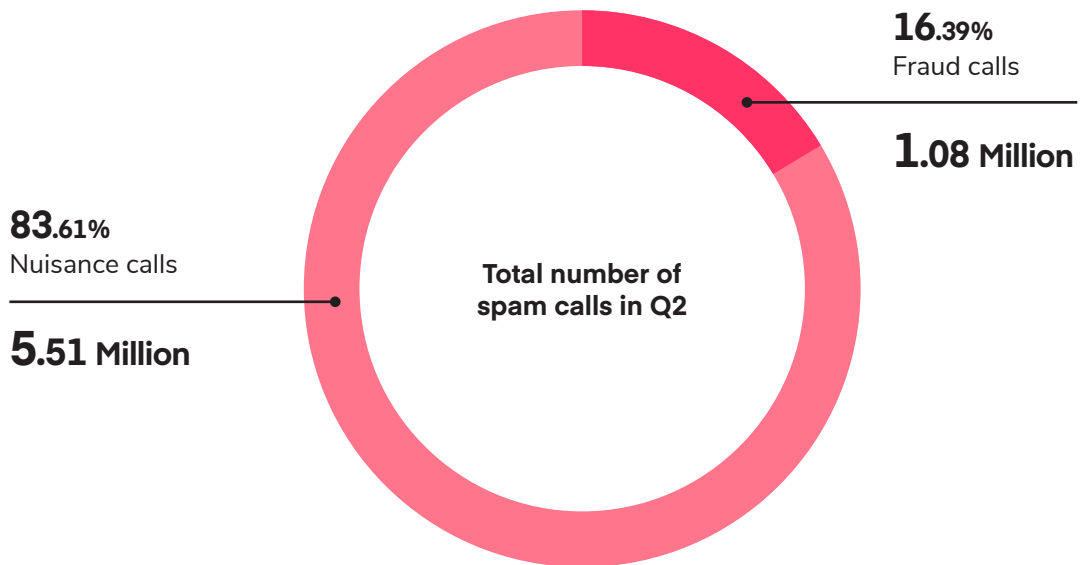address book.

Source:
Samsung Smart Call users
in Czech Republic

Denmark

PERIOD

Q2
Apr 2023 - Jun 2023

hiya

15.7%
Spam flag rate

■ **14%**
Nuisance calls

■ **1.7%**
Fraud calls

● **84.3%**
Wanted calls

2 Calls/Month
Average spam calls
per person

10% of all spam calls in Q2 were labeled as fraud

10.38%
Fraud calls

0.29 Million

89.62%
Nuisance calls

2.47 Million

**Total number of
spam calls in Q2**

Spam ratios represent
the number of unwanted
calls from "non-contacts,"
which are calls placed
from numbers that are
not in an individual's local
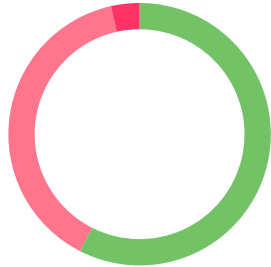address book.

Source:
Samsung Smart Call users
in Denmark

Finland

PERIOD

Q2
Apr 2023 - Jun 2023
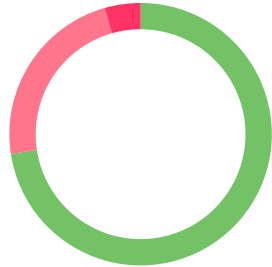
27.4%
Spam flag rate

23%
Nuisance calls

4.4%
Fraud calls

72.6%
Wanted calls

4 Calls/Month
Average spam calls
per person

16% of all spam calls in Q2 were labeled as fraud

16.39%
Fraud calls

1.08 Million

83.61%
Nuisance calls

5.51 Million

Total number of
spam calls in Q2

Spam ratios represent
the number of unwanted
calls from "non-contacts,"
which are calls placed
from numbers that are
not in an individual's local
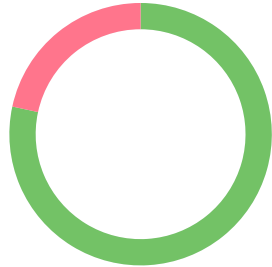address book.

Source:
Samsung Smart Call users
in Finland

EUROPE

France

PERIOD

Q2
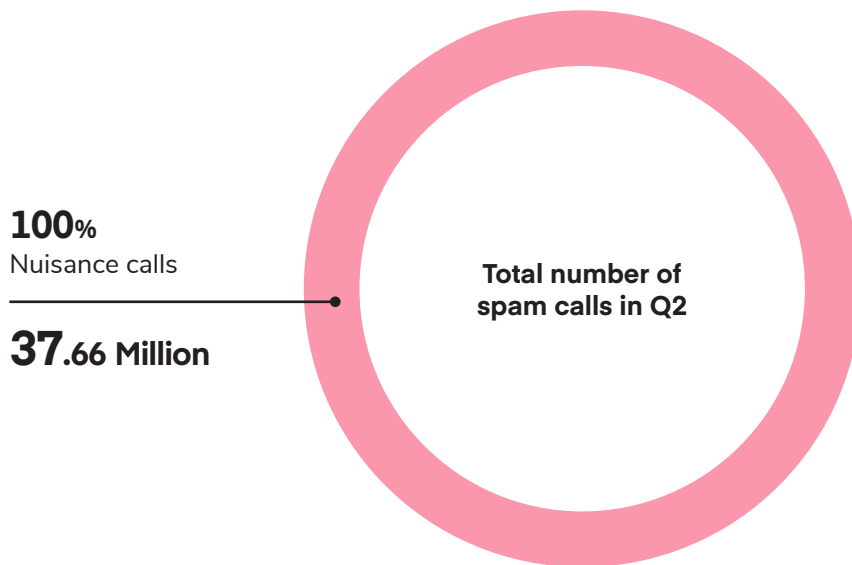**Apr 2023 - Jun 2023**

42.5%
Spam flag rate

39%
Nuisance calls

3.5%
Fraud calls

57.5%
Wanted calls

9 Calls/Month
Average spam calls
per person

8% of all spam calls in Q2 were labeled as fraud
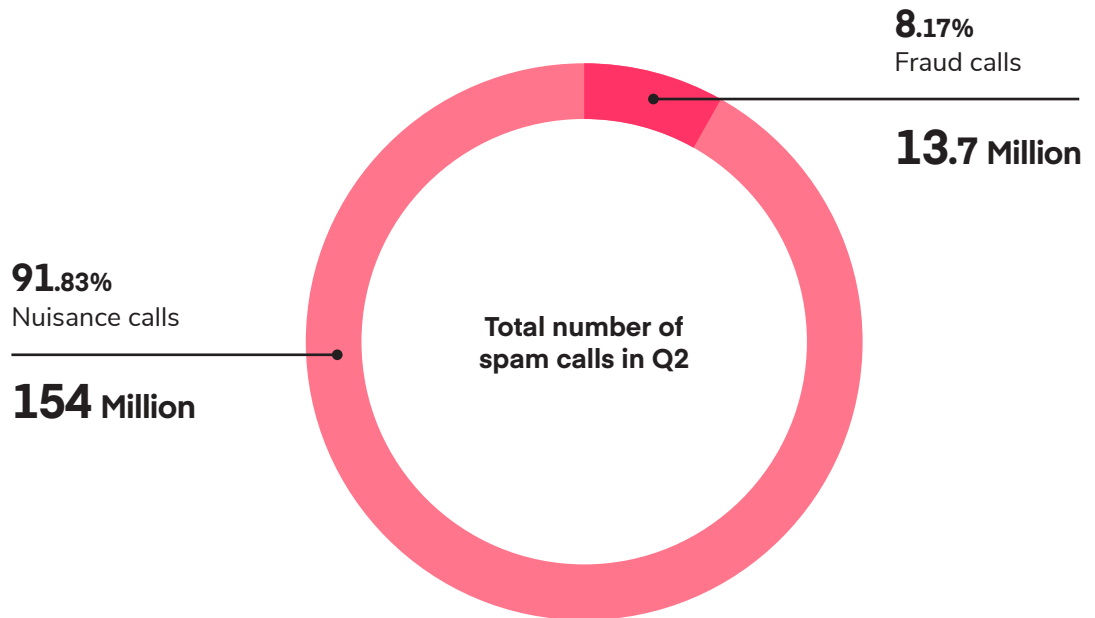
8.17%
Fraud calls

13.7 Million

91.83%
Nuisance calls

154 Million

Total number of
spam calls in Q2

Spam ratios represent
the number of unwanted
calls from "non-contacts,"
which are calls placed
from numbers that are
not in an individual's local
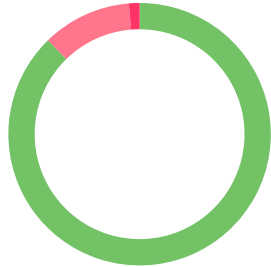address book.

Source:
Samsung Smart Call users
in France

Germany

Q2
Apr 2023 - Jun 2023

21.62%
Spam flag rate

21.62%
Nuisance calls

78.38%
Wanted calls

2 Calls/Month
Average spam calls
per person

All unwanted calls flagged as spam
Hiya uses a single 'spam' warning for both nuisance and fraud calls.

100%
Nuisance calls

37.66 Million

**Total number of
spam calls in Q2**

Spam ratios represent
the number of unwanted
calls from "non-contacts,"
which are calls placed
from numbers that are
not in an individual's local
address book.

Source:
Samsung Smart Call users
in Germany

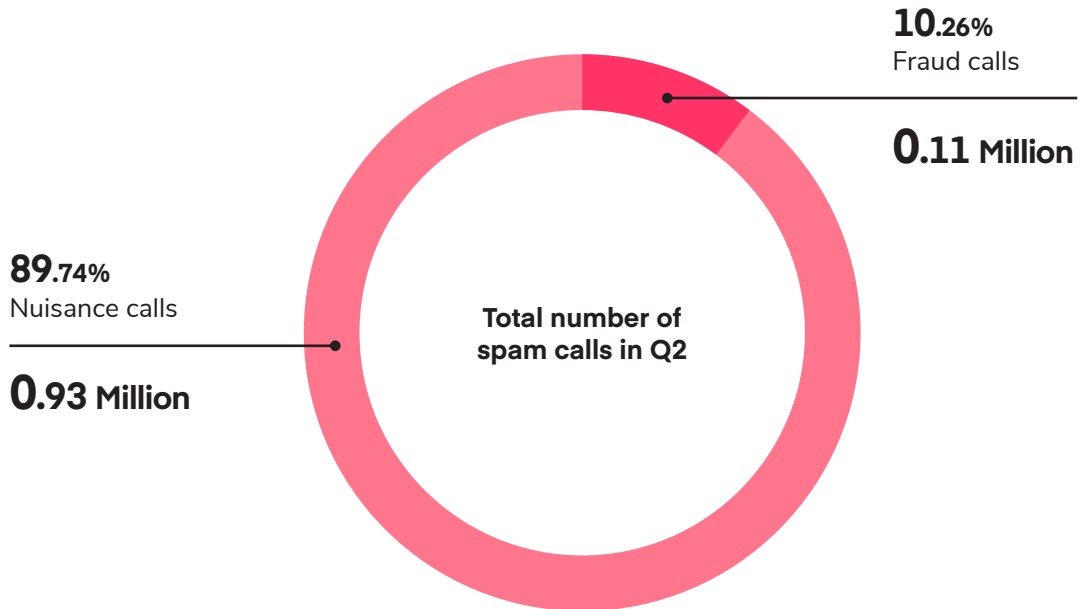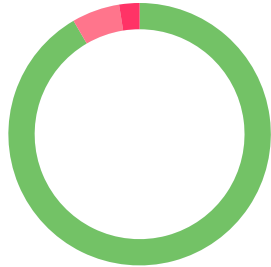# Greece

Q2
Apr 2023 - Jun 2023

12.3%
Spam flag rate

🟥 **11%**
Nuisance calls

🟥 **1.3%**
Fraud calls

🟩 **87.7%**
Wanted calls

3 Calls/Month
Average spam calls
per person

10% of all spam calls in Q2 were labeled as fraud

10.26%
Fraud calls

0.11 Million

89.74%
Nuisance calls

0.93 Million

Total number of spam calls in Q2

Spam ratios represent the number of unwanted calls from "non-contacts," which are calls placed from numbers that are not in an individual's local address book.

Source:
Samsung Smart Call users in Greece

Hungary

PERIOD

Q2
Apr 2023 - Jun 2023
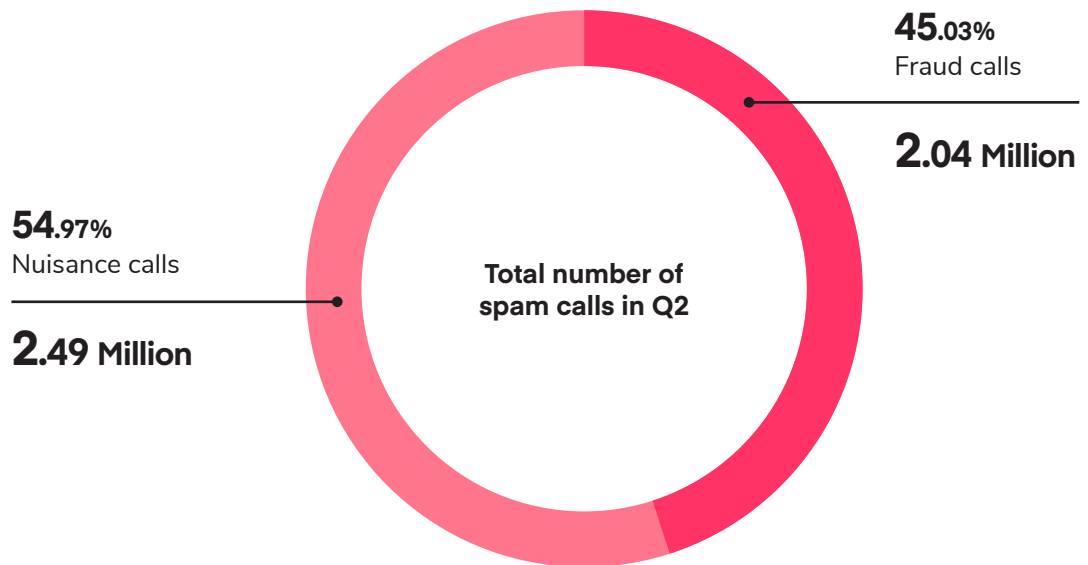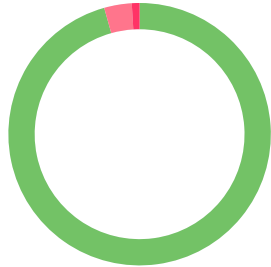
hiya

8.4%
Spam flag rate

5.9%
Nuisance calls

2.5%
Fraud calls

91.6%
Wanted calls

1 Calls/Month
Average spam calls
per person

45% of all spam calls in Q2 were labeled as fraud

45.03%
Fraud calls

2.04 Million

54.97%
Nuisance calls

2.49 Million

Total number of
spam calls in Q2

Spam ratios represent
the number of unwanted
calls from "non-contacts,"
which are calls placed
from numbers that are
not in an individual's local
address book.

Source:
Samsung Smart Call users
in Hungary

Ireland

PERIOD

Q2
Apr 2023 - Jun 2023

4.35%
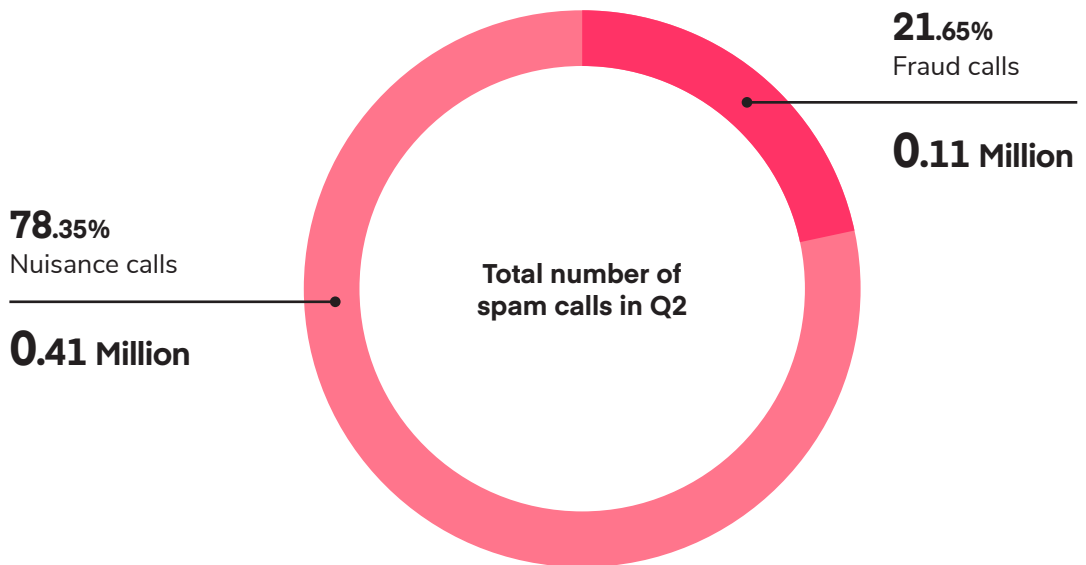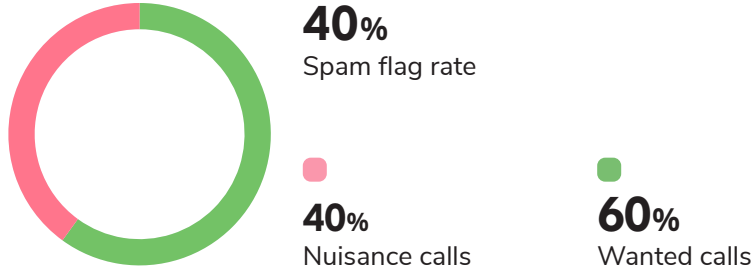Spam flag rate

🟥 **3.4%**
Nuisance calls

🟥 **0.95%**
Fraud calls

🟩 **95.65%**
Wanted calls

Less than 1 Calls/Month
Average spam calls
per person

22% of all spam calls in Q2 were labeled as fraud

21.65%
Fraud calls

0.11 Million

78.35%
Nuisance calls

0.41 Million

Total number of spam calls in Q2

Spam ratios represent the number of unwanted calls from "non-contacts," which are calls placed from numbers that are not in an individual's local address book.

Source:
Samsung Smart Call users in Ireland

EUROPE

Italy

PERIOD

Q2
Apr 2023 - Jun 2023

40%
Spam flag rate
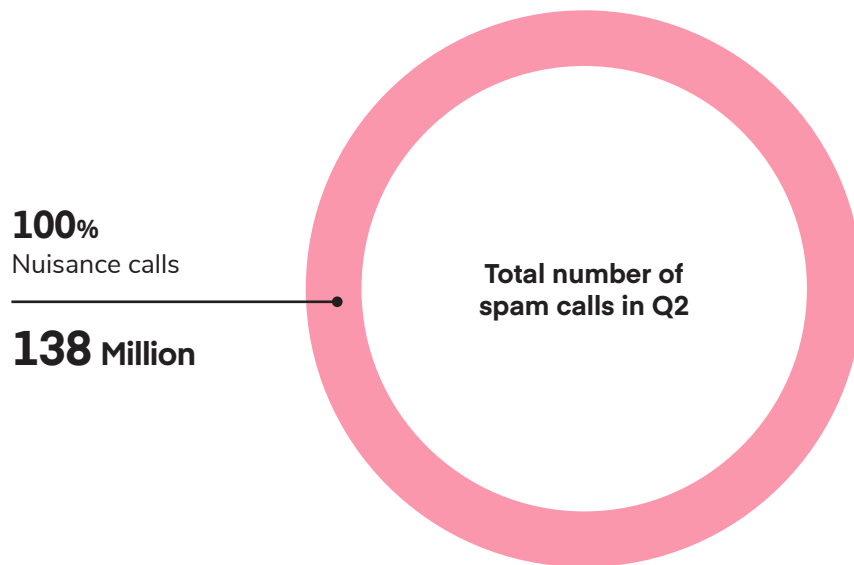
40%
Nuisance calls

60%
Wanted calls

10 Calls/Month
Average spam calls
per person

All unwanted calls flagged as spam
Hiya uses a single 'spam' warning for both nuisance and fraud calls.

100%
Nuisance calls

138 Million

**Total number of
spam calls in Q2**

Spam ratios represent
the number of unwanted
calls from "non-contacts,"
which are calls placed
from numbers that are
not in an individual's local
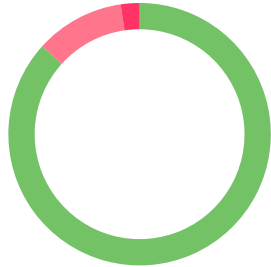address book.

Source:
Samsung Smart Call users
in Italy

Netherlands

PERIOD

Q2
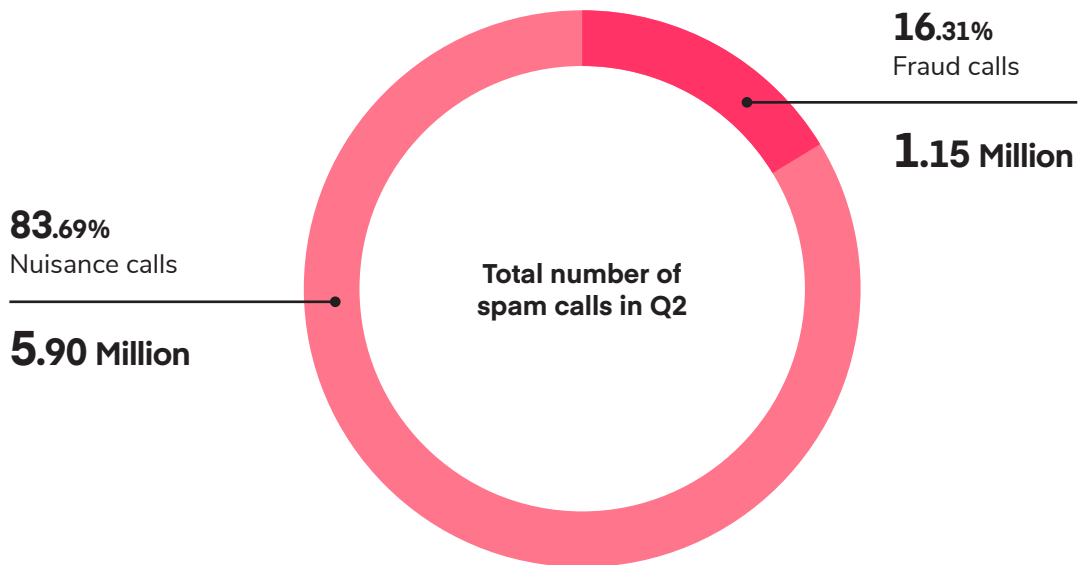**Apr 2023 - Jun 2023**

13.3%
Spam flag rate

11%
Nuisance calls

2.3%
Fraud calls

86.7%
Wanted calls

1 Calls/Month
Average spam calls
per person

16% of all spam calls in Q2 were labeled as fraud

16.31%
Fraud calls

1.15 Million

83.69%
Nuisance calls

5.90 Million

**Total number of
spam calls in Q2**

Spam ratios represent
the number of unwanted
calls from "non-contacts,"
which are calls placed
from numbers that are
not in an individual's local
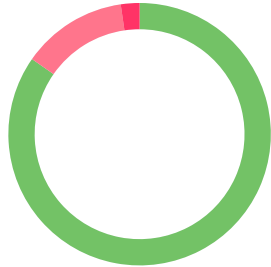address book.

Source:
Samsung Smart Call users
in Netherlands

Norway

PERIOD

Q2
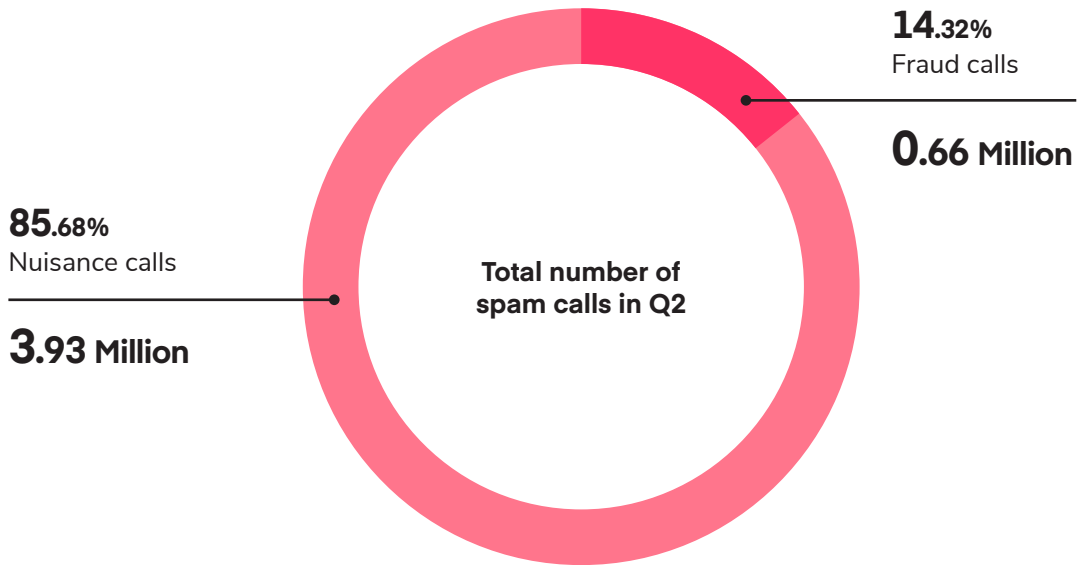Apr 2023 - Jun 2023

15.3%
Spam flag rate

13%
Nuisance calls

2.3%
Fraud calls

84.7%
Wanted calls

2 Calls/Month
Average spam calls
per person

14% of all spam calls in Q2 were labeled as fraud

14.32%
Fraud calls

0.66 Million

85.68%
Nuisance calls

3.93 Million

Total number of
spam calls in Q2

Spam ratios represent
the number of unwanted
calls from "non-contacts,"
which are calls placed
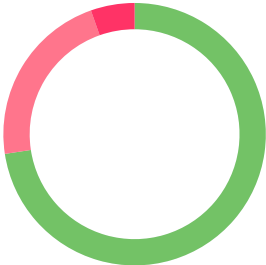from numbers that are
not in an individual's local
address book.

Source:
Samsung Smart Call users
in Norway

Poland

PERIOD

Q2
Apr 2023 - Jun 2023
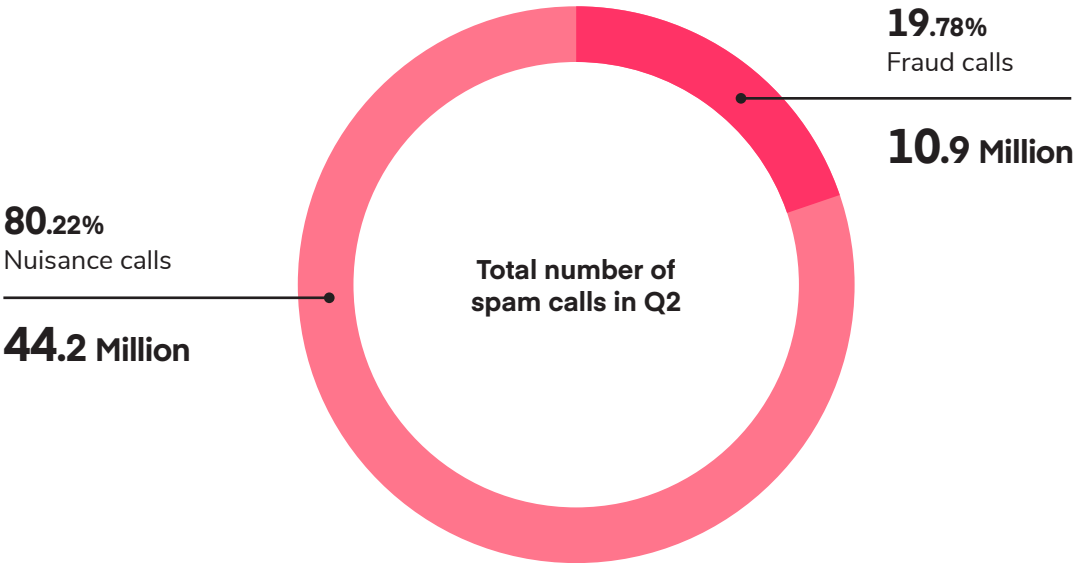
27.4%
Spam flag rate

22%
Nuisance calls

5.4%
Fraud calls

72.6%
Wanted calls

6 Calls/Month
Average spam calls
per person

20% of all spam calls in Q2 were labeled as fraud

19.78%
Fraud calls

10.9 Million

80.22%
Nuisance calls

44.2 Million

Total number of spam calls in Q2

Spam ratios represent the number of unwanted calls from "non-contacts," which are calls placed from numbers that are not in an individual's local address book.
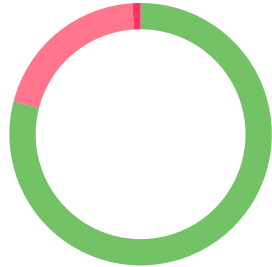
Source:
Samsung Smart Call users in Poland

EUROPE

Portugal

PERIOD

Q2
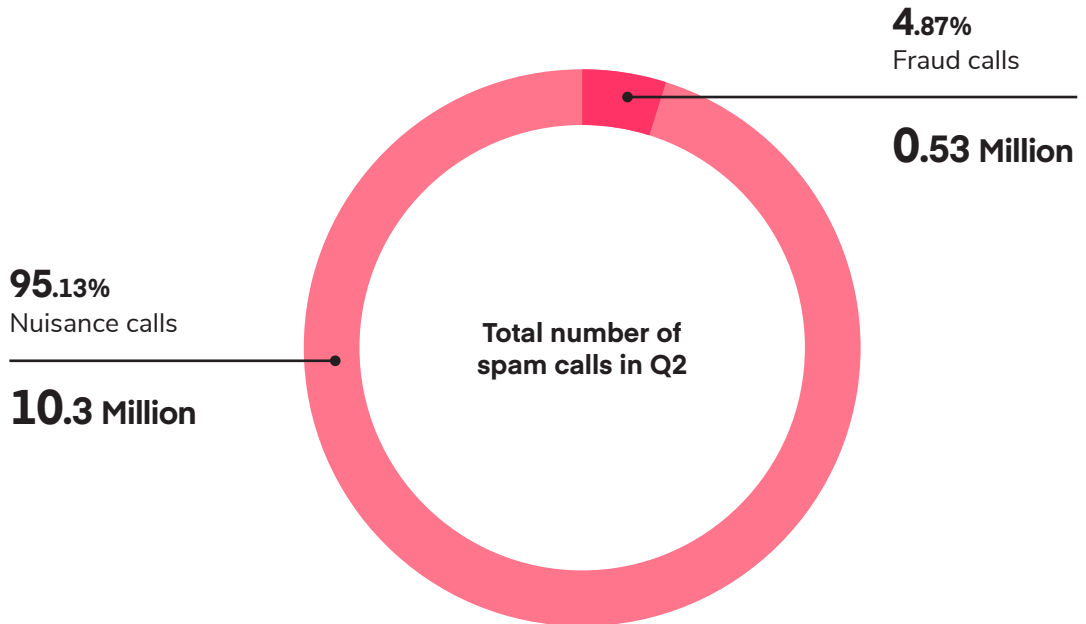**Apr 2023 - Jun 2023**

21%
Spam flag rate

🟪 **20**%
Nuisance calls

🟥 **1**%
Fraud calls

🟩 **79**%
Wanted calls

4 Calls/Month
Average spam calls
per person

5% of all spam calls in Q2 were labeled as fraud

4.87%
Fraud calls

0.53 Million

95.13%
Nuisance calls

10.3 Million

Total number of
spam calls in Q2

Spam ratios represent
the number of unwanted
calls from "non-contacts,"
which are calls placed
from numbers that are
not in an individual's local
address book.

Source:
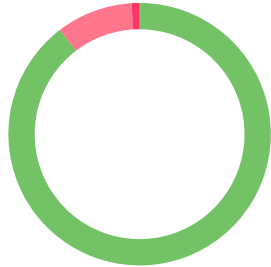Samsung Smart Call users
in Portugal

Slovakia

PERIOD
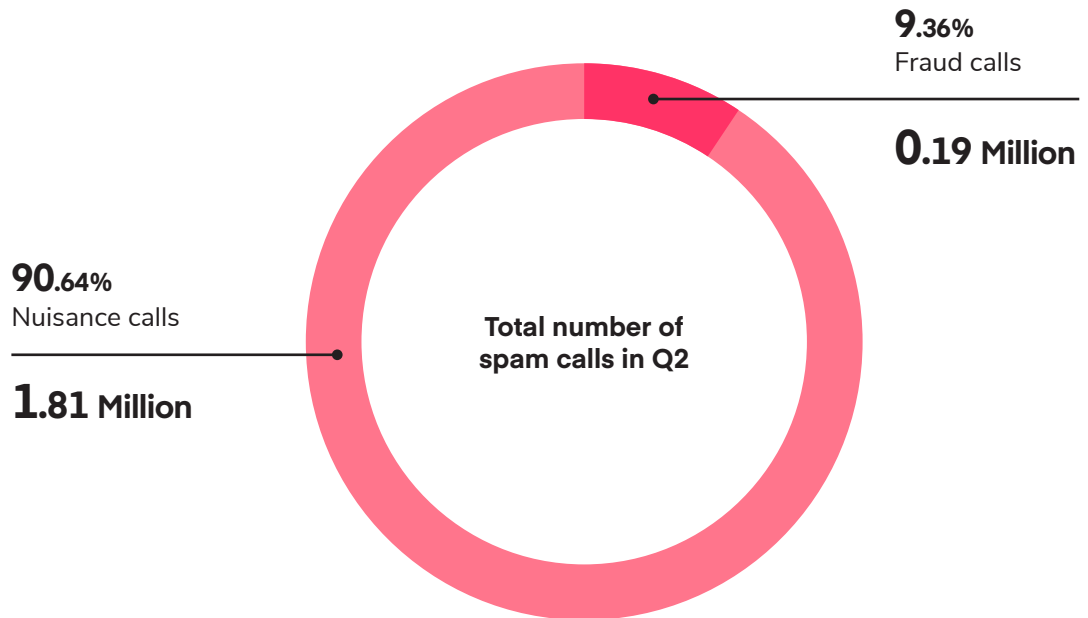
Q2
Apr 2023 - Jun 2023

10.37%
Spam flag rate

9.40%
Nuisance calls

0.97%
Fraud calls

89.63%
Wanted calls

2 Calls/Month
Average spam calls
per person

9% of all spam calls in Q2 were labeled as fraud

9.36%
Fraud calls

0.19 Million

90.64%
Nuisance calls

1.81 Million

Total number of
spam calls in Q2

Spam ratios represent
the number of unwanted
calls from "non-contacts,"
which are calls placed
from numbers that are
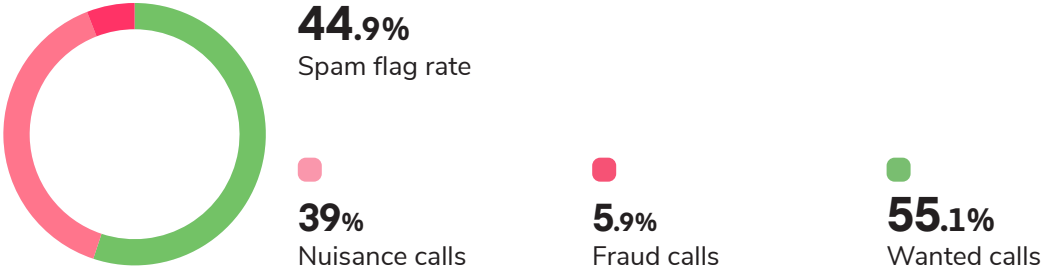not in an individual's local
address book.
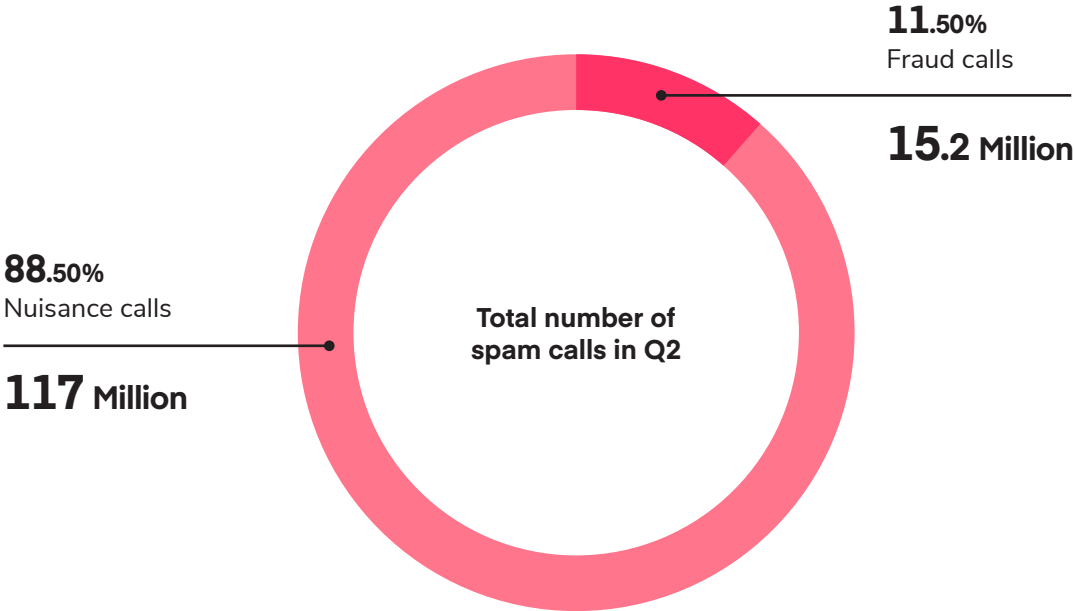
Source:
Samsung Smart Call users
in Slovakia

PERIOD

Q2
Apr 2023 - Jun 2023

hiya

44.9%
Spam flag rate

39%
Nuisance calls

5.9%
Fraud calls

55.1%
Wanted calls

10 Calls/Month
Average spam calls
per person

12% of all spam calls in Q2 were labeled as fraud

11.50%
Fraud calls

15.2 Million

88.50%
Nuisance calls

117 Million

Total number of spam calls in Q2

Spam ratios represent the number of unwanted calls from "non-contacts," which are calls placed from numbers that are not in an individual's local address book.

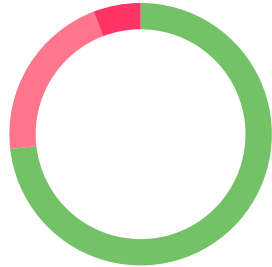Source:
Samsung Smart Call users in Spain

Sweden

hiya

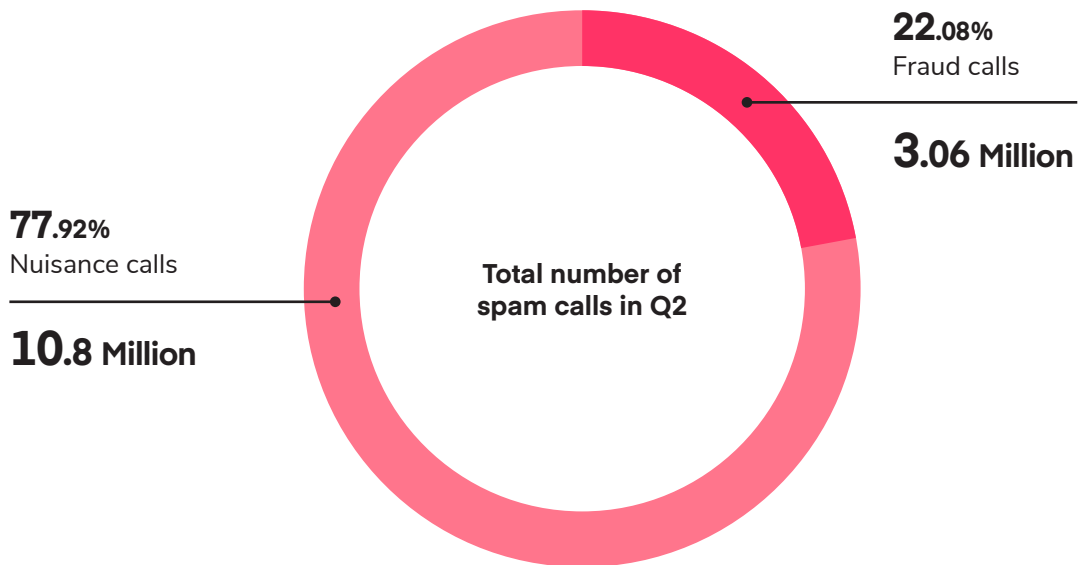## Q2
Apr 2023 - Jun 2023

26.8%
Spam flag rate

21%
Nuisance calls

5.8%
Fraud calls

73.2%
Wanted calls

4 Calls/Month
Average spam calls
per person

22% of all spam calls in Q2 were labeled as fraud

22.08%
Fraud calls

3.06 Million

77.92%
Nuisance calls

10.8 Million

Total number of
spam calls in Q2

Spam ratios represent
the number of unwanted
calls from "non-contacts,"
which are calls placed
from numbers that are
not in an individual's local
address book.

Source:
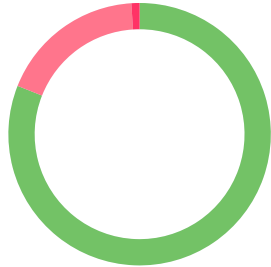Samsung Smart Call users
in Sweden

Switzerland

PERIOD

Q2
Apr 2023 - Jun 2023
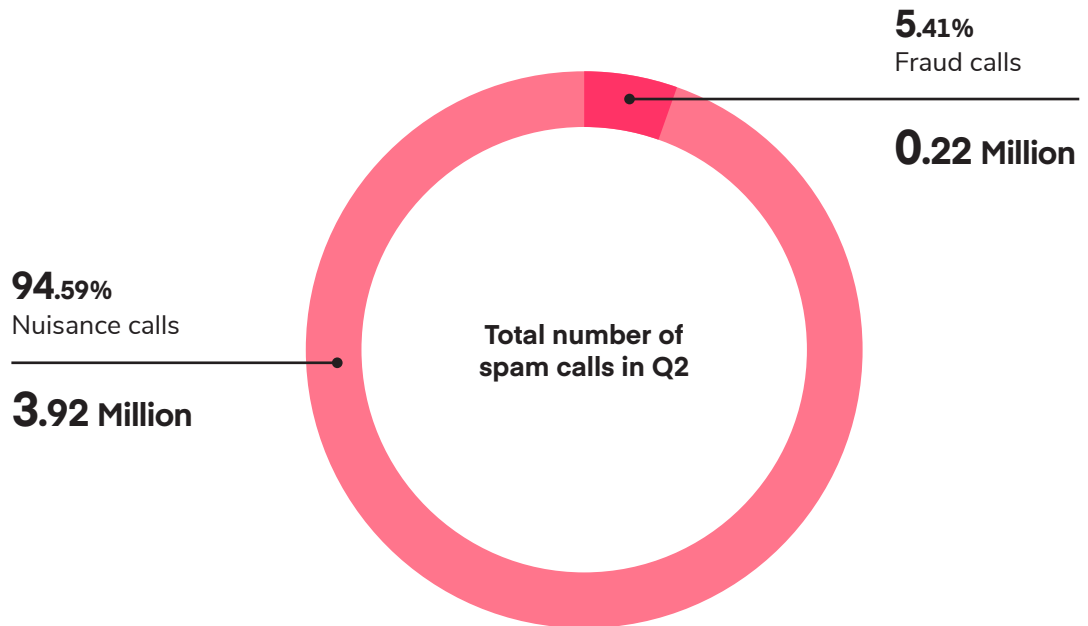
hiya

19%
Spam flag rate

18%
Nuisance calls

1%
Fraud calls

81%
Wanted calls

2 Calls/Month
Average spam calls
per person

5% of all spam calls in Q2 were labeled as fraud

5.41%
Fraud calls

0.22 Million

94.59%
Nuisance calls

3.92 Million

Total number of spam calls in Q2

Spam ratios represent
the number of unwanted
calls from "non-contacts,"
which are calls placed
from numbers that are
not in an individual's local
address book.

Source:
Samsung Smart Call users
in Switzerland

United Kingdom

PERIOD

Q2
Apr 2023 - Jun 2023

27.3%
Spam flag rate

■ **18%**
Nuisance calls

■ **9.3%**
Fraud calls

■ **72.7%**
Wanted calls

4 Calls/Month
Average spam calls
per person

34% of all spam calls in Q2 were labeled as fraud

33.67%
Fraud calls

26.7 Million

66.33%
Nuisance calls

52.6 Million

Total number of spam calls in Q2

Spam ratios represent the number of unwanted calls from "non-contacts," which are calls placed from numbers that are not in an individual's local address book.
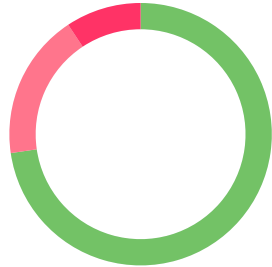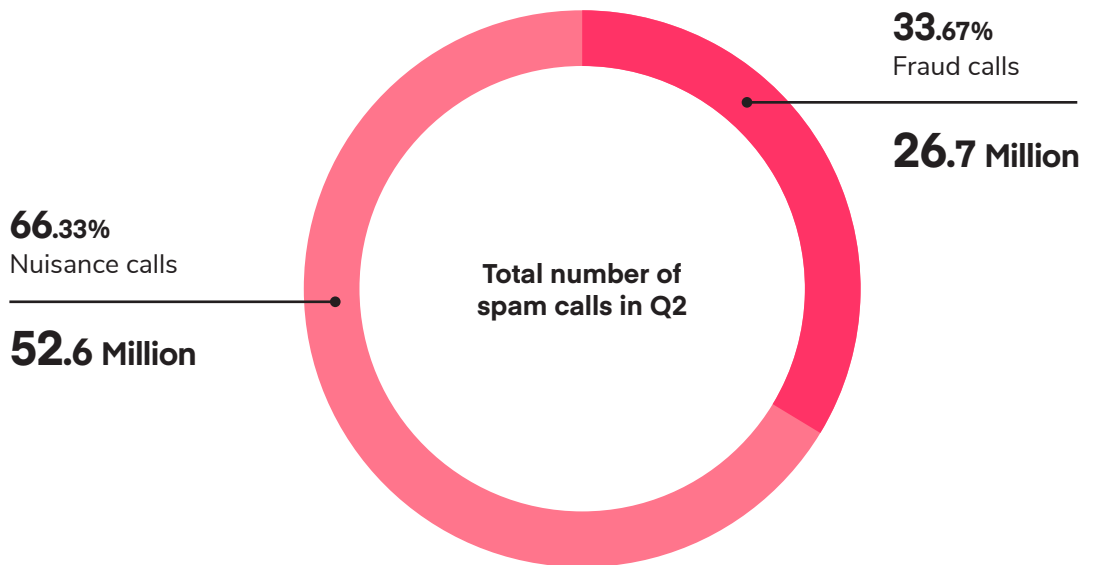
Source:
Samsung Smart Call users in United Kingdom

hiya

ABOUT HIYA

Hiya is trusted by global businesses, carriers and consumers to provide secure, engaging connections and stop unwanted calls. Built on the world's leading Voice Security Platform, Hiya connects businesses with their customers, helps carriers secure their networks, and protects people from spam and fraud calls.

Hiya's leading SaaS applications, Hiya Connect and Hiya Protect, improve the voice experience with trust, identity and intelligence. Powering call protection and identity services for AT&T, EE, Samsung, Ericsson and more, Hiya Protect outsmarts sophisticated scammers with machine-trained trust models and makes voice more intelligent via real-time, global analytics. With a reach of hundreds of millions of users worldwide, Hiya Connect enables enterprises to deliver an unsurpassed, differentiated customer experience through secure and branded calls, and optimizes business results with call performance intelligence.