

# **TeleSign Consumer Account Security Report**

June 2015

An International Study of Digital Security Concerns and Practices





Contents

INTRODUCTION ..... 4

KEY FINDINGS..... 4

METHODOLOGY ..... 6

DETAILED FINDINGS ..... 7

Concerns about Online Security are Universal—and Based on Experience ..... 7

Identical Passwords Used on Multiple Online Accounts Put Consumers at High Risk ..... 11

Consumers Have Lost Faith in Passwords..... 13

Majority of Consumers Want Help in Understanding and Using Two-Factor Authentication ..... 16

Most Consumers Want Online Companies to Provide an Extra Layer of Protection ..... 19

RESEARCH DEMOGRAPHICS..... 26

# Consumers Lose Faith in Passwords

June 2015

## INTRODUCTION

With the dramatic uptick in high-profile online breaches grabbing headlines in recent years, and an increased general awareness of the security dangers lurking in cyberspace, most internet users now count being hacked as one of life's everyday concerns. Yet a disconnect remains between this increased fear and increased adoption of security techniques in the digital world. As this study shows, one of the key reasons for this fear is consumers' lack of confidence in the main security mechanism (and single point of failure) standing between their online lives and hackers: the password.

Consumers are looking for guidance and protection from the companies they do business with. One thing is clear – cybersecurity threats and attackers are moving faster than ever and consumers are in need of help to stay protected and put their minds at ease.

Even while lacking trust in passwords and being worried about being hacked, consumers are falling short of taking steps to protect themselves either due to lack of awareness or lack of education on additional security measures. They would like the added protection of two-factor authentication (2FA) because it adds an extra layer of protection, but many don't know where to start or how to set it up.

Further complicating matters, consumers continually put themselves at heightened risk when they use the same password across several accounts. If one password gets hacked, then all the other accounts are in peril. Between password reuse and not taking advantage of available additional security, such as two-factor authentication (2FA), users continue to ignore security advice in favor of convenience, thus leaving the entirety of the online world more open to the whims of hackers.

This study, commissioned by TeleSign, quantifies consumers' concerns about online security and their exposure to breaches, describes the actions they are taking—or not taking—to protect themselves, and reveals how poor password management and single-factor authentication create the potential for widespread security incidents due to data breaches and other issues in today's threat landscape. But hope remains as more consumers today show an interest in learning how to better protect themselves.

## KEY FINDINGS

### *Concerns About Online Security Are Universal—and Based on Personal Experience*

- 80 percent of consumers worry about online security.
- 45 percent are extremely or very concerned about their accounts being hacked.
- In the past year, 40 percent of consumers experienced a security incident (received a notice that their personal information had been compromised, had an account hacked or had a password stolen) and 70 percent changed their passwords in response.

### *Consumers Lack Faith in Passwords*

- Only 30 percent of consumers are confident that their passwords will protect the security of their online accounts.

### *The Domino Effect: Using the Same Password on Multiple Accounts Can Topple Online Security*

- Consumers have an average of 24 online accounts, but use only 6 unique passwords to protect them.
- 73 percent of accounts use duplicate passwords.
- Consumers rarely change their passwords. Almost half (47 percent) are using a

password that hasn't been changed in five or more years and 77 percent have a password that is one year or older.

### ***Consumers Want Help to Protect the Security of Their Accounts***

- 72 percent would welcome advice on how to protect the security of their online accounts.
- 68 percent say they want online companies to provide an extra layer of security, such as two-factor authentication, to protect their personal information.

### ***Majority Are Not Using Two-Factor Authentication***

- Although 2FA is widely available, 61 percent of consumers have not enabled it for any of their online accounts.
- Among consumers who are not using 2FA, 56 percent are unfamiliar with two-factor authentication, 29 percent don't know how to turn on 2FA, and 29 percent say none of their online accounts offer 2FA.
- Over half (54 percent) of consumers say they'd be more willing to use 2FA if companies guaranteed mobile phone numbers would only be used for account security and never for marketing.

### ***Consumers Feel More Secure When They Use Two-Factor Authentication***

- Nine in ten who use 2FA say it makes them feel their online information is more secure
- Only 39 percent of consumers use two-factor authentication. The top reasons are because the site required it (61 percent) and they want an extra layer of protection (54 percent).

### ***Millennials Are Concerned About Hacking but Use Poor Password Practices***

- Almost half (47 percent) of Millennials (18 to 34) are extremely or very concerned about hacking and 81 percent would like advice on how to protect their accounts.

- Although Millennials have more online accounts, they use fewer passwords; 32 percent use only one to three passwords for all of their accounts vs. 17 percent of those 35 and older.
- Despite using the same passwords on multiple accounts, 36 percent of Millennials are highly confident that their passwords will protect their security.
- Millennials more often turn on 2FA because they want an extra layer of protection: 61 percent vs. 49 percent of those 35 and older.

### ***Anxiety About Online Security Higher in the US***

- US consumers worry more than UK consumers about online security: 84 percent vs. 76 percent.
- Over half of US consumers (56 percent) are extremely or very concerned about their online accounts being hacked, compared with only 35 percent in the UK.
- Those in the US are more likely to have experienced an online security incident in the past year: 50 percent vs. 30 percent of UK consumers.
- Interest in getting advice on how to protect the security of online accounts is higher in the US (79 percent) than in the UK (66 percent).
- Familiarity with 2FA is higher in the US (49 percent somewhat or very familiar) than in the UK (39 percent).
- More US consumers (71 percent) than UK consumers (64 percent) would like online companies to provide an extra layer of security to protect their personal information.
- Although the same share of consumers have enabled 2FA in the US and UK, the reasons they do so are different. In the UK 70 percent turn on 2FA because the site requires it (vs. 52 percent in the US). More US consumers (63 percent) turn on 2FA to get an extra layer of protection (vs. 44 percent of UK consumers).

- Almost six times as many US consumers turned on 2FA because their personal information was exposed in a data breach (17 percent vs. 3 percent of UK consumers). About three times the share of US consumers enabled 2FA because they read or heard about a data breach (24 percent vs. 7 percent in the UK) or had an account hacked (23 percent vs. 9 percent in the UK).

## METHODOLOGY

TeleSign commissioned Lawless Research to design and conduct a study about online security and two-factor authentication. Between March 24 and March 25, 2015, 2,020 adults who have a mobile phone and at least one online account completed the 10-minute online survey. The online survey was hosted by Qualtrics and Survey Sampling International provided respondents from their online panel. The margin of error for the total sample is  $\pm 2.2$  percentage points at the 95 percent level of confidence ( $\pm 3.1$  for the 1,004 US respondents and  $\pm 3.1$  for the 1,016 UK respondents). Tests of significant difference were conducted at the .01 level (99% probability that the difference is real, not by chance).

*Note: \* $p < .01$  indicates there is a significant difference at the .01 level.*

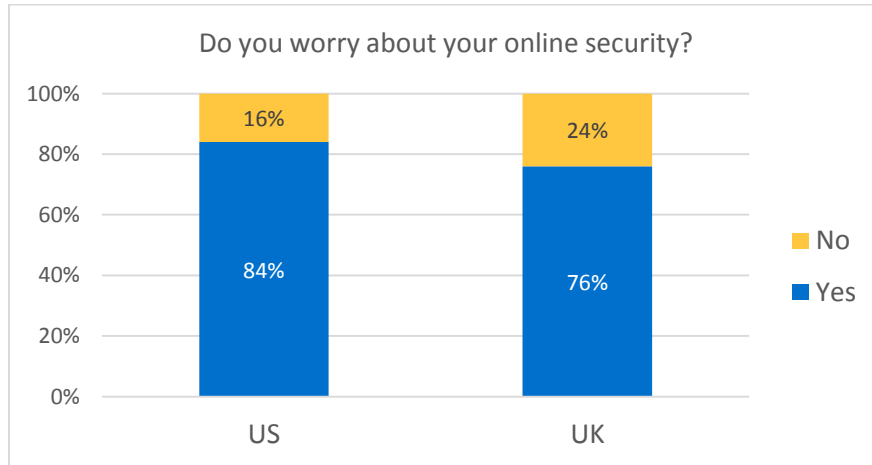
## DETAILED FINDINGS

### Concerns about Online Security are Universal—and Based on Experience

#### *Eight in ten consumers worry about their online security.*

Overall, 80 percent of consumers say they worry about their online security.

- More US consumers are worried, compared with those in the UK: 84 percent vs. 76 percent of UK consumers.



#### *Majority of consumers are concerned about their accounts being hacked.*

Almost half of the respondents (45 percent) are extremely or very concerned about their accounts being hacked.



**US consumers are more concerned about their online accounts being hacked, compared with UK consumers.**

Over half of US consumers (56 percent) are extremely or very concerned about hacking vs. 35 percent of UK consumers.

**How concerned are you about your online accounts being hacked?**

	US N=1,004	UK N=1,016	Total N=2,020
Extremely concerned	<b>24%</b>	11%	17%
Very concerned	<b>32%</b>	24%	28%
Moderately concerned	32%	<b>43%</b>	37%
Slightly concerned	10%	<b>17%</b>	14%
Not at all concerned	2%	<b>5%</b>	4%
Total	100%	100%	100%
Extremely or Very Concerned	<b>56%</b>	35%	45%
*p<.01			

**Millennials and Gen Xers are more concerned about the risk of being hacked.**

Five in ten consumers age 18 to 50 are extremely or very concerned about their online accounts being hacked, versus four in ten Baby Boomers (51 to 69) and only 25 percent of the Silent Generation (70 and older).

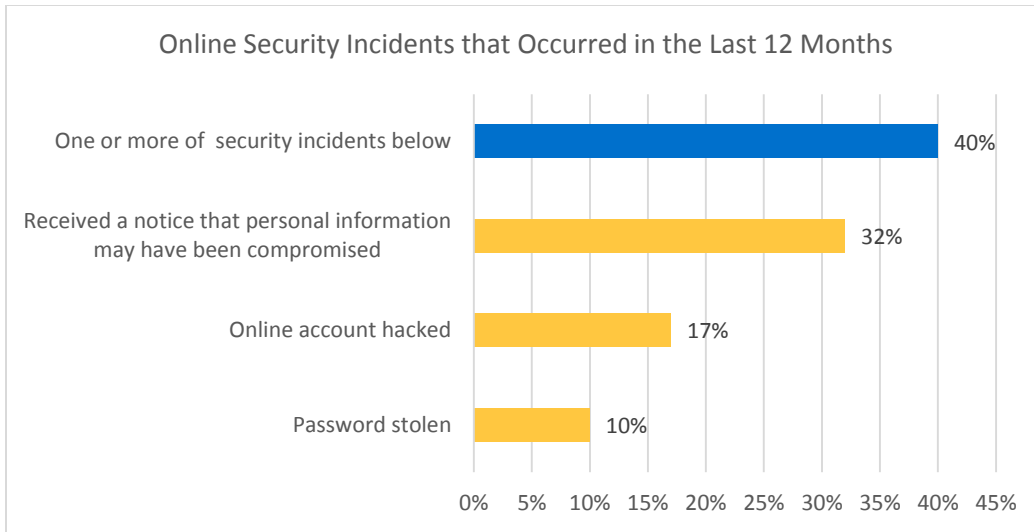
**How concerned are you about your online accounts being hacked?**

	Millennial 18-34	Gen X 35-50	Boomer 51-69	Silent 70+	Total
Extremely concerned	<b>19%</b>	<b>20%</b>	14%	9%	17%
Very concerned	<b>28%</b>	<b>29%</b>	<b>27%</b>	16%	28%
Moderately concerned	37%	34%	39%	50%	37%
Slightly concerned	12%	13%	16%	21%	14%
Not at all concerned	3%	4%	4%	4%	4%
Total	100%	100%	100%	100%	100%
Extremely or Very Concerned	<b>47%</b>	<b>49%</b>	41%	25%	45%
*p<.01					

**Four in ten consumers experienced security incidents in the past year.**

In the past 12 months, 40 percent of online consumers say they had one or more of the following security incidents: received a notice that their personal information had been compromised, had an account hacked or had a password stolen.





**US online account users were more likely to experience one or more security incidents.**

In the past year, 50 percent of US consumers experienced a security incident (received a notice that their personal information may have been compromised, had an account hacked or had a password stolen), compared with only 30 percent of UK online consumers.

**Online Security Incidents that Occurred in the Last 12 Months**

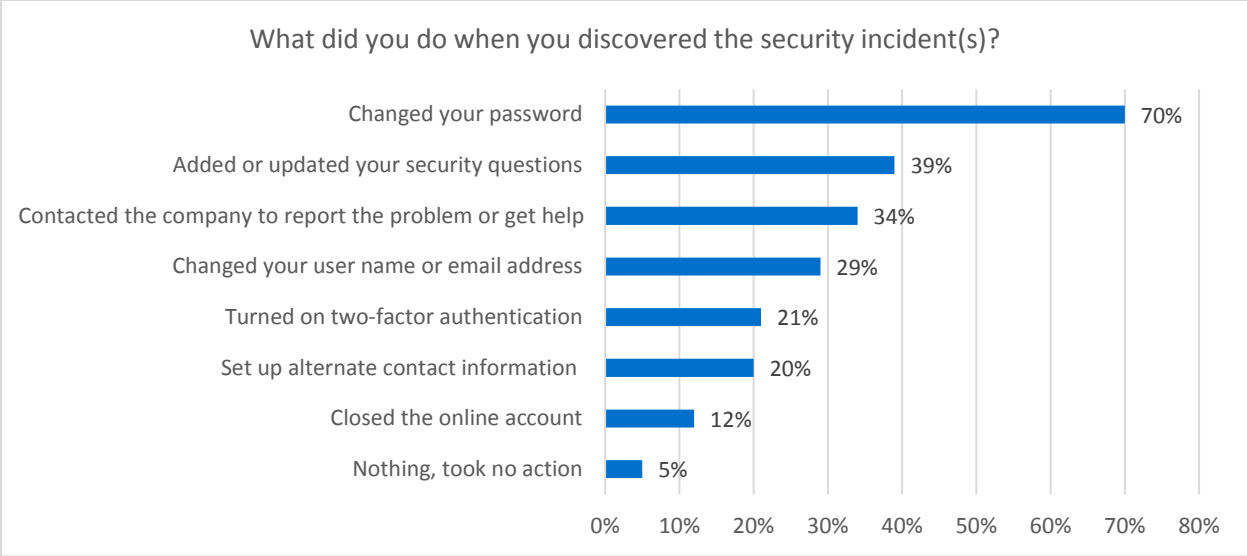
	US N=1,004	UK N=1,016	Total N=2,020
You received a notice that your personal information (e.g., user name, password, credit card number, Social Security Number or National Insurance Number) may have been compromised.*	41%	23%	32%
One or more of your online accounts were hacked*	23%	11%	17%
One or more of your passwords were stolen*	17%	4%	10%
One or More of the Above	50%	30%	40%

\*p<.01

**Majority changed their passwords when they discovered the security incident.**

Seventy percent of those who experienced an online security incident changed their password.

- Four in ten victims added or updated their security questions in response to the security incident.
- Three in ten contacted the company to report the incident and three in ten changed their user name or email address.



**Those in the US were more likely to turn on two-factor authentication.**

Overall, 21 percent of consumers who experienced a security incident enabled 2FA. However, victims in the US were more likely to turn on 2FA (25 percent vs. 14 percent in the UK).

**What did you do when you discovered the security incident(s)?**  
(Choose all that apply)

	US N=506	UK N=302	Total N=808
Changed your password	71%	69%	70%
Added or updated your security questions	41%	34%	39%
Contacted the company to report the problem or get help	32%	36%	34%
Changed your user name or email address	32%	24%	29%
Turned on two-factor authentication*	<b>25%</b>	14%	21%
Set up alternate contact information for your account	21%	20%	20%
Closed the online account*	<b>15%</b>	8%	12%
Other	6%	5%	6%
Nothing. You took no action.	4%	5%	5%
*p<.01			

**Millennials and Gen Xers are most likely to take action after a security incident.**

Compared with older consumers, Millennials and Gen Xers took more protective steps after discovering a security incident.

### What did you do when you discovered the security incident(s)?

(Choose all that apply)

	Millennial 18-34	Gen X 35-50	Boomer 51-69	Silent 70+	Total N=808
Changed your password	74%	69%	66%	68%	70%
Added or updated your security questions*	<b>44%</b>	<b>38%</b>	31%	24%	39%
Contacted the company to report the problem or get help	31%	36%	35%	40%	34%
Changed your user name or email address*	<b>33%</b>	<b>31%</b>	20%	12%	30%
Turned on two-factor authentication*	<b>32%</b>	18%	6%	16%	21%
Set up alternate contact information for your account*	<b>26%</b>	<b>20%</b>	13%	12%	20%
Closed the online account	12%	14%	9%	16%	12%
Other*	2%	<b>7%</b>	<b>9%</b>	<b>16%</b>	6%
Nothing. You took no action.	3%	5%	7%	4%	5%
*p<.01					

### Identical Passwords Used on Multiple Online Accounts Put Consumers at High Risk

*Consumers have an average of 23 online accounts, but use only 6 passwords to protect them.*

Most respondents do not use unique passwords for each online account. Almost three-fourths of accounts (73 percent) use duplicate passwords.

#### Total Number of Password Protected Online Accounts in 11 Categories<sup>1</sup>

	US N=1,004	UK N=1,016	Total N=2,020
1 to 4	2%	3%	2%
5 to 9	10%	12%	11%
10 to 19	33%	36%	35%
20 to 29	28%	26%	27%
30 to 39	16%	14%	15%
40 to 110	11%	9%	10%
Total	100%	100%	100%
Average Number of Accounts	23.5	21.7	22.6
Average Number of Passwords	5.9	6.3	6.1
Ratio	25%	29%	27%

<sup>1</sup> Communication, email, entertainment, file sharing, financial, health, news and sports, shopping, social networks, software in the cloud, travel

**Those 50 and older protect more of their online accounts with unique passwords.**

Baby Boomers and the Silent Generation use an average of seven passwords to protect their online accounts vs. five for Millennials and six for Gen Xers.

**Total Number of Password Protected Online Accounts  
in 11 Categories<sup>1</sup>**

	<b>Millennial 18-34</b>	<b>Gen X 35-50</b>	<b>Boomer 51-69</b>	<b>Silent 70+</b>	<b>Total N=2,020</b>
1 to 4*	2%	1%	<b>4%</b>	0%	2%
5 to 9*	9%	9%	<b>15%</b>	<b>18%</b>	11%
10 to 19*	<b>34%</b>	<b>36%</b>	<b>33%</b>	46%	35%
20 to 29	30%	25%	27%	21%	27%
30 to 39	16%	17%	13%	9%	15%
40 to 110	10%	12%	8%	6%	10%
Total	100%	100%	100%	100%	100%
Average Number of Accounts	23.4	24.0	20.8	18.8	22.6
Average Number of Passwords	5.2	6.4	6.6	7.2	6.1
Ratio	22%	27%	<b>32%</b>	<b>38%</b>	27%

<sup>1</sup> Communication, email, entertainment, file sharing, financial, health, news and sports, shopping, social networks, software in the cloud, travel

\*p<.01

**Shopping sites are the most popular online accounts that require passwords.**

Consumers have an average of four online shopping accounts, three financial accounts and three email accounts. UK respondents tend to have more online shopping accounts: 4.5 vs. 3.6 for US respondents.

**Approximately how many online accounts do you have within each category?  
AVERAGE**

	<b>US</b>	<b>UK</b>	<b>Total</b>
Shopping (e.g., Amazon, eBay, etsy, Ikea, Groupon, BestBuy, Walmart, Target, Argos, Tesco)*	3.6	<b>4.5</b>	4.0
Financial (e.g., banks, investments, credit cards, PayPal, Priceline)*	3.1	<b>3.3</b>	3.2
Email (e.g., Google, Yahoo!, Outlook, iCloud, Comcast, BT)*	<b>2.8</b>	2.5	2.7
Entertainment (e.g., YouTube, Netflix, Pandora, Yahoo! Music, Google Play, Game Sites)*	<b>2.7</b>	1.9	2.3
Social Networks (e.g., Facebook, Twitter, LinkedIn, Pinterest, Google+, Meetup)*	<b>2.6</b>	2.0	2.3
Communication (e.g., Internet or Phone Provider, Skype, Google Voice)	2.1	2.2	2.2
Travel (e.g., Airlines, Hotels, TripAdvisor, Booking.com, Expedia)*	1.5	<b>1.9</b>	1.7
File Sharing and Storage (e.g., Dropbox, Google Drive, Instagram, Imgur, Shutterfly, Flickr)*	<b>1.5</b>	1.1	1.3
Health (e.g., Insurance, WebMD, NHS, NIH, Myfitnesspal, Weightwatchers, Patient.co, CDC)*	<b>1.5</b>	0.9	1.2
News and Sports (e.g., CNN, BBC, NYT, The Guardian, Huffingtonpost, ESPN, Yahoo! Sports)*	<b>1.1</b>	0.8	1.0
Software in the Cloud (e.g., Office 365, TurboTax, WordPress, Evernote)*	<b>1.0</b>	0.6	0.8

\*p<.01

## Consumers Have Lost Faith in Passwords

*The majority of consumers lack confidence that their passwords will protect their online security.*

Only 30 percent of consumers are extremely or very confident that their passwords will protect the security of their online accounts.

- Men are more confident than women: 35 percent extremely or very confident vs. 24 percent of women.

### How confident are you that your passwords will protect the security of your online accounts?

	US N=1,004	UK N=1,016	Total N=2,020
Extremely confident	9%	5%	7%
Very confident	25%	21%	23%
Moderately confident	50%	58%	54%
Slightly confident	13%	13%	13%
Not at all confident	3%	3%	3%
Total	100%	100%	100%
Moderately/Slightly/Not at All	66%	74%	70%

\*p<.01

*Millennials and Gen Xers are more confident in passwords than Baby Boomers or the Silent Generation.*

- 36 percent of Millennials and 33 percent of Gen Xers are extremely or very confident that their passwords will protect their online accounts vs. 22 percent of Boomers and 15 percent of those 70 and older.

### How confident are you that your passwords will protect the security of your online accounts?

	Millennial 18-34	Gen X 35-50	Boomer 51-69	Silent 70+	Total N=2,020
Extremely confident	8%	7%	5%	3%	7%
Very confident*	28%	25%	17%	13%	23%
Moderately confident	50%	53%	59%	61%	54%
Slightly confident	13%	11%	14%	14%	13%
Not at all confident	2%	3%	5%	10%	3%
Total	100%	100%	100%	100%	100%
Extremely or Very Confident	36%	32%	22%	15%	30%

\*p<.01

**Most consumers use five or fewer passwords to protect their online accounts.**

Over half (54 percent) use five or fewer passwords to protect all of their online accounts.

**Approximately how many different passwords do you use across all of your online accounts?**

	US N=1,004	UK N=1,016	Total N=2,020
1	2%	1%	1%
2	7%	5%	6%
3	16%	14%	15%
4	15%	15%	15%
5	18%	17%	17%
6	7%	8%	7%
7	4%	3%	4%
8	5%	4%	4%
9	2%	2%	2%
10 or more	25%	31%	28%
Total	100%	100%	100%

**Millennials use fewer passwords than those in older generations.**

Although they have more online accounts, only 15 percent of Millennials use 10 or more passwords, compared with 33 percent of Gen Xers, 34 percent of Baby Boomers and 43 percent of the Silent Generation.

**Approximately how many different passwords do you use across all of your online accounts?**

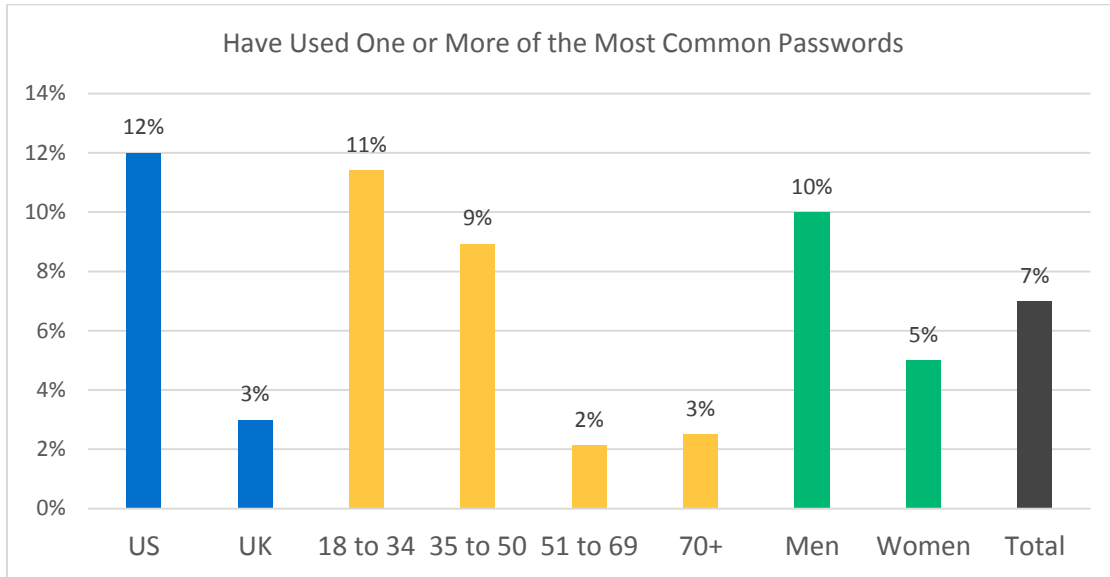
Number of Passwords	Millennial 18-34	Gen X 35-50	Boomer 51-69	Silent 70+	Total N=2,020
1	2%	1%	1%	0%	1%
2	9%	5%	4%	3%	6%
3	21%	12%	11%	14%	15%
4	18%	14%	14%	8%	15%
5	20%	19%	14%	13%	17%
6	6%	6%	10%	8%	7%
7	4%	4%	3%	6%	4%
8	3%	4%	5%	5%	4%
9	2%	2%	3%	3%	2%
10 or more	15%	33%	34%	43%	28%
Total	100%	100%	100%	100%	100%
1 to 3	32%	19%	16%	17%	22%

\*p<.01

**One in 14 consumers (7 percent) report using at least one of the 25 most common passwords.**

The most commonly used password in 2014 were 123456, password, 12345, 12345678, qwerty, 123456789, 1234, baseball, dragon, football, 1234567, monkey, letmein, abc123, 111111, mustang, access, shadow, master, michael, superman, 696969, 123123, batman, and trustno1. One in 14 consumers say they have used one or more of them for their online accounts (<http://gizmodo.com/the-25-most-popular-passwords-of-2014-were-all-doomed-1680596951>).

- US consumers have used these easily guessed passwords more than UK consumers: 12 percent vs. 3 percent.
- Eleven percent of Millennials and 9 percent of Gen Xers have used one of these commonly stolen passwords, compared with 2 percent of Boomers and 3 percent of Silent Generation online consumers.
- More men (10 percent) than women (5 percent) have used the most common passwords.



**Almost half (47 percent) are using a password that hasn't been changed in five or more years.**  
 The vast majority (77 percent) have a password that is one year or older.

**Approximately how old is the oldest password you use for one or more online accounts?**

	US N=1,004	UK N=1,016	Total N=2,020
Less than 6 months old	14%	13%	13%
6 months to 11 months	11%	8%	9%
1 year to 4 years old	30%	30%	30%
5 years to 9 years old	25%	27%	26%
10 years to 14 years old	14%	15%	14%
15 years to 19 years old	5%	5%	5%
20 years or older	2%	2%	2%
Total	100%	100%	100%

**The oldest generation has the oldest passwords.**

One-third (33 percent) of Silent Generation online users (70 and up) are using a password that is 10 years or older, thus leaving themselves at greater risk than younger generations.

**Approximately how old is the oldest password you use for one or more online accounts?**

	<b>Millennial 18-34</b>	<b>Gen X 35-50</b>	<b>Boomer 51-69</b>	<b>Silent 70+</b>	<b>Total N=2,020</b>
Less than 6 months old	12%	15%	14%	10%	13%
6 months to 11 months	9%	11%	9%	9%	9%
1 year to 4 years old	34%	28%	29%	24%	30%
5 years to 9 years old	29%	25%	24%	24%	26%
10 years to 14 years old	12%	15%	15%	22%	14%
15 years to 19 years old	4%	5%	6%	7%	5%
20 years or older	1%	2%	4%	4%	2%
<b>Total</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>
1+ years	80%	75%	77%	80%	77%
5+ years	46%	47%	48%	<b>57%</b>	47%
10+ years	17%	22%	24%	<b>33%</b>	21%

\*p<.01

**Majority of Consumers Want Help in Understanding and Using Two-Factor Authentication**

*Majority want advice on how to protect the security of their online accounts.*

Seven in ten (72 percent) would welcome advice on how to protect the security of their online accounts.

- US respondents are more eager for advice: 79 percent vs. 66 percent of UK respondents.

**I would welcome advice on how to protect the security of my online accounts.**

	<b>US N=1,004</b>	<b>UK N=1,016</b>	<b>Total N=2,020</b>
Strongly Agree	<b>36%</b>	21%	28%
Agree	43%	45%	44%
Neutral	19%	<b>28%</b>	23%
Disagree	1%	<b>4%</b>	3%
Strongly Disagree	1%	2%	2%
<b>Total</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>
Strongly Agree/Agree	<b>79%</b>	66%	72%

\*p<.01

*Millennials are more eager for advice on how to protect the security of their online accounts.*

Eight in ten (81 percent) would welcome advice on how to protect the security of their online accounts.

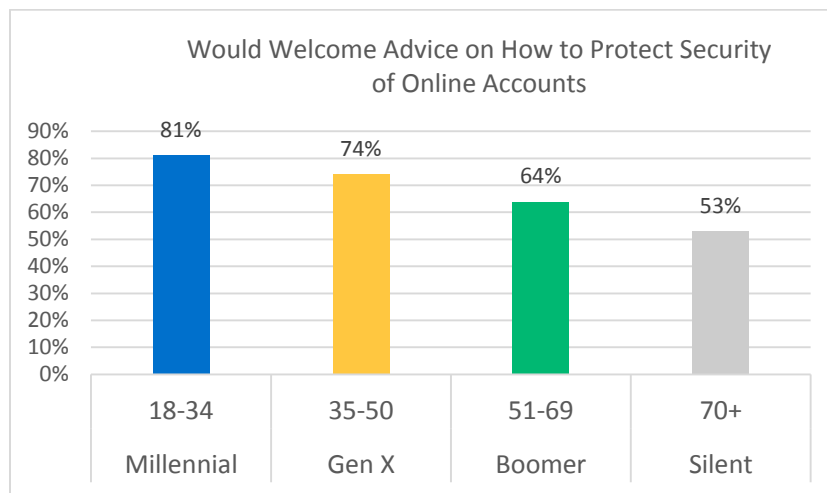
- Only 53 percent of the oldest generation want advice about online security.



**I would welcome advice on how to protect the security of my online accounts.**

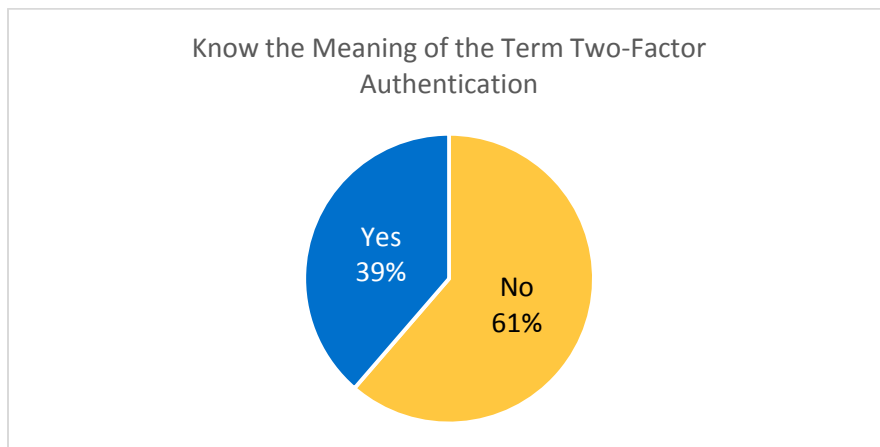
	Millennial 18-34	Gen X 35-50	Boomer 51-69	Silent 70+	Total N=2,020
Strongly Agree	33%	28%	25%	13%	28%
Agree	48%	45%	39%	40%	44%
Neutral	17%	22%	30%	39%	23%
Disagree	1%	3%	4%	3%	3%
Strongly Disagree	1%	1%	2%	6%	2%
Total	100%	100%	100%	100%	100%
Strongly Agree/Agree	<b>81%</b>	74%	64%	53%	72%

\*p<.01



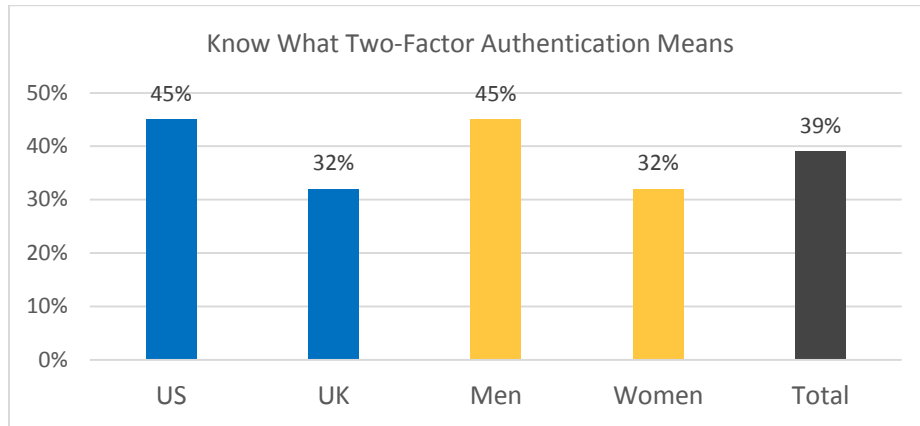
**Majority do not know what two-factor authentication is.**

Six in ten (61 percent) do not know the meaning of the term two-factor authentication. Only 39 percent of consumers know what 2FA is.



**Knowledge of the term two-factor authentication is higher for US consumers and men.**

Almost half (45 percent) of US consumers know the meaning of two-factor authentication (vs. 32 percent of UK consumers. More men (45 percent) than women (32 percent) know what 2FA means.



**When given the definition of two-factor authentication, over half are not at all or only slightly familiar with the term.**

Overall, 56 percent are unfamiliar or only slightly familiar with two-factor authentication.

- UK respondents are less familiar than US respondents: 61 percent vs. 51 percent US respondents who are not at all or slightly familiar.

**How familiar are you with two-factor authentication<sup>1</sup> for your online accounts?**

	US N=1,004	UK N=1,016	Total N=2,020
Not at all familiar	22%	<b>27%</b>	25%
Slightly familiar	28%	<b>33%</b>	31%
Somewhat familiar	<b>26%</b>	21%	24%
Very familiar	<b>23%</b>	18%	21%
Total	100%	100%	100%
Not at all/Slightly	51%	<b>61%</b>	56%
Somewhat/Very	<b>49%</b>	39%	44%

\*p<.01

1 Defined as: Some sites provide the option of an added layer of security beyond passwords, known as two-factor authentication (2FA) or two-factor verification. With these, in addition to your password, you have to enter another code when you sign in. These codes are sent to your smartphone or cellphone (via an app, text message, phone call) in real time.

**More men than women are familiar with two-factor authentication.**

Whereas 49 percent of men are somewhat or very familiar with two-factor authentication, only 39 percent of women are familiar with 2FA.

**How familiar are you with two-factor authentication<sup>1</sup>  
for your online accounts?**

	Men N=1,007	Women N=1,013	Total N=2,020
Not at all familiar	22%	<b>27%</b>	25%
Slightly familiar	28%	33%	31%
Somewhat familiar	<b>26%</b>	21%	24%
Very familiar	<b>23%</b>	18%	21%
Total	100%	100%	100%
Not at all/Slightly	51%	<b>61%</b>	56%
Somewhat/Very	<b>49%</b>	39%	44%

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**Most Consumers Want Online Companies to Provide an Extra Layer of Protection**

**Majority would like online companies to provide two-factor authentication.**

Seven in ten (68 percent) say they want online companies to provide an extra layer of security, such as two-factor authentication, to protect their personal information.

- US respondents are more interested in having companies provide 2FA: 71 percent vs. 64 percent of UK respondents.

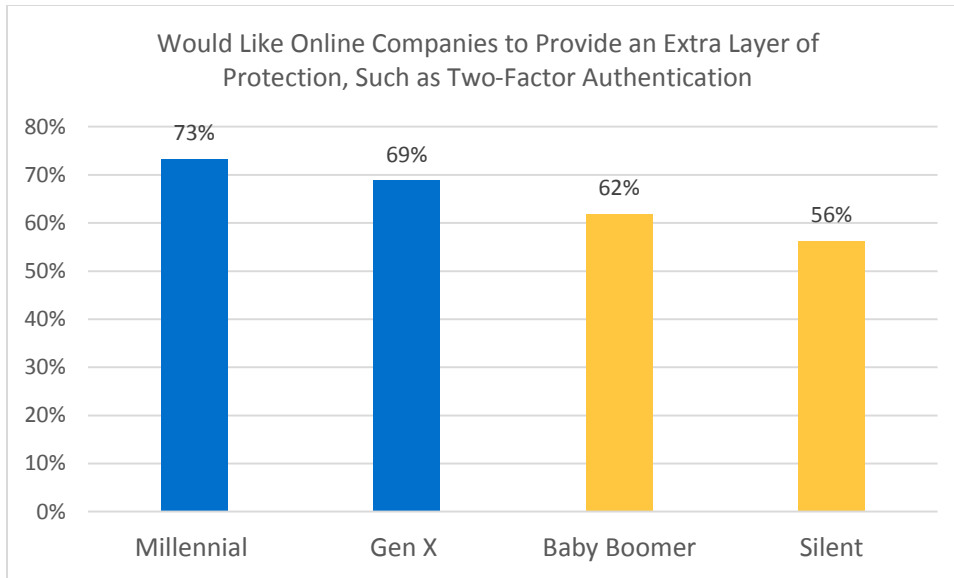
**Would you like online companies to provide an extra layer of security, such as two-factor authentication, to protect your personal information?**

	US N=1,004	UK N=1,016	Total N=2,020
Yes*	<b>71%</b>	64%	68%
No	10%	11%	11%
Don't know*	18%	<b>24%</b>	21%
Total	100%	100%	100%

\*p<.01

**Millennials and Gen Xers have the highest interest in two-factor authentication.**

Seven in ten Millennials (18 to 34) and Gen Xers (35 to 49) want companies to provide an extra layer of protection.



**Willingness to turn on two-factor authentication would increase if companies guarantee that mobile phone numbers will not be used for marketing.**

With spamming fears averted, over half of consumers (54 percent) would be more willing to use 2FA.

**Would you be more willing to use two-factor authentication if companies guaranteed they would use your mobile phone number ONLY for account security and never for marketing?**

	US N=1,004	UK N=1,016	Total N=2,020
Yes	56%	53%	54%
Maybe	36%	38%	37%
No	8%	9%	9%
Total	100%	100%	100%

**Over half of Millennials and Gen Xers say the guarantee would increase their interest in 2FA.**

A non-marketing guarantee increases the interest in 2FA for Millennials (59 percent) and Gen Xers (57 percent).

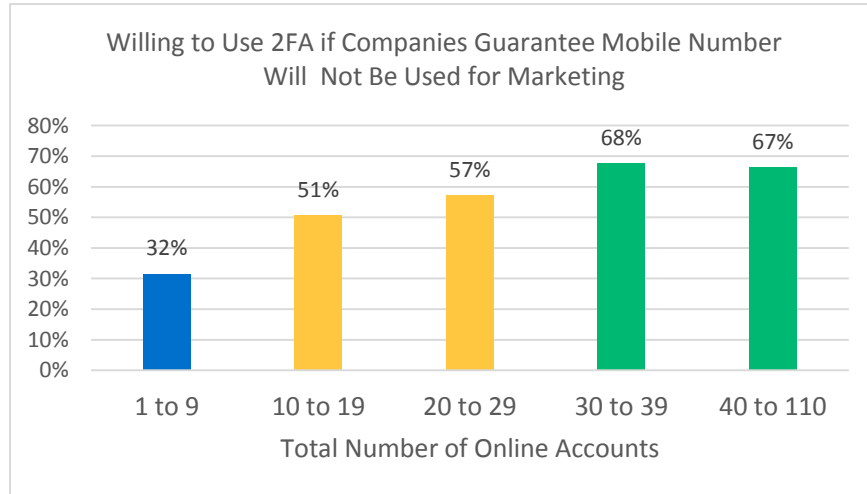
**Would you be more willing to use two-factor authentication if companies guaranteed they would use your mobile phone number ONLY for account security and never for marketing?**

	Millennial 18-34	Gen X 35-50	Boomer 51-69	Silent 70+	Total N=2,020
Yes	59%	57%	47%	43%	54%
Maybe	35%	35%	42%	41%	37%
No	6%	8%	11%	16%	9%
Total	100%	100%	100%	100%	100%

\*p<.01

**A non-marketing guarantee increases willingness to turn on two-factor authentication more for those with 30 or more online accounts.**

Six in ten consumers with 30 to 110 online accounts say they would be more willing to turn on two-factor authentication if their mobile number is only used for security purposes.



**Only four in ten consumers have turned on two-factor authentication for an online account.**

About the same percentage of online users in the US and UK have turned on 2FA.

**Have you enabled (or turned on) two-factor authentication for any of your online accounts?**

	US N=1,004	UK N=1,016	Total N=2,020
Yes	40%	38%	39%
No	48%	46%	47%
Don't know	13%	16%	15%
Total	100%	100%	100%

**Those who experienced online security incidents are more likely to turn on 2FA for accounts.**

Over half (58 percent) of those who experienced an online security incident enabled 2FA on one or more online account (vs. only 36 percent who did not experience a security incident).

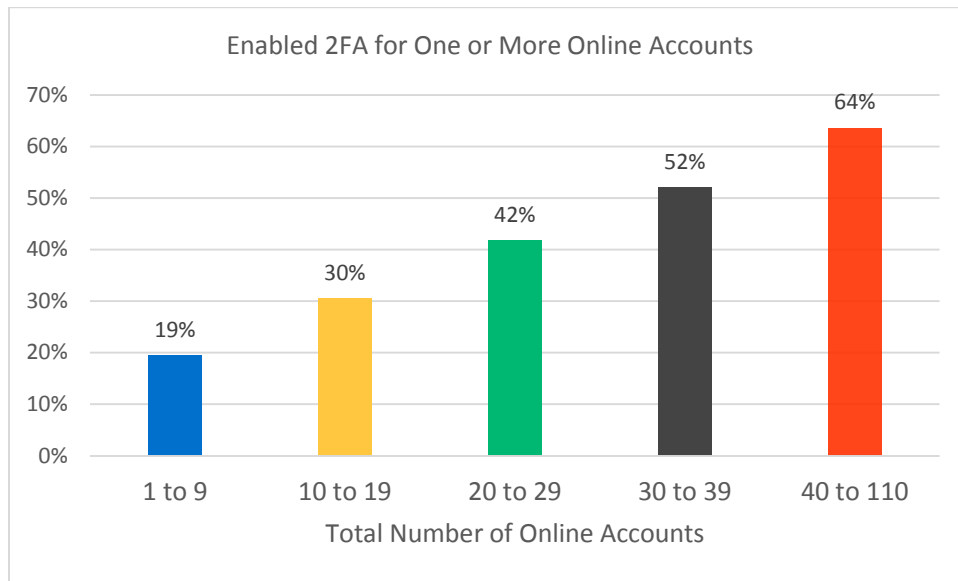
**Experienced Security Incident vs. Enabled Two-Factor Authentication**

	Experienced Security Incident in Past Year <sup>1</sup> N=692	Did Not Experience Security Incident in Past Year N=1,034	Total N=1,726
Enabled 2FA	58%	36%	45%
Have Not Enabled 2FA	42%	64%	55%
Total	100%	100%	100%

\*p<.01 Don't know's removed

<sup>1</sup> Received a notice that your personal information may have been compromised, one or more of your online accounts were hacked, one or more passwords were stolen

**The share of people who have turned on 2FA increases with the number of online accounts they have.** Whereas only 19 percent of those with four or fewer online accounts have turned on two-factor authentication, 64 percent of those with 40 or more online accounts have turned on the service.



**Majority turn on two-factor authentication because it's required or they want an extra layer of protection.**

The requirement to turn on 2FA drives adoption in the UK more than in the US: 70 percent vs. 52 percent. An extra layer of protection is more important to US consumers: 63 percent vs. 44 percent of UK consumers who have enabled 2FA.

**What are the reasons that you use two-factor authentication?**  
(Choose all that apply.)

	US N=397	UK N=384	Total N=781
It was required by the site.*	52%	<b>70%</b>	61%
I want an extra layer of protection.*	<b>63%</b>	44%	54%
I had an account hacked.*	<b>23%</b>	9%	16%
I read or heard about a data breach.*	<b>24%</b>	7%	15%
My personal information was exposed in a data breach.*	<b>17%</b>	3%	10%
*p<.01			

**The top reason Millennials turn on two-factor authentication is desire for an extra layer of protection.** Six in ten Millennials (61 percent) turn on 2FA because they want another layer of protection, compared with 55 percent of Gen Xers, 44 percent of Baby Boomers and 35 percent of the Silent Generation.

### What are the reasons that you use two-factor authentication?

(Choose all that apply.)

	Millennial 18-34	Gen X 35-50	Boomer 51-69	Silent 70+	Total N=781
It was required by the site.*	48%	61%	<b>77%</b>	<b>81%</b>	61%
I want an extra layer of protection.*	<b>61%</b>	<b>55%</b>	44%	35%	54%
I had an account hacked.*	<b>22%</b>	<b>15%</b>	8%	12%	16%
I read or heard about a data breach.*	<b>23%</b>	13%	7%	4%	15%
My personal information was exposed in a data breach.*	<b>15%</b>	<b>10%</b>	3%	<b>12%</b>	10%

\*p<.01

### Two-factor authentication is most often turned on for financial and email online accounts.

Overall, 66 percent of those who turned on 2FA did so for one or more online financial accounts and 42 percent turned 2FA on for an email account.

- 2FA is turned on more often on financial sites in the UK and on email accounts in the US.

### On what types of sites are you using two-factor authentication? (Choose all that apply.)

	US N=397	UK N=384	Total N=781
Financial (e.g., banks, investments, credit cards, PayPal, Priceline)*	56%	<b>75%</b>	66%
Email (e.g., Google, Yahoo!, Outlook, iCloud, Comcast, BT)*	<b>57%</b>	26%	42%
Shopping (e.g., Amazon, eBay, etsy, Ikea, Groupon, BestBuy, Walmart, Target, Argos, Tesco)	22%	16%	19%
Social Networks (e.g., Facebook, Twitter, LinkedIn, Pinterest, Google+, Meetup)*	<b>28%</b>	9%	19%
Communication (e.g., Internet or Phone Provider, Skype, Google Voice)*	<b>24%</b>	10%	17%
Entertainment (e.g., YouTube, Netflix, Pandora, Yahoo! Music, Google Play, Game Sites)*	<b>24%</b>	4%	14%
File Sharing and Storage (e.g., Dropbox, Google Drive, Instagram, Imgur, Shutterfly, Flickr)*	<b>21%</b>	5%	13%
Health (e.g., Insurance, WebMD, NHS, NIH, Myfitnesspal, Weightwatchers, Patient.co, CDC)*	<b>15%</b>	3%	9%
Software in the Cloud (e.g., Office 365, TurboTax, WordPress, Evernote)	9%	6%	8%
News and Sports (e.g., CNN, BBC, NYT, The Guardian, Huffingtonpost, ESPN, Yahoo! Sports)*	<b>11%</b>	1%	6%
Travel (e.g., Airlines, Hotels, TripAdvisor, Booking.com, Expedia)*	<b>7%</b>	3%	5%

\*p<.01

**Millennials are more likely to turn on two-factor authentication for their email accounts.**

Six in ten Millennials turn on 2FA for their email accounts, compared to only 30 percent of those 35 and older.

- Millennials are also twice as likely to enable 2FA for social networking accounts: 27 percent vs. 13 percent of older generations.

**On what types of sites are you using two-factor authentication?**

(Choose all that apply.)

	Millennial 18-34 N=314	35 or Older N=467	Total N=781
Financial (e.g., banks, investments, credit cards, PayPal, Priceline)*	54%	73%	66%
Email (e.g., Google, Yahoo!, Outlook, iCloud, Comcast, BT)*	59%	30%	42%
Social Networks (e.g., Facebook, Twitter, LinkedIn, Pinterest, Google+, Meetup)*	27%	13%	19%
Shopping (e.g., Amazon, eBay, etsy, Ikea, Groupon, BestBuy, Walmart, Target, Argos, Tesco)	21%	17%	19%
Communication (e.g., Internet or Phone Provider, Skype, Google Voice)*	22%	14%	17%
Entertainment (e.g., YouTube, Netflix, Pandora, Yahoo! Music, Google Play, Game Sites)*	23%	8%	14%
File Sharing and Storage (e.g., Dropbox, Google Drive, Instagram, Imgur, Shutterfly, Flickr)*	18%	11%	13%
Health (e.g., Insurance, WebMD, NHS, NIH, Myfitnesspal, Weightwatchers, Patient.co, CDC)	7%	10%	9%
Software in the Cloud (e.g., Office 365, TurboTax, WordPress, Evernote)	8%	8%	8%
News and Sports (e.g., CNN, BBC, NYT, The Guardian, Huffingtonpost, ESPN, Yahoo! Sports)*	9%	4%	6%
Travel (e.g., Airlines, Hotels, TripAdvisor, Booking.com, Expedia)	4%	6%	5%

\*p<.01

**Using two-factor authentication makes the majority feel their information is more secure.**

Almost nine in ten (86 percent) say that turning on two-factor authentication makes them feel their online information is more secure.

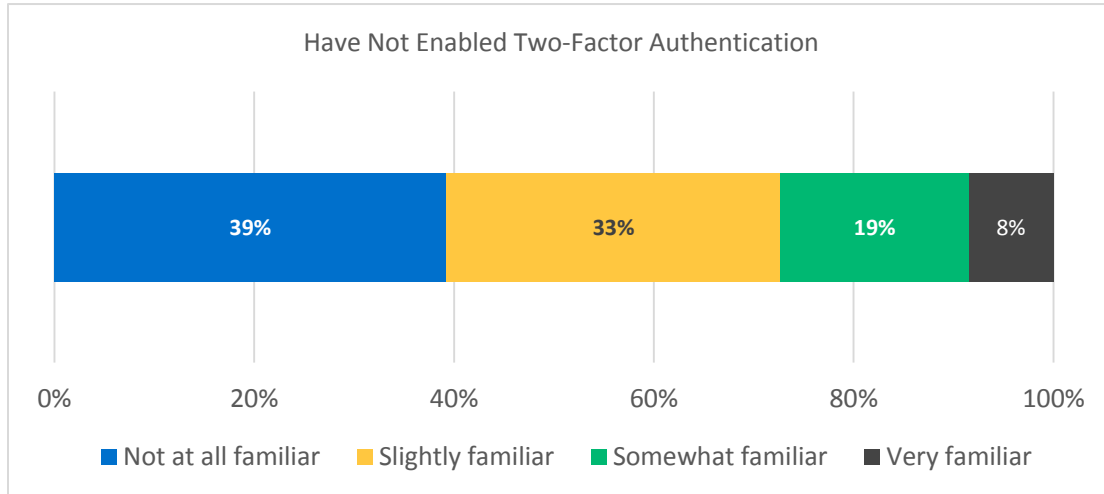
**Does using two-factor authentication make you feel that your online information is more secure?**

	US N=397	UK N=384	Total N=781
Yes	89%	83%	86%
No	5%	8%	6%
Don't know	6%	9%	7%
Total	100%	100%	100%



**The majority of those who have not turned on 2FA are unfamiliar with 2FA.**

Six in ten consumers (61 percent) have not turned on two-factor authentication. Seven in ten (72 percent) of those who have not turned on 2FA are not at all familiar or only slightly familiar with two-factor authentication.



**The top reasons for not enabling 2FA are don't know how to set it up, don't know what it is and online companies don't offer it.**

Three in ten consumers who aren't using two-factor authentication say they don't know how to set it up, none of their online accounts offers the protection, or they don't understand what 2FA is.

- One-fourth of consumers don't use 2FA because they're concerned that their mobile phone number will be spammed with unwanted marketing.

**What are the reasons that you don't use two-factor authentication?**  
(Choose all that apply.)

	US N=607	UK N=632	Total N=1,239
I don't know how to enable or set it up.	29%	29%	29%
None of my online accounts offer two-factor authentication.	28%	30%	29%
I don't know what it is.*	25%	31%	28%
I'm concerned that my phone number will be spammed with unwanted marketing.	25%	22%	24%
I'm worried that I won't be able to gain access to my accounts.*	17%	10%	14%
Passwords are sufficient protection.	10%	9%	9%
I tried, but it was too difficult to set it up.*	4%	1%	2%

\*p<.01

## RESEARCH DEMOGRAPHICS

### What is your age?

	US N=1,004	UK N=1,016	Total N=2,020
18 to 34 (Millennial)	45%	24%	35%
35 to 50 (Gen X)	29%	33%	31%
51 to 69 (Baby Boomer)	24%	37%	30%
70 or older (Silent Generation)	3%	5%	4%
Total	100%	100%	100%

\*p<.01

### Are you male or female?

	US N=1,004	UK N=1,016	Total N=2,020
Male	50%	50%	50%
Female	50%	50%	50%
Total	100%	100%	100%

### Which of the following do you own and regularly use?

	US N=1,004	UK N=1,016	Total N=2,020
Smartphone (a phone such as an Android or iPhone that can access your email and the Internet)	95%	94%	95%
Cellphone or mobile phone	20%	18%	19%
Neither of the above	0%	0%	0%
Total	100%	100%	100%

### What is the highest level of education that you have completed?

	US N=1,004
Less than High School	1%
High School / GED	15%
Some College	23%
Technical College Degree or Certificate	4%
2-year College Degree	10%
4-year College Degree	29%
Master's Degree	10%
Doctoral Degree	2%
Professional Degree (e.g., JD, MD, DDS, DC, DO)	4%
Total	100%

**What is the highest level of education that you have completed?**

	<b>UK</b> N=1,016
Entry Level Certificate	1%
GCSE/'O' Level	22%
AS/A-Level	16%
Certificate of Higher Education	7%
Diploma of Higher Education / Foundation Degree / HND	12%
Bachelor's Degree / Honours Degree	22%
Postgraduate Certificate	1%
Postgraduate Diploma	3%
Master's Degree	9%
Doctoral Degree	2%
Professional degree (MD, JD)	2%
Other	3%
Total	100%

**What range best describes the combined annual household income of all members of your household?**

	<b>US</b> N=1,004
\$0 to \$24,999	12%
\$25,000 to \$49,999	26%
\$50,000 to \$74,999	24%
\$75,000 to \$99,999	19%
\$100,000 or more	19%
Total	100%

**What range best describes the combined annual household income of all members of your household?**

	<b>UK</b> N=1,016
£0 to £20,000	24%
£20,000 to £29,999	21%
£30,000 to £39,999	17%
£40,000 to £49,999	12%
£50,000 to £59,999	8%
£60,000 to £69,999	6%
£70,000 or more	11%
Total	100%

**What is your primary employment status?**

	<b>US</b> N=1,004	<b>UK</b> N=1,016	<b>Total</b> N=2,020
Full-time (employed or self-employed)	48%	45%	47%
Retired*	10%	<b>19%</b>	15%
Part-time (employed or self-employed)	13%	15%	14%
Full-time homemaker	8%	8%	8%
Student*	<b>10%</b>	5%	7%
Not currently employed*	<b>7%</b>	4%	6%
Disabled	3%	3%	3%
<b>Total</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>

\*p<.01