Neptune Consumer Survey of Flood Risk Awareness – In partnership with the University of South Florida Institute for Data Analytics and Visualization

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Goals of Study

Neptune Flood in partnership with the University of South Florida Institute for Data Analytics and Visualization has established this national survey related to flood insurance adoption and consumer perceptions of risk. The survey will be conducted at a minimum once annually.

A large coverage gap exists in the US between those that have flood insurance and those that need flood insurance. This survey is designed to uncover data and opinions of flood risk and flood insurance, allowing statistical analysis of the results to enable the industry to help address and improve flood insurance coverage in the US.

Method

The methodology for the study comprised two phases. In the initial phase, exploratory interviews were conducted with a judgment sample of nine individuals who both *have* and *do not have* flood insurance, and who live in high-risk and moderate-low risk areas. The purpose of the interviews was to provide potential questions and response categories to be included in the study's quantitative survey.

The full-scale survey was administered to two batches of 500 surveys each and a final batch of 300 surveys. A judgment sample of states was selected based on two factors: residents are more prone to flooding in these states than others; and geographical representation. As such, the states purposefully included in the three batches made up of the following regions for geographic comparisons: *West Coast* (California, Oregon, Washington), *Northeast* (Connecticut, New Jersey, New York, Massachusetts), *Midwest* (Missouri, Illinois), *Carolinas* (North Carolina, South Carolina), *Florida*, and *Texas*. Of the total 1,300 surveys, 281 were not included because respondents did not own or rent their homes, or the surveys were incomplete or invalid. In total, there were 1,019 completed surveys included in the results.

Key Findings and Recommendations

The top findings include:
- Despite a large coverage gap and continued weather-driven flooding across the country, there is a significant lack of awareness of flood risk and flood insurance in general. 54% of those surveyed do not know what flood zone they are in. 100% of homes are in a flood zone, they just vary by degree of risk. FEMA and private industry spend millions of dollars per year on advisory and marketing communications of flood insurance, yet the majority of Americans still do not understand their risk.
- Perception that the risk of flooding at their home is low, whereas the actual risk is much higher. For example, 65% of Florida residents surveyed perceive their homes to be at Low or No Risk of flooding. Nationally, 63% believe that they are at Low or No Risk of flooding, yet according to a 2019 Verisk analysis 62M homes, or approximately 51% of US homes are at Moderate to Extreme Risk of flooding.
- 15% of consumers in high risk zones would not purchase flood insurance if it were not mandatory. Note that Auto insurance and Home insurance are both mandatory everywhere.
- A perception that flood insurance is expensive emanating from word of mouth hearsay. 27.7% of those that non-renewed did so because of perception of too expensive, and 21.3% of those that never bought insurance believed it is too expensive. Among those that do not have insurance, 77% don't know what it would cost. In fact, the average policy premium for residential flood insurance was $708 last year.
- Significant consumer confusion over which entity provides their flood insurance. Many consumers who purchased National Flood Insurance Program (NFIP) policies via a private company agency (called Write Your Own (WYO) insurers) think they have a private flood policy. This creates a situation of under-insurance, where homeowners purchase up to the $250,000 maximum allowed by the NFIP, whereas the actual cost of rebuilding the home would be much greater in most parts of the US.
- While not sure if they are at risk, 9% of those surveyed attributed their purchase of flood insurance in part due to their neighbors buying flood insurance.
- Surprisingly, the 18-34 age group perceived their risk as the highest of any age group.
- Despite a money losing program, consumers are highly confident (82%) that the NFIP will pay out on claims. They also have high confidence in private insurers honoring claims (67%), however the majority also believe that private flood companies would be more efficient in paying claims.

More detailed analysis of the responses and data include:
- **Confidence**. Individuals who currently have insurance with either the NFIP or private insurers are highly confident that their claims will be honored.
    - 82% have Very High or High confidence that the NFIP will pay claims that cover losses.
    - 67% have similar confidence that Private will pay.
    - However, 55.6% believe private is more efficient at paying claims.
- **Awareness and Risk Perception.** 70% of individuals without flood insurance cited not being at risk as a primary reason for not buying it. This may present an opportunity to improve the coverage gap because some of these individuals may be at risk and not know it. Further, individuals who had no knowledge of their flood zone were significantly less likely to feel their homes were at risk than those who had knowledge of their flood zones. Some useful information:
    - 63% believe that they have Low Risk or No Risk of flooding, whereas statistically over 50% of US homes are at Moderate to High Risk.
    - Only 7.6% of respondents believe they are at High Risk of flooding.

- 65% of Floridians perceive themselves to be at Low to No risk of flooding.
- 15% of those in A/V zones with flood insurance would NOT purchase if not required to
- 45% of those that have not bought flood insurance do not believe they are at risk.
- 69% estimate the value of their belongings to be less than $25K, whereas the average contents value in a sample portfolio of tens of thousands of policies is $51K, highlighting significant underestimation of value.

- **Age and Risk Perception**. Younger individuals are more likely than older individuals to believe their homes are at risk of flooding. The 18-34 age range has the highest perception of risk of any age category.
- **Gender and Risk Perception.** Men and women showed no statistically significant difference in terms of perceptions of flood risk.
- **Responsiveness.** Individuals who do not have flood insurance are much more likely to think private insurers are more responsive. This may emanate from preconceived notions about inefficiencies in government bureaucratic structures.
- **Awareness.** A substantial number of respondents without flood insurance (27.2%) cited "It's not on my mind" as a reason for not purchasing flood insurance.
- **Cost.** Lack of knowledge of the cost of flood insurance, anecdotally "heard the price is high."
  - 44.7% of those that non-renewed and 44.9% of those that never bought flood insurance opted to not purchase due to perceptions or concerns about the cost of flood insurance
  - Among those that do not have insurance, 77% don't know what it would cost.
- **Renewal Risk.**
  - Among those who believe they have insurance with the NFIP, nearly four-fifths (78.9%) indicated that they would renew with NFIP. By contrast, among those who believe they have insurance with a private insurer, only 42.4% indicated they would renew with a private insurer, while about one-third (33.1%) indicated they would switch to the NFIP.
- **General Lack of Knowledge of the Product.**
  - 54% (554/1019) don't know or are very unsure what flood zone they are in.
  - Of those WITH Flood Insurance, only 22% know "for sure" what Flood Zone they are in.
  - As much as 25% of those that have flood insurance think that they have private flood, when actually it is an NFIP product.
- **Reasons for Purchasing Flood Insurance.**
  - 8.9% bought because some of their neighbors did so.

1. Do you own your primary living residence?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes, I own it outright.	462	45.3	45.3	45.3
	Yes, I own it and have a mortgage.	357	35.0	35.0	80.4
	No, I rent it.	200	19.6	19.6	100.0
	Total	1019	100.0	100.0	

Do you own your primary living residence? - Selected Choice

- Yes, I own it outright.
- Yes, I own it and have mortgage.
- No, I rent it.

19.63%
No, I rent it.

45.34%
Yes, I own it outright.

35.03%
Yes, I own it and have a mortgage.
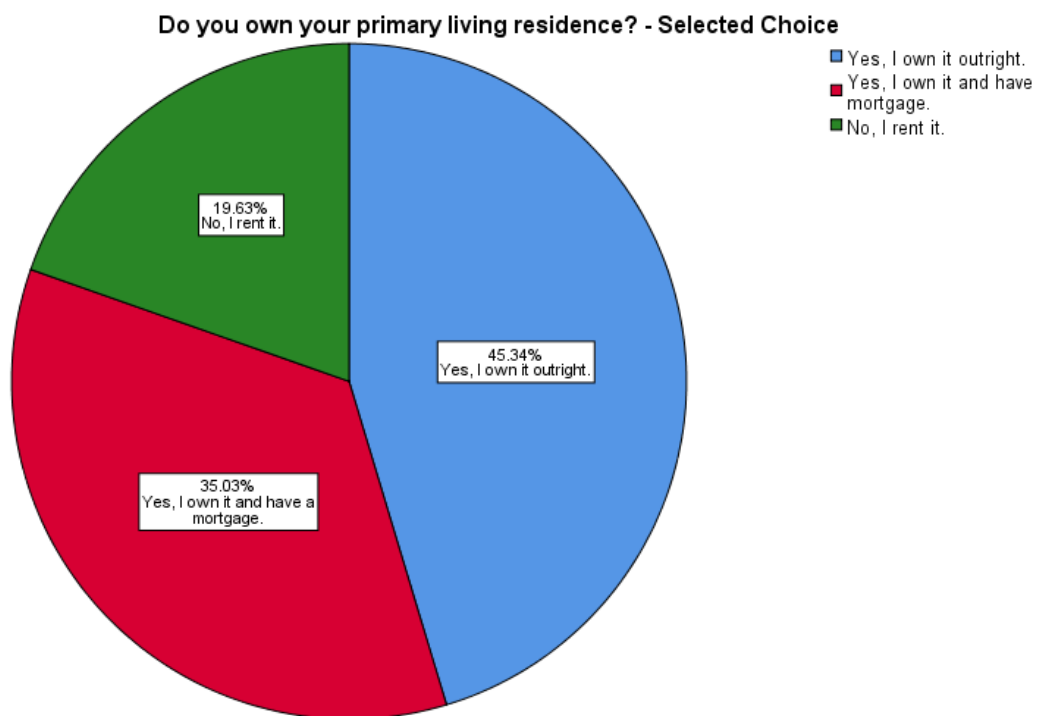
Eighty percent of survey participants indicated they owned their homes – either outright or with a mortgage.

2. In what FEMA flood zone is your primary residence located?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	A	249	24.4	24.4	24.4
	X, B, or C	228	22.4	22.4	46.8
	V	40	3.9	3.9	50.7
	I don't know	502	49.3	49.3	100.0
	Total	1019	100.0	100.0	

In what FEMA flood zone is your primary residence located?
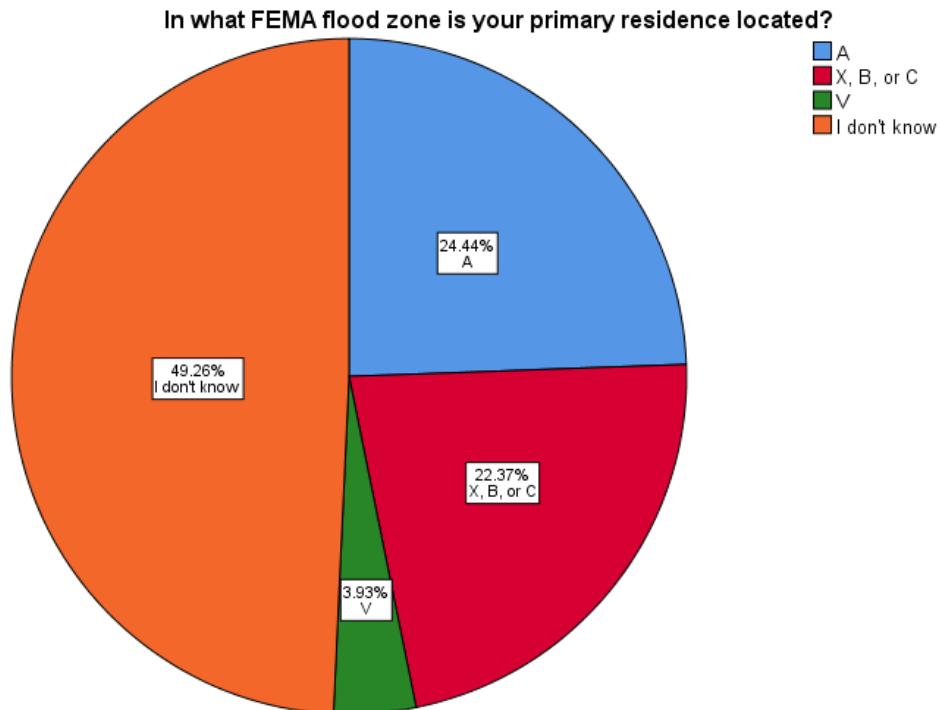
About half of the survey participants indicated they did not know what flood zone they were located in.

3. How sure are you that your primary residence is in flood zone?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Not sure at all	2	.2	.4	.4
	Not very sure	50	4.9	9.7	10.1
	Pretty sure	243	23.8	47.0	57.1
	Very sure	222	21.8	42.9	100.0
	Total	517	50.7	100.0	
Missing	System	502	49.3		
Total		1019	100.0		

How sure are you that your primary residence is in flood zone [QID12-ChoiceGroup-SelectedChoices]?

Legend:
- Not sure at all
- Not very sure
- Pretty sure
- Very sure

9.67% Not very sure
42.94% Very sure
47.00% Pretty sure
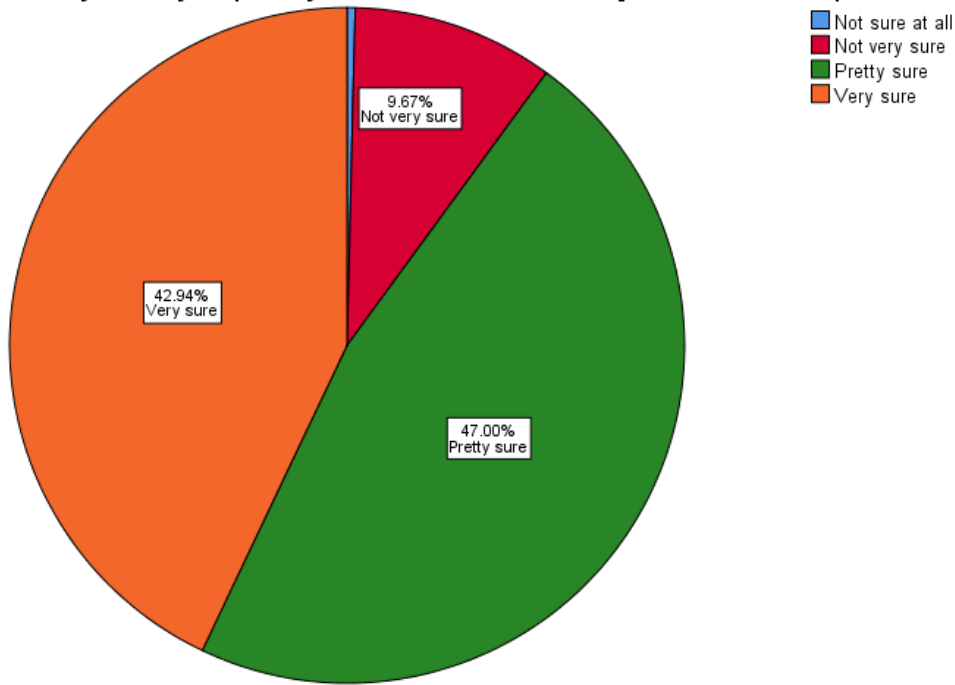
Among those respondents who indicated they knew which flood zone they were in, about 90% were confident that they were correct in their knowledge.

4. Do you currently have flood insurance on your primary living residence?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	549	53.9	53.9	53.9
	No	470	46.1	46.1	100.0
	Total	1019	100.0	100.0	

Do you currently have flood insurance on your primary living residence?
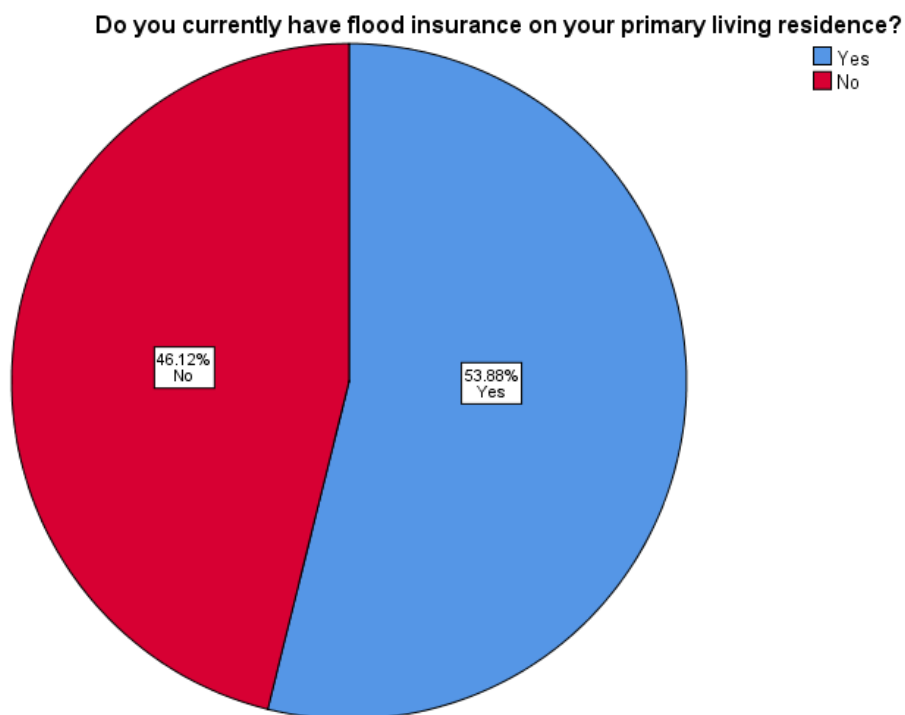
Slightly more than half of the study's respondents indicated they had flood insurance.

5a. What are the main reasons you decided to purchase flood insurance? (Check all that apply.)

		Responses		Percent of Cases
		N	Percent	
Main Reasons for Flood Insurance[a]	Peace of mind.	275	25.0%	50.1%
	Flood damage can be expensive.	309	28.1%	56.3%
	I'm required to have flood insurance by my lender or law.	194	17.7%	35.3%
	I'm not sure I'm at risk, but some of my neighbors have flood insurance.	98	8.9%	17.9%
	My agent recommended that I purchase flood insurance.	213	19.4%	38.8%
	Other	10	0.9%	1.8%
Total		1099	100.0%	200.2%

Notably, substantially more respondents cited 'flood damage can be expensive' (28.1%) and 'peace of mind' (25%) as reasons for buying flood insurance than 'I'm required to have flood insurance by lender or law' (17.7%). 'My agent recommended that I purchase flood insurance' (19.4%) was also a slightly more popular response.

5b. Other reasons for purchasing flood insurance besides those provided on the survey.

- Creek runs through property and has flooded about 20 ft from house as well as numerous times in the past 15 years.
- Entire county is high risk in the event of a major hurricane or tropical storm
- I had flood insurance on my home and didn't remove it for my temporary residence
- I live in Florida
- I live on a lake, plus I'm in Florida (hurricane season).
- Live close enough to Houston to know to get flood insurance
- near a flooding creek
- our house flooded once; I'm not taking another chance
- The area I live in is occasionally prone to flooding
- We are close to a flood zone, and I am concerned about it being altered due to development.

6. If you were not required to purchase flood insurance, would you still purchase it?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	140	13.7	72.2	72.2
	No	30	2.9	15.5	87.6
	Unsure	24	2.4	12.4	100.0
	Total	194	19.0	100.0	
Missing	System	825	81.0		
Total		1019	100.0		

If you were not required to purchase flood insurance, would you still purchase it?
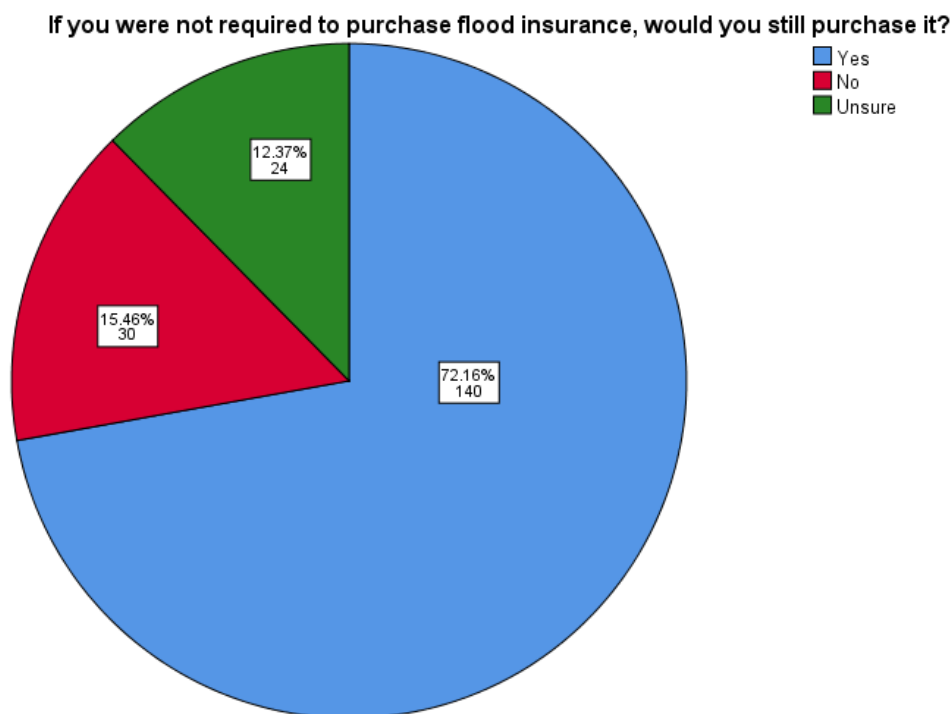
72% of the study's participants who indicated that they were required to have flood insurance would purchase it even if they were not required to carry flood insurance.

7. With whom do you have your flood insurance policy?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	The government's National Flood Insurance Program	223	21.9	40.6	40.6
	A Private Company Insurer	314	30.8	57.2	97.8
	I don't know	11	1.1	2.0	99.8
	Other (Please describe)	1	.1	.2	100.0
	Total	549	53.9	100.0	
Missing	System	470	46.1		
Total		1019	100.0		

With whom do you have your flood insurance policy? - Selected Choice
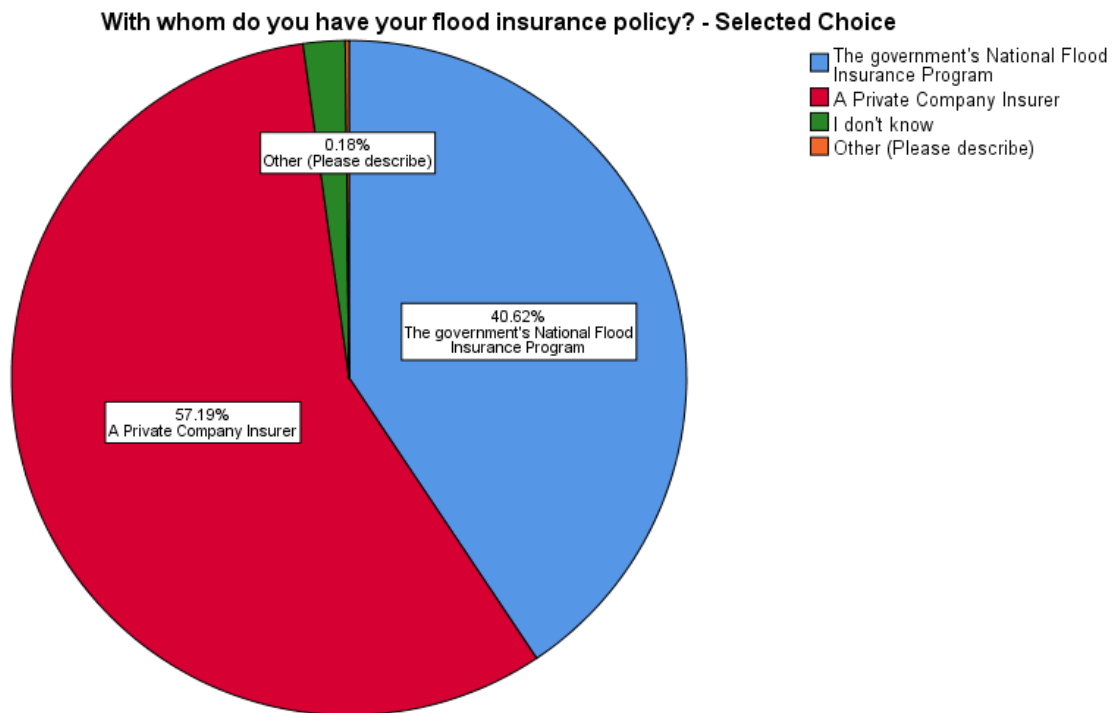
About 57% of the study's respondents indicated they had flood insurance with a private company insurer, whereas 90% of the general market have NFIP policies, highlighting a misperception of private coverage when they actually have an NFIP policy.

8a. What is your level of confidence that your insurer will honor your claims for losses if you have a flood? (Among those currently insured by NFIP insurer)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Low confidence	3	1.3	1.3	1.3
	Moderate confidence	37	16.6	16.6	17.9
	High confidence	98	43.9	43.9	61.9
	Very high confidence	85	38.1	38.1	100.0
	Total	223	100.0	100.0	

What is your level of confidence that your insurer will honor your claims for losses if you have a flood?

- Low confidence
- Moderate confidence
- High confidence
- Very high confidence

1.35%
Low confidence

16.59%
Moderate confidence

38.12%
Very high confidence

43.95%
High confidence
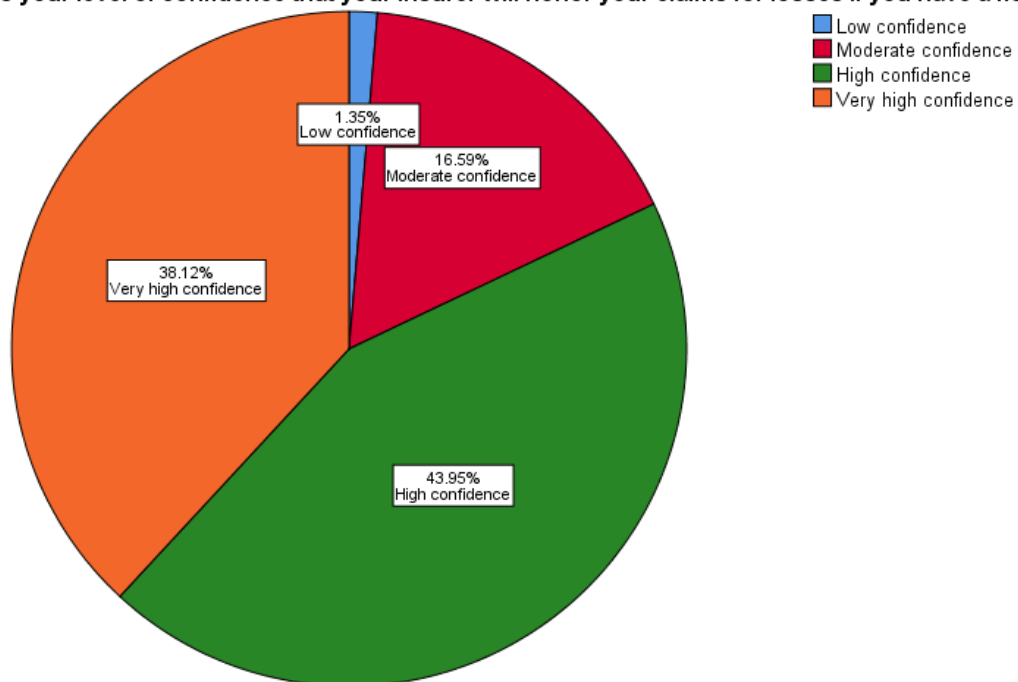
About 38% of respondents indicated very high confidence in NFIP to honor their claims, with another 44% of respondents indicated high confidence.

8b. What is your level of confidence that your insurer will honor your claims for losses if you have a flood? (Among those currently insured with Private Insurer)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Low confidence	8	2.5	2.5	2.5
	Moderate confidence	95	30.3	30.3	32.8
	High confidence	135	43.0	43.0	75.8
	Very high confidence	76	24.2	24.2	100.0
	Total	314	100.0	100.0	

What is your level of confidence that your insurer will honor your claims for losses if you have a flood?
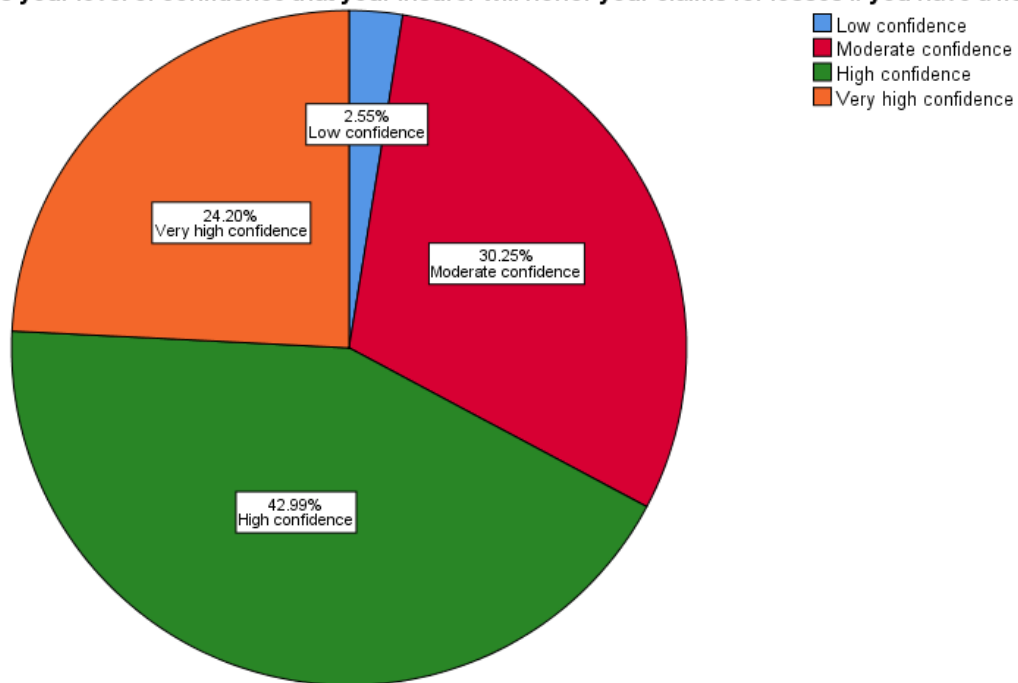
About 24% of respondents indicated very high confidence in their private insurer to honor their claims, with another 43% of respondents indicated high confidence.

Group Statistics

	With whom do you have your flood insurance policy? - Selected Choice	N	Mean	Std. Deviation	Std. Error Mean
What is your level of confidence that your insurer will honor your claims for losses if you have a flood?	The government's National Flood Insurance Program	223	4.19	.754	.050
	A Private Company Insurer	314	3.89	.798	.045

On a five-point scale, with five equaling very high confidence and one equaling very low confidence, individuals with the government NFIP averaged 4.19 in terms of their flood claims being honored. Individuals with private insurers averaged 0.3 less, at 3.89. The difference was significant at the 99% confidence level.

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means					95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
What is your level of confidence that your insurer will honor your claims for losses if you have a flood?	Equal variances assumed	.140	.708	4.391	535	.000	.300	.068	.166	.434
	Equal variances not assumed			4.434	493.954	.000	.300	.068	.167	.433

9a. What are the main reasons you decided NOT to purchase flood insurance?

Not_purchase Frequencies

		Responses		Percent of
		N	Percent	Cases
Reasons for Not Purchasing Flood Insurance[a]	My home is built to withstand the damage that comes from flooding.	30	4.1%	6.4%
	It's too expensive.	100	13.6%	21.3%
	I don't believe I'm at risk.	329	44.8%	70.0%
	I don't have the disposable income to buy flood insurance.	111	15.1%	23.6%
	It's just not on my mind.	128	17.4%	27.2%
	Other (Please specify)	36	4.9%	7.7%
Total		734	100.0%	156.2%

a. Dichotomy group tabulated at value 1.

The reason most participants cited for not buying flood insurance was that they did not believe they were at risk.

9b. Other reasons for not purchasing flood insurance besides those provided on the survey.

- 2nd floor
- flood control repairs are being made right now
- House is not in a flood area
- I am a renter - though I have flood protection as part of my renter's policy
- I am a renter in an apartment building
- I am a renter.
- I am not in a flood zone
- I don't own a ton of stuff
- I don't own my home
- I have not looked into it
- I have not seen a flood during past hurricanes
- I live atop a high hill
- I live in Active Duty Military Housing
- I live on a mountain
- I rent
- I rent
- I rent an apartment so presumably the building owner has flood insurance/I only have rental insurance on the apartment
- I'm in a zone of minimal flood hazrad.
- I'm renting, and my soon-to-be-permanent residence is not in a flood zone.
- It is not available to purchase because we are near an area that commonly has flooding problems.
- it's a rental property and they cover that
- It's not up to me, as a renter, to purchase
- landlord says not in flood zone
- My home is a sailboat.
- My home is on top of a hill
- My monthly condo association fee covers risks from flooding.
- No rivers within 50 miles
- Not required by FEMA
- Not required in my area.
- Only the unfinished basement floods, slightly.
- They don't sell to to me because I am at no risk zone.
- We just moved in a few months ago and we're looking into flood insurance, but we haven't gotten around to purchasing yet due to pandemic-related lockdowns, etc.
- We live far away from the river
- We live on the top of a hill.
- when other homes have flooded in the neighborhood, mine was higher and did not flood

10. Did you have a flood insurance policy in the past?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	47	4.6	10.0	10.0
	No	423	41.5	90.0	100.0
	Total	470	46.1	100.0	
Missing	System	549	53.9		
Total		1019	100.0		

Did you have a flood insurance policy in the past?
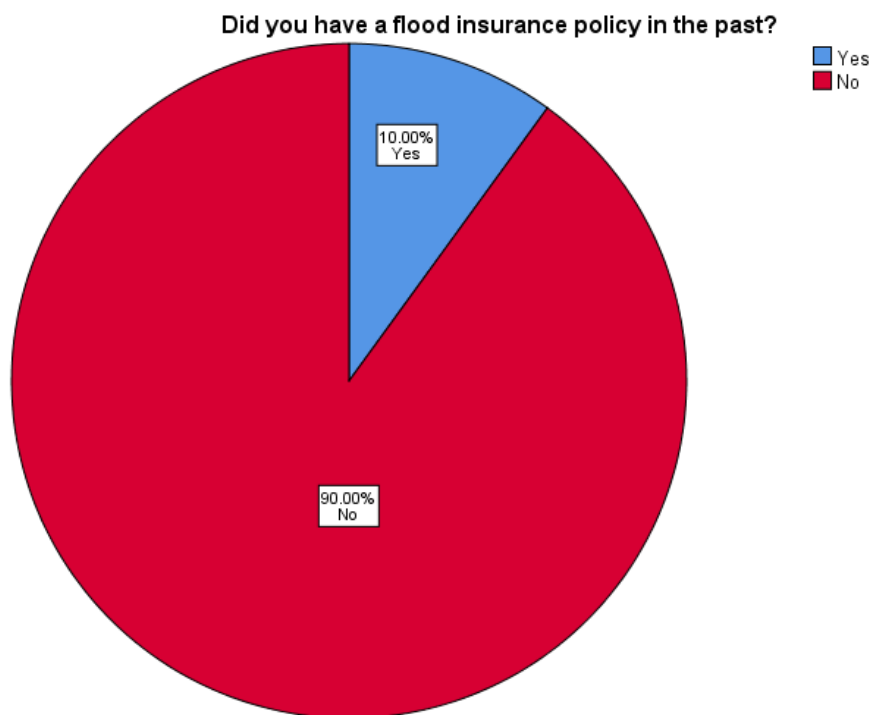
Ninety percent of participants who did not have a flood insurance policy had not had one in the past.

11a. Why did you discontinue your flood insurance?

Discontinue Flood Insurance Frequencies

		Responses		Percent of
		N	Percent	Cases
Why discontinue Flood Insurance[a]	My home is built to withstand the damage that comes from flooding.	2	2.9%	4.3%
	It became too expensive.	13	18.8%	27.7%
	I don't believe I'm at risk.	9	13.0%	19.1%
	I don't have the disposable income to buy flood insurance.	8	11.6%	17.0%
	I just didn't bother renewing it.	7	10.1%	14.9%
	My insurance company cancelled my policy.	2	2.9%	4.3%
	I moved to a different location where is was not required.	21	30.4%	44.7%
	Other	7	10.1%	14.9%
Total		69	100.0%	146.8%

a. Dichotomy group tabulated at value 1.
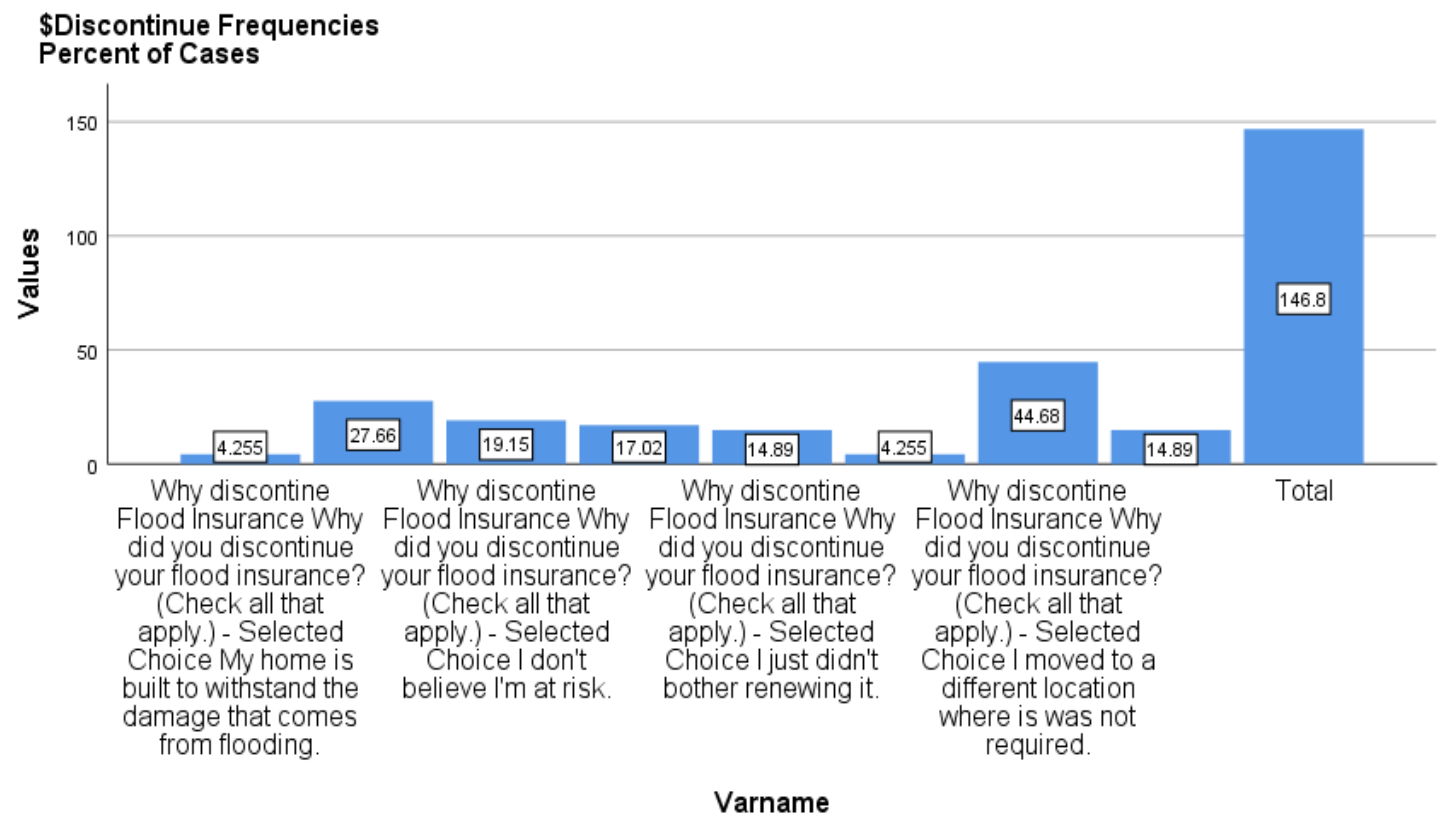
Nearly half of all participants who canceled their flood insurance policies did so because they moved.

20

11b. Other reasons for discontinuing flood insurance beside those not provided on the survey.

- flood control repairs being made right now
- I did not see any flood during past hurricanes for 16 years
- I got a LOMA from FEMA
- I had it on a previous home I owned.
- It isn't required at my house.
- It was no longer required
- My house's location is extremely high up and unlikely to flood

12. Do you know the approximate cost of a flood insurance policy for your primary residence?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	I'm very sure how much flood insurance would cost for me.	15	1.5	3.2	3.2
	I'm pretty sure how much flood insurance would cost for me.	92	9.0	19.6	22.8
	I'm not sure how much flood insurance would cost for me.	363	35.6	77.2	100.0
	Total	470	46.1	100.0	
Missing	System	549	53.9		
	Total	1019	100.0		

Do you know the approximate cost of a flood insurance policy for your primary residence?

Legend:
- I'm very sure how much flood insurance would cost for me.
- I'm pretty sure how much flood insurance would cost for me.
- I'm not sure how much flood insurance would cost for me.

Pie chart labels:
- 3.19% I'm very sure how much flood insurance would cost for me.
- 19.57% I'm pretty sure how much flood insurance would cost for me.
- 77.23% I'm not sure how much flood insurance would cost for me.
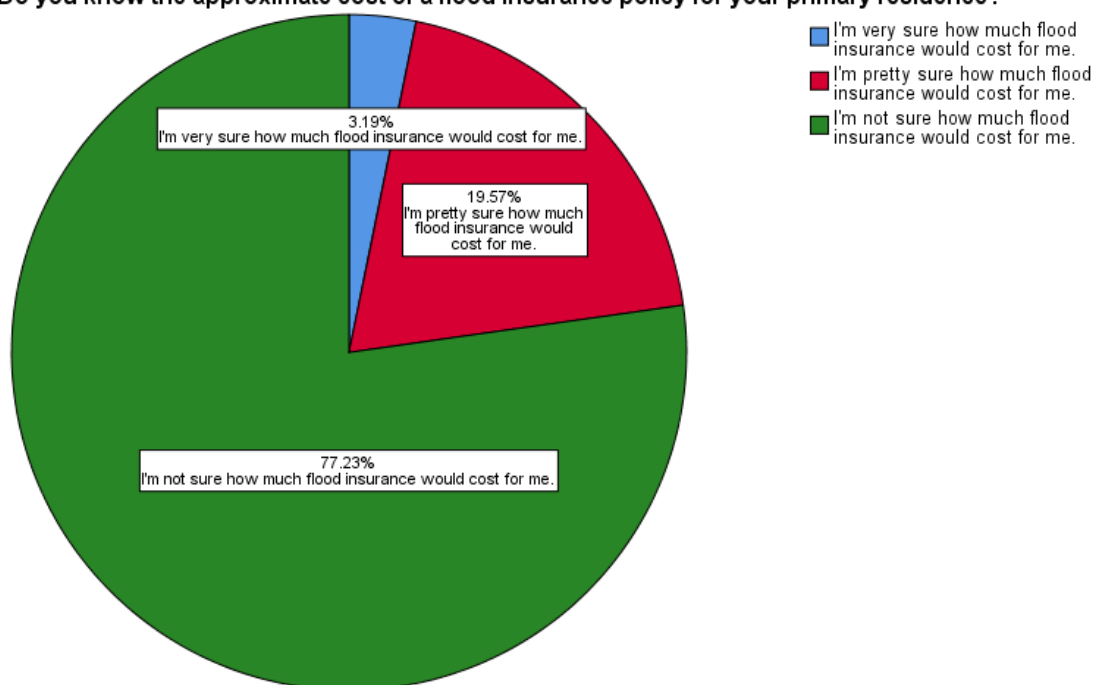
Only individuals who do not have flood insurance answered this question. Among these uninsured individuals, over three-fourths are unsure how much flood insurance would cost them.

13. How much would it cost to replace your belongings in a typical flood in your area?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Less than $5,000	27	2.6	14.4	14.4
	$5,000 - $9,999	43	4.2	22.9	37.2
	$10,000 - $24,999	60	5.9	31.9	69.1
	$25,000 - $49,999	16	1.6	8.5	77.7
	$50,000 or more	12	1.2	6.4	84.0
	I don't know	30	2.9	16.0	100.0
	Total	188	18.4	100.0	
Missing	System	831	81.6		
Total		1019	100.0		

How much would it cost to replace your belongings in a typical flood in your area?
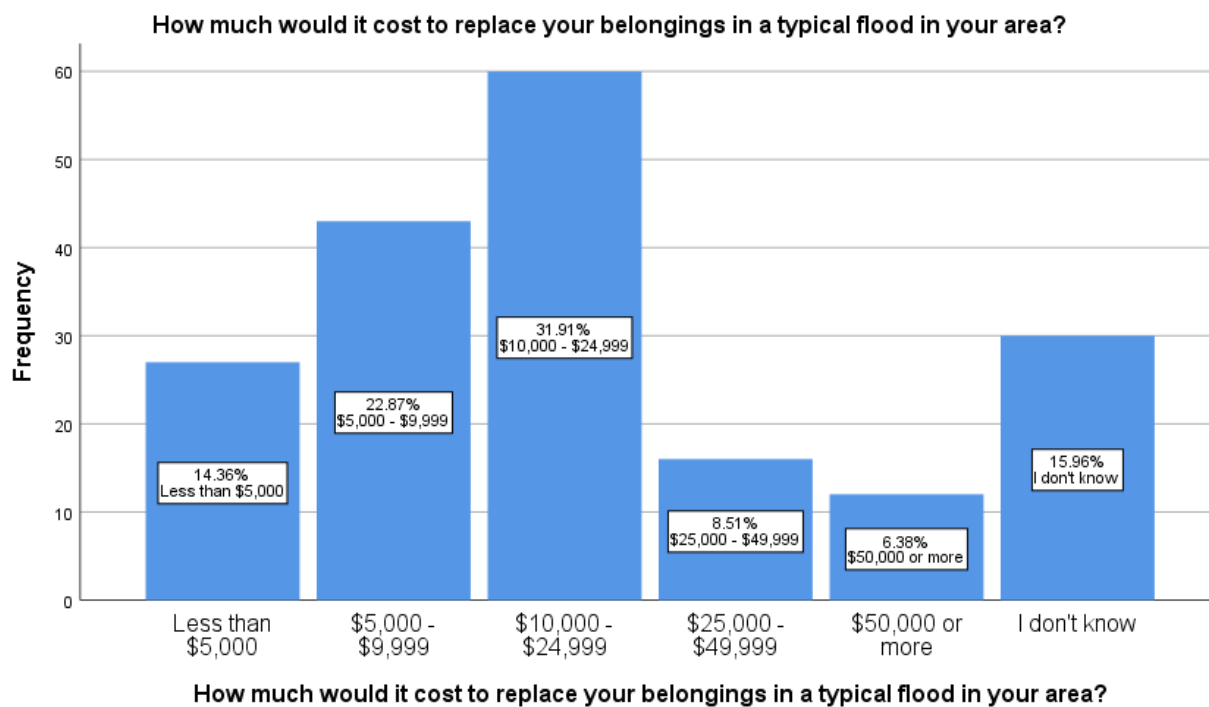
This question was only presented to renters. Only about 15% of renters believe their belongings are worth $25,000 or more.

14. Who would you expect to be more responsive in terms of getting a flood insurance claim processed?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	The government's National Flood Insurance Program	452	44.4	44.4	44.4
	A private company insurer	567	55.6	55.6	100.0
	Total	1019	100.0	100.0	

Who would you expect to be more responsive in terms of getting a flood insurance claim processed?

■ The government's National Flood Insurance Program
■ A private company insurer

44.36%
The government's National Flood Insurance Program

55.64%
A private company insurer
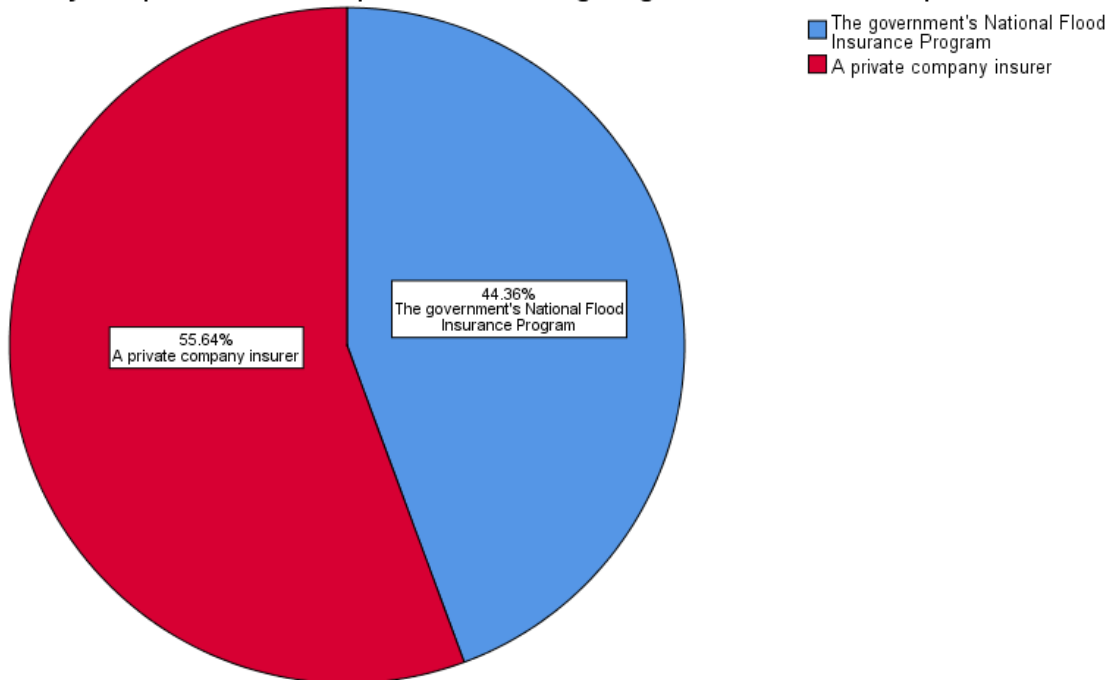
14a. Who would you expect to be more responsive in terms of getting a flood insurance claim processed? (Among those with no flood insurance.)

Who would you expect to be more responsive in terms of getting a flood insurance claim processed?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	The government's National Flood Insurance Program	131	27.9	27.9	27.9
	A private company insurer	339	72.1	72.1	100.0
	Total	470	100.0	100.0	

Who would you expect to be more responsive in terms of getting a flood insurance claim processed?

- The government's National Flood Insurance Program
- A private company insurer

27.87%
The government's National Flood Insurance Program

72.13%
A private company insurer
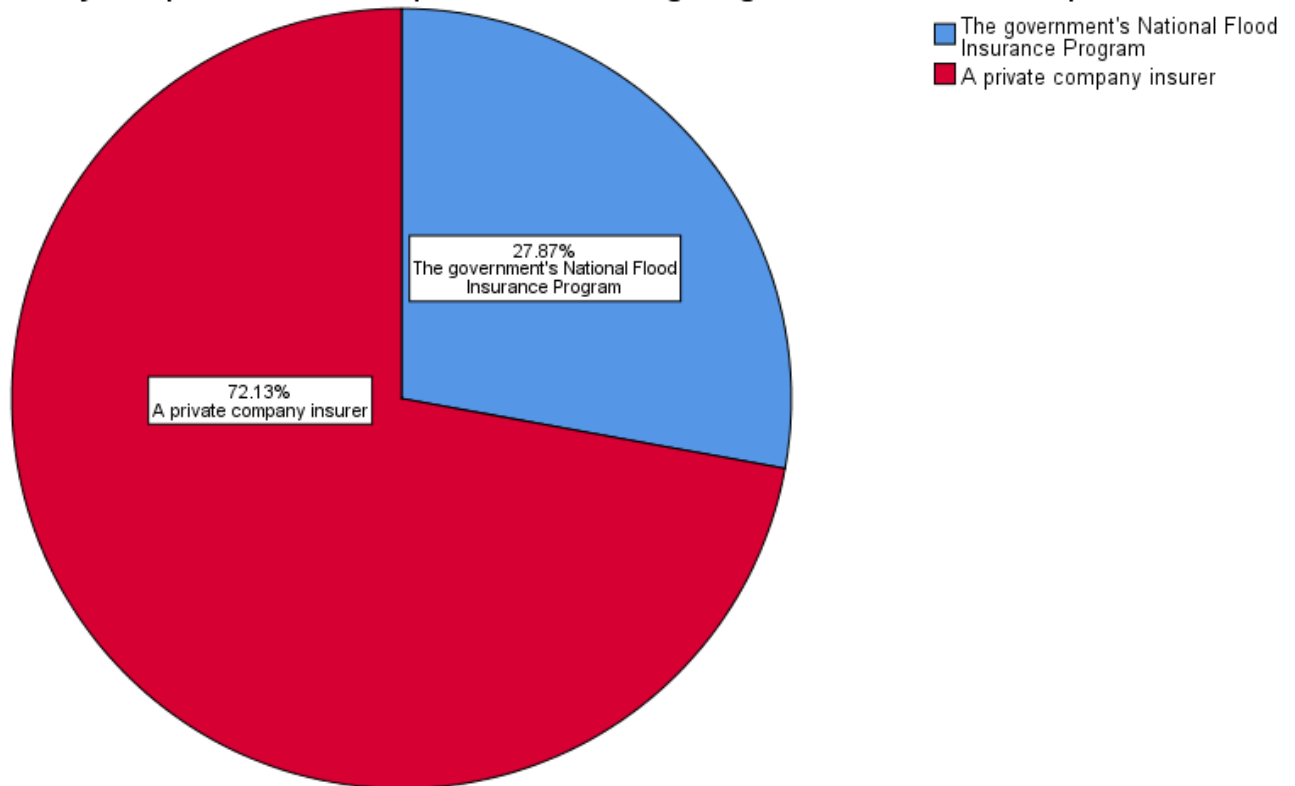
14b. Who would you expect to be more responsive in terms of getting a flood insurance claim processed? (Among those with NFIP insurer.)

Who would you expect to be more responsive in terms of getting a flood insurance claim processed?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	The government's National Flood Insurance Program	203	91.0	91.0	91.0
	A private company insurer	20	9.0	9.0	100.0
	Total	223	100.0	100.0	

Who would you expect to be more responsive in terms of getting a flood insurance claim processed?
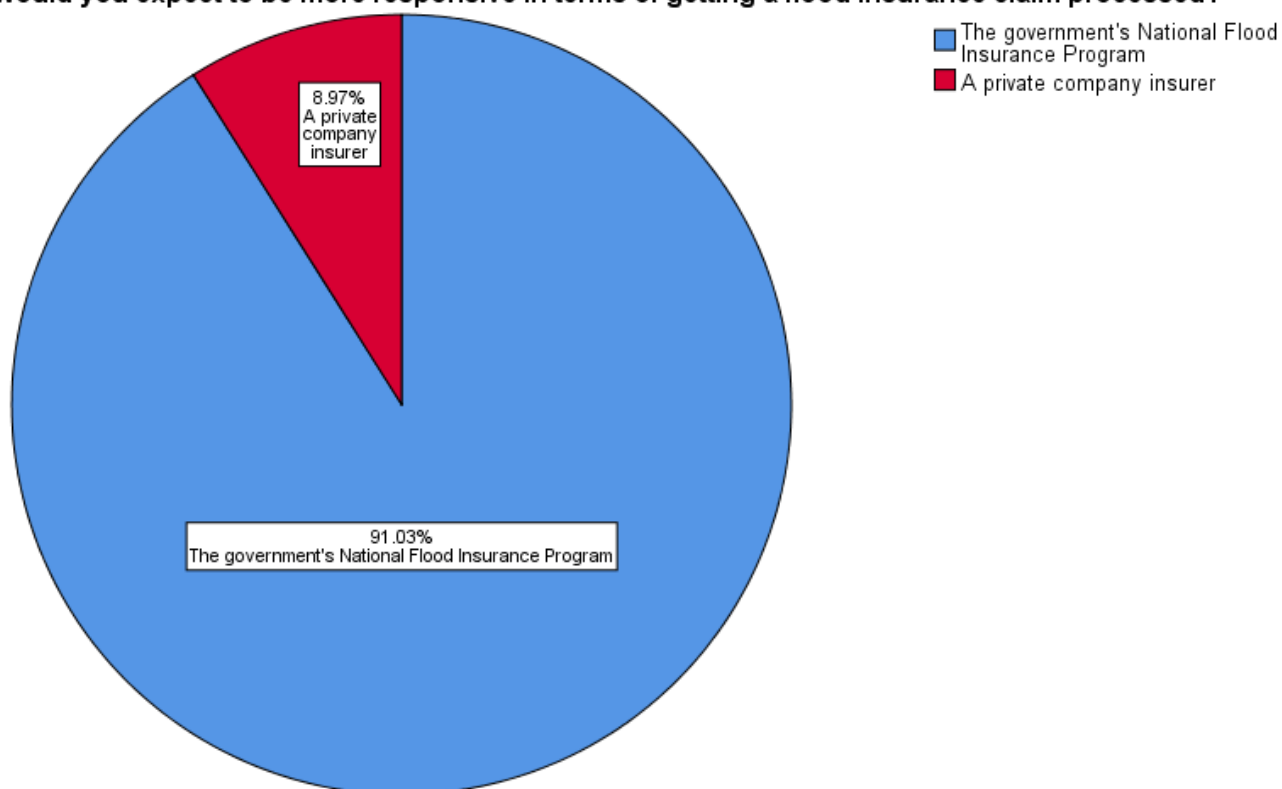
14c. Who would you expect to be more responsive in terms of getting a flood insurance claim processed? (Among those with Private insurer.)

Who would you expect to be more responsive in terms of getting a flood insurance claim processed?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	The government's National Flood Insurance Program	113	36.0	36.0	36.0
	A private company insurer	201	64.0	64.0	100.0
	Total	314	100.0	100.0	

Who would you expect to be more responsive in terms of getting a flood ins

35.99%
113

64.01%
201
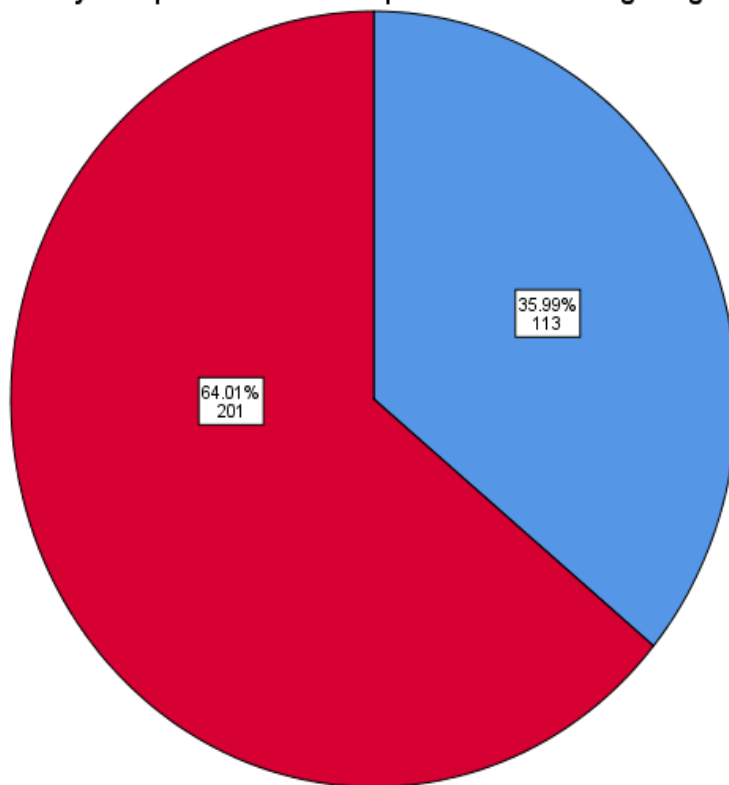
- Among those individuals who have no flood insurance, 72% believe a private insurer is more responsive.
- Among those with NFIP, 90% believe NFIP is more responsive.
- Among those privately insured, 64% believe private insurers are more responsive.

15. In your opinion, what is the likelihood of your residence flooding in the next five years:

Statistics

In your opinion, what is the likelihood of your residence flooding in the next five years:

N	Valid	1019
	Missing	0
Median		2.00

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No risk at all	175	17.2	17.2	17.2
	Low risk	463	45.4	45.4	62.6
	Moderate risk	284	27.9	27.9	90.5
	High	78	7.7	7.7	98.1
	I don't know	19	1.9	1.9	100.0
	Total	1019	100.0	100.0	
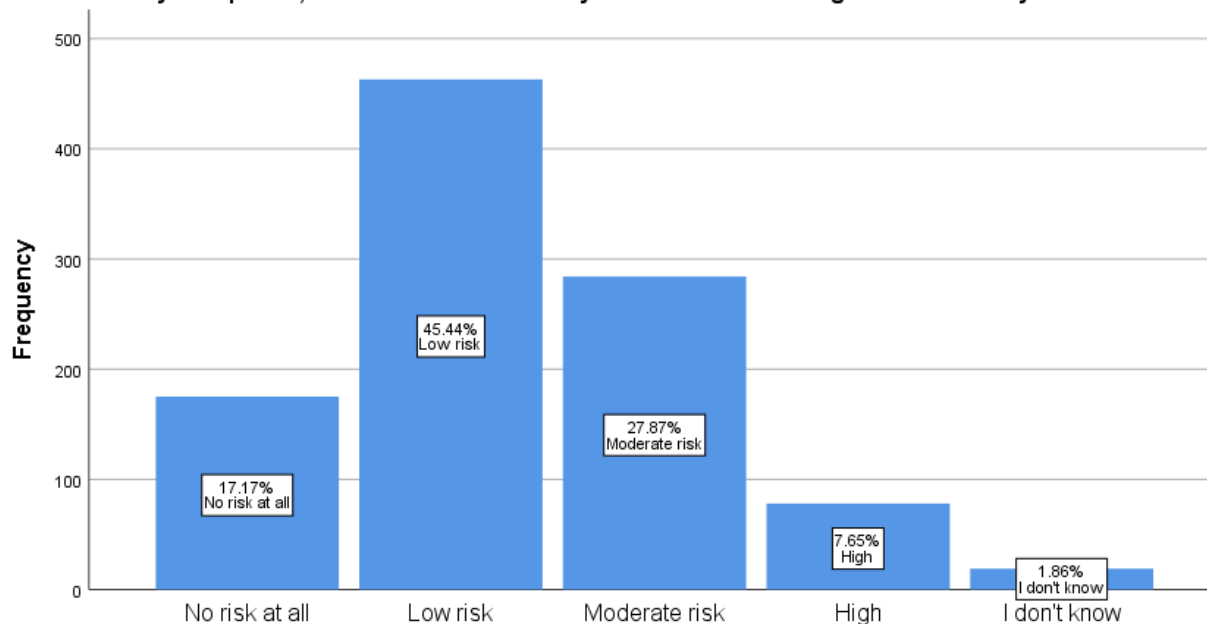
In your opinion, what is the likelihood of your residence flooding in the next five years:

The median response category is 'low risk.' Nearly half of all survey respondents view their residences as low risk in term of flooding.

16. How much would it cost to repair your home and replace your belongings in a typical flood in your area?

Statistics

How much would it cost to repair your home and replace your belongings in a typical flood in your area?

N	Valid	819
	Missing	200
Median		3.00

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Less than $10,000	55	5.4	6.7	6.7
	$10,000 - $24,999	138	13.5	16.8	23.6
	$25,000 - $49,999	229	22.5	28.0	51.5
	$50,000 - $99,999	213	20.9	26.0	77.5
	$100,000 or more	94	9.2	11.5	89.0
	I don't know	90	8.8	11.0	100.0
	Total	819	80.4	100.0	
Missing	System	200	19.6		
Total		1019	100.0		

How much would it cost to repair your home and replace your belongings in a typical flood in your area?

6.72%
Less than $10,000

16.85%
$10,000 - $24,999

27.96%
$25,000 - $49,999

26.01%
$50,000 - $99,999

11.48%
$100,000 or more

10.99%
I don't know
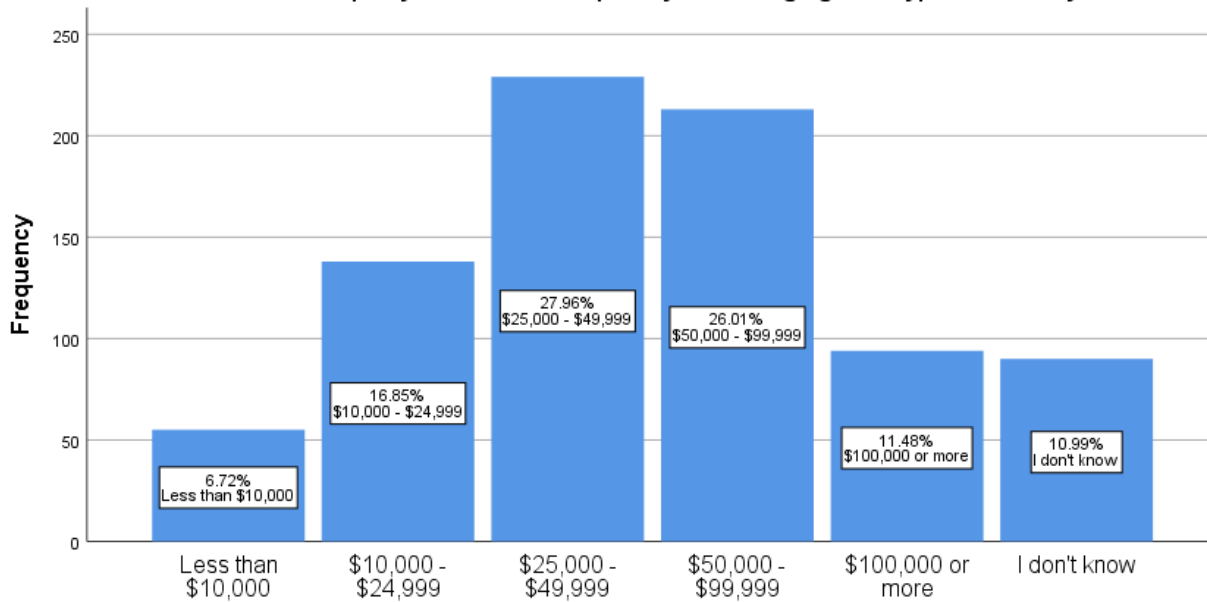
How much would it cost to repair your home and replace your belongings in a typical flood in your area?

This question was only given to homeowners. The median response category was '3' which is $25,000 - $49,999. Most homeowners in this survey believe the cost to repair their home and replace their belongings is between $25,000 and $99,999.

17. Please let us know which choice below most accurately reflects your feelings (structure versus contents).

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Insuring my home's structure is much more important than insuring the contents of my home.	207	20.3	20.3	20.3
	Insuring my home's structure is somewhat more important than insuring the contents of my home.	277	27.2	27.2	47.5
	Insuring my home's structure is equally important to insuring my home's contents from flooding.	392	38.5	38.5	86.0
	Insuring the contents of my home is somewhat more important to me than insuring my home's structure.	71	7.0	7.0	92.9
	Insuring the contents of my home is much more important to me than insuring my home's structure.	72	7.1	7.1	100.0
	Total	1019	100.0	100.0	
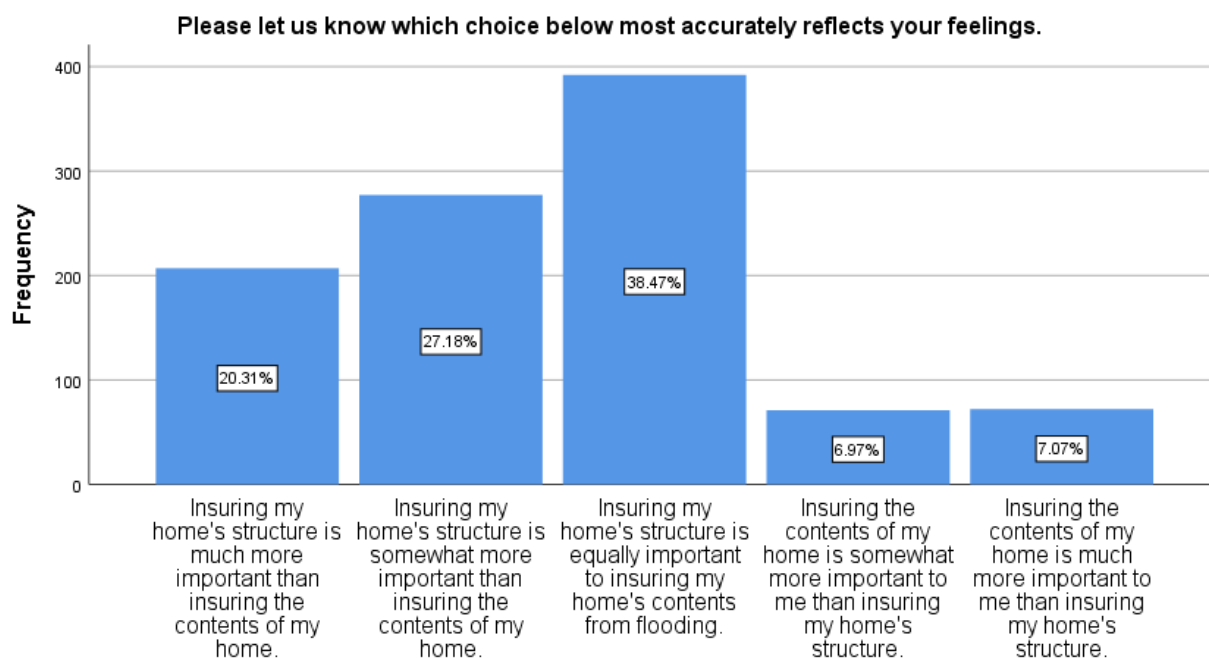
Please let us know which choice below most accurately reflects your feelings.

This question was given to all respondents. A plurality (38.5%) believe that insuring their home's stucture and contents are equally important.

18. Which of the choices below best describes your primary living residence? - Selected Choice

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Detached, single family home	604	59.3	59.3	59.3
	Duplex, rowhouse, or townhouse	230	22.6	22.6	81.8
	Condominium, co-op, or apartment	152	14.9	14.9	96.8
	Mobile or manufactured home	27	2.6	2.6	99.4
	Other, please specify	6	.6	.6	100.0
	Total	1019	100.0	100.0	
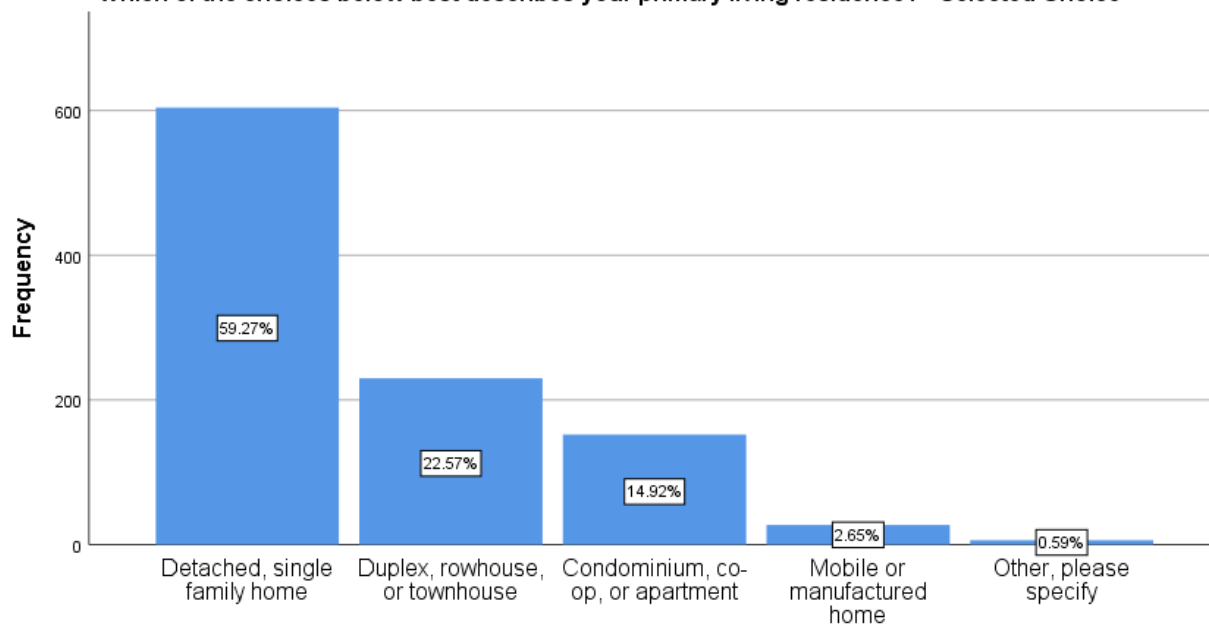
Which of the choices below best describes your primary living residence? - Selected Choice

19. What is the highest level of school you have completed or the highest degree you have received?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Less than High School Degree	2	.2	.2	.2
	High School Graduate (High School Diploma or Equivalent including GED)	63	6.2	6.2	6.4
	Some College but no Degree	107	10.5	10.5	16.9
	Associate's Degree (2 year)	90	8.8	8.8	25.7
	Bachelor's Degree (4 year)	538	52.8	52.8	78.5
	Master's Degree	197	19.3	19.3	97.8
	Doctoral Degree	12	1.2	1.2	99.0
	Professional Degree (e.g. MD)	10	1.0	1.0	100.0
	Total	1019	100.0	100.0	

What is the highest level of school you have completed or the highest degree you have received?
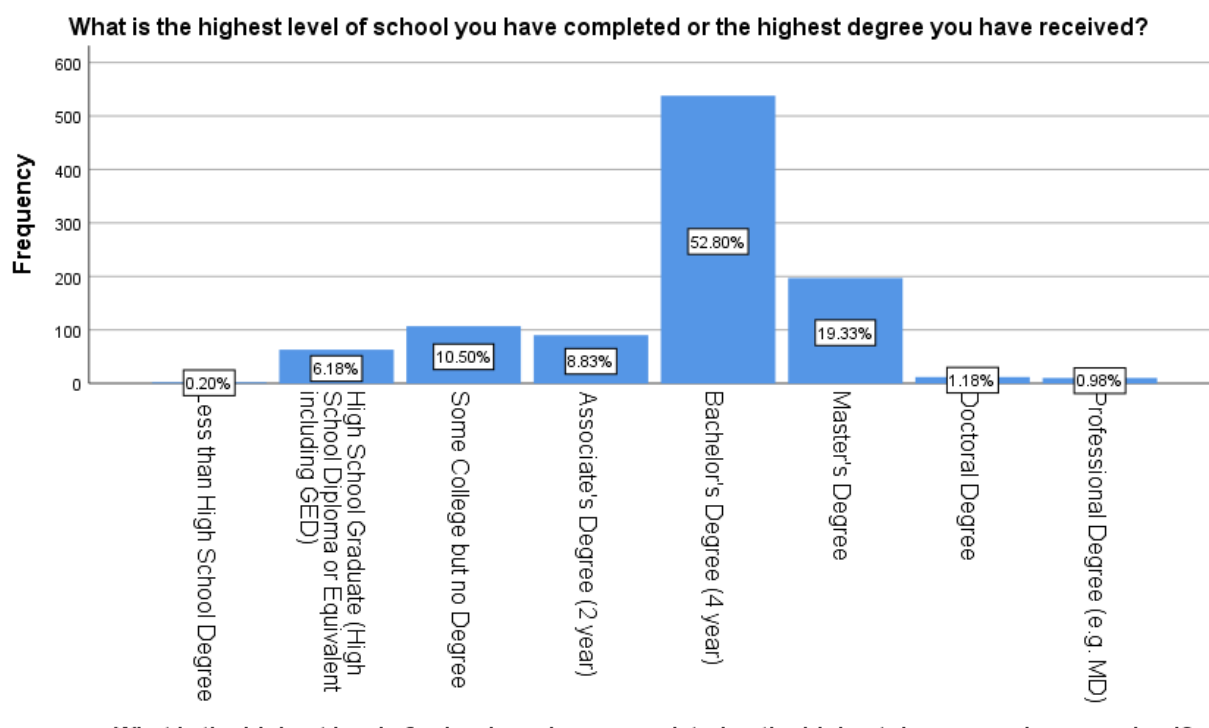
20. What is your marital status?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Single, never married	289	28.4	28.4	28.4
	Married	655	64.3	64.3	92.6
	Divorced	58	5.7	5.7	98.3
	Widowed	9	.9	.9	99.2
	Separated	8	.8	.8	100.0
	Total	1019	100.0	100.0	

What is your marital status?
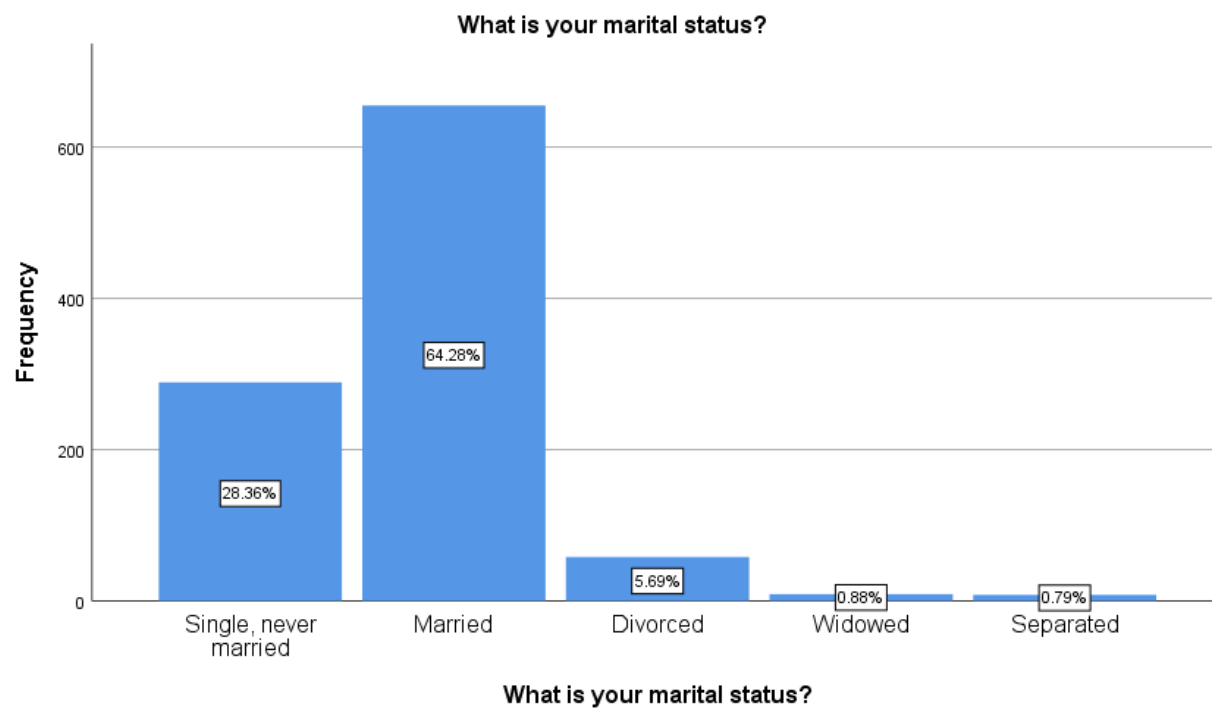
21. What is your sex?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Male	592	58.1	58.1	58.1
	Female	420	41.2	41.2	99.3
	Prefer not to say	7	.7	.7	100.0
	Total	1019	100.0	100.0	
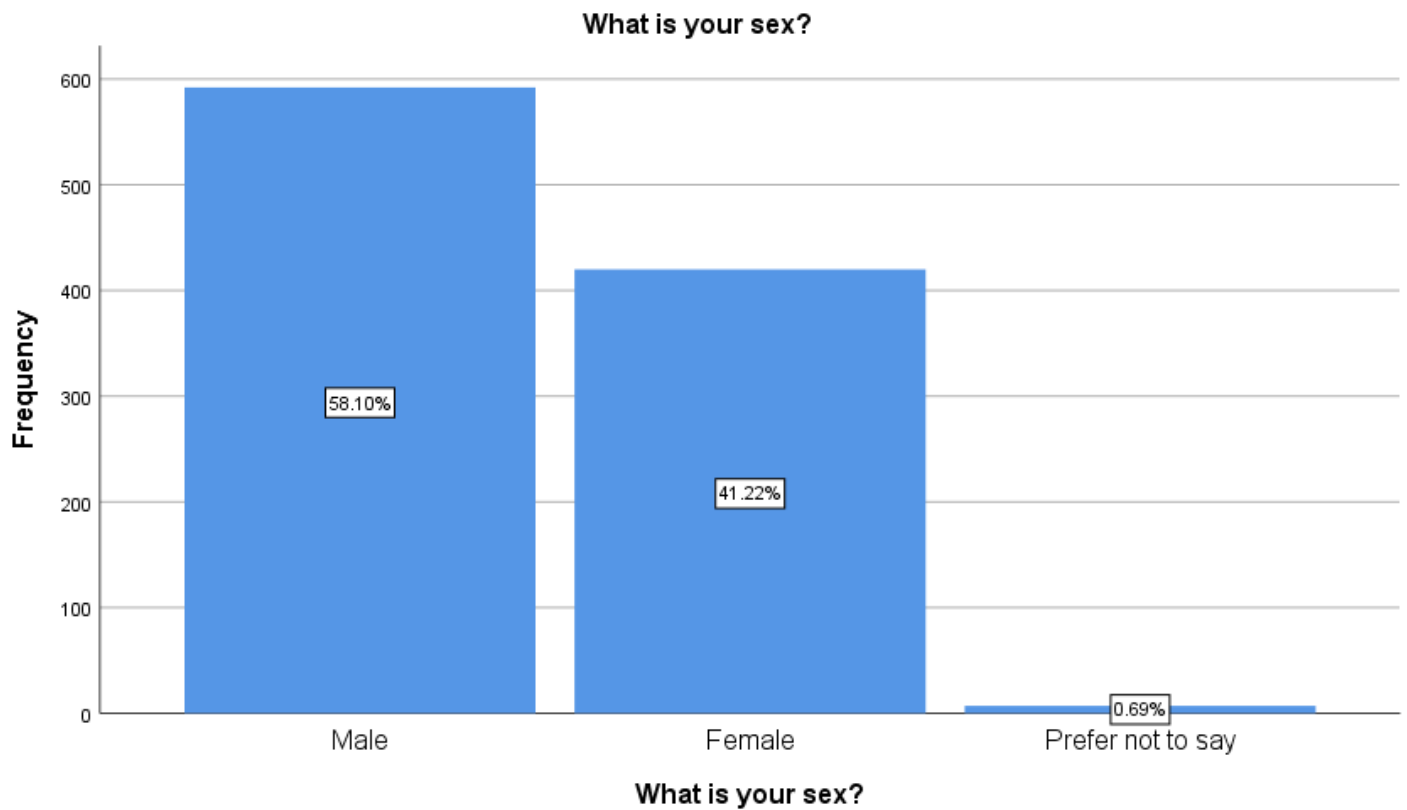
22. What is your age?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	18-24	53	5.2	5.2	5.2
	25-34	413	40.5	40.5	45.7
	35-44	250	24.5	24.5	70.3
	45-54	160	15.7	15.7	86.0
	55-64	103	10.1	10.1	96.1
	65-99	40	3.9	3.9	100.0
	Total	1019	100.0	100.0	

Age_Categories
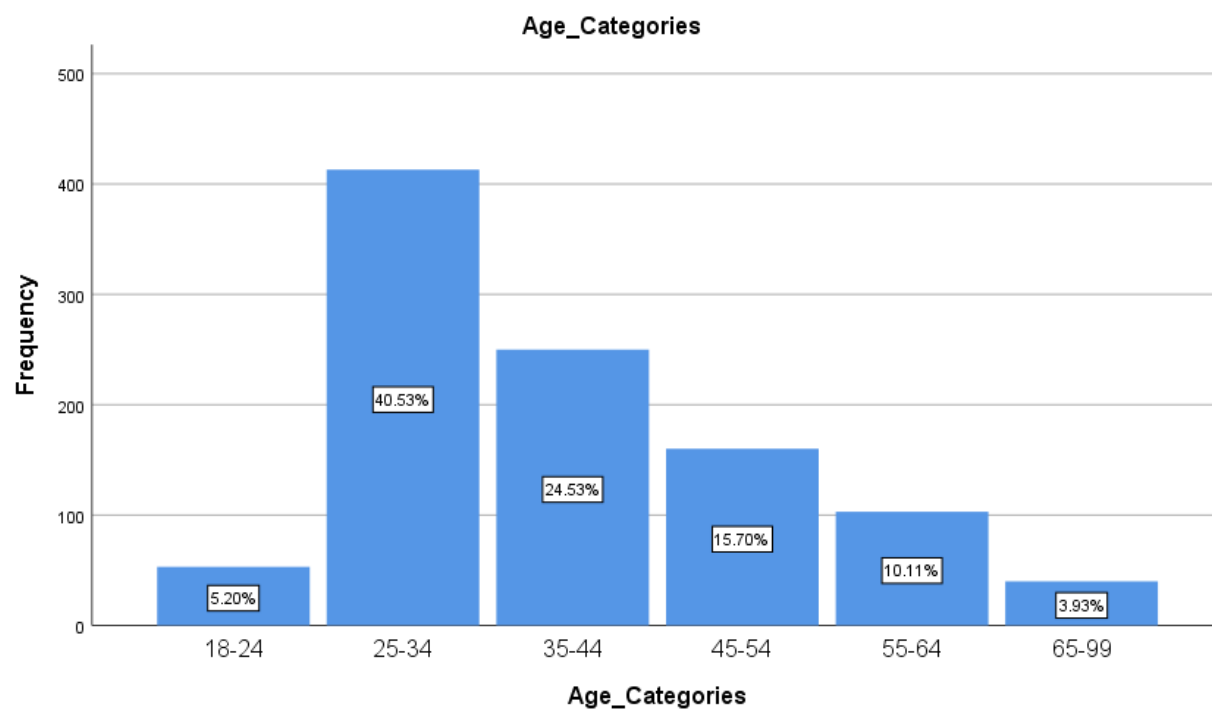
23. What was your annual household income in 2019?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Under $50,000	296	29.0	29.0	29.0
	$50,000 - $99,999	496	48.7	48.7	77.7
	$100,000 - $149,999	155	15.2	15.2	92.9
	$150,000 - $249,999	53	5.2	5.2	98.1
	$250,00 - $499,999	14	1.4	1.4	99.5
	$500,000 +	5	.5	.5	100.0
	Total	1019	100.0	100.0	

What was your annual household income in 2019?
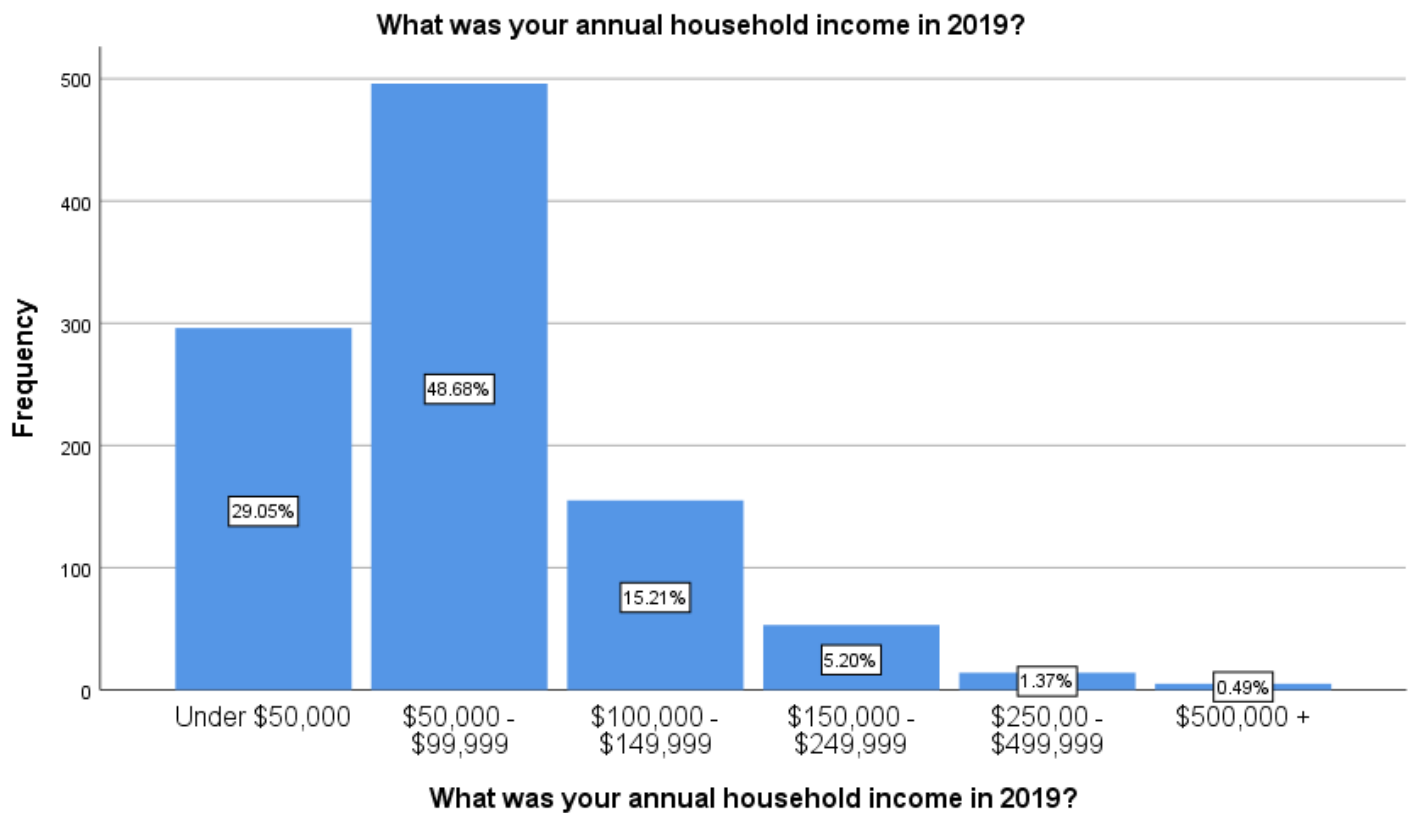
24. Distribution of Responses by State

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Alaska	2	.2	.2	.2
	Arizona	4	.4	.4	.6
	Arkansas	2	.2	.2	.8
	California	206	20.2	20.2	21.0
	Colorado	5	.5	.5	21.5
	Connecticut	35	3.4	3.4	24.9
	Delaware	1	.1	.1	25.0
	Florida	188	18.4	18.4	43.5
	Georgia	3	.3	.3	43.8
	Illinois	129	12.7	12.7	56.4
	Iowa	1	.1	.1	56.5
	Maine	3	.3	.3	56.8
	Maryland	2	.2	.2	57.0
	Massachusetts	12	1.2	1.2	58.2
	Michigan	2	.2	.2	58.4
	Mississippi	1	.1	.1	58.5
	Missouri	39	3.8	3.8	62.3
	Montana	4	.4	.4	62.7
	Nebraska	1	.1	.1	62.8
	Nevada	6	.6	.6	63.4
	New Hampshire	1	.1	.1	63.5
	New Jersey	50	4.9	4.9	68.4
	New York	16	1.6	1.6	70.0
	North Carolina	36	3.5	3.5	73.5
	Ohio	1	.1	.1	73.6
	Oregon	35	3.4	3.4	77.0
	Pennsylvania	3	.3	.3	77.3
	Rhode Island	1	.1	.1	77.4
	South Carolina	48	4.7	4.7	82.1
	Tennessee	2	.2	.2	82.3
	Texas	116	11.4	11.4	93.7
	Utah	1	.1	.1	93.8
	Virginia	2	.2	.2	94.0
	Washington	57	5.6	5.6	99.6
	West Virginia	1	.1	.1	99.7
	Wisconsin	3	.3	.3	100.0
	Total	1019	100.0	100.0	

25. How many people live in your primary residence (including yourself)?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1.00	121	11.9	11.9	11.9
	2.00	229	22.5	22.5	34.4
	3.00	243	23.8	23.9	58.3
	4.00	269	26.4	26.5	84.8
	5.00	116	11.4	11.4	96.2
	6.00	19	1.9	1.9	98.0
	7.00	8	.8	.8	98.8
	8.00	2	.2	.2	99.0
	10.00	4	.4	.4	99.4
	12.00	4	.4	.4	99.8
	13.00	1	.1	.1	99.9
	15.00	1	.1	.1	100.0
	Total	1017	99.8	100.0	
Missing	System	2	.2		
Total		1019	100.0		

Key: Florida=FL; Northeast=MA, CT, NY, NJ; Midwest=MO, IL; Carolinas=NC, SC; Texas =TX;
West Coast=CA; WA,OR

Who would you expect to be more responsive in terms of getting a flood insurance claim processed? * Regions Crosstabulation

			Regions						Total
			Florida	Northeast	Midwest	Carolinas	Texas	West Coast	
Who would you expect to be more responsive in terms of getting a flood insurance claim processed?	The government's National Flood Insurance Program	Count	70	40	58	46	57	155	426
		% within Regions	37.2%	35.4%	34.5%	54.8%	49.1%	52.0%	44.1%
	A private company insurer	Count	118	73	110	38	59	143	541
		% within Regions	62.8%	64.6%	65.5%	45.2%	50.9%	48.0%	55.9%
Total		Count	188	113	168	84	116	298	967
		% within Regions	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Chi-Square Tests

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	25.958[a]	5	.000
Likelihood Ratio	26.106	5	.000
Linear-by-Linear Association	18.485	1	.000
N of Valid Cases	967		

a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 37.01.

Key: Florida=FL; Northeast=MA, CT, NY, NJ; Midwest=MO, IL; Carolinas=NC, SC; Texas =TX;
West Coast=CA; WA,OR

If you were not required to purchase flood insurance, would you still purchase it? * Regions Crosstabulation

			Regions						Total
			Florida	Northeast	Midwest	Carolinas	Texas	West Coast	
If you were not required to purchase flood insurance, would you still purchase it?	Yes	Count	18	13	13	17	21	50	132
		% within Regions	58.1%	68.4%	68.4%	81.0%	75.0%	74.6%	71.4%
	No	Count	7	3	1	2	5	12	30
		% within Regions	22.6%	15.8%	5.3%	9.5%	17.9%	17.9%	16.2%
	Unsure	Count	6	3	5	2	2	5	23
		% within Regions	19.4%	15.8%	26.3%	9.5%	7.1%	7.5%	12.4%
Total		Count	31	19	19	21	28	67	185
		% within Regions	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Chi-Square Tests

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	10.581[a]	10	.391
Likelihood Ratio	10.579	10	.391
Linear-by-Linear Association	4.357	1	.037
N of Valid Cases	185		

a. 9 cells (50.0%) have expected count less than 5. The minimum

expected count is 2.36.

US Regions Crosstabs: Likelihood of Flooding (Risk Perception)

Key: Florida=FL; Northeast=MA, CT, NY, NJ; Midwest=MO, IL; Carolinas=NC, SC; Texas =TX;
West Coast=CA; WA, OR

In your opinion, what is the likelihood of your residence flooding in the next five years: * Regions Crosstabulation

			Regions						Total
			Florida	Northeast	Midwest	Carolinas	Texas	West Coast	
In your opinion, what is the likelihood of your residence flooding in the next five years:	No risk at all	Count	16	28	38	14	18	54	168
		% within Regions	8.5%	24.8%	22.6%	16.7%	15.5%	18.1%	17.4%
	Low risk	Count	106	49	80	38	43	122	438
		% within Regions	56.4%	43.4%	47.6%	45.2%	37.1%	40.9%	45.3%
	Moderate risk	Count	53	27	40	21	39	87	267
		% within Regions	28.2%	23.9%	23.8%	25.0%	33.6%	29.2%	27.6%
	High	Count	12	7	9	7	12	28	75
		% within Regions	6.4%	6.2%	5.4%	8.3%	10.3%	9.4%	7.8%
	I don't know	Count	1	2	1	4	4	7	19
		% within Regions	0.5%	1.8%	0.6%	4.8%	3.4%	2.3%	2.0%
Total		Count	188	113	168	84	116	298	967
		% within Regions	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Chi-Square Tests

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	39.507[a]	20	.006
Likelihood Ratio	40.855	20	.004
Linear-by-Linear Association	3.481	1	.062
N of Valid Cases	967		

a. 5 cells (16.7%) have expected count less than 5. The minimum
expected count is 1.65.

US Regions Crosstab: Repair and replace home and belongings

Key: Florida=FL; Northeast=MA, CT, NY, NJ; Midwest=MO, IL; Carolinas=NC, SC; Texas =TX;
West Coast=CA; WA,OR

How much would it cost to repair your home and replace your belongings in a typical flood in your area? * Regions Crosstabulation

			Regions						Total
			Florida	Northeast	Midwest	Carolinas	Texas	West Coast	
How much would it cost to repair your home and replace your belongings in a typical flood in your area?	Less than $10,000	Count	16	4	7	5	4	15	51
		% within Regions	10.5%	4.6%	5.5%	6.8%	4.2%	6.2%	6.6%
	$10,000 - $24,999	Count	29	12	21	9	19	39	129
		% within Regions	19.0%	13.8%	16.5%	12.3%	20.0%	16.2%	16.6%
	$25,000 - $49,999	Count	36	20	36	27	21	79	219
		% within Regions	23.5%	23.0%	28.3%	37.0%	22.1%	32.8%	28.2%
	$50,000 - $99,999	Count	33	25	31	20	30	63	202
		% within Regions	21.6%	28.7%	24.4%	27.4%	31.6%	26.1%	26.0%
	$100,000 or more	Count	23	11	17	6	8	24	89
		% within Regions	15.0%	12.6%	13.4%	8.2%	8.4%	10.0%	11.5%
	I don't know	Count	16	15	15	6	13	21	86
		% within Regions	10.5%	17.2%	11.8%	8.2%	13.7%	8.7%	11.1%
Total		Count	153	87	127	73	95	241	776
		% within Regions	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Chi-Square Tests

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	26.856[a]	25	.363
Likelihood Ratio	26.187	25	.398
Linear-by-Linear Association	.810	1	.368
N of Valid Cases	776		

a. 1 cells (2.8%) have expected count less than 5. The minimum
expected count is 4.80.

Bivariate Analyses: Comparing Likelihood of Flooding (Risk Perceptions) by Age

```
1 = No risk at all
2 = low risk
3 = moderate risk
4 = high risk
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Descriptives

In your opinion, what is the likelihood of your residence flooding in the next five years:

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
18-34	456	2.36	.835	.039	2.28	2.44	1	4
35-54	401	2.21	.809	.040	2.13	2.29	1	4
55 +	143	2.12	.892	.075	1.97	2.27	1	4
Total	1000	2.27	.838	.026	2.21	2.32	1	4

ANOVA

In your opinion, what is the likelihood of your residence flooding in the next five years:

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	8.679	2	4.340	6.252	.002
Within Groups	692.096	997	.694		
Total	700.775	999			

Multiple Comparisons

Dependent Variable: In your opinion, what is the likelihood of your residence flooding in the next five years:

Tukey HSD

(I) new_age	(J) new_age	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
18-34	35-54	.155*	.057	.018	.02	.29
	55 +	.243*	.080	.007	.06	.43
35-54	18-34	-.155*	.057	.018	-.29	-.02
	55 +	.088	.081	.523	-.10	.28
55 +	18-34	-.243*	.080	.007	-.43	-.06
	35-54	-.088	.081	.523	-.28	.10

*. The mean difference is significant at the 0.05 level.

The tables show that the youngest age group expressed the highest risk perception of flooding, with an average 2.36. Individuals aged 55 and over expressed the lowest risk perception of flooding, with an average of 2.12. Those in the middle age group, 35-54, had expressed a risk perception that was between the older and younger groups. 18-34 year olds expressed higher risk than the other two groups at the 95% confidence level. Although 55+ individuals expressed slightly lower perception of flood risk than 35-54 year olds, the difference was not statistically significant.

Group Statistics

	What is your sex?	N	Mean	Std. Deviation	Std. Error Mean
In your opinion, what is the likelihood of your residence flooding in the next five years:	Male	592	2.29	.913	.038
	Female	420	2.34	.885	.043

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means					95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
In your opinion, what is the likelihood of your residence flooding in the next five years:	Equal variances assumed	1.490	.223	-.809	1010	.419	-.047	.058	-.159	.066
	Equal variances not assumed			-.814	919.122	.416	-.047	.057	-.159	.066

Females in the sample, on average expressed a risk likelihood of 2.34. Males participants perceptions were only very slightly lower, with an average of 2.29. The differences were not significant.

Descriptives

In your opinion, what is the likelihood of your residence flooding in the next five years:

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
A	249	2.71	.914	.058	2.60	2.82	1	5
X, B, or C	228	2.45	.825	.055	2.34	2.56	1	5
V	40	2.90	.778	.123	2.65	3.15	1	4
I don't know	502	2.01	.838	.037	1.94	2.09	1	5
Total	1019	2.32	.909	.028	2.26	2.37	1	5

Multiple Comparisons

Dependent Variable: In your opinion, what is the likelihood of your residence flooding in the next five years:

Tukey HSD

(I) In what FEMA flood zone is your primary residence located?	(J) In what FEMA flood zone is your primary residence located?	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
A	X, B, or C	.259*	.078	.005	.06	.46
	V	-.189	.145	.561	-.56	.18
	I don't know	.699*	.066	.000	.53	.87
X, B, or C	A	-.259*	.078	.005	-.46	-.06
	V	-.448*	.146	.012	-.82	-.07
	I don't know	.440*	.068	.000	.26	.61
V	A	.189	.145	.561	-.18	.56
	X, B, or C	.448*	.146	.012	.07	.82
	I don't know	.888*	.140	.000	.53	1.25
I don't know	A	-.699*	.066	.000	-.87	-.53
	X, B, or C	-.440*	.068	.000	-.61	-.26
	V	-.888*	.140	.000	-1.25	-.53

*. The mean difference is significant at the 0.05 level.

The two tables above show that individuals who believe they are in flood zones V (2.90) and A (2.71) believe they are at significantly higher risk of flooding in the next five years than flood zones X, B, or C (2.45) and those who don't know what flood zone they're in (2.01). These differences are significant at well above the 95% confidence level. Relatedly, individuals who don't know what flood zone they're located in are much less likely to believe they're at risk than all the other groups at the 99% confidence level.

Bivariate Analyses: Comparing Likelihood of Flooding (Risk Perceptions) by Whether Respondent have Flood Insurance

Group Statistics

	Do you currently have flood insurance on your primary living residence?	N	Mean	Std. Deviation	Std. Error Mean
In your opinion, what is the likelihood of your residence flooding in the next five years:	Yes	542	2.62	.791	.034
	No	458	1.85	.688	.032

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means					95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
In your opinion, what is the likelihood of your residence flooding in the next five years:	Equal variances assumed	37.243	.000	16.206	998	.000	.767	.047	.674	.860
	Equal variances not assumed			16.394	997.094	.000	.767	.047	.675	.859

Not surprisingly, those individuals who have flood insurance are significantly more likely (at the 99% confidence level) to perceive risk of flooding than those participants who do not have a flood insurance policy. Those with flood insurance policies averaged 2.62 (with 4 being high perceived likelihood of flooding) and those without flood insurance averaged 1.85.