

# Mass Shootings in Texas and the Housing Market

(An Event Study)

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A Technical Writing Sample



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## **Abstract**

Mass shootings are common in the US, present day. This research endeavor looks at the effects that mass shootings have on the housing market in the state of Texas. The variables of consideration are: house listings, average price of sold houses, and house sales. These data are collected and observed from the Metropolitan Statistical Area (MSA) level. The event study methodology is used to observe how much - if at all - these variables are affected after a mass shooting. After, statistical significance is tested for. This research finds that house listings are essentially unaffected, whereas average price and sales are relatively more affected.

# 1 Introduction

The Federal Bureau of Investigation defines a mass shooting as any event where at least 4 individuals are murdered with a firearm (Krouse & Richardson 2015). The state of Texas is no stranger to mass shootings. In the past 60 years there have been over 20 mass shootings. The first of which was the University of Texas Tower Shooting on August 1st, 1966 where Charles Whitman shot and killed 16 individuals and injured 31 more people before taking his own life. The most recent shooting was at Allen Premium Outlets, on May 6th, 2023 – only two months prior to this writing - where Mauricio Martinez-Garcia killed 8 individuals and injured another 7 before his own life was taken with a firearm by law enforcement.

Conventional wisdom would conclude that these events have immense costs on the community, many of which come with extreme emotional/psychological disturbances. These are the main costs that come to mind after an event such as the shooting at Robb Elementary School occurs. This conventional wisdom is correct; after a mass shooting occurs there are psychological effects such as post-traumatic stress syndrome (PTSS). This syndrome is “readily defined as symptoms consistent with post-traumatic stress disorder (PTSD), but that occur earlier than 30 days after experiencing the traumatic event” (National Institute of Health, 2017). In addition to PTSS: depression, emotional regulation difficulty, and experience avoidance are some more of the adverse psychological and psychosocial effects that a mass shooting impose (Lowe & Galea 2017). The authors go on to state that at minimum there’s an increased amount of fear and a lower perception of safety, not just in the immediate area – reaching far outside. Which makes sense as mass shootings typically have strong nationwide news coverage – more on the quantitative side of mass shootings and news coverage later.

Although these areas of mass shootings are important to study – as a researcher of economics, the aspect of these occurrences that interest me is how the housing market is affected after a mass shooting occurs. The research on this topic has been relatively unexplored, however there are a few papers written that have been published. An honors thesis from the University of Mississippi written by Clair Sherman titled *The Impact of Mass and Active Shooting Incidents on Residential Real Estate Values* uses data from 73 mass shootings in the United States from the years 1996-2015 to conduct analysis. Sherman’s analysis suggests that although mass shootings are extremely rare, they adversely affect property values in the surrounding area – dropping them by approximately 15-20% around a three-year time frame

Another paper that considered the effects imposed on the housing market due to a mass

shooting was (Munoz-Morales & Singh 2023) that looked at the effects of 11 mass shootings, that occurred at schools in the years of 1998-2014, on property values. The authors found that – on the average – house prices decline by 2.4% over a four-year period.

Other projects have focused not specifically on the housing market, but on the economic tolls that mass shootings have on local economies. This paper, (Brodeur & Yousaf 2022), has a couple important findings. The main finding is that mass shootings have negative effects on the counties in which they occur. The authors used approximately 1,400 mass shootings spanning the entire United States, and gathered data at the county level to conduct their research, and the time the researchers chose was 6 years surrounding the occurrence. The specific negative effects are boiled down to two main components. The first of which is that residents develop pessimistic views of financial and local business conditions. The second, is that these residents are likely to report that they have poor mental health. The reason for this importance – from a local economy point-of-view – is that poor mental health decreases productivity. They find that mass shootings reduce business earnings by about 2% and heighten unemployment by about 1%.

A brief summary of this project you are reading now is that the variables of focus for this paper are: listings, average price and sales. This is the first paper in the field to focus on these specific variables. The event study methodology is implemented to see how each of these variables are affected after a mass shooting. There are 15 mass shooting instances across 8 metropolitan statistical areas (MSAs) occurring between the years 1993-2019.

One may hypothesize that the housing market could run parallel to the research. In this case perhaps listings rise – people want to leave the area - average prices fall and sales fall. On the other hand, the housing market could be affected positively in terms of sales. Perhaps listings rise, average prices fall. Anticipating a drop in price, individuals decide to trade off the discomfort for a good deal on a house – afterall, mass shootings are extremely unlikely to occur in the same area twice. My hypothesis aligns most with the former.

While there were many mass shootings that have occurred within the boarder of Texas over the last 60 years, not every shooting can be used in this analysis. Due to the limitation of available monthly housing data, which starts in January of 1990, this project only looks at 15 mass shootings spanning over 25 years in 8 MSAs. The housing data – which is further discussed later – comes from Texas A&M’s Real Estate Research Center. The most recent shootings – in Cleveland, Texas (April, 2023) and Allen, Texas (May, 2023) – aren’t included as there isn’t data for these months to conduct analysis. Additionally, this research only considers mass shootings that were contained

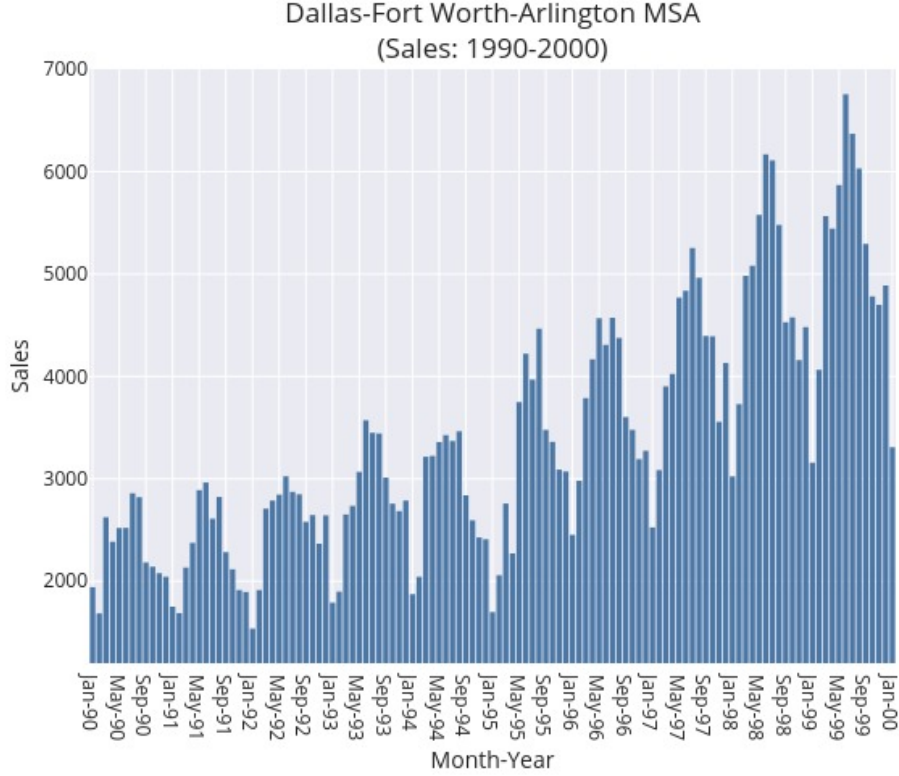
within a single MSA. For this reason, the Midland-Odessa Shooting (August, 2019) – where there were firearm deaths spanning two MSAs - is not included.

The housing market in Texas has always been lucrative due to the abundance of land – 83% of the land in Texas is either a ranch, forest or farm (Joiner 2017). In addition to the abundance of land, Texas also has relatively lax zoning laws – or absolutely no zoning laws like Houston (Fischel 1985). Since 1991, Texas has had an average of approximately 8,500 building permits issued each month over the past 3 decades. The closest state is California, with an average of 6,000. In the aggregate, each state has an average of 1,500 building permits issued. Collected from Texas A&M’s Real Estate Research Center, monthly: listings, average price and sales are collected for analysis.

## 2 Methods

The event study methodology is implemented for analysis to see if there are any abnormalities and, of these abnormalities, if any are statistically significant. To give background on how event studies are conducted, they are composed of two-time frames. The first of which is the estimation period, a period where the average change of a variable is calculated. The second is the observation period, this is the time frame in which an event occurs. After these two frames are defined and data is collected for each of them, the mean of the estimation period is projected onto the observation period to see if they differ and, if so, by how much. The resulting difference between the mean variable change and the variable change of the observation period is referred to as a mean adjusted abnormality (MAA), with the acronym being adjusted to contain a specific variable. For instance, mean adjusted abnormal listings is MAAL, the same pattern follows for average price (MAAAP) and sales (MAAS). In summary, the event study method tests to see how much a variable is affected after an event occurs compared to its average behavior leading up to the event.

How the event study methodology is used throughout this research is as follows. Given that the housing market is seasonal and follows typical trends, such as that of the Dallas-Fort Worth-Arlington MSA:



Here we observe that sales follows a general upward trend. Additionally, sales peak in the summer months and trough in the winter months. Due to the predictable seasonality, the observation period tracks each variable on a month-to-month percent change. In practice, say a shooting happened in El Paso MSA on May of 2016, this project tracks the percentage change from May to June for the previous 10 years. How the percentage change is calculated is by implementing the following formula of natural log, Where “t” is the month of the mass shooting.

$$\% \Delta = \ln\left(\frac{Sales_{t+1}}{Sales_t}\right) \quad (1)$$

The calculation period for this project is the 10-year time frame leading up to the mass shooting. The observation period is chosen to be a percent change in the given variable from the month of the mass shooting to the month after. The reason for this is that – on the average – it takes a month to close on a house. Some home buyers (in the form of sales) and sellers (in the form of listings) may have their preferences altered due to the mass shooting, affecting the price (average price) of housing in the area. To examine the effects of mass shootings on the housing market for a more in-depth look, a stretched-out timeline can be examined via time series analysis. One limitation of myself in this research endeavor is that I have relatively limited econometric training

– something that I will develop and come back to this question in years to come. In the scope of this paper, this limitation doesn't effect the results stemming from the event study framework.

To expand on specifics, say we see the following results for sales in El Paso (the 10-year estimation period):

May-June '06: +5%  
May-June '07: +2%  
May-June '08: +3%  
May-June '09: +2%  
May-June '10: +1%  
May-June '11: +7%  
May-June '12: +5%  
May-June '13: +3%  
May-June '14: +5%  
May-June '15: +7%

On the average, the percentage change of sales in El Paso is +4% (the mean). Again, this is the calculation period, so we take the 4% and compare it to the observation period – the percentage change in sales from the month of the shooting (May) to the month after (June):

May-June '16: -5% (observation period value)

We can calculate the mean adjusted abnormal sales (MAAS) from this information using the following formula:

$$MAAS_{ElPaso,1} = \% \Delta Sales_{ElPaso, Observation} - \overline{\% \Delta Sales_{ElPaso, Estimation}} \quad (2)$$

Or, more specifically:

$$MAAS_{ElPaso,1} = \ln\left(\frac{Sales_{s+1}}{Sales_s}\right) - \frac{1}{10} \sum_{m=1}^{10} \ln\left(\frac{Sales_{m+1}}{Sales_m}\right) \quad (3)$$

Where “s” identifies the month of the mass shooting (May) and “m” is the symbol for month of shooting – May – but in the estimation period. The “1” signifies that it's the first shooting that is observed in El Paso. This descriptor is included because some MSAs have more than 1 shooting in the given time frame. When we apply this formula directly to this problem, we observe that the MAAS for El Paso's mass shooting that occurred on May of 2016 is -9%.



The next question becomes is -9% statistically significant? To do that requires more calculation. Assuming that all mean adjusted abnormalities are normally distributed, a t-test is conducted:

$$t = \frac{MAA_{i,j}}{s_{MAA_{i,j}}} \quad (4)$$

Where “i” is one of the 8 MSAs, and “j” is the shooting referenced – some MSAs, such as Killeen-Temple, have more than one mass shooting throughout the time frame. A reminder that MAA is mean adjusted abnormality and can be applied to listings (MAAL) as well as average price and sales. And  $s_{MAA}$  is the sample standard deviation.

For El Paso, the standard deviation ( $s_{MAA_{El\ Paso,j}}$ ) is approximately 2, so the t-statistic – applicable to the event study methodology - is equivalent to:

$$t = \frac{-9}{2} = -4.5 \quad (5)$$

This t-statistic is quite large, signifying that given the sample data, a drop in sales from May to June of 5% is extremely rare, thus statistically significant – also illustrated by being greater than -2.262 ( $t \sim t_{(10-1)}$ ).

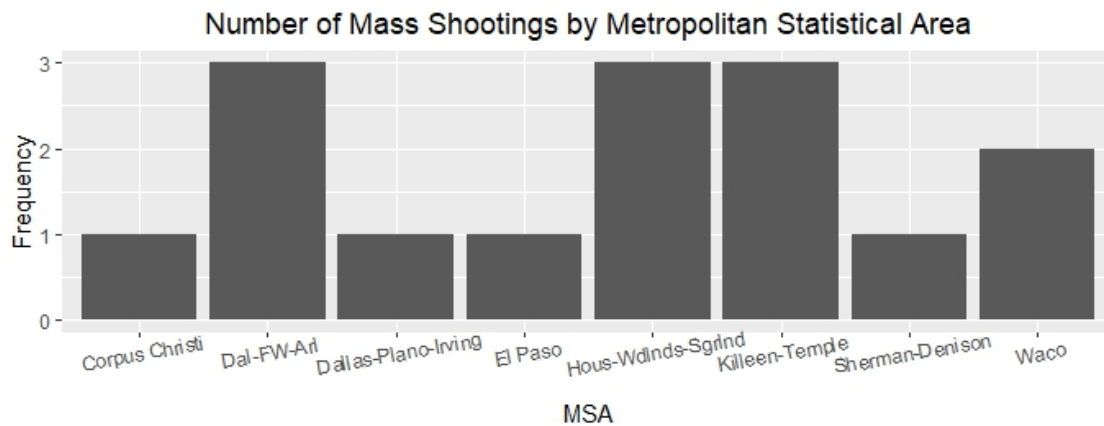
Separate from the event study methodology, news coverage of each mass shooting is considered. This portion of research is conducted by counting up the number of articles written within 1 week after the shooting took place. This metric is coined “visibility.” This is done by searching through news archives and filtering the date of publication so that only the articles in the selected time frame appear for a given mass shooting. Then we observe the interrelations between visibility and not only the variables considered in this research, but also number of deaths.

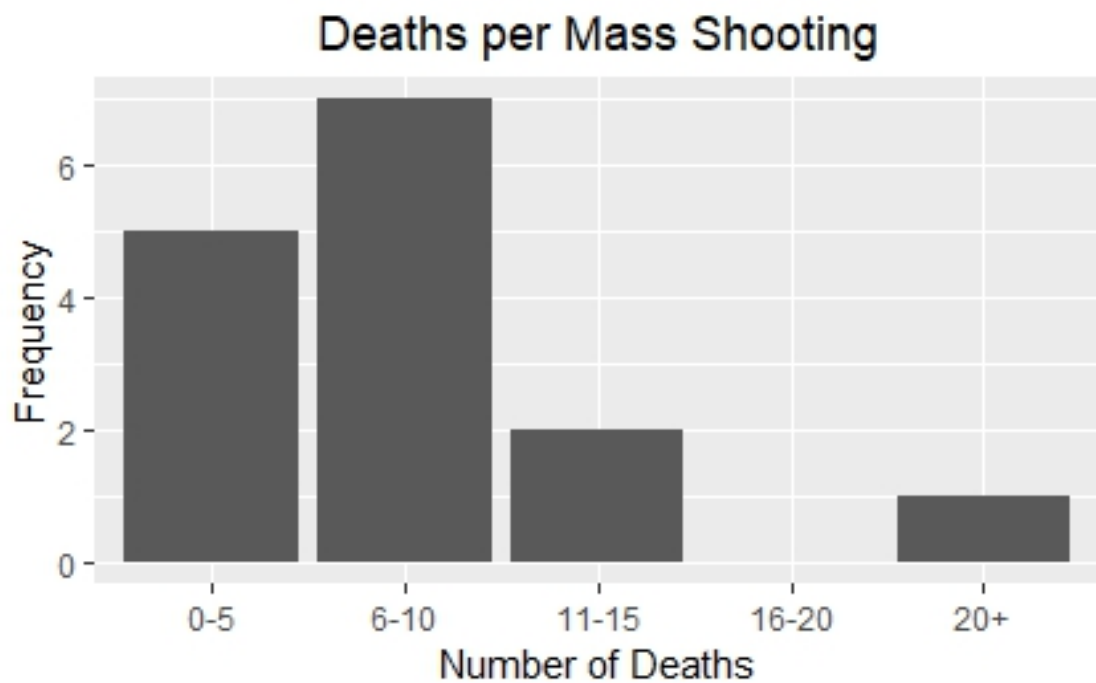
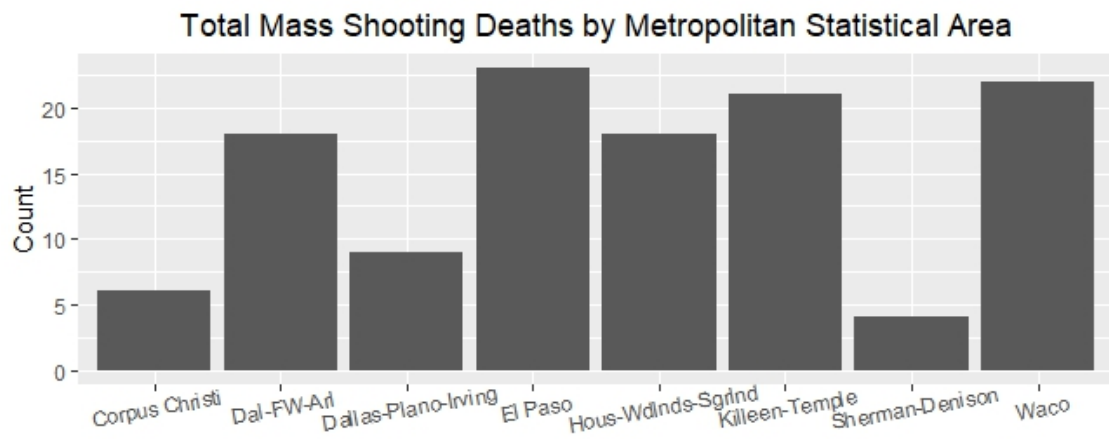
### 3 Results

#### 3.1 Mass Shootings in Texas MSAs Overview

First, comprehensive information on mass shootings in Texas via tables and graphs are needed to further grasp the nature of these occurrences and visualize the resulting information. Following this portion will be the results for: listings, average price, and sales. The mean adjusted abnormalities for these variables are broken down by number of deaths. The first table will be the MAA for all deaths, followed by three groupings greater than; 5, 10, 20 deaths respectively. Then the average MAA for each death group will be displayed both in a table and as a bar graph to visually conceptualize the results.

Obs	Date	MSA	Total Fatalities
1	2/28/1993	Waco	22
2	5/17/2015	Waco	9
3	4/3/1995	Corpus Christi	6
4	9/15/1999	Dallas-Fort Worth-Arlington	8
5	8/7/2013	Dallas-Fort Worth-Arlington	4
6	7/7/2016	Dallas-Fort Worth-Arlington	6
7	11/5/2009	Killeen-Temple	13
8	4/2/2014	Killeen-Temple	4
9	2/22/2015	Killeen-Temple	4
10	7/9/2014	Houston-The Woods-Sugar Land	6
11	8/8/2015	Houston-The Woods-Sugar Land	8
12	4/19/2016	Houston-The Woods-Sugar Land	4
13	3/21/2016	Sherman-Denison	4
14	9/10/2017	Dallas-Plano-Irving	9
15	8/3/2019	El Paso	23





### 3.2 Listings

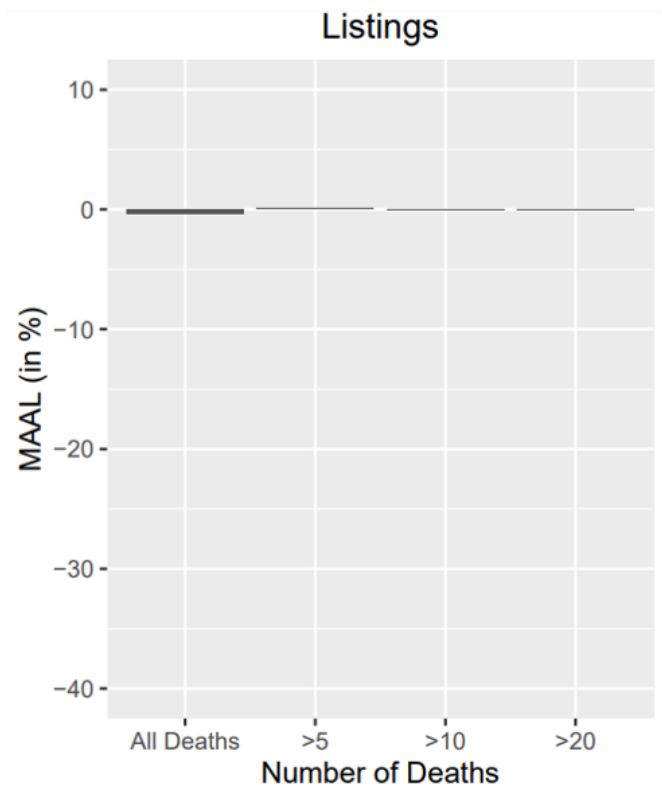
<b>Metropolitan Statistical Area</b>	<b>All Deaths</b>	<b>MAAL (%)</b>
Waco	22	-
Waco	6	0.80
Corpus Christi	8	3.73
Dallas-Fort Worth-Arlington	13	0.23
Dallas-Fort Worth-Arlington	4	-1.47
Dallas-Fort Worth-Arlington	4	-4.04
Killeen-Temple	6	0.58
Killeen-Temple	4	0.49
Killeen-Temple	9	-4.59
Houston-The Woods-Sugar Land	8	1.31
Houston-The Woods-Sugar Land	4	-1.05
Houston-The Woods-Sugar Land	4	0.16
Sherman-Denison	6	-1.78
Dallas-Plano-Irving	9	0.53
El Paso	23	-0.09

<b>Metropolitan Statistical Area</b>	<b>&gt;5 Deaths</b>	<b>MAAL (%)</b>
Waco	22	-
Waco	6	0.80
Corpus Christi	8	3.73
Dallas-Fort Worth-Arlington	13	0.23
Killeen-Temple	6	0.58
Killeen-Temple	9	-4.59
Houston-The Woods-Sugar Land	8	1.31
Sherman-Denison	6	-1.78
Dallas-Plano-Irving	9	0.53
El Paso	23	-0.09

<b>Metropolitan Statistical Area</b>	<b>&gt;10 Deaths</b>	<b>MAAL (%)</b>
Waco	22	-
Dallas-Fort Worth-Arlington	13	0.23
El Paso	23	-0.09

Metropolitan Statistical Area	>20 Deaths	MAAL (%)
Waco	22	-
El Paso	23	-0.09

Deaths	MAAL
All	-0.37%
>5	0.08%
>10	0.07%
>20	-0.09%



### 3.3 Average Price

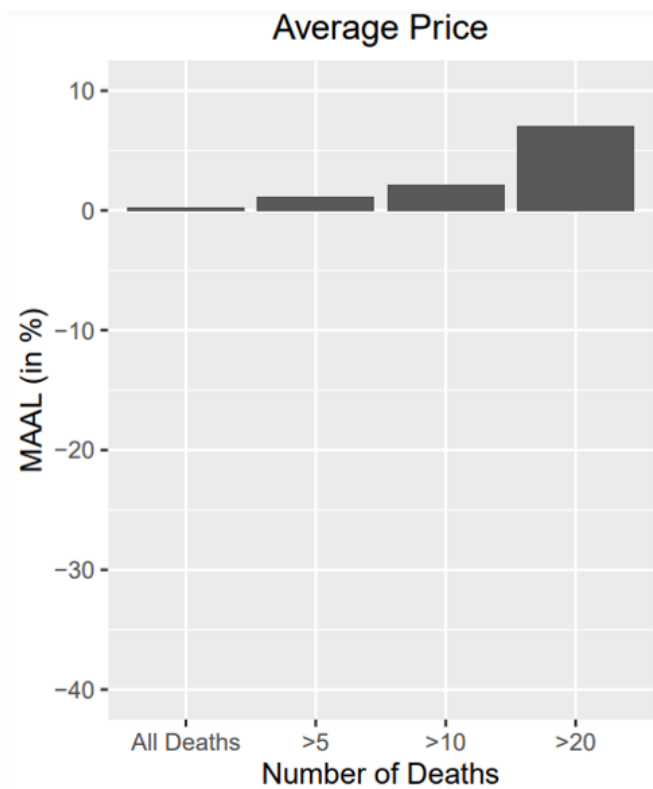
<b>Metropolitan Statistical Area</b>	<b>All</b>	<b>MAAAP (%)</b>
Waco	22	9.05
Waco	6	5.55
Corpus Christi	8	2.14
Dallas-Fort Worth-Arlington	13	-7.56
Dallas-Fort Worth-Arlington	4	0.62
Dallas-Fort Worth-Arlington	4	2.25
Killeen-Temple	6	0.31
Killeen-Temple	4	-7.46
Killeen-Temple	9	-7.4
Houston-The Woods-Sugar Land	8	-1.33
Houston-The Woods-Sugar Land	4	-1.96
Houston-The Woods-Sugar Land	4	-0.42
Sherman-Denison	6	2.62
Dallas-Plano-Irving	9	2.75
El Paso	23	5.05

<b>Metropolitan Statistical Area</b>	<b>&gt;5 Deaths</b>	<b>MAAAP (%)</b>
Waco	22	9.05
Waco	6	5.55
Corpus Christi	8	2.14
Dallas-Fort Worth-Arlington	13	-7.56
Killeen-Temple	6	0.31
Killeen-Temple	9	-7.4
Houston-The Woods-Sugar Land	8	-1.33
Sherman-Denison	6	2.62
Dallas-Plano-Irving	9	2.75
El Paso	23	5.05

Metropolitan Statistical Area	>10 Deaths	MAAAP (%)
Waco	22	9.05
Dallas-Fort Worth-Arlington	13	-7.56
El Paso	23	5.05

Metropolitan Statistical Area	>20 Deaths	MAAAP (%)
Waco	22	9.05
El Paso	23	5.05

Deaths	MAAAP
All	0.28%
>5	1.12%
>10	2.18%
>20	7.05%



### 3.4 Sales

<b>Metropolitan Statistical Area</b>	<b>All</b>	<b>MAAS (%)</b>
Waco	22	-56.64
Waco	6	-4.43
Corpus Christi	8	-0.55
Dallas-Fort Worth-Arlington	13	-19.74
Dallas-Fort Worth-Arlington	4	-5.26
Dallas-Fort Worth-Arlington	4	11.77
Killeen-Temple	6	-2.2
Killeen-Temple	4	0.16
Killeen-Temple	9	0.34
Houston-The Woods-Sugar Land	8	12.81
Houston-The Woods-Sugar Land	4	-9.76
Houston-The Woods-Sugar Land	4	0.87
Sherman-Denison	6	7.85
Dallas-Plano-Irving	9	-1.79
El Paso	23	-13.95

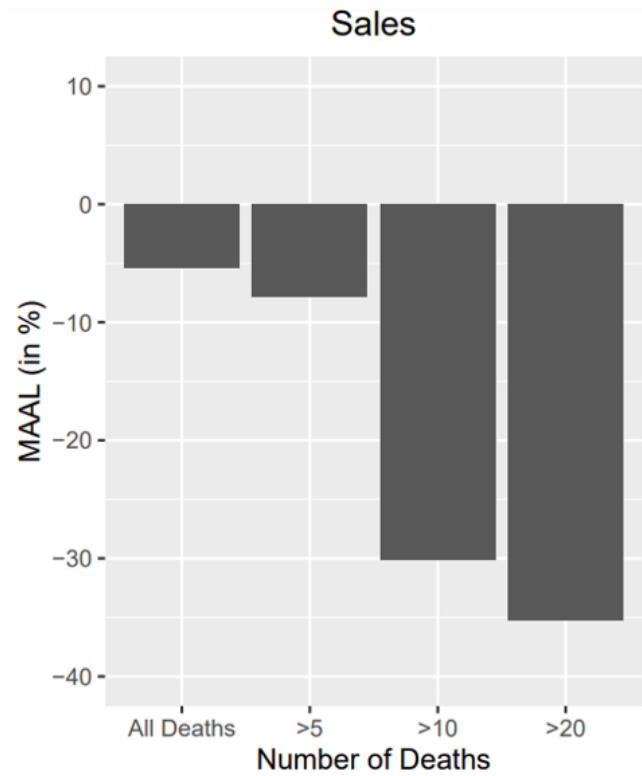
<b>Metropolitan Statistical Area</b>	<b>&gt;5 Deaths</b>	<b>MAAS (%)</b>
Waco	22	-56.64
Waco	6	-4.43
Corpus Christi	8	-0.55
Dallas-Fort Worth-Arlington	13	-19.74
Killeen-Temple	6	-2.2
Killeen-Temple	9	0.34
Houston-The Woods-Sugar Land	8	12.81
Sherman-Denison	6	7.85
Dallas-Plano-Irving	9	-1.79
El Paso	23	-13.95



Metropolitan Statistical Area	>10 Deaths	MAAS (%)
Waco	22	-56.64
Dallas-Fort Worth-Arlington	13	-19.74
El Paso	23	-13.95

Metropolitan Statistical Area	>20 Deaths	MAAS (%)
Waco	22	-56.64
El Paso	23	-13.95

Deaths	MAAS
All	-5.37%
>5	-7.83%
>10	-30.11%
>20	-35.30%



## 4 Statistical Significance

As discussed in the methods section, t-statistics are calculated to test for statistical significance, below are tables that organize all the information for MAAL, MAAAP, and MAAS

MSA	MAAL t-statistic	Critical Value (90% Confidence Level)	Significant?
Waco	-	-	-
Corpus Christi	0.2979	2.132	N
Dallas-Fort Worth-Arlington	0.4290	1.86	N
Killeen-Temple	0.0447	1.812	N
Dallas-Fort Worth-Arlington	-0.8750	1.812	N
Killeen-Temple	-0.3018	1.812	N
Houston-The Woods-Sugar Land	0.2571	1.812	N
Killeen-Temple	0.2398	1.812	N
Waco	-1.2896	1.812	N
Houston-The Woods-Sugar Land	0.8176	1.812	N
Sherman-Denison	-0.6019	1.812	N
Houston-The Woods-Sugar Land	0.0594	1.812	N
Dallas-Fort Worth-Arlington	-0.4332	1.812	N
Dallas-Plano-Irving	0.5782	1.812	N
El Paso	-0.0395	1.812	N

MSA	MAAAP t-statistic	Critical Value (90% Confidence Level)	Significant?
Waco	1.126	2.920	N
Corpus Christi	0.529	2.132	N
Dallas-Fort Worth-Arlington	0.507	1.860	N
Killeen-Temple	-1.033	1.812	N
Dallas-Fort Worth-Arlington	0.245	1.812	N
Killeen-Temple	0.668	1.812	N
Houston-The Woods-Sugar Land	0.177	1.812	N
Killeen-Temple	0.712	1.812	N
Waco	-1.183	1.812	N
Houston-The Woods-Sugar Land	-0.609	1.812	N
Sherman-Denison	-0.181	1.812	N
Houston-The Woods-Sugar Land	-0.180	1.812	N
Dallas-Fort Worth-Arlington	1.013	1.812	N
Dallas-Plano-Irving	-1.066	1.812	N
El Paso	2.257	1.812	Y

MSA	MAAS t-statistic	Critical Value (90% Confidence Level)	Significant?
Waco	-1.021	2.920	N
Corpus Christi	-0.651	2.132	N
Dallas-Fort Worth-Arlington	-0.130	1.860	N
Killeen-Temple	-0.829	1.812	N
Dallas-Fort Worth-Arlington	-0.598	1.812	N
Killeen-Temple	1.057	1.812	N
Houston-The Woods-Sugar Land	-0.331	1.812	N
Killeen-Temple	2.854	1.812	Y
Waco	0.034	1.812	N
Houston-The Woods-Sugar Land	1.062	1.812	N
Sherman-Denison	-0.616	1.812	N
Houston-The Woods-Sugar Land	0.154	1.812	N
Dallas-Fort Worth-Arlington	1.115	1.812	N
Dallas-Plano-Irving	-0.239	1.812	N
El Paso	-1.525	1.812	N

There are two instances of statistical significance – one in average price and one in sales. The MAAAP for El Paso is 5%. In the calculation period, homes were decreasing in price by 3% on

average. In the observation period, home prices increased by 2%. There are several contributing factors to this significance, but it'd be unwise not to include the mass shooting that had 23 deaths (the most in this sample).

In Killeen-Temple (Feb. 2015) MSA, the average percent change in sales was +14% in the estimation period. In the observation period, it was +30% - MAAS equaling +16%. With the lowest number of deaths in the sample (4), it likely isn't due directly to the mass shooting. What's interesting to note is that Killeen-Temple (April 2014) also saw the same trend – although not statistically significant – saw MAAS of 11.77%. Killeen Temple MSA houses Fort Hood, renamed Fort Cavazos in 2020, an army base – approximately 45,000 of individuals in Killeen-Temple MSA are active-duty military. Both sales and average prices of homes rising concurrently, suggests that this is a demand side phenomenon. Perhaps family members who live in another portion of the country, anticipate that after a mass shooting, homes will be cheaper, but not for a long time – so they rush to buy one before prices go up. This influx of family members would cause the demand for housing to rise, increasing the average price as well as sales. The anticipation of home prices rising manifests itself via rational expectations.

The sales during the months of the Waco Siege wasn't statistically significant – even though MAAS was -57% - the reason for this being a very limited amount of data, thus a small  $n$ -K, and  $t$ -statistic. The shooting occurred on 2/28/1993, leaving only 3 years in the estimation period – as the data start in January 1990. During the estimation period the mean was a whopping 87%, most of which is influenced by the Feb-Mar '91 data point, where home sales rose by 148%. The observation period value is 30%, and while home prices did rise from Feb to March, it wasn't by as much as the estimation period.

## 5 Conclusion

The event study methodology was implemented to inquire into Texas' housing market variables: listings, average price and sales. This methodology was used to observe how the variables of interest behaved – on the average – 10 years prior to a mass shooting and compare that to the change in the variable the month of, to the month after a mass shooting. We find that on average, listings aren't affected. On the other hand, average price of a home is moderately affected – especially in El Paso MSA following the 2019 Walmart Shooting. Housing sales are the most affected by a mass shooting, especially in Killeen-Temple MSA following the shooting in February of 2015. As stated, the listings are relatively unaffected in this sample – there's no explicit pattern.

On the other hand, average price and sales do follow a similar pattern. Average prices tend to rise after a mass shooting and sales tend to fall. Both of these variables follow echelon form in terms of deaths, the more deaths – the more severe the observation is from the mean. Additionally, with average prices rising and sales falling – this suggests that there are less houses demanded in a given MSA following a mass shooting. It is incorrect to state that this is a decrease in supply, which would lead to the same conclusion on a decrease in sales and an increase in average price, because listings were unaffected during this time. The results, quite literally, follow the law of demand.

### Bonus - "Visibility"

Obs	MSA	Total Fatalities	Visibility
1	Waco	22	200
2	Waco	9	60
3	Corpus Christi	6	55
4	Dallas-Fort Worth-Arlington	8	169
5	Dallas-Fort Worth-Arlington	4	8
6	Dallas-Fort Worth-Arlington	6	210
7	Killeen-Temple	13	60
8	Killeen-Temple	4	30
9	Killeen-Temple	4	2
10	Houston-The Woods-Sugar Land	6	6
11	Houston-The Woods-Sugar Land	8	9
12	Houston-The Woods-Sugar Land	4	3
13	Sherman-Denison	4	2
14	Dallas-Plano-Irving	9	10
15	El Paso	23	110

Here, we see all of the mass shootings' MSA as well as how many articles were written within one week of the shooting. An interesting aspect for further research is why the mass shootings in Houston-The Woodlands-Sugar Land are covered far less than mass shootings that had the same number of deaths. Nevertheless, it's quite difficult to see any sort of obvious pattern from this table alone.

Looking at only the top 4 most visible mass shootings, one can draw some conclusions right away; if a shooting has more than 20 deaths, it's going to have a lot of articles written. However, that doesn't explain the 6 and 8 that are also included in the list. If one reads the title of these

<b>Title</b>	<b>MSA</b>	<b>Total Fatalities</b>	<b>Visibility</b>
Waco Seige	Waco	22	200
Wedgwood Baptist Church	Dallas-Fort Worth-Arlington	8	169
Shooting of Dallas Police Officers	Dallas-Fort Worth-Arlington	6	210
El Paso Walmart Shooting	El Paso	23	110

highly covered, yet low number of deaths, it starts to make sense. Mass shootings that occur in a taboo location (a church), or contain deaths from a taboo group of individuals not typically explicitly targeted (police officers), have vastly more media coverage than mass shootings with the same number of deaths. This area of research is also relatively underdeveloped, meaning the elasticity of media coverage.

## Special Thanks

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## **”Visibility” Links**

Waco 2/28/1993

Waco 5/17/2015

Corpus Christi 4/3/1993

Dallas-Fort Worth-Arlington 9/15/1999

Dallas-Fort Worth-Arlington 8/7/2013

Dallas-Fort Worth-Arlington 7/7/2016

Killeen-Temple 11/5/2009

Killeen-Temple 4/2/2014

Killeen-Temple 2/22/2015

Houston-The Woodlands-Sugar Land 7/9/2014

Houston-The Woodlands-Sugar Land 8/8/2015

Houston-The Woodlands-Sugar Land 4/9/2016

Sherman-Denison 3/21/2016

Dallas-Plano-Irving 9/10/2017

El Paso 8/3/2019