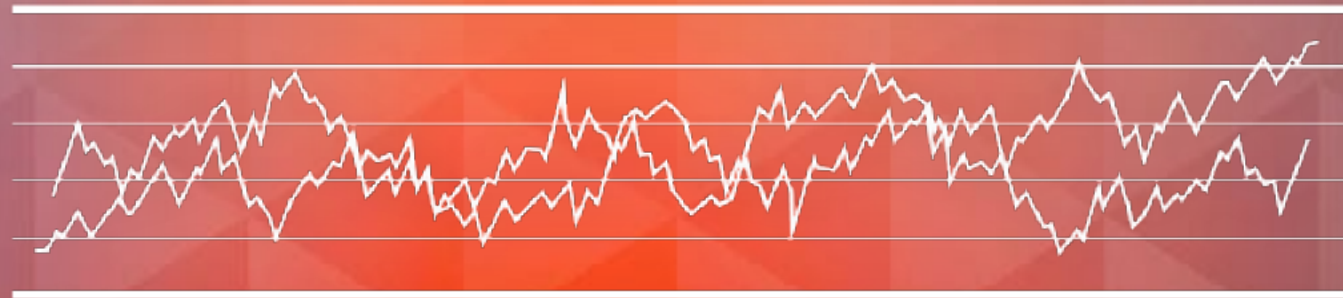




LegalShield<sup>SM</sup>  
**LAW INDEX**



## AMERICAN CONSUMERS FACING ‘IMMINENT ECONOMIC COLLAPSE’ WITHOUT ADDITIONAL FEDERAL STIMULUS, PER NEW LEGALSHIELD REPORT

*Company’s suite of predictive indices show bankruptcy fears are rising sharply even though official statistics lag and will take months to confirm -*

ADA, Okla. - August 13, 2020 - Released today, the July 2020 LegalShield Law Index, a suite of leading indicators of the economic and financial status of U.S. households and small business, saw its Consumer Financial Stress Index remain little changed in July, despite widespread job loss since February, as Americans awaited the outcome of negotiations to extend federal fiscal support. However, in a worrying sign, the company’s Bankruptcy Index rose for the first time in 9 months, reversing its steady downward trend in 2020 and marking the sharpest percent increase in series history. LegalShield has been measuring the demand for various legal services for nearly 16 years, collecting real-time data from consumers on those issues of greatest concern. The company’s data, therefore, often detects trends before traditional indicators and is viewed as predictive.

“For the first time in U.S. history, American consumers are facing an imminent economic collapse because of political gridlock in Washington D.C.,” said LegalShield CEO Jeff Bell. “The earlier actions of Congress and the Federal Reserve forestalled a full meltdown of the U.S. economy, but without additional economic aid now our data suggest that we are on the precipice of an epic wave of small business and personal bankruptcies. In July, total intakes - consumer inquiries into specific legal services - surpassed 90,000 for the first month since January and were at the second highest level in nearly eight years, since August 2012. We are setting new record intakes each month around landlord-tenant, billing and employment issues, showing the pain is only worsening. President Trump’s recent executive actions are helpful only in focusing attention on the problem, not in solving the plight of millions of Americans. Only Congress with the power of the purse can do that, and lawmakers need to act boldly and quickly before we spiral completely out of control.”

The LegalShield Law Index reflects the demand for legal services among the company’s provider law firms in all 50 states, and includes five sub-indices focused on consumer financial stress, housing activity, real estate, bankruptcy and foreclosure. The five sub-indices tend to lead an existing economic indicator that sheds light on the health of the U.S. economy. Highlights from July are as follows:

- The *LegalShield Consumer Financial Stress Index* was little changed for the month, ticking down 0.1 point from 66.5 in June to 66.4 in July. Federal efforts to mitigate the economic collapse have kept consumers afloat, but significant uncertainty remains regarding the extension of these measures.
- The *LegalShield Bankruptcy Index* rose (worsened) 6.9 points from 23.4 in June to 30.3 in July, the sharpest increase in series history although still below pre-pandemic levels. Meanwhile total U.S. bankruptcies eased in June and are down 31% from June 2019. However, large banks are anticipating the likelihood that things could get worse, and have set aside tens of billions of dollars in Q2 to offset impending loan losses. While consumer bankruptcies remain historically low, most signs point to an increase, and the company’s bankruptcy index is designed to provide an early warning signal.

- The *LegalShield Housing Activity Index* reached a new high for the third consecutive month, suggesting that housing starts should continue to improve over the coming months. The index increased 1.7 points to an all-time high of 128.4 in July. LegalShield and broader housing data suggests construction activity will continue to recover in the near- to medium-term. The NAHB/Wells Fargo Housing Market Index has followed suit, for example, surging 14 points in July with its next report scheduled for August 17.
- The *LegalShield Real Estate Index* improved to its highest level in 14 years, in line with the jump in existing home sales. The index increased 1.1 points in July to 107.5, the highest level since June 2006. Meanwhile, existing home sales surged a record 21% in June, as anticipated by recent movements in LegalShield data. The National Associations of Realtors will next report home sales on August 21, anticipating another strong month of activity.
- The *LegalShield Foreclosure Index* edged down in July, falling 1.1 points to 38.9 in July, near a historic low. Without the moratorium on evictions, however, there is evidence that foreclosure activity could spike in the coming months.

#### About LegalShield and IDShield

A trailblazer in the democratization of affordable access to legal protection, LegalShield is one of North America's largest providers of online legal subscription plans covering more than 4.4 million people. Its IDShield identity theft solution for individuals and families has more than one million members. LegalShield and IDShield serve more than 141,000 businesses. In addition, over 40,000 companies offer LegalShield and IDShield plans to their employees as a voluntary benefit. Both legal and identity theft plans start for less than \$25 per month. For more information about LegalShield, visit: <https://www.legalshield.com/> or for more information about IDShield, visit: <https://www.idshield.com/>.

###

# About LegalShield



**#1 Provider**  
of Subscription-based legal  
plans to households

1972–present

**46+ Year History**  
and counting



**6,900 Broker & Agency Clients**  
served by our dedicated  
B2B division



**More than 1.8 Million Memberships**  
paying monthly via credit card/  
debit card/payroll deduction



**47,000**  
small business accounts



**39 Law Firms**  
In 50 states and 4 Canadian provinces  
with a total of 900 lawyers focused on  
LegalShield matters, in addition to  
a referral network of 4,600 lawyers,  
with average of 22 years experience

# About the LegalShield Law Index

- The LegalShield Law Index is a suite of leading indicators of the economic and financial status of U.S. households and small businesses.
- The LegalShield Law Index is comprised of five sub-indices that are constructed from LegalShield's proprietary data, which reflect the demand for various legal services over the past 15+ years. Each time a LegalShield provider law firm receives a request from a LegalShield customer, the request is logged as an "intake" in one of roughly 70 unique areas of law (e.g., real estate) depending on the nature of the request.
- Each sub-index reflects the number of intakes in an area of law as a share of total intakes across all areas of law in a given month. In some instances, individual indices across multiple areas of law (e.g., bankruptcy, foreclosure, consumer/finance) are combined to produce a composite index (e.g., consumer financial stress).
- The sub-indices that comprise the LegalShield Law Index were selected because they tend to lead an existing economic indicator that sheds light on the health of the U.S. economy (i.e., the target economic indicator). In this way, the LegalShield Law Index provides actionable intelligence about the direction of the U.S. economy in the near term.

# Advantages of the LegalShield Law Index

## **UNIQUE**

The LegalShield Law Index is based on inquiries into specific legal services each month. To the best of our knowledge, there is no comparable data on the market.

## **PROPRIETARY**

The LegalShield Law Index is based on data collected through LegalShield's provider law firms in all 50 states, thereby offering information that is not accessible to the general public.

## **HIGH-FREQUENCY**

The LegalShield Law Index is based on data collected on a near real-time basis, and can be refreshed on a weekly, monthly, or quarterly basis depending on the user's needs.

## **ROBUST**

The LegalShield Law Index is based on intakes for more than 1.8 million memberships (including individuals and small businesses), providing a window into the experiences of families and businesses across the country at any given point in time.

# LegalShield Law Index + Target Economic Indicators

Each sub-index that comprises the LegalShield Law Index has undergone a battery of statistical tests to validate its relationship to an existing economic indicator that sheds light on the health and direction of the U.S. economy (i.e., the target economic indicator). Each index was selected because it tracks its target indicator, thereby providing advance insight into where the economy is heading in the near term.

LegalShield Law Index	LegalShield Area(s) of Law	Target Economic Indicator
<b>Consumer Financial Stress (Composite Index)</b>	Bankruptcy, Foreclosure, & Consumer/Finance	Consumer Confidence (Conference Board)
<b>Housing Activity (Composite Index)</b>	Foreclosure & Real Estate	Housing Starts (U.S. Census Bureau)
<b>Bankruptcy</b>	Bankruptcy	Total Bankruptcies (Compiled by Epiq Systems)
<b>Foreclosure</b>	Foreclosure	Foreclosure Starts (Mortgage Bankers Association)
<b>Real Estate</b>	Real Estate	Existing Home Sales (National Association of Realtors)

# Interpreting Each Component of the LegalShield Law Index

## **Consumer Financial Stress Index**

Consumer spending accounts for more than two-thirds of U.S. economic activity. The flagship LegalShield Consumer Financial Stress Index tends to lead the Conference Board's Consumer Confidence Index by one to three months. The LegalShield Consumer Financial Stress Index also provides a useful "hard" data check on the Consumer Confidence Index and similar measures of consumer confidence that are based on "soft" survey data, as these measures are not always consistent with underlying economic conditions.

## **Housing Activity Index**

The housing market, broadly defined, accounts for up to one-seventh of U.S. economic activity, and the amount of new residential construction (as measured by housing starts) can provide insights into consumers' confidence about their jobs and future income. The LegalShield Housing Activity Index tends to lead U.S. Census data on housing starts (a key economic indicator) by 1–2 months — providing timely intelligence about near-term housing market health.

## **Bankruptcy Index**

Bankruptcy data provide an important insight into the overall financial health of consumers and businesses. As witnessed during the Great Recession of 2008-09, an uptick in bankruptcies can foreshadow significant turmoil within the economy. The LegalShield Bankruptcy Index tends to lead the trajectory of total bankruptcies by roughly one month, providing an early warning signal of an economic downturn.

## **Foreclosure Index**

A rise in foreclosures often signals a worsening of household finances, as households typically delay payments on other debt obligations in order to pay their mortgages on time. The LegalShield Foreclosures Index closely tracks foreclosures as reported each quarter by the Mortgage Bankers Association.

## **Real Estate Index**

The housing market accounts for a significant share of U.S. economic activity, and the pace of existing home sales can provide insights into consumers' confidence about their jobs and future income. The LegalShield Real Estate Index tends to lead existing home sales as published by the National Association of Realtors and offers an early look at emerging trends in the housing market.

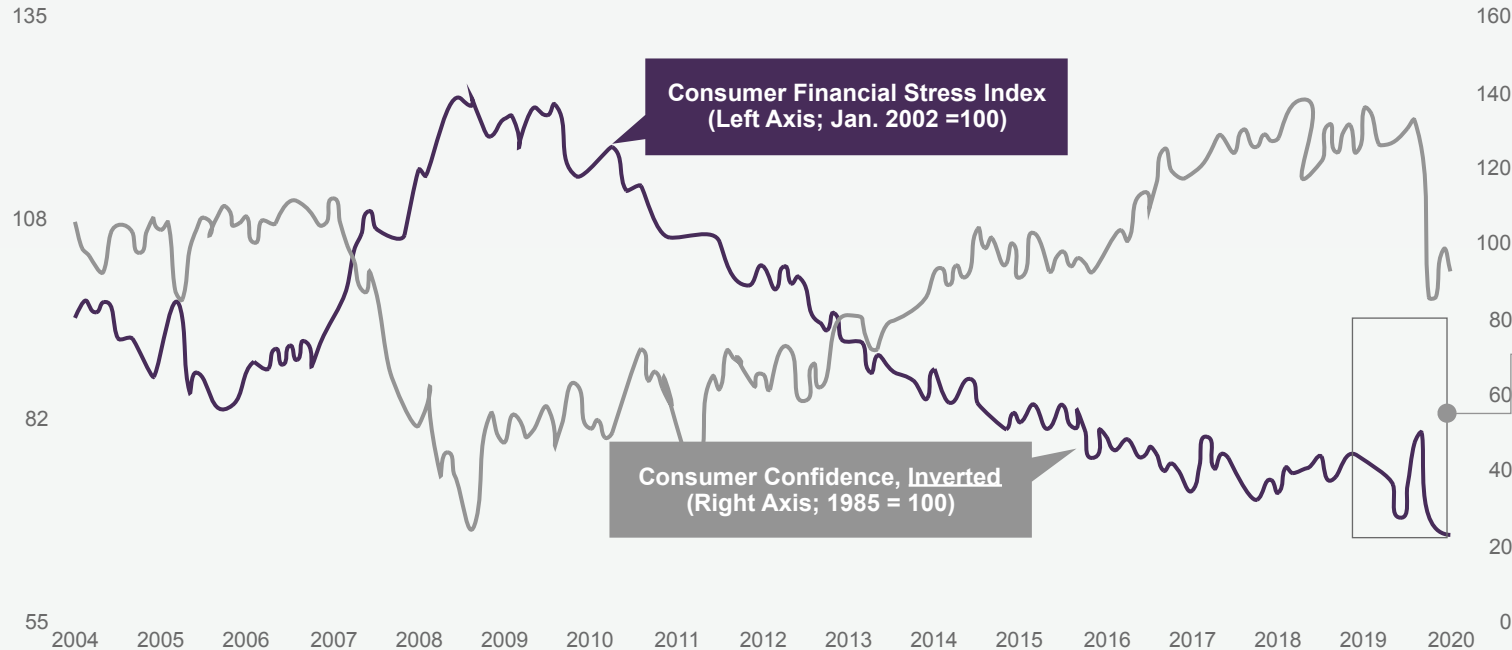
# LegalShield Consumer Financial Stress Index

**Headline:** The LegalShield CFSI was little changed this month and continues to signal low financial stress, despite widespread job loss. Federal efforts to mitigate the economic collapse have kept consumers afloat, but significant uncertainty remains regarding the extension of these measures.

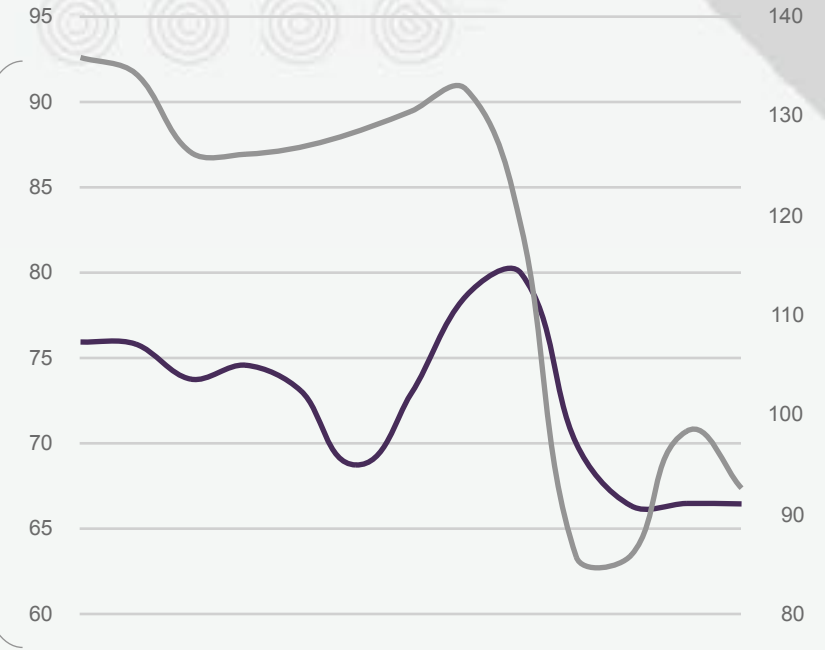
**Trends in Context:** The LegalShield Consumer Financial Stress Index (CFSI) was little changed in July, ticking down 0.1 point to 66.4. Meanwhile, the Conference Board Consumer Confidence Index dropped 5.7 points to 92.6 as COVID-19 cases increased throughout much of the United States. While government stimulus efforts continue to provide a buffer to consumers in the face of double-digit unemployment, consumers have simultaneously cut back on spending: data from Affinity Solutions shows that credit and debit card spending was roughly 6.2% below January levels as of the last week of July. Moreover, not only have consumers cut spending, but they are using their government stimulus checks to pay down existing debt: per Equifax, total outstanding credit card debt is down 11% from February.

The resilience demonstrated by U.S. consumers as the economy suffered its worst quarter of growth on record has been a pleasant surprise, and federal policymakers deserve credit for a rapid and aggressive response. However, there are signs that consumer financial stress may rise in the months ahead. Initial unemployment claims remain substantially higher than the pre-pandemic record nearly five months after the pandemic began, consumer and business sentiment are both muted, and the share of small businesses open is 16% below January levels. Significant uncertainty remains regarding the extension of federal fiscal support measures, but the LegalShield CFSI is designed to detect rising consumer financial stress before it shows up in more traditional economic indicators.

## HISTORICAL TREND OVER PAST 16 YEARS



## MOVEMENT OVER PAST 12 MONTHS

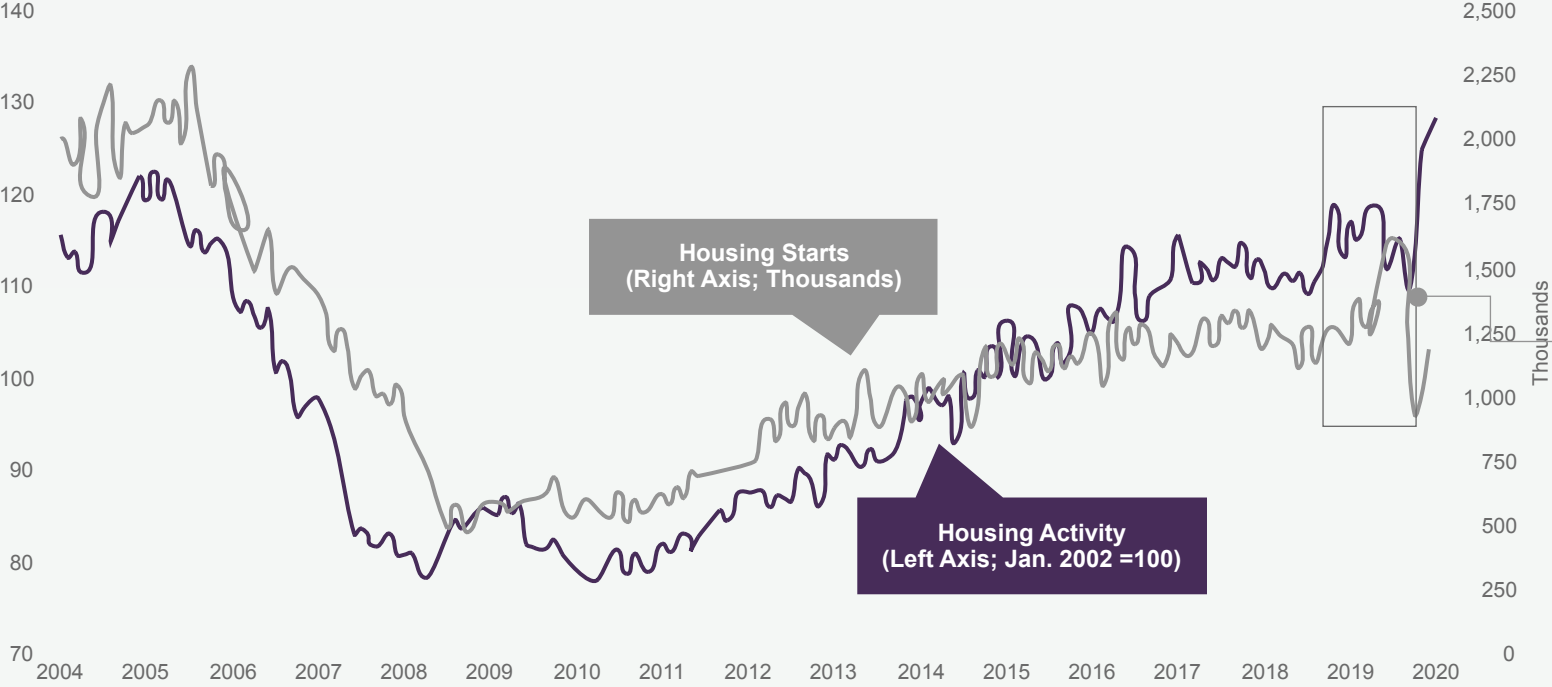


# LegalShield Housing Activity Index

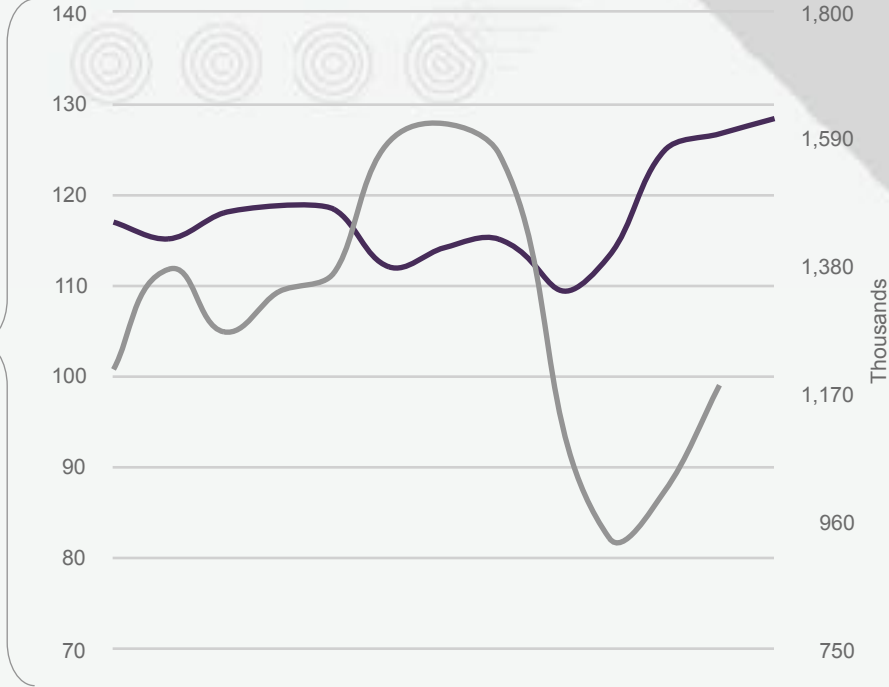
**Headline:** The LegalShield Housing Activity Index reached a new high in July for the third consecutive month, suggesting that housing starts should continue to improve over the coming months.

**Trends in Context:** The LegalShield Housing Activity Index increased 1.7 points to an all-time high of 128.4 in July. Meanwhile, housing starts jumped 17% in June and are only 4.0% below year-ago levels. As demonstrated by the LegalShield Index and other economic data, the housing sector seems to be recovering more quickly than the broader economy as historically low mortgage rates and pent-up demand during the pandemic have spurred construction. Indeed, single-unit housing permits grew over 12% in June, particularly in the Midwest (+18%) and Western (+17%) United States, as potential homebuyers seek to move to the suburbs and exurbs. The NAHB/Wells Fargo Housing Market Index has followed suit, surging 14 points in July to near pre-pandemic levels despite elevated building material costs (e.g., lumber prices surged 35% in July to a two-year high). Likewise, architecture firms who specialize in multi-family residential buildings see encouraging signs on the horizon, according to the Architecture Billings Index. Although housing starts cratered at the onset of the pandemic, LegalShield and broader housing data suggests construction activity will continue to recover in the near- to medium-term.

## HISTORICAL TREND OVER PAST 16 YEARS



## MOVEMENT OVER PAST 24 MONTHS



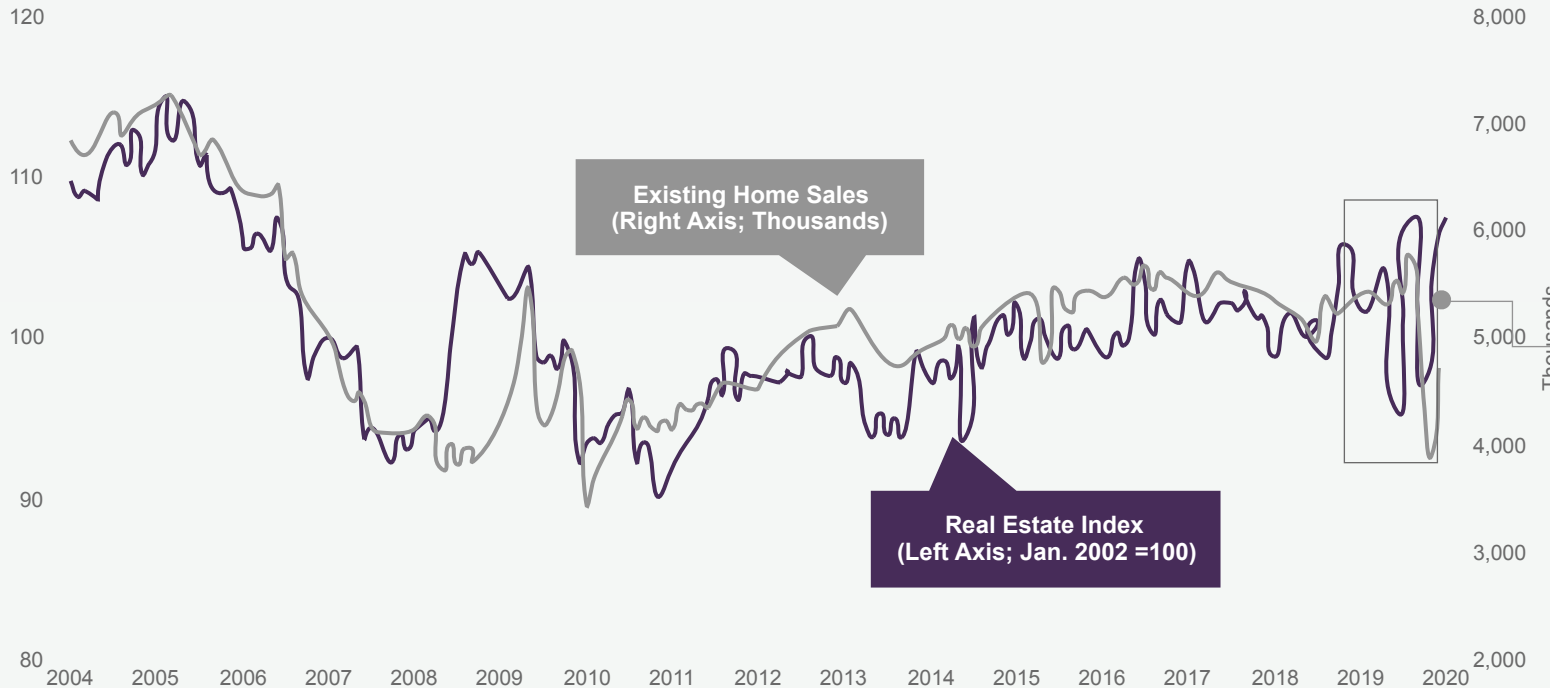
Source: LegalShield; Census Bureau; Census Bureau (X-13ARIMA-SEATS Seasonal Adjustment Program).

# LegalShield Real Estate Index

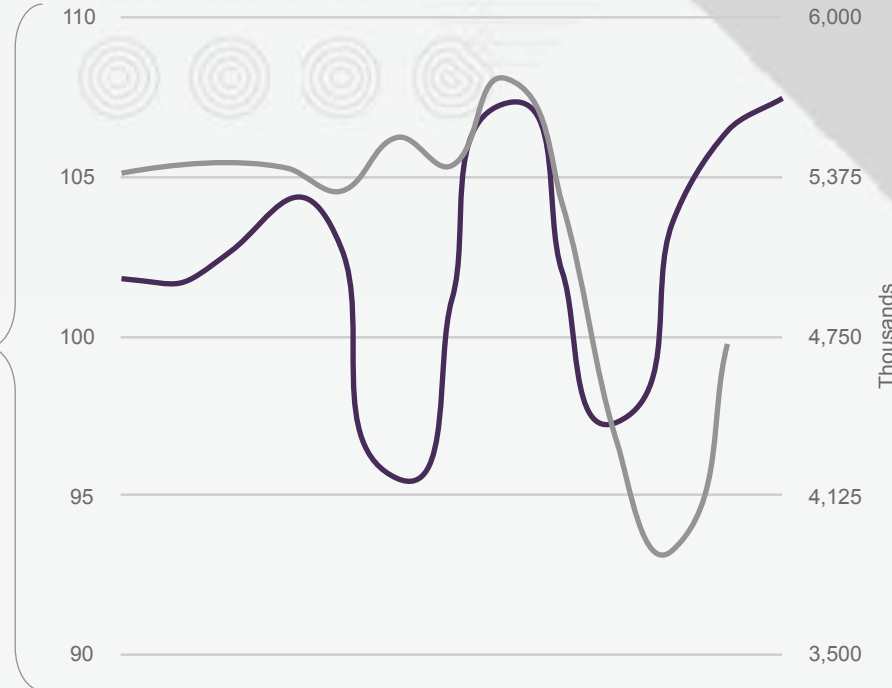
**Headline:** The LegalShield Real Estate Index improved to the highest level in 14 years, in line with a jump in existing home sales. While home prices remain a sticking point, all-time low borrowing costs should spur further homebuying activity in the months to come.

**Trends in Context:** The LegalShield Real Estate Index increased 1.1 points in July to 107.5, the highest level since June 2006. Meanwhile, existing home sales surged a record 21% in June, as anticipated by recent movement in LegalShield data. Although home prices increased 4.9% year-over-year in June, record-low mortgage rates are attractive to many would-be homebuyers. Indeed, the monthly payment on a \$340,000 home is down nearly 10% from a year ago, in part due to the Federal Reserve's slashing of its benchmark lending rate in response to the pandemic. Low borrowing costs have brought potential homebuyers who are still employed and have solid credit history back into the market, as the NAHB/Wells Fargo Traffic of Prospective Buyers Sub-Index suggests home viewings have returned to pre-pandemic levels. Mortgage applications likewise have held 10–20% above year-ago levels since late May according to the Mortgage Bankers Association. Real estate activity should continue to recover in the months ahead after bottoming out in April.

## HISTORICAL TREND OVER PAST 16 YEARS



## MOVEMENT OVER PAST 12 MONTHS

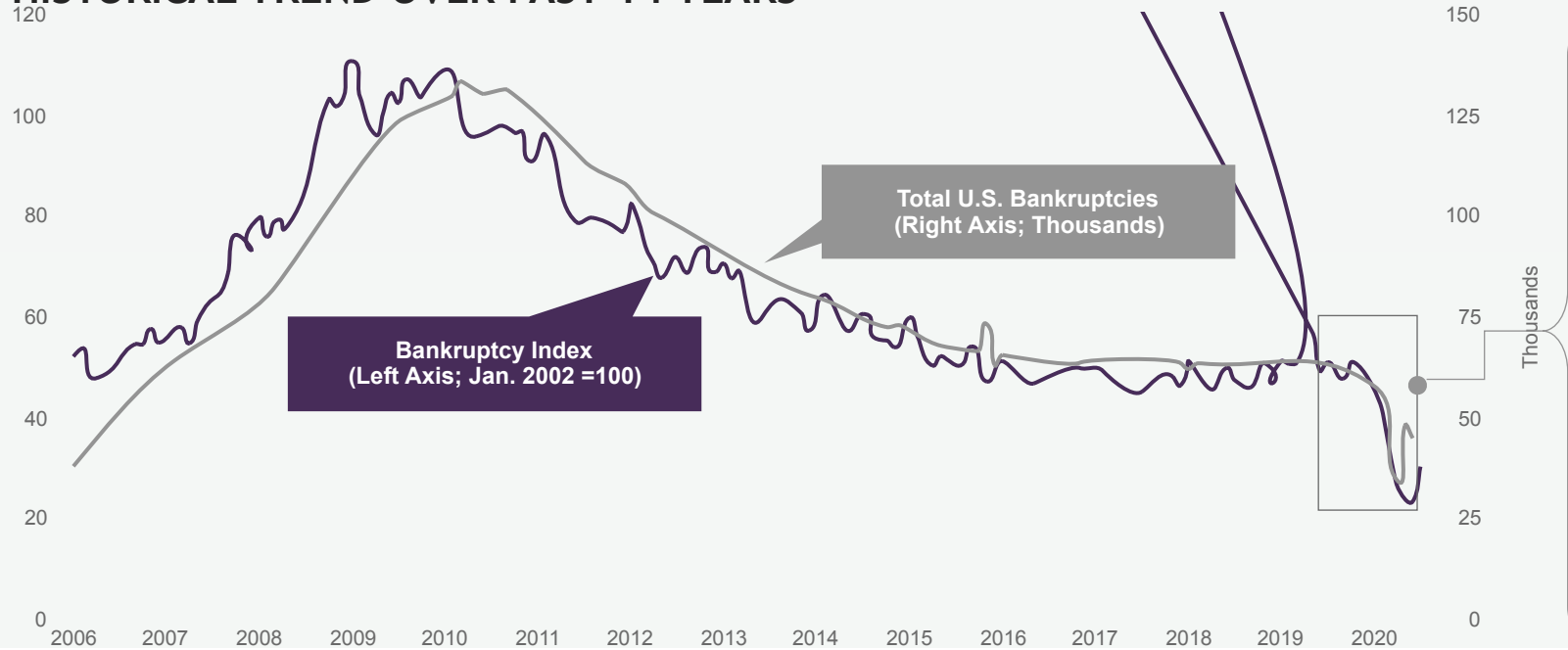


# LegalShield Bankruptcy Index

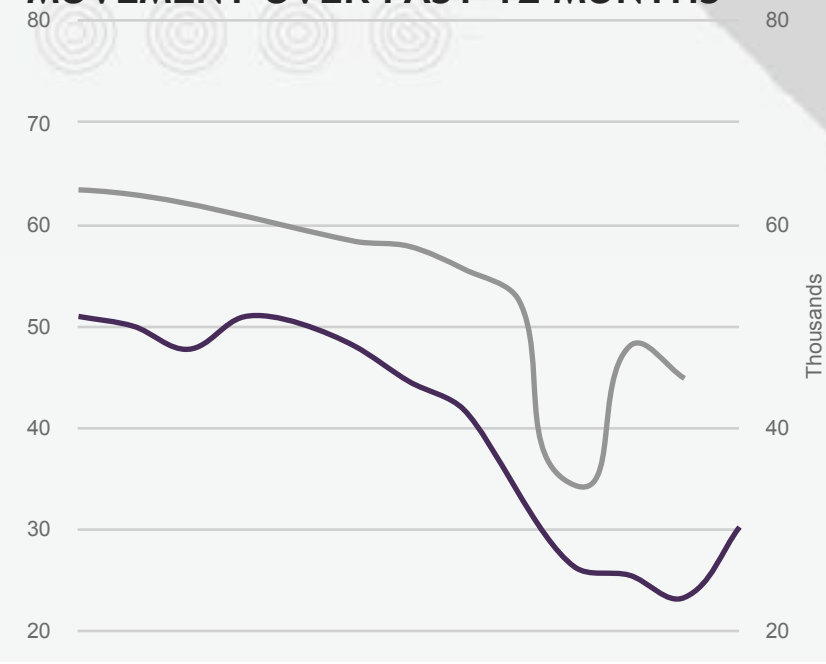
**Headline:** The LegalShield Bankruptcy Index increased in July as several federal stimulus programs expired, though it remains historically low. While there is significant uncertainty regarding the continued level of federal support offered to consumers, bankruptcies are likely to rise eventually, and LegalShield data should detect this trend before traditional indicators.

**Trends in Context:** The LegalShield Bankruptcy Index rose (worsened) 6.9 points to 30.3 in July, the sharpest percent increase in series history but still well below pre-pandemic levels. Meanwhile, total U.S. bankruptcies eased in June and are down 31% from June 2019. Several federal assistance efforts provided by the CARES Act have now expired (including enhanced unemployment benefits) and the labor market recovery slowed in July after two consecutive months of record-breaking job growth. According to BLS, more than 18 million people are unemployed (and another 3–4 million want a job but have left the labor force since February) while the Census Bureau's Household Pulse survey suggests nearly half of households have experienced a loss of employment income since the outbreak began. Temporary assistance measures, including enhanced unemployment benefits and a payment holiday on student loans, have expired and face an uncertain future. Large banks, anticipating the likelihood that things could get worse, set aside tens of billions of dollars in Q2 to offset impending loan losses. While consumer bankruptcies remain historically low, most signs point to an increase over the next year, and the LegalShield Bankruptcy Index should provide an early warning signal.

## HISTORICAL TREND OVER PAST 14 YEARS



## MOVEMENT OVER PAST 12 MONTHS

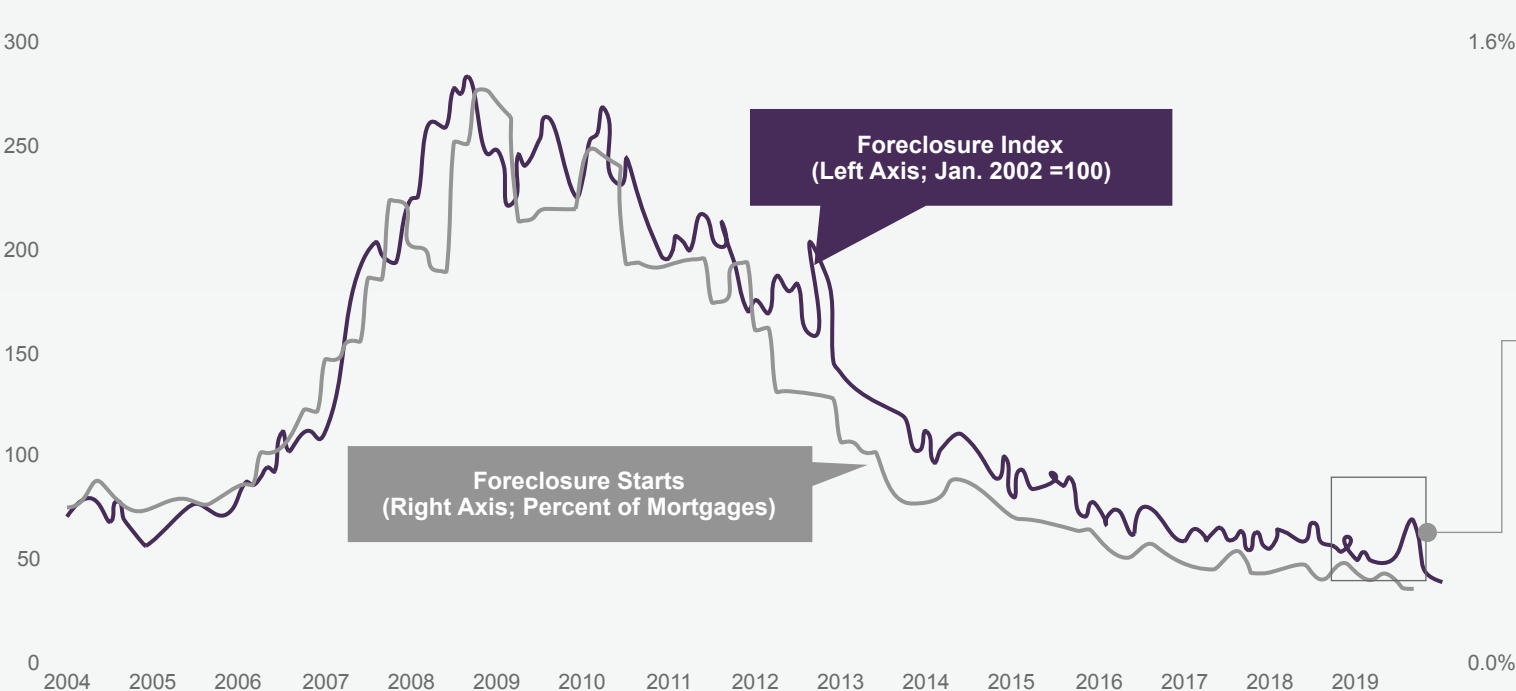


# LegalShield Foreclosure Index

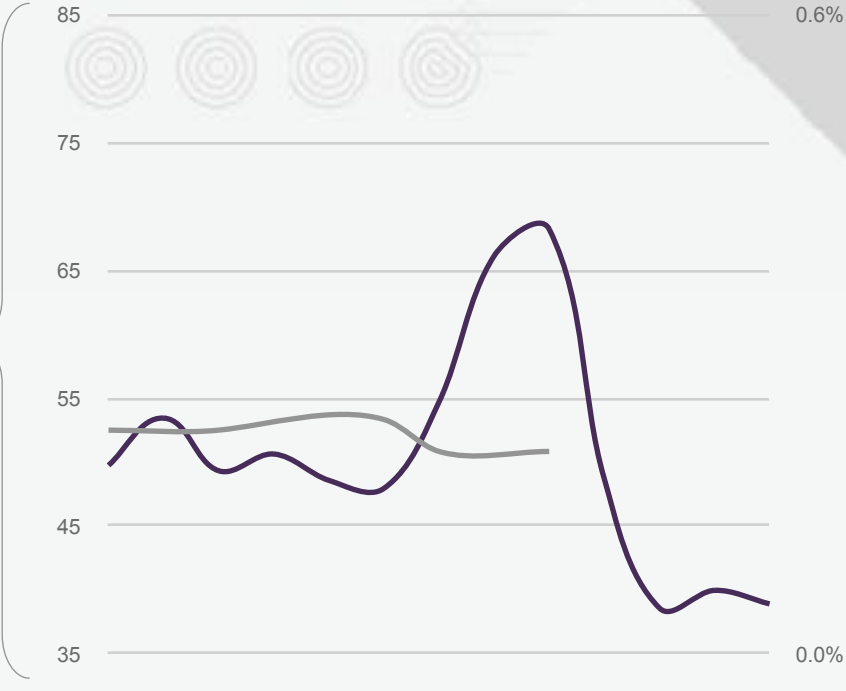
**Headline:** The LegalShield Foreclosure Index edged down in July as mortgage holders benefitted from foreclosure moratoria and federal stimulus payments. Absent these temporary measures, foreclosures may rise in the months ahead.

**Trends in Context:** The LegalShield Foreclosure Index eased 1.1 points to 38.9 in July, near a historic low. Likewise, foreclosure starts eased 2 basis points to a new all-time low of 0.19% in the first quarter. The recent downward movement in the LegalShield Foreclosure Index appears to be the result of a foreclosure moratorium on federally backed mortgages, which is set to expire at the end of August. Without this moratorium, there is evidence that foreclosure activity could spike in the coming months: according to Fitch, borrowers are foregoing mortgage payments to stay current on personal and auto loans, while a LendingTree analysis indicates that nearly one-in-five residential mortgage holders missed at least one payment between March and July. The number of missed payments may climb if federal assistance expires: per USA Today, nearly half of homeowners receiving enhanced unemployment benefits are at least somewhat concerned about paying their mortgage once these payments expire, and 9% are completely uncertain how they will meet their payment.

## HISTORICAL TREND OVER PAST 16 YEARS



## MOVEMENT OVER PAST 12 MONTHS





# **LegalShield Law Index:**

## **Technical Appendix**

# Key Findings

Three individual AOLs demonstrated strong correlation and leading properties against five target macroeconomic indicators.

## Summary Of Results

LegalShield Area of Law	Target Macro Indicator(s)	Correlation (Level)	Correlation (Y/Y)	Correlation (Q/Q)	Tracks Historical Trend?	Estimated Lead	Robust Over Time?
Bankruptcy	•Bankruptcies	0.75	0.74	0.22	✓	≈ 1 mo.	✓+
Foreclosure	•Foreclosures	0.96	0.88	0.47	✓	Coincident*	✓+
Real Estate	• Existing Home Sales	0.87	0.65	0.46	✓	≈ 0-1 mo.*	✓

# Composite Indices

We developed two composite indexes that are strongly correlated with and tend to lead economic indicators of interest.



## LEGALSHIELD “CONSUMER STRESS” INDEX

- **Component AOLs:** (1) Bankruptcy; (2) Consumer/Finance; (3) Foreclosure
- **Target Indicator:** Consumer Confidence
- **Performance:** -0.85 Correlation; 1-3 Month Lead



## LEGALSHIELD “HOUSING ACTIVITY” INDEX

- **Component AOLs:** (1) Real Estate; (2) Foreclosure
- **Target Indicator:** Housing Starts
- **Performance:** 0.91 Correlation; 0-2 Month Lead\*

A faint background graphic of a line graph with multiple data series, overlaid on a grid, positioned behind the main text.

# **Methodology: Individual Index Development**

# Methodology

A six-step process was used to convert LegalShield intake data into potential indices.

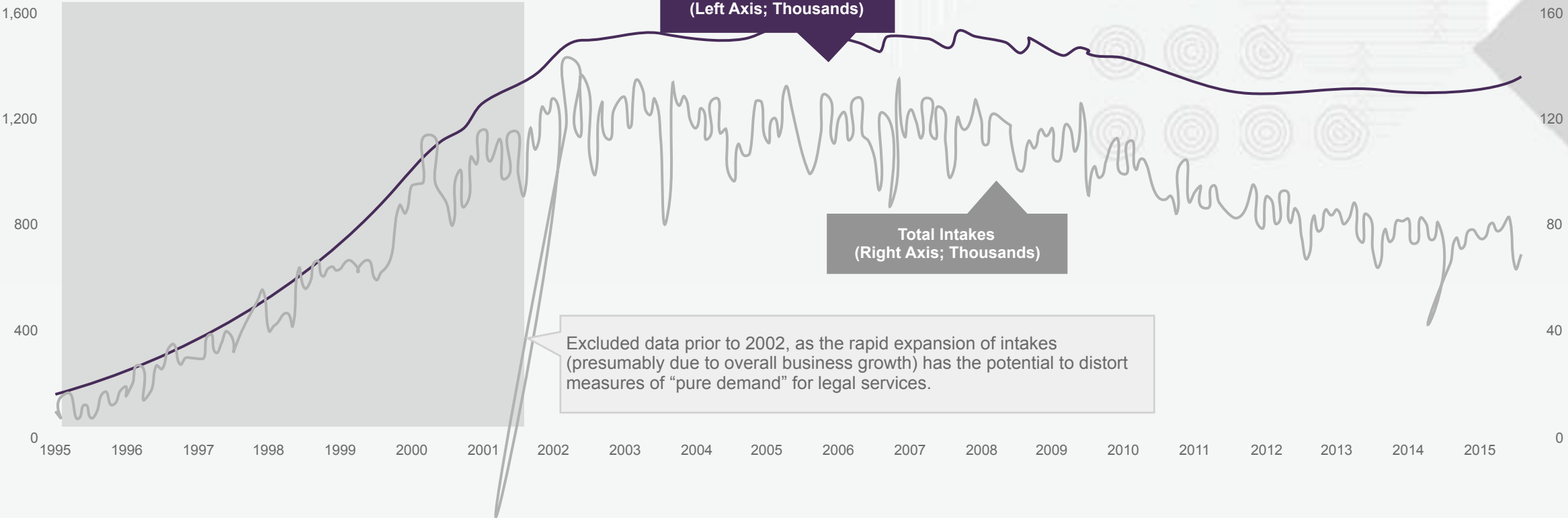
- 1 Construct Dataset.** Conduct preliminary data cleaning, processing, and formatting.
- 2 Determine Scope of Analysis.** Examine differences across plan types and subscriber samples to determine the optimal “subscriber universe” for index development.
- 3 Define Intake Metric.** Test competing approaches for normalizing intake data.
- 4 Filter AOLs.** Evaluate and scope the original list of 65 areas of law (AOLs) to identify the best candidates for index development.
- 5 Test.** Run the scoped AOLs through a series of transformations and statistical tests to identify quantitative relationships with key macroeconomic indicators.
- 6 Develop Indexes.** Combine specific AOLs into composite indexes and test relationships with key macroeconomic indicators.

# Data Construction & Cleaning

Monthly subscriber and intake data was trimmed to improve the stability of the dataset over time.

**Active Subscribers  
Thousands**

**Total Intakes  
Thousands**



# Analytical Scope

Testing and index development used intake data from all subscribers across all plan types, standardized by total intakes.

Determine Scope of Analysis

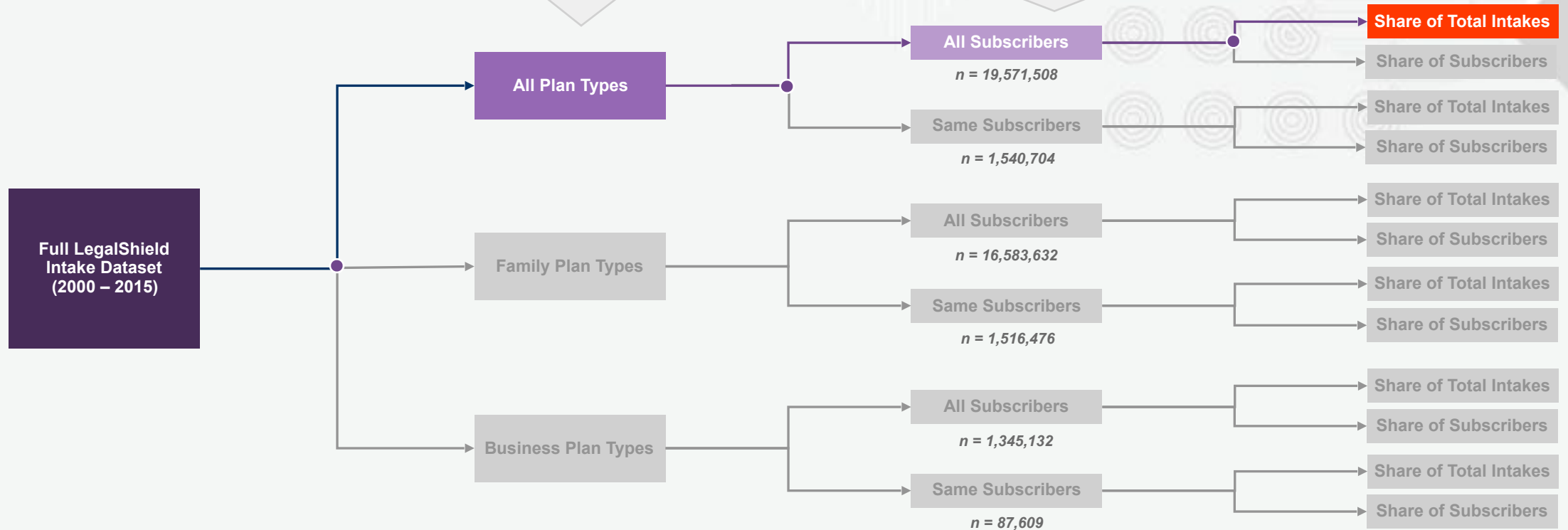
## Dataset Development

Define Intake Metric\*

Trends in demand for AOLs were fairly constant across plan types.

All subscribers were used in the analysis; a “same subscriber” sub-sample was used to validate results.

Standardizing intake data as a share of total intakes produced stronger results.



\*Standardizing intake data as a share of active subscribers controls for the change in the size of the subscriber base over time. Standardizing intake data as a share of total intakes controls for shifts in the relative demand for different AOLs over time.

# Filter AOLs

Out of 65 AOLs in the original intake data, a three-step filtering process identified 27 as suitable candidates for index development.

## Scoping Intake Data

**1 Original Dataset**  
*Historical intake data from LegalShield included 65 AOLs.*



**2 Consolidate AOLs**  
*Consolidating “like” AOLs reduced the number from 65 to 49.*



**3 Criteria 1: Historical Data**  
*18 AOLs lacked sufficient historical data.*



**4 Criteria 2: Narrow Scope**  
*4 AOLs were defined too broadly to support a specific index narrative, leaving 27 “qualifying” AOLs.*



# Filter AOLs

## Detailed Inclusion Filter Results (1/2)

ID	LegalShield Area of Law	Associated with +/- Life Event	Historical Data	Narrow Scope	Include in Dataset
1	Administrative Law	Ambiguous		✓	
2	Automobile Accident	-	✓	✓	✓
3	Banking	Ambiguous	✓		
4	Bankruptcy	-	✓	✓	✓
5	Business License, Fees, etc.	Ambiguous	✓	✓	✓
6	Civil Litigation	-	✓	✓	✓
7	Collection	-	✓	✓	✓
8	Consumer/Finance	Ambiguous	✓	✓	✓
9	Contract	Ambiguous	✓	✓	✓
10	Corporate	+	✓	✓	✓
11	Criminal	-	✓	✓	✓
12	Divorce	-		✓	
13	Divorce Uncontested	-		✓	
14	Education	-	✓	✓	✓
15	Elder Law	-	✓	✓	✓
16	Employment	Ambiguous	✓	✓	✓
17	Entertainment	Ambiguous		✓	
18	Estate Planning	Ambiguous	✓	✓	✓
19	Family Law	Ambiguous	✓	✓	✓
20	Firearm	Ambiguous		✓	
21	Foreclosure	-	✓	✓	✓
22	Franchise Law	Ambiguous		✓	
23	General Law	Ambiguous	✓		
24	Identity Theft	-		✓	
25	Immigration	Ambiguous	✓	✓	✓

# Filter AOLs

## Detailed Inclusion Filter Results (2/2)

ID	LegalShield Area of Law	Associated with +/- Life Event	Historical Data	Narrow Scope	Include in Dataset
26	Insurance	-	✓	✓	✓
27	Labor Law	-		✓	
28	Landlord Tenant	-	✓	✓	✓
29	Legal Malpractice	-		✓	
30	Loan Modification	Ambiguous		✓	
31	Medical Malpractice	-	✓	✓	✓
32	Military Law/Security Clearance	Ambiguous		✓	
33	Other	Ambiguous	✓		
34	Patents Combined	+	✓	✓	✓
35	Personal Injury	-	✓	✓	✓
36	Probate	-	✓	✓	✓
37	Product Liability	-		✓	
38	Public Service	Ambiguous		✓	
39	Real Estate	+	✓	✓	✓
40	Request for Service	Ambiguous			
41	Small Claims	-	✓	✓	✓
42	Social Security	-	✓	✓	✓
43	Tax	Ambiguous	✓		
44	Trademarks	+		✓	
45	Traffic	-	✓	✓	✓
46	Veteran's Affairs	Ambiguous		✓	
47	Will Workshop	Ambiguous		✓	
48	Workman's Compensation	-	✓	✓	✓
49	Wrongful Death	-		✓	
	TOTAL		31	44	27

# Testing

Intake data from the 27 “qualifying” AOLs was then tested against 15 economic indicators of interest to assess potential predictive value.

## Macroeconomic Indicators

- 1 Gross Domestic Product
- 2 Nonfarm Payrolls (Total; Professional and Business Services)
- 3 ISM Non-Manufacturing Purchasing Managers’ Index (PMI)

## Confidence Indicators

- 4 Consumer Confidence Index (Conference Board)
- 5 Small Business Optimism Index (NFIB)

## Housing Indicators

- 6 Housing Starts
- 7 Existing Home Sales (NAR)
- 8 Residential Construction Permits
- 9 Small Business Optimism Index (NFIB)

## Financial Health Indicators

- 10 Total Bankruptcies (Total Filings; Epiq)
- 11 Delinquencies (All Loans & Leases; St. Louis Fed)
- 12 Foreclosures (All Mortgage Foreclosures Started; Mortgage Bankers Association)
- 13 Consumer Credit (Total; Revolving; Non-Revolving)
- 14 S&P 500 Index
- 15 Wilshire 5000 Index

# Testing

Three out of the final 27 AOLs demonstrated a strong statistical relationship to a handful of economic indicators.

## SCOPING INTAKE DATA

1

### 27 Scoped AOLs

*27 AOLs were subjected to several rounds of statistical testing.*



2

### Statistical Relationship

*Test for correlation across various transformations.*



3

### Tracking Historical Trend

*Visually assess AOL to determine how closely it tracks its target indicator.*



4

### Leading Properties

*Test for leading / concurrent properties.*



5

### Robust Across Time

*Confirm that relationships hold across various out-of-sample time periods.*



# Testing

Testing included computing various correlations, assessing historical trends and leading properties, and evaluating stability over time.

## 1 Basic Correlations

- Examined the correlation between AOL and target macro indicator using different transformations



## 2 Historical Trend & Leading Properties

- Produced charts of transformed AOL and select economic indicators to confirm/reject if AOL tracks indicator's historical trend
- Examined AOLs on both a concurrent and leading basis

## 3 Stability Tests

- Performed testing to confirm that relationship between AOL and macro indicator was not driven solely by a specific time period within the dataset and ensure that the relationship holds across time
- Test 1: Compared correlations between first half of data (2000 – 2007) and second half of data (2008 – 2015)
- Test 2: Compared correlations between random samples of the data
- Test 3: Compared earliest and latest data (2000 – 2005, 2010 – 2015) with middle of data (2006 – 2009)
- Test 4: Compared correlations between 20% of most recent data (Nov 2012 – Dec 2015) and remaining data

# Testing

Statistical Relationship Testing, Select Results

## CORRELATION RESULTS (2002 – 2017)

LegalShield Area of Law	Target Indicator	Correlation (Level)	Correlation (Y/Y)	Correlation (Q/Q)
Bankruptcy	<ul style="list-style-type: none"><li>• Bankruptcies</li></ul>	0.76	0.67	0.20
Foreclosure	<ul style="list-style-type: none"><li>• Foreclosures</li></ul>	0.96	0.87	0.49
Real Estate	<ul style="list-style-type: none"><li>• Existing Home Sales</li></ul>	0.85	0.58	0.36

# Testing

Historical Trend & Leading Properties Testing, Select Results

## HISTORICAL TREND & LEADING PROPERTIES RESULTS (2002 – 2016)

LegalShield Area of Law	Target Indicator	Tracks Historical Trend?	Leading Properties?	Approximate Lead Time
Bankruptcy	<ul style="list-style-type: none"><li>• Bankruptcies</li></ul>	✓	✓	≈ 1 mo.
Foreclosure	<ul style="list-style-type: none"><li>• Foreclosures</li></ul>	✓	r	Coincident*
Real Estate	<ul style="list-style-type: none"><li>• Existing Home Sales</li></ul>	✓	✓	≈ 0-1 mo.*

# Testing

Intertemporal Stability Testing, Select Results

## STABILITY TEST RESULTS (2000 – 2015)

LegalShield Area of Law	Target Macro Indicator(s)	Test 1*	Test 2*	Test 3*	Test 4*	Overall Score	Key Takeaways
Bankruptcy	• Bankruptcies	✓	✓	✓	✓	✓+	Performed well across all tests
Foreclosure	• Foreclosures	✓	✓	✓	✓	✓+	Performed well across all tests
Real Estate	• Existing Home Sales	r	✓	✓	✓	✓	Performed well on all but one test

Test 1: Compared correlations between first half of data (2000 – 2007) and second half of data (2008 – 2015)

Test 2: Compared correlations between random samples of the data

Test 3: Compared earliest and latest data (2000 – 2005, 2010 – 2015) with middle of data (2006 – 2009)

Test 4: Compared correlations between 20% of most recent data (Nov 2012 – Dec 2015) and remaining data

A faint background image of a line graph with multiple data series, overlaid on the text.

# Methodology: Composite Index Development

# Methodology

A five-step process was used to convert LegalShield data into composite indices.

## 1 Select AOLs

Select individual AOLs to be included in the composite index, based on results of statistical tests and desired index “narrative” (e.g., consumer stress).

## 2 Transform AOLs

Compute the month-on-month percent change for each AOL.

## 3 Standardize

Create a standardization factor for each AOL, based on its standard deviation. Multiply each transformed AOL by the standardization factor to produce an “adjusted monthly contribution” for each AOL.

## 4 Sum Components

Sum the adjusted monthly contribution across each AOL to produce a monthly index growth rate.

## 5 Rebase to 100

Rebase the monthly index growth rate to a given month (January 2000 = 100) and to produce a monthly composite index.

# Testing

## Historical Trend & Leading Properties Test Results

### Historical Trend & Leading Properties Results (2002 – 2016)

Composite Index	Target Indicator	Tracks Historical Trend?	Leading Properties?	Approximate Lead Time
Consumer Financial Stress	Consumer Confidence	✓	✓	1 – 3 mo.
Housing Activity	Housing Starts	✓	✓	0 – 2 mo.*

# Testing

## Statistical Relationship Test Results

### Correlation Results (2002 – 2017)

Composite Index	Target Indicator	Correlation (Level)	Correlation (Y/Y)	Correlation (Q/Q)
Consumer Financial Stress	Consumer Confidence	-0.85	-0.58	-0.33
Housing Activity	Housing Starts	0.88	0.55	0.23

# Testing

## Intertemporal Stability Tests

### Stability Test Results (2000 – 2015)

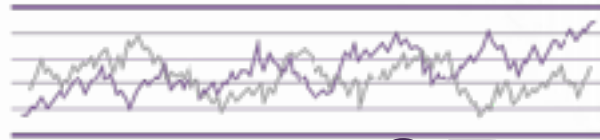
Composite Index	Target Indicator	Test 1*	Test 2*	Test 3*	Test 4*	Overall Score	Key Takeaways
Consumer Financial Stress	Consumer Confidence	r	✓	✓	✓	✓	Performed well on all but one test
Housing Activity	Housing Starts	r	✓	✓	✓	✓	Performed well on all but one test

\*Test 1: Compared correlations between first half of data (2000 – 2007) and second half of data (2008 – 2015)

Test 2: Compared correlations between random samples of the data

Test 3: Compared earliest and latest data (2000 – 2005, 2010 – 2015) with middle of data (2006 – 2009)

Test 4: Compared correlations between 20% of most recent data (Nov 2012 – Dec 2015) and remaining data



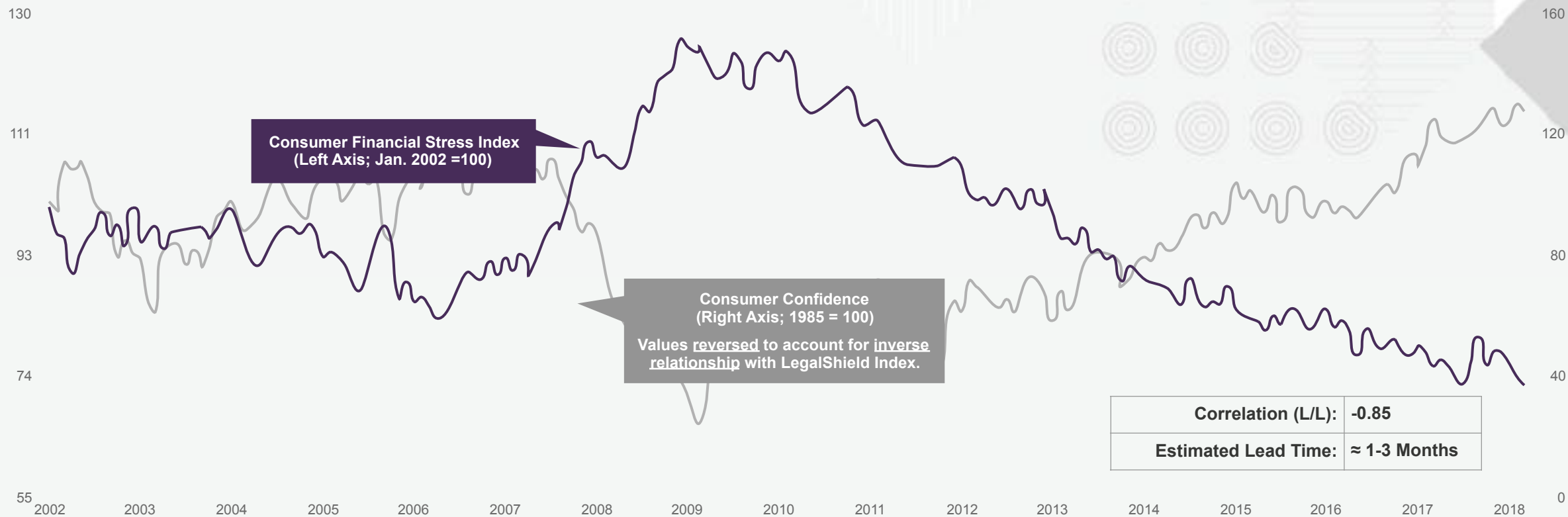
# Summary of Results

# Composite Index: Consumer Financial Stress

AOLs: Bankruptcy; Foreclosure; Consumer Finance

## LegalShield Consumer Financial Stress Index Index (January 2002 = 100)

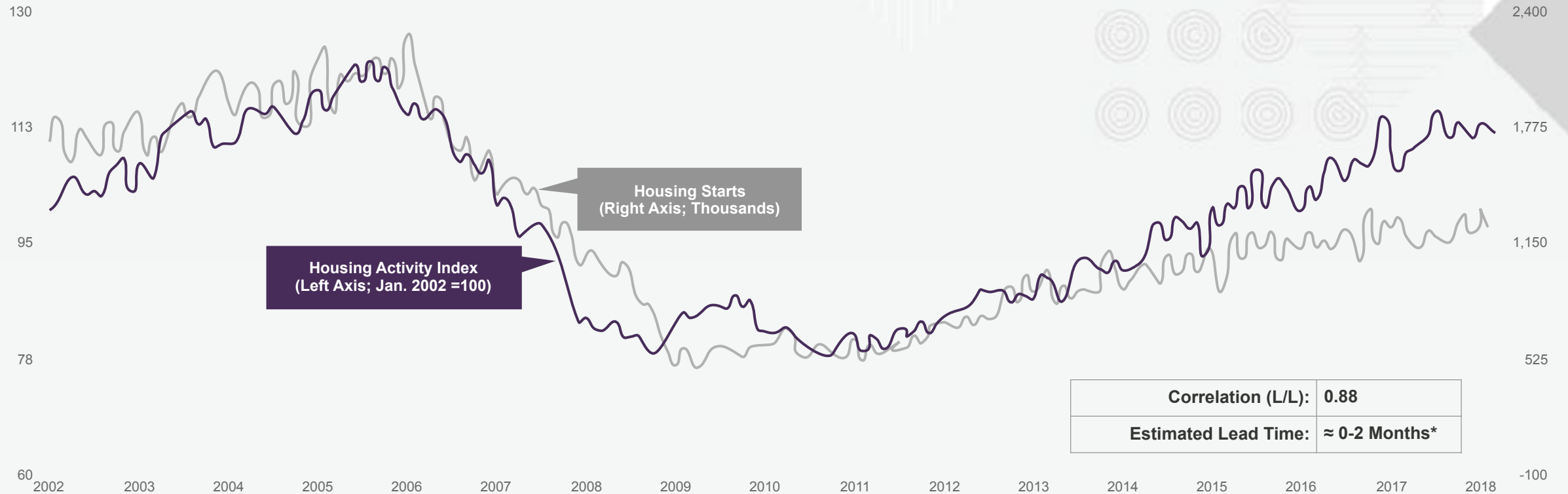
## Consumer Confidence Index (1985 = 100)



# Composite Index: Housing Activity Index

AOLs: Foreclosure; Real Estate\*

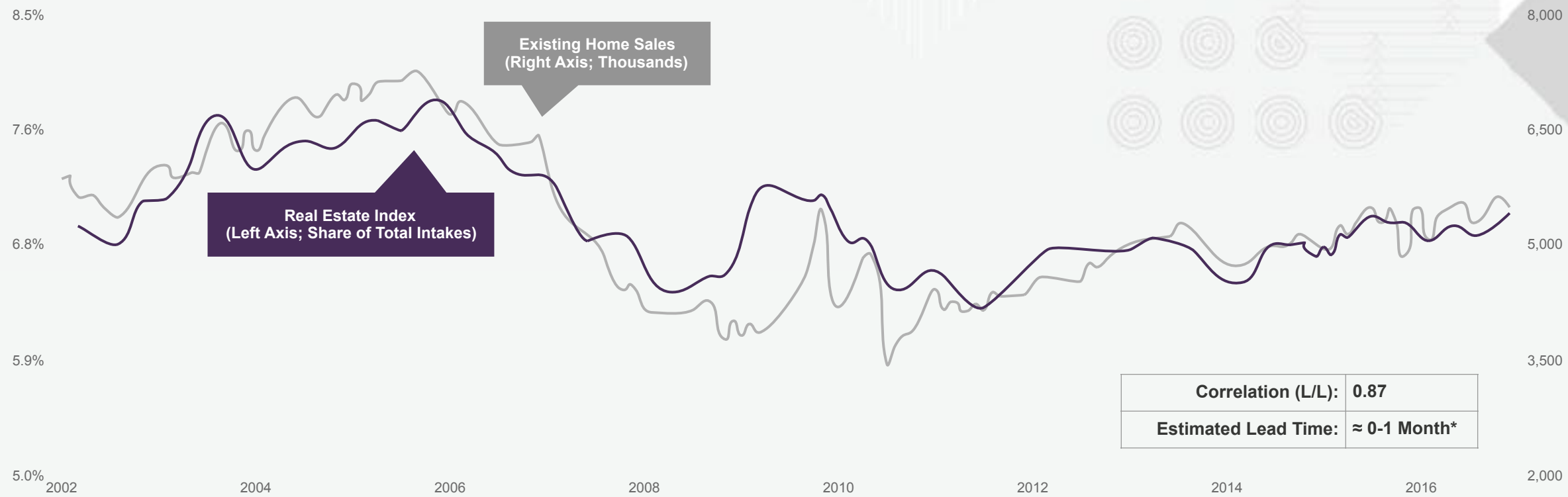
## Legalshield Housing Activity Index Index (January 2002 = 100)



# AOL: Real Estate

Target Series: Existing Home Sales

## Legalshield Real Estate Index Share Of Total Intakes (Seasonally Adjusted\*, 3mma)

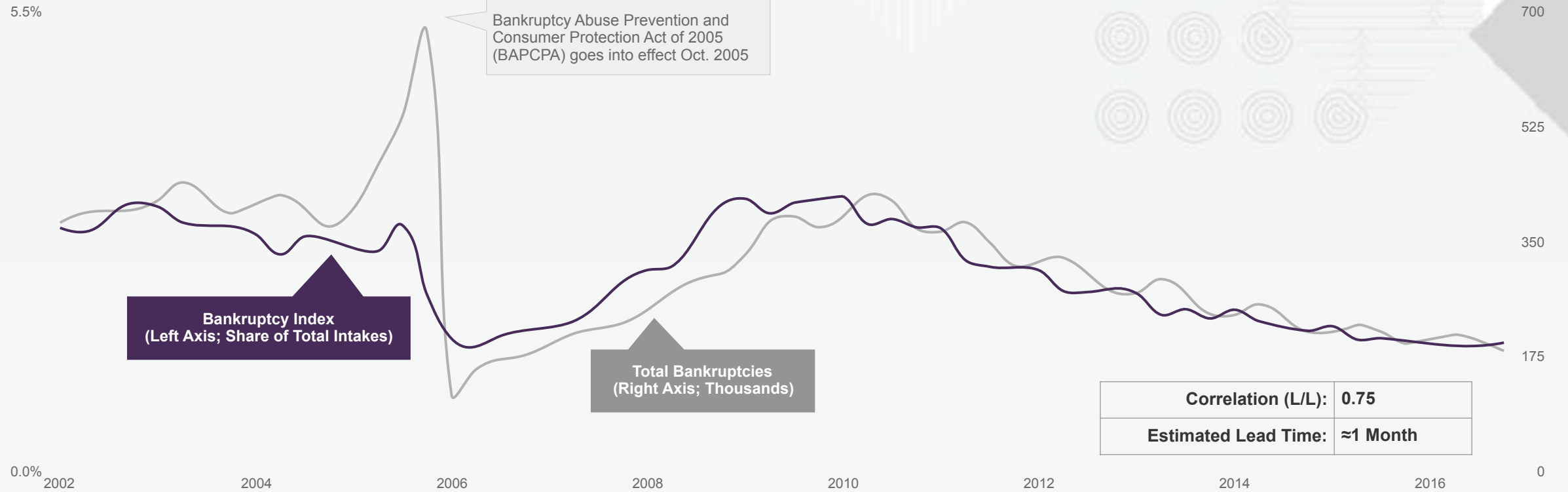


\*The Real Estate Index was seasonally adjusted using the Census Bureau's X-13 ARIMA-SEATS Seasonal Adjustment Program. In addition to its statistical lead time, the Index has a timing advantage of roughly two weeks over existing home sales due to release schedules.

# AOL: Bankruptcy

Target Series: Target Bankruptcies

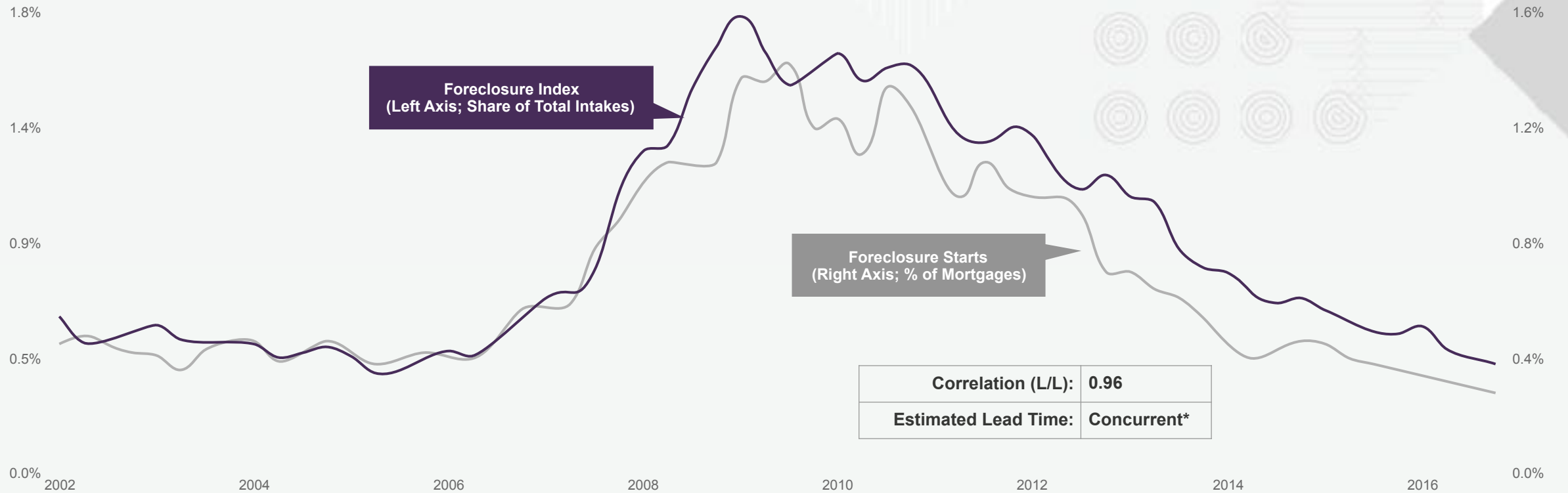
## Legalshield Bankruptcy Index Share Of Total Intakes



# AOL: Foreclosure

Target Series: Foreclosure Starts

## Legalshield Foreclosure Index Share Of Total Intakes



# Results

## Summary of Key Findings

### Summary Of Results

LegalShield Law Index	Target Series	Correlation (Level)	Correlation (Y/Y)	Correlation (Q/Q)	Approximate Lead Time	Robust Across Time
Bankruptcy	• Bankruptcies	0.76	0.67	0.20	≈ 1 mo.	✓+
Foreclosure	• Foreclosures	0.96	0.87	0.49	Coincident*	✓+
Real Estate	• Existing Home Sales	0.85	0.58	0.36	≈ 0-1 mo.*	✓
Consumer Financial Stress	• Consumer Confidence	-0.85	-0.58	-0.33	≈ 1-3 mo.	✓
Housing Activity	• Housing Starts	0.88	0.55	0.23	≈ 0-2 mo.*	✓



LegalShield<sup>SM</sup>

**LAW INDEX**

