The Legal Shield Stress Index Stress Index 100 Stress Ind





About LegalShield



#1 Provider of subscription-based legal plans to households



1.8 million+ memberships paying monthly via credit card/ debit card/payroll deduction



49 year history and counting



47,000 small business accounts



6,900 broker & agency clients served by our dedicated B2B division



39 law firms in 50 states, Canada and the United Kingdom with a total of 900 lawyers, and a referral network of 4,600 lawyers, with average of 22 years experience



About the LegalShield Economic Stress Index

- ✓ The LegalShield Economic Stress Index is a suite of leading indicators of the economic and financial status of U.S. households and small businesses.
- The LegalShield Economic Stress 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 quarter. 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 Economic Stress 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 Economic Stress Index provides actionable intelligence about the direction of the U.S. economy in the near term.

Advantages of the LegalShield Economic Stress Index

✓ UNIQUE

The LegalShield Economic Stress 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 Economic Stress 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 Economic Stress 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 Economic Stress 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.

Interpreting Each Component of the LegalShield Economic Stress Index

CONSUMER STRESS INDEX

BANKRUPTCY INDEX

FORECLOSURE INDEX

HOUSING CONSTRUCTION INDEX

HOUSING SALES INDEX

Consumer spending accounts for more than two-thirds of U.S. economic activity. The flagship Consumer Stress Index tends to lead the Conference Board's Consumer Confidence Index by one to three months. The Consumer 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.

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 Bankruptcy Index tends to lead the trajectory of total bankruptcies by roughly one month, providing an early warning signal of an economic downturn.

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 Foreclosure Index closely tracks foreclosures as reported each quarter by the Mortgage Bankers Association.

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 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 nearterm housing market health.

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 Housing Sales 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.



Consumer Stress Index

The LegalShield Consumer Stress Index was mostly unchanged in October and remains at one of the lowest levels on record. Consumers remain in good financial standing thanks to accumulated savings and a strong labor market, even after the expiration of federal support measures.

The LegalShield Consumer Stress Index edged down (improved) 0.9 point in October to 58.7. Meanwhile, the Conference Board's Consumer Confidence Index increased 4.0 points in October to 113.8 after falling for three consecutive months.

Savings amassed over the pandemic, along with favorable labor market conditions, are helping workers maintain healthy financial prospects. For example, the Conference Board's Labor Differential Index — which represents the gap between people with positive and negative perceptions of the labor market — rose to a pandemic-era record in October and is just shy of a series-high. Strong labor demand is leading to both plentiful job opportunities and wage increases. A quarterly survey by the National Association of Business Economics reports that 58% of business leaders said they increased wages in Q3, and nearly the same share expect to do so again this quarter. This is leading to increased financial security among lower-income workers. Indeed, the October Morning Consult/Axios Inequality Index fell to the lowest level since April, as fewer lower-income workers expressed concern about losing employment income.

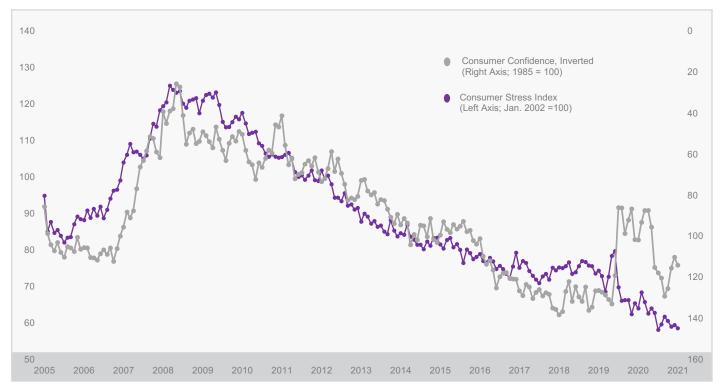
However, while strong labor demand and an improving public health situation boosted consumer confidence last month, there remains a substantial gap between consumers' perceptions of the labor market and the broader economy. Rising prices and supply chain disruptions remain concerns for consumers, particularly as they gear up for holiday shopping that will be directly impacted by these headwinds. Nevertheless, consumers are showing a greater willingness to travel and spend on in-person services as COVID-19 infection levels fall. Per an October <u>Conference Board survey</u>, the share of respondents planning on taking a vacation rose to the highest level since before the pandemic.

In all, consumers continue to report low financial stress a couple of months after various government support provisions have expired. Consumer stress is expected to stay muted in coming months, an outlook supported by LegalShield data.

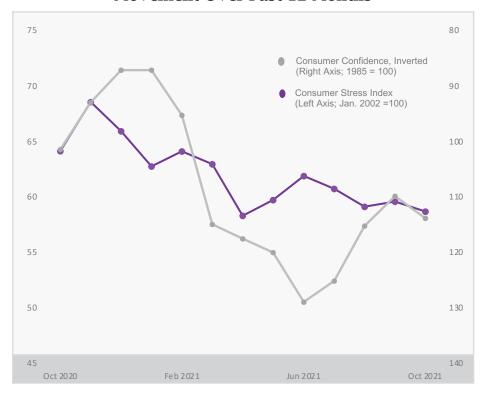


Consumer Stress Index

Historical Trend Over Past 16 Years



Movement Over Past 12 Months





Bankruptcy Index

The LegalShield Bankruptcy Index was largely unchanged at one of the lowest readings in the series, and bankruptcies should remain low in the near term.

The LegalShield Bankruptcy Index increased (worsened) 0.6 point to 19.5 in October. Meanwhile, total seasonally adjusted bankruptcy filings fell by 0.9% to 30,703 in September and were down 19% compared to a year ago.

Consumers have accumulated savings and paid down record levels of debt during the pandemic thanks to government support measures, below-trend spending and a faster-than-expected recovery in the labor market. This financial cushion has helped consumers maintain and improve their financial standing. For example, the <u>American Bankers Association</u> reports that in Q2, consumer credit delinquencies fell to the lowest level since the series began in 1993. Meanwhile, research from <u>TransUnion</u> finds that 58% of consumers that entered a financial hardship program during the pandemic saw their credit risk scores rise in 2020, while the <u>Federal Reserve</u> reported that consumer credit grew at a robust rate in September.

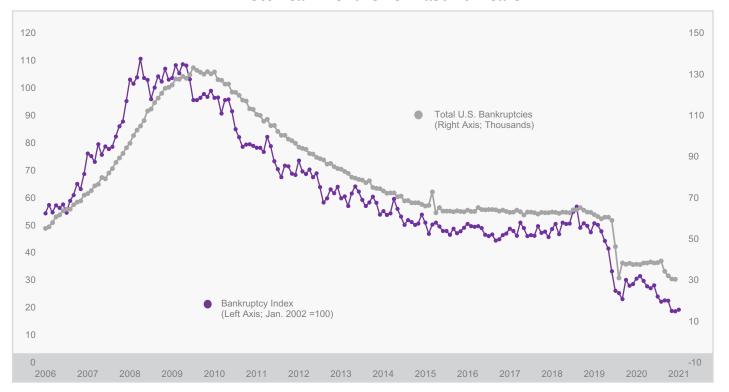
While consumers are broadly in good credit standing, the pandemic has had varied impacts on people's ability to repay debt. According to a study by Northwestern Mutual, the pandemic has led to about a third of Americans saying it will take longer than expected to pay off their debt. One significant factor to watch that could have significant consequences for consumer finances (particularly among lower-income earners) is rising inflation. Higher prices for essential goods and services (e.g., food, rent/housing, clothing) reduce consumers' ability to make other payments and increase financial insecurity. While average wages have risen sharply over the last year, inflation has as well — notably, real disposable income has fallen in five of the last six months.

Overall, consumers have accumulated savings during the pandemic that is helping them remain financially afloat. Rising prices and dwindling savings may translate to increased bankruptcies in 2022, but in the near-term bankruptcies should remain very low.

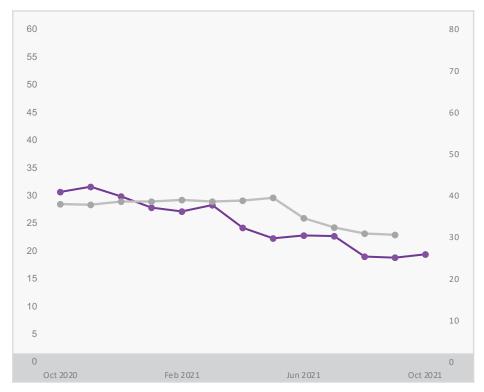


Bankruptcy Index

Historical Trend Over Past 16 Years



Movement Over Past 12 Months





Foreclosure Index

The LegalShield Foreclosure Index inched up in October but remains historically low. Foreclosure activity has increased since the foreclosure moratorium expired but is still well-below pre-pandemic levels.

The LegalShield Foreclosure Index increased (worsened) 1.5 points to 34.7 in October. Meanwhile, <u>ATTOM</u> reports that there were nearly 20K properties with foreclosure filings in September, up a sharp 24% compared to August. While filings have doubled over the last year, they are still nearly 70% below levels from two years ago, underscoring the effect of pandemic-era assistance programs.

While foreclosure activity is likely to continue rising as hundreds of thousands of borrowers exit forbearance plans in the coming months, foreclosures are not expected to rise to levels seen during the 2008 housing market crash, for two key reasons:

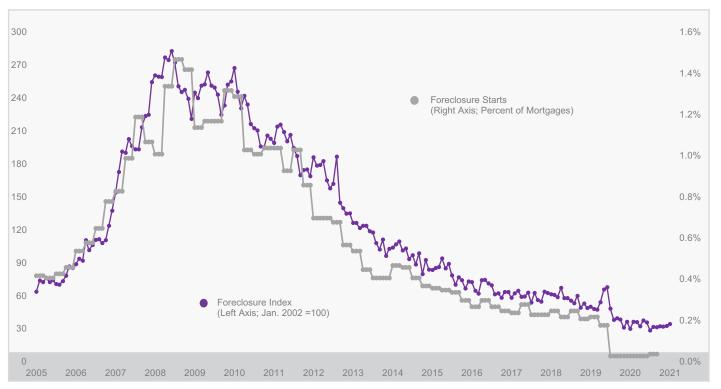
- Government agencies and mortgage providers are helping borrowers <u>prevent unnecessary foreclosures</u>. Many lenders have been proactively making loan modifications to help borrowers make payments, and the Consumer Financial Protection Bureau has instated guidelines through the end of the year making it easier for lenders to work with borrowers to avoid foreclosures.
- Meanwhile, unlike the Great Recession, home values have skyrocketed since the onset of pandemic and led to high levels of home equity. Per CoreLogic, homeowners gained an average of \$51,500 in equity Q2, five-times the gain seen a year ago. This makes it less likely homeowners will have to resort to a distressed sale if they are unable to remain current on their payments.

In all, foreclosure activity will likely continue to rise in the near term given the expiration of most government support, including the foreclosure moratorium that kept levels artificially low since the beginning of the pandemic. However, foreclosures should remain relatively low compared to historical trends.

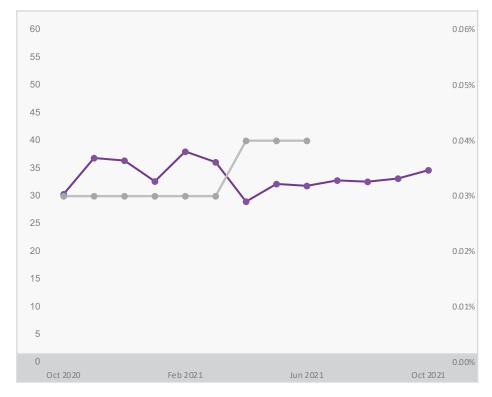


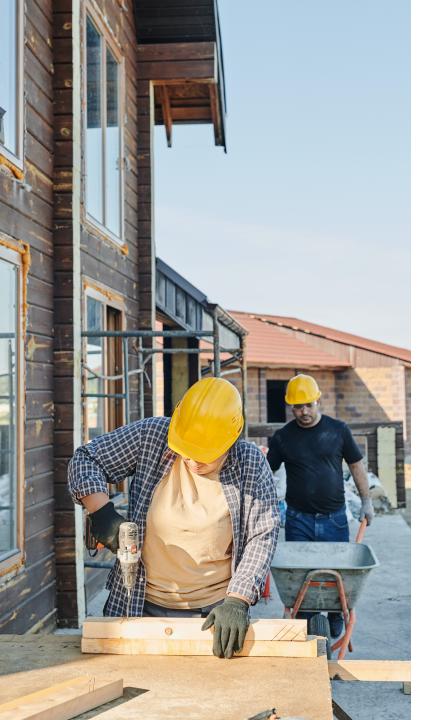
Foreclosure Index

Historical Trend Over Past 16 Years



Movement Over Past 12 Months





Housing Construction Index

The LegalShield Housing Construction Index suffered its worst-ever decline in October. Homebuilders have been struggling with rising input costs, supply chain disruptions, and labor shortages, all of which are weighing on building activity.

The LegalShield Housing Construction Index plunged 7.8 points in October, its steepest decline on record. Meanwhile, housing starts fell 1.6% in September but were up 7.4% compared to one year ago. In addition to LegalShield data, several other metrics point to a slowdown in construction activity, including residential permits (a leading indicator of construction), which fell by 7.7% in September.

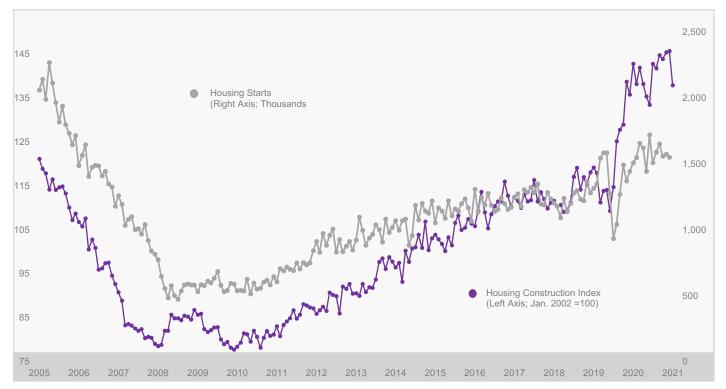
One factor contributing to the fall in residential permits is a severe shortage in available lots. Per a survey by the National Association of Home Builders, 76% of builders said the supply of developed lots in their areas was low, marking an all-time high by a wide margin. Housing construction has also been hampered by rising materials costs, supply chain constraints, and a shortage in skilled labor. For example, the NAHB reports that prices for residential construction materials are up 11% so far in 2021 and are 14% higher than a year ago. These headwinds have led to some decline in homebuilder confidence and surging costs for new homes. Further, The Associated Builders and Contractors' Construction Confidence Index readings for sales, profit margins, and staffing levels fell in September, although they remain in expansionary territory.

Overall, LegalShield data point to slowing housing construction activity in the coming months, especially if rising materials costs, supply chain difficulties, and labor scarcity persist.

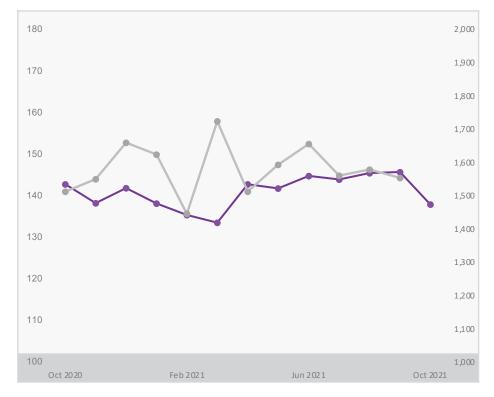


Housing Construction Index

Historical Trend Over Past 16 Years



Movement Over Past 12 Months





Housing Sales Index

The LegalShield Housing Sales Index fell sharply in October, its first negative reading in six months. While sales remain historically high, affordability concerns increasingly weighed on buying activity.

The LegalShield Housing Sales Index plunged by 6.8 points in October to 114.3, one of the largest declines in the series. Meanwhile, existing home sales climbed by 7.0% in September to an 8-month high but were 2.3% below year-ago levels.

Surging home prices are squeezing buyers out of the market. According to the Census Bureau, the median price of houses sold rose to \$405K in Q3, the largest annual increase recorded. Further, after a year and a half of below-trend spending, well-heeled buyers are making all-cash offers to increase their chances of a successful bid, making it more difficult for other buyers who need a loan to purchase their home. This dynamic is particularly discouraging for first-time homebuyers, who now comprise the lowest share of sales in six years according to the National Association of the Realtors. Highly competitive buying conditions are no longer contained to one part of the housing market: data from the University of Michigan shows that homebuying sentiment is at or near a record low across all income groups, and overall sentiment is at its lowest point since the early 1980s.

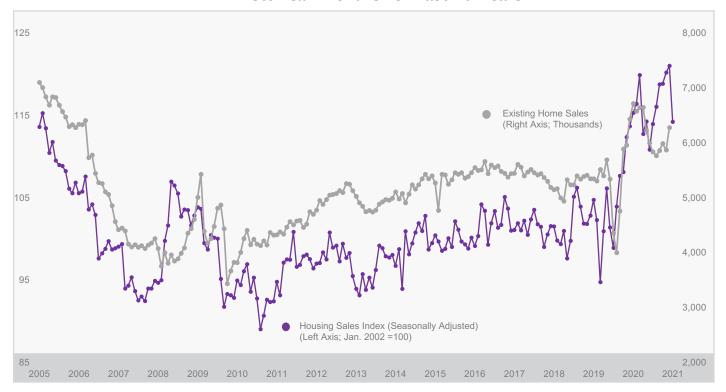
High home prices even have begun to outweigh the benefits of historically low mortgage rates. Per the Mortgage Bankers Association, the average loan size grew to a record \$408K in September, and mortgage applications fell on a monthly and annual basis. With mortgage rates forecasted to climb in coming quarters as interest rates normalize in response to higher inflation and a recovering labor market, payments will take up a larger share of overall incomes and may further dampen demand.

Overall, affordability constraints are weighing on the housing market. Home purchases may lose steam if prices continue to soar, mortgage rates keep rising, and housing supply remains stagnant. However, even if homebuying activity slows in the coming months, existing home sales are expected to remain elevated relative to historical trends, an outlook supported by LegalShield data.

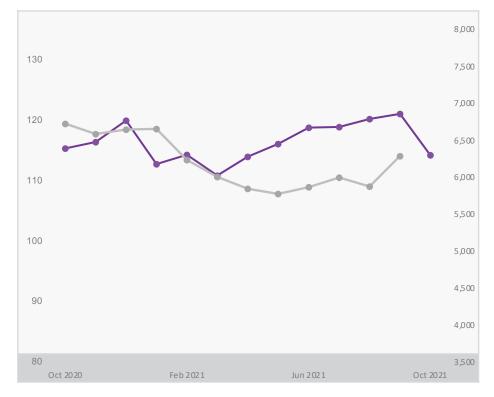


Housing Sales Index

Historical Trend Over Past 16 Years



Movement Over Past 12 Months



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.* | √ | | |

^{*}These indices have a timing advantage over their target indicators due to the release schedule of the target series.

Composite Indices

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



LegalShield "Consumer Stress" Index



LegalShield "Housing Construction" Index

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

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

^{*}In addition to its statistical lead time, the Index also has a timing advantage over housing starts of roughly one week due to release schedules.

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.

4

FILTER AOLS:

Evaluate and scope the original list of 65 areas of law (AOLs) to identify the best candidates for index development.

2

DETERMINE SCOPE OF ANALYSIS:

Examine differences across plan types and subscriber samples to determine the optimal "subscriber universe" for index development.



TEST:

Run the scoped AOLs through a series of transformations and statistical tests to identify quantitative relationships with key macroeconomic indicators.

3

DEFINE INTAKE METRIC:

Test competing approaches for normalizing intake data.

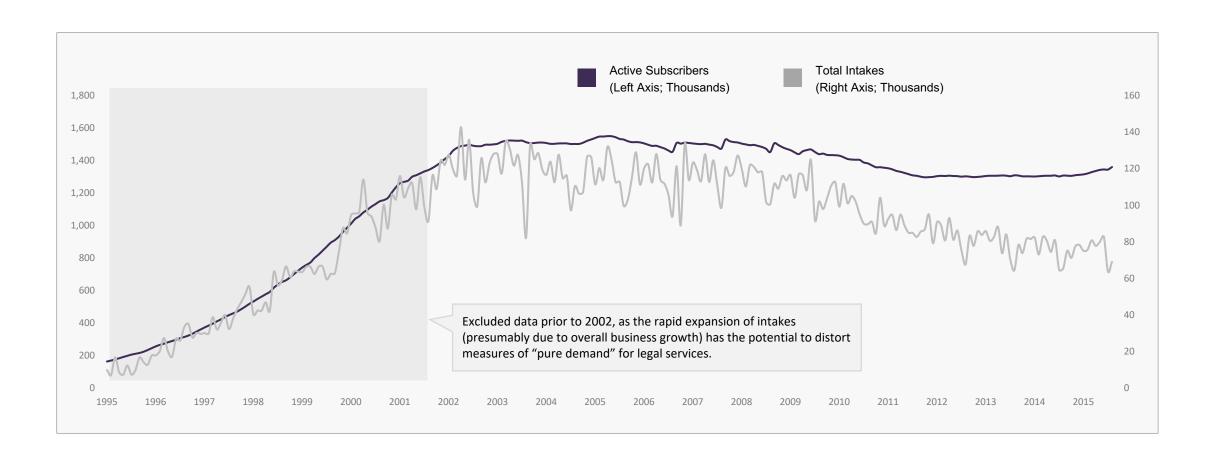


DEVELOP INDEXES:

Combine specific AOLs into composite indexes and test relationships with key macroeconomic indicators.

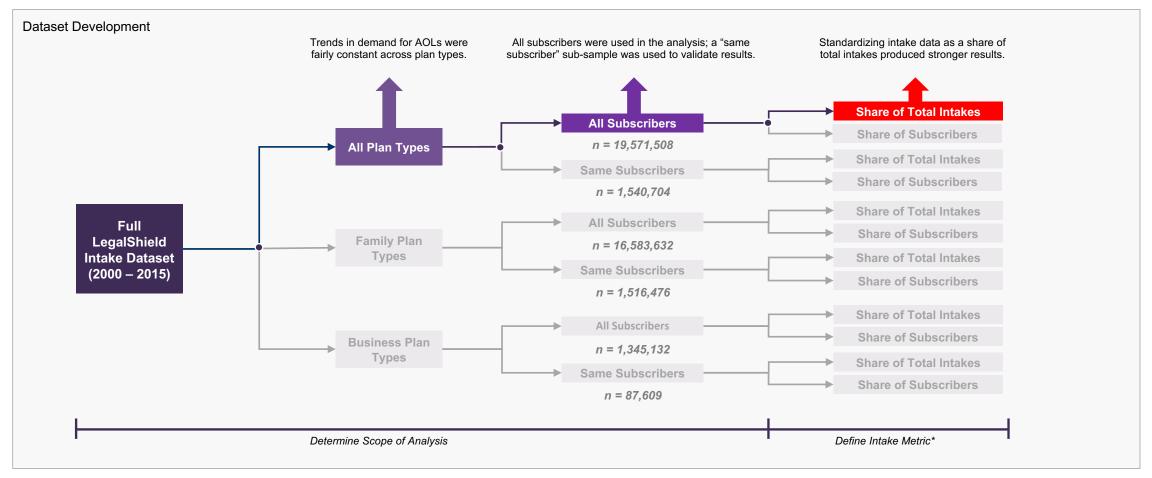
Data Construction & Cleaning

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



Analytical Scope

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



^{*}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

ORIGINAL DATASET:
Historical intake data from LegalShield included 65 AOLs.



CONSOLIDATE AOLS:
Consolidating "like" AOLs reduced the number from 65 to 49.

CRITERIA 1: HISTORICAL DATA
18 AOLs lacked sufficient historical data.

- 4 AOLs were defined too broadly to support a specific index narrative, leaving 27 "qualifying" AOLs.

Filter AOL

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 | - | ✓ | \checkmark | ✓ |
| 7 | Collection | - | ✓ | \checkmark | ✓ |
| 8 | Consumer/Finance | Ambiguous | ✓ | \checkmark | ✓ |
| 9 | Contract | Ambiguous | ✓ | \checkmark | ✓ |
| 10 | Corporate | + | ✓ | \checkmark | ✓ |
| 11 | Criminal | - | ✓ | \checkmark | ✓ |
| 12 | Divorce | - | | \checkmark | |
| 13 | Divorce Uncontested | - | | ✓ | |
| 14 | Education | - | ✓ | ✓ | ✓ |
| 15 | Elder Law | - | ✓ | \checkmark | ✓ |
| 16 | Employment | Ambiguous | ✓ | ✓ | ✓ |
| 17 | Entertainment | Ambiguous | | \checkmark | |
| 18 | Estate Planning | Ambiguous | ✓ | \checkmark | ✓ |
| 19 | Family Law | Ambiguous | ✓ | \checkmark | ✓ |
| 20 | Firearm | Ambiguous | | \checkmark | |
| 21 | Foreclosure | - | ✓ | ✓ | ✓ |
| 22 | Franchise Law | Ambiguous | | ✓ | |
| 23 | General Law | Ambiguous | ✓ | | |
| 24 | Identity Theft | - | | ✓ | |
| 25 | Immigration | Ambiguous | ✓ | \checkmark | ✓ |

Filter AOL

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 |

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

MACROECONOMIC INDICATORS:

- 1. Conduct preliminary data cleaning, processing, and formatting.
- Examine differences across plan types and subscriber samples to determine the optimal "subscriber universe" for index development
- 3. Test competing approaches for normalizing intake data.

HOUSING INDICATORS:

- 4. Housing Starts
- 5. Existing Home Sales (NAR)
- 6. Residential Construction Permits
- 7. Small Business Optimism Index (NFIB)

FINANCIAL HEALTH INDICATORS:

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

CONFIDENCE INDICATORS:

- 14. Consumer Confidence Index (Conference Board)
- 15. Small Business Optimism Index (NFIB)

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

BASIC COORELATIONS:

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



- 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

Statistical Relationship Testing, Select Results

| Correlation Results (2002 – 2017) | | | | | | | | |
|-----------------------------------|---------------------|---------------------|----------------------|----------------------|--|--|--|--|
| LEGALSHIELD AREA OF LAW | TARGET INDICATOR | CORRELATION (LEVEL) | CORRELATION (Y/Y) | CORRELATION (Q/Q) | | | | |
| Bankruptcy | Bankruptcies | 0.76 | 0.67 | 0.20 | | | | |
| Foreclosure | Foreclosures | 0.96 | 0.87 | 0.49 | | | | |
| Real Estate | Existing Home Sales | 0.85 | 0.58 | 0.36 | | | | |

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 | Bankruptcies | ✓ | ✓ | ≈ 1 mo. | | | | |
| Foreclosure | Foreclosures | ✓ | r | Coincident* | | | | |
| Real Estate | Existing Home Sales | ✓ | ✓ | ≈ 1 mo.* | | | | |

^{*} These indices have a practice lead time of varying length due to the release schedule of the target series.

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

Methodology:

Composite Index Development



Methodology

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

- **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).
- TRANSFORM AOLS: Compute the month-on-month percent change for each AOL.
- 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.
- **REBASE TO 100:** Rebase the monthly index growth rate to a given month (January 2000 = 100) and to produce a monthly composite index.

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 Stress | Consumer Confidence | ✓ | ✓ | 1 - 3 mo. | | | | |
| Housing Construction | Housing Starts | ✓ | ✓ | 0 – 2 mo.* | | | | |

^{*}In addition to its statistical lead time, the Index also has a timing advantage over housing starts of roughly a week due to release schedules.

Statistical Relationship Test Results

| Correlation Results (2002 – 2017) | | | | | | | | |
|-----------------------------------|---------------------|------------------------|----------------------|----------------------|--|--|--|--|
| COMPOSITE INDEX | TARGET INDICATOR | CORRELATION (INDEX) | CORRELATION (Y/Y) | CORRELATION (Q/Q) | | | | |
| Consumer Stress | Consumer Confidence | -0.85 | -0.58 | -0.33 | | | | |
| Housing Construction | Housing Starts | 0.88 | 0.55 | 0.23 | | | | |

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 Stress | Consumer Confidence | r | ✓ | ✓ | ✓ | ~ | Performed well on all but one test | | |
| Housing Construction | 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)

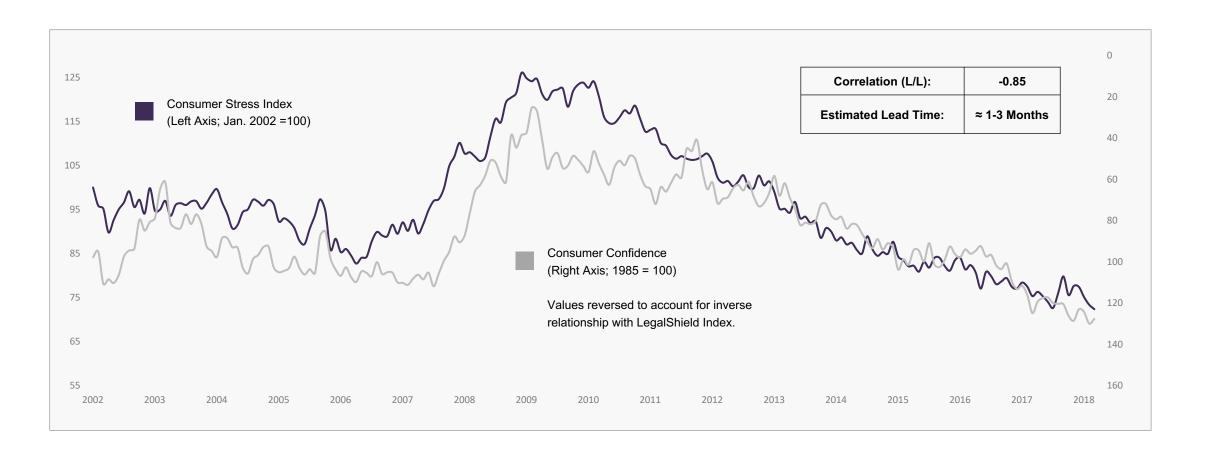
Test 2: Compared correlations between random samples of the data

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

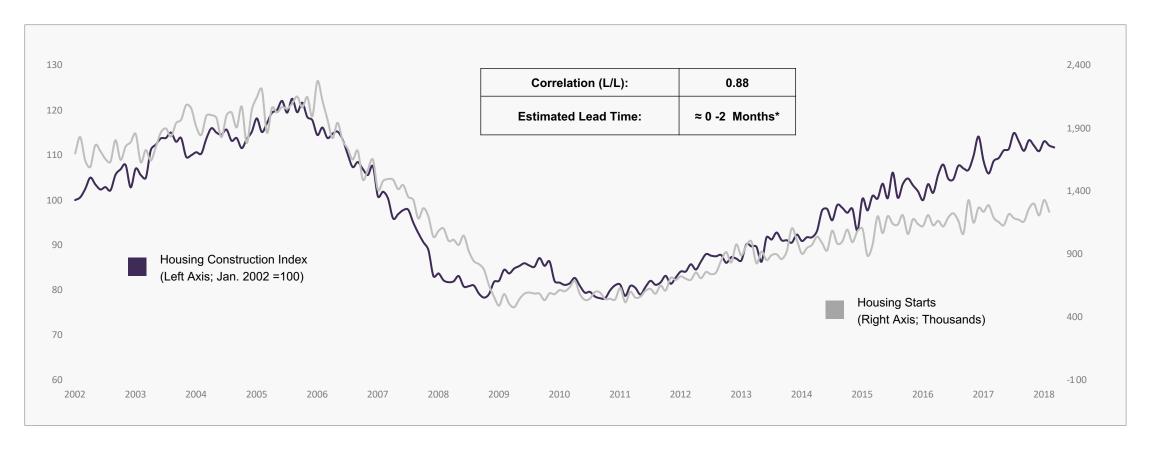
Composite Index: Consumer Stress

AOLs: Bankruptcy; Foreclosure; Consumer Finance



Composite Index: Housing Construction Index

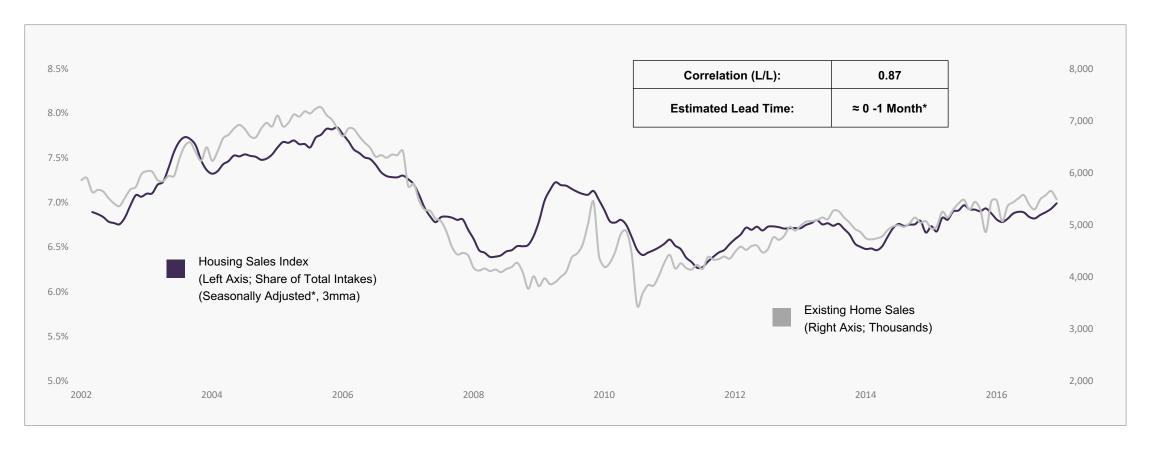
AOLs: Foreclosure; Real Estate*



^{*}The Housing Construction Index component of the Housing Activity 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 over housing starts of roughly a week due to release schedules.

AOL: Real Estate

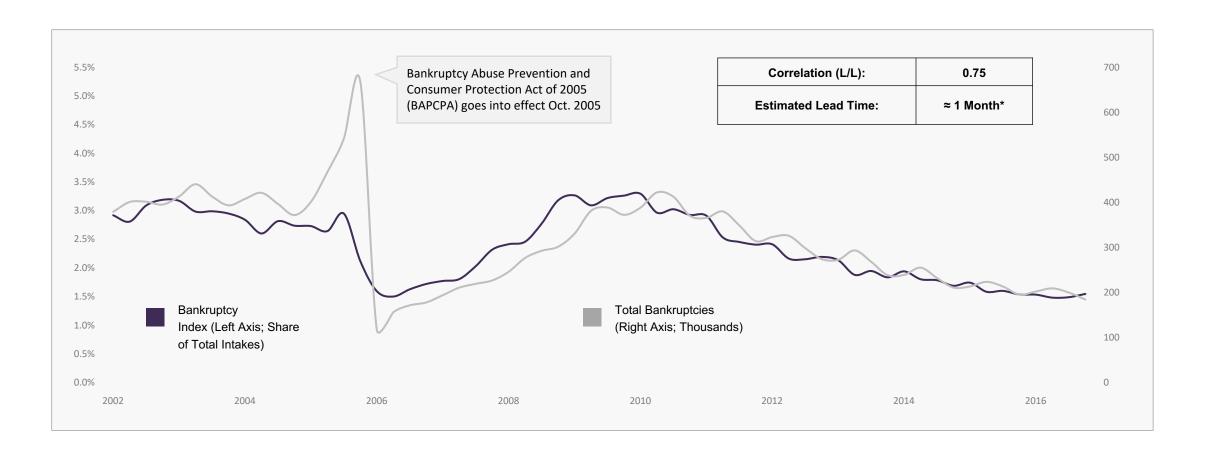
Target Series: Real Estate*



^{*}The Housing Sales 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.

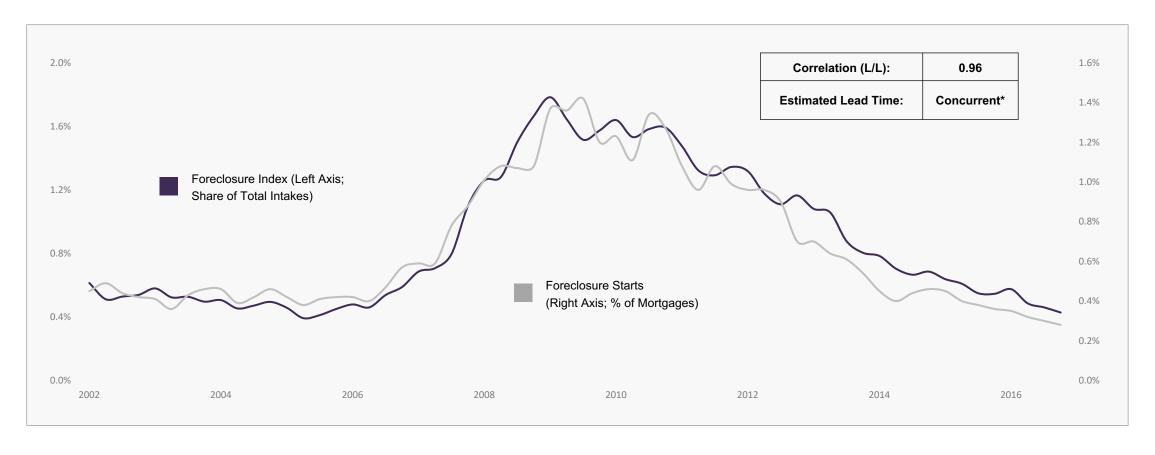
AOL: Bankruptcy

Target Series: Consumer Bankruptcies



AOL: Foreclosure

Target Series: Foreclosure Starts



^{*}Foreclosures starts are statistically coincident with the LegalShield Foreclosure Index, but the Index has a significant timing advantage time due to its monthly release (compared to the quarterly release of foreclosure starts).

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* | √ + | | |
| Housing Sales | Existing Home Sales | 0.85 | 0.58 | 0.36 | ≈ 0-1 mo.* | ✓ | | |
| Consumer Stress | Consumer Confidence | -0.85 | -0.58 | -0.33 | ≈ 1-3 mo. | ✓ | | |
| Housing Construction | Housing Starts | 0.88 | 0.55 | 0.23 | ≈ 0-2 mo.* | ✓ | | |

Thank you!

LegalShield | Economic \
Stress Index

