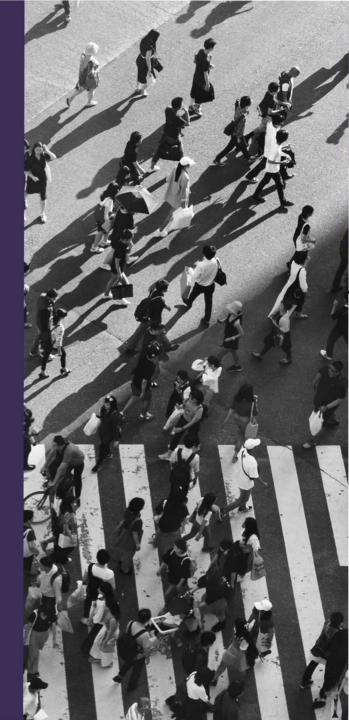


# LegalShield<sup>®</sup> Economic Stress Index<sup>®</sup>





#### **About LegalShield**



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



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



46+ 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.

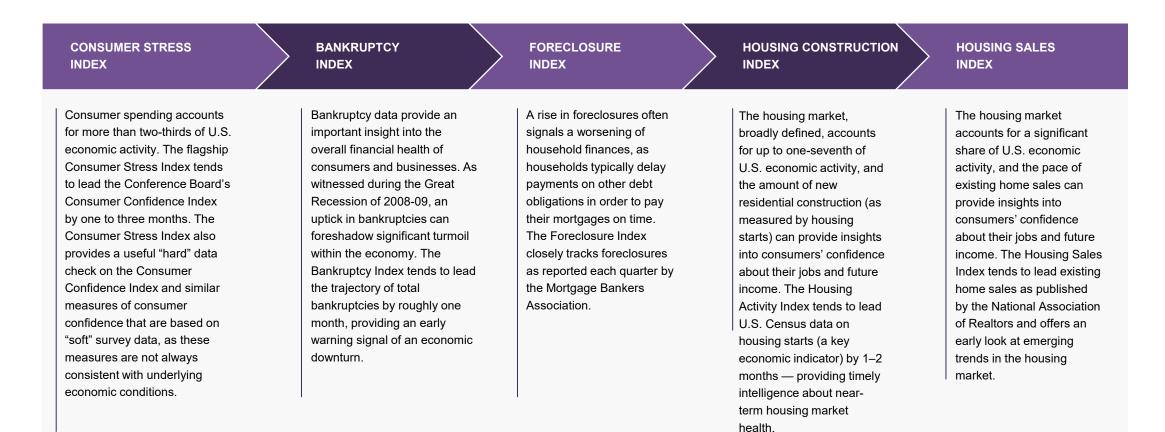
#### HIGH-FREQUENCY

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**

The LegalShield Consumer Stress Index inched up in May but remains at the second lowest level on record. While federal protections have kept consumer stress low in recent months, the situation may change as support measures expire.

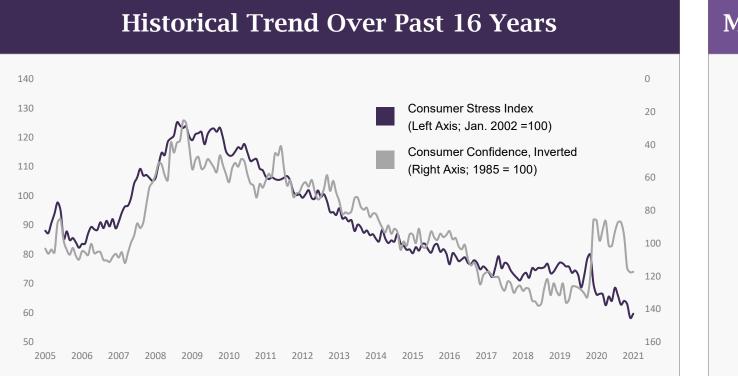
The LegalShield Consumer Stress Index edged up (worsened) 1.4 points in May to 59.7. Meanwhile, the Conference Board's Consumer Confidence Index was mostly unchanged in May, ticking down 0.3 point to 117.2 but remaining near its strongest reading since the pandemic began.

Consumer stress has remained historically low due to the March stimulus package, rising vaccination rates, falling COVID-19 infections, and an improving labor market. For example, <u>Visa's Spending Momentum Index</u> shows that 65% of consumers are spending more than they did a year ago, and 51% are spending more than they did in April 2019. However, some metrics suggest that the effects of government relief may be waning. For instance, the Bureau of Economic Analysis's card transaction data reveals that the latest reading from mid-May was the weakest posted since the March stimulus (though it was still indicated positive growth). Relatedly, the <u>Morning Consult/Axios Income Inequality Index</u> increased for the first time since the December relief package, as the economic benefits stemming from government transfer payments wore off faster than job growth could generate more sustainable increases in income for low- and middle-income workers.

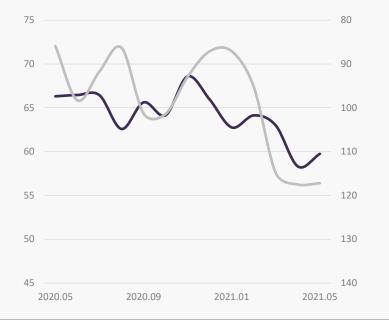
Thus far, federal stimulus and relief measures have kept many Americans afloat financially. However, some of this support will expire in the coming weeks. Roughly half of U.S. states have opted out of the federal pandemic unemployment insurance expansion (with the official expiration date coming as soon as June in some cases), which could generate stronger job growth, but may also lead to increased in financial stress if unemployed workers are unable to find employment.

Consumer stress should remain low on aggregate in the near term as the pandemic winds down. However, as federal support measures expire, we may see rising consumer stress later this year.

#### **Consumer Stress Index**



#### Movement Over Past 12 Months





#### **Bankruptcy Index**

The LegalShield Bankruptcy Index edged down in May to the lowest reading in the series' history. Bankruptcies should remain low in the near term, particularly while federal protection measures remain in place.

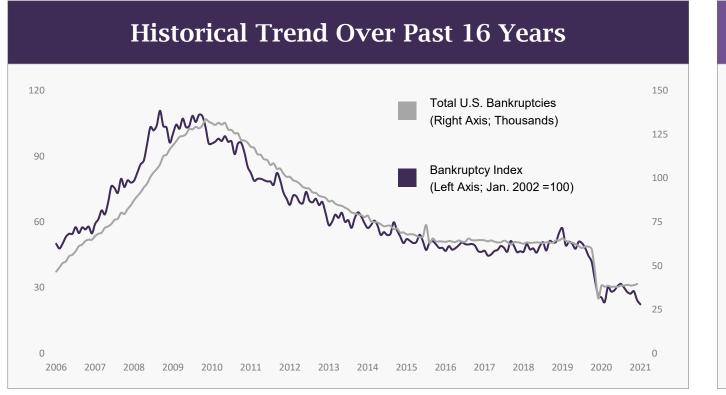
The LegalShield Bankruptcy Index decreased (improved) 1.9 points to 22.4 in May. Meanwhile, total seasonally adjusted bankruptcy filings increased by 1.8% to 39,595 in April but were down 37% compared to last year.

Bankruptcies have remained low throughout the pandemic due to federal provisions like stimulus payments, enhanced unemployment insurance programs, and federal moratoria on student loan payments. According to the <u>Census Bureau</u>, about half of Americans said they used their stimulus checks to pay down debt. Of that group, 56% said they would pay down non-housing debt, including credit card debt and student loans. Meanwhile, the New York Fed reported that both auto loans (+\$8 billion) and student loans balances (+\$29 billion) increased slightly last quarter. However, total credit card balances declined by \$49 billion, the second-largest quarterly decline since the series began in 1999 and a sign that consumers are still being cautious with their borrowing, on balance.

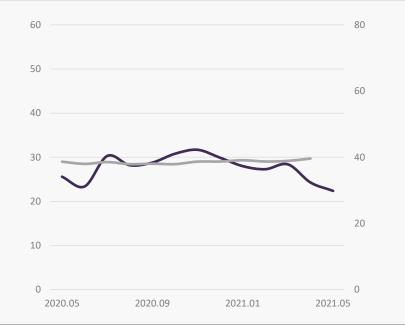
Consumers have made a concerted effort to reduce their revolving credit balances during the pandemic, as the New York Fed found in separate <u>research</u> that despite credit tightening and increased unemployment, there was no increase in unmet credit need. In response, banks have been loosening credit standards and increasing marketing efforts, a sign that they expect credit quality to remain healthy as the economy reopens and Americans return to work.

Thanks to historic federal stimulus efforts and relatively low debt balances, bankruptcies are expected to remain low in the near term, an outlook supported by the LegalShield Bankruptcy Index.

#### **Bankruptcy Index**



#### Movement Over Past 12 Months





#### **Foreclosure Index**

The LegalShield Foreclosure Index increased in May, though it remains historically low. Foreclosures should remain muted while the federal foreclosure moratorium is in effect but may rise once it expires.

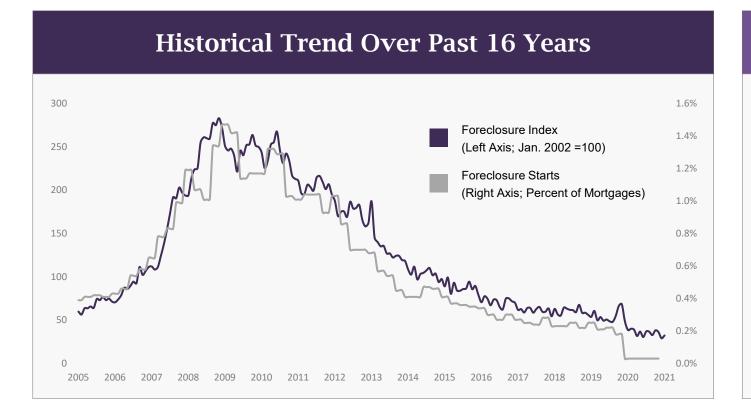
The LegalShield Foreclosure Index increased (worsened) 3.2 points to 32.2 in May. Meanwhile, foreclosure starts remained stable at 0.03% last quarter.

Research from the <u>New York Fed</u> shows that borrowers in the lowest-income areas were more likely to enter forbearance at some point during the pandemic. These borrowers are likely to have lower credit scores or have a delinquent mortgage status, making them more prone to fall behind on their debt payments. Further, in March over 70% of borrowers in forbearance were not making payments — higher than any month in 2020. While the researchers predict that serious delinquency rate could rise to about 3.8% when the foreclosure moratorium ends (well above the pre-pandemic rate), they do not expect this rate to exceed 6% of mortgagors, as was the case after the Great Recession.

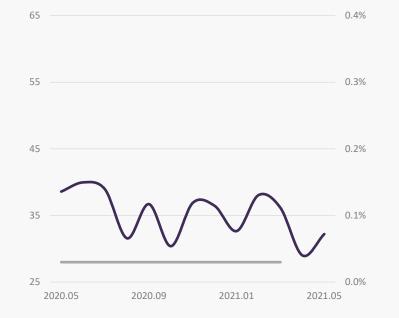
On a more positive note, although more than two million homeowners remained in forbearance as of mid-May according to the <u>Mortgage Bankers Association</u>, nearly <u>90% of borrowers</u> are resuming mortgage payments as they exit forbearance. This suggests that even if delinquencies rise somewhat later this year after the federal foreclosure moratoria expires this summer, a wave of foreclosures appears to be unlikely.

Overall, the LegalShield Foreclosure Index indicates that foreclosures will remain low for the next several months, though there remains the potential for an increase once the federal foreclosure moratorium expires.

#### **Foreclosure Index**



#### Movement Over Past 12 Months





### **Housing Construction Index**

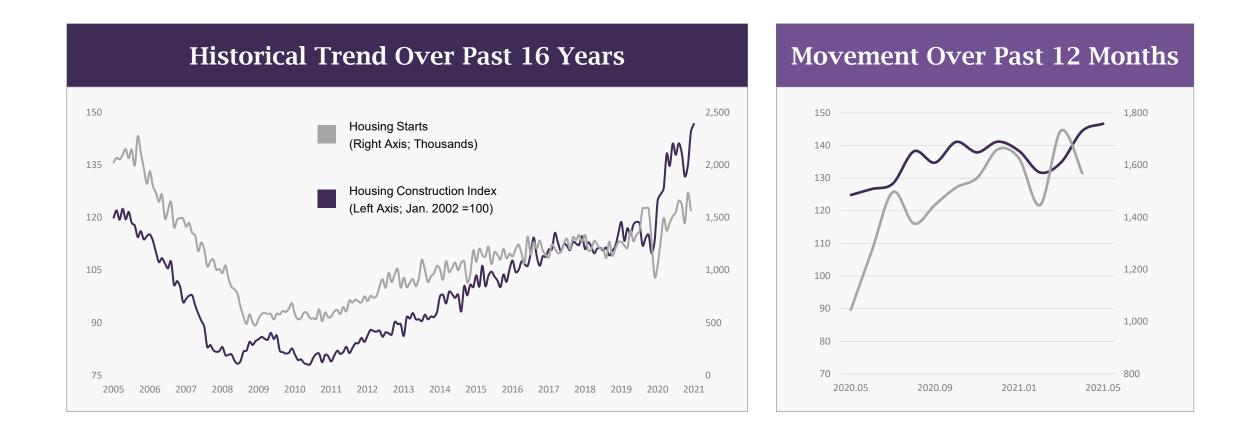
The LegalShield Housing Construction Index increased in May to yet another record high. While strong housing demand and low inventories should keep housing construction strong by historical standards, supply chain constraints may continue to delay projects and could slow growth compared to earlier this year.

The LegalShield Housing Construction Index rose from 144.4 to 146.7 in May, a new all-time high. Meanwhile, housing starts fell by 9.5% in April, missing expectations, but were up 67% from a year ago. Per <u>Census Bureau</u> data, housing permits ticked up +0.3% while construction backlogs worsened: homes authorized for construction but not yet started rose 5% M/M. The combination of strong housing demand and low inventories have led to a surge in new home construction during the pandemic. According to <u>Redfin</u>, more than a quarter of single-family homes for sale in Q1 were newly constructed, the highest share on record. As a result, homebuilder sentiment remained strong in May, per the NAHB/Wells Fargo Housing Market Index.

However, momentum in the housing market has slowed due to serious supply chain constraints. Homebuilders are having trouble finding skilled workers and are wrestling with soaring materials costs. <u>Lumber prices</u> have fallen somewhat from their peak but are still more than 300% higher than year-ago levels, while prices of other key building materials like steel and gypsum have also climbed sharply. According to the <u>NAHB</u>, shortages of materials are now more widespread than any other point on record. High demand and soaring construction costs have led 19% of builders to delay sales and 47% to add price escalation clauses into contracts, per an April <u>NAHB survey</u>.

Robust housing demand and shortages in available homes will likely keep housing construction strong in the coming months, despite significant supply chain issues and project delays.

#### **Housing Construction Index**





#### **Housing Sales Index**

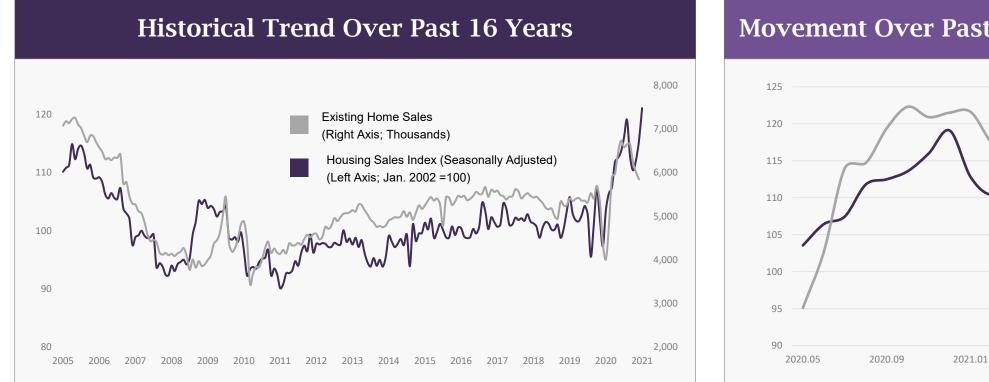
The LegalShield Housing Sales Index rose in May to the highest level on record. Existing home sales will likely stay strong through the end of the year, though rising prices may lead to affordability constraints.

The LegalShield Housing Sales Index jumped 5.5 points in May to 121.1. Meanwhile, existing home sales declined 2.7% M/M in April for the third consecutive month but were still 34% above year-ago levels.

Pandemic-driven increases in demand for single-family homes and historically low mortgage rates have kept housing demand robust. The average home sold in April was on the market for just 17 days according to the <u>National Association of Realtors</u>, the fastest ever recorded. According to a <u>survey</u> conducted in April, 70% of millennials who have purchased a home in the last year indicated that the pandemic influenced their decision to do so, while more than one-quarter listed it as their primary reason. However, nearly half of respondents said the housing market was more competitive than they expected it would be. This finding is illustrated by the <u>CoreLogic</u> Home Price Index — up 13% Y/Y in March, the largest annual increase since February 2006 — and by the record 51% of homes sold for <u>higher than their list price</u>. Many of these sales are occurring in the upper-end of the market; per <u>Redfin</u>, sales of high-priced homes climbed by 26% Y/Y from February – April, compared to a 15% increase for mid-priced homes and 18% increase for the most affordable homes.

LegalShield data suggest that housing sales will remain robust for the next 3–6 months, despite rising prices.

#### **Housing Sales Index**



#### Movement Over Past 12 Months

7,000

6,500

6,000

5,500

5,000

4,500

4,000

3,500

2021.05



# **Technical Appendix**



### **Key Findings**

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

|                            | Summary Of Results           |                        |                      |                      |                                |                   |                      |  |  |  |  |
|----------------------------|------------------------------|------------------------|----------------------|----------------------|--------------------------------|-------------------|----------------------|--|--|--|--|
| LEGALSHIELD<br>AREA OF LAW | TARGET MACRO<br>INDICATOR(S) | CORRELATION<br>(LEVEL) | CORRELATION<br>(Y/Y) | CORRELATION<br>(Q/Q) | TRACKS<br>HISTORICAL<br>TREND? | ESTIMATED<br>LEAD | ROBUST<br>OVER TIME? |  |  |  |  |
| Bankruptcy                 | Bankruptcies                 | 0.75                   | 0.74                 | 0.22                 | $\checkmark$                   | ≈ 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.

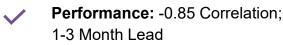
### **Composite Indices**

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











LegalShield "Housing Construction" Index

**Component AOLs:** (1) Real Estate; (2) Foreclosure



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.



2

#### CONSTRUCT DATASET:

Conduct preliminary data cleaning, processing, and formatting.

DETERMINE SCOPE OF ANALYSIS:

Examine differences across plan types and

subscriber samples to determine the optimal

"subscriber universe" for index development.



#### FILTER AOLS:

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

#### TEST:



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



#### DEFINE INTAKE METRIC:

Test competing approaches for normalizing intake data.

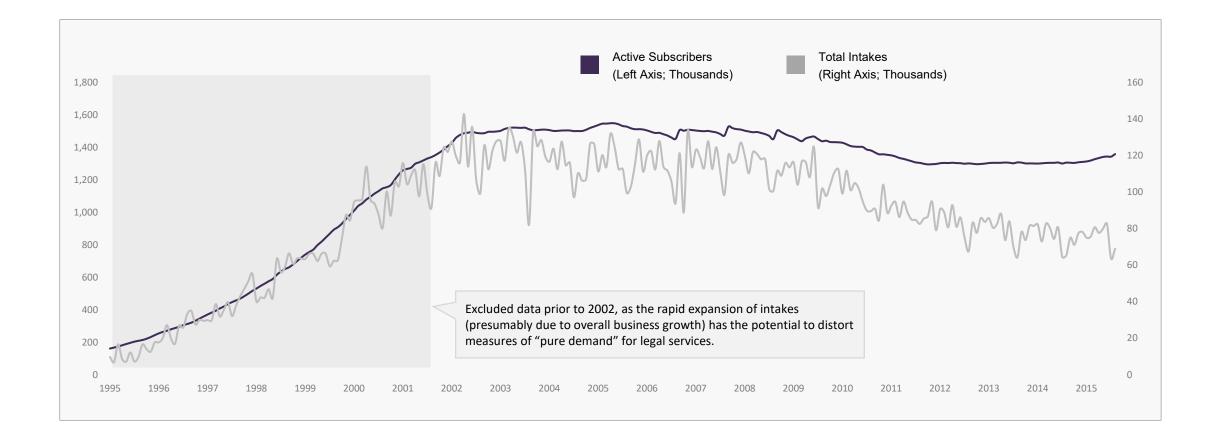


#### **DEVELOP INDEXES:**

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

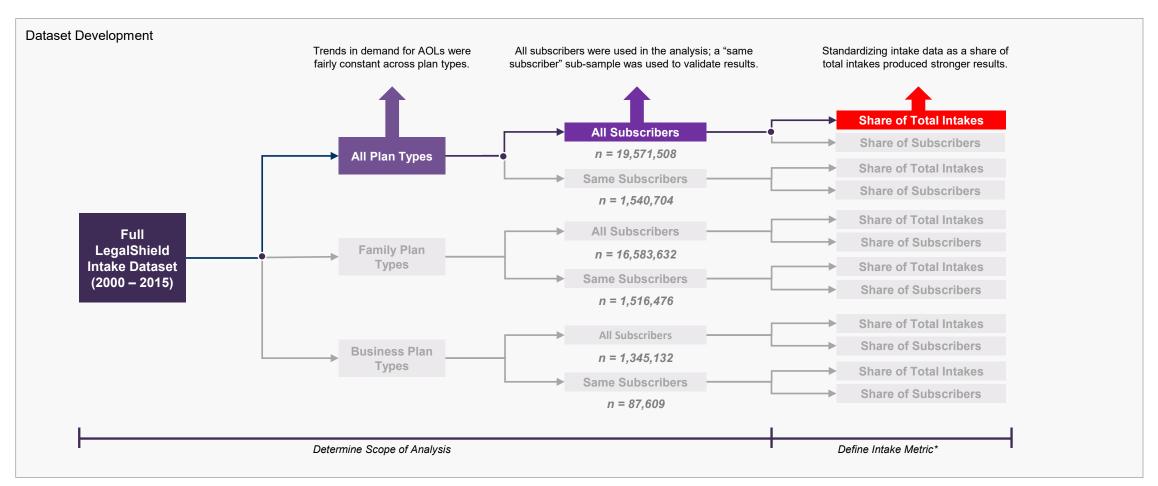
### **Data Construction & Cleaning**

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



### **Analytical Scope**

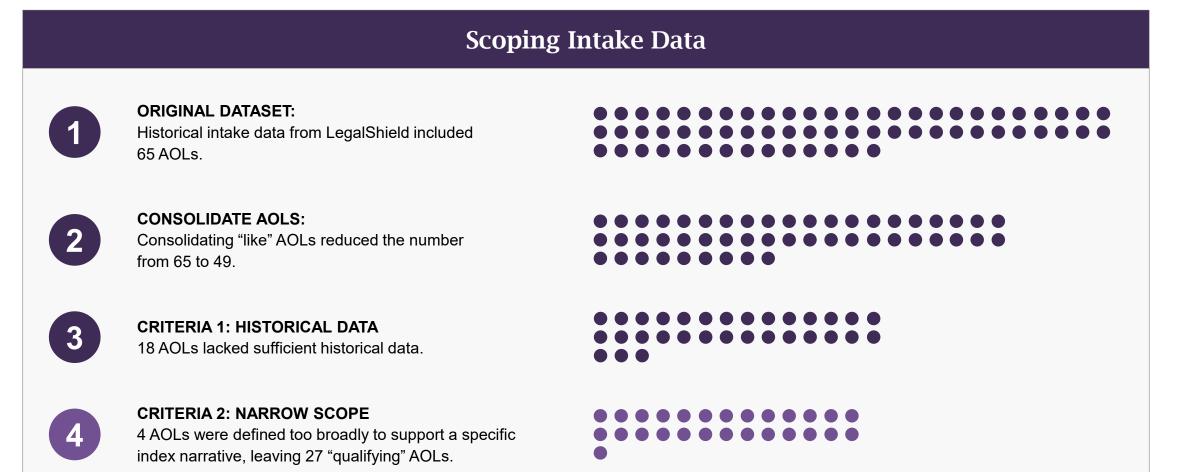
Testing and index development used intake data from all subscribers across all plan types, standardized by total intakes.



\*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.



### 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                      |                 | $\checkmark$ |                    |
| 2  | Automobile Accident          | -                              | $\checkmark$    | $\checkmark$ | $\checkmark$       |
| 3  | Banking                      | Ambiguous                      | $\checkmark$    |              |                    |
| 4  | Bankruptcy                   | -                              | $\checkmark$    | $\checkmark$ | $\checkmark$       |
| 5  | Business License, Fees, etc. | Ambiguous                      | $\checkmark$    | $\checkmark$ | $\checkmark$       |
| 6  | Civil Litigation             | -                              | $\checkmark$    | $\checkmark$ | $\checkmark$       |
| 7  | Collection                   | -                              | $\checkmark$    | $\checkmark$ | $\checkmark$       |
| 8  | Consumer/Finance             | Ambiguous                      | $\checkmark$    | $\checkmark$ | $\checkmark$       |
| 9  | Contract                     | Ambiguous                      | $\checkmark$    | $\checkmark$ | $\checkmark$       |
| 10 | Corporate                    | +                              | $\checkmark$    | $\checkmark$ | $\checkmark$       |
| 11 | Criminal                     | -                              | $\checkmark$    | $\checkmark$ | $\checkmark$       |
| 12 | Divorce                      | -                              |                 | $\checkmark$ |                    |
| 13 | Divorce Uncontested          | -                              |                 | $\checkmark$ |                    |
| 14 | Education                    | -                              | $\checkmark$    | $\checkmark$ | $\checkmark$       |
| 15 | Elder Law                    | -                              | $\checkmark$    | $\checkmark$ | $\checkmark$       |
| 16 | Employment                   | Ambiguous                      | $\checkmark$    | $\checkmark$ | $\checkmark$       |
| 17 | Entertainment                | Ambiguous                      |                 | $\checkmark$ |                    |
| 18 | Estate Planning              | Ambiguous                      | $\checkmark$    | $\checkmark$ | $\checkmark$       |
| 19 | Family Law                   | Ambiguous                      | $\checkmark$    | $\checkmark$ | $\checkmark$       |
| 20 | Firearm                      | Ambiguous                      |                 | $\checkmark$ |                    |
| 21 | Foreclosure                  | -                              | $\checkmark$    | $\checkmark$ | $\checkmark$       |
| 22 | Franchise Law                | Ambiguous                      |                 | $\checkmark$ |                    |
| 23 | General Law                  | Ambiguous                      | $\checkmark$    |              |                    |
| 24 | Identity Theft               | -                              |                 | $\checkmark$ |                    |
| 25 | Immigration                  | Ambiguous                      | $\checkmark$    | $\checkmark$ | $\checkmark$       |

### 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                       | -                              | $\checkmark$    | $\checkmark$ | $\checkmark$       |
| 27 | Labor Law                       | -                              |                 | $\checkmark$ |                    |
| 28 | Landlord Tenant                 | -                              | $\checkmark$    | $\checkmark$ | $\checkmark$       |
| 29 | Legal Malpractice               | -                              |                 | $\checkmark$ |                    |
| 30 | Loan Modification               | Ambiguous                      |                 | $\checkmark$ |                    |
| 31 | Medical Malpractice             | -                              | $\checkmark$    | $\checkmark$ | $\checkmark$       |
| 32 | Military Law/Security Clearance | Ambiguous                      |                 | $\checkmark$ |                    |
| 33 | Other                           | Ambiguous                      | $\checkmark$    |              |                    |
| 34 | Patents Combined                | +                              | $\checkmark$    | $\checkmark$ | $\checkmark$       |
| 35 | Personal Injury                 | -                              | $\checkmark$    | $\checkmark$ | $\checkmark$       |
| 36 | Probate                         | -                              | $\checkmark$    | $\checkmark$ | $\checkmark$       |
| 37 | Product Liability               | -                              |                 | $\checkmark$ |                    |
| 38 | Public Service                  | Ambiguous                      |                 | $\checkmark$ |                    |
| 39 | Real Estate                     | +                              | $\checkmark$    | $\checkmark$ | $\checkmark$       |
| 40 | Request for Service             | Ambiguous                      |                 |              |                    |
| 41 | Small Claims                    | -                              | $\checkmark$    | $\checkmark$ | $\checkmark$       |
| 42 | Social Security                 | -                              | $\checkmark$    | $\checkmark$ | $\checkmark$       |
| 43 | Тах                             | Ambiguous                      | $\checkmark$    |              |                    |
| 44 | Trademarks                      | +                              |                 | $\checkmark$ |                    |
| 45 | Traffic                         | -                              | $\checkmark$    | $\checkmark$ | $\checkmark$       |
| 46 | Veteran's Affairs               | Ambiguous                      |                 | $\checkmark$ |                    |
| 47 | Will Workshop                   | Ambiguous                      |                 | $\checkmark$ |                    |
| 48 | Workman's Compensation          | -                              | $\checkmark$    | $\checkmark$ | $\checkmark$       |
| 49 | Wrongful Death                  | -                              |                 | $\checkmark$ |                    |
|    | 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.
- 2. 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)

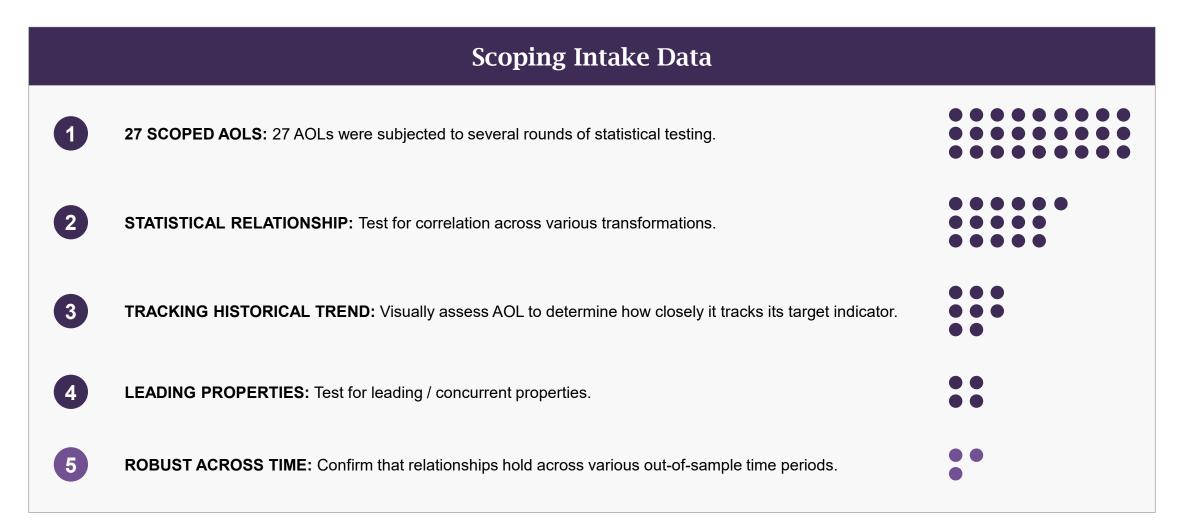
#### FINANCIAL HEALTH INDICATORS:

- 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

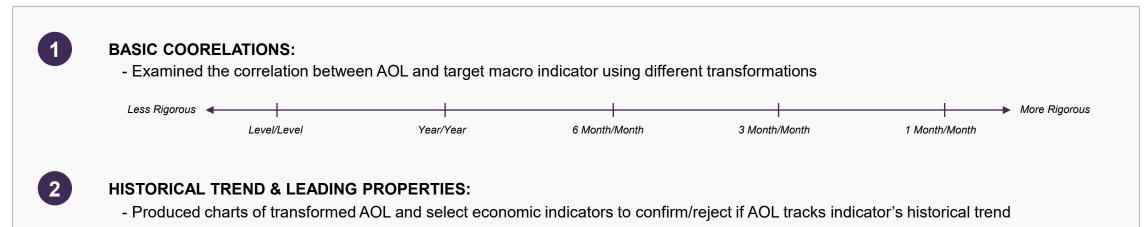
#### **CONFIDENCE INDICATORS:**

- 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.



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



- Examined AOLs on both a concurrent and leading basis

#### STABILITY TESTS:

3

- 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<br>AREA OF LAW        | TARGET<br>INDICATOR | CORRELATION (LEVEL) | CORRELATION<br>(Y/Y) | CORRELATION<br>(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<br>AREA OF LAW                                  | TARGET<br>INDICATOR | TRACKS<br>HISTORICAL TREND? | LEADING<br>PROPERTIES | APPROXIMATE<br>LEAD TIME |  |  |  |  |
| Bankruptcy  | Bankruptcies        | ×                           | ×                     | ≈ 1 mo.                  |  |  |  |  |
| Foreclosure   | Foreclosures        | ✓                           | r                     | Coincident*              |  |  |  |  |
| Real Estate   | Existing Home Sales | ~                           | $\checkmark$          | ≈ 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<br>AREA OF LAW | TARGET MACRO<br>INDICATOR(S) | TEST 1*      | TEST 2* | TEST 3* | TEST 4* | OVERALL<br>SCORE | KEY<br>TAKEAWAYS                      |
|----------------------------|------------------------------|--------------|---------|---------|---------|------------------|---------------------------------------|
| Bankruptcy                 | Bankruptcies                 | ✓            | ✓       | ~       | ~       | √+               | Performed well across all tests       |
| Foreclosure                | Foreclosures                 | $\checkmark$ | ✓       | ~       | ~       | √+               | Performed well across all tests       |
| Real Estate                | Existing Home Sales          | r            | ✓       | ~       | ~       | √                | Performed well on<br>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).



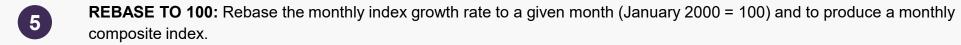
TRANSFORM AOLS: Compute the month-on-month percent change for each AOL.



**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.



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



Historical Trend & Leading Properties Test Results

| Historical Trend & Leading Properties Results (2002 – 2016) |                     |                             |                       |                          |  |  |  |  |
|---|---------------------|-----------------------------|-----------------------|--------------------------|--|--|--|--|
| COMPOSITE<br>INDEX  | TARGET<br>INDICATOR | TRACKS<br>HISTORICAL TREND? | LEADING<br>PROPERTIES | APPROXIMATE<br>LEAD TIME |  |  |  |  |
| Consumer<br>Stress  | Consumer Confidence | $\checkmark$                | $\checkmark$          | 1 - 3 mo.                |  |  |  |  |
| Housing Construction  | Housing Starts      | $\checkmark$                | $\checkmark$          | 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<br>INDEX                | TARGET<br>INDICATOR | CORRELATION<br>(INDEX) | CORRELATION<br>(Y/Y) | CORRELATION<br>(Q/Q) |  |  |  |  |
| Consumer<br>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<br>INDEX      | TARGET<br>INDICATOR                  | TEST 1* | TEST 2* | TEST 3* | TEST 4* | OVERALL<br>SCORE | KEY<br>TAKEAWAYS                   |  |  |
| Consumer Stress         | Consumer Confidence                  | r       | ~       | ~       | ~       | ✓                | Performed well on all but one test |  |  |
| Housing<br>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)

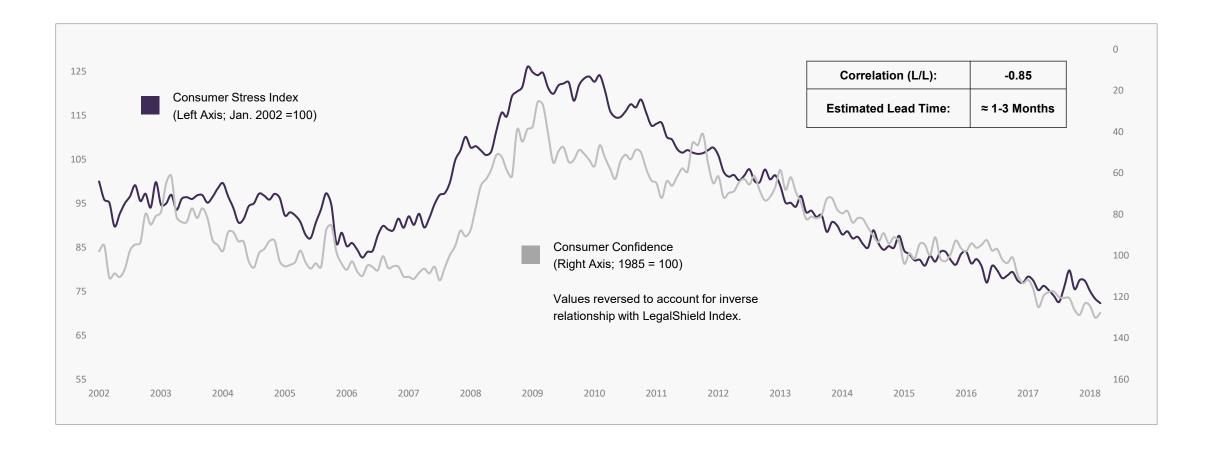
Test 2: Compared correlations between random samples of the data

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

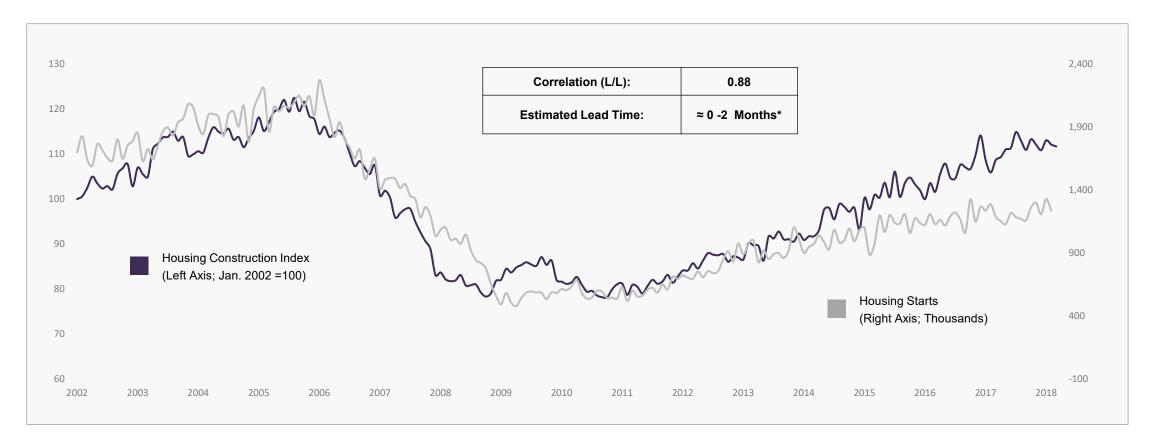
### **Composite Index: Consumer Stress**

AOLs: Bankruptcy; Foreclosure; Consumer Finance



### **Composite Index: Housing Construction Index**

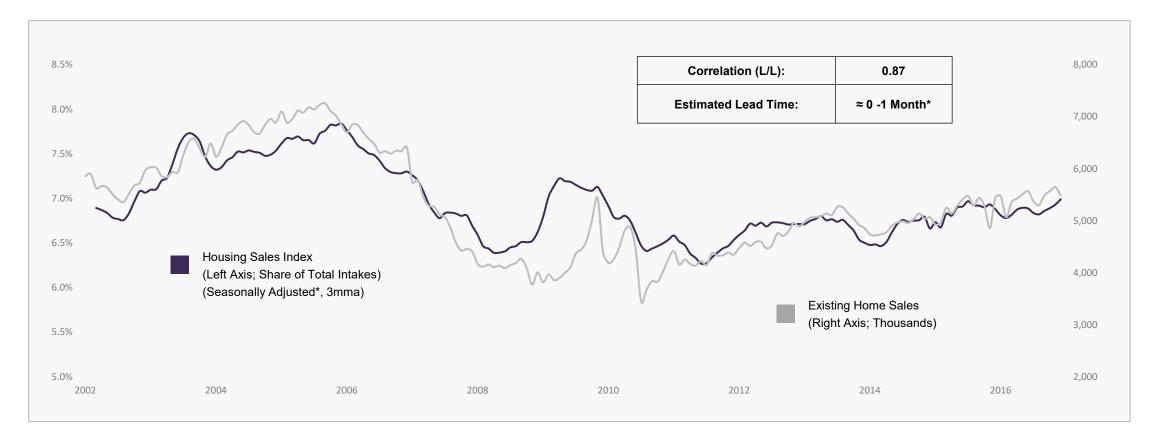
AOLs: Foreclosure; Real Estate\*



\*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**

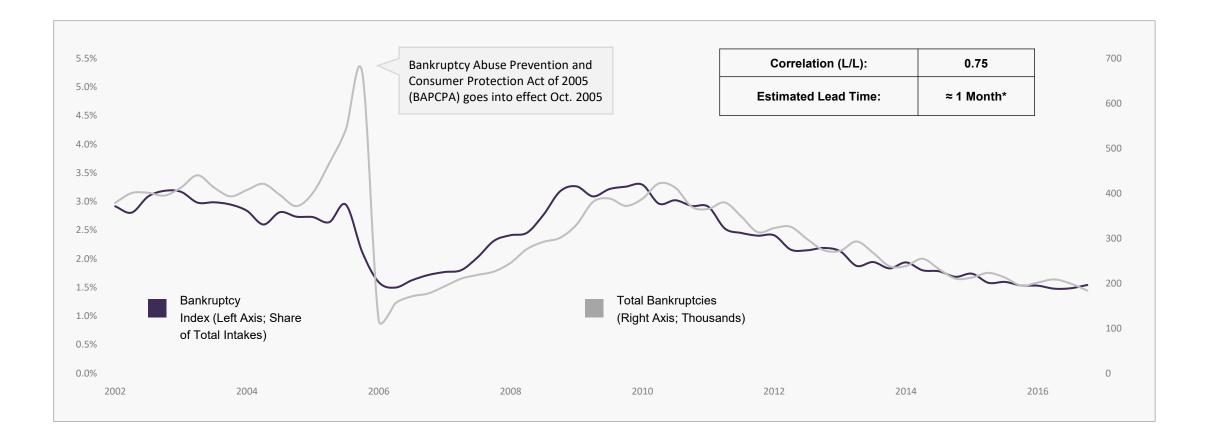
Target Series: Real Estate\*



\*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.

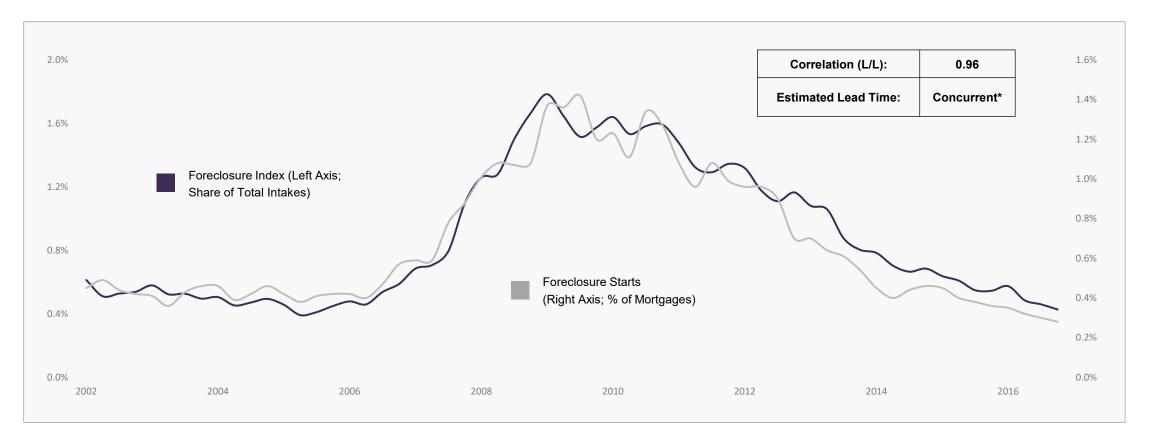
### **AOL: Bankruptcy**

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).



Summary of Key Findings

| Summary of Results       |                     |                        |                      |                      |                          |                       |  |  |  |
|--------------------------|---------------------|------------------------|----------------------|----------------------|--------------------------|-----------------------|--|--|--|
| LEGALSHIELD<br>LAW Index | TARGET<br>SERIES    | CORRELATION<br>(LEVEL) | CORRELATION<br>(Y/Y) | CORRELATION<br>(Q/Q) | APPROXIMATE<br>LEAD TIME | ROBUST<br>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<br>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!



