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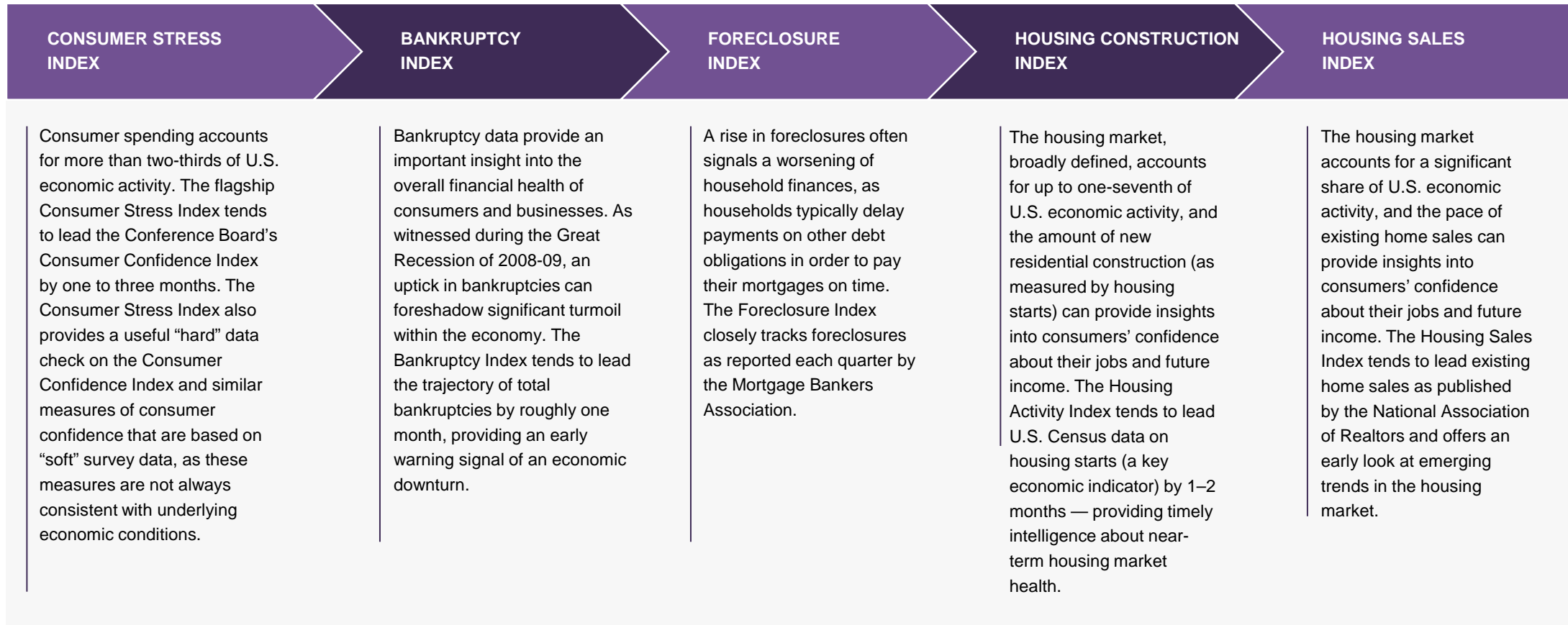
✓ **HIGH-FREQUENCY**
The LegalShield Economic Stress Index is based on data collected on a near real-time basis, and can be refreshed on a weekly, monthly, or quarterly basis depending on the user's needs.

✓ **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	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 near-term 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 fell in January for the second consecutive month. The latest federal stimulus package will likely keep consumer stress low this quarter.

The LegalShield Consumer Stress Index fell (improved) 3.1 points in January to 62.8. Meanwhile, the Conference Board's Consumer Confidence Index increased 0.7 point to 89.3 in January after declining in November and December as the recovery lost steam.

The latest federal stimulus and extension of temporary mitigation measures (e.g., eviction and foreclosure moratoria and student loan repayment deferrals) have played a significant role in alleviating consumer stress. For example, Opportunity Insights reports that consumer spending improved substantially in January, particularly among lower-income households. Similarly, per a recent Census Bureau survey, 5% (or 2 million) fewer people in the lowest income bracket said it was "very difficult" to pay for their usual expenses in the week after stimulus checks reached bank accounts — suggesting the relief bill passed in December is helping consumers most in need. Simultaneously, vaccine rollouts have likely made consumers more optimistic about their finances in 2021: the New York Fed reports that expectations for annual household income growth rebounded to 2.2% in December after dipping in the fall.

While the stimulus bill undoubtedly helped consumers, an ailing labor market remains an obstacle to long-term economic recovery. In December, the economy lost 140,000 jobs after 8 consecutive months of robust growth, and expectations for finding a job plunged to the lowest level in nearly seven years. Indeed, CBO forecasts that employment levels are unlikely to return to pre-pandemic levels until late 2023 or early 2024. Additionally, despite the latest stimulus package, a significant portion of small and mid-size businesses remain at risk of closing. According to a survey by PNC, nearly one-third of smaller businesses reported they could only operate for less than a year under the current conditions.
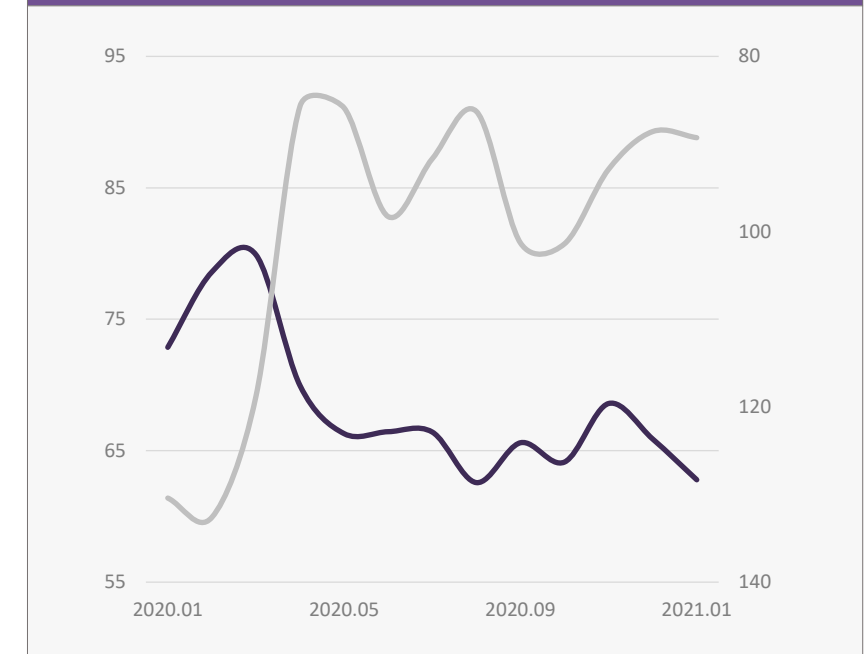
For the time being, however, consumer financial stress is expected to remain in check in the near term.

Consumer Stress Index

Historical Trend Over Past 16 Years

Consumer Stress Index
(Left Axis; Jan. 2002 =100)

Consumer Confidence, Inverted
(Right Axis; 1985 = 100)
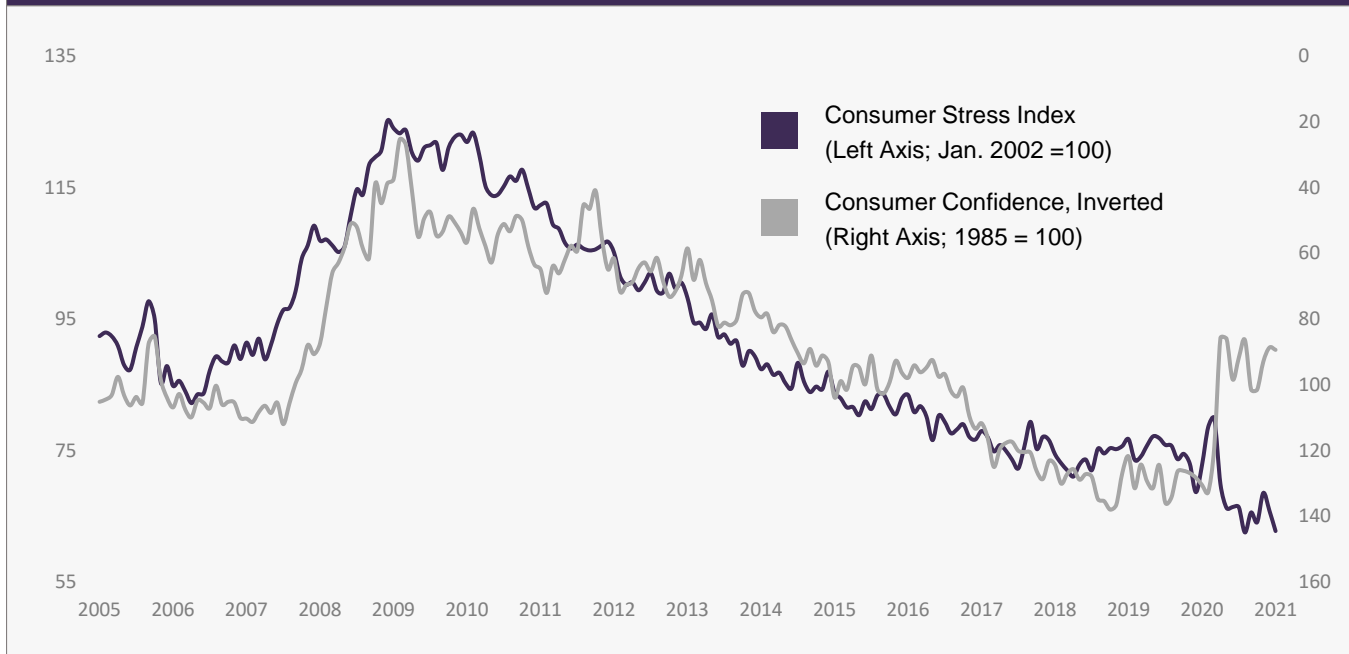
Movement Over Past 12 Months

Bankruptcy Index

The LegalShield Bankruptcy Index edged down in January to the lowest level since June. Although bankruptcies should remain low in the near term, upward pressure may build over the course of the year.

The LegalShield Bankruptcy Index fell (improved) 1.9 points to 28.0 in January, falling for the second consecutive month. In January, total seasonally adjusted bankruptcy filings decreased 4.3%, the eighth straight monthly decline. Bankruptcies remain more than 40% below their year ago level. The decline in — and low position of — the Index is consistent with the latest round of federal stimulus payments; the extension of unemployment benefits, eviction and foreclosure moratoria, and student loan deferments; and the renewal of the Paycheck Protection Program. These and other relief measures were responsible for the sharp drop-off in bankruptcy filings in 2020, and that trend has continued into 2021.

While the latest stimulus package should keep the economic recovery on track, there remains a sizeable minority of consumers and small business owners who continue to struggle to make ends meet. For example, one-third of U.S. households report having difficult paying usual expenses, and the growing popularity of "buy now, pay later" programs as an alternative to credit cards could portend rising financial stress down the road. Similarly, as of early January, 33% of small businesses reported that they would need to obtain financial assistance or additional capital in the next six months. Major lenders also have expressed concern that as extra benefits run out and unemployment increases among more sections of the population, credit card delinquencies and charge-offs may increase later this year.

In the near term, however, federal relief should help consumers maintain low delinquency rates and bankruptcies are expected to remain muted.
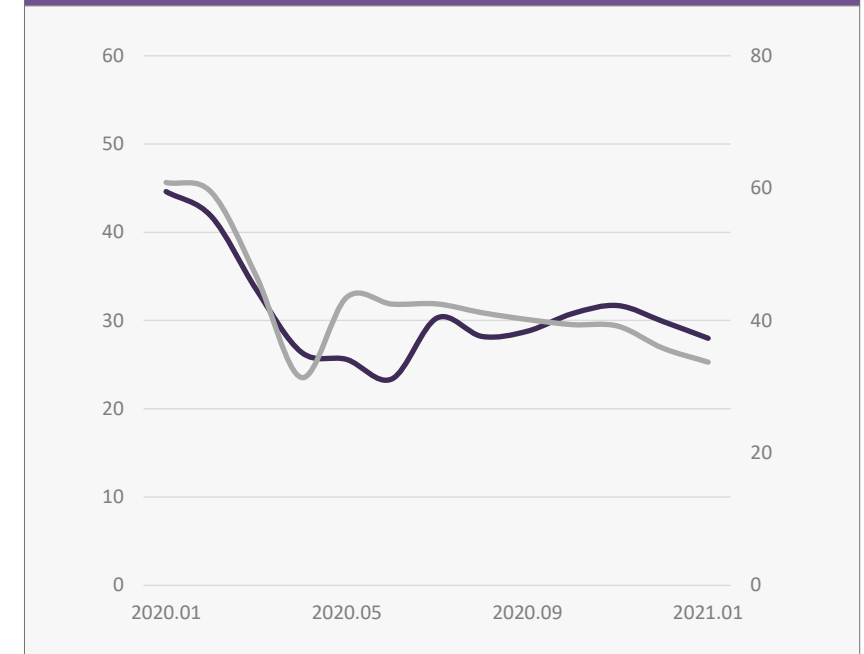
Bankruptcy Index

Historical Trend Over Past 16 Years

Total U.S. Bankruptcies
(Right Axis; Thousands)

Bankruptcy Index
(Left Axis; Jan. 2002 =100)
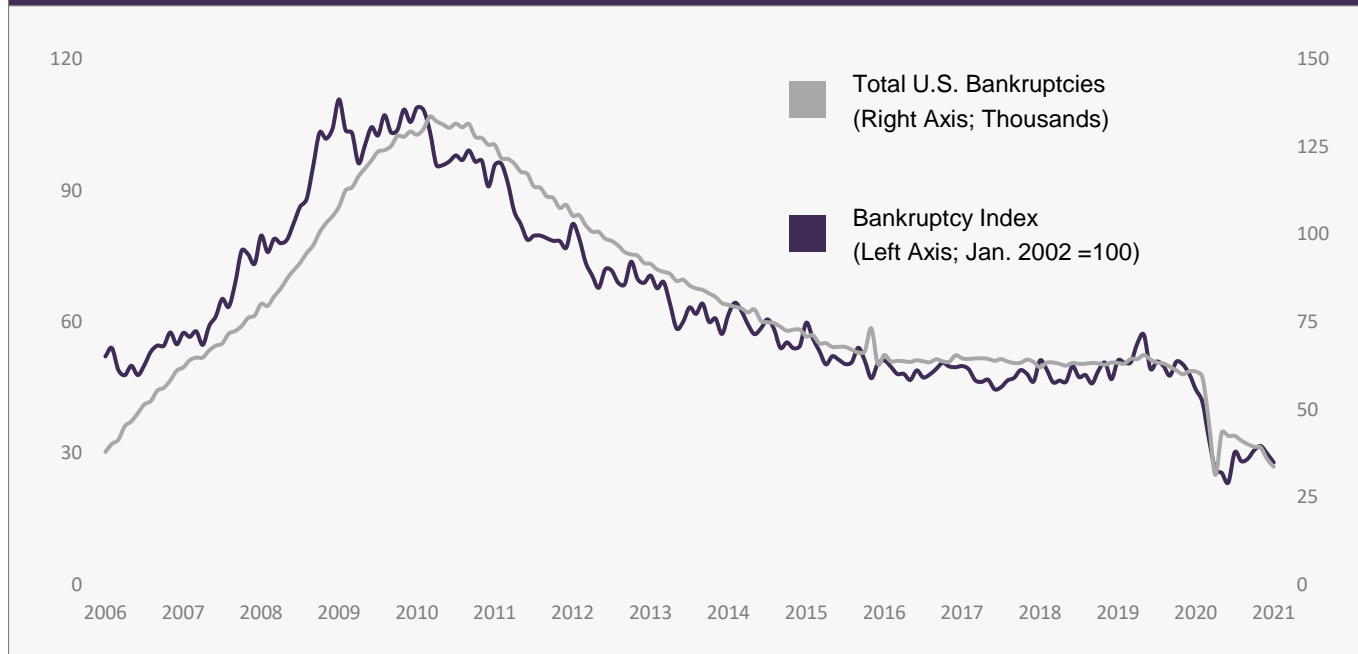
Movement Over Past 12 Months

Foreclosure Index

The LegalShield Foreclosure Index fell in January and remains well below pre-pandemic levels. Foreclosures are likely to remain subdued in the near term due to the extension of various moratoria in the latest federal relief package.

The LegalShield Foreclosure Index declined (improved) 3.8 points to 32.6 in January. The improvement in the Index this month is consistent with the extension of foreclosure and eviction moratoria on federally-backed properties through the end of February. Though these measures provide a temporary shield for many consumers, they also make it difficult for lenders to determine the strength of mortgage portfolios for single- and multifamily residences. Across credit products, it appears that lenders are bracing for losses, as the share of mortgage loans in forbearance continues to climb even as the share of other types of loans in forbearance has held steady or declined.

A recent study published by the National Bureau of Economic Research supports this view: between March and October of 2020, of the $2 trillion in loans that entered forbearance, more than half were mortgages. Unsurprisingly, the researchers found that forbearance rates are higher among the more vulnerable populations: individuals with lower credit scores, lower incomes, minority borrowers, and those residing in regions that have been more impacted by pandemic-related economic shocks. At the same time, one-third of borrowers in forbearance continued to make full payments, which suggests that in some cases forbearance acts as a credit line, allowing borrowers to "draw" on payment deferral if needed. However, for the two-thirds of borrowers who haven't kept up on payments, there is a significant risk that the interest that has accrued over the last several months could lead to a rapid increase in foreclosure activity when emergency mitigation measures are eventually lifted.
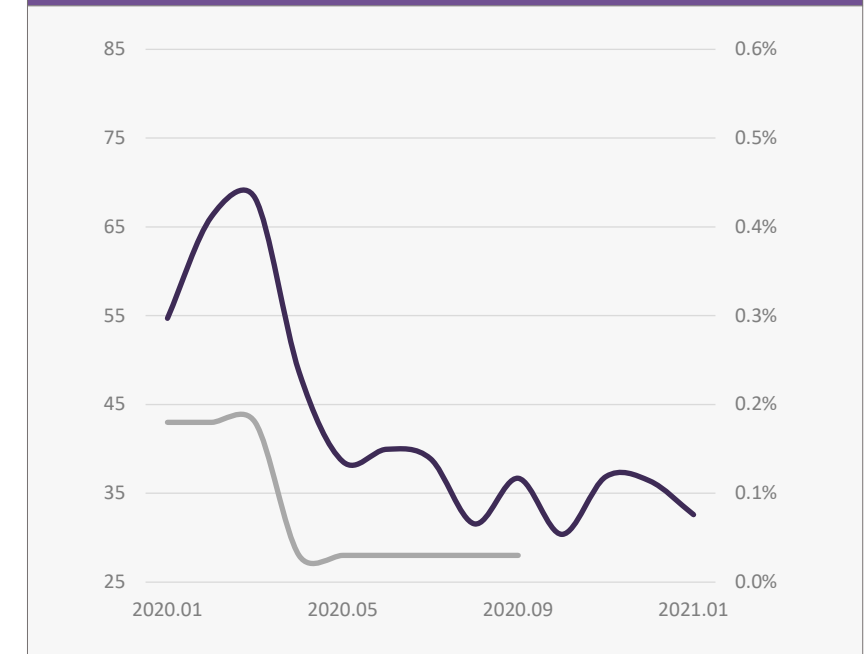
In the near term, however, foreclosure activity should remain subdued.

Foreclosure Index

Historical Trend Over Past 16 Years

Foreclosure Index
(Left Axis; Jan. 2002 =100)

Foreclosure Starts
(Right Axis; Percent of Mortgages)
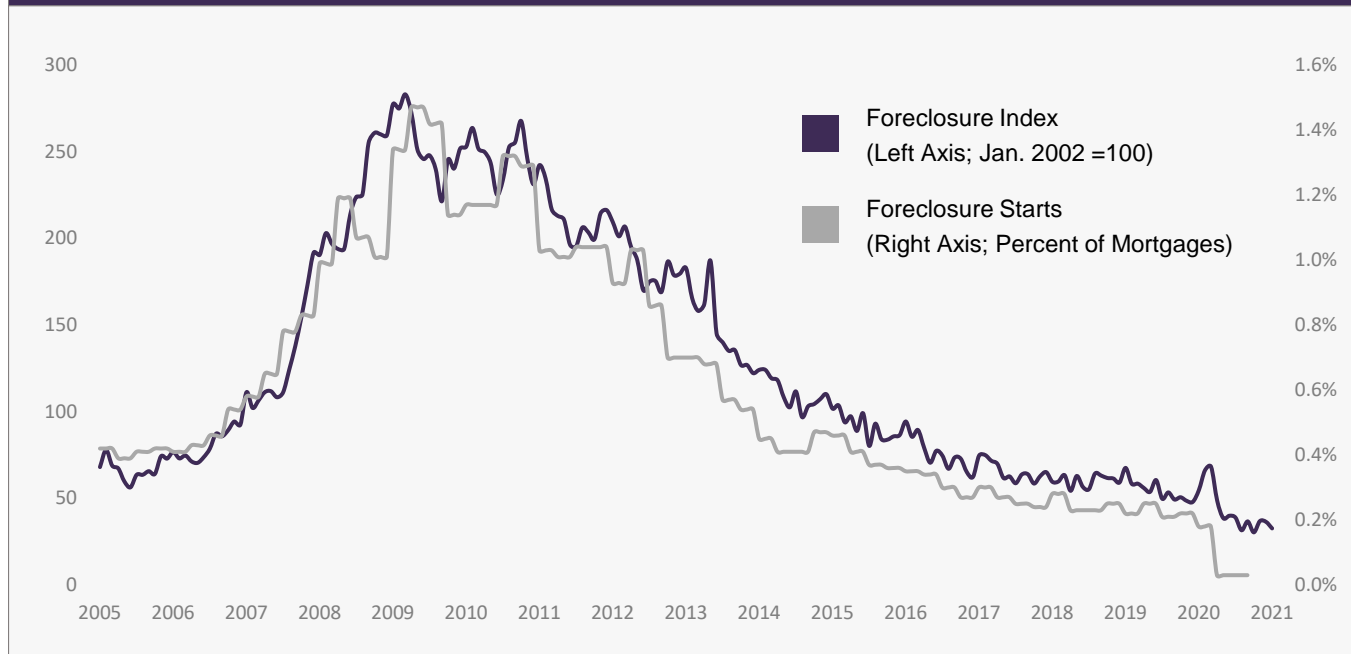
Movement Over Past 12 Months

Housing Construction Index

The LegalShield Housing Construction Index eased in January but is well above pre-pandemic levels, suggesting housing construction should remain strong this quarter.

The LegalShield Housing Construction Index eased from 141.2 to 138.3 in January, though this reading still marks the third-highest level on record. Meanwhile, housing starts improved 7.8% in December and are up 5.2% from a year ago.

The softening of the Housing Construction Index comes amid sharp run-ups in housing input costs, including that of lumber, which is up more than 100% year-over-year. The NAHB/Wells Fargo Housing Market Index fell by 3 points in January as homebuilders wrestled with these rising material costs and delivery delays, while also expressing concerns about the potential for a changing regulatory environment under the new administration. Even so, in December residential construction spending increased 3.1% and residential construction employment rose above its pre-pandemic level to the highest point in over a decade.

The homebuilding industry continues to play a significant role in the ongoing economic rebound as low mortgage rates and a pandemic-induced desire for larger living quarters keeps demand for housing high. Though rising input costs will contribute to higher home prices, the LegalShield Housing Construction Index and other macroeconomic indicators suggest that homebuilding activity should remain robust over the next three to six months.

Housing Construction Index

Historical Trend Over Past 16 Years

Housing Starts
(Right Axis; Thousands)

Housing Construction Index
(Left Axis; Jan. 2002 =100)
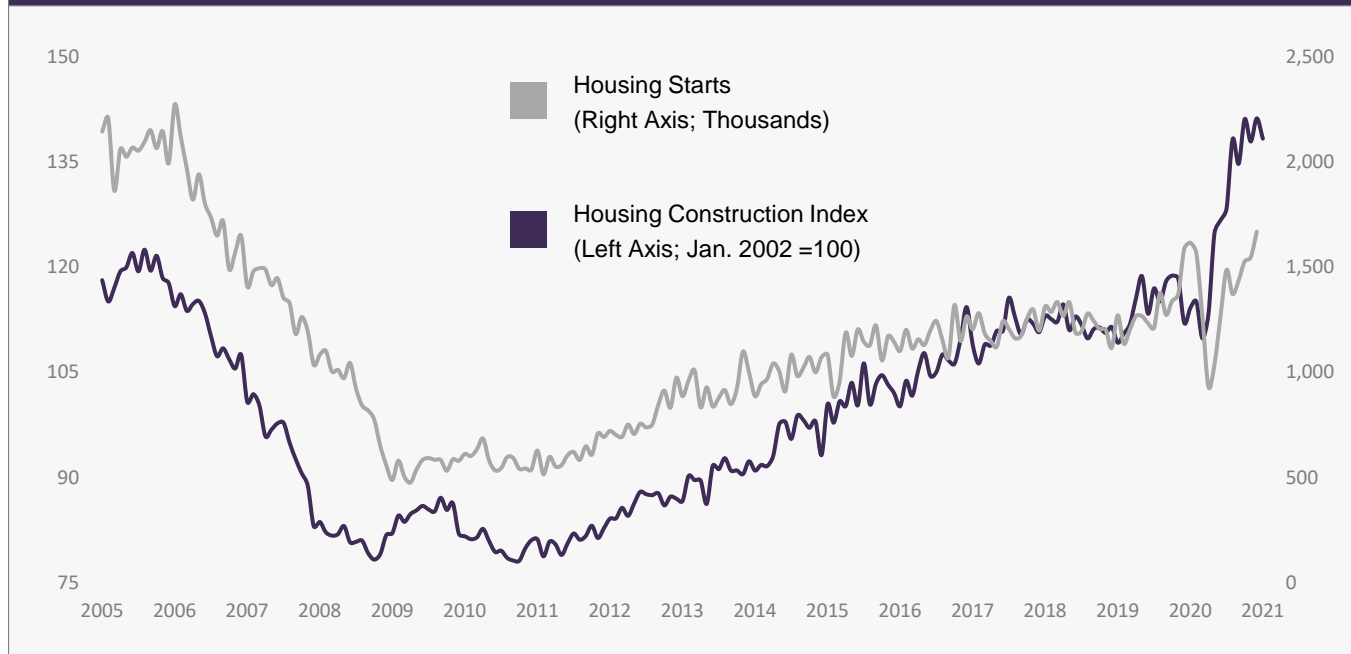
Movement Over Past 12 Months
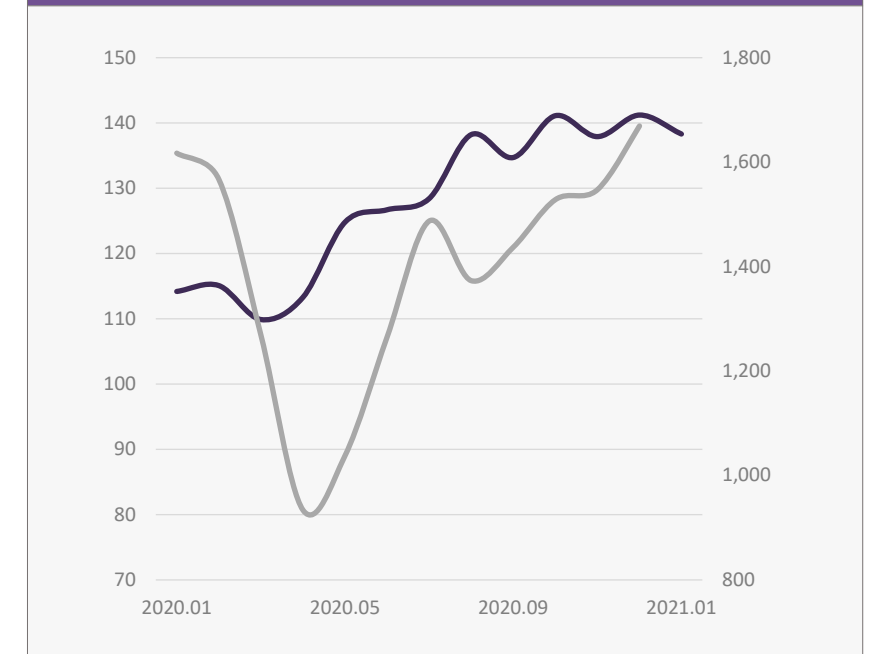
Housing Sales Index

The LegalShield Housing Sales Index declined in January but remains historically elevated, suggesting that existing home sales should remain elevated in early 2021.

The LegalShield Housing Sales Index fell 6.3 points in January to 112.8 but remains well above pre-pandemic levels. Meanwhile, existing home sales inched up 0.7% in December to the highest level in 14 years. The ongoing housing boom — for those who can afford it — continued unabated as 2020 came to a close. Overall, existing home sales were up 5.6% from their 2019 level last year, a remarkable fact given that 2020 also saw the largest GDP contraction since 1946.

Though the housing boom showed few signs of slowing in 2020, there are still several factors that could take some air out of the market in early 2021. Data from the National Association of Realtors shows that the average number of days on the market plunged from 41 in December 2019 to 21 in December 2020, and 70% of homes sold in December were on the market for less than a month. Further, unsold inventory is at an all-time low 1.9-month supply at the current sales pace, which has driven the median sales price up to $308,800. Simply put, there may not be enough supply on the market to maintain the housing boom, particularly if new construction is slowed by rising input prices and supply chain delays. Worsening affordability conditions were captured in a report by Attom Data Solutions, which found that homes and condos in 55% of counties it analyzed were less affordable in Q4 of 2020 compared to historical averages — up from 43% in 2019.

In the near term, strong demand will likely help existing home sales maintain their momentum, though affordability concerns could begin to weigh on sales later in the year if more supply does not come onto the market.

Housing Sales Index

Historical Trend Over Past 16 Years

Existing Home Sales
(Right Axis; Thousands)

Housing Sales Index (Seasonally Adjusted)
(Left Axis; Jan. 2002 =100)
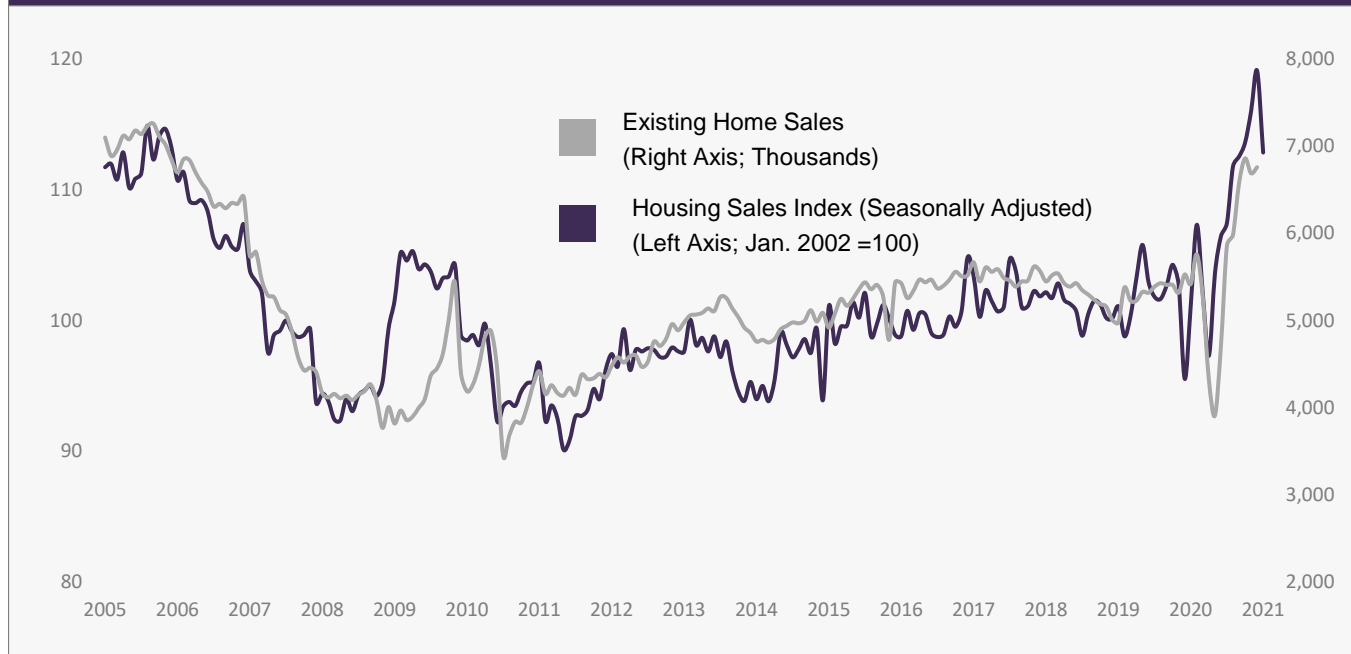
Movement Over Past 12 Months
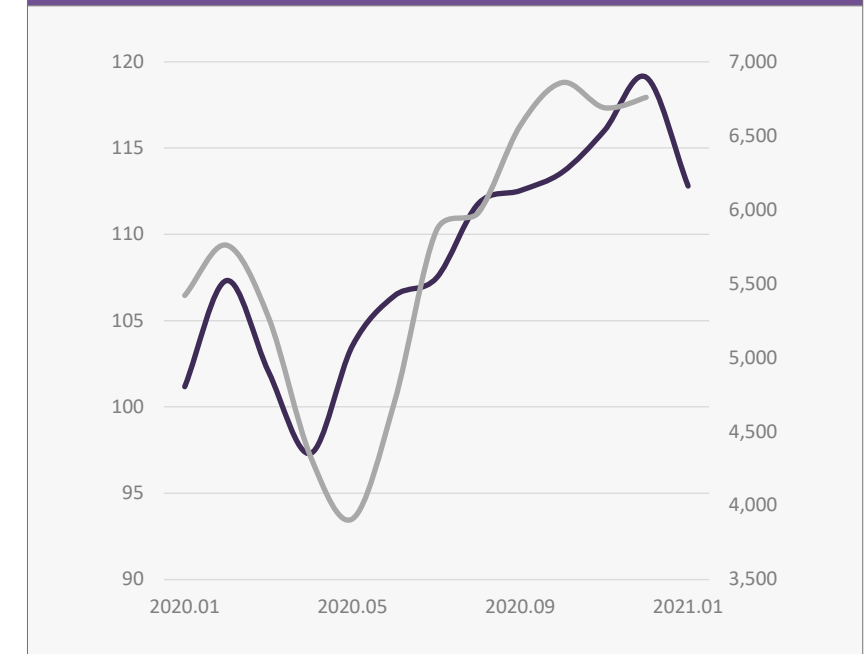
Technical Appendix

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

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

✓ **Target Indicator:** Consumer Confidence

✓ **Target Indicator:** Housing Starts

✓ **Performance:** -0.85 Correlation; 1-3 Month Lead

✓ **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.

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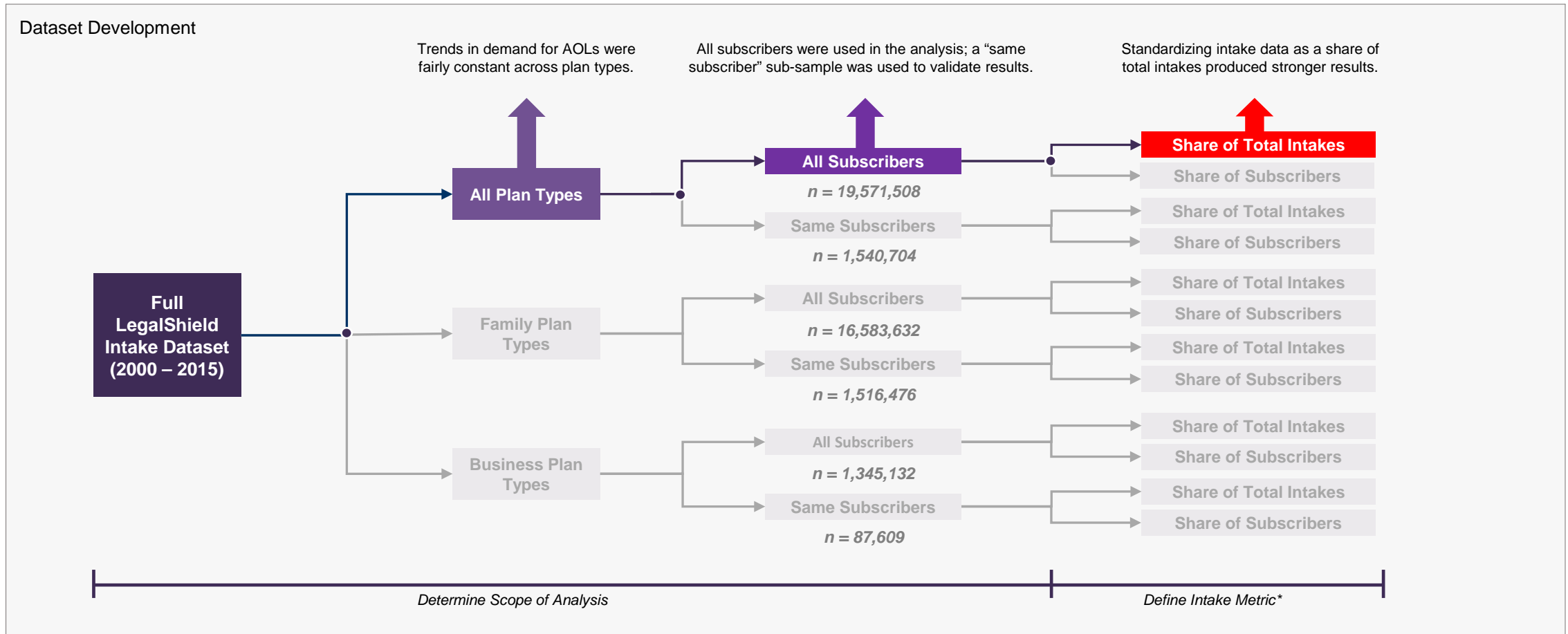Combine specific AOLs into composite indexes and test relationships with key macroeconomic indicators.

Data Construction & Cleaning

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

Excluded data prior to 2002, as the rapid expansion of intakes (presumably due to overall business growth) has the potential to distort measures of "pure demand" for legal services.
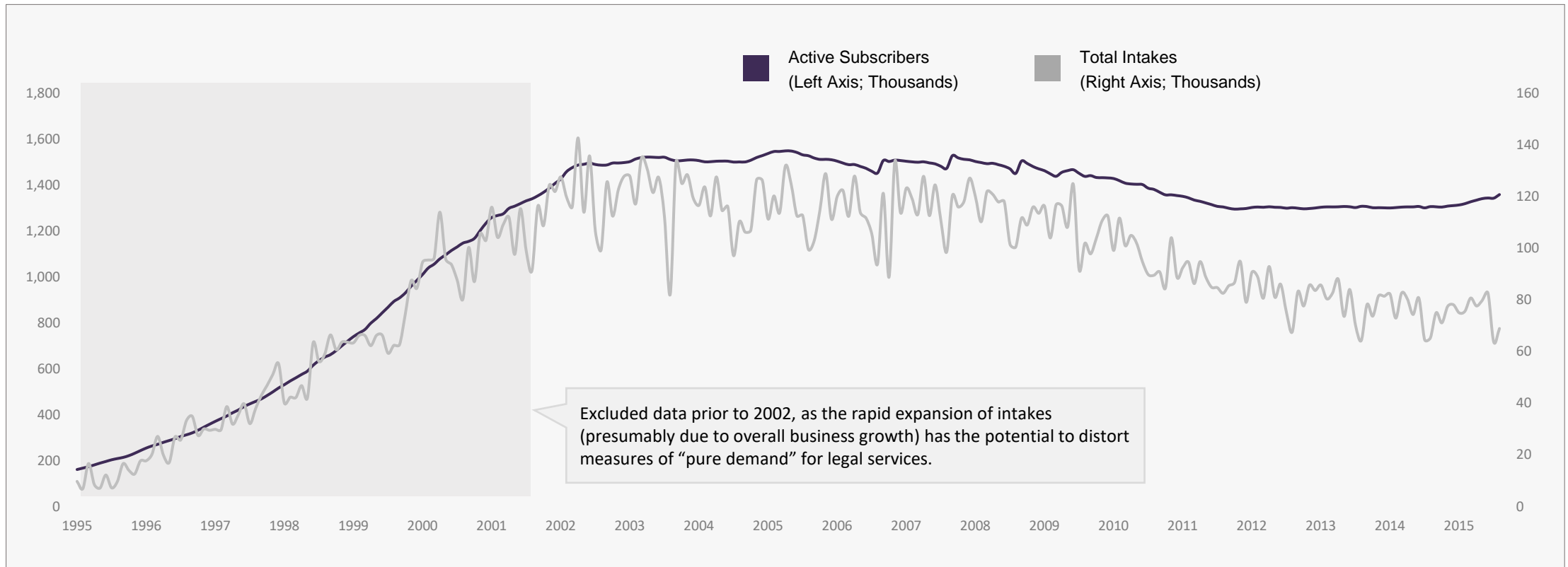
Analytical Scope

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

Dataset Development

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.

Full LegalShield Intake Dataset (2000 – 2015)

All Plan Types

All Subscribers
n = 19,571,508

Same Subscribers
n = 1,540,704

Share of Total Intakes
Share of Subscribers
Share of Total Intakes
Share of Subscribers

Family Plan Types

All Subscribers
n = 16,583,632

Same Subscribers
n = 1,516,476

Share of Total Intakes
Share of Subscribers
Share of Total Intakes
Share of Subscribers

Business Plan Types

All Subscribers
n = 1,345,132

Same Subscribers
n = 87,609

Share of Total Intakes
Share of Subscribers
Share of Total Intakes
Share of Subscribers

Determine Scope of Analysis

Define Intake Metric*

*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.
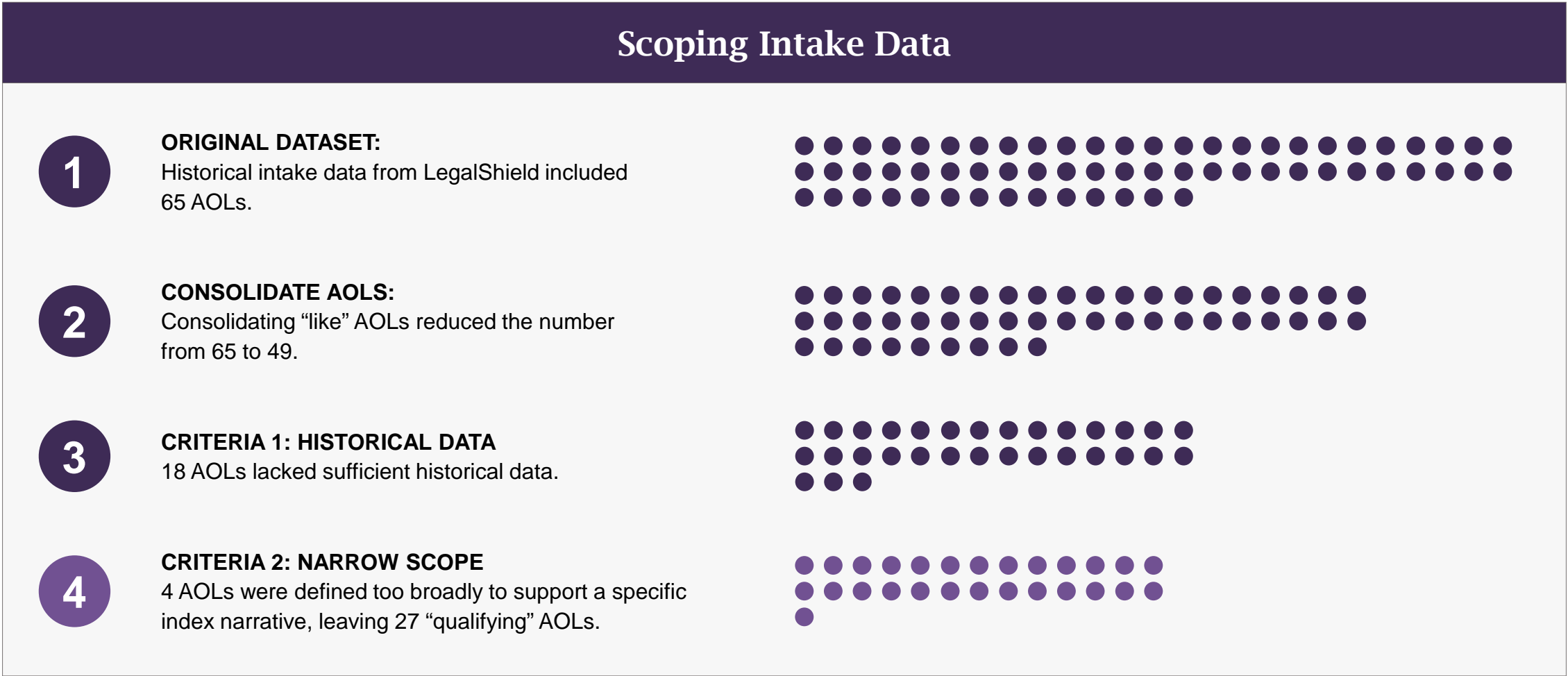
Filter AOL

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	-	✓	✓	✓
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 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**

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. 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)

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

Less Rigorous ←————————|————————|————————|————————|————————→ *More Rigorous*

Level/Level   *Year/Year*   *6 Month/Month*   *3 Month/Month*   *1 Month/Month*

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	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

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	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.

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

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 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.

Testing

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

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 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)

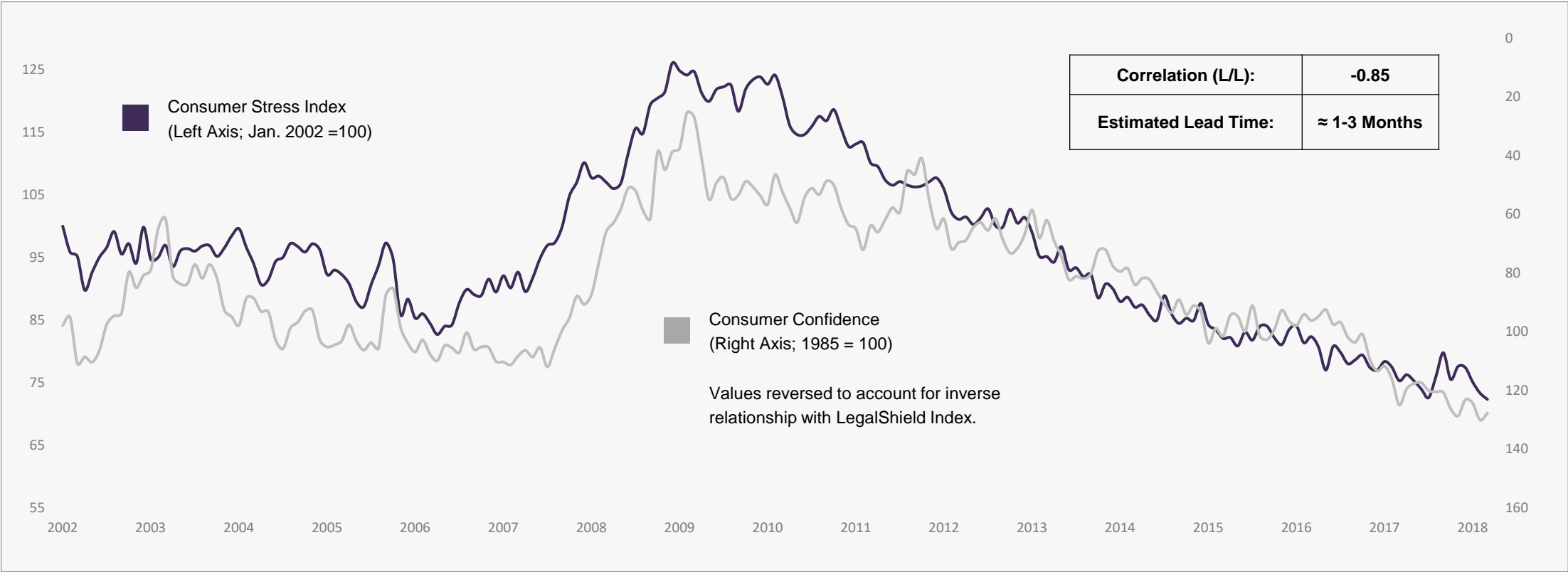Test 2: Compared correlations between random samples of the data

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
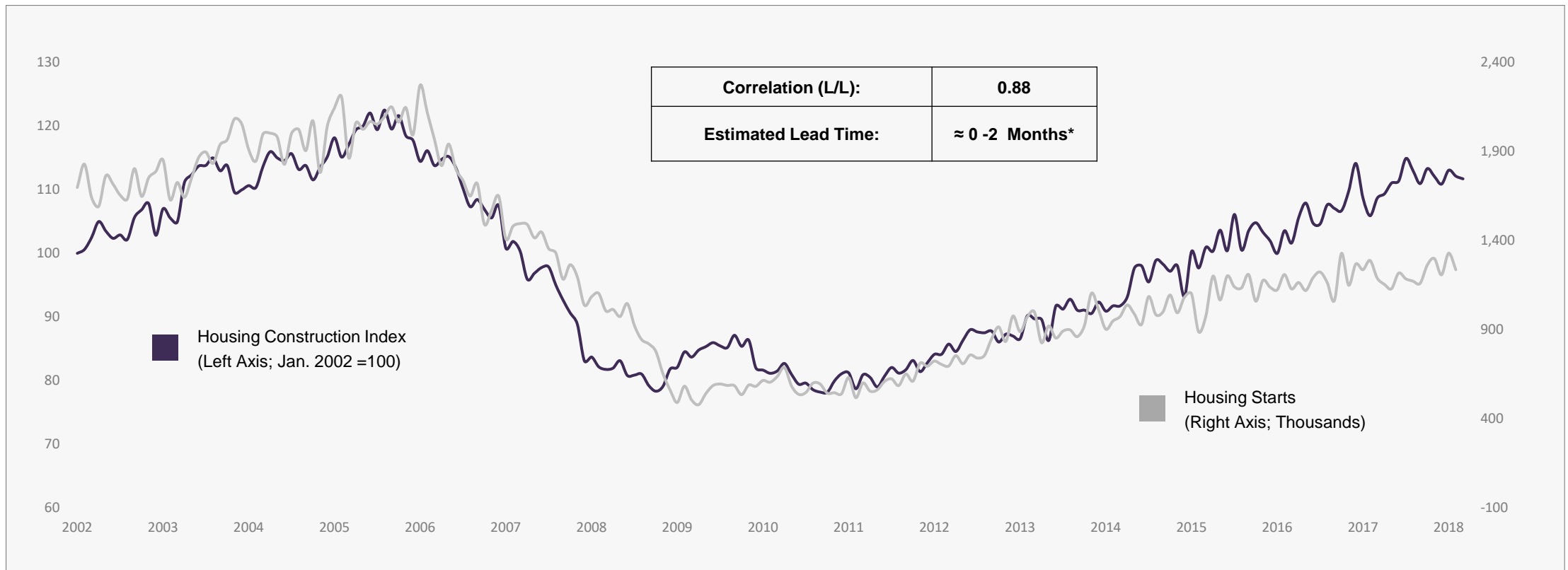
Composite Index: Consumer Stress

AOLs: Bankruptcy; Foreclosure; Consumer Finance

Correlation (L/L):	-0.85
Estimated Lead Time:	≈ 1-3 Months

Consumer Stress Index
(Left Axis; Jan. 2002 =100)

Consumer Confidence
(Right Axis; 1985 = 100)

Values reversed to account for inverse relationship with LegalShield Index.

Composite Index: Housing Construction Index

AOLs: Foreclosure; Real Estate*

Correlation (L/L):	0.88
Estimated Lead Time:	≈ 0 -2 Months*

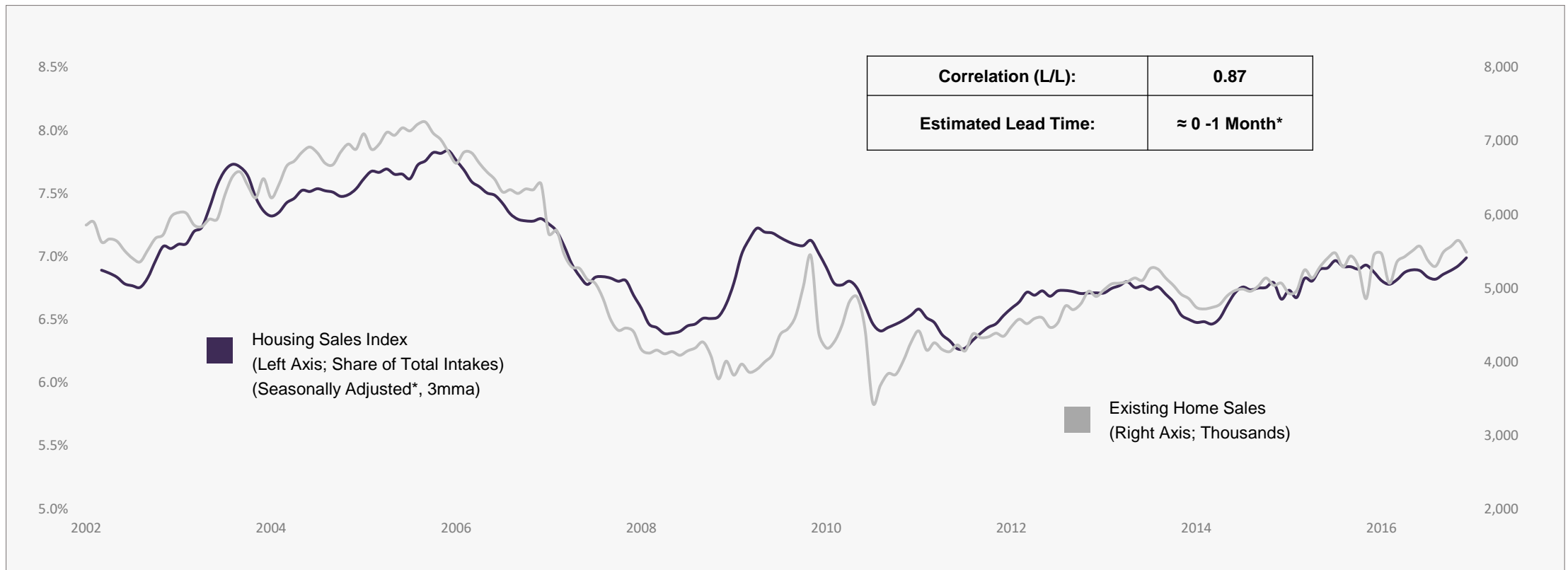■ Housing Construction Index
(Left Axis; Jan. 2002 =100)

■ Housing Starts
(Right Axis; Thousands)

*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.
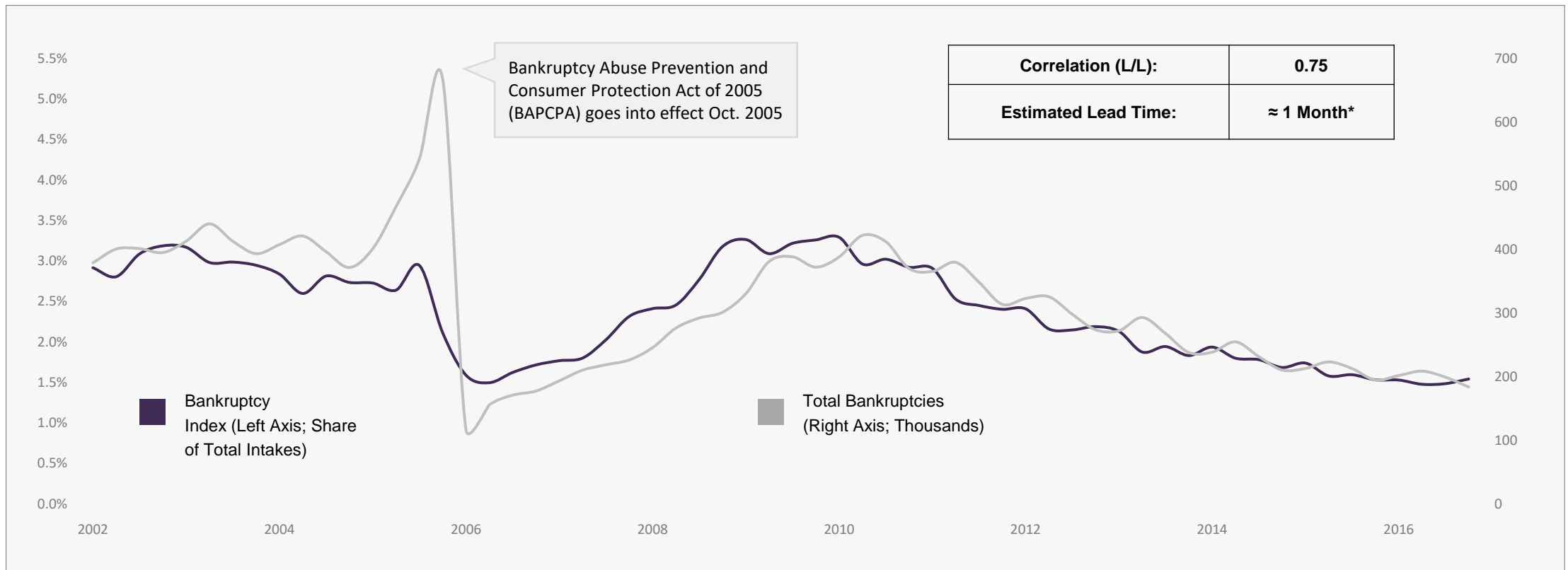
AOL: Real Estate

Target Series: Real Estate*

Correlation (L/L):	0.87
Estimated Lead Time:	≈ 0 -1 Month*

Housing Sales Index
(Left Axis; Share of Total Intakes)
(Seasonally Adjusted*, 3mma)

Existing Home Sales
(Right Axis; Thousands)

*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.
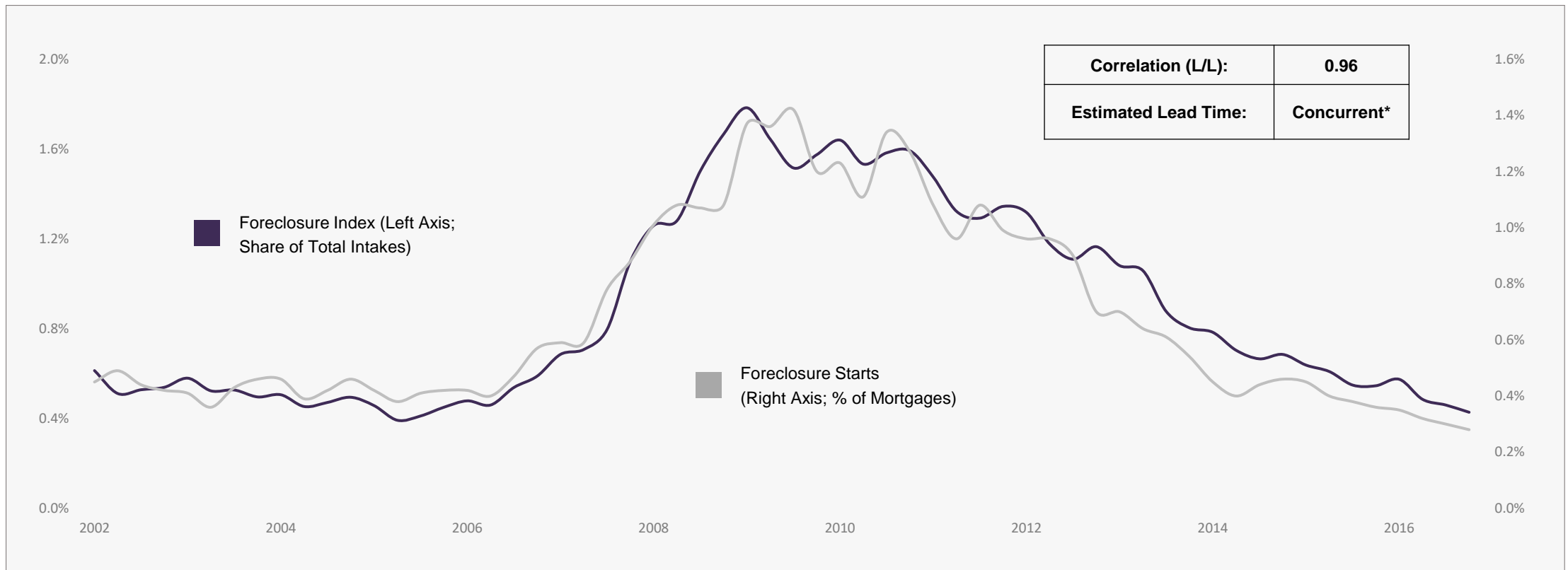
AOL: Bankruptcy

Target Series: Consumer Bankruptcies

AOL: Foreclosure

Target Series: Foreclosure Starts

Correlation (L/L):	0.96
Estimated Lead Time:	Concurrent*

Foreclosure Index (Left Axis; Share of Total Intakes)

Foreclosure Starts (Right Axis; % of Mortgages)

*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**™