



# Economic Stress Index™





# 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

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 INDEX

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

## FORECLOSURE INDEX

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

## HOUSING CONSTRUCTION INDEX

The housing market, broadly defined, accounts for up to one-seventh of U.S. economic activity, and the amount of new residential construction (as measured by housing starts) can provide insights into consumers' confidence about their jobs and future income. The 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.

## HOUSING SALES INDEX

The housing market accounts for a significant share of U.S. economic activity, and the pace of existing home sales can provide insights into consumers' confidence about their jobs and future income. The 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

**Bottom Line:** The LegalShield Consumer Stress Index worsened in November for the third consecutive month, though it remains low by historical standards. Inflation and rising interest rates are daunting headwinds for consumers, but the labor market remains strong, and most consumers appear well-positioned to handle further rate hikes for now.

**Latest Reading:** In November, the LegalShield Consumer Stress Index increased (worsened) 2.9 points to 65.6, up 16% compared to a year prior. Meanwhile, the Conference Board's Consumer Confidence Index worsened 2.0 points to 100.2.

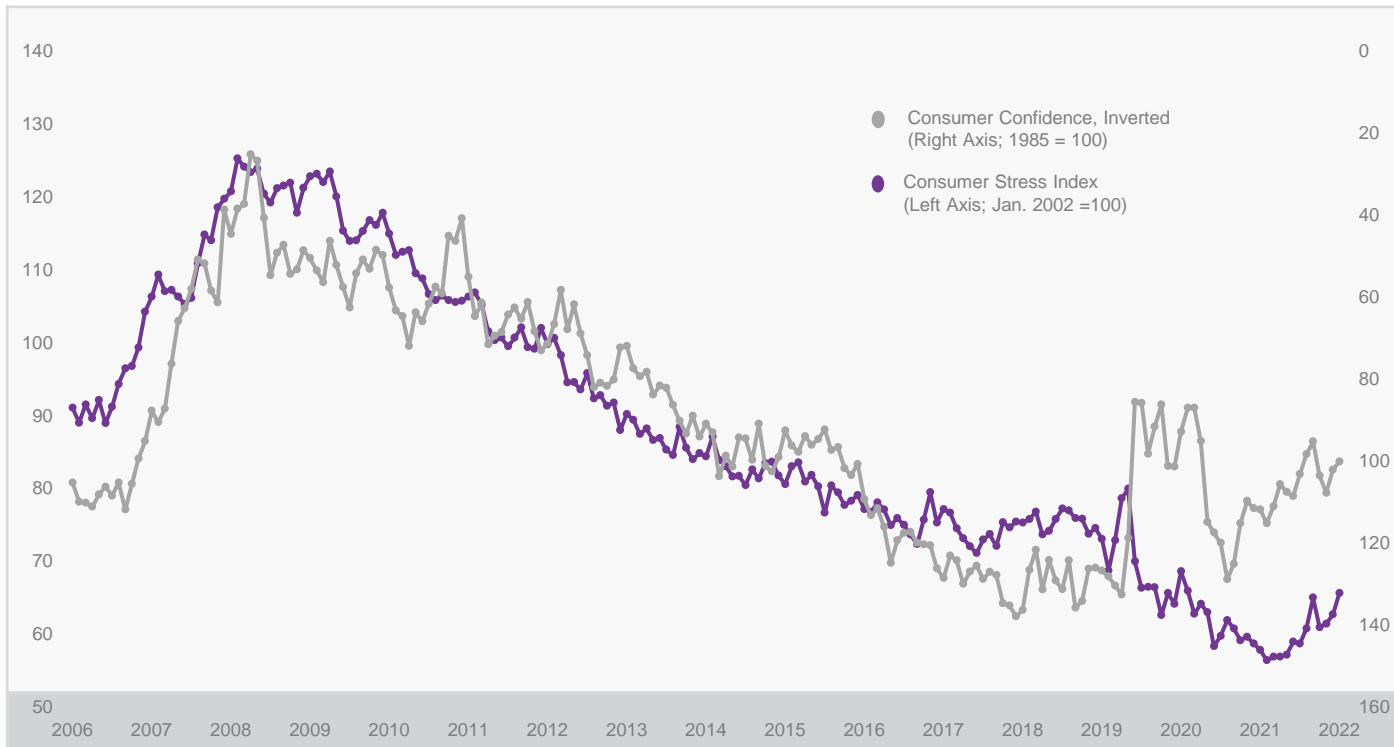
**Economic Context:** Though consumer stress remains low by historical standards, stress has been rising steadily in 2022 as the combined effect of rising interest rates and high prices takes a bite out of consumers' wallets. Indeed, though headline inflation and core inflation eased somewhat in October, price pressures remain a daunting headwind for consumers —particularly [grocery prices](#), which were up more than 12% Y/Y in October.

As wage growth continues to lag inflation, consumers are struggling to keep up with rising prices. As a result, the personal savings is in decline: in October, consumers saved just 2.3% of their income, near an all-time low and roughly one-third of pre-pandemic readings. Inflation-adjusted retail sales during the holiday season are expected to lag their performance in recent years, and many consumers are [planning](#) to buy fewer gifts this year or are looking harder for discounts.

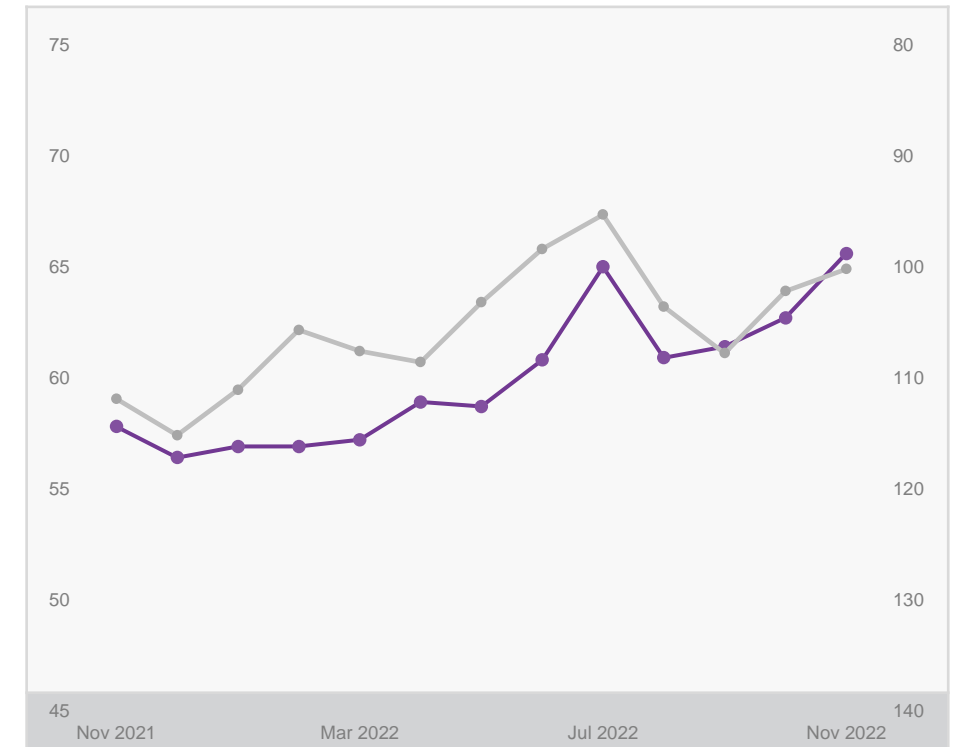
Looking ahead, a strong labor market, which added 263,000 jobs in November, is still buoying consumers for now, and with jobs still plentiful across the economy and financial stress low overall, most consumers remain well-positioned for the months ahead. Still, LegalShield data continue to suggest that financial stress will rise slowly but steadily during the first half of 2023.

# Consumer Stress Index

## Historical Trend Over Past 16 Years



## Movement Over Past 12 Months





# Bankruptcy Index

**Bottom Line:** In November, the LegalShield Bankruptcy Index worsened for the second month in a row. Given that the index remains at roughly half its pre-pandemic level, bankruptcies are likely to remain subdued in the near term.

**Latest Reading:** The LegalShield Bankruptcy Index increased (worsened) 1.7 points in November to 26.9, its highest reading of the year but still low by historical standards. In November, total seasonally adjusted bankruptcy filings edged up to 32,287, up 4.7% from a year prior.

**Economic Context:** Bankruptcies remain far below pre-pandemic levels despite growing economic headwinds, and it is unlikely that they will rise substantially in the near term given the strong labor market and low debt delinquencies. For example, in Q3 the delinquency rate for all loans held steady at 1.19%, the lowest rate on record. Further, credit card debt outstanding as a share of disposable income remains well below pre-pandemic levels, suggesting that most credit cardholders are still managing their debt well ([ABA](#)).

However, consumer debt is rising, which could lead to an increase in delinquencies and bankruptcies later in 2023. Revolving credit card debt is up 15% from a year prior, the largest increase in over 20 years ([NY Fed](#)). High inflation is a major reason why consumers are relying more on their credit cards: as reported by [U.S. Census Bureau](#), more than half of households that rely on credit cards to make household payments are struggling to pay their expenses. The Federal Reserve's efforts to tame inflation by raising interest rates are likely to compound these issues in 2023, as the Fed Funds Rate is a direct determinant of the prime rate, which in turn determines the APR for most credit cards.

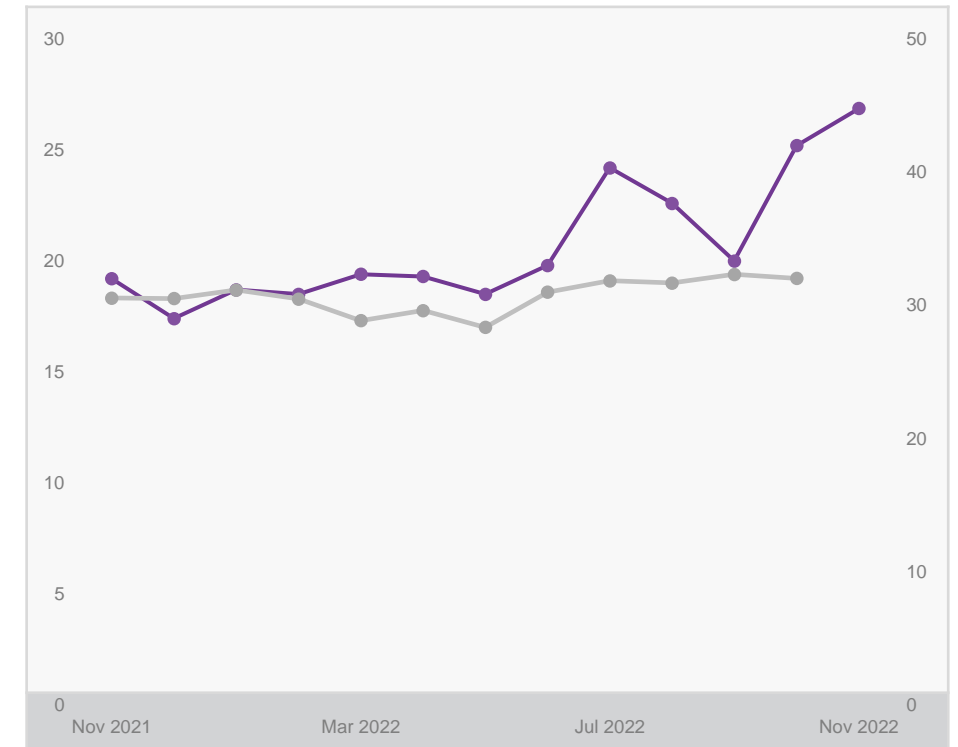
All told, overall delinquency rates remain historically low. Given that consumers are handling their debt burdens for the time being, it is unlikely that bankruptcies will rise dramatically in the coming months, an outlook supported by LegalShield data.

# Bankruptcy Index

## Historical Trend Over Past 16 Years



## Movement Over Past 12 Months





# Foreclosure Index

**Bottom Line:** The LegalShield Foreclosure Index worsened in November after improving slightly last month. The index remains well below its pre-COVID level, though foreclosure starts have been gradually increasing since the pandemic-era foreclosure moratorium expired. A gradual normalization in foreclosure starts is expected in 2023.

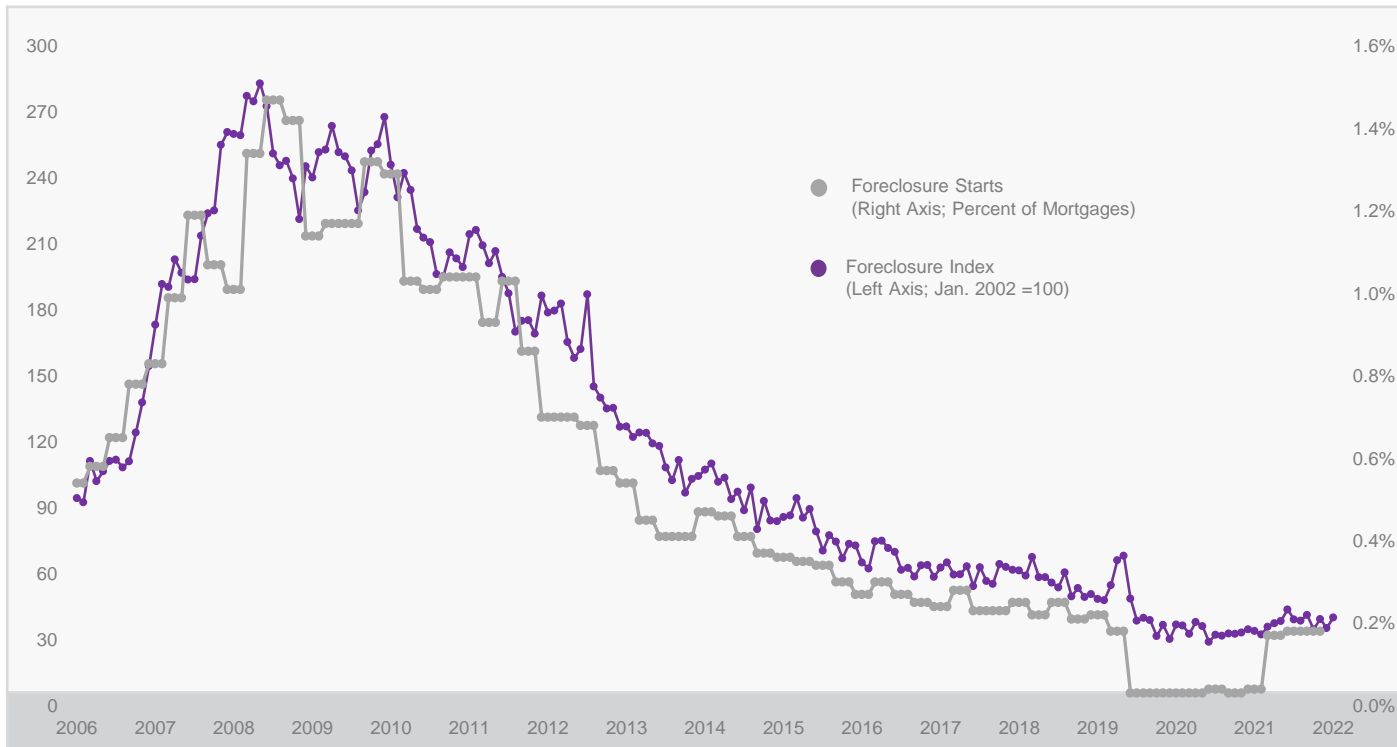
**Latest Reading:** The LegalShield Foreclosure Index worsened (increased) 4.8 points to 40.1 in November after improving the prior month. Meanwhile, foreclosure starts held steady to at 0.18% of all loans in Q3, the same share as in Q1 of 2020.

**Economic Context:** Foreclosures remain historically low, though they have been gradually increasing since the expiration of the foreclosure moratorium. In October, foreclosure activity increased 57% from the year prior, but it was only up 2% from September ([ATTOM](#)). Meanwhile, foreclosure repossessions are still 69% below their level in October 2019, suggesting that many borrowers in foreclosure have been able to sell their homes prior to foreclosure auction, falling back on equity gained from higher home prices. However, as the housing market cools and home sales slow, it will become increasingly difficult for homeowners to sell their homes prior to auction, which could put upward pressure on foreclosure completions in the next year.

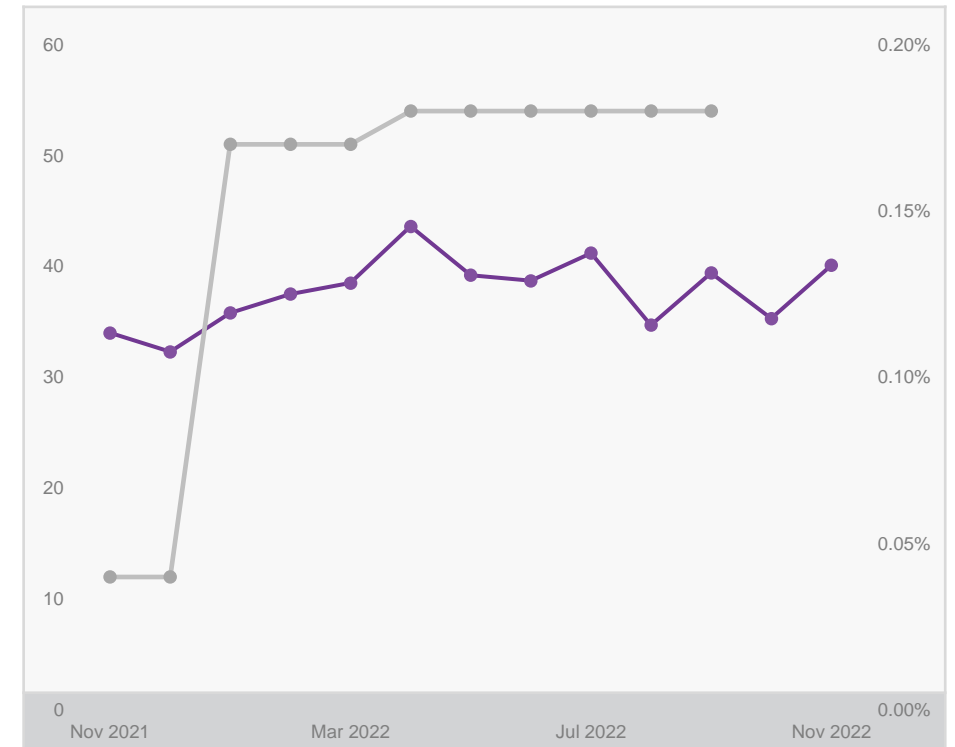
In general, mortgage delinquencies (a precursor to foreclosure) are still low compared to pre-pandemic levels. According to the New York Fed's Household Debt and Credit Report, new seriously delinquent mortgage debt (90+ days delinquent) increased to \$2.02 billion in Q3 — nearing its pre-pandemic level — but only 0.37% of total mortgage debt is seriously delinquent, the smallest share on record. With these data in mind, it is unlikely that we will see a significant increase in foreclosure activity during the first half of 2023.

# Foreclosure Index

### Historical Trend Over Past 16 Years



### Movement Over Past 12 Months





# Housing Construction Index

**Bottom Line:** The LegalShield Housing Construction Index worsened in November to its lowest level since May 2020. Homebuilders continue to face strong headwinds like rising interest rates, high costs of building materials, and waning demand.

**Latest Reading:** The LegalShield Housing Construction Index decreased (worsened) 4.9 points to 122.8 in November. Meanwhile, housing starts decreased 1.0% M/M in October and were down 8.8% from the year prior.

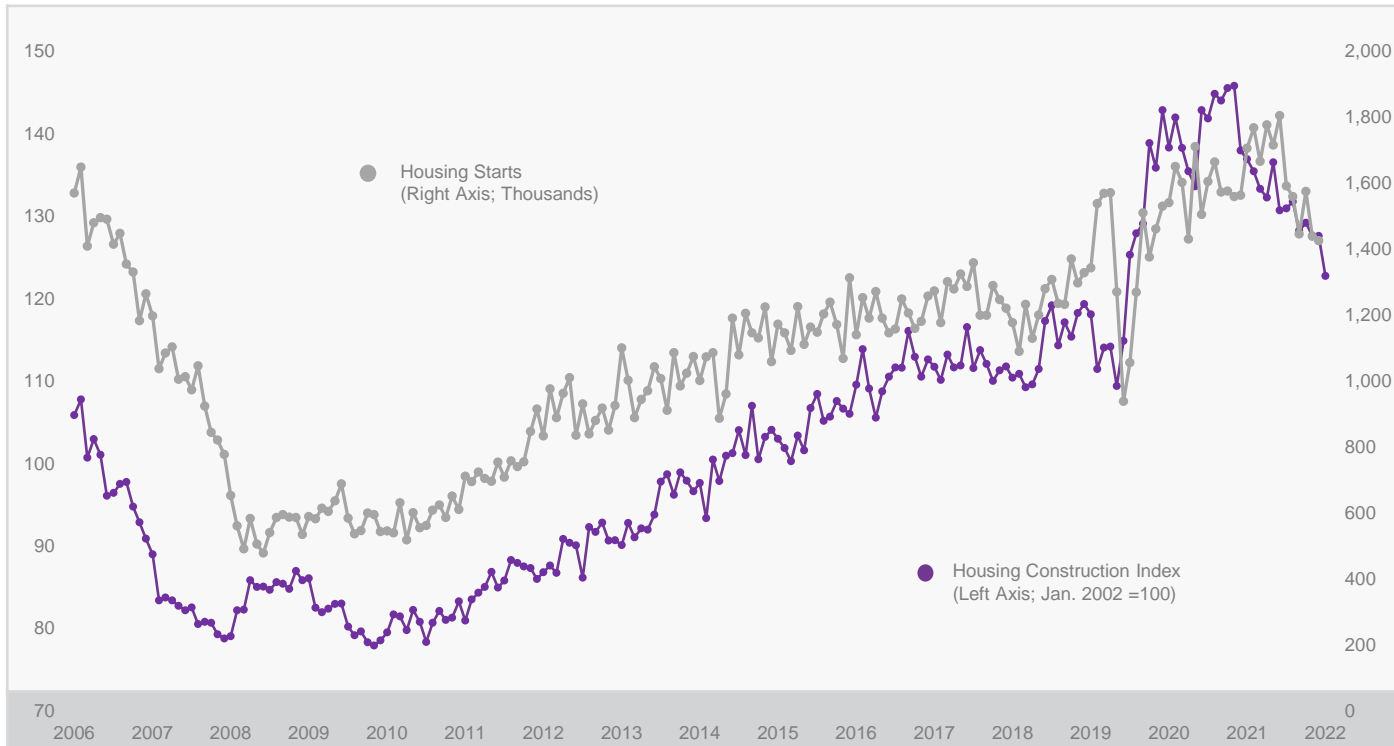
**Economic Context:** Housing construction continues to face daunting challenges as the housing market weakens:

- **Rising interest rates:** Mortgage rates hit record highs in November, and though they have retreated somewhat in recent weeks, demand for new homes remains subdued. As a result, builders are looking for ways to attract potential buyers. For example, the share of builders offering mortgage rate buy downs rose from 19% to 27% in the last three months ([NAHB](#)). Similarly, 37% of builders cut prices in November at an average of 6%, up from 26% of builders in September.
- **Cost of building materials:** The producer price index for residential construction goods eased in October, though it remains up 14.3% Y/Y. With still-high building costs, builders are taking on increasing risk building homes as the market cools.
- **Supply chain constraints & labor shortages:** Builders continue to report bottlenecks, which have pushed the backlog of homes under construction to new record highs even as starts collapse. While this backlog may help to buoy construction activity in the near term, this effect is unlikely to last much longer.

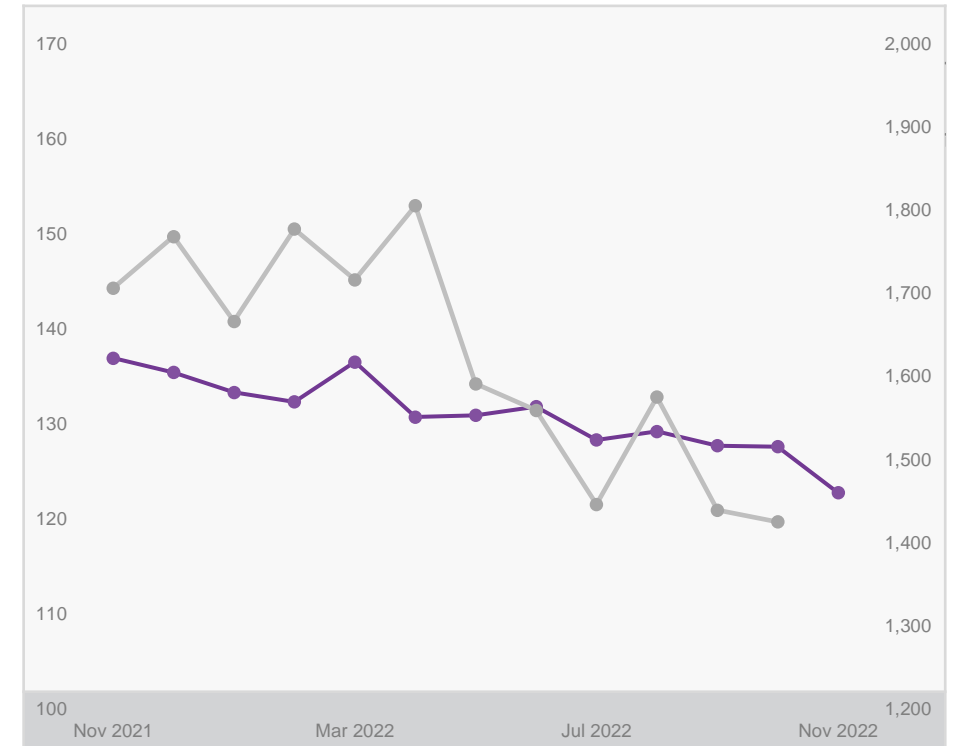
[NAHB's](#) Housing Market Index fell for the eleventh consecutive month in November to 33. This is the lowest reading since June 2012 (excluding the immediate onset of the pandemic). Builders are increasingly pessimistic about the housing market, and LegalShield data suggest that construction activity is likely to ease further in the coming months.

# Housing Construction Index

## Historical Trend Over Past 16 Years



## Movement Over Past 12 Months





# Housing Sales Index

**Bottom Line:** In September, the LegalShield Housing Sales Index worsened to its lowest level since April 2020. The housing market has clearly softened as the Federal Reserve has raised interest rates, and LegalShield data suggest that existing home sales will weaken further over the remainder of the year.

**Latest Reading:** The LegalShield Housing Sales Index decreased (worsened) 1.7 points to 102.4 in November, falling 9.1% from a year prior. Meanwhile, existing home sales decreased 5.9% in October, down 28.4% Y/Y.

**Economic Context:** Home sales decreased for the ninth straight month in October. Fed rate hikes have continued to drive up mortgage rates, making borrowing less affordable and cooling the housing market. The average 30-year fixed-rate mortgage rate touched 7% in November, and there is ample evidence that the market has further to fall:

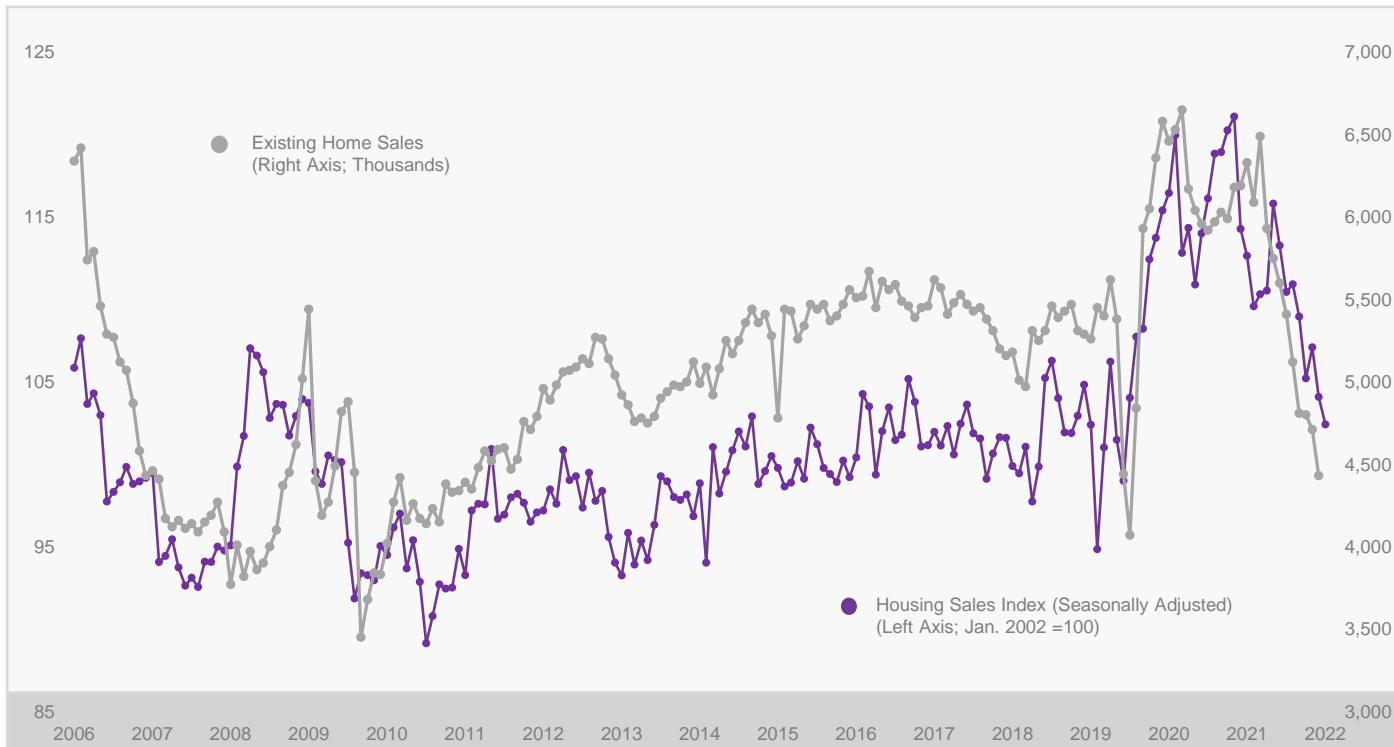
- New house listings were down 21% Y/Y in November ([Redfin](#)).
- The average number of days on the market was 35, the highest since summer 2020 ([Redfin](#)).
- Since July, the share of active listings with price drops has been above 6% of all listings, a share not seen since before the pandemic-era housing market surge ([Redfin](#)).

Housing sales are expected to continue to slow in the coming months as affordability concerns smother demand. Indeed, [Fannie Mae's](#) Home Purchase Sentiment Index is hovering just above an all-time low, with just 16% of consumers reporting that now is a good time to buy a home.

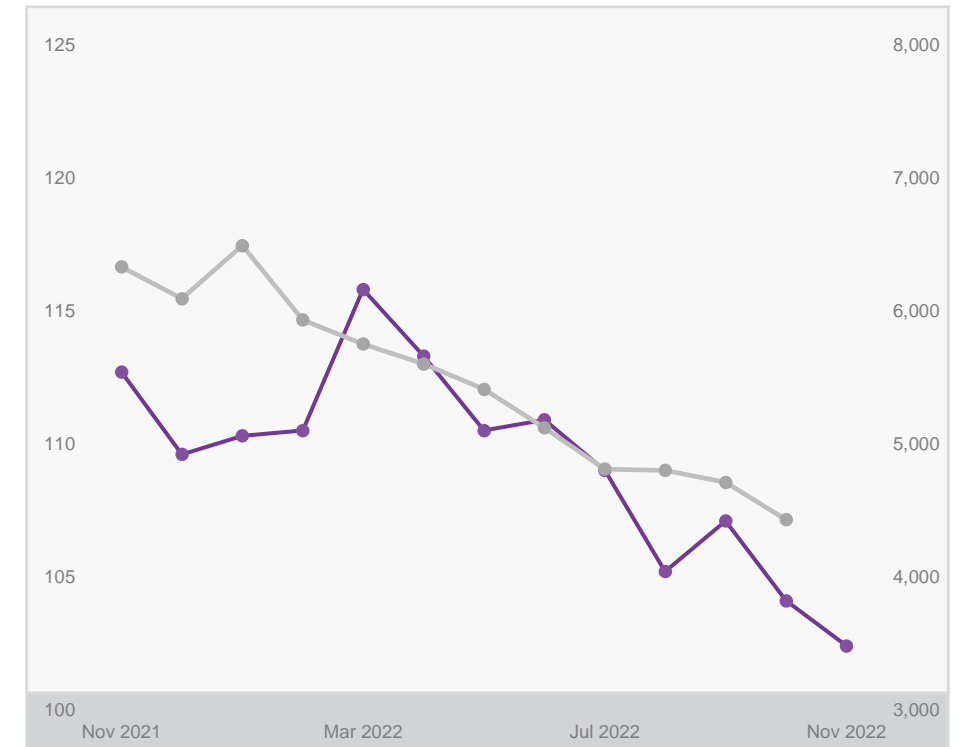
LegalShield data suggest home sales activity will remain weak in the near term, particularly given expectations of further Fed rate hikes.

# 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

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



LegalShield “Housing Construction” Index

- ✓ **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.

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.

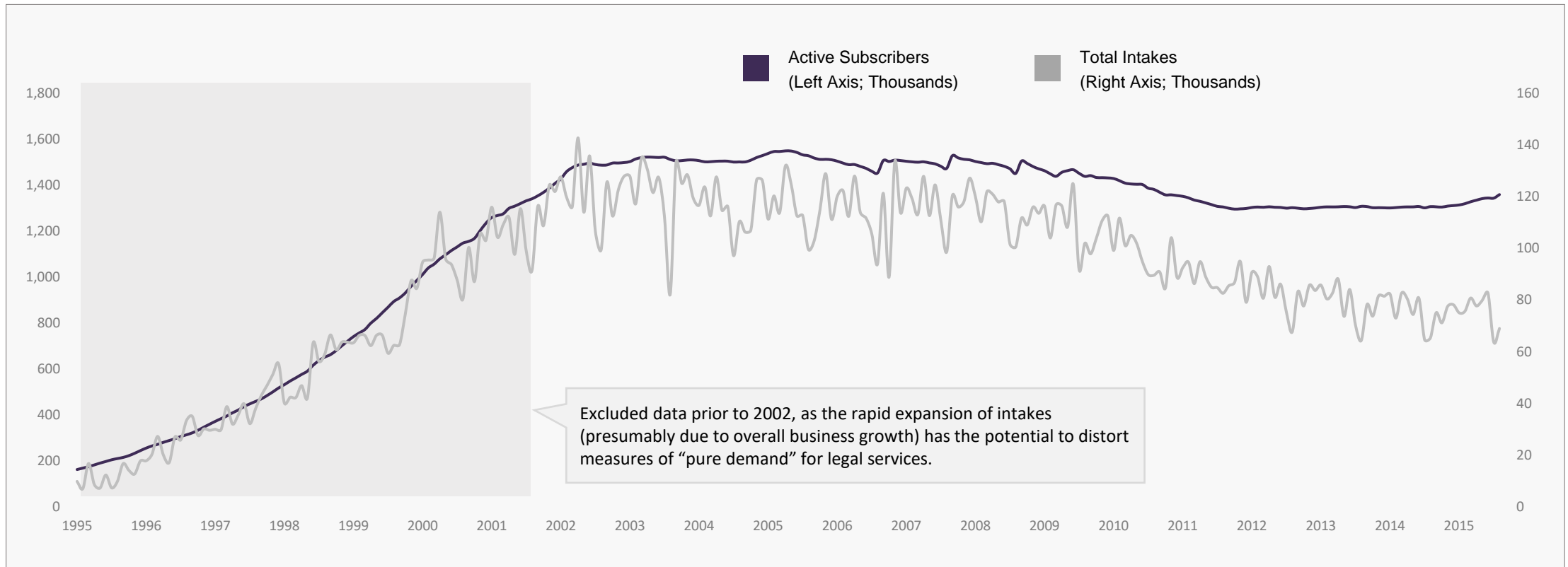
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## **DEVELOP INDEXES:**

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.





# 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	-		✓	
<b>TOTAL</b>			<b>31</b>	<b>44</b>	<b>27</b>

# 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



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)

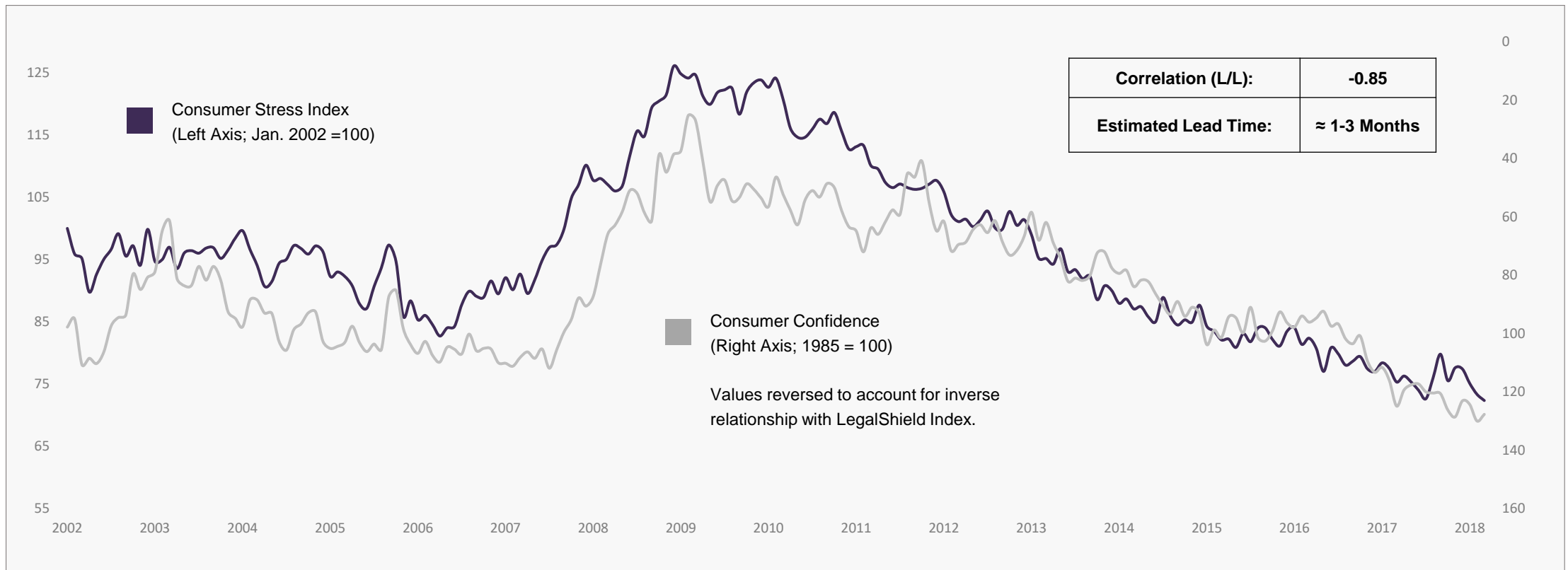
Test 2: Compared correlations between random samples of the data

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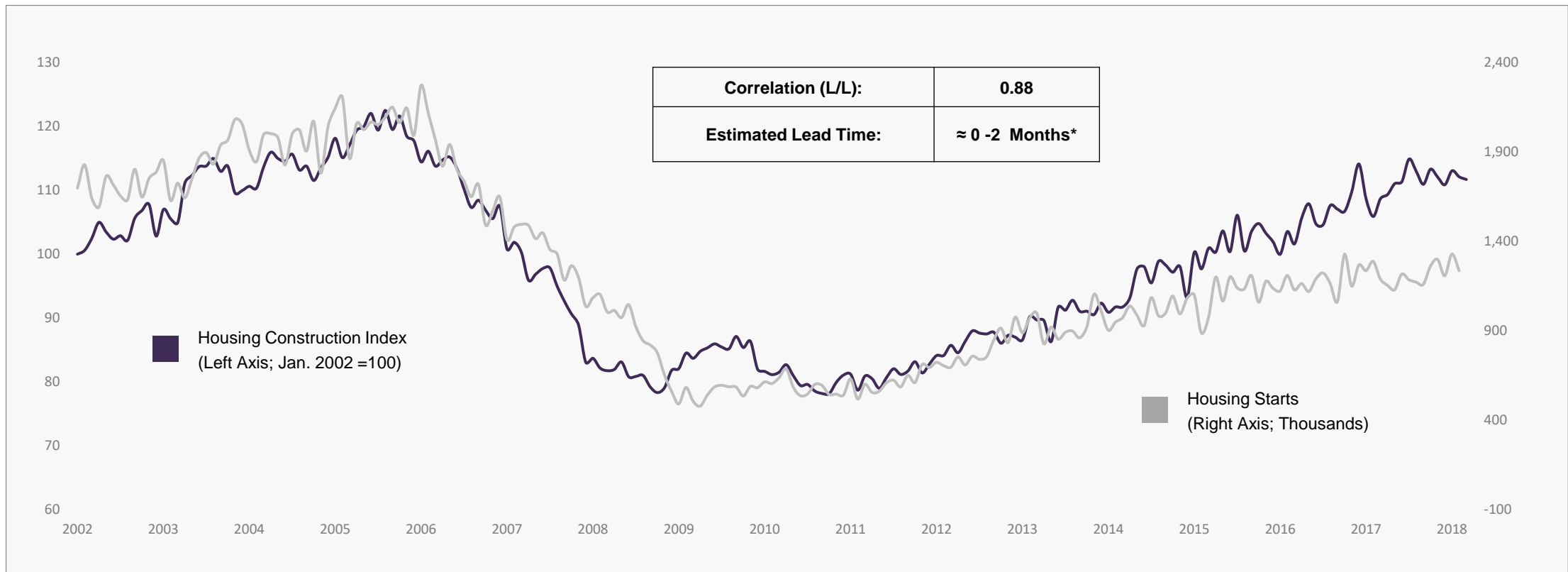
# Composite Index: Consumer Stress

AOLs: Bankruptcy; Foreclosure; Consumer Finance



# Composite Index: Housing Construction Index

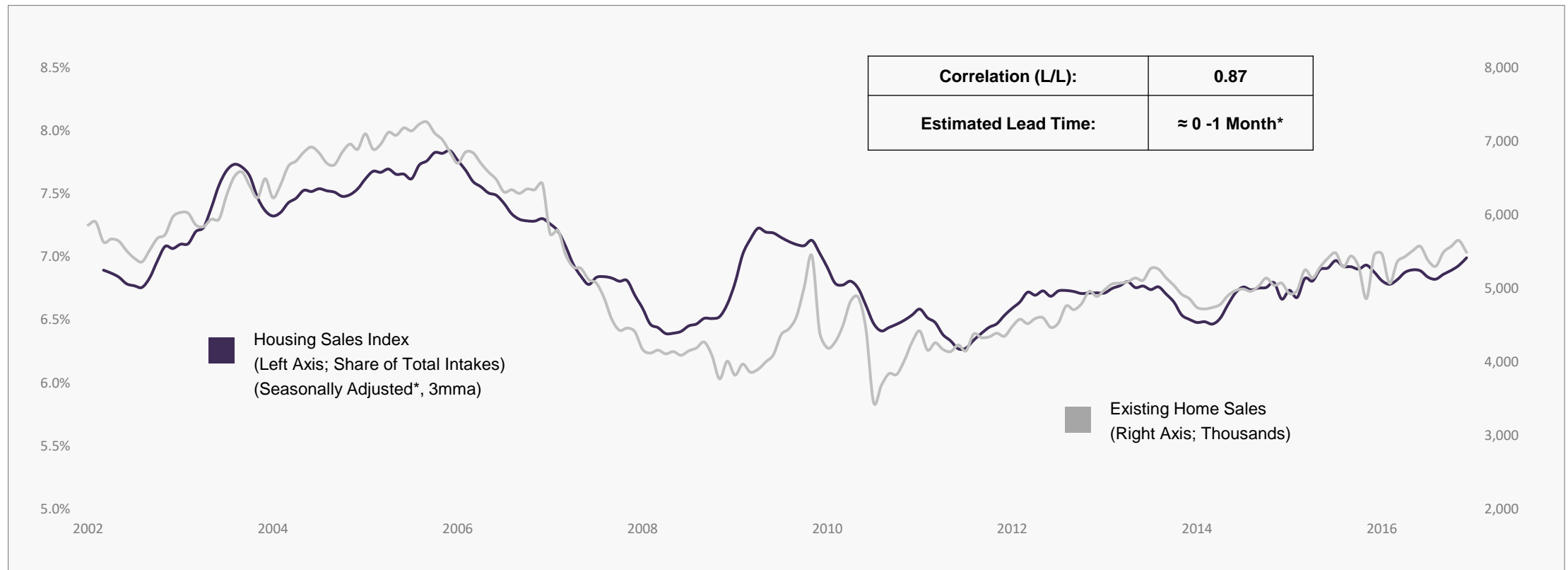
AOLs: Foreclosure; Real Estate\*



\*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

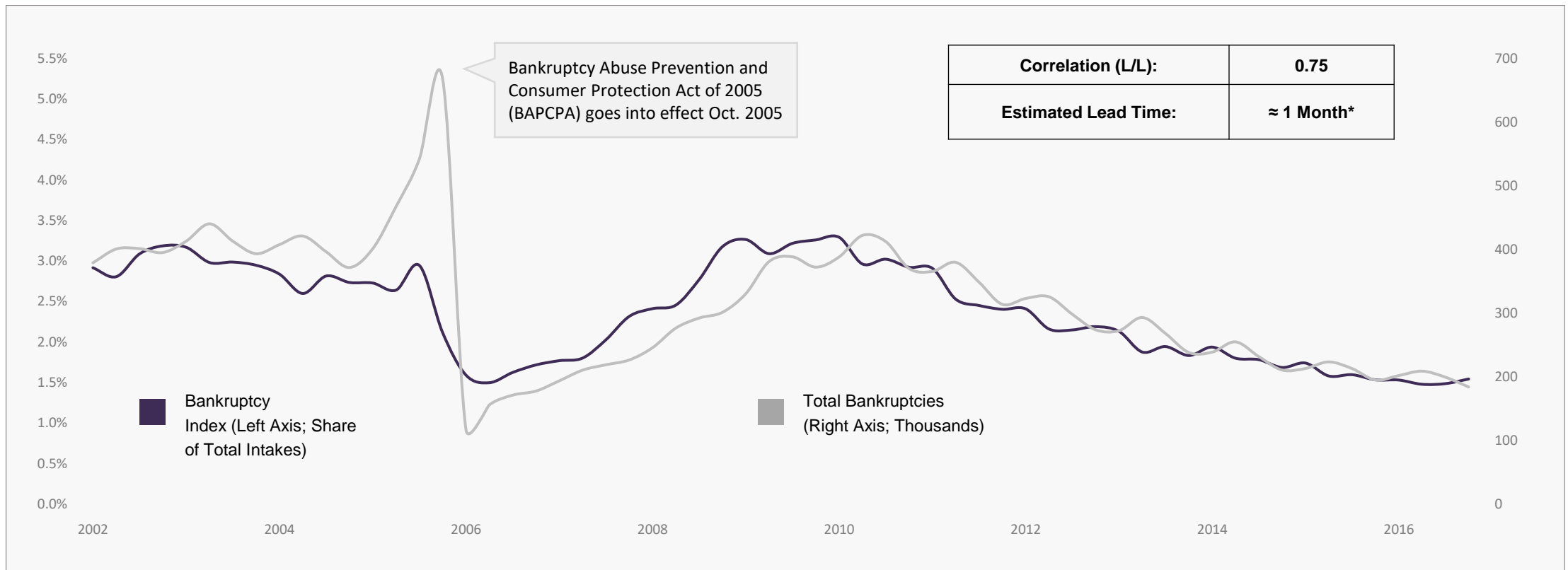
Target Series: Real Estate\*



\*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.

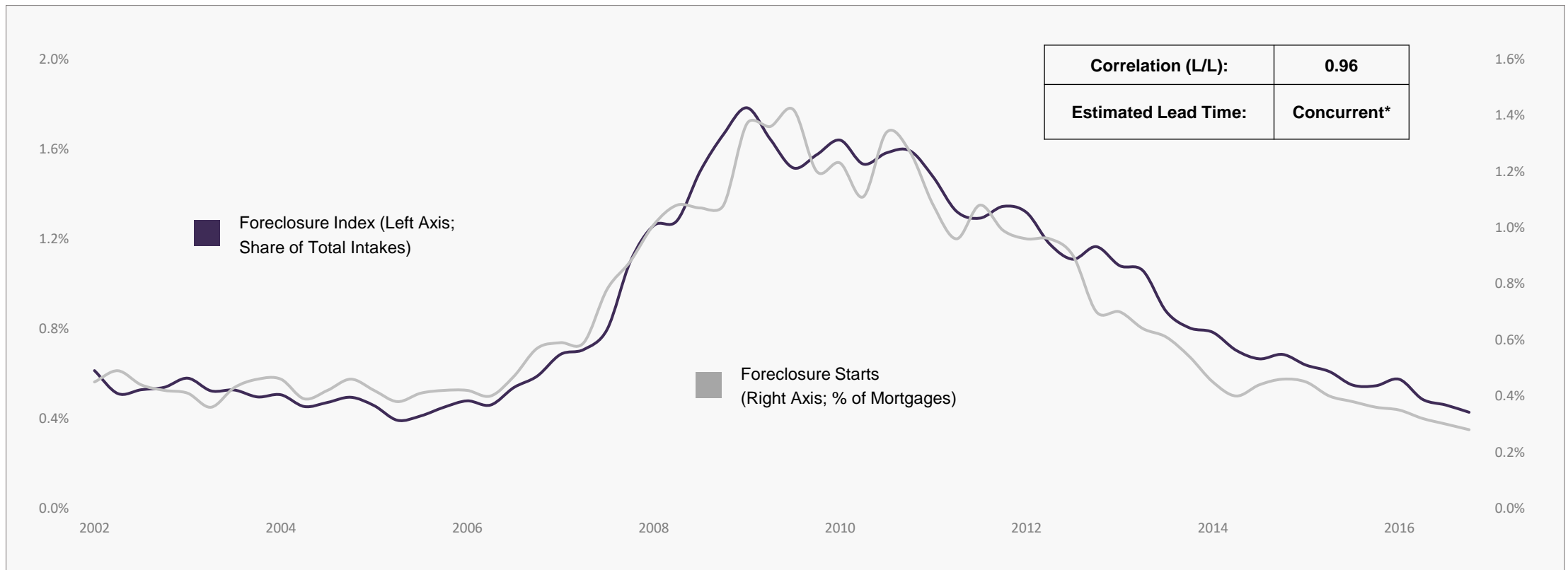
# AOL: Bankruptcy

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!



**Economic  
Stress Index™**

