About LegalShield

#1 Provider of subscription-based legal plans to households

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

49 year history and counting

47,000 small business accounts

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

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

About the LegalShield Economic Stress Index

✓ The LegalShield Economic Stress Index is a suite of leading indicators of the economic and financial status of U.S. households and small businesses.

✓ The LegalShield Economic Stress Index is comprised of five sub-indices that are constructed from LegalShield's proprietary data, which reflect the demand for various legal services over the past 15+ years. Each time a LegalShield provider law firm receives a request from a LegalShield customer, the request is logged as an "intake" in one of roughly 70 unique areas of law (e.g., real estate) depending on the nature of the request.

✓ Each sub-index reflects the number of intakes in an area of law as a share of total intakes across all areas of law in a given quarter. In some instances, individual indices across multiple areas of law (e.g., bankruptcy, foreclosure, consumer/finance) are combined to produce a composite index (e.g., consumer financial stress).

✓ The sub-indices that comprise the LegalShield Economic Stress Index were selected because they tend to lead an existing economic indicator that sheds light on the health of the U.S. economy (i.e., the target economic indicator). In this way, the LegalShield Economic Stress Index provides actionable intelligence about the direction of the U.S. economy in the near term.

Advantages of the LegalShield Economic Stress Index

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

✓ **PROPRIETARY**
The LegalShield Economic Stress index is based on data collected through LegalShield's provider law firms in all 50 states, thereby offering information that is not accessible to the general public.
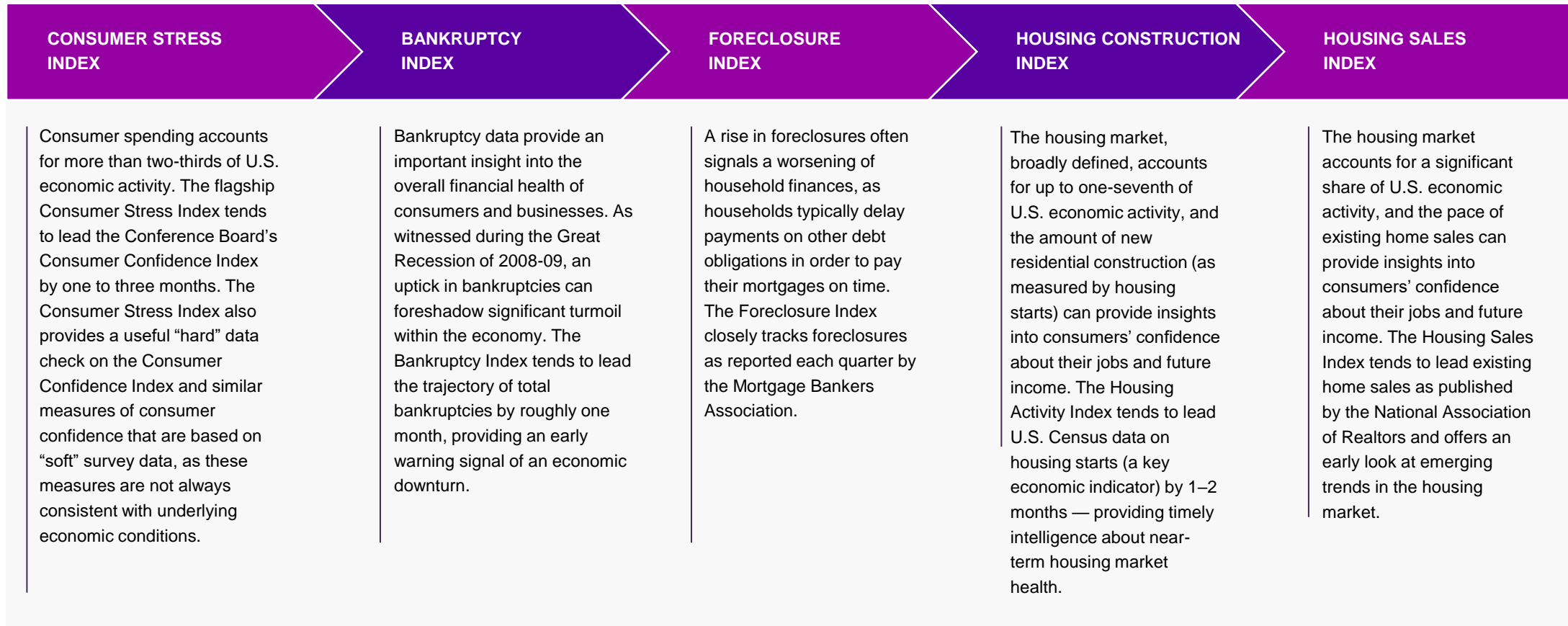
✓ **HIGH-FREQUENCY**
The LegalShield Economic Stress Index is based on data collected on a near real-time basis, and can be refreshed on a weekly, monthly, or quarterly basis depending on the user's needs.

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

Interpreting Each Component of the LegalShield Economic Stress Index

CONSUMER STRESS INDEX	BANKRUPTCY INDEX	FORECLOSURE INDEX	HOUSING CONSTRUCTION INDEX	HOUSING SALES INDEX
Consumer spending accounts for more than two-thirds of U.S. economic activity. The flagship Consumer Stress Index tends to lead the Conference Board's Consumer Confidence Index by one to three months. The Consumer Stress Index also provides a useful "hard" data check on the Consumer Confidence Index and similar measures of consumer confidence that are based on "soft" survey data, as these measures are not always consistent with underlying economic conditions.	Bankruptcy data provide an important insight into the overall financial health of consumers and businesses. As witnessed during the Great Recession of 2008-09, an uptick in bankruptcies can foreshadow significant turmoil within the economy. The Bankruptcy Index tends to lead the trajectory of total bankruptcies by roughly one month, providing an early warning signal of an economic downturn.	A rise in foreclosures often signals a worsening of household finances, as households typically delay payments on other debt obligations in order to pay their mortgages on time. The Foreclosure Index closely tracks foreclosures as reported each quarter by the Mortgage Bankers Association.	The housing market, broadly defined, accounts for up to one-seventh of U.S. economic activity, and the amount of new residential construction (as measured by housing starts) can provide insights into consumers' confidence about their jobs and future income. The Housing Activity Index tends to lead U.S. Census data on housing starts (a key economic indicator) by 1–2 months — providing timely intelligence about 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

Bottom Line: The LegalShield Consumer Stress Index was mostly unchanged in May and remains near an all-time low. While consumers are increasingly feeling the pinch of inflation and higher borrowing costs which is putting upward pressure on financial stress, the robust labor market has helped most consumers remain in good financial condition.

Latest Reading: The LegalShield Consumer Stress Index edged down (improved) 0.2 point to 58.7 in May. The Conference Board's Consumer Confidence Index increased 1.0 point in May to 108.6.

Economic Context: Consumers continue to benefit from a strong labor market. In May, the U.S. added 390,000 jobs, roughly three times the level needed to replace retiring works and well above consensus expectations. Though job openings fell slightly in April, layoffs and discharges edged down to a series low. Job growth may slow as the Fed raises interest rates, but the labor market is well-positioned to handle additional rate hikes.

A historically tight labor market has led to strong nominal wage growth: the latest employment report indicated that average wages are up 5.2% Y/Y. Unfortunately, inflation is outpaced wage growth, resulting in inflation-adjusted wages declining for most of the last year. Household expenditures on staples like food, gasoline, and utilities have soared: per Moody's Analytics, U.S. households are spending nearly $350 more per month than they were a year ago. Although high prices have not yet weighed heavily on overall consumer stress, they do appear to be affecting consumer behavior. For example, the personal savings rate fell to 4.4% in April (a 14-year low), and more households are reporting a worse financial situation than a year ago. According to the New York Fed, in March and April, over 9% of respondents reported being "much worse off" than a year ago — topping the previous peak reached during the partial economic shutdown in April 2020 — and one-third of respondents said they expect to be financially worse off a year from now. Not surprisingly, consumer sentiment has declined over the same period, particularly with respect to future expectations. In the meantime, however, these early indications of rising consumer financial stress have had little impact on overall spending as evidenced by real personal consumption expenditures, which increased in April for the 15th consecutive month.

Though we expect financial stress to rise later this year as inflation continues to take a toll, LegalShield data indicate that consumers are still generally in good shape, in large part due to the historically strong labor market.

Consumer Stress Index

Historical Trend Over Past 16 Years

Movement Over Past 12 Months

Consumer Confidence, Inverted
(Right Axis; 1985 = 100)

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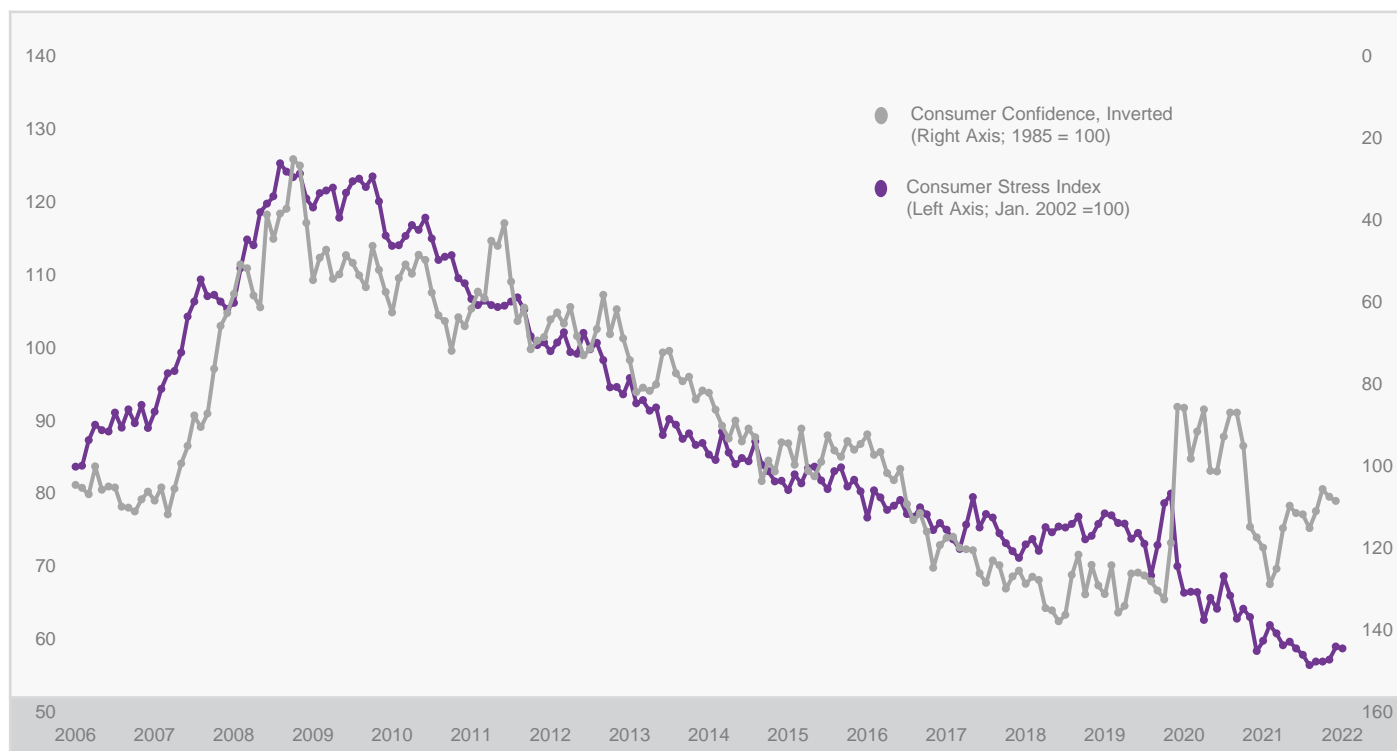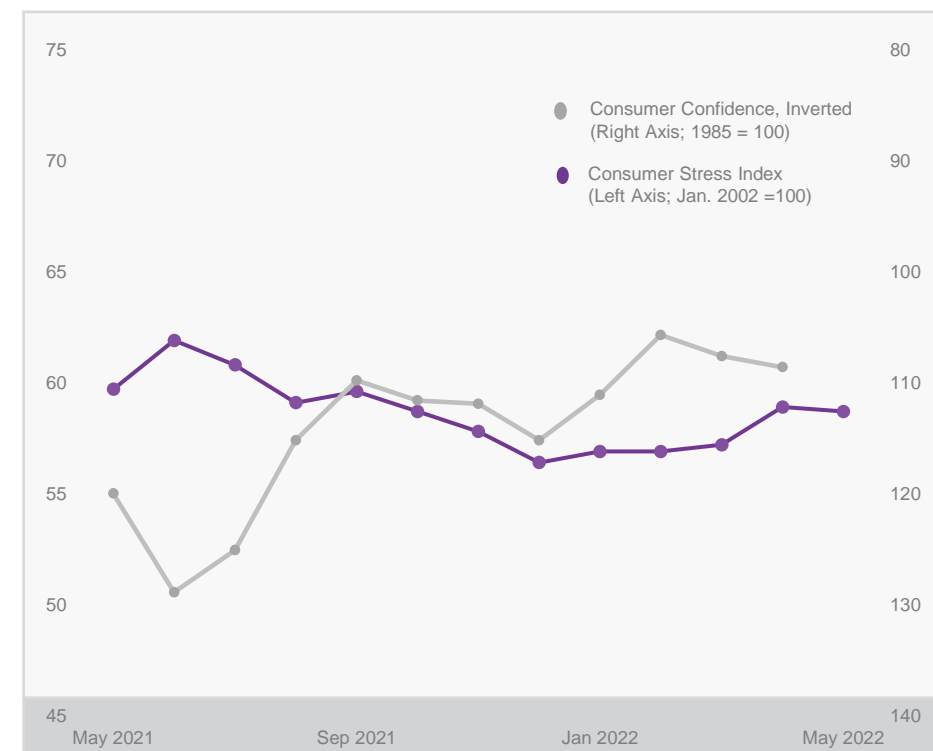
Bankruptcy Index

Bottom Line: The LegalShield Bankruptcy Index decreased in May to the second lowest value in series history, supporting LegalShield's view that bankruptcies will remain low for the foreseeable future given low consumer stress and a strong labor market.

Latest Reading: The LegalShield Bankruptcy Index eased (improved) 0.8 point to 18.5 in May, near an all-time low. Total seasonally adjusted bankruptcy filings decreased by 2.3% to 28,338 in May and were down 19% compared to a year ago.

Economic Context: According to a report from the Federal Reserve's Board of Governors, consumers were historically comfortable with their finances in 2021. In the fourth quarter, 78% of adults reported they were doing "at least okay" financially, the highest reported share since the survey began in 2013. Households with children reported particularly large gains in financial well-being in 2021, reflecting the one-year child tax credit expansion passed early in the year. These strong readings suggest that most consumers are well-positioned to meet financial obligations.

However, there are signs that inflation is beginning to take its toll on consumers. According to Equifax, subprime credit card and personal loan delinquencies, though still low by historical standards, are rising quickly and are nearing their pre-pandemic levels. While this data could be a benign indicator of normalizing credit markets, there are concerns that some consumers are falling behind on loan payments in an environment of rising interest rates, particularly given that most credit card APRs are variable and will climb when the prime rate rises. Similarly, the most recent Census Bureau Household Pulse Survey reported that more than one-third of Americans are struggling with household expenses; this metric has been rising slowly but steadily over the last few months. Still, despite these potential warning signs, most consumers are keeping up with their payments, and the overall delinquency rate remains historically low.
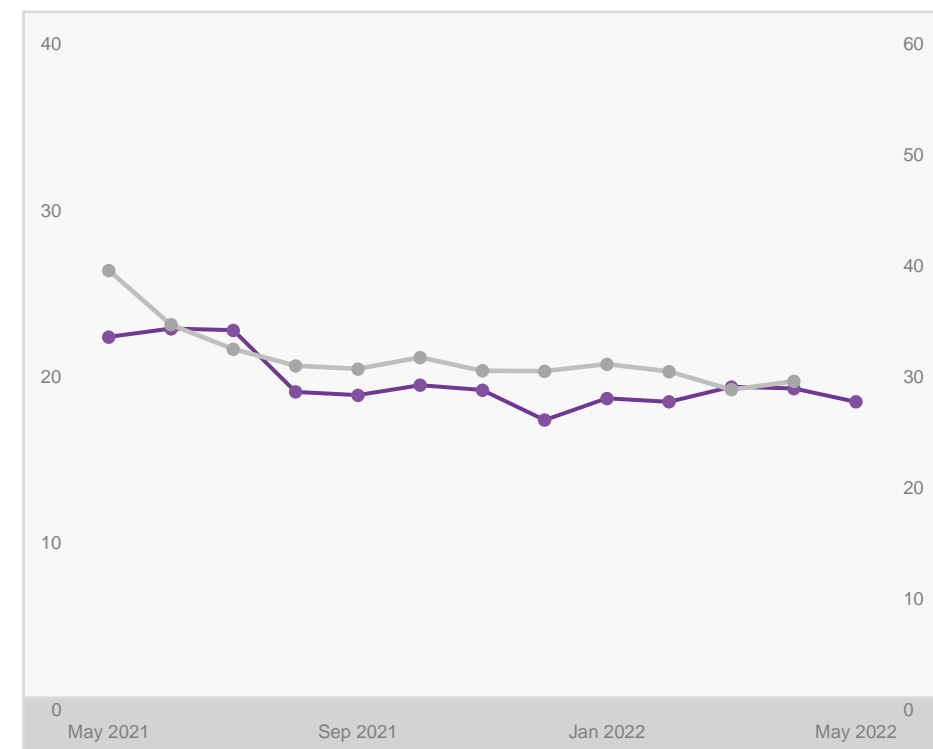
Though there are mounting headwinds to consumers' financial health, bankruptcies are expected to remain low in the coming months, an outlook supported by LegalShield data.

Bankruptcy Index

Historical Trend Over Past 16 Years

Movement Over Past 12 Months

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

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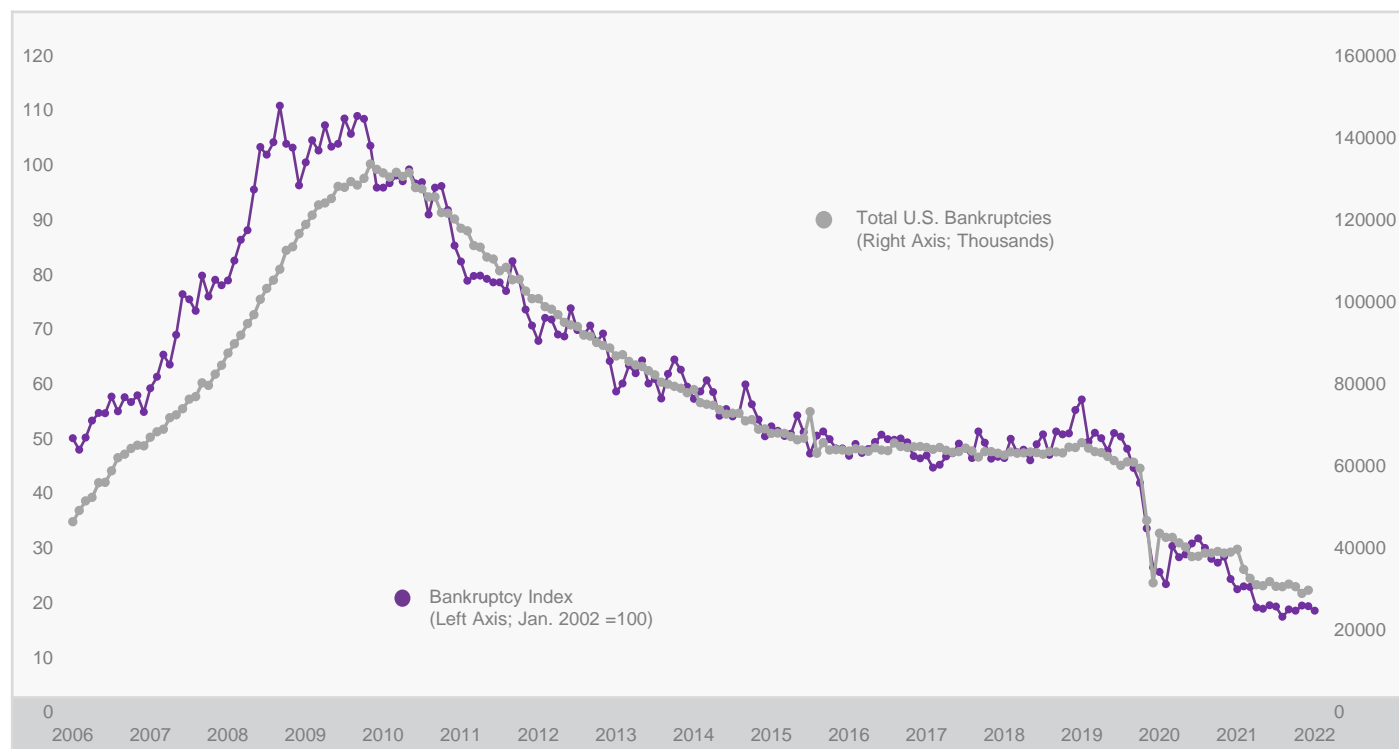
Foreclosure Index

Bottom Line: The LegalShield Foreclosure Index declined in May from its highest level since the onset of the pandemic. Foreclosure activity has been gradually returning to its pre-pandemic trend after the expiration of government support, though it remains very low by historical standards. A continued slow and steady normalization in foreclosure starts is expected in the months ahead.

Latest Reading: The LegalShield Foreclosure Index decreased (improved) 4.4 points to 39.2 in May, easing for the first time since November. Foreclosure starts jumped to 0.17% in the first quarter of 2022 with the end of government support, roughly in line with pre-pandemic levels.

Economic Context: Foreclosure and mortgage delinquency rates fell to historic lows during the pandemic due to the foreclosure moratorium, forbearance plans, and other repayment support offered by the federal government and private lenders. Foreclosures remain low thanks to these factors, though they have begun to normalize. ATTOM reports that 30,674 properties had foreclosure filings in April, down 8% M/M but 160% higher than a year ago. The hot housing market has also kept foreclosures low: per ATTOM, the thin housing supply means that financially distressed homeowners are often able to sell their homes before a foreclosure auction.

While historically high home prices make it more difficult for would-be homeowners to purchase a new residence, they have also helped current homeowners build equity. Relatedly, many homeowners took advantage of low interest rates in 2020 and 2021 to refinance their mortgages: per the Federal Reserve, nearly one-quarter of homeowners with a mortgage refinanced last year. For these borrowers, lower mortgage payments have helped keep delinquencies muted, as evidenced by the steady improvement in seriously past-due loans as reported by Black Knight.

The combination of rising home prices and a strong labor market make a sharp increase in foreclosure activity in the near term unlikely. LegalShield data suggest that a slow and steady normalization in foreclosure starts is a more likely outcome.

Foreclosure Index

Historical Trend Over Past 16 Years

Foreclosure Starts
(Right Axis; Percent of Mortgages)

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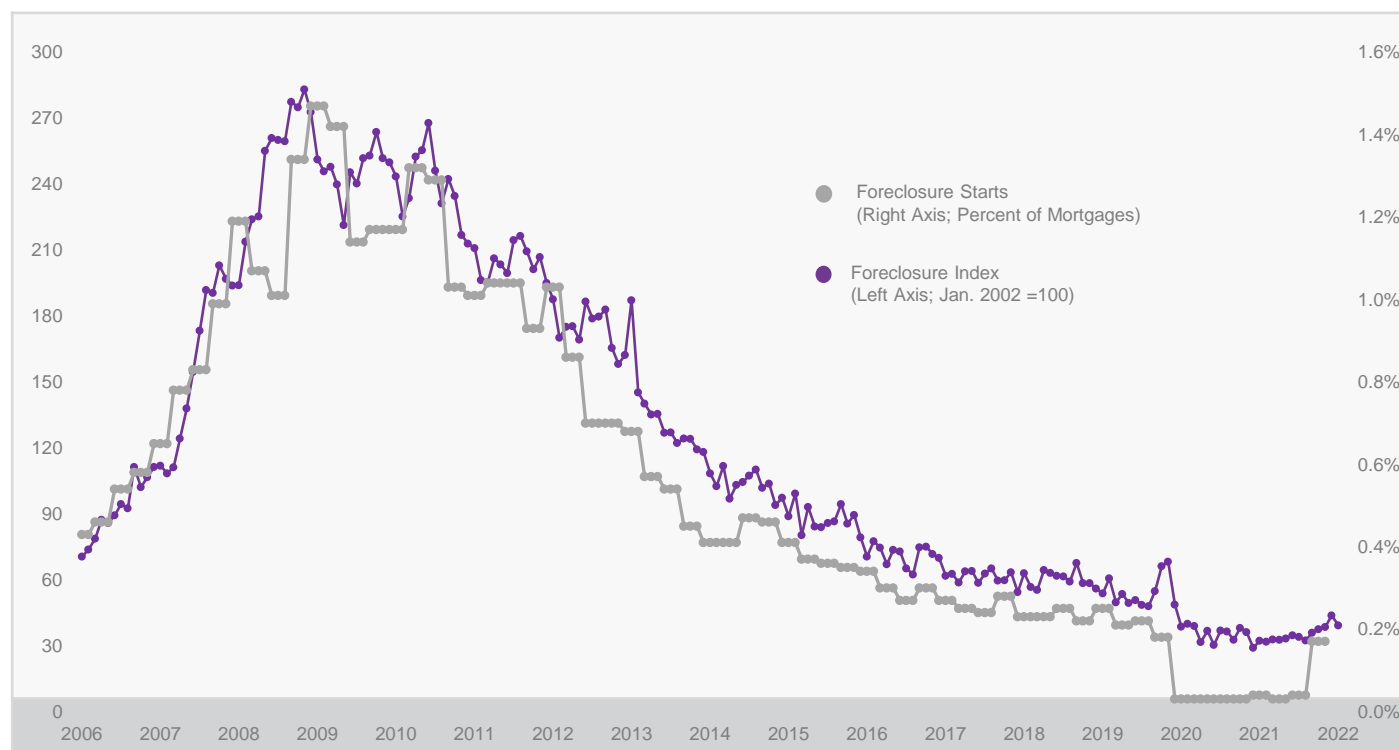
Movement Over Past 12 Months
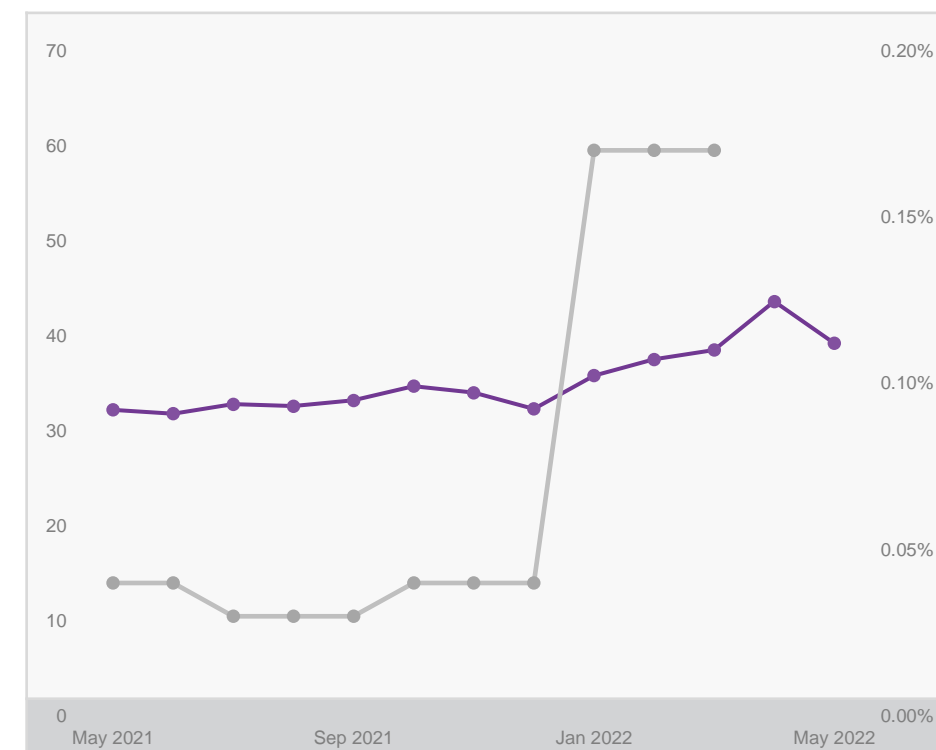
Housing Construction Index

Bottom Line: The LegalShield Housing Construction Index was mostly unchanged in May and remains near its lowest level since the pandemic-fueled housing market surge began in mid-2020. Strong demand has sustained the homebuilding industry for the last two years and construction activity should remain healthy in the near term, but high materials prices and rising mortgage rates are increasingly weighing on homebuilder optimism.

Latest Reading: The LegalShield Housing Construction Index edged up 0.2 point to 130.9 in May. Meanwhile, housing starts dipped in April but are well above pre-pandemic levels.

Economic Context: Housing construction has been elevated throughout much of the pandemic thanks to strong demand and historically low housing inventories. However, building activity has been slowing of late, due to a combination of high input costs, delays in receiving building materials, and an ongoing shortage of skilled workers. Lumber costs have been highly volatile: after spiking last year, they have fallen sharply in recent weeks but remain roughly 50% higher than they were prior to the pandemic. The unpredictability stemming from these headwinds — along with a 200 basis point increase in the average 30-year fixed mortgage rate since the start of the year — are weighing on builder confidence. The NAHB/Wells Fargo Housing Market Index dipped for the fifth straight month in May to its lowest level since June 2020 and building permits, a leading indicator of construction activity, fell in April (though they remain elevated).

Looking ahead, high prices, rising interest rates, and waning consumer confidence are likely to take some of the air out of the homebuilding sector. Though the number of homes under construction continues to climb, home *completions* remain stubbornly low, reflecting both supply chain delays and worker availability. Further, the number of single-family homes authorized but not yet started appears to have crested, another sign that the current homebuilding cycle may have peaked.

Overall, LegalShield expects construction activity to remain healthy in the coming months given the demand for homes, but activity will likely slow due to high construction material prices and rising mortgage rates.

Housing Construction Index

Historical Trend Over Past 16 Years

Housing Starts
(Right Axis; Thousands)

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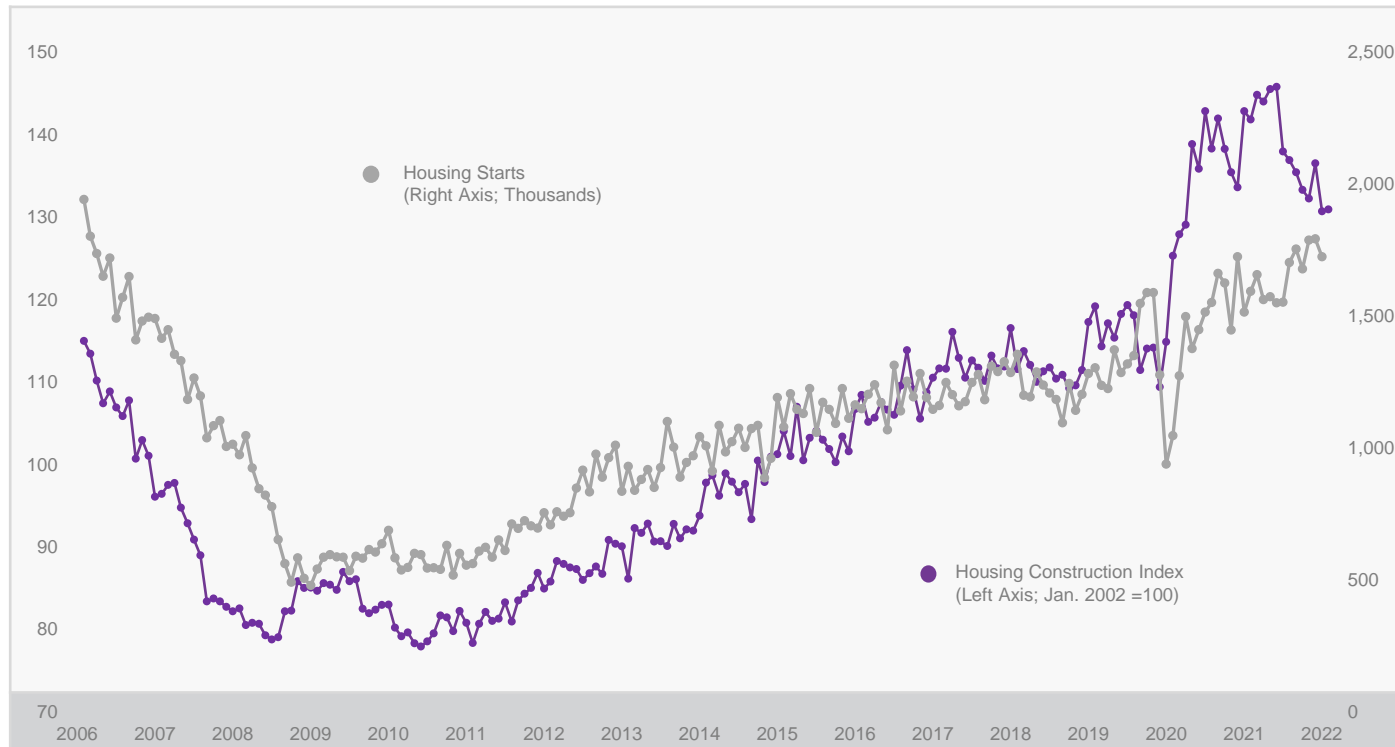
Movement Over Past 12 Months
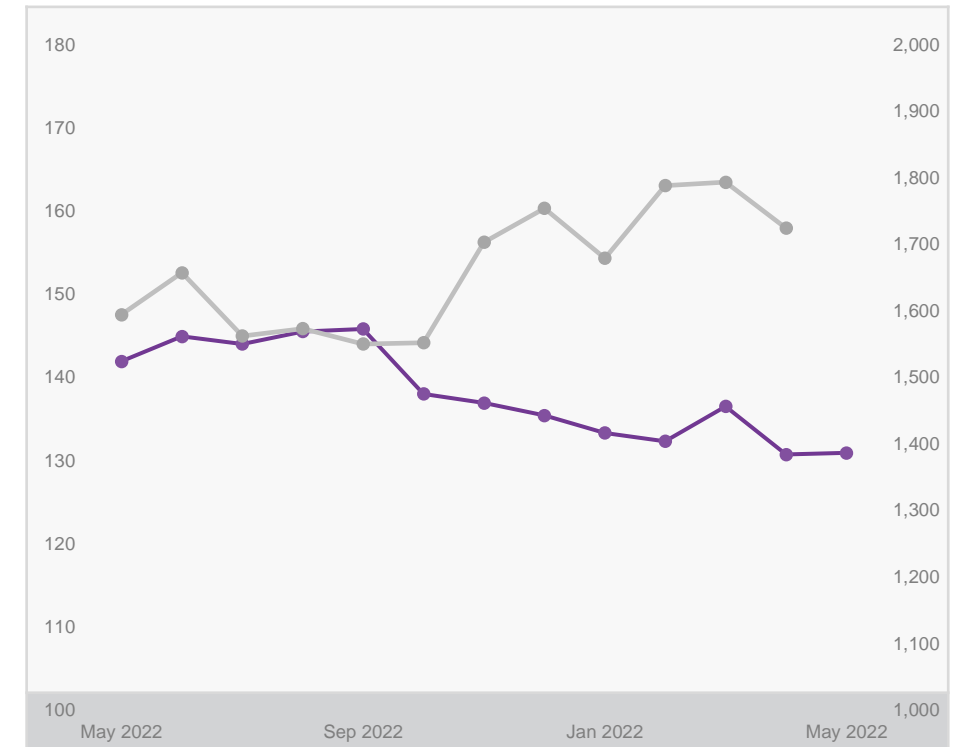
Housing Sales Index

Bottom Line: The LegalShield Housing Sales Index fell in May, slipping nearer to its summer 2020 level that coincided with pandemic-era surge in sales activity. While sales activity is expected to remain above pre-pandemic levels in the near term, housing affordability is a growing concern and is likely to weigh on the market for the foreseeable future.

Latest Reading: The LegalShield Housing Sales Index dipped 2.8 points to 110.5 in May. Meanwhile, existing home sales fell 2.8% in April, down 5.9% compared to year-ago levels.

Economic Context: After two years of robust price growth in single-family homes across the country, home affordability is a growing headwind for the housing market. According to the National Association of Realtors, home affordability fell nearly 8% M/M in March, while the Census Bureau reports that the national median price for new residential sales in April was $450,600, up more than $15K compared to just a month prior. New home prices are nearly 20% above year-ago levels, and the Fed's efforts to rein in inflation have helped drive the average 30-year fixed-rate mortgage above 5%.

The combination of higher prices and higher financing costs have led some would-be homebuyers to reconsider whether now is the right time to buy, particularly at lower price points. Total existing-home sales slid 2.4% in April compared to the previous month and are down nearly 6% compared to last year, and the National Association of Realtors expects further slippage in the months ahead. At the same time, the inventory of unsold existing homes appears to have bottomed out after rising nearly 11% in April, while the Mortgage Bankers Association reported that mortgage applications have fallen in four of the last five weeks — additional signals that the market is cooling.

Overall, strong demand is still driving a healthy volume of sales each month, and LegalShield expects sales activity to remain above pre-pandemic levels in the near term. However, housing affordability is clearly a growing concern, and with the LegalShield Housing Sales Index receding back to mid-2020 levels, new home sales are unlikely to bounce back this year.

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)
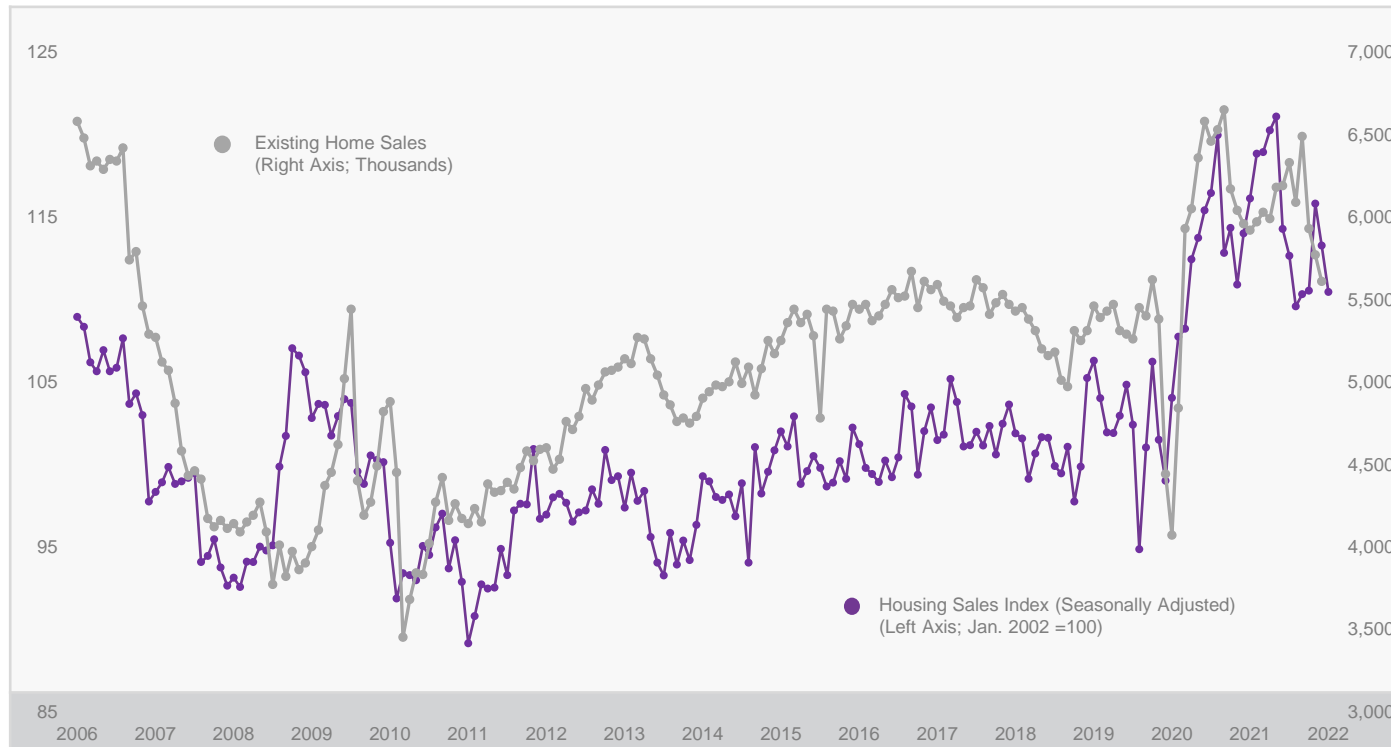
Movement Over Past 12 Months
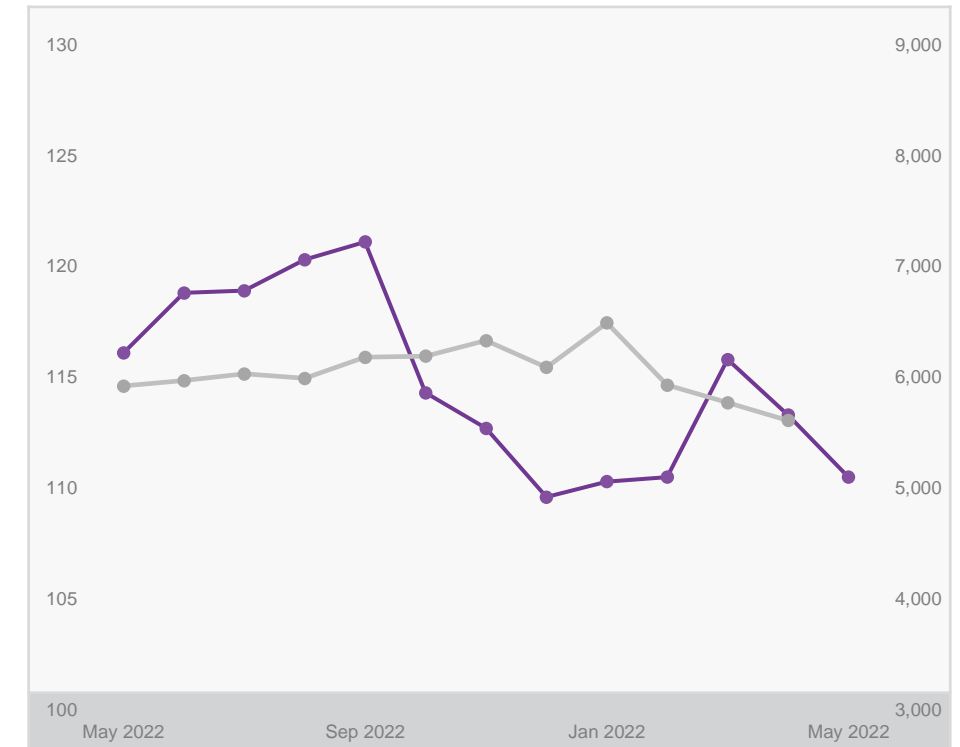
Technical Appendix

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

- ✓ **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.

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.

Legend:
- **Active Subscribers** (Left Axis; Thousands)
- **Total Intakes** (Right Axis; Thousands)

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.
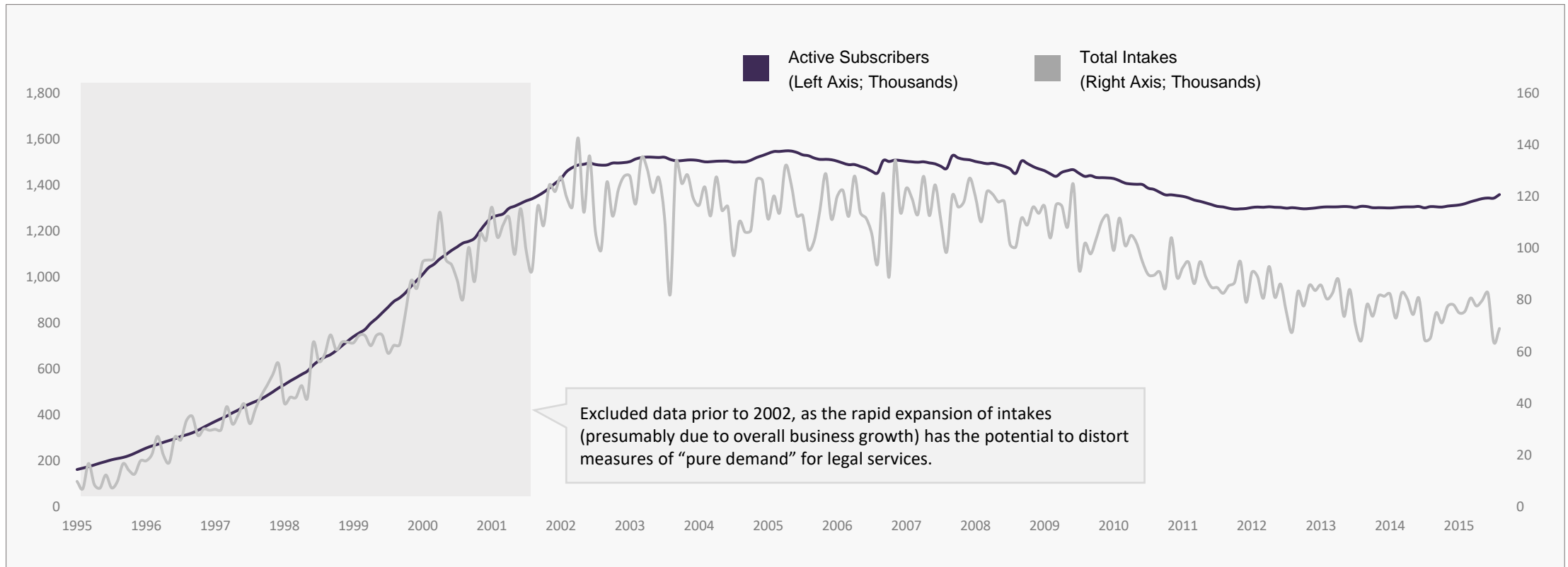
Analytical Scope

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

Family Plan Types

All Subscribers
n = 16,583,632

Same Subscribers
n = 1,516,476

Business Plan Types

All Subscribers
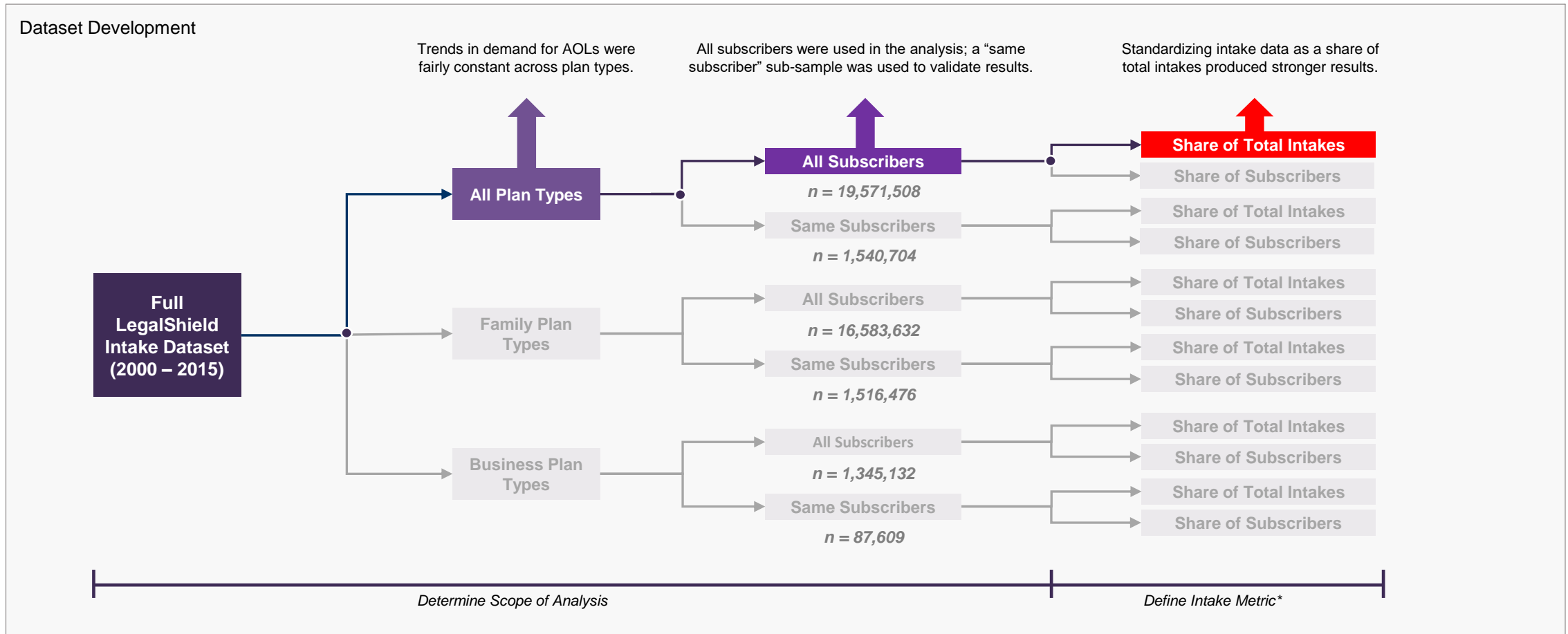*n = 1,345,132*

Same Subscribers
n = 87,609

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

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

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 ← | Level/Level | Year/Year | 6 Month/Month | 3 Month/Month | 1 Month/Month | → *More Rigorous*

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)
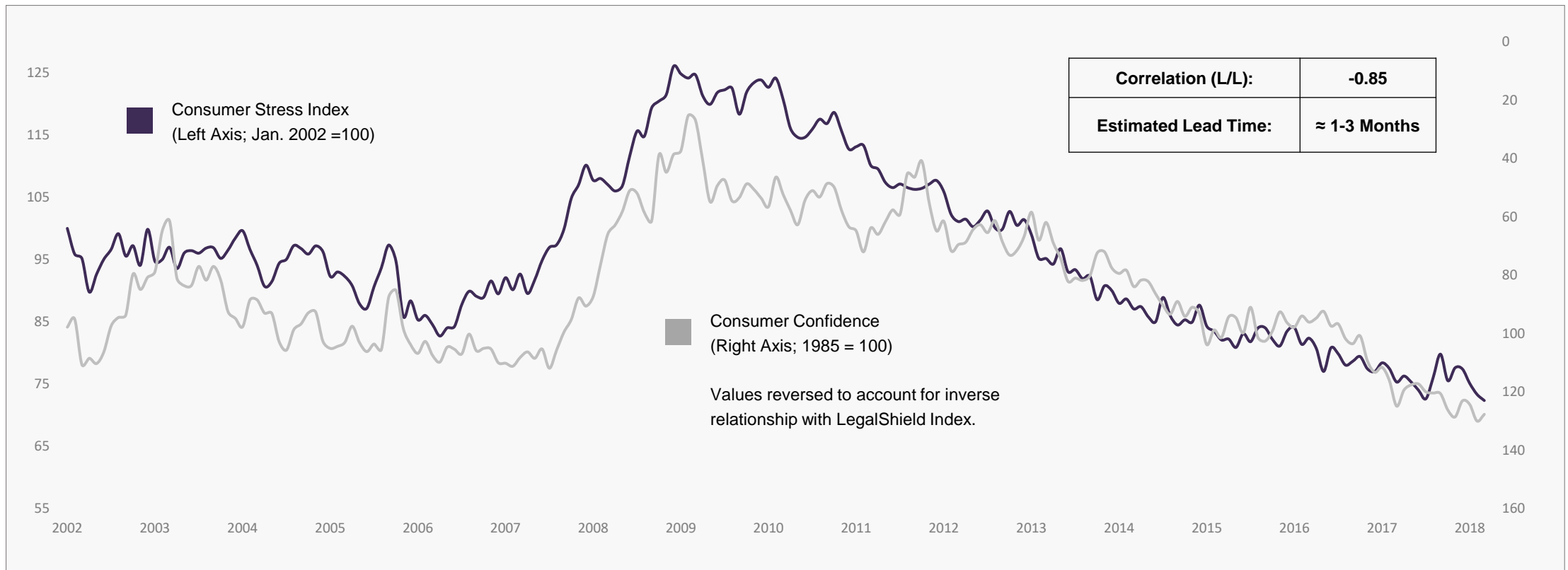
Test 2: Compared correlations between random samples of the data

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
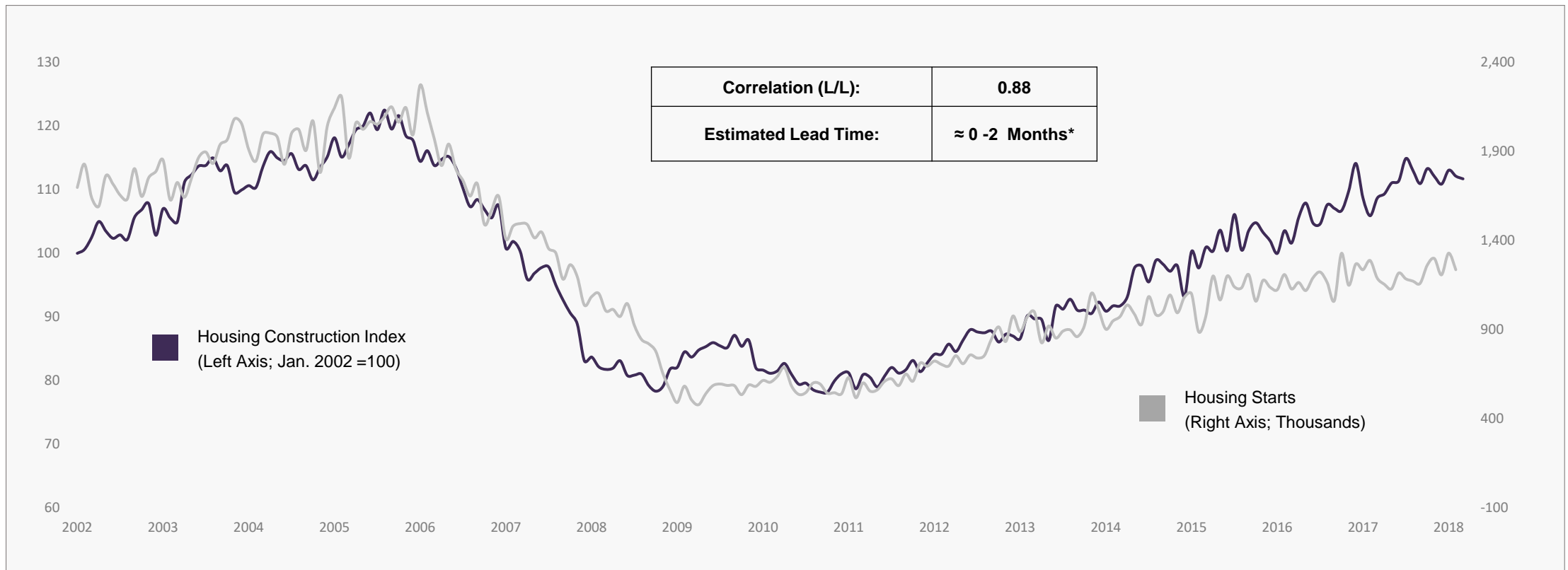
Composite Index: Consumer Stress

AOLs: Bankruptcy; Foreclosure; Consumer Finance

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

Consumer Confidence
(Right Axis; 1985 = 100)

Values reversed to account for inverse relationship with LegalShield Index.

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

Composite Index: Housing Construction Index

AOLs: Foreclosure; Real Estate*

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

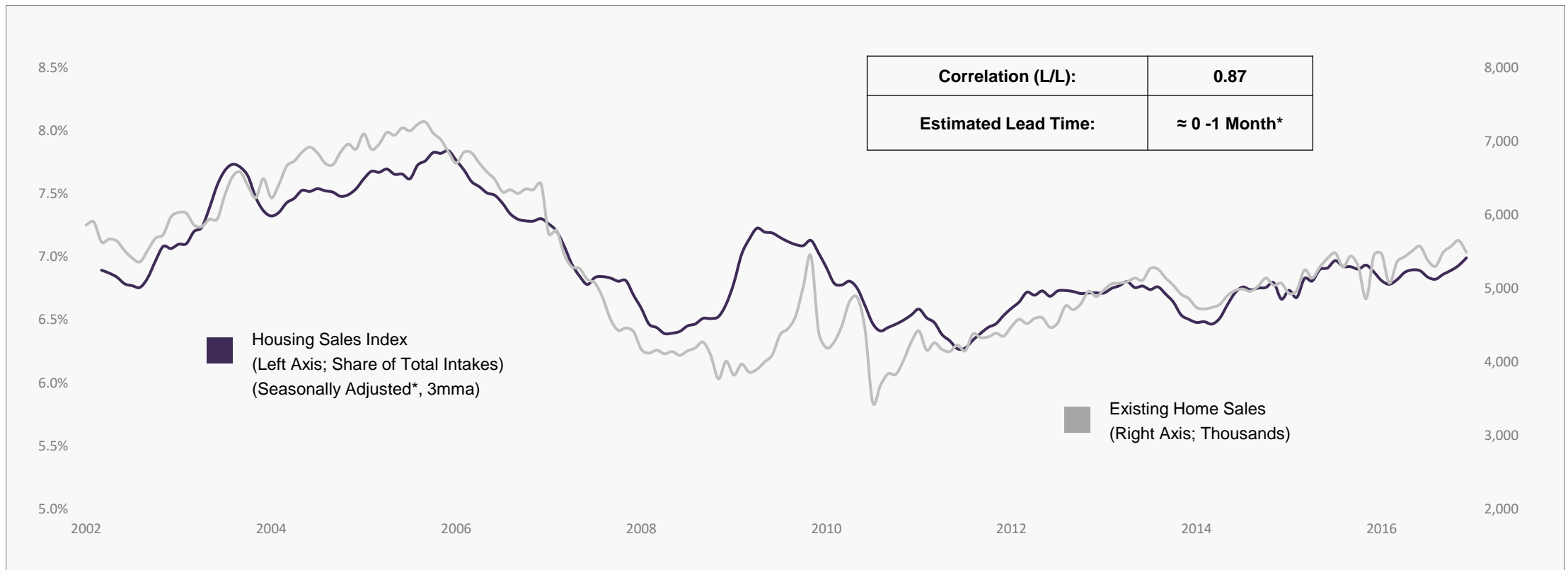Housing Construction Index
(Left Axis; Jan. 2002 =100)

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.
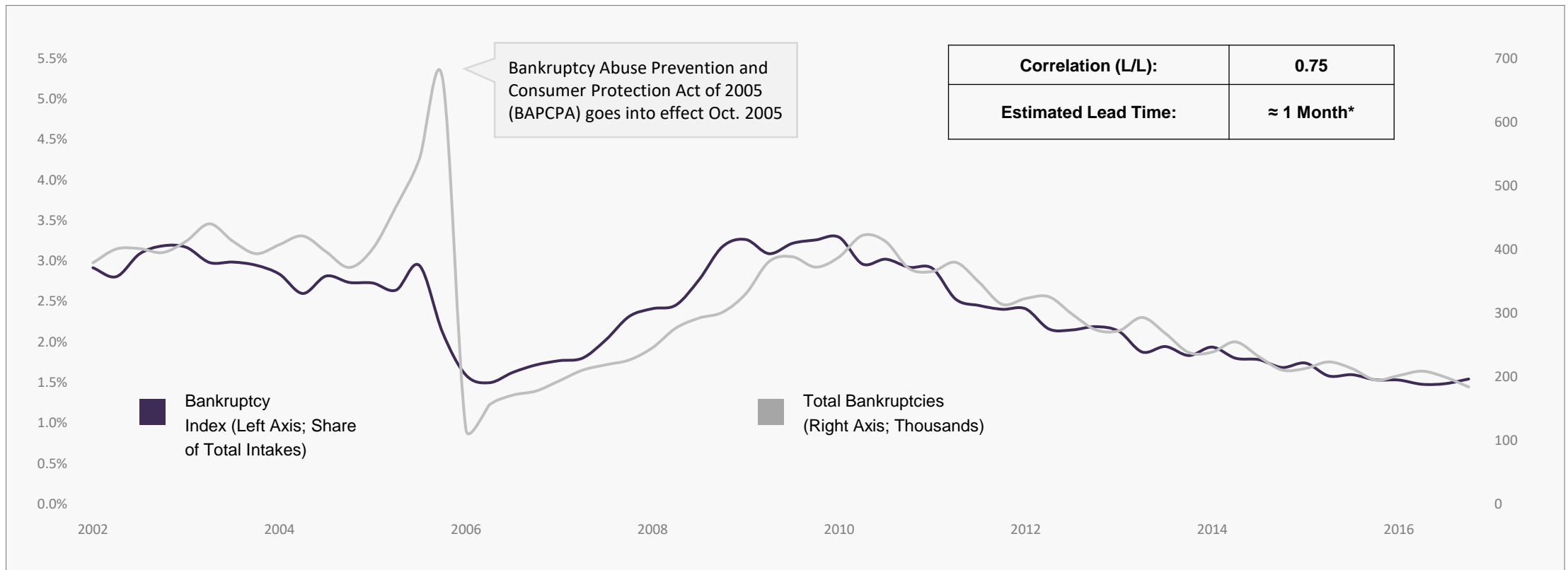
AOL: Real Estate

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.
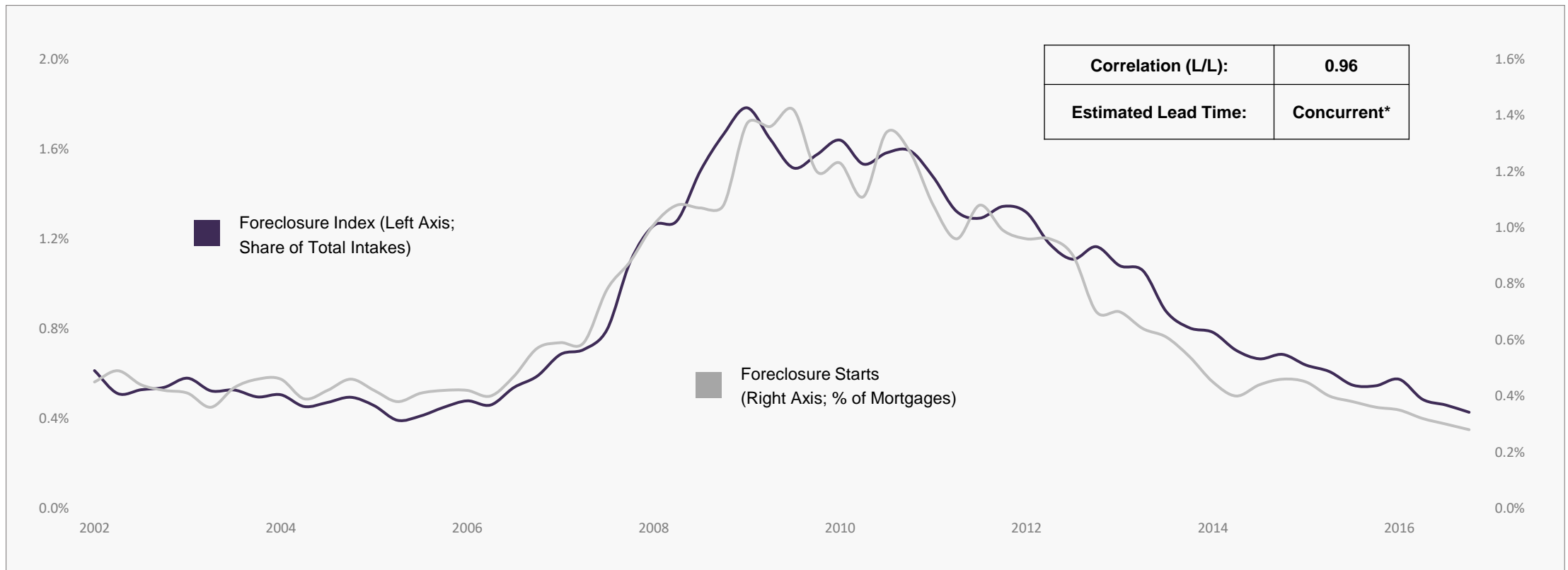
AOL: Bankruptcy

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™