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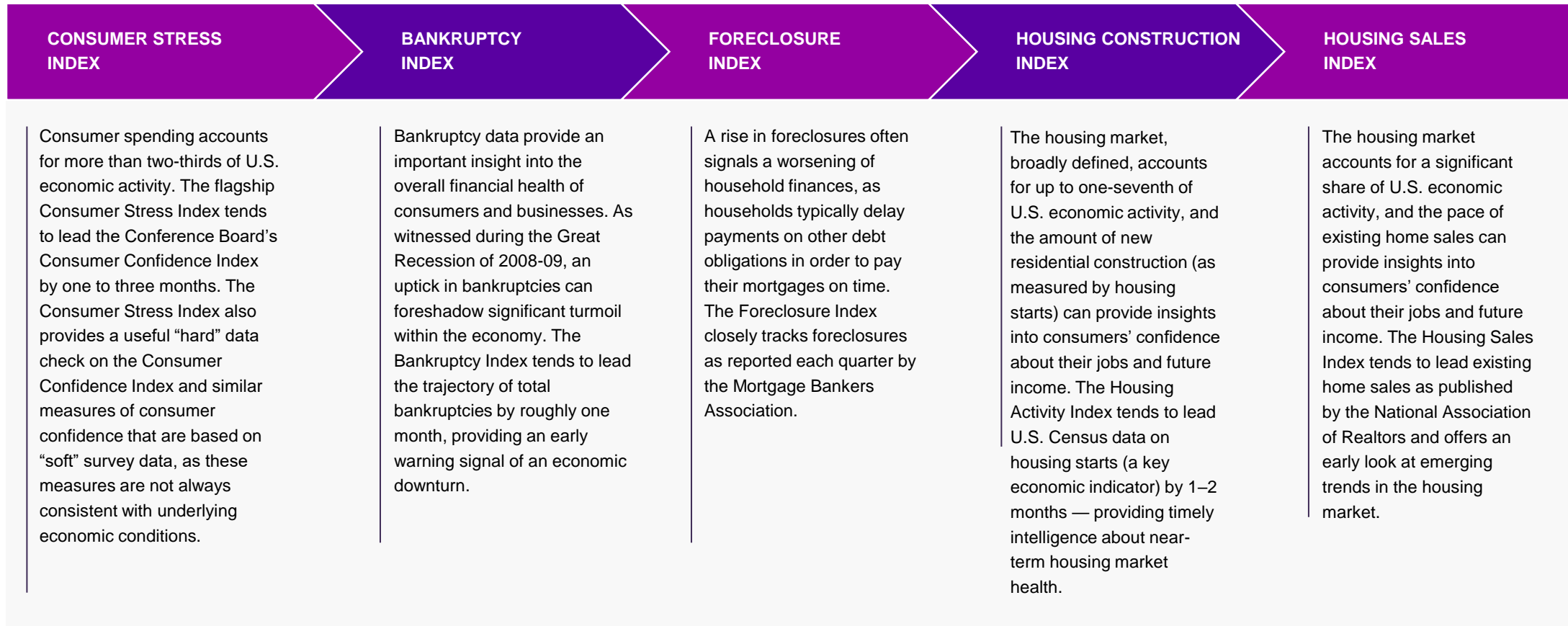
✓ **HIGH-FREQUENCY**
The LegalShield Economic Stress Index is based on data collected on a near real-time basis, and can be refreshed on a weekly, monthly, or quarterly basis depending on the user's needs.

✓ **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

The LegalShield Consumer Stress was unchanged last month near a record low. Consumer finances have remained strong thanks to accumulated savings and a strong labor market, although high inflation may lead to rising financial stress later in 2022.

The LegalShield Consumer Stress Index was unchanged at 56.9 in February. Meanwhile, the Conference Board's Consumer Confidence Index edged down 0.6 point in February to 111.1.
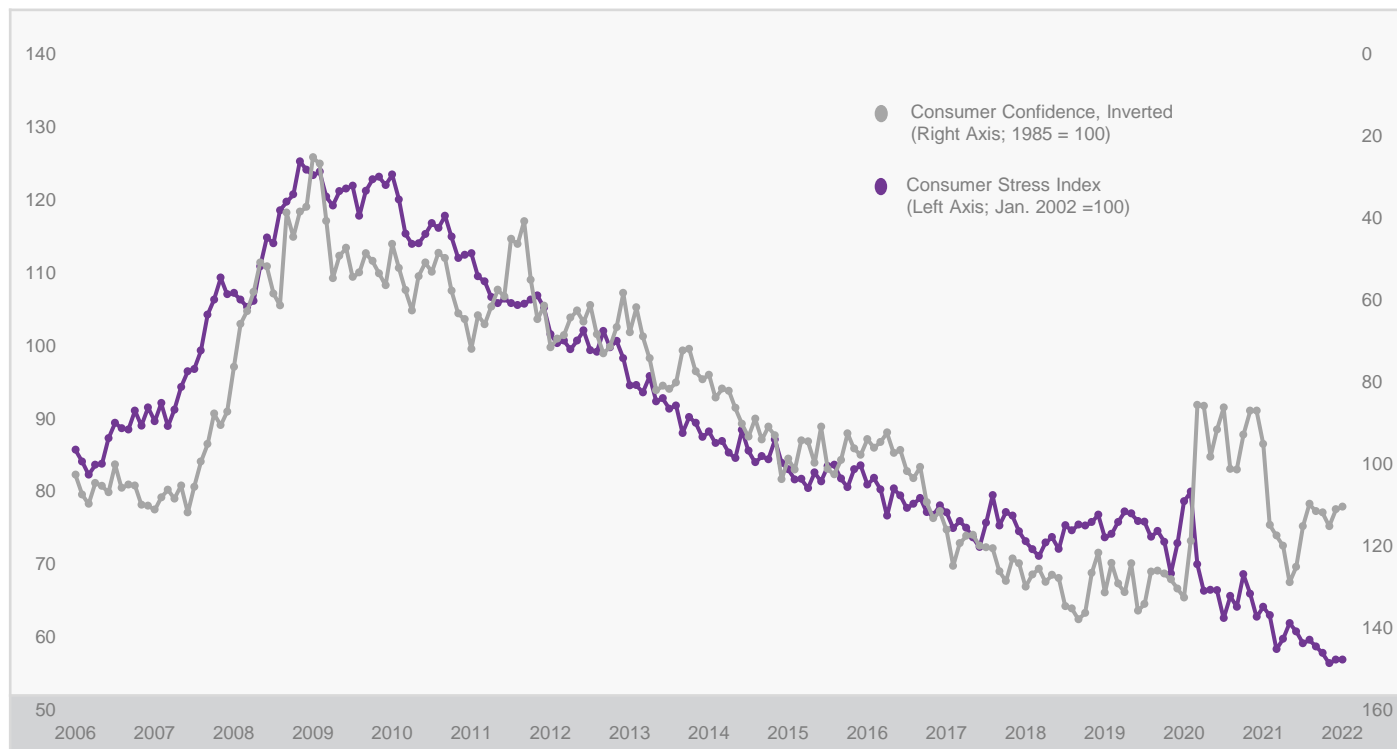
Consumers have remained financially strong even as government support programs have ended thanks to the financial cushion they built during the pandemic and a strong labor market. With the Omicron variant receding and many states relaxing public health restrictions, consumers are poised to increase spending on goods and services. Per Bank of America, deposit balances for checking and savings accounts were up 15% Y/Y in January and consumers spent 17% more than they did a year prior. Meanwhile, the Bureau of Economic Analysis reports that inflation-adjusted consumer spending rose by 1.5% in January, the largest increase in ten months.

While consumers continue to spend at robust rates, fast-rising prices are weighing on consumer confidence. Per the University of Michigan, the decline in its Index of Consumer Sentiment was driven by wealthy consumers impacted by stock market volatility and high inflation. However, inflation typically impacts lower-income households the most, and in recent months the costs of rent, groceries, and other necessities have risen faster than wages. Further complicating matters, a new emerging headwind is the price of gasoline, as Russia's invasion of Ukraine will put upward pressure on the price of oil and other commodities. The effect of "unplugging" Russia from the global financial system is still unclear, but recent events are unlikely to provide relief for most American consumers and could exacerbate inflationary concerns, particularly for lower-income households.
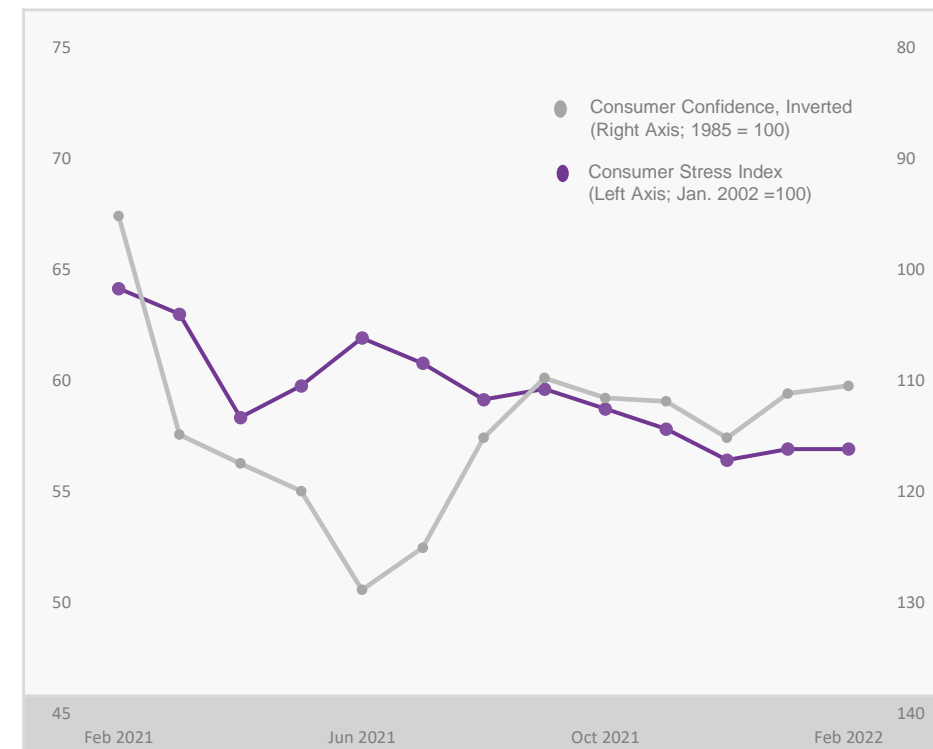
Although high inflation remains a significant headwind, consumer financial stress is expected to remain low overall for at least the first half of the year.

Consumer Stress Index

Historical Trend Over Past 16 Years

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

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

Movement Over Past 12 Months

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

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

Foreclosure Index

The LegalShield Foreclosure Index rose in February to the highest level in a year. Foreclosures remain low by historical standards, but activity has been increasing in recent months following the expiration of government support.

The LegalShield Foreclosure Index increased (worsened) 1.7 points to 37.5 in February. Meanwhile, foreclosure starts were essentially unchanged (+0.04%) in the fourth quarter.

Foreclosure activity rose again last month due to the expiration of foreclosure restrictions put in place by the Consumer Financial Protection Bureau. Per ATTOM, 23,204 properties filed for foreclosure in January, up 29% M/M and 139% higher than a year ago, marking the highest level of foreclosure activity since the onset of the pandemic. This increase does not necessarily forebode a meteoric rise in foreclosures, as about half of the reported foreclosure starts were from borrowers who were already delinquent before the pandemic but protected from further action by the now-expired federal foreclosure moratorium. In fact, Black Knight's measure of national delinquencies improved last month, and the share of seriously delinquent mortgages (90+ days past due) fell by 9%.

In addition to a strong labor market and built-up savings, homeowners are also benefitting from a booming housing market that has led to a sharp increase in home values. According to ATTOM, 42% of mortgaged residential properties were "equity-rich" last quarter (i.e., loan balances totaled less than 50% of the home's value) — up from 30% of homes in 2020 Q4 — and just 3% of mortgaged homes were considered seriously underwater. Borrowers are also benefitting from loss mitigation plans offered by mortgage servicers, though a recent Philadelphia Fed study found that most borrowers in these plans have not been paying their loans. Specifically: about half of all seriously delinquent mortgages that are not in forbearance are enrolled in a loss mitigation plan, and of these, 72% of borrowers are not making payments. This is a concerning sign and a metric to track in over the remainder of 2022, as it could mean rising foreclosure activity down the road.
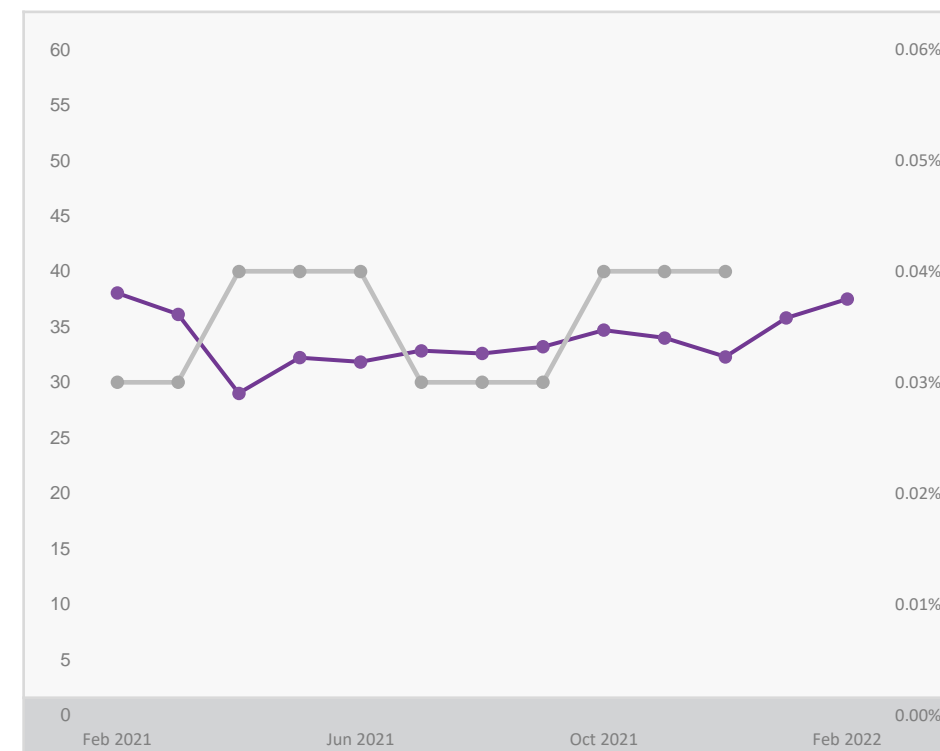
In the near term, however, foreclosure starts are expected to rise slowly but should remain low by historical standards during the first half of the year.

Foreclosure Index

Historical Trend Over Past 16 Years

Foreclosure Starts
(Right Axis; Percent of Mortgages)

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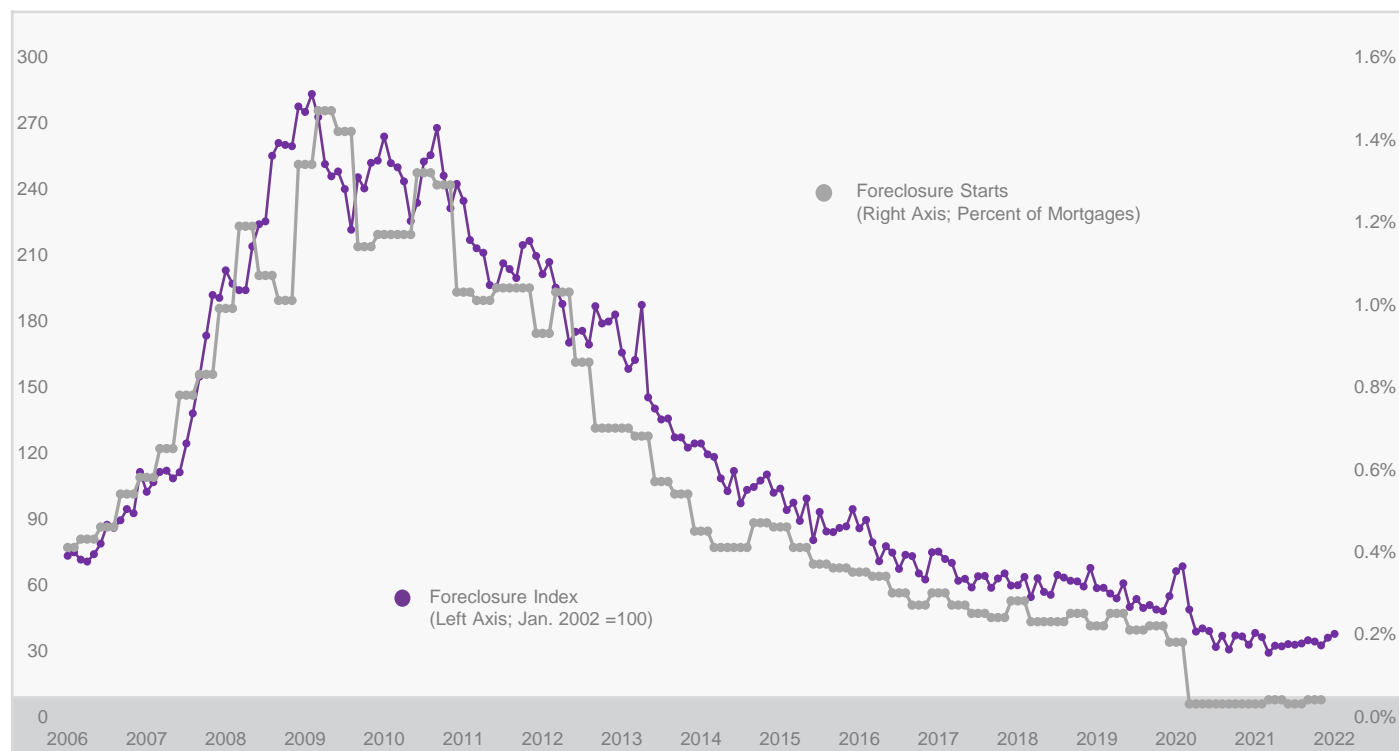
Movement Over Past 12 Months

Bankruptcy Index

The LegalShield Bankruptcy Index was roughly unchanged in February at a low level. Bankruptcy rates are expected to stay low in the near term as amassed savings and a favorable labor market have kept most consumers financially strong.

The LegalShield Bankruptcy Index decreased (improved) 0.2 point to 18.5 in February after rising in January. Meanwhile, total seasonally adjusted bankruptcy filings increased 2% to 31,142 in January but were down 20% compared to a year ago. The New York Fed reports that just 94,000 consumers had a bankruptcy notation added to their credit reports last quarter, a record low since the series began in 1999.
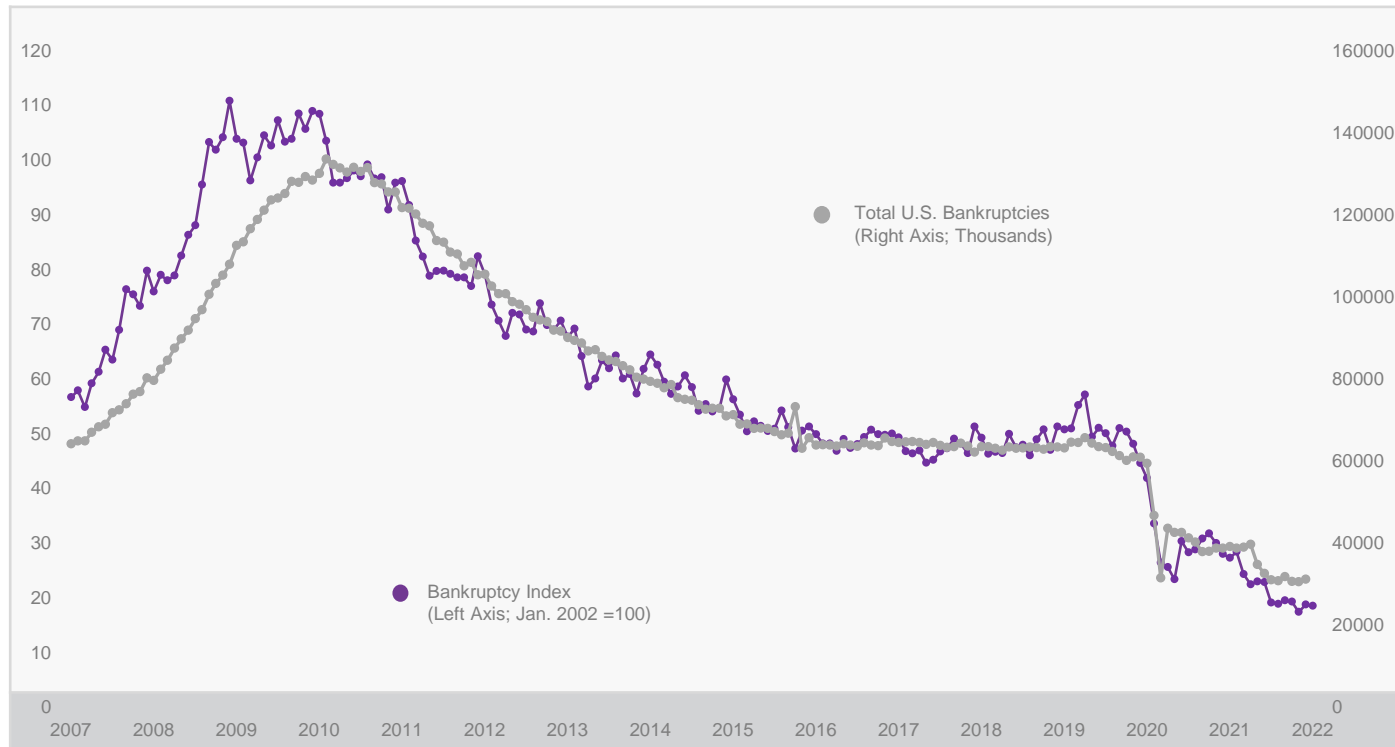
Most Americans remain in good financial standing thanks to pandemic-era savings and labor market gains. Moreover, consumers have been returning to pre-pandemic credit card spending patterns. The NY Fed reports that in Q4, total non-housing debt grew by $74 billion, driven by substantial increases in credit card and auto debt. Importantly, credit card debt rose in Q4 by the largest amount on record, though balances remain $71 billion lower than at the end of 2019. Meanwhile, a combination of government protections and consumers' financial cushion have kept delinquency rates muted; 2.7% of outstanding debt was in some stage of delinquency as of late December, two percentage points lower than in 2019 Q4.

However, broad measures of consumer financial health have been obscuring income-level differences in spending and duress. Higher-income consumers have been driving discretionary spending while also amassing savings. In contrast, lower-income households are increasingly seeing their savings dwindle as they contend with high inflation. Per Morning Consult, consumers have been allocating a larger share of their household budgets to goods and services that meet basic needs, leaving less room for discretionary or unexpected expenses. Delinquencies and defaults may rise later this year as federal protections unwind. For example, a GAO report found if payments resume as expected, about half of student loan borrowers could be at higher risk of delinquency.
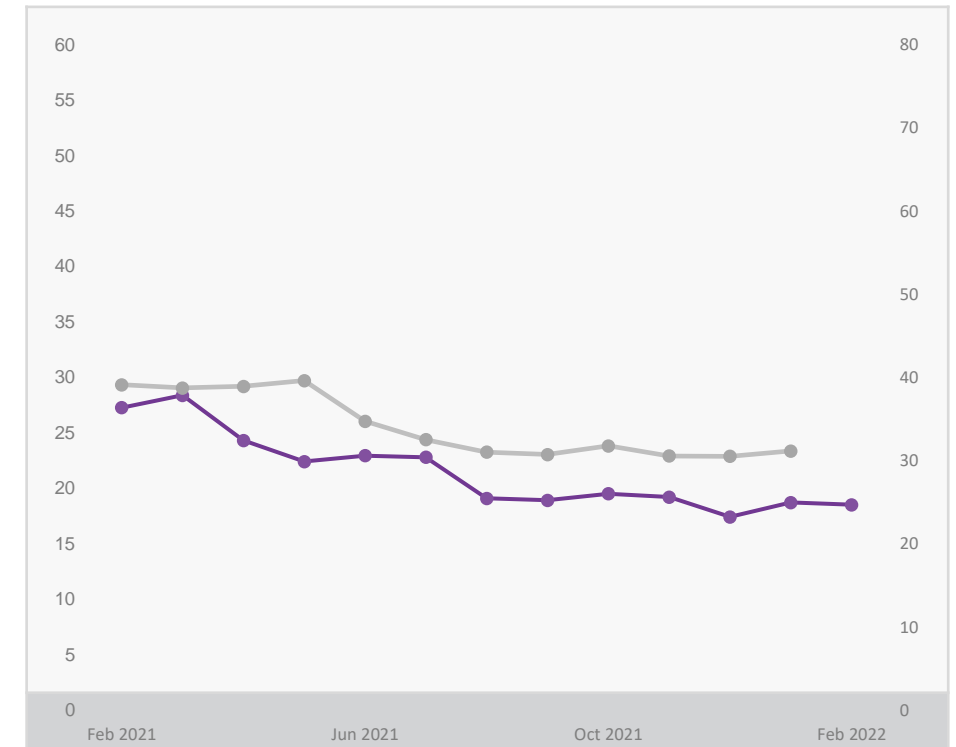
In the near term, however, bankruptcies are expected to remain muted.

Bankruptcy Index

Economic Stress Index (LegalShield)

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

Housing Construction Index

The LegalShield Housing Construction Index decreased in February to the lowest level since August 2020. While construction activity has been slowed by supply and labor-related headwinds, strong demand and a significant backlog of homes waiting to be built have been propping up homebuilder confidence.

The LegalShield Housing Construction Index fell 1.0 point in February, the fifth consecutive monthly decline. Meanwhile, housing starts fell 4.1% in January but were 0.8% above year-ago levels.

Housing construction slowed last month as homebuilders were hampered by supply chain issues, high materials costs, bad weather, and worker shortages. Materials shortages and supplier delays continue to cause bottlenecks in the construction industry, which has resulted in fewer project completions and higher costs. The mill price of lumber has more than tripled since last August, and prices of other materials including paint and ready-mix concrete are also rising. Unsurprisingly, the National Association of Homebuilders recently found that 91% of builders expect materials prices to be an issue this year. Construction has also been impeded by labor shortages, which were particularly acute earlier in the year due to the Omicron-fueled COVID-19 surge across the country. More generally, Associated Builders and Contractors estimates that the construction industry still needs to recruit 650K workers above the current pace of hiring this year to meet housing demand.

While these headwinds have been slowing housing construction, homebuilder confidence remains strong, largely due to a large shortage of available homes relative to demand. Per Redfin, active home listings dropped to a record low of 456K in February, and new construction comprised a third of all single-family homes for sale in December, a new record high. Similarly, an analysis of data from the Federal Deposit Insurance Corporation found that financing for single-family home construction rose in Q4 by the highest amount since the Great Recession.

In all, low housing inventories and high demand point to continued strength in construction activity over the next three months. However, recent declines in the LegalShield Housing Construction Index provide additional evidence that industry headwinds are unlikely to dissipate anytime soon.

Housing Construction Index

Historical Trend Over Past 16 Years

Housing Starts
(Right Axis; Thousands)

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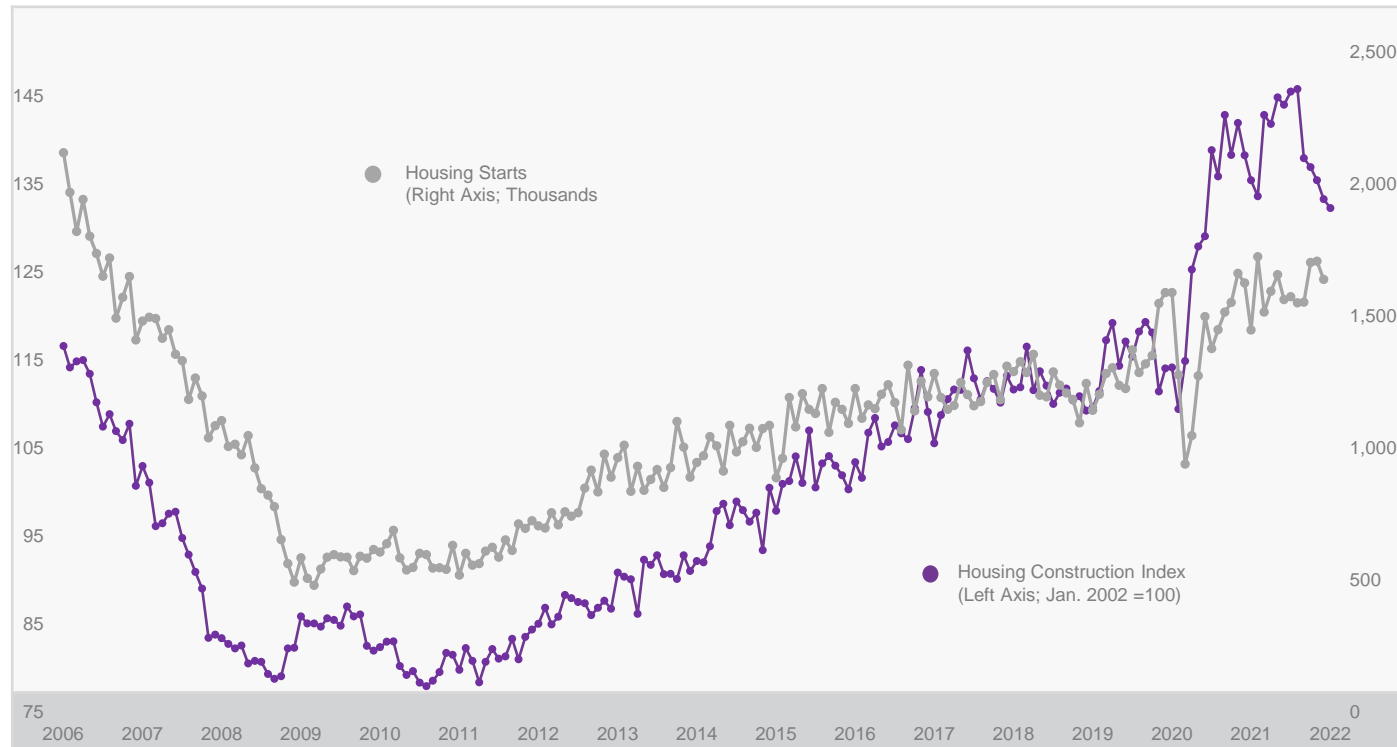
Movement Over Past 12 Months
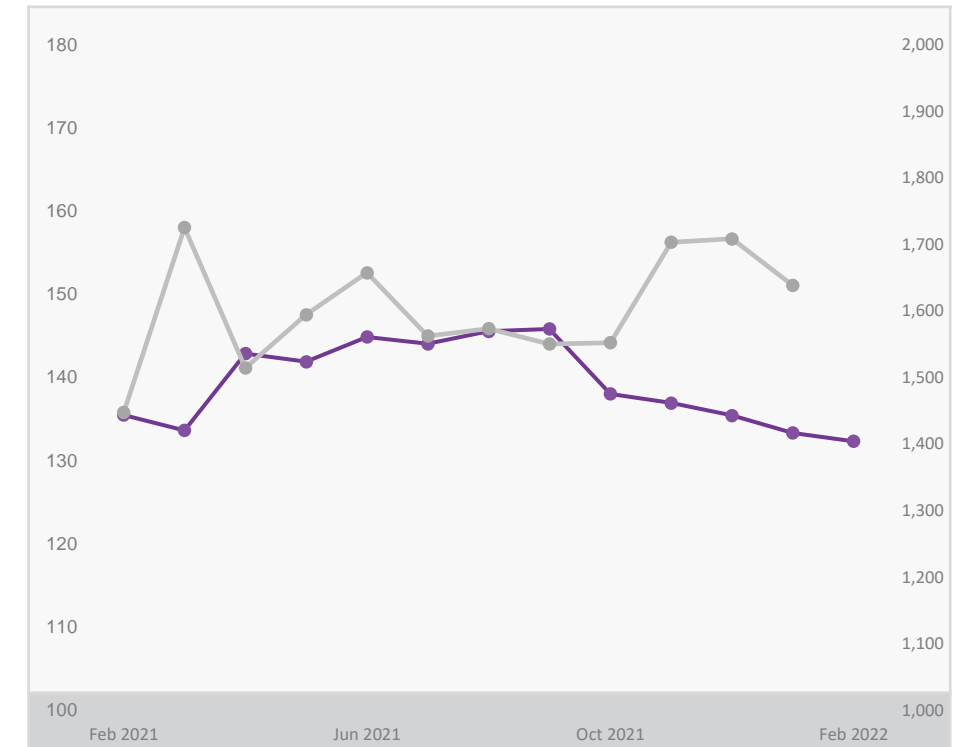
Housing Sales Index

The LegalShield Housing Sales Index was roughly unchanged in February and remains well above pre-pandemic levels. The housing market has remained healthy thanks to pent-up demand and cash-flush buyers, although high prices and rising mortgage rates remain headwinds.

The LegalShield Housing Sales Index ticked up 0.2 point in February to 110.5. Meanwhile, existing home sales rose 6.7% in January but were down 2.4% compared to year-ago levels. The National Association of Realtors' Pending Home Sales Index, a leading indicator of imminent sales, fell 5.7% in January.

Healthy consumer finances, a favorable labor market, and strong demographic trends are driving high home sales. High demand for historically low inventories of homes are leading homebuyers to buy homes quickly, in many cases via all-cash offers and shortened or bypassed inspection periods. Strong investor demand for homes is further exacerbating existing inventories and driving up home prices. According to Redfin, investors bought a record 18.4% of all U.S. homes in Q4, of which 75% were single-family homes, near an all-time high. Three-quarters of all investor purchases were in cash, suggesting that rising interest rates may not impact overall housing demand as much as might usually be expected. Indeed, some homebuyers may "pull forward" a planned home purchase to get ahead of imminent rate increases, though over time higher rates should reduce demand by making financing more expensive.

Fierce competition for homes has led to record increases in home prices over the past year and worsened affordability. The S&P CoreLogic Case-Shiller Index logged a 19% annual increase in home prices in 2021, and while price growth is expected to slow this year, some analysts predict prices will rise another 10% in 2022. This has made purchasing homes unaffordable for many households: per the NAHB, about 69% of all U.S. households lack the income required to qualify for a mortgage for a median-priced new home.

Overall, home sales growth is expected to slow compared to last year's frenzied pace. However, demand is above pre-COVID levels and should remain solid according to LegalShield data.

Housing Sales Index

Historical Trend Over Past 16 Years

Movement Over Past 12 Months

Existing Home Sales
(Right Axis; Thousands)

Housing Sales Index (Seasonally Adjusted)
(Left Axis; Jan. 2002 =100)
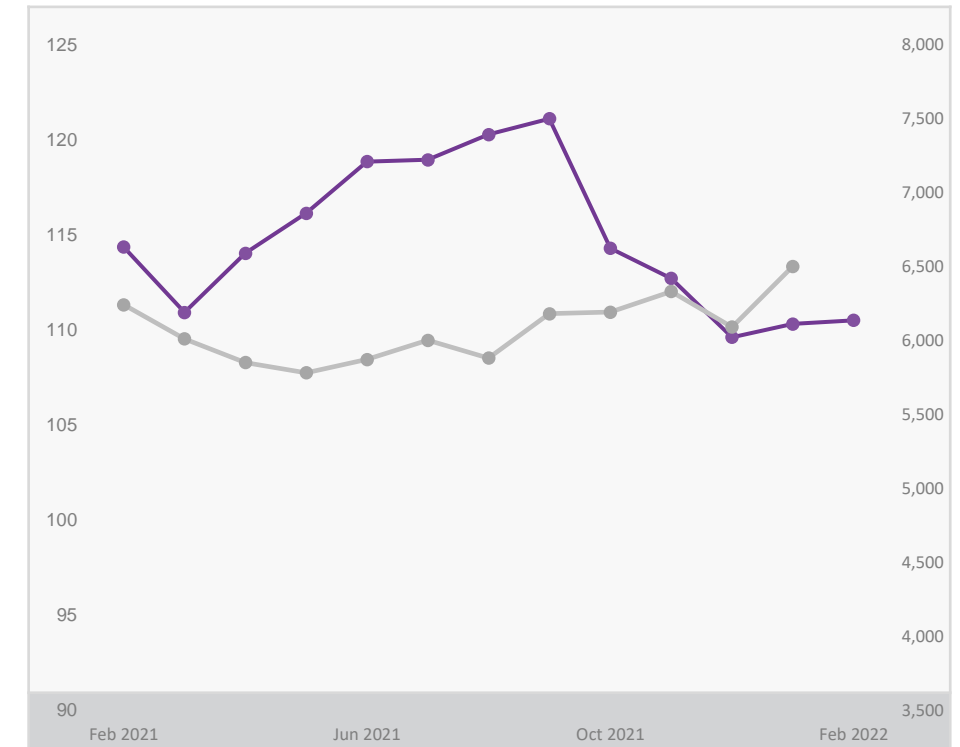
Technical Appendix

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.

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.

Active Subscribers (Left Axis; Thousands)

Total Intakes (Right Axis; Thousands)
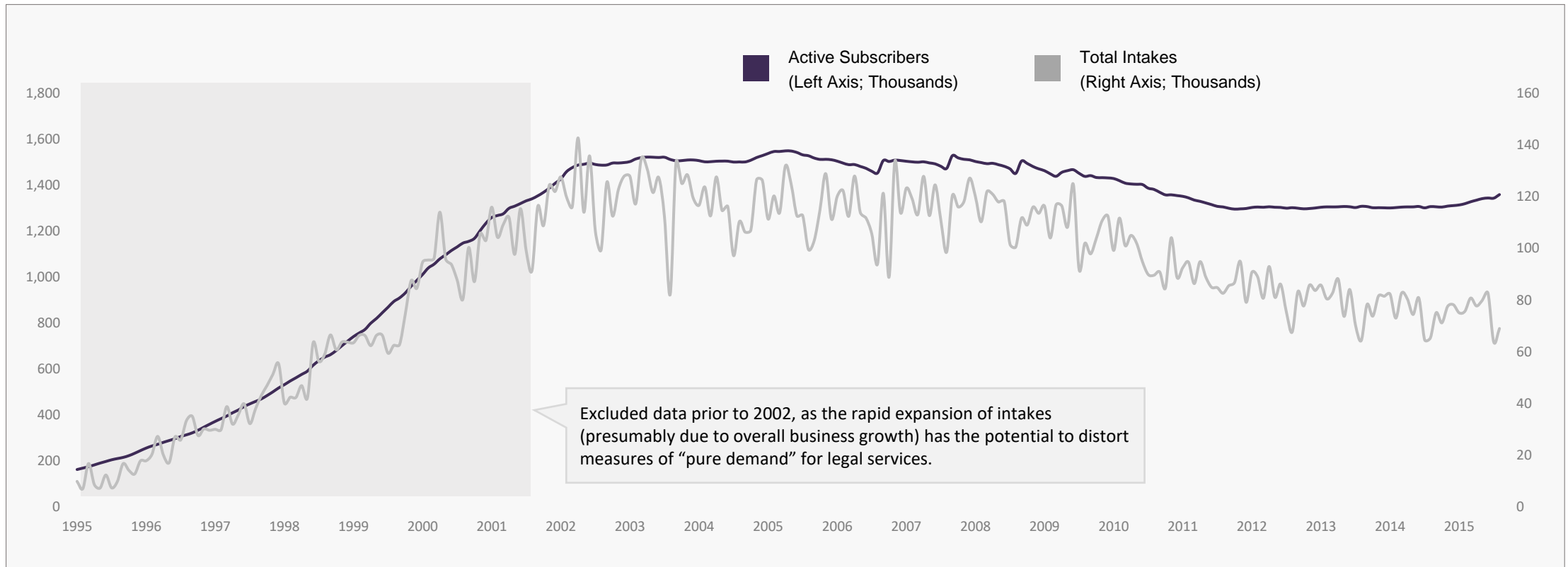
Analytical Scope

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.

All Plan Types

All Subscribers
n = 19,571,508

Share of Total Intakes

Share of Subscribers

Same Subscribers
n = 1,540,704

Share of Total Intakes

Share of Subscribers

Full LegalShield Intake Dataset (2000 – 2015)

Family Plan Types

All Subscribers
n = 16,583,632

Share of Total Intakes

Share of Subscribers

Same Subscribers
n = 1,516,476

Share of Total Intakes

Share of Subscribers

Business Plan Types

All Subscribers
n = 1,345,132

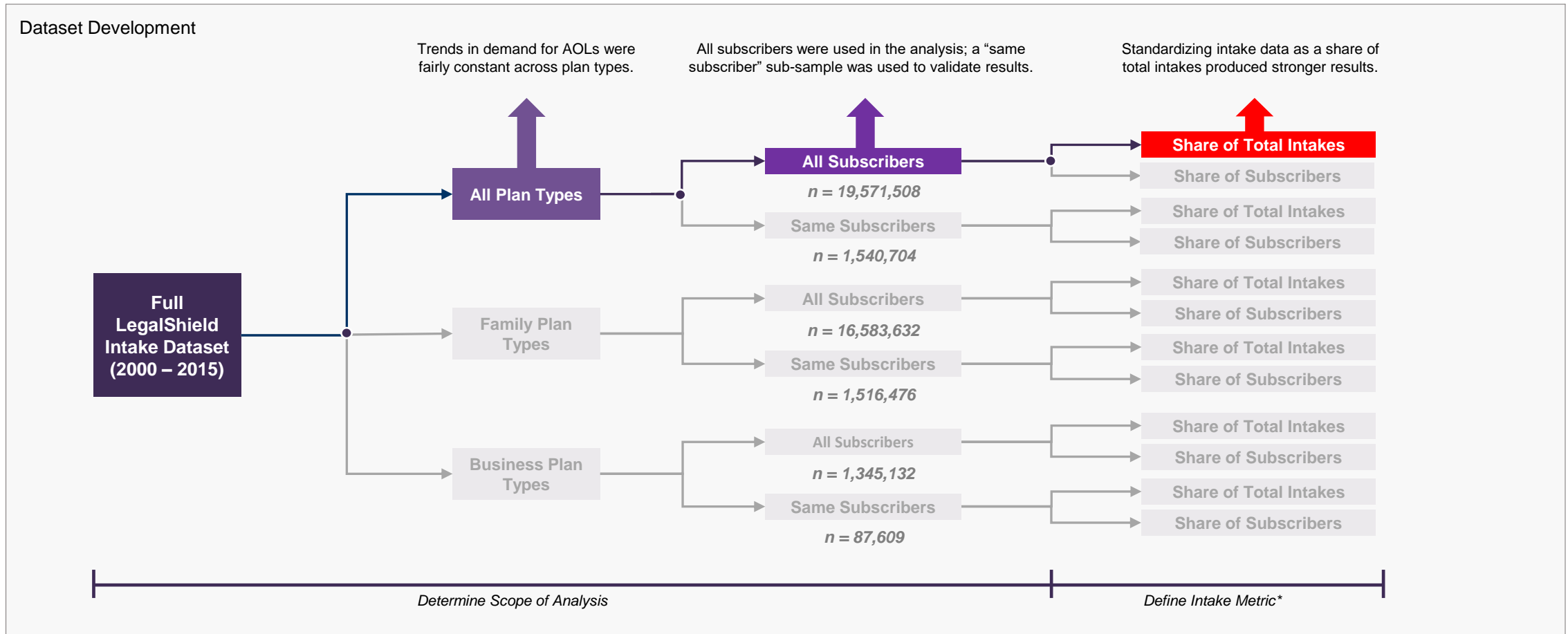Share of Total Intakes

Share of Subscribers

Same Subscribers
n = 87,609

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.
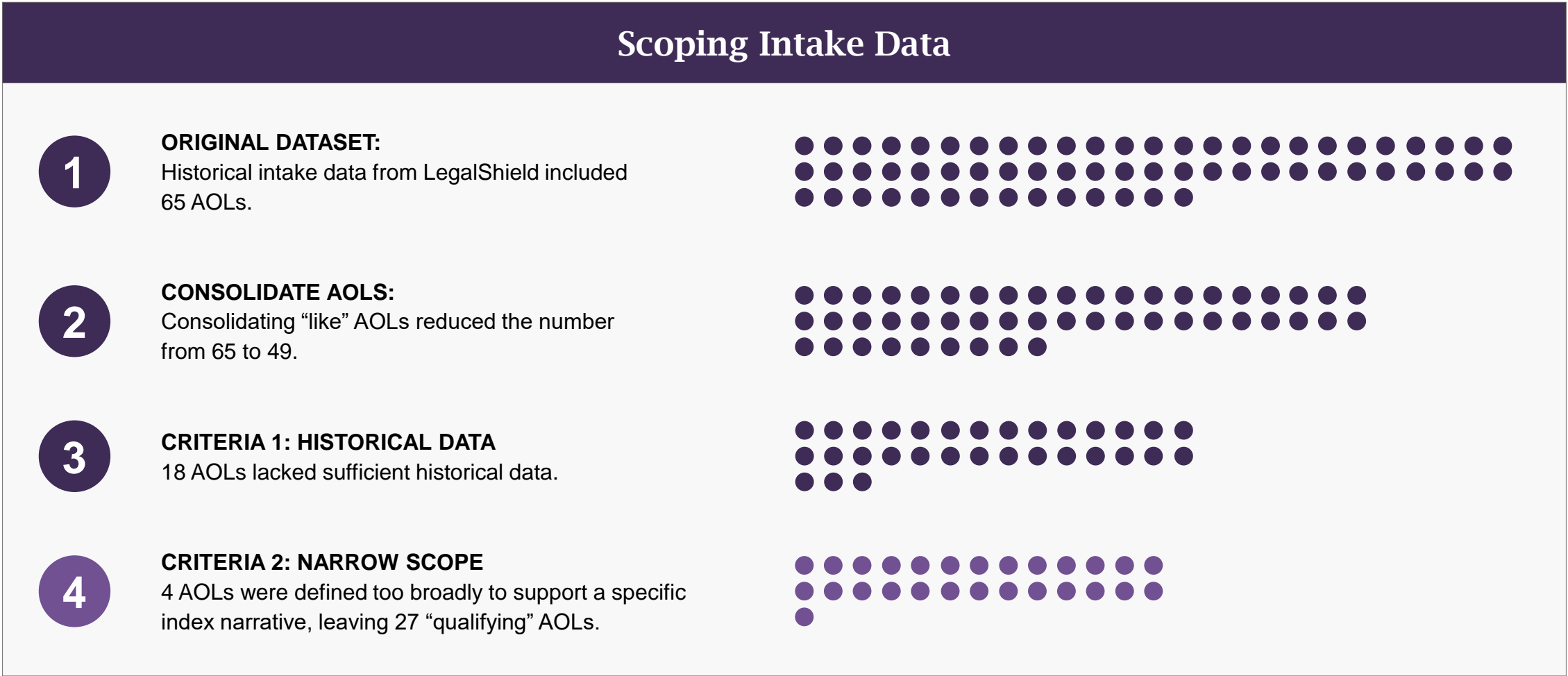
Filter AOL

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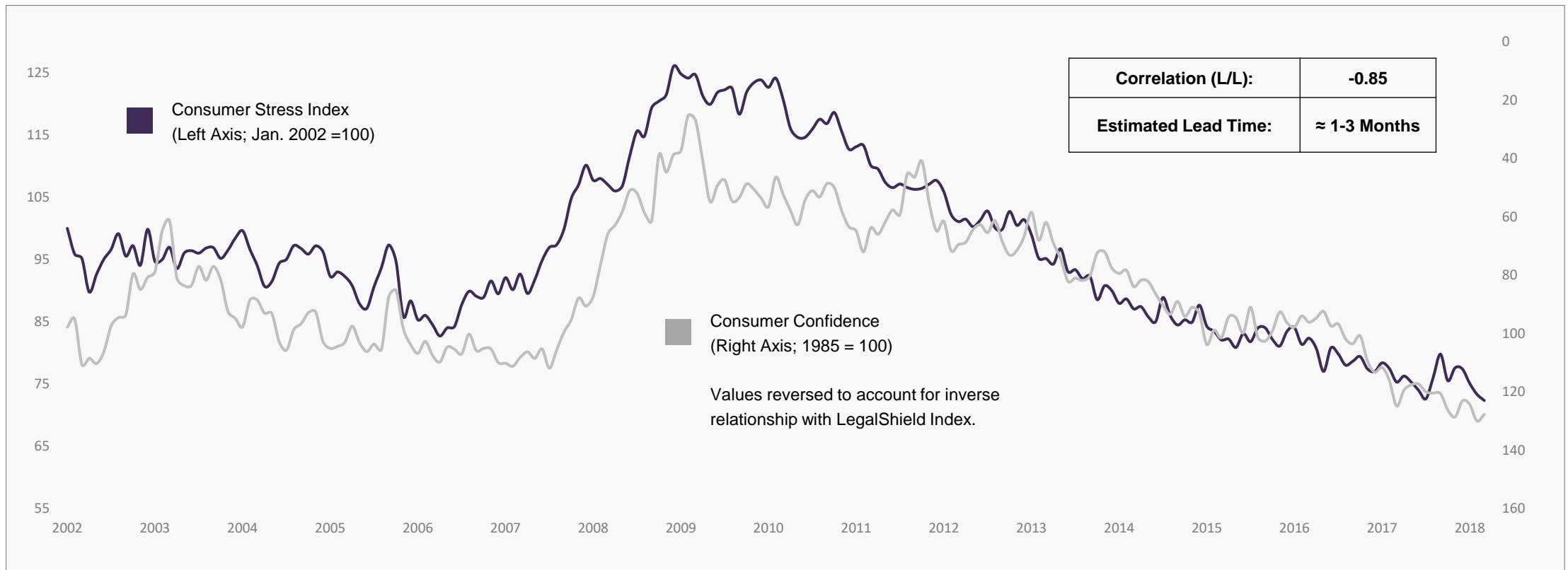
Test 2: Compared correlations between random samples of the data

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
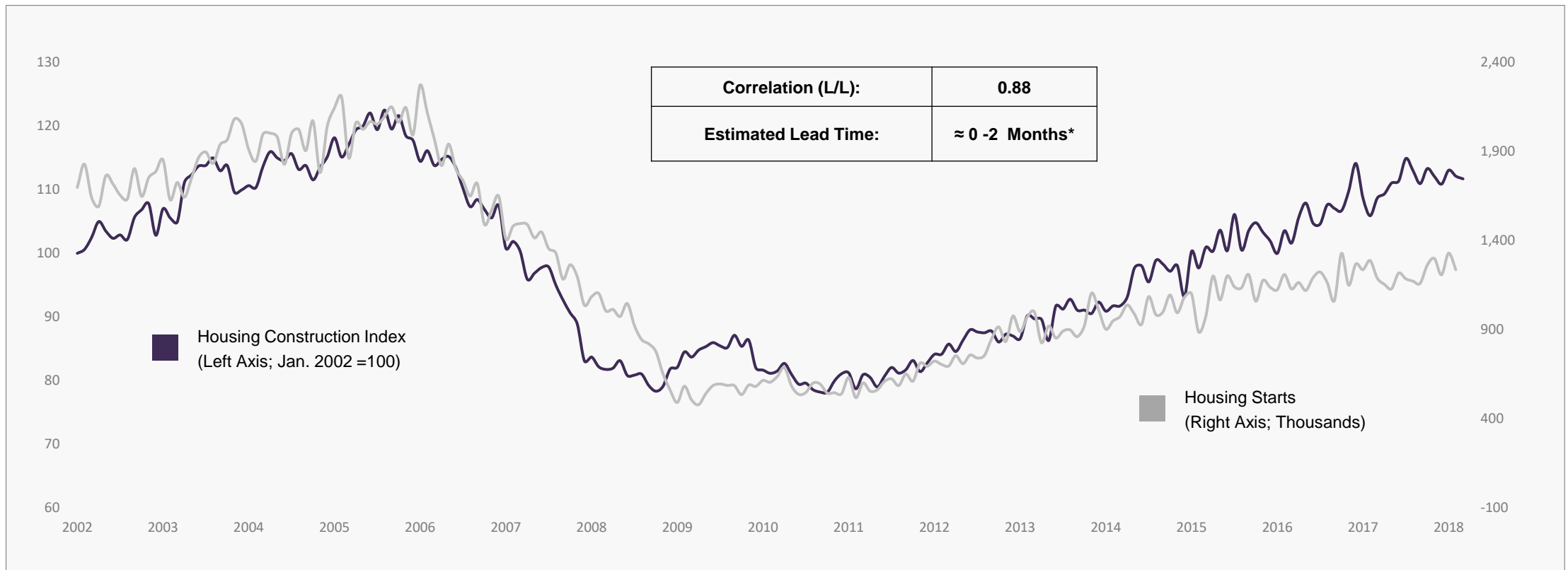
Composite Index: Consumer Stress

AOLs: Bankruptcy; Foreclosure; Consumer Finance

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

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

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)
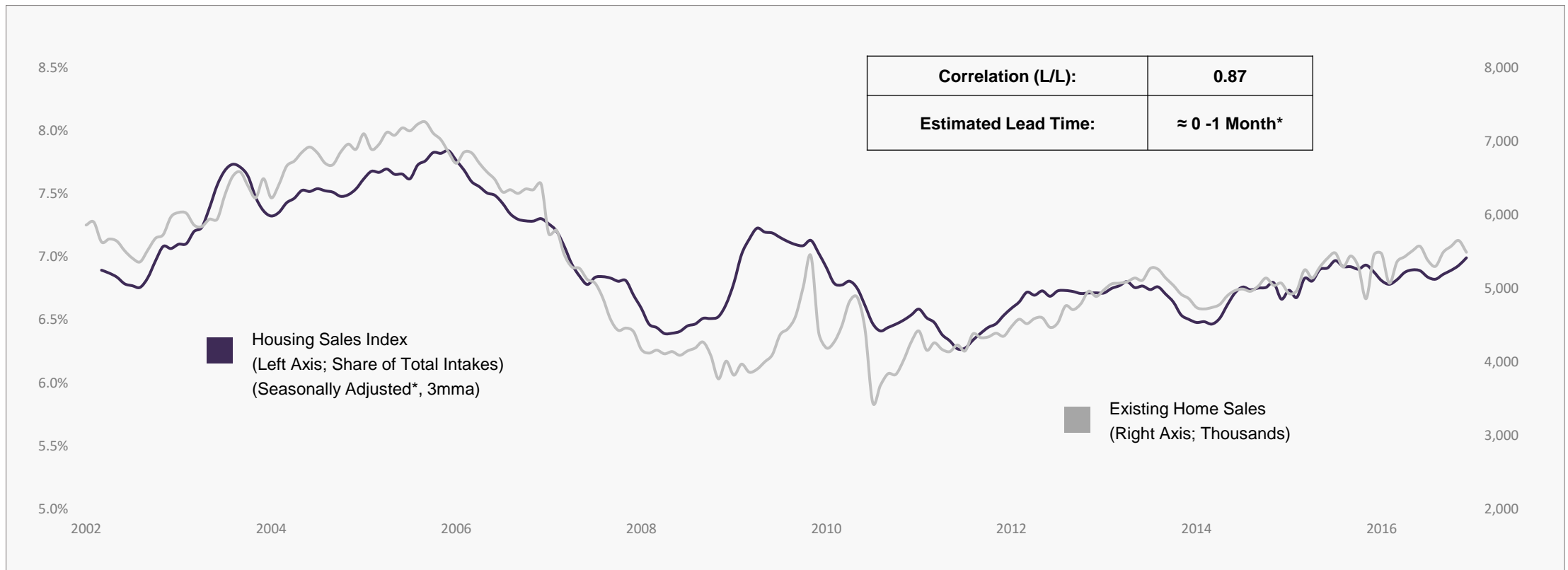
*The Housing Construction Index component of the Housing Activity Index was seasonally adjusted using the Census Bureau's X-13 ARIMA-SEATS Seasonal Adjustment Program. In addition to its statistical lead time, the Index has a timing advantage over housing starts of roughly a week due to release schedules.
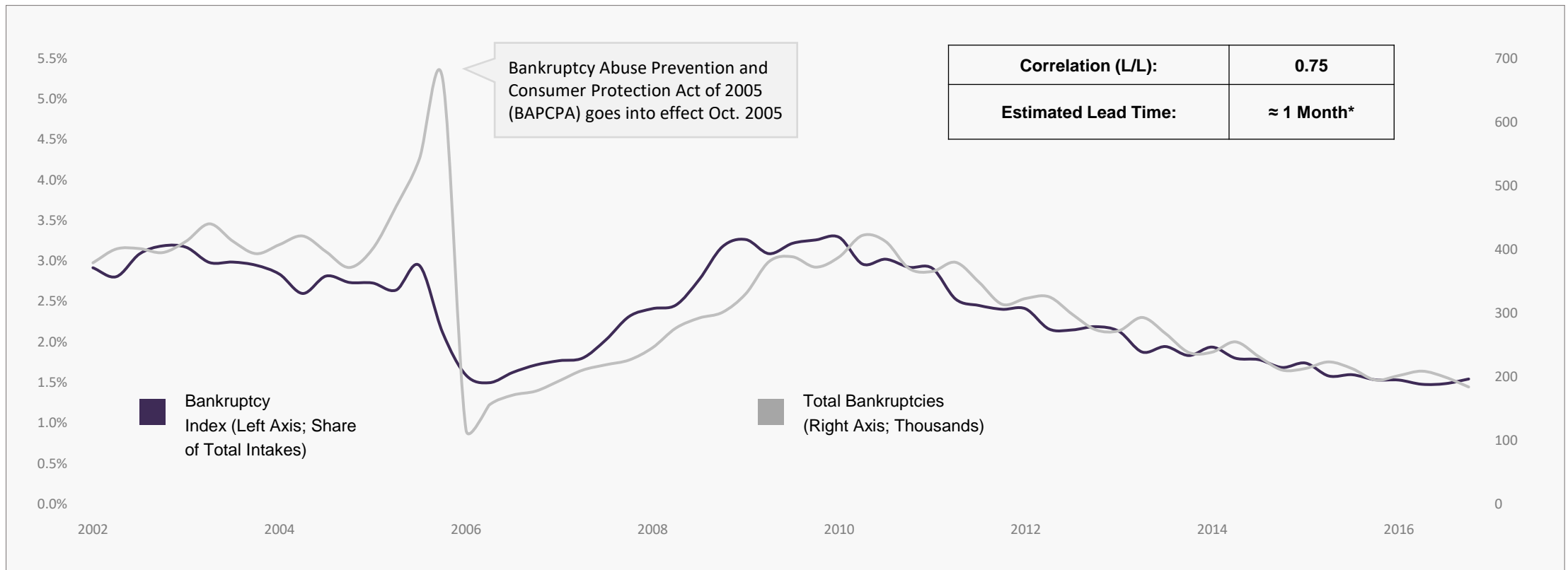
AOL: Real Estate

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.
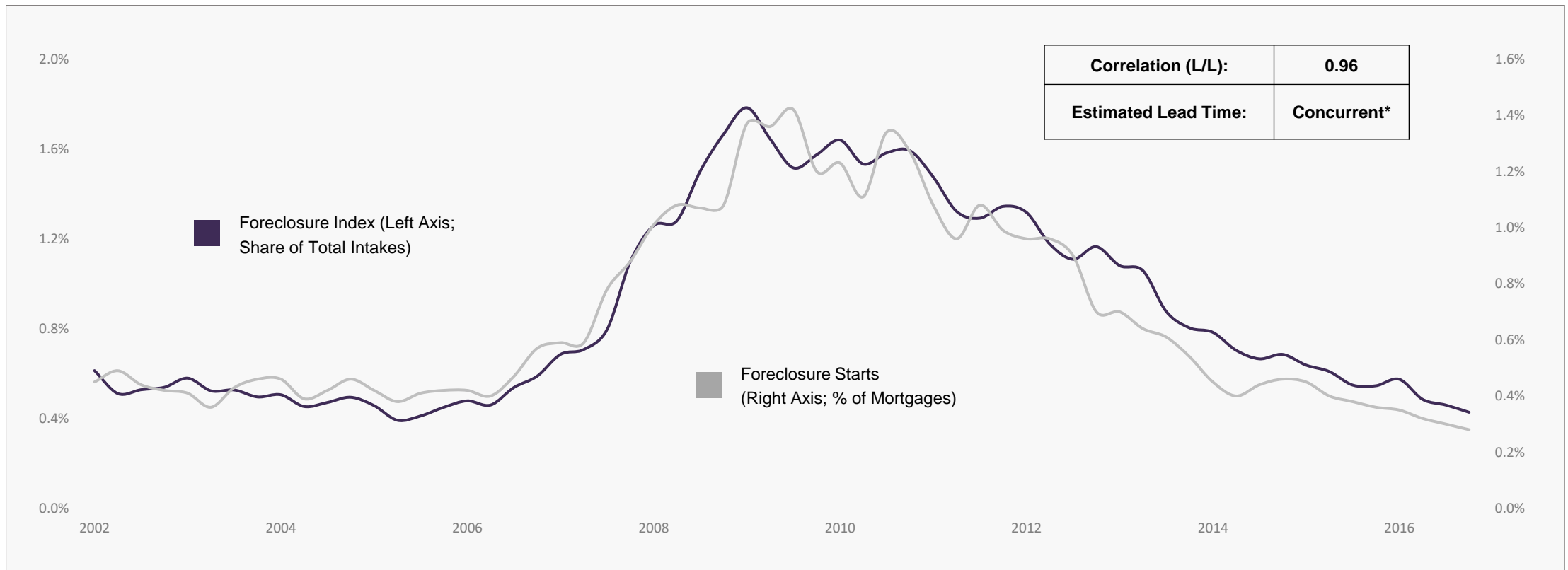
AOL: Bankruptcy

Target Series: Consumer Bankruptcies

Bankruptcy Abuse Prevention and Consumer Protection Act of 2005 (BAPCPA) goes into effect Oct. 2005

Correlation (L/L):	0.75
Estimated Lead Time:	≈ 1 Month*

Bankruptcy Index (Left Axis; Share of Total Intakes)

Total Bankruptcies (Right Axis; Thousands)

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.*	✓