The LRC US Imports Vietnam YoY Demand-Pull Signal: US Roaster Pulls as a Robusta Leading Indicator

Why US monthly green coffee imports from Vietnam year-over-year, read as a US roaster demand-pull proxy, delivers a daily Spearman information coefficient of plus 0.113 against Robusta forward 60-day returns.

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The signal with the limits stated upfront

Three things the reader must know before the rest of this brief lands.

First, the full-distribution daily Spearman information coefficient against Robusta forward 60-day returns is plus 0.113 at p-value 4.9e-12 on a sample of 3,691 daily observations. Strongly significant. The signal is a real statistical lead on Robusta forward returns.

Second, Phase +1 (VN Imports Surge) delivers plus 1.05 percentage points above baseline across 1,092 trading days (29.6 percent of sample) and Phase −1 (VN Imports Collapse) delivers minus 0.45 percentage points across 1,673 days (45.3 percent). 1.49 pp directional spread. The pattern is monotone though asymmetric around baseline. The Phase +1 tail carries most of the directional information.

Third, the non-overlapping independence test at 60-day sampling is sign-consistent but not independently significant. Across 62 independent samples the Spearman is plus 0.075 with p-value 0.56. The sample is short (14 years from US Census FT900 start 2012) and the FT900 publication carries a 45-day lag. The signal is a demand-flow proxy, not a standalone trigger; pair with supply and positioning signals.

The thesis: US roaster demand-pull on Robusta

The United States imports the bulk of its Robusta from Vietnam under HS 090111 (green coffee). Vietnam produces roughly 95 percent of the Robusta that flows to US roasters. US roaster demand for Vietnamese stock is a reasonably direct proxy for US Robusta demand.

Empirically, when US monthly imports of Vietnamese green coffee surge year-over-year, Robusta forward 60-day returns run above trend. When imports collapse, returns run below trend. The eco-

nomic read is demand-pull. US roasters time their Vietnam pulls to lift into rising-price regimes; the imports reading precedes further Robusta strength. When they pull back, Robusta weakness follows.

The signal takes US Census FT900 monthly imports from Vietnam under HS 090111, computes year-over-year percent change, z-scores on a rolling window, and tanh-bounds. State thresholds plus or minus 0.2 (moderate) and plus or minus 0.5 (extreme). Phase +1 at composite above +0.3, phase −1 below −0.3. Target: ICE Europe Robusta Coffee first-nearby back-adjusted close.

Historical window: US Census FT900 bilateral trade from 2012; engine runs from 2012 onward against Robusta target.

What the firings have actually done

Computed over 3,691 daily observations post-warmup from 2012 onward.

> **Baseline Robusta forward 60-day return:** mean plus 1.73 percent / median minus 0.64 percent across the live-window sample.
>
> **Daily Spearman IC (fwd 60d):** plus 0.113, p-value 4.9e-12, N equals 3,691. Strongly significant.
>
> **Non-overlap IC (60-day step):** plus 0.075, p-value 0.56, N equals 62. Sign-consistent but not independently significant.
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> **Phase-conditional forward 60-day Robusta returns:** Phase +1 (VN Imports Surge, 1,092 days / 29.6 pct): plus 2.77 percent, edge plus 1.05 pp. Phase 0 (On Trend, 926 days / 25.1 pct): plus 1.30 percent, edge minus 0.43 pp. Phase −1 (VN Imports Collapse, 1,673 days / 45.3 pct): plus 1.28 percent, edge minus 0.45 pp.
>
> 1.49 pp directional spread between Phase +1 and Phase −1. Pattern is asymmetric; Phase +1 tail carries most of the directional information.

Three findings. The daily IC is strongly significant on the full distribution. The phase spread is modest at 1.49 pp but monotone. The pattern is asymmetric: Phase +1 (VN Imports Surge) delivers plus 1.05 pp above baseline while Phase 0 and Phase −1 cluster near minus 0.4 pp. The Phase +1 regime carries most of the directional information; readers should treat Phase −1 and Phase 0 as mostly indistinguishable sub-baseline regimes.

Three cases that frame how to read the signal

The canonical anchors are the 2021-2022 demand-pull rally, the 2016 Robusta-led softs rally, and the 2019 Robusta demand trough.

Case 1: The 2021-2022 Robusta demand-pull rally

VN Imports Surge firing anchored the 2021-2022 Robusta rally as US roasters pulled Vietnamese stock into the supply-shock regime. Robusta prices broke above 2,500 USD per metric tonne through 2022 and the Vietnam drought plus global container crunch drove aggressive US stockpiling. Composite held in Phase +1 territory through the rally; demand-pull reinforced the supply-tightening narrative.

Case 2: The 2016 Robusta-led softs rally

VN Imports Surge firing as the 2016 Robusta-led softs rally built on tightening Vietnam supply. US roasters front-loaded Vietnam stock pulls as prices broke higher through the first half of 2016. Composite held in Phase +1 territory through mid-2016 with demand-pull preceding further price appreciation.

Case 3: The 2019 Robusta demand trough

VN Imports Collapse firing anchored the 2018-2019 Robusta demand trough. US roaster demand softened through the cycle-low pricing regime and Vietnamese imports fell year-over-year. Composite held in Phase −1 territory consistent with weak demand-pull and sub-baseline Robusta forward returns.

How to use this signal today

Composite is currently reading minus 0.854 in the VN Imports Collapse band. The STRESS phase began August 2026, 90 trading days ago. US monthly green coffee imports from Vietnam have run significantly below prior year through 2026 and Robusta forward 60-day returns historically run below baseline in this regime.

Pair with the following for stacked conviction: Z6701 Vietnam soil moisture (direct Robusta supply), ICE Europe COT Robusta managed-money positioning (speculator conviction), and global Robusta stocks reporting (inventory context). This demand-pull signal captures the US roaster side of the Robusta demand ledger; pair with supply and positioning signals for the full picture.

Reader rule: VN Imports Surge firings flag demand-pull regimes with Robusta strength following. VN Imports Collapse firings flag demand-softening regimes with Robusta weakness following. On Trend readings sit near the Phase −1 edge and are mostly indistinguishable from mild weakness.

Methodology

Data source: US Census Bureau FT900 monthly bilateral trade release, HS 090111 (green coffee) import value from Vietnam. Computation: year-over-year percent change in monthly import value, z-scored on a rolling window, tanh-bounded to plus or minus one. State thresholds plus or minus 0.2 (moderate) and plus or minus 0.5 (extreme). Phase +1 at composite above +0.3, phase −1 below −0.3. Target: ICE Europe Robusta Coffee first-nearby back-adjusted close.

Historical window: US Census FT900 bilateral trade data from 2012; engine runs from 2012 onward.

Validation computed on 3,691 post-warmup daily observations. Daily Spearman IC plus 0.113 at p-value 4.9e-12 across 3,691 observations, strongly significant. Phase +1 per-day forward return plus 2.77 percent (plus 1.05 pp above plus 1.73 percent baseline). Phase −1 per-day forward return plus 1.28 percent (minus 0.45 pp below baseline). 1.49 pp directional spread. Non-overlap IC at 60-day sampling plus 0.075 at p-value 0.56 across 62 samples, sign-consistent but not independently significant.

Note on polarity. An earlier draft of this engine targeted ICE US Coffee C (Arabica) on a cross-origin substitution thesis and inverted the composite. Empirical review showed the signal is a direct Robusta demand-pull lens rather than an Arabica substitution lens. The engine was retargeted to ICE Europe Robusta Coffee and the inversion was removed; the Phase +1 and Phase −1 labels shown here reflect the corrected polarity.

What this signal does not cover

The signal does not cover Vietnam supply directly (see Z6701 Vietnam soil moisture). It does not cover Brazilian Conilon production (Brazil ships Conilon to Europe and the US HS 0901 import mix is dominated by Vietnam). It does not cover speculator positioning (see ICE Europe COT Robusta). Monthly Census FT900 release with 45-day publication lag limits short-horizon use. The non-overlap test is not independently significant on the short 62-sample window.

Disclaimer

This brief and the signal it describes are for informational purposes only and do not constitute investment, legal, tax, or trading advice. Hypothetical or simulated performance results have certain inherent limitations. Unlike an actual performance record, simulated results do not represent actual trading. Also, since the trades have not been executed, the results may have under- or over-compensated for the impact, if any, of certain market factors, such as lack of liquidity. Simulated trading programs in general are also subject to the fact that they are designed with the benefit of hindsight. No representation is being made that any account will or is likely to achieve profits or losses similar to those shown. The phase-conditional forward-return stats reported above are a full-sample unconditional measurement. Readers should consult a licensed financial professional before taking any trading action.

References

US Census Bureau, FT900 monthly bilateral trade release, HS 090111 green coffee, census.gov.

ICE Futures Europe, Robusta Coffee first-nearby back-adjusted continuous contract (ticker LRC), end-of-day settlement.

USDA Foreign Agricultural Service, Coffee: World Markets and Trade, semi-annual reports.