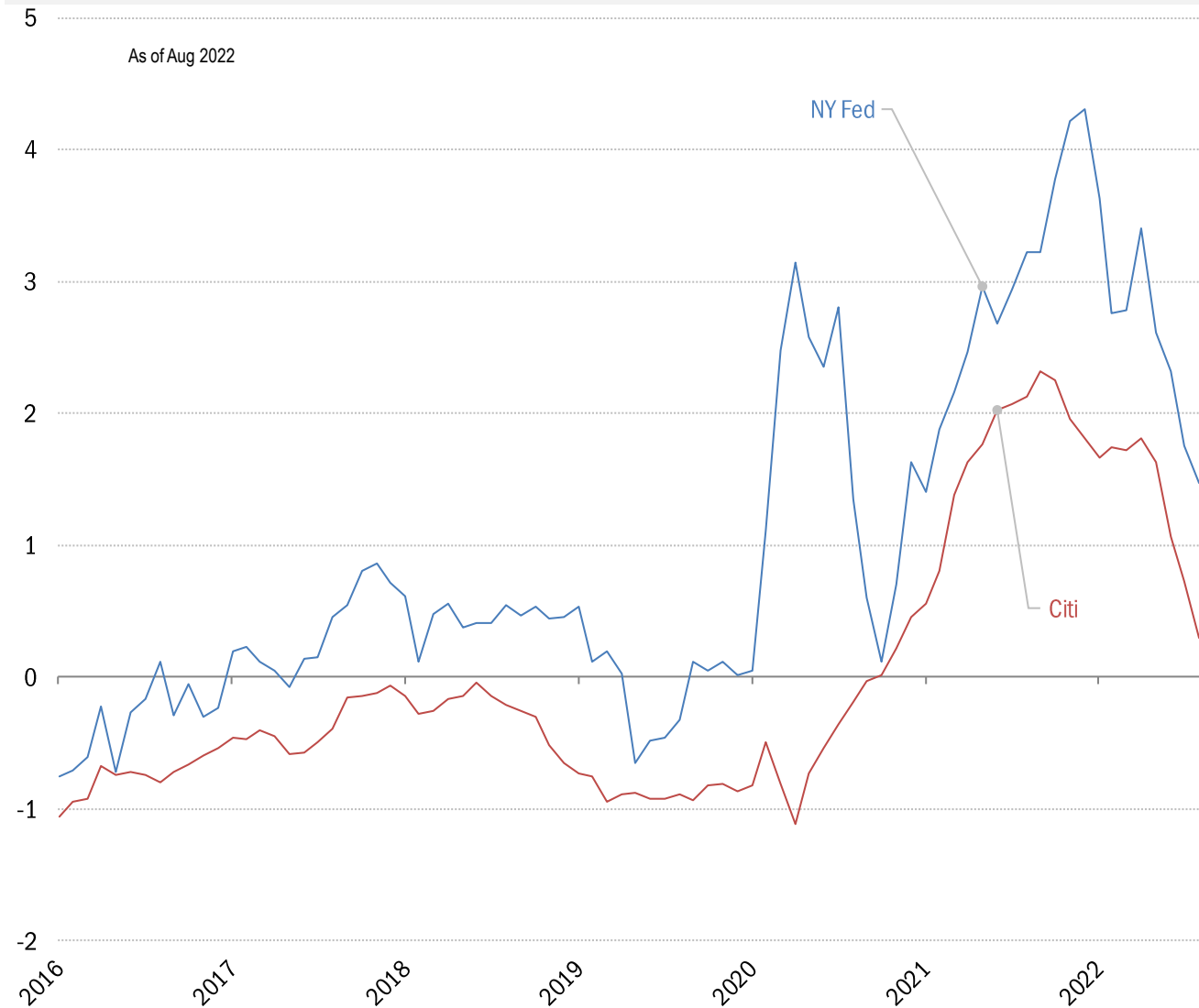# Data Insights: Supply Chain Stress Monitor

Thursday, September 15, 2022

Supply chain pressure indices
Standard deviations from average

As of Aug 2022
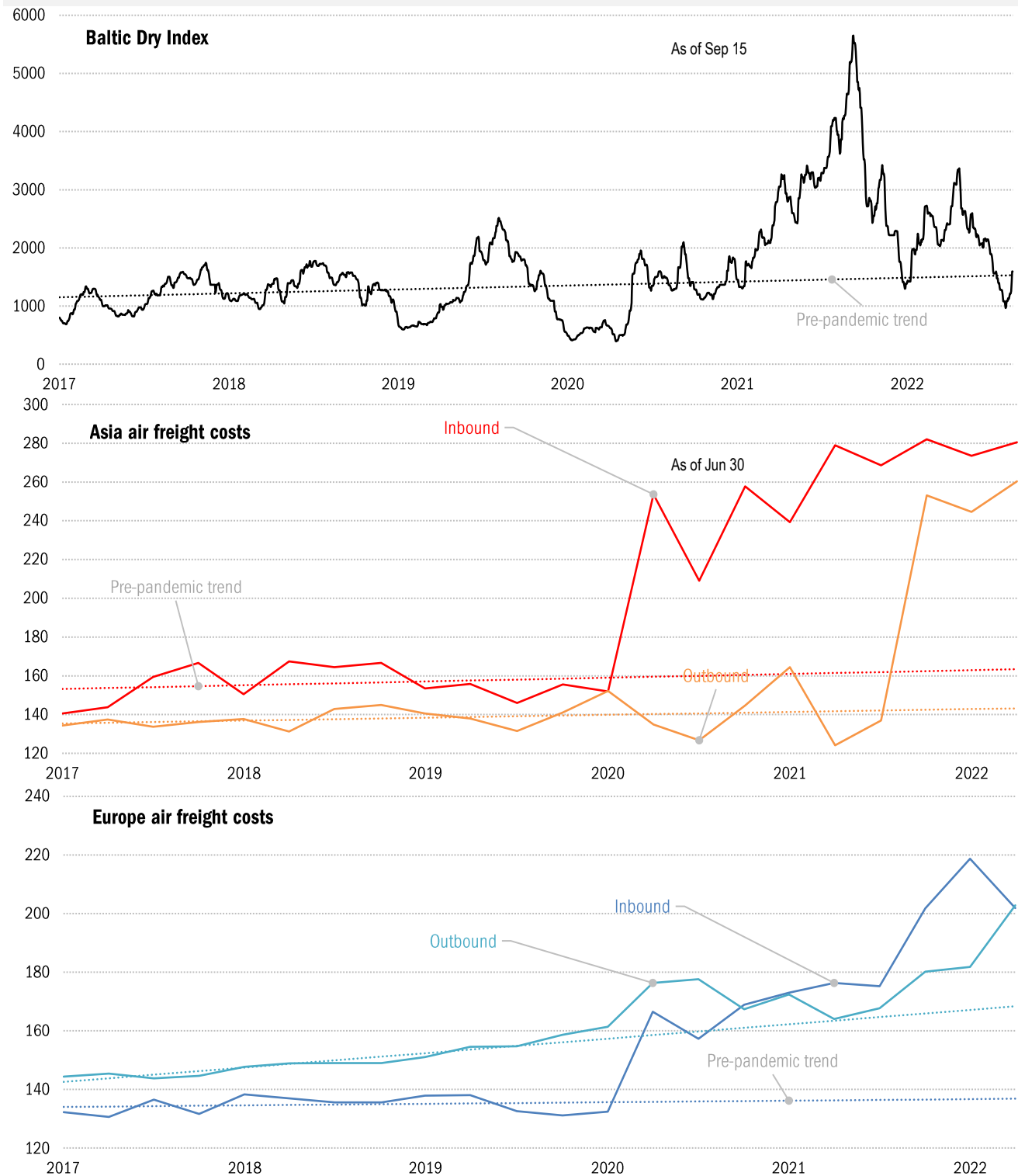

Source: New York Fed, Bloomberg, TrendMacro calculations

For more information contact us:
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Thomas Demas: 704 552 3625 tdemas@trendmacro.com

Global transportation costs
Index points

Baltic Dry Index

As of Sep 15

Pre-pandemic trend

2017 2018 2019 2020 2021 2022

Asia air freight costs

Inbound

As of Jun 30

Pre-pandemic trend

Outbound

2017 2018 2019 2020 2021 2022

Europe air freight costs

Inbound

Outbound

Pre-pandemic trend

2017 2018 2019 2020 2021 2022

Source: Bloomberg, BLS, TrendMacro calculations

Container shipping speed
Slower speed indicates congested ports

As of Sep 14
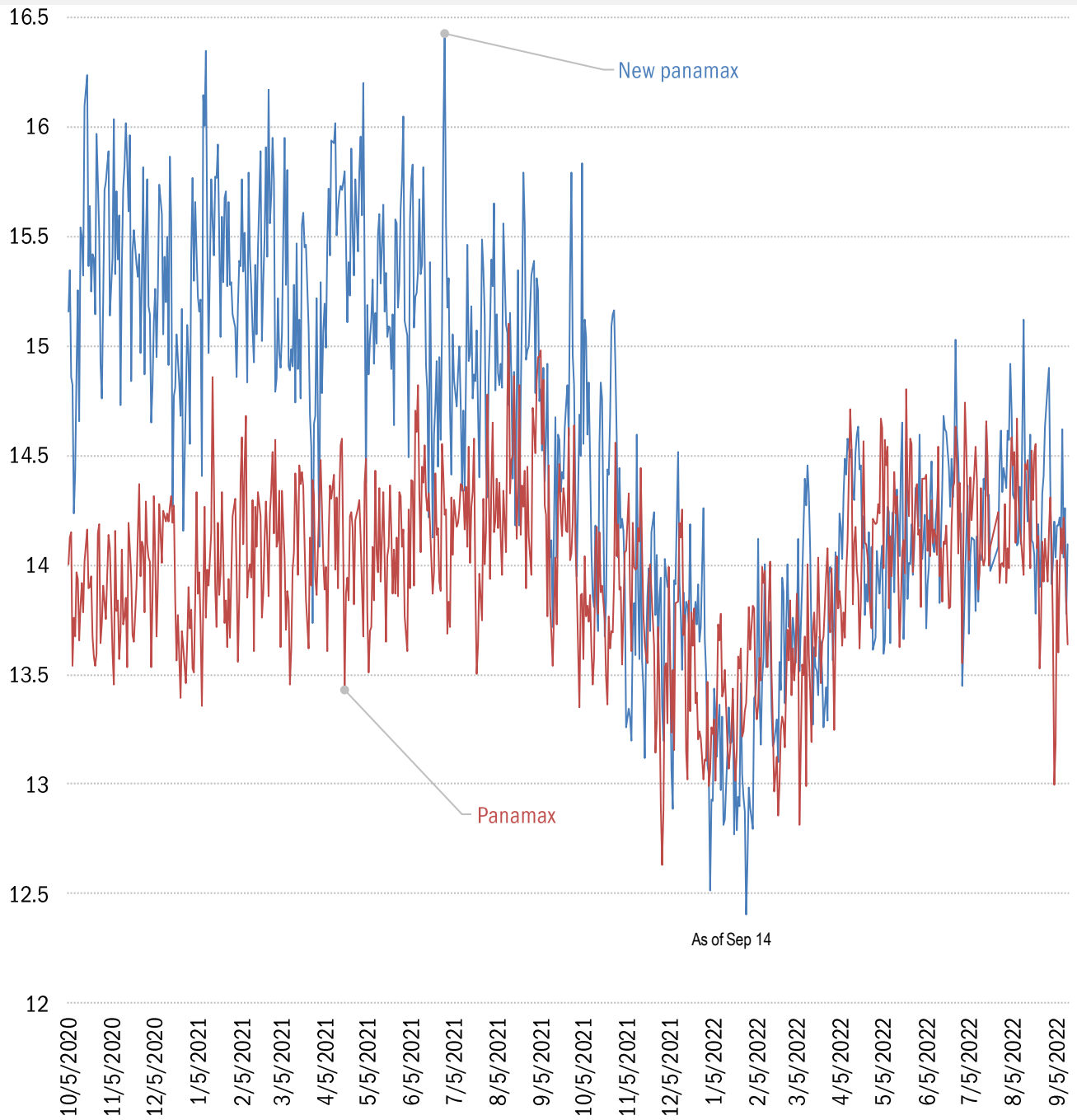
Source: Bloomberg, TrendMacro calculations

US purchasing managers index: backlog of orders growing
Diffusion index

As of Aug 2022

US manufacturing

US services

Pre-pandemic trend

75
70
65
60
55
50
45
40
35

2017   2018   2019   2020   2021   2022
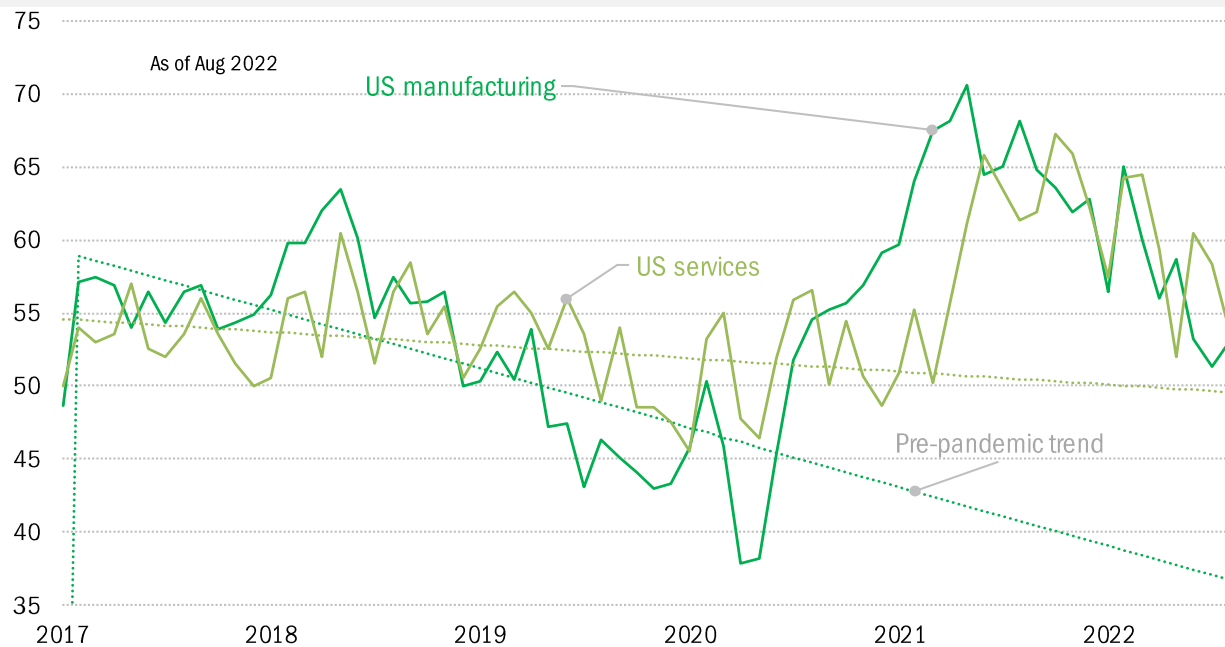
Source: **ISM**, TrendMacro calculations

China purchasing managers index: improving time-to-delivery from suppliers
Diffusion index

China manufacturing

China services

Pre-pandemic trend

As of Aug 2022

55
50
45
40
35
30
25

2017   2018   2019   2020   2021   2022
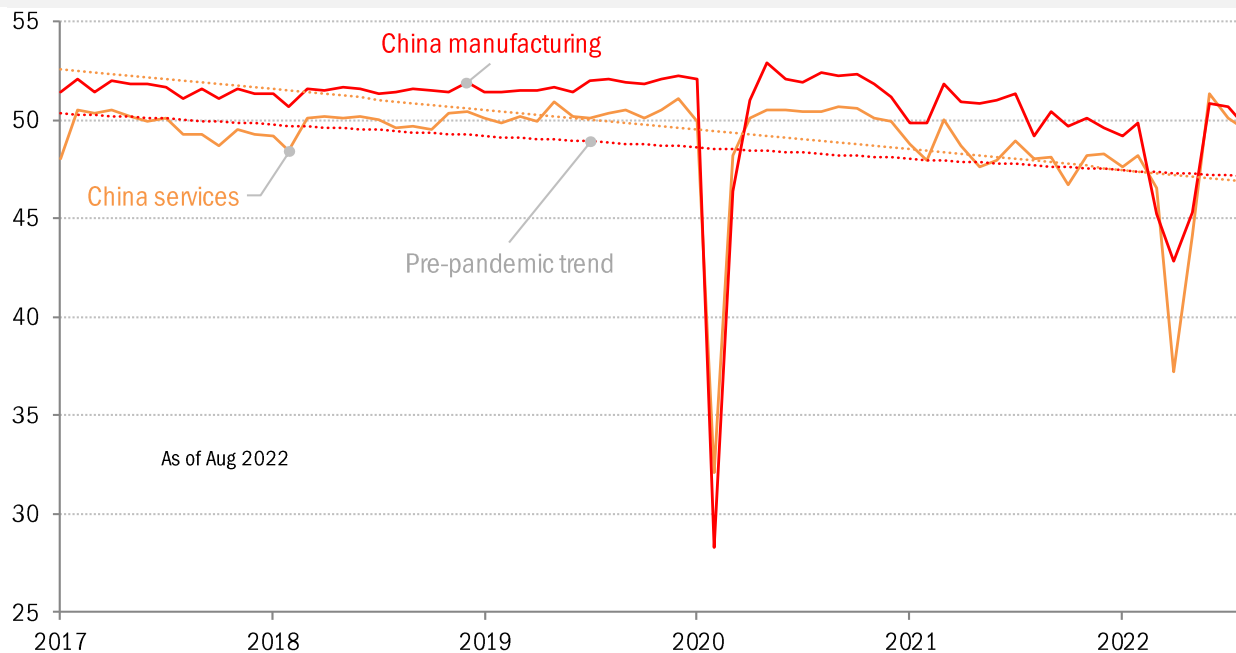
Source: **China Federation of Logistics & Purchasing**, TrendMacro calculations

The ecosystem: <u>manufacturing and trade</u> sales and inventories vs personal income
USD billions (DPI normalized to sale levels)

As of Jul 2022

Business inventories

Pre-pandemic trend

Business sales

Inventories/sales ratio
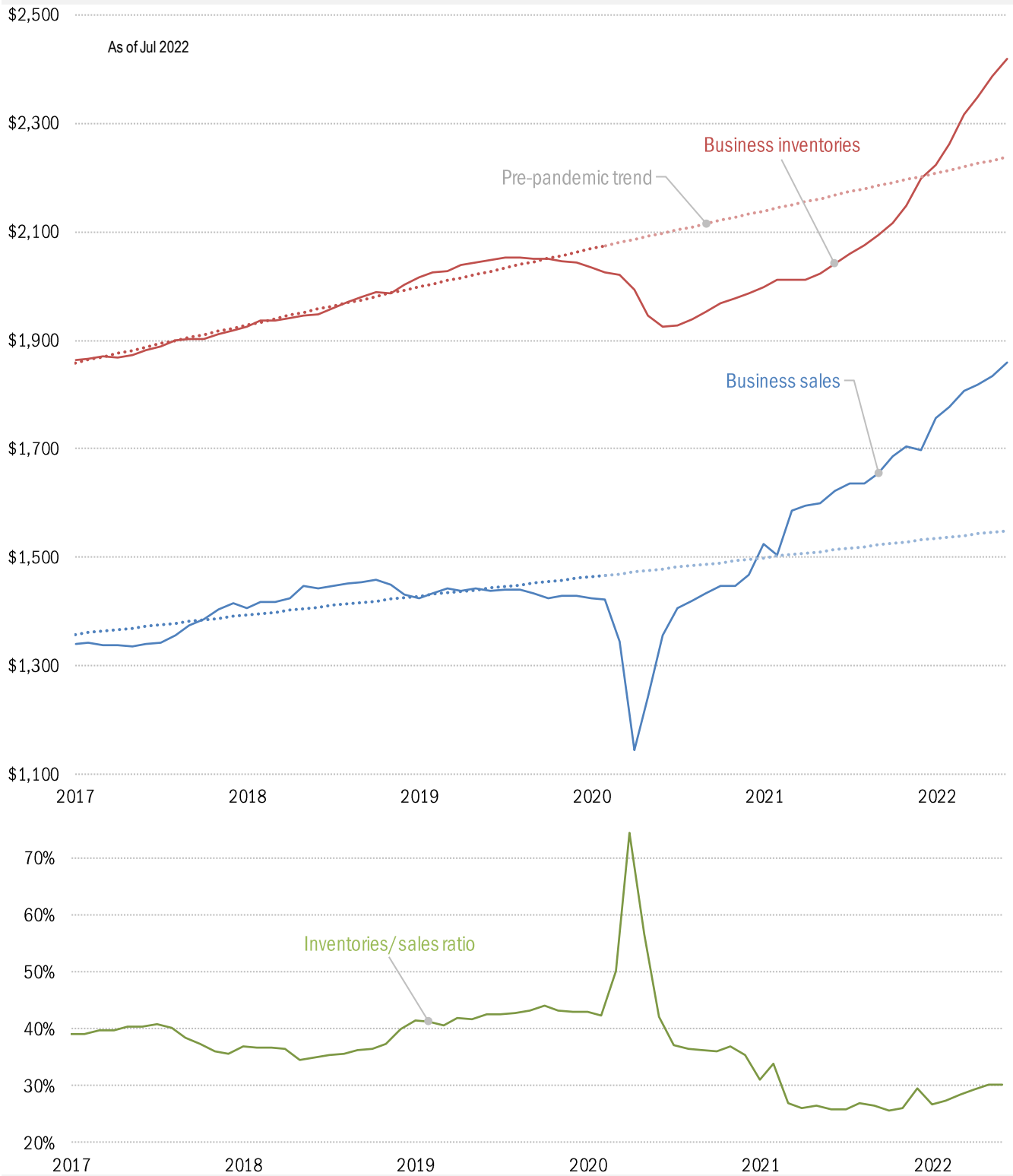
Source: [Census Bureau](#), [BEA](#), TrendMacro calculations

The Main Street sub-ecosystem: <u>retail</u> sales and inventories
USD billions

As of Aug 2022

Pre-pandemic trend

Retail sales

Retail inventories

Inventories/sales ratio
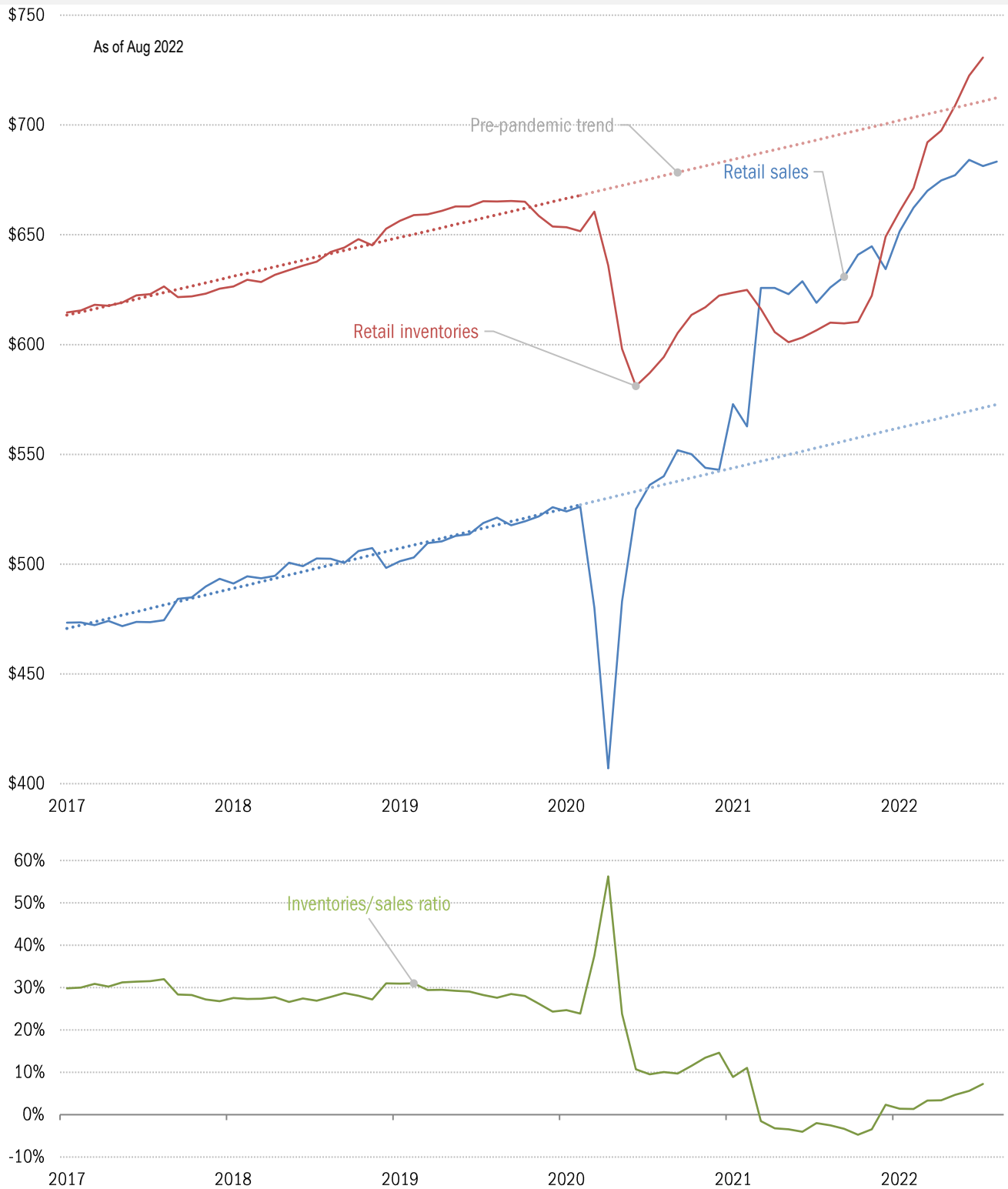
Source: Census Bureau, TrendMacro calculations

The Main Street sub-sub-ecosystem: <u>retail</u> sales and inventories *<u>ex-auto</u>*
USD billions

As of Aug 2022

Retail inventories ex auto

Retail sales ex-auto
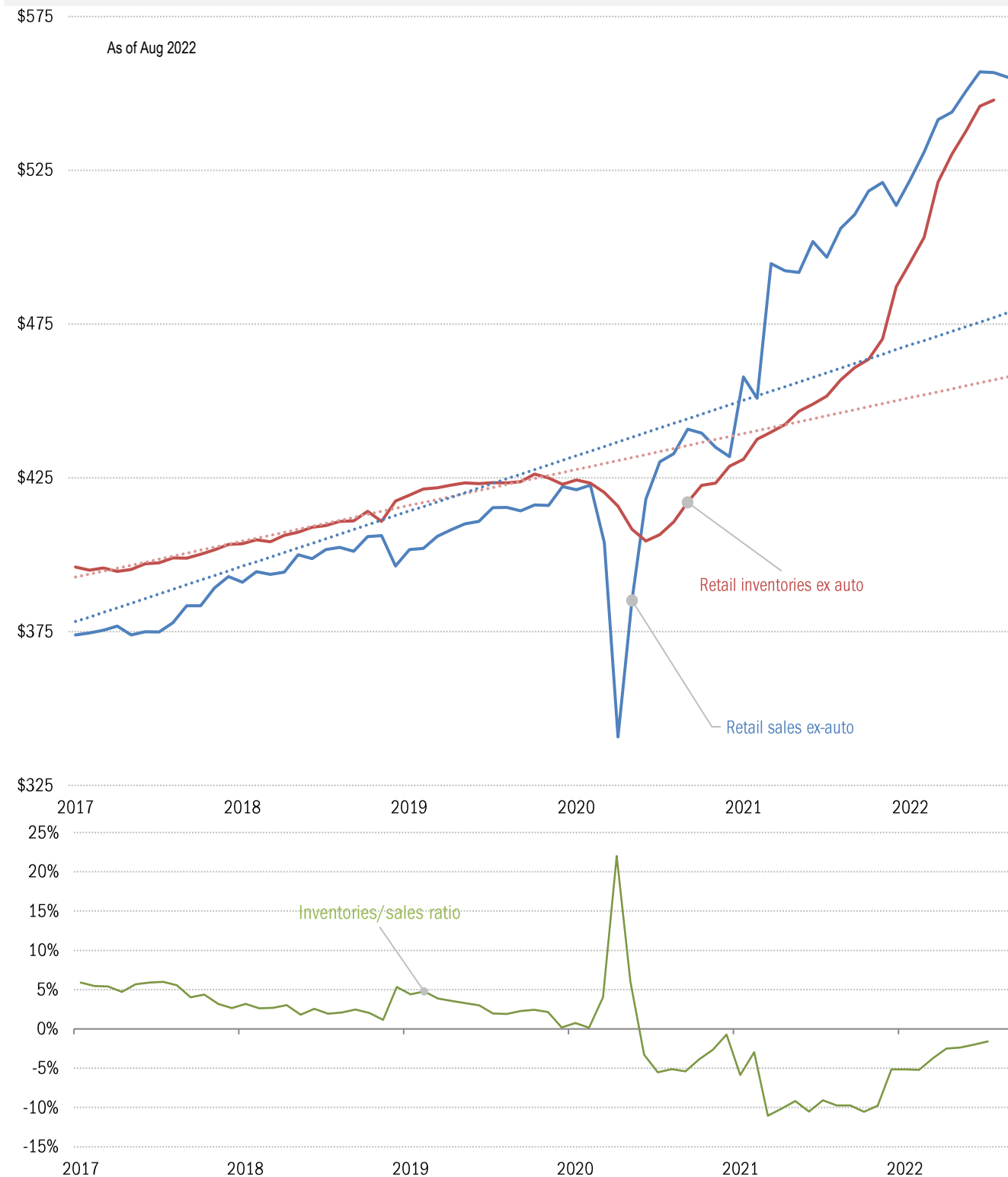
Inventories/sales ratio

Retail sales – where did the growth come from?

As of Aug 2022

```
                                                    ┌─ Motor vehicle and parts +0.50%
                                                    ├─ Furniture, electronics -0.02%
                                                    ├─ Building materials +0.07%
                                                    ├─ Food and beverage +0.06%
                              ┌── Stores +0.27% ─────┼─ Health & personal care -0.03%
                              │                      ├─ Gasoline stations -0.42%
Total +0.29%                  │                      ├─ Clothing +0.02%
                              │                      ├─ Sporting, hobby, book, music +0.01%
                              │                      ├─ General merchandise +0.05%
Core -0.00%                   │                      └─ Miscellaneous +0.04%
                              │
Excluding auto, gas +0.21%    │                      ┌─ Gasoline stations -0.12%
                              └── Non-stores +0.02% ─┤
                                                     └─ Gasoline stations +0.14%
```
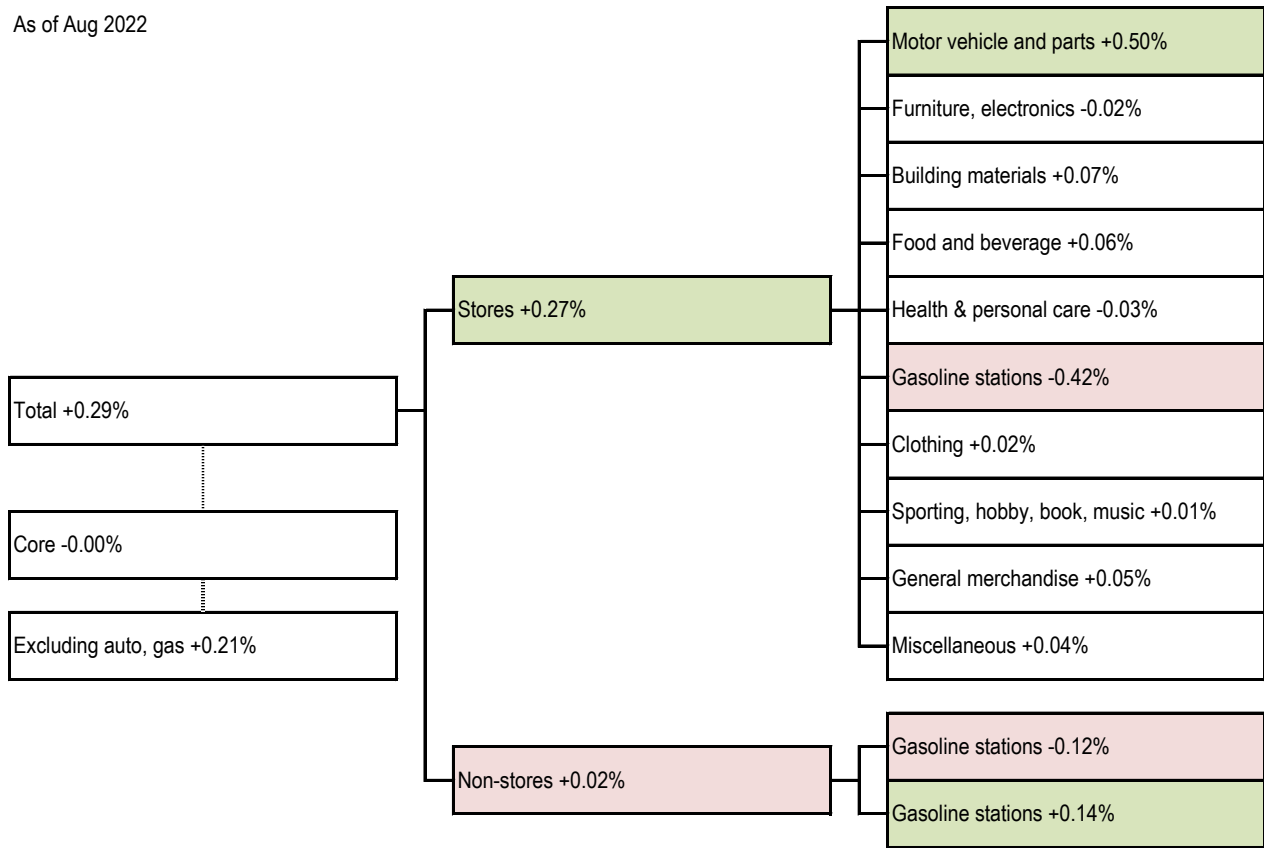
Retail inventories – where did the growth come from?
Contributions to nominal, sequential month change, SA   Biggest change per detail-level: ■ positive ■ negative

As of Jun 2022

```
                                    ┌─ Motor vehicle and parts +0.79%
                                    ├─ Furniture +0.09%
                                    ├─ Building materials +0.18%
Total +1.94% ───────────────────────┼─ Food and beverage +0.04%
                                    ├─ Clothing +0.17%
Excluding autos +1.14%              ├─ General +0.19%
                                    ├─ Department stores +0.09%
                                    └─ Other +0.38%
```

The backstage sub-ecosystem: <u>wholesale</u> sales and inventories
USD billions

As of Jul 2022

Pre-pandemic trend

Wholesale inventories

Wholesale sales

Inventories/sales ratio

Source: Census Bureau, TrendMacro calculations

Wholesale sales -- where did the growth come from?

Contributions to nominal, sequential month change, SA   Biggest change per detail-level: 🟩 positive 🟥 negative

As of Jul 2022

```
                                                            Automobiles +0.01%

                                                            Furniture -0.00%

                                                            Lumber +0.06%

                                                            Pro equipment +0.07% ──┬── Computers +0.03%
                                                                                   │
                            Durable +0.28%                  Metals -0.05%          └── Other +0.04%

                                                            Electrical goods +0.25%

                                                            Hardware +0.00%

                                                            Machinery +0.02%

  Total -1.45%                                              Other -0.08%


                                                            Paper -0.01%

                                                            Drugs -0.10%

                                                            Apparel -0.05%

                                                            Groceries +0.04%

                            Non-durable -1.73%              Farm products -0.09%

                                                            Chemicals +0.03%

                                                            Petroleum -1.53%

                                                            Alcohol +0.07%

                                                            Other -0.07%
```
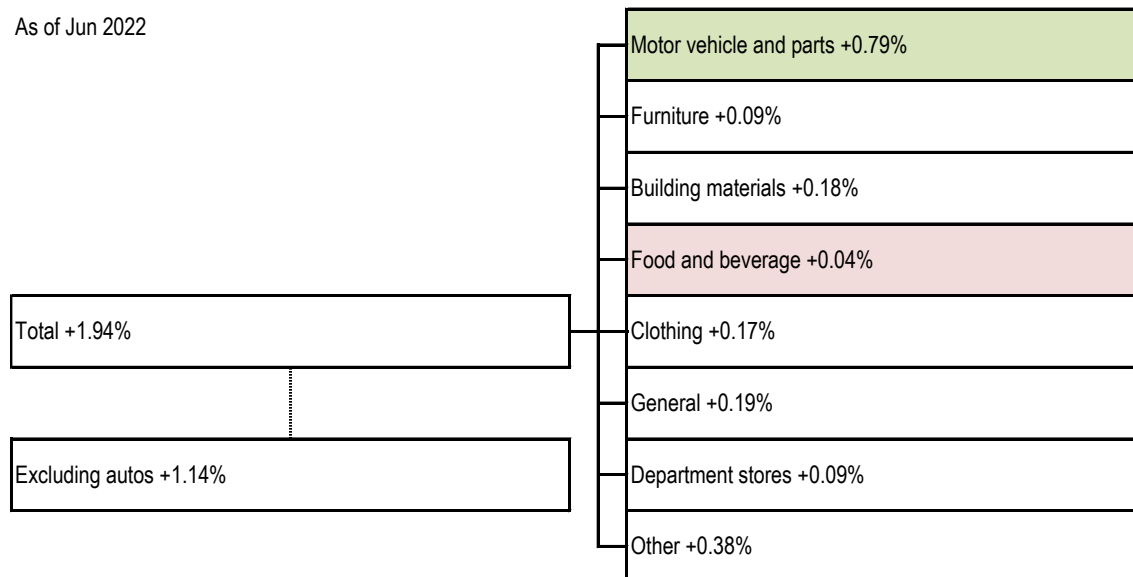
Source: **Census Bureau**, TrendMacro calculations

Wholesale inventories -- where did the growth come from?

Contributions to nominal, sequential month change, SA   Biggest change per detail-level: ■ positive ■ negative
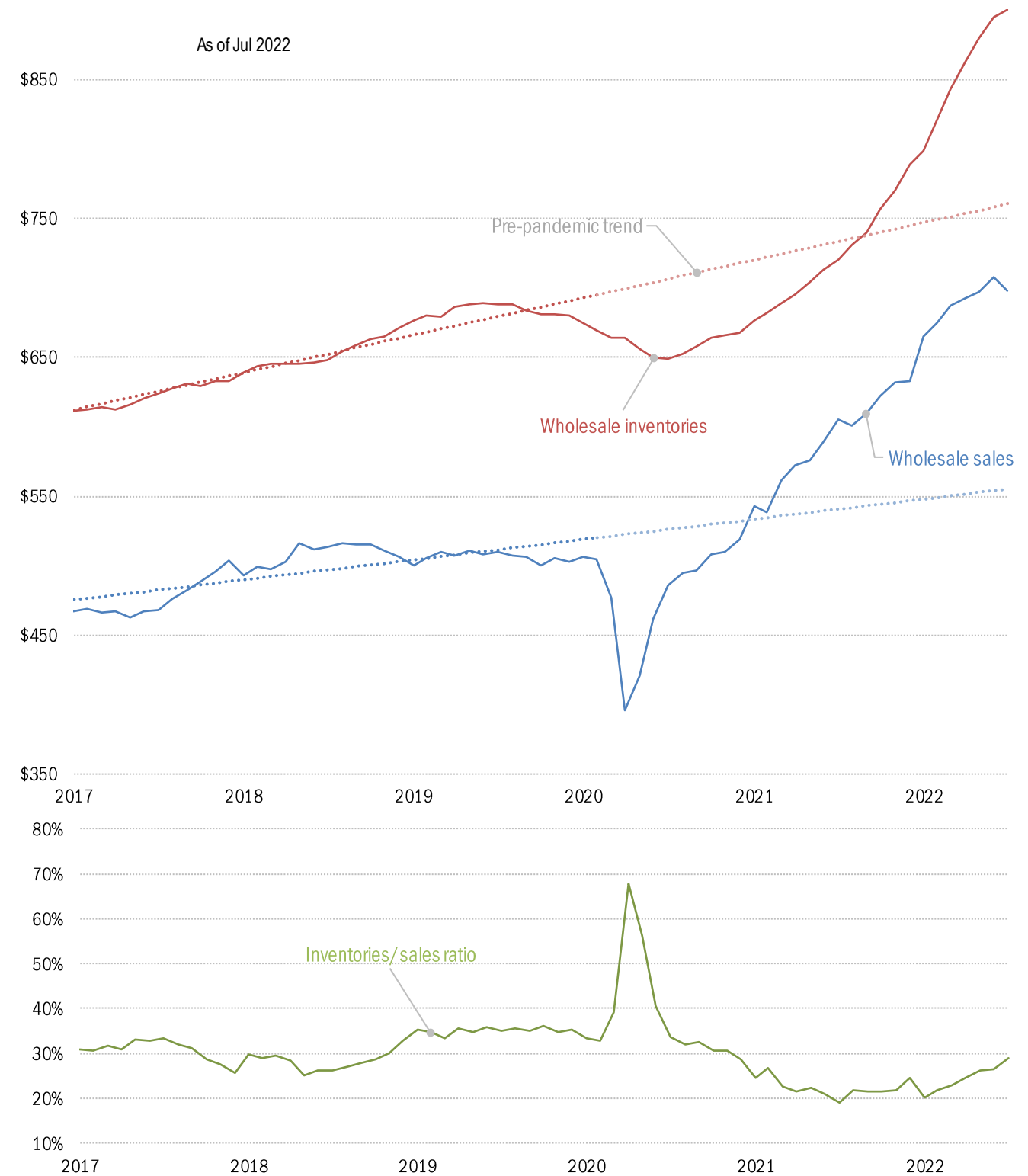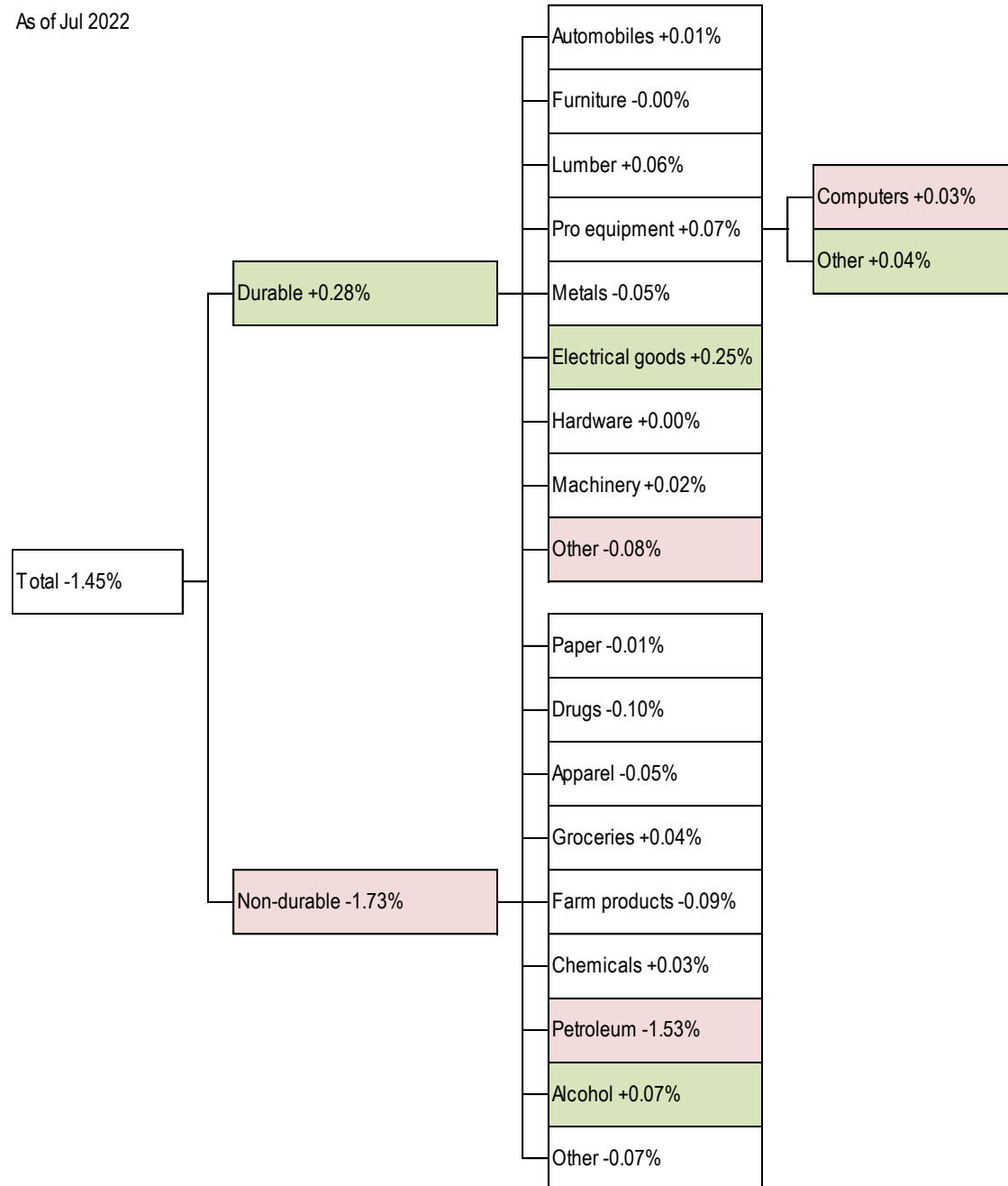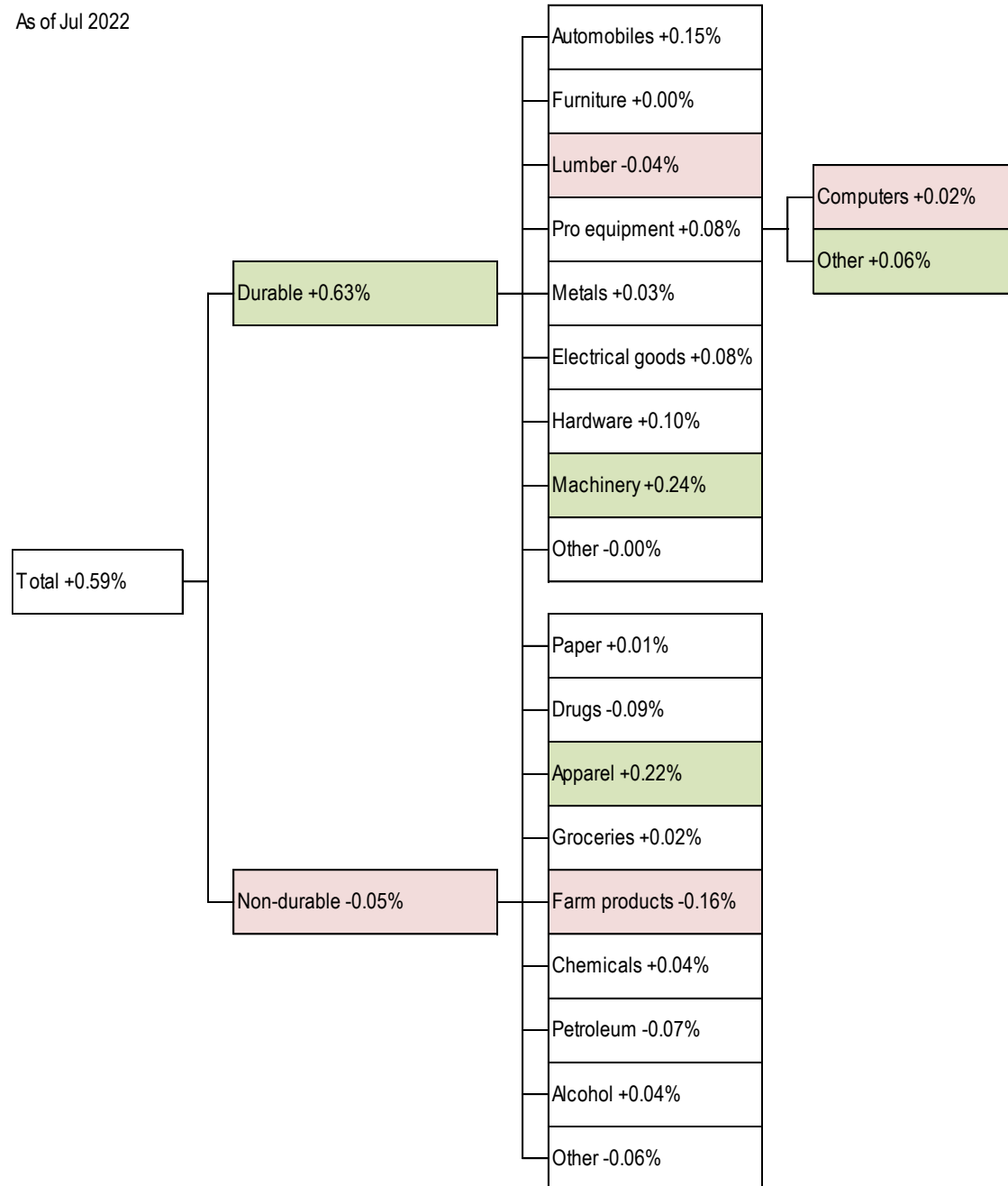
As of Jul 2022

```
                                          ┌─ Automobiles +0.15%
                                          ├─ Furniture +0.00%
                                          ├─ Lumber -0.04%
                                          ├─ Pro equipment +0.08% ──┬─ Computers +0.02%
                          Durable +0.63% ──┤                        └─ Other +0.06%
                                          ├─ Metals +0.03%
                                          ├─ Electrical goods +0.08%
                                          ├─ Hardware +0.10%
                                          ├─ Machinery +0.24%
                                          └─ Other -0.00%
  Total +0.59% ──┤
                                          ┌─ Paper +0.01%
                                          ├─ Drugs -0.09%
                                          ├─ Apparel +0.22%
                                          ├─ Groceries +0.02%
                      Non-durable -0.05% ─┤─ Farm products -0.16%
                                          ├─ Chemicals +0.04%
                                          ├─ Petroleum -0.07%
                                          ├─ Alcohol +0.04%
                                          └─ Other -0.06%
```

Source: Census Bureau