

# Printing Paper Industry Update to the



Greg Lovensheimer – Executive Vice President – Chief Operating Officer - Millcraft

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# My Background

- Third generations Paper Professional – over 125 years of perspective
- 37 Years in Paper Industry
  - Millen/Mafcote/Miami Group
  - Mead
  - MeadWestvaco
  - NewPage
  - Glatfelter
- Variety of roles from 4<sup>th</sup> Hand on Paper Machine, Converting, Production Planning, Strategy, ERP Lead, Marketing, Product Management, Technical Field Service, Business Development, Business Operations
- Last 8 years with Millcraft – 100+ year old, 4<sup>th</sup> generation family owned & operated paper & packaging merchant based in the Midwest
  - Commercial Printers (small, regional, and national scale)
  - Book Publishing / Printers
  - Quick Printers
  - End Users



Most importantly, THANK YOU to all our supplier partners for their information and perspective

# Questions being Asked



- Why can't I get paper to print/mail?
- Why is the price of paper so much higher than pre-COVID?
- What's being done to correct the above conditions?
- What role does domestic producers play versus imports?
- When will we see a return to "normal"?

# It all relates to Demand Trends & Paper Producer Economics...



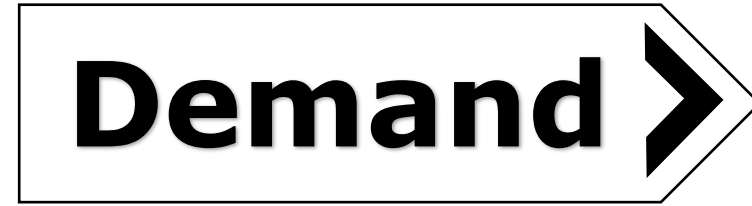
- Electronic Substitution
- Direct Mail still highest ROI
- Consistent volume (programs) VS. sporadic demand (seasonal or unplanned)
- Cyber Security / Trust issues with electronic media/methods



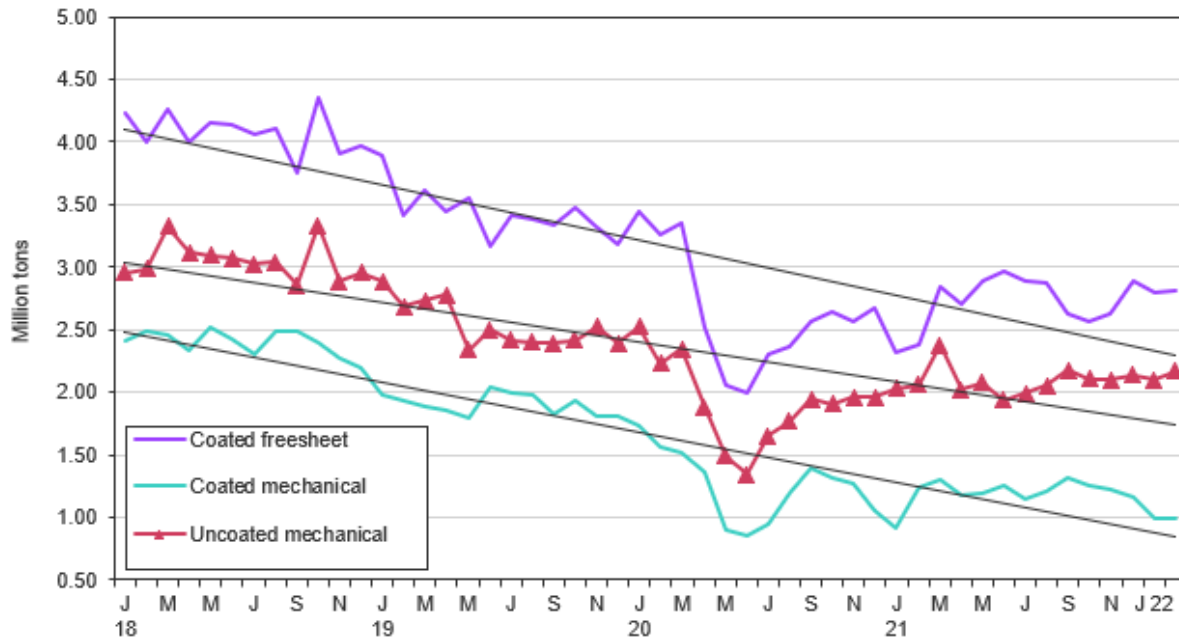
- Capital Intensive Industry
- Government regulations impair infrastructure investment (\$1B for BART/MACT alone)
- Transportation costs/availability (rail & truck)
- Input costs (oil & gas)
- Labor availability
- Global industry – lack of imports

COVID-19 impact was extremely disruptive to the balance.

# How did we get here?

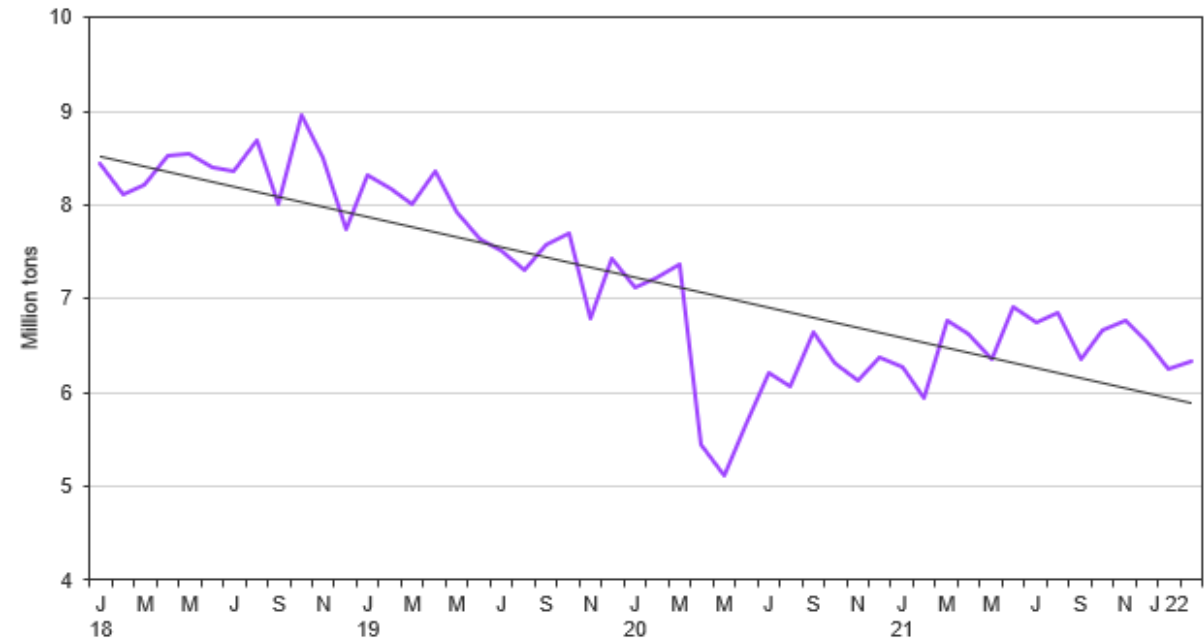


**North American apparent consumption of coated paper and uncoated mechanical**  
Seasonally adjusted, annual rate



Data source: PPPC and AF&PA (shipments), US Commerce Dept. (trade) and Fastmarkets RISI.  
Coated freesheet data revised to include coated bristols.

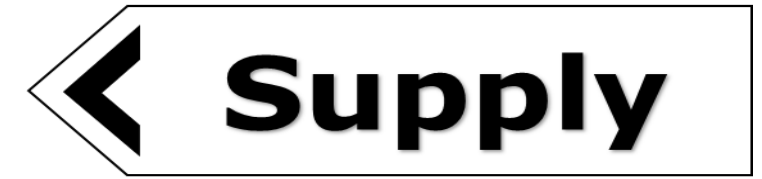
**North American apparent consumption of uncoated freesheet paper**  
Seasonally adjusted, annual rate



Data source: PPPC and AF&PA (shipments), US Commerce Dept. (trade) and Fastmarkets RISI.  
Data revised to include uncoated bristol and cotton.

Printing Paper Industry has been in secular decline as electronic substitution has become more prevalent.

# How did we get here?



- Paper industry was historically poor at inventory management
  - Paper Mills carried inventory both in finished goods and work in progress
  - Regional Distribution Centers carried inventory
  - Merchants carried inventory
  - Printers carried less than a week's worth of inventory
  - Mills allowed Less than Truckload sized orders in as little as 2,000 lbs
- Industry Adoption of ERP solutions and S&OP in the mid-2000's
  - Suppliers begin to free up cash tied up in inventory
- Major capacity closures began in 2014 (Courtland, AL) and accelerated in 2018 and COVID further accelerated capacity moves!
  - Initially most capacity impacts were complete closures
    - Difficult to arrive at that point, fixed cost absorption versus variable cost
  - Growth in E-commerce and the YouTube unboxing moments have resulted in conversions of capacity to packaging grades. Growth segment 3-5% annually! The emergence of Plan B opens to every integrated producer.

Paper Producers have better insights into their cost to produce. High-cost &/or commodity assets re-directed!

# How did we get here?

# Supply

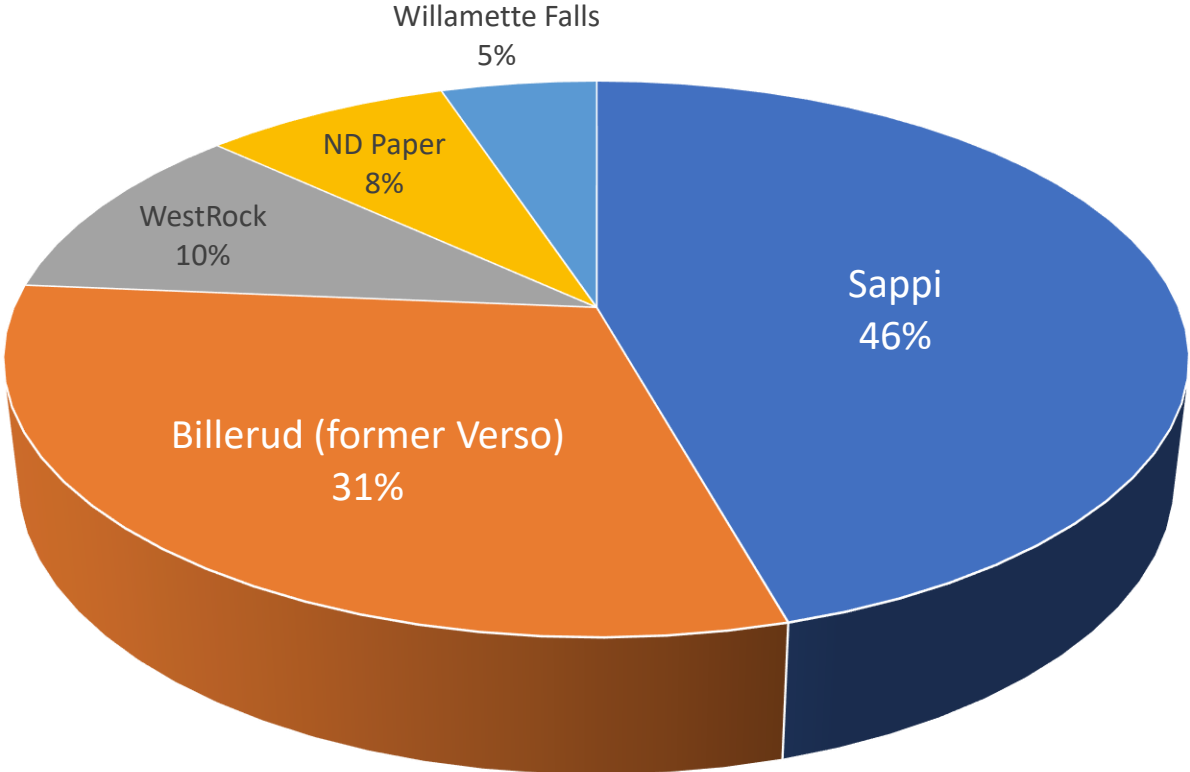
Year	Mill	'000 tons	Type
2017	Verso - Jay, ME PM #1 and #2	-200	Closure
	Appleton Coated - Combined Locks, WI	-380	Closure
	Glatfleter - Chillicothe, OH PM #24	-60	Closure
	West Linn - West Linn, OR	-265	Closure
2018	UPM - Blandin, MN	-128	Closure
	Flambeau River - Park Falls, WI PM#3	-100	Closure
	Appleton Coated (Midwest Converting)	50	Restart
	Georgia Pacific - Camus, WA PM #20	-235	Closure
	PCA - Wallula, WA	-190	Conversion to Packaging
2019	GP - Port Hudson, LA	-615	Closure
	Flambeau River - Park Falls, WI PM#1 & 2	-65	Closure
	Domtar - Ashdown, AR #63	-200	Conversion to Pulp
	Verso - Luke, MD	-410	Closure
	Phoenix - Wickliffe, KY	170	Restart
	IP - Selma, AL PM#15	-235	Conversion to Packaging
2020	Domtar - Ashdown, AR #62	-220	Conversion to Pulp
	Domtar - Kingsport, TN	-425	Conversion to Packaging
	PCA - Jackson, AL#3	-365	Conversion to Packaging
	Verso - Wisconsin Rapids, WI	-520	Closed
	Nine Dragons - Rumford, ME	-294	Conversion to Packaging
2021	Domtar - Port Huron, MI	-30	Closed
	Appvion Roaring Springs, PA	-120	Closed
	Midwest Paper - Combined Locks, WI	-40	Conversion to Packaging
	PCA - Jackson, AL PM#1	-90	Conversion to Packaging
2022	Domtar - Ashdown AR #62	185	Restart
	Resolute - Calhoun ,TN	-150	Closed



# North American Coated Freesheet Supply & Demand



## 2022 CFS Demonstrated Supply



## CFS Market Overview

CFS Demand	2,642,000	
CFS Supply	2,166,555	
Less Exports	207,000	
<b>Net Supply</b>	<b>1,959,556</b>	<b>74%</b>
<b>Imports</b>	<b>682,000</b>	<b>26%</b>

Reported as short tons

Sources: RISI and Other Industry Sources

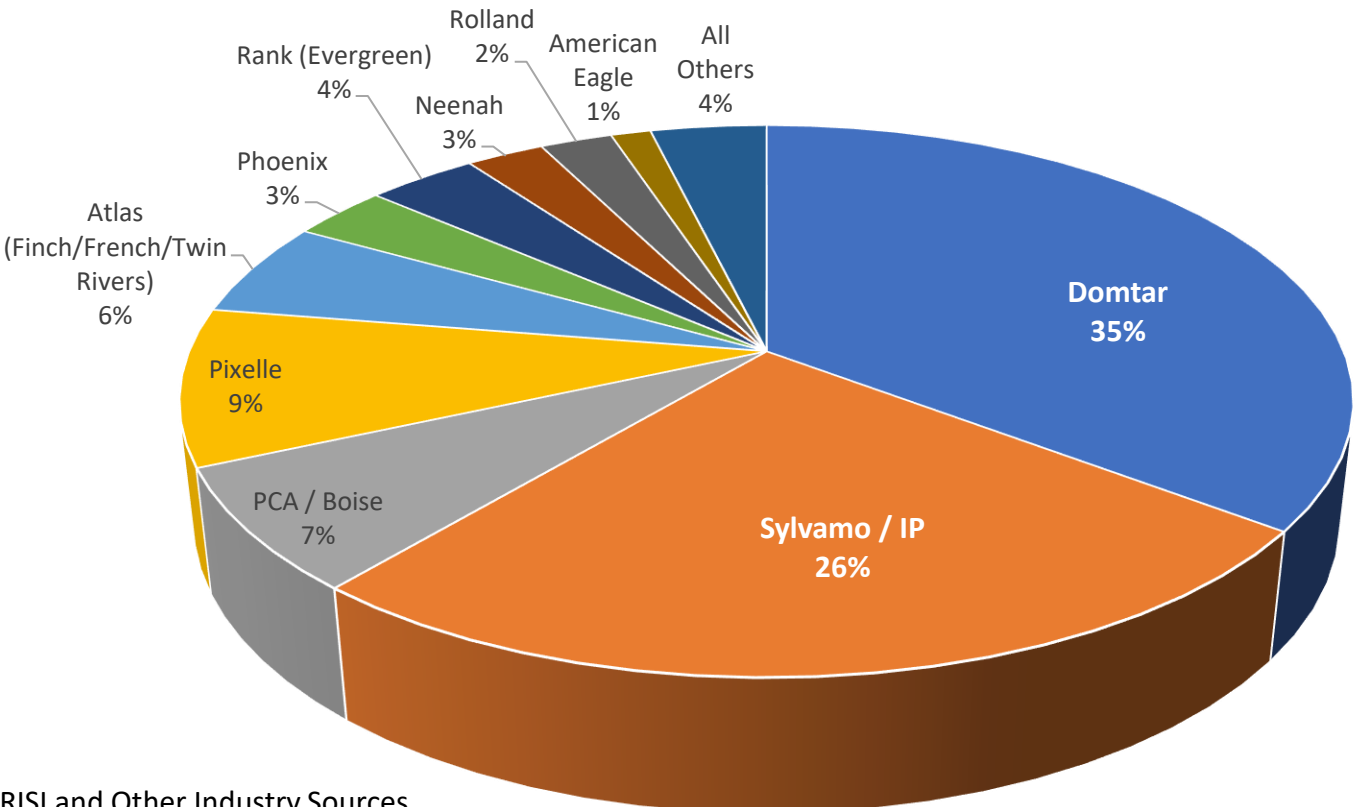
**Coated market requires significant level of imports to achieve balance!**



# North American Uncoated Freesheet Supply & Demand



## 2022 UFS Demonstrated Supply



## UFS Market Overview

UFS Demand	6,323,000	
UFS Supply	6,430,000	
Exports	108,000	
<b>NET UFS Supply</b>	<b>6,322,000</b>	<b>100%</b>
Imports	540,000	+9%

Reported as short tons

Sources: RISI and Other Industry Sources

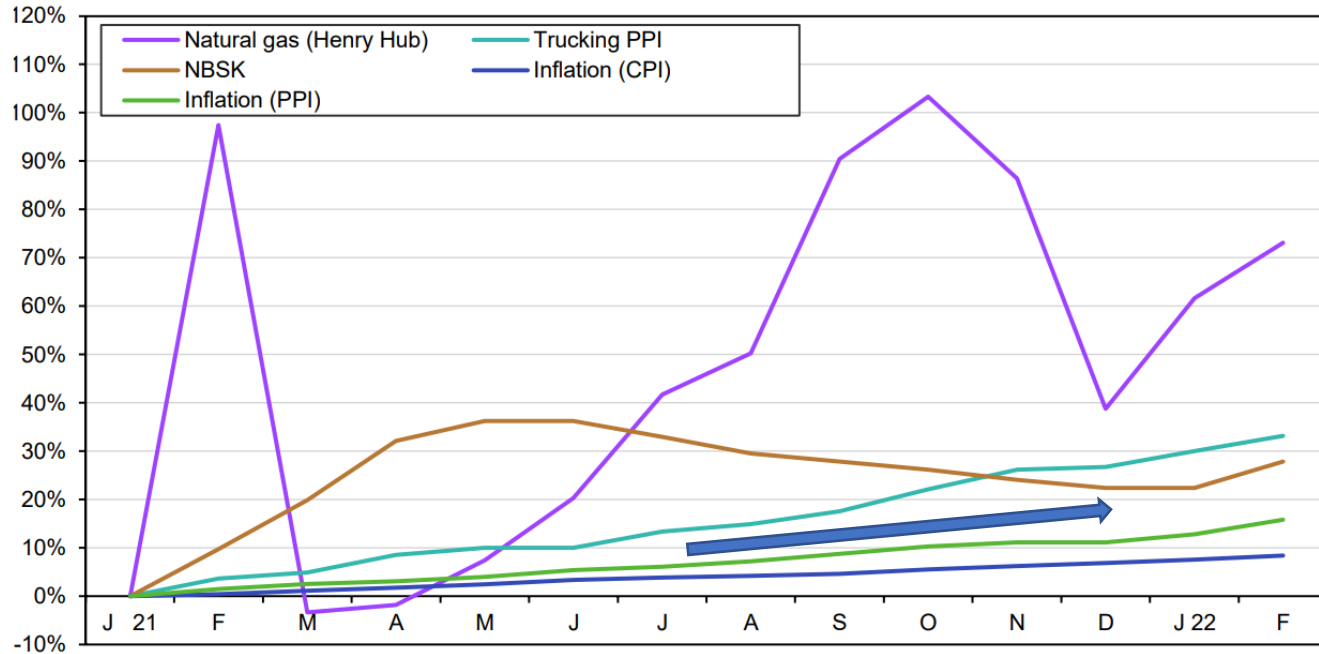
Uncoated market is more balanced, imports actually provide excess 9% capacity!

# Issues & Impacts

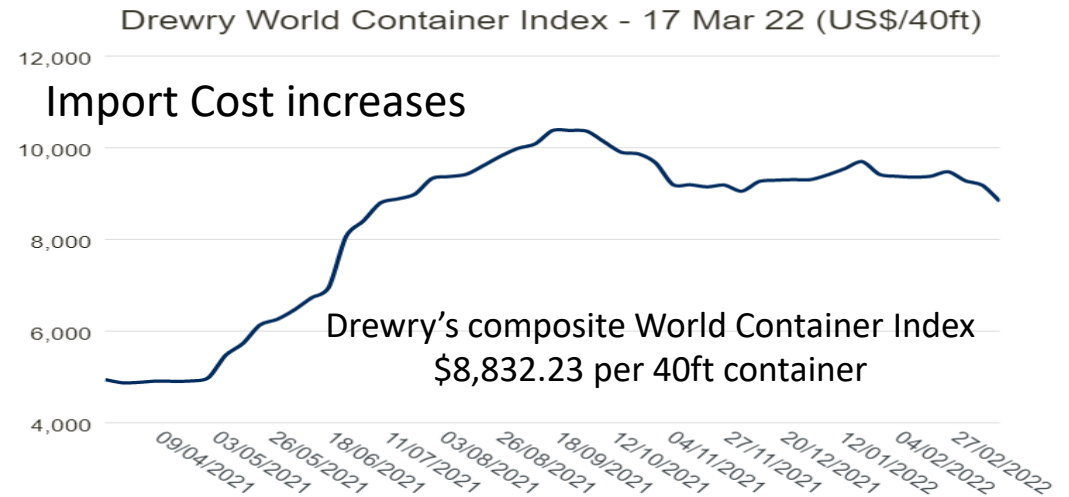
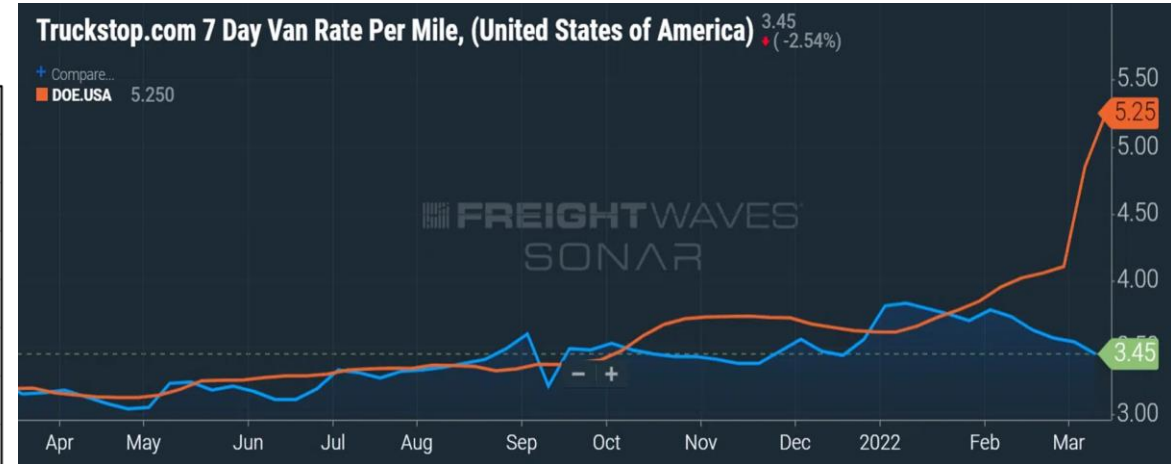


## US input cost inflation

Percentage change versus January 2021

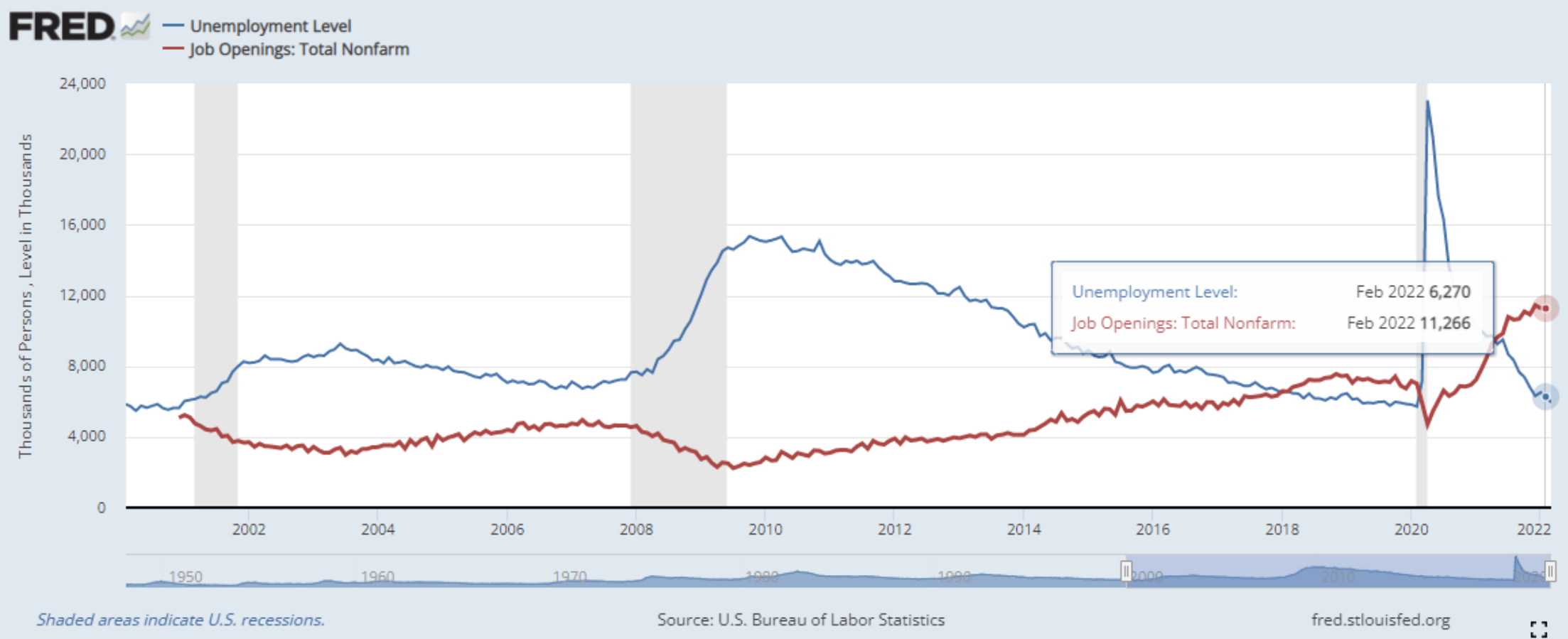


Data source: Fastmarkets RISI, US Federal Reserve.



Run up in oil is fueling latest round of price increases as it's a feed stock for chemicals as well as drives up transportation cost. Imports at bay due to container costs, energy costs in Europe, China port closures

# Here are the issues/impacts - Labor



Labor market imbalance leading to lack of available employees for downstream converting – sheets, envelopes, etc

# Here's the Demand Forecast with Risks



		2021	2022	2023	2024	CAGR
PPPC	Coated Woodfree	4.5%	-8.2%	-9.1%	-8.6%	-6.5%
	Coated Mechanical	-5.8%	-15.8%	-10.9%	-11.9%	-9.8%
	Uncoated Woodfree	4.1%	-2.0%	-4.6%	-4.5%	-2.8%
	Uncoated Mechanical	4.6%	-4.9%	-8.5%	-8.1%	-5.4%
<i>PPPC World PW Forecast - March 2022</i>						
		2021	2022	2023	2024	CAGR
RISI	Coated Woodfree	2.5%	1.7%	-4.3%	-4.8%	-1.9%
	Coated Mechanical	-4.7%	-2.6%	-4.4%	-5.0%	-3.0%
	Uncoated Woodfree	4.2%	0.7%	-3.9%	-3.6%	-1.7%
	Uncoated Mechanical	9.0%	0.5%	-5.2%	-9.6%	-3.7%
<i>RISI Paper Trader - March 2022</i>						

- Costs pressures continue to mount, expect several more rounds of increases.
- Imports from Europe curtailed due to war in Ukraine and the run up in natural gas and the return of European demand.
- Imports from Asia will be challenged due to container costs, Chinese port closures and Korean dependence on Chinese container ships.
- Expect market tightness to continue thru mid-2023 at the earliest.

The free-market forces will bring back supply and demand balance by mid-'23 assuming no further exogenous shocks.

# Opportunities in 2022 & Beyond

- PLAN
- Allocation protects supply chains
- Supply chain partnerships are critical
- Reduce complexity of graphics paper industry
  - Grades & Basis Weights
  - Colors
  - Sizes (BIG OEM watchout)
  - Surface Finishes
  - Packaging Format (skids vs cartons)
- Value of a stocking merchant



### Prescription for Success



1. Pick the right sustainable supply chain partners
2. Plan & Forecast & share with supply chain partners
3. Be flexible (brands, basis weights, sizes)
4. Be prepared to carry inventory as buffer for seasonal demand needs & un-forecasted demand
5. Be confident in the value add of paper/print to be able to sell through the cost increases

# Wrap Up



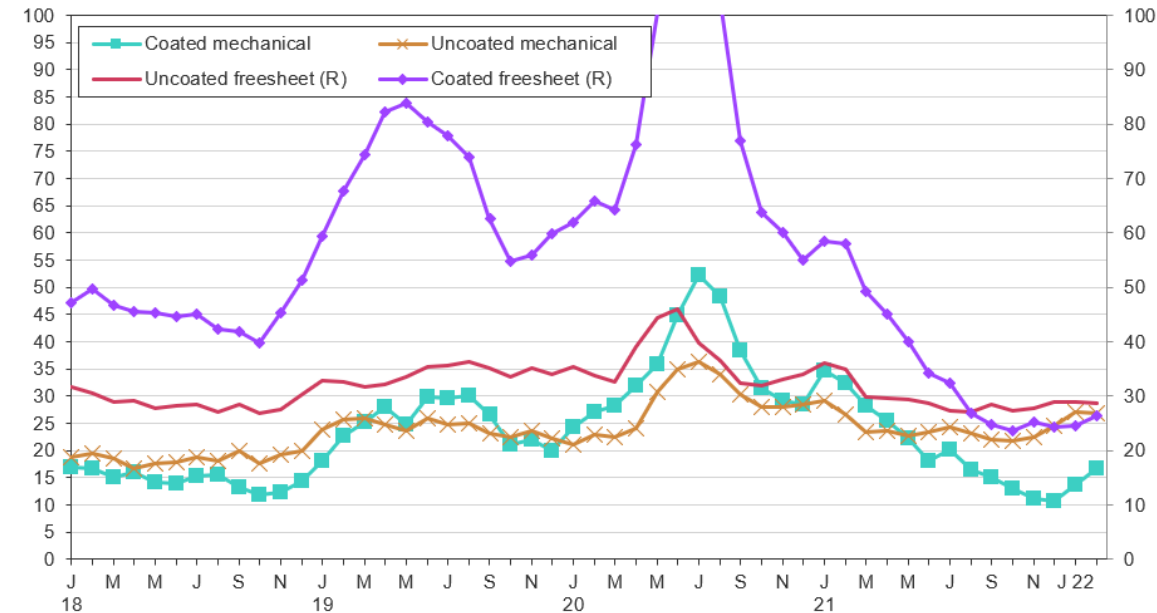
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North American producer inventories of printing & writing papers  
Days of supply

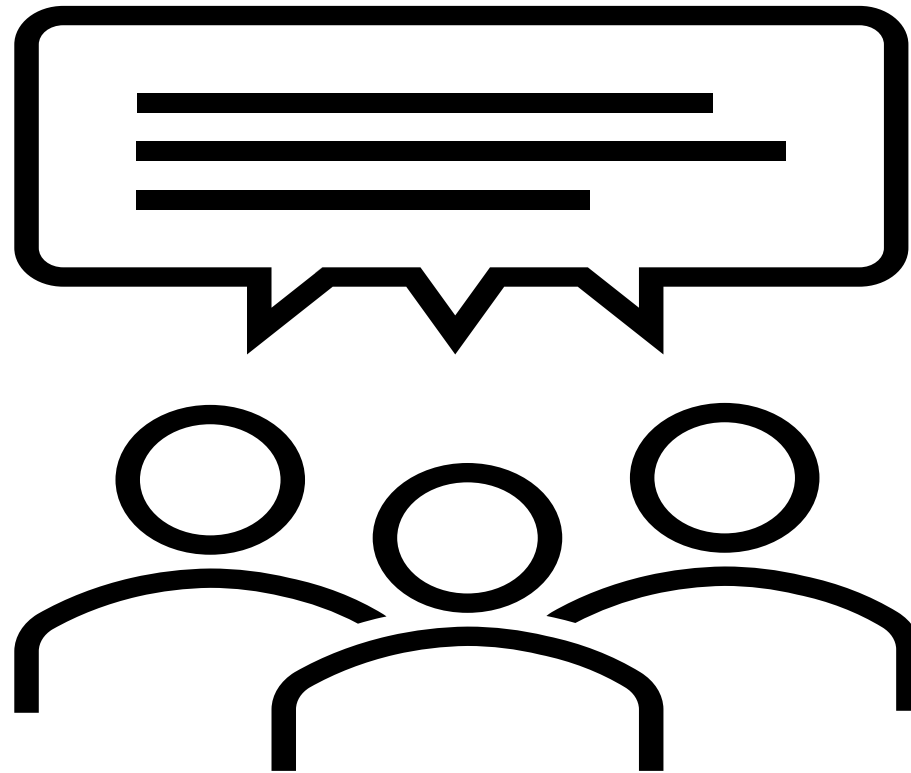


Data source: Calculated by Fastmarkets RISI from PPPC data.

Need a new definition of "Normal". It's unlikely that excess supply will re-occur over the mid-term. The industry's ability to react and cover seasonal spikes or slugs of un-forecasted demand likely not until mid-2023. The need for healthy and sustainable producers, converters, and printers is imperative. The need for supply chain partnership collaboration has never been greater than now!

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# Questions ?



# Thank you



On behalf of the entire Millcraft organization, we thank you for the opportunity to share our insights with the hopes that a better-informed industry is better prepared for thriving together!

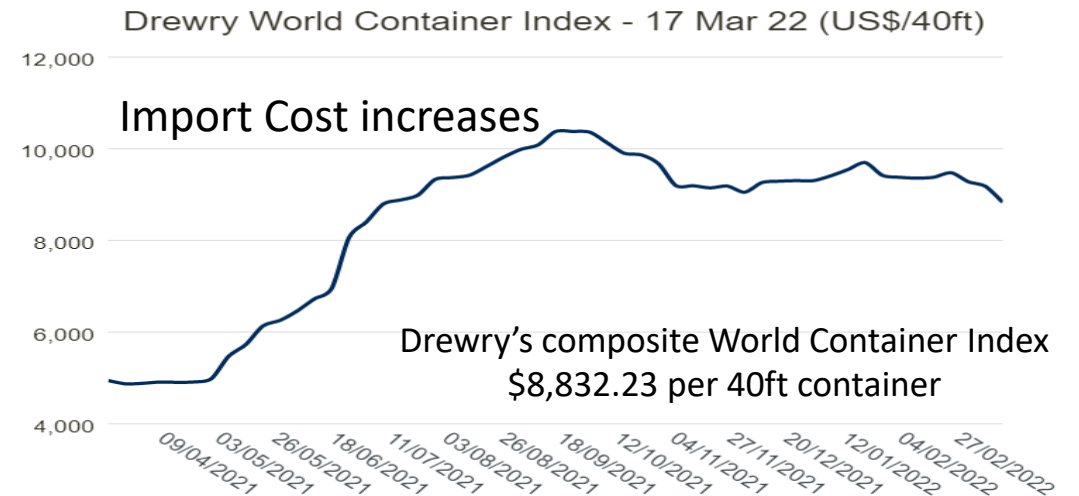
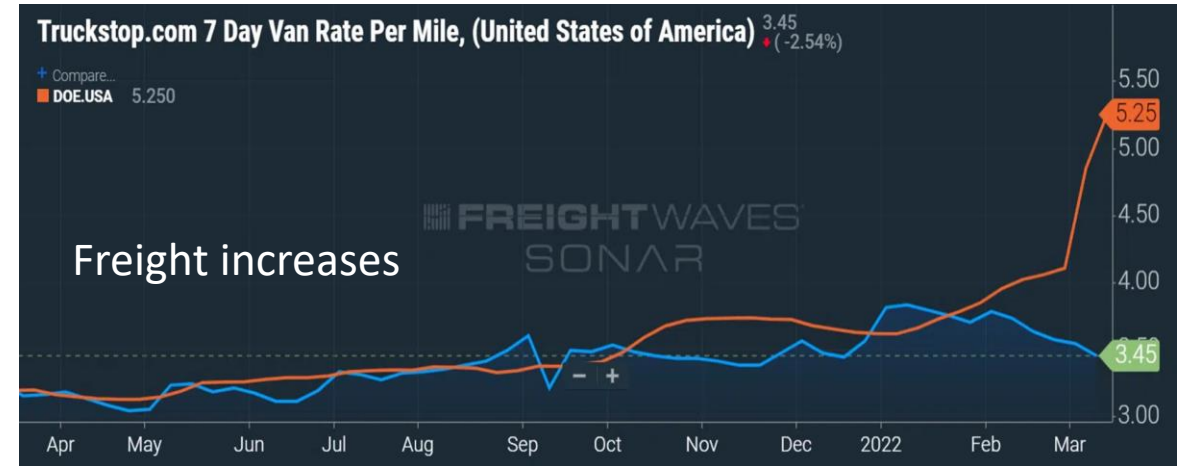
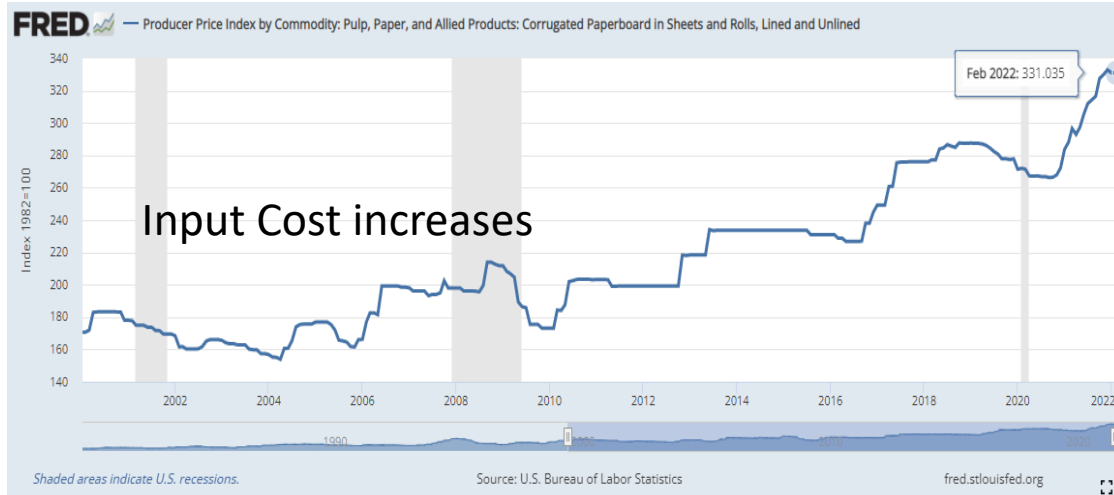
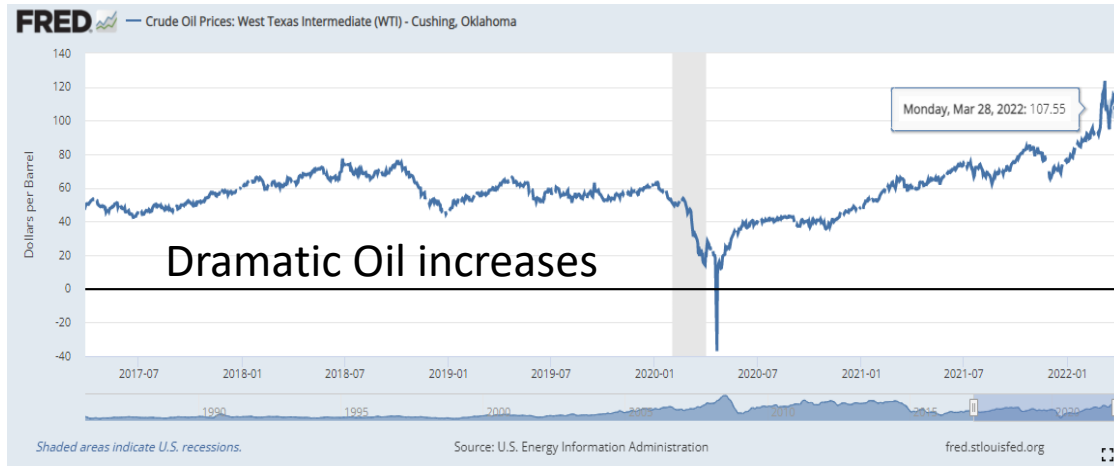
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# Appendix

# Issues & Impacts



Run up in Oil is fueling latest round of price increases as it's a feed stock for chemicals as well as drives up transportation cost. Imports at bay due to container costs, energy costs in Europe, China port closures

# Concerns Over Ballot Availability

- Forecasting demand is imperative!
- Order as early as possible to allow for the demand to be factored in over several production cycles. 90-180 days if possible.
- Do not expect to see rapid turnaround times for paper availability. Inventory levels are still not rebuilt to handle unplanned and/or irregular demand.
- Reimagine ballot forms and make the best/most efficient use of paper.

