

# Vested Metals Market Update



December 2022 Issue

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### Headquarters: Sales & Operations

7000 US Highway 1 N STE 504  
Saint Augustine, FL 32095

### Sales Office

1690 Broadway Bldg. 19, STE 165  
Fort Wayne, IN 46802

## 2023 Outlook & Trends Q&A With Industry Veteran Tom Zuccarini

*Tom Zuccarini recently retired from Carpenter Technology after 37 years of service and is Vested Metal's new Chief Commercial Officer*

**The biggest factor impacting titanium prices has been supply constraints related to the Russian conflict with Ukraine. Heading into 2023, do you expect any change in the dynamics currently in place?** *Assuming some level of economic stability in 2023, pricing should stabilize but remain high. Demand will remain strong, but I would anticipate less volatility with raw material inputs. This would include increased sponge capacity and more scrap flowing back into the industry because of the higher production schedules in aerospace. Surcharge mechanisms are built around raw material inputs. This positive could be offset somewhat by uncertainty with inflationary pressure for non-raw material inputs. Additionally, I believe our customers will return to near-normal purchasing patterns, meaning less risk mitigation behavior than we've seen in 2022 due to the Russian invasion of Ukraine. Medical Market demand should remain strong as hospitals will fast track elective procedures and more Ambulatory Surgery Centers (ASC's) are opening which will focus on orthopedic procedures exclusively.*

**What supply chain strategies have been the most successful in 2022 and how do you think those strategies will perform in 2023?** *2022 confirmed that geopolitical factors can have a major impact on markets. Many companies scrambled to shift demand to new suppliers or increase existing relationships. **Continues On Page 2***

### Vested Metal's 8(a) Certification Can Help Your Business Access Significant Government Contract Revenue

The federal government allocates billions in contracting dollars each year to 8(a) certified companies. Through joint ventures with Vested Metals (teaming agreements) companies that do not have this certification can compete for 8(a) contracts.

Vested Metals is an experienced government contractor that is now 8(a) certified and is looking for teaming agreement partners. Please contact us to learn more. Also, see our [Capabilities Statement](#) for additional details related to Vested Metal's teaming agreement value proposition.

## Page 1 Continued

*Companies that achieved a greater understanding of their supply chain and identified potential risk factors will be in a better position in 2023. Carrying higher inventory levels should serve as an insurance policy for the uncertainty that exists in 2023.*

### **You've been through several industry cycles - what are a few fundamental supply chain strategies to consider regardless of where we end up in the cycle in 2023?**

*I think it is important not to overreact when it comes to strategy through the cycles. The approach that has worked best over my career is an analysis that includes multiple scenarios in the short, medium, and long term and assigning a probability to various outcomes. Also, linking up with companies that understand and value long term relationships and manage their business accordingly has proven to be effective. Those companies should have capability, capacity, and breadth of product but also understand that leverage can change, and they should have equally strong relationships with customers and suppliers.*

### **What COVID driven changes to the global supply chain do you expect to be permanent and what changes do you expect to fade in the coming years?**

*One area that I believe will be permanent is a higher company emphasis on well-being, health, and safety of employees. Covid has taken a significant toll on both physical and mental health resulting in loneliness and depression from isolation, stress and anxiety, and despair from lost livelihood. Additionally, I think you will see more small businesses in supply chains. I believe Covid exposed the fault lines in economic development policy and practices by fully supporting big business while small businesses struggled. Moving forward, there will be a focus on small business retention by directing resources and creating policies that will make it essential to have a blend of small and large businesses in supply chains. Small business provides 85% of all job growth and accounts for 95% of all business in the nation. Covid showed us that small business is critical in maintaining a healthy sustainable economy. In the coming years, I would expect the logistical challenges in supply chain to improve and in general terms, companies will be in a better position to handle the adversity of a pandemic type of interruption in business continuity.*



## **Labor Market Weighing On Hospital Profitability Although Pressure Appears To Be Easing**

In 1H 2022, hospital profit margins were down 37% relative to pre-pandemic levels. Elevated expenses are the primary driver of the profit declines. According to a [KaufmanHall report](#), 64% of the expense increase relates to labor and 36% relates to non-labor expenses.

### **Wage growth slowing**

In October 2021, Y/Y wage growth for Healthcare and Education (67% Healthcare weighted) was 6.9% versus just 4.4% in October of 2022. Quits in that same sector also appear to have peaked at 626k in December of 2021 versus quits of only 521k in 2022.

The normalization in key supply and demand indicators is likely the result of increased labor supply, not a reduction in demand for health care services.

First, health care and social assistance job openings hit record levels in September 2022. Second, while overall U.S. job growth has slowed through most of 2022, health care job growth is accelerating and is now above 3%. Lastly, from a longer-term demand standpoint, health care related construction spending is accelerating in 2H 2022 and is now above pre-pandemic spending levels.



"Companies that achieved a greater understanding of their supply chain and identified potential risk factors will be in a better position in 2023."

# Vested Metals Inventory Update

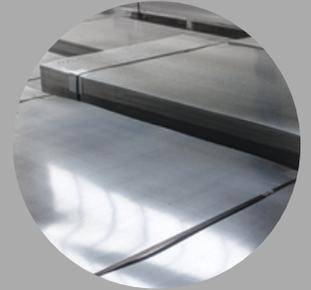
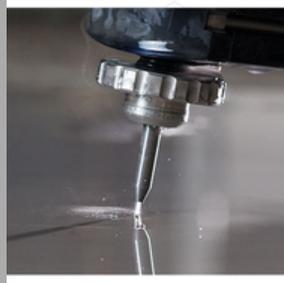
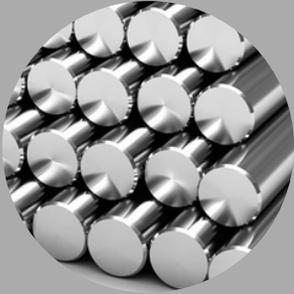
## Featured Items

### 17-4 H900 Stainless Bar:

- Used in applications requiring high strength and a moderate level of corrosion resistance.
- Principal applications include surgical instruments and turbine blades.
- Stocked in a pre-hardened condition to save downstream time for aging final parts.

### 6Al-4V ELI Titanium Plate:

- The ELI (extra low interstitials) variant has moderately high tensile strength, good fatigue strength, and high resistance to general corrosion.
- Principal applications include medical implants, jet engine, rocket components, and automotive components.



## In Stock - Ready To Ship

### Titanium

- 6Al-4V ELI Plate & Round Bar
- 6Al-4V Plate & Round Bar

### Stainless

- 316 LVM Flat & Round Bar
- 420 Mod/X15TN (UNS 42025) Round Bar
- 455 Round Bar
- 17-4 & 17-4 H900 Round Bar, Flat, Sheet & Plate
- C465 Round Bar
- CCM Round Bar

## Waterjet Cutting

- Highly versatile - Waterjet machines can cut most metals up to 18 inches thick
- Tight tolerances - Some material/thickness: +0.0625 IN, minimum tolerance: +0.040 IN
- Clean edges, no burns
- For in house material we can fill orders as quickly as 2 days

[Vested Metals Line Card](#)



## What We're Reading

[WSJ Podcast: The Promise and Peril of One Self Driving Truck Company](#)

[Mining Firm Backed by Bezos and Gates To Begin Greenland Drilling](#)

# Metallurgy Minute

Fred McMann - Metallurgical Consultant For Vested Metals

Quite frequently raw material supplied for machined components is not in the Thermal or Strain Hardened condition that the part print requires. Rather the raw material may be in the solution annealed or simply put, the annealed condition. Producing mills may include (and most should include) capability tests to prove the raw material will meet mechanical property requirements at select heat treated conditions.

So you may have two sets of mechanical properties listed on the Certification from the mill. In the case of 17-4PH solution annealed, .500"rd, you may find the "as shipped" solution annealed Hardness in Rc units. Then you may also find mechanical properties at H900 age hardened and the cert should say "Capability tests at H900". It may show Tensile, Yield, Elongation, Reduction of Area, and also Hardness. Where do these requirements come from?

In the case above, the material may be specified to ASTM F899 and or ASTM A564. Both have charts which show typical mechanical properties (sometimes min and max) of 17-4PH (type 630) at solution annealed conditions AND age hardened conditions. We would speculate that 90% of 17-4PH age hardened is to the H900 condition, thus why it was selected by the mill.



So to conclude, Capability tests show that the mills are manufacturing material in compliance to Industry Standards AFTER appropriate thermal hardening all the while supplying material not yet in that thermal hardened state. A type of quality control if you will.

Other alloys which commonly have Capability tests on their certifications are Custom 465, Custom 455, 440-C, 420, and 13-8. Titanium alloys may also be in the annealed condition before thermal aging and would show capability results as well.



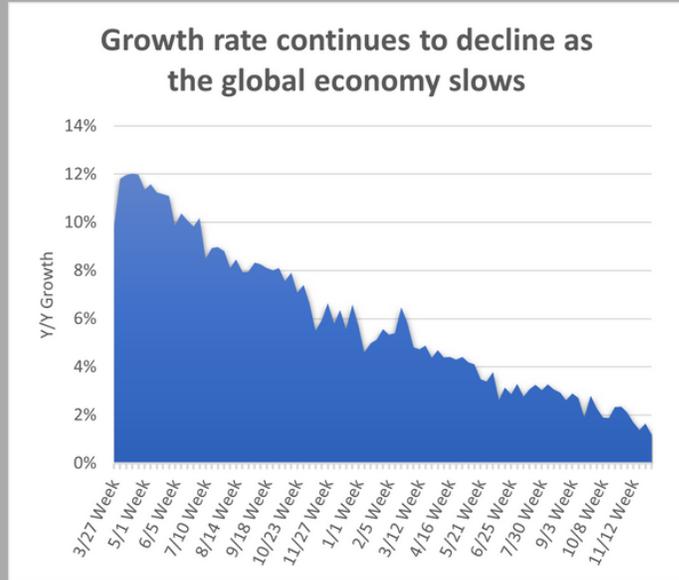
## What We're Reading

[AdvaMed pushes Biden to use \\$52B chip program to support medtech supply chains](#)

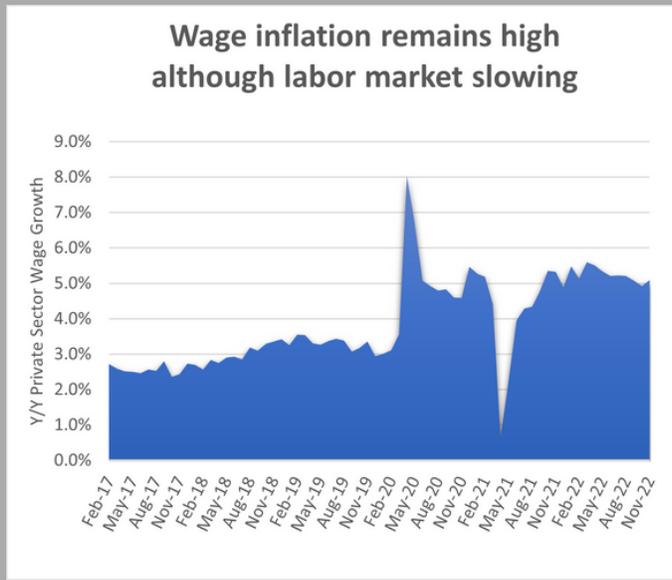
# Economic Trends

## Economic Indicators of Interest

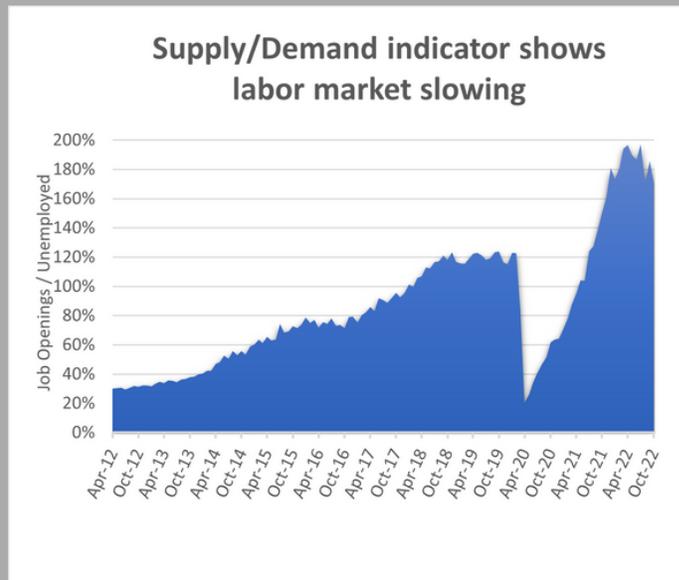
**The Weekly Economic Index** is composed of ten daily and weekly indicators of real economic activity and is directionally comparable to U.S GDP growth.



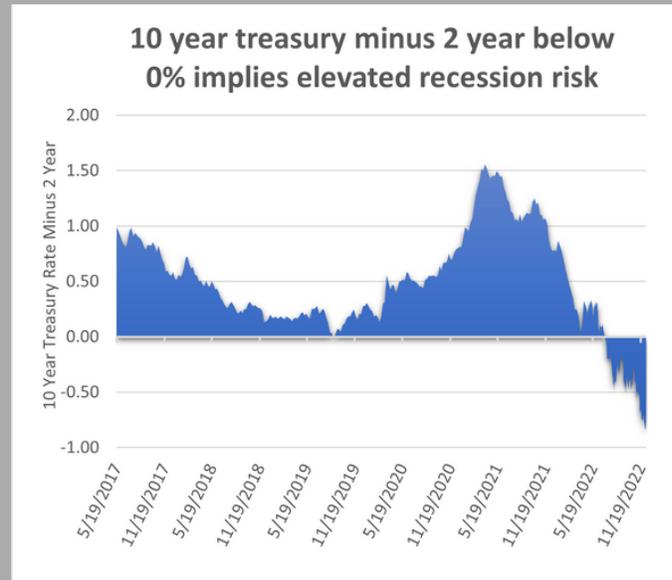
**Private Sector Hourly Wage Growth** measures the change over time in private sector pay rates.



**Job Openings / Unemployment** measures labor market supply versus demand. This ratio is a key inflation causing data point to watch.



**10 Year Treasury Rate Minus 2 Year** is an indicator that tends to go below 0% 6-18 months before a recession begins.



## What We're Reading

[What Higher Interest Rates Could Mean for Jobs](#)



# Vested Metals Overview

Vested Metals International is a certified customer centric metals supplier focused on locating hard to find metals. We provide various grades of titanium, stainless steel, and a range of other metals. Industries we serve include medical, industrial, defense, and aerospace.

Vested Metals is also an SBA 8(a) certified organization and is open to teaming agreements that can expand a company's ability to compete for government contracts.

## Contact Vested Metal's Leadership Team To Learn More



### VIV HELWIG

**President**

**P:** 904-495-7278

**E:** [vhelwig@vestedmetals.net](mailto:vhelwig@vestedmetals.net)

Viv founded Vested Metals in 2014 and has 10+ years of experience in the metals industry.

Under Viv's leadership, Vested Metals earned a spot on Inc. Magazine's 5000 fastest growing companies list three years in a row (2019, 2020 and 2021). In 2019, the Jacksonville Business Journal named Viv to its "Ultimate CEO" list.

He earned his bachelor's degree from Flagler College where he was also awarded an honorary "Doctor of Laws" degree.



### RIC SNYDER

**VP of Business Development**

**P:** 260-443-2204

**E:** [rsnyder@vestedmetals.net](mailto:rsnyder@vestedmetals.net)

Ric has 15 years of industry experience with a focus on orthopedic bar. As a product line manager he developed significant material and technical expertise in a range of raw material products.

He received his MBA from Indiana Wesleyan University and his BA from Indiana University-Purdue University at Fort Wayne.



### TOM ZUCCARINI

**Chief Commercial Officer**

**P:** 724-263-6739

**E:** [tzuccarini@vestedmetals.net](mailto:tzuccarini@vestedmetals.net)

Tom joined Vested Metals in 2022 after 37 years of experience at Carpenter Technology. He has global experience across multiple end markets and products.

He received his Bachelor of Science from Kutztown University of Pennsylvania and his MBA from Aquinas College - Grand Rapids.



### JOHN PULLIAM

**Chief Operating Officer**

**P:** 317-450-1832

**E:** [jpulliam@vestedmetals.net](mailto:jpulliam@vestedmetals.net)

John is one of Vested Metal's founding investors and has 10+ years of experience as a financial professional including 5 years of experience successfully managing a hedge fund.

He received his MBA from Columbia Business School and has experience investing in commodities including copper, oil & gas, and precious metals.



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