




Tank Terminal Merger &
Acquisition Whitepaper

INSIGHTS GLOBAL
ENABLING INTELLIGENT DECISIONS

**What you must know
before investing in
Tank Terminals**



INSIGHTS GLOBAL



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INTRODUCTION

If you are an investment manager looking to make profitable investments in the Tank Terminal industry, congratulations on having downloaded this Whitepaper.

Because in this Whitepaper you'll discover:

- What questions to ask your advisors
- Why big consultancy firms are not your best partner to perform due diligence
- The specific market dynamics and - details you cannot ignore

Choosing the right opportunity

Tank terminals are considered infrastructure assets with a low risk profile that generate stable revenue streams.

Competition for terminal assets is quite fierce. The tank terminal market is also very fragmented with more than a thousand terminal operators and five thousand terminals worldwide.

As a smart investor you will find terminals up for sale. But there is an art to identifying the best Tank Terminals to buy.

In this Whitepaper Insights Global will share important aspects to consider when you do your commercial due diligence.

Minimize cost, maximize results

Strategic players like terminal operators and oil traders buy tank storage assets to support their business goals. Investment funds buy tank storage assets for their stable revenues and margins.

As an investment manager you will be interested in the latter.

Participating in auction processes is time consuming and as you get deeper in the process, your spending rate on advisors and consultants increases.

If it turns out that you lost a bid, the incurred costs and time invested are for nothing. A costly learning experience, at best.

If on the other hand, you win an auction by paying a price that's too high, your portfolio's return on investment will suffer



**Insights Global strives for
better functioning markets in
energy and chemical markets by
enabling intelligent decisions.**

THE CASE OF MR. JOHN

To illustrate the value of hiring expertise advisors, we will use the virtual case of Mr. John, a fund manager of a medium sized infrastructure fund named 'FictiveFund' connected to a pension provider.

John's FictiveFund has just been founded and is full of cash waiting to be invested. John is anxiously looking for investment opportunities, because the current interest rate situation puts a lot of pressure on him.

John comes across an opportunity in the terminal sector. Let's call this opportunity CityTerminal101. The general risk profile is in line with the investment philosophy of the fund. John decides to pursue this opportunity and look at the asset in more detail. Because John is no expert on the terminal sector, he turns to a big consultancy firm – 'LargeConsultant' in this illustration - that he worked with in a previous job as an investor in oil and chemical plants.

LargeConsultant analyzes 'CityTerminal101' and gives John a green light. John participates in the bid process by submitting a non-binding bid to the seller. FictiveFund is selected to go to the next round.

Now things are getting serious for John. He scrambles to gather a due diligence team, sets up various workflows and contract advisors. Because John is new to the terminal industry, he does not hesitate to contract LargeConsultant again in this phase. However, at this time John does not realize that these consultants have no real experience in the tank terminal industry. No-one at LargeConsultant fully understands the dynamics, drivers and trade flows in this specific part of the oil and chemical value chain relevant to CityTerminal101.

Not knowing what he doesn't know, John is confident he has selected the right team because it consists of people working at reputable firms with a long standing track record in M&A advisory.

So, John's team sets out to study all the relevant (so they think...) details of the investment opportunity.

They look at:

- Market outlook
- Client contracts
- Opex
- Capex
- Ebitda
- Trade flows
- Supply and demand imbalances

John has no reason to suspect something is missing from his due diligence and risk assessment study.

However, Johns team is overlooking at least one crucial fact:

Due to vessel congestion in the port, the berth occupancy rate of this specific terminal is much lower than other terminals in this port. This market dynamic characteristic gives CityTerminal101 an important competitive advantage.

It is the kind of fact that only a business intelligence expert like Insights Global with in-depth factual and actual knowledge of the Tank Terminal industry can provide.

As a consequence of overlooking this important data about CityTerminal101, FictiveFund underestimates the value of this opportunity and bids a price that is too low.

As a result, John doesn't acquire the asset. He is heavily disappointed and frustrated. His team spent a lot of time, effort and money in this M&A process. But John doesn't feel he can really blame anyone, because 'hadn't they checked all the important marks?'

John could only blame himself if he had read the Tank Terminal Merger & Acquisition Whitepaper you are reading now.

What should John do next time when a similar opportunity like CityTerminal101 arises?

For starters, Mr. John should read the next section.

HOW TO BECOME A SUCCESSFUL INVESTOR IN THE TANK TERMINAL BUSINESS

Being a successful investor means that you have a well-diversified portfolio of quality assets that is generating a healthy return on investment.

This means:

- Fund management costs are low
- Due diligence costs are low
- Your risk assessment is solid
- You close a high number of deals by winning bids

How to hit the sweet spot in Tank Terminal bids

Services like Insights Global will not only help you find enough investment opportunities (deal flow). Fast, factual, actual and accurate assessments will also help you hit the sweet spot for each bid.

By knowing industry specific facts about your investment opportunity, you minimize the risk of bidding too high. So, you avoid ending up paying too much or bidding too low, losing the opportunity altogether.

We advise a diligent phased approach, where after the end of each phase you decide whether to continue or exit the process.

Phase 1A : Get a first impression of the asset

Phase 1B : Get a first impression of the seller

Phase 1C : Get a first impression of competing bidders

Phase 2 : Securing approval from your investment committee

Phase 3 : Getting funding from banks

Especially in the first phases you'll want to keep your costs low. The biggest problem in phase one is that you have very limited time while information requirements are really high.

In any case you will need a market and commercial review from an independent consultancy firm in order to secure funding. But more than that, when considering Tank Terminal assets, it means you are focusing on highly specific, global dynamic market AND local market knowledge. It is simply IMPOSSIBLE for big general consultancies to provide the required up-to-date information from their shelves, as they might do for other industries, to prepare you for your next bid.

But their shelves are often all they've got.

So how do you identify the right consultancy partner to help you get the information you need?

Meet your ideal independent advisor

How do you identify the ideal independent advisor with required knowledge and experience in the industry to help you become a successful investor in the tank terminal industry?

Know what questions to ask

You don't know what you don't know.

Most investment banking desks will tell you they provide support on terminal assets up for sale and indications on valuations based upon recent transactions and multiples. And they do.

However, to outsmart your competitors in your bid, you need access to the real valuable data.

Competitive value comes from collecting and understanding data on

- a terminal's location
- infrastructure
- activity level
- logistical performance
- the competitive environment
- commercial position
- the business outlook for relevant market segments
- business drivers
- local dynamics

Only if and when you partner with an advisor who understands the industry and will provide you with the essential and detailed insights, you can build your investment case and valuation model.

So, given the complexity and dynamic of the Tank terminal industry, make sure you ask these questions:

- What are the throughput levels?
- What are excess throughput levels?
- How are contracts being structured?
- What are the occupancy rates of the jetties?
- What is the commercial occupancy rate of the terminal?
- How much room for expansion does the terminal have?

Not only will you make the best case possible, you will impress your investment committee and financing provider.

An aerial photograph of a busy port facility. In the foreground, a large red oil tanker is docked at a pier. To its left, several smaller white and blue cargo ships are moored. The port area is filled with stacks of colorful shipping containers (red, blue, green, yellow) and various pieces of heavy machinery, including cranes and forklifts. Large white industrial buildings with multiple loading docks are visible on the left side. The water is a calm, greenish-grey color. The overall scene depicts a complex logistics and shipping hub.

**We combine
a data driven
approach with
on-the-ground-
intelligence.**



INSIGHTS GLOBAL'S SIGNATURE MARKET AND COMMERCIAL DUE DILIGENCE APPROACH

Enabling intelligent decisions

Insights Global is an independent market research company specialized in international petroleum and (petro)chemical industries. We offer market data, market analysis reports, consultancy and training services to support smart commercial decision making. We understand the true complexities and realities, which we translate to clear market and commercial outlooks in our tailored reports.

Not surprisingly, Insights-Global owns and operates the **leading online platform and database for the terminal industry:**

TankTerminals.com

Our customers praise us for being fast, factual and actual, because our data driven conclusions are always cross-checked on the ground.

For instance, we visually check Rhine barge flows fill rate and we can SEE the berth occupancy for Mr. Johns CityTerminal101. Our local contacts in ports will confirm reported congestion in ports.

That's why you will find our people at headquarters in the Netherlands making many international phone calls, day to day.

Teaser assessments

We want to protect you from heading in a direction you'll regret, that's why we provide a free of charge teaser assessment to help you determine if a terminal asset fits your investment portfolio and if you should pursue this particular investment opportunity.

Or find a better opportunity.

Market and Commercial Due Diligence (MCDD) projects

We use a phased approach to Market and Commercial Due Diligence (MCDD) projects:

Initial review

The critical assessment of the IM focusing on key considerations regarding location, market outlook of main segments and competitive position of the terminal(s).

Red flag report

The more detailed analysis of available information with respect to location, terminal infrastructure & logistical performance, its competitive environment and the detailed outlook for its market segments. We determine key risks and develop a first order revenue model.

MCDD (final) report

The MCCD report is compiled and organized for presentation to investment committees and banks to secure your funding. This report builds on the content of the red flag report and adds a scenario analysis and sensitivity analysis that quantifies the impact of major business risks with regard to the asset's value. When applicable, the asset's commercial contracts with its existing clients are analyzed. Major opportunities and risks are identified and documented in the MCDD report and translated to the topline of the financial valuation model.

INSIGHTS® GLOBAL TANK TERMINAL MARKET MODELS

For market and commercial due diligence projects we use our INSIGHTS® GLOBAL tank terminal reality market models, a highly effective practical approach and research methodology. The research methodology aims to provide factual and data-driven conclusions and projections in line with how terminal markets function in reality (not just theory).

INSIGHTS® GLOBAL ANALYSIS FRAMEWORK

In a market and commercial due diligence project the focus is on developing a view on the topline of the business plan.

It is important to have a view on the topline of the business plan, but it is also crucial to conduct a detailed analysis of the terminal characteristic and performance indicators. Insights Global has the required in-depth expertise and an extensive network in the tank terminal market. And don't forget, Insights Global owns tankterminals.com, a database that provides the detailed terminal data you need to make smart decisions. To help you understand our tank terminal market model, it is important to understand Tank Terminal functions and capacity.

Tank Terminal Functions

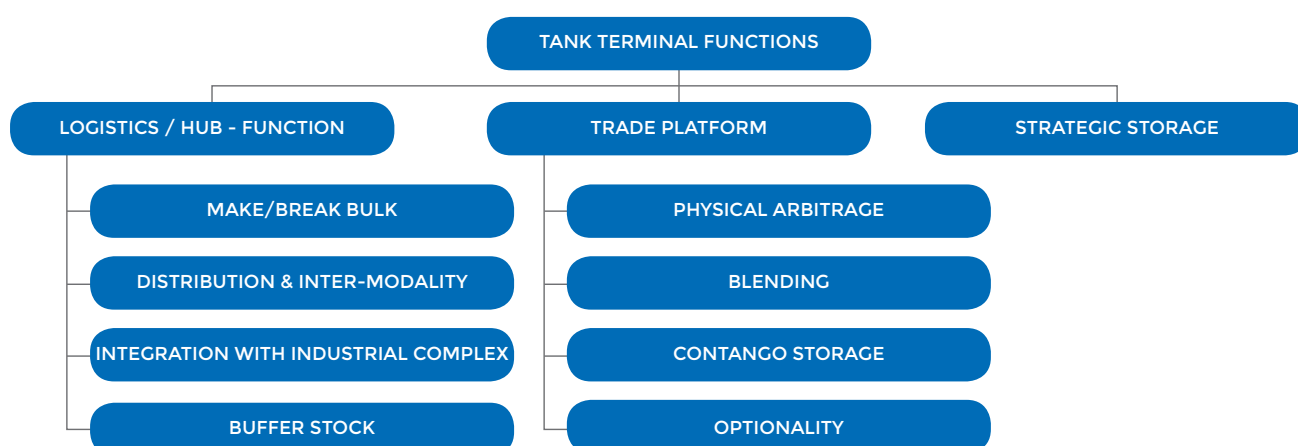
A tank terminal can have various functions for its clients.

Consider:

- logistical purposes
- trading platform
- strategic storage

Tank terminals are likely to support a combination of these functions.

See **figure A** below for tank terminal function details.



Each function has its own commercial specifics and requires a distinct analysis approach.

Tank terminal capacity

When looking at the commercial performance of tank terminals the two main factors are:

1. Storage rates

The price tank terminals get for renting out their tank capacity

2. Occupancy rates

The percentage of capacity that has been rented out to customers

Revenues for renting tank capacity are equal to:

storage rate X occupancy rate X terminal capacity

Example:

An oil terminal of 1 million cbm storage capacity has a monthly storage rate of €3 per cbm.

The occupancy rate on a yearly basis: **90%**.

The yearly revenues are $12 \times 3 \times 1 \text{ million} \times 0.95 =$ **€34.2 million**

For liquid bulk terminals, storage rates or rental fees are often used as an all-in fee. However, sometimes revenues are based on throughput instead of storage capacity. In addition, terminals have separate rates for (un)loading trains and trucks, extra throughputs, nitrogen, heating and other storage related services.

There is no standard terminal situation!

Depending on market circumstances a terminal that functions excellent in certain high value segments can ask premium storage rates and will find enough demand to rent out its tank capacity.

However, the constantly changing markets alter clients' requirements and shift profit potential and demand between market segments.

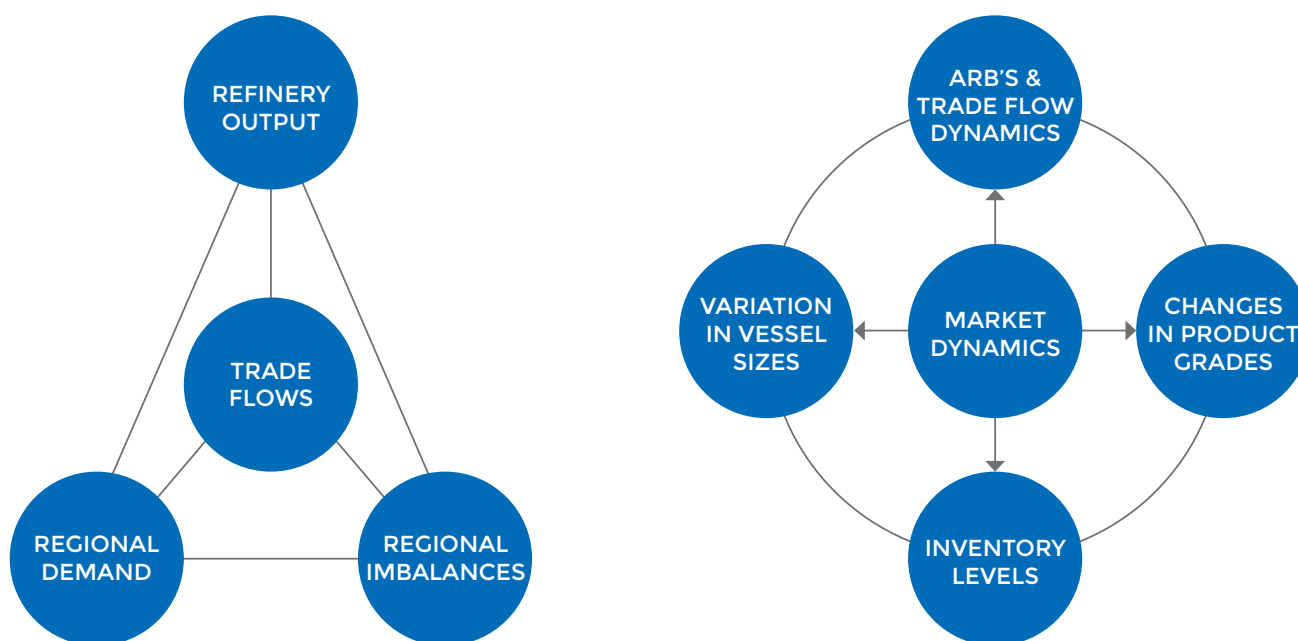
To identify which market variables are relevant and how these variables influence commercial circumstances for tank terminals, INSIGHTS GLOBAL has developed a conceptual model.

INSIGHTS GLOBAL TANK TERMINAL COMMERCIAL PERFORMANCE MODEL

Figure B below shows the relation between market circumstances and commercial performance. In this model market fundamentals drive market dynamics. A terminal with a good fit to these market dynamics will find that their storage rates are supported.



Figure C (below) and **C1** (next page) show the structure of both market fundamentals and market dynamics applicable to the tank terminal sector.



Above: Detailed graphical representation of 'Market Fundamentals' and 'Market dynamics' as part of the INSIGHTS GLOBAL conceptual model Tank Terminal commercial performance (left diagram: Market fundamental 'Logistics' in more detail; right diagram: Market dynamics).

The distinction between market fundamentals and market dynamics lies mostly in the difference in rate of change. Market fundamentals tend to be more stable compared to market dynamics.

Meanwhile, market dynamics have a direct relation to operational activities at tank terminals.

The main focus points in our due diligence reports are related to market fundamentals:

- logistics
- forward curve outlook
- competitive structure

You will also find dedicated chapters on each of these subjects in our due diligence reports. When appropriate and relevant, expected impact on market dynamics and corresponding tank terminal operations will also be addressed.

MARKET FUNDAMENTALS

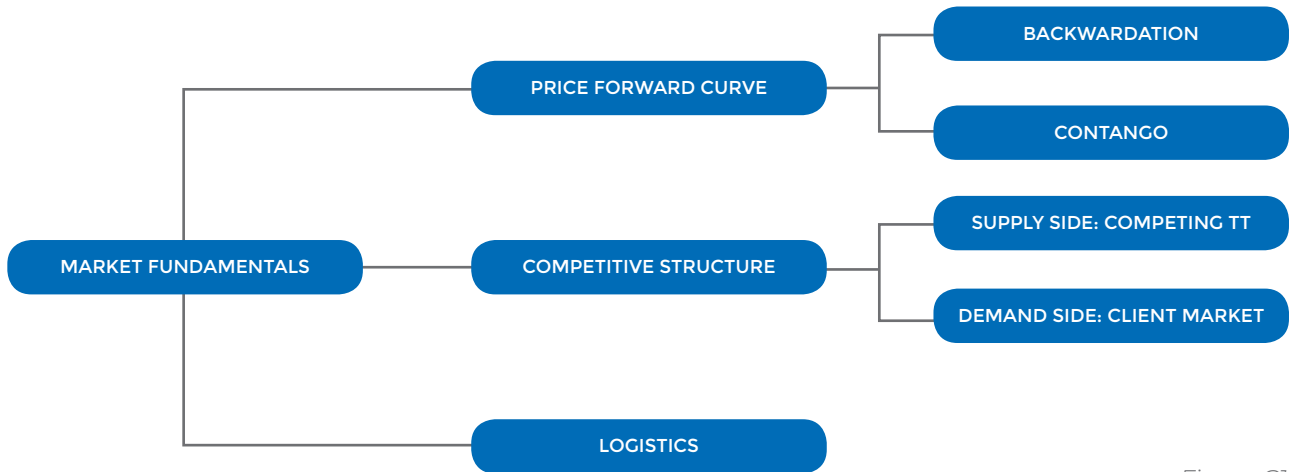


Figure C1

We need to pay close attention to market fundamentals as they influence commercial performance of tank terminals.

Relevant market fundamentals for the oil storage business are

- shape of the forward curve
- competitive market structure
- logistical factors: supply, demand, imbalances and trade flows.

For chemical storage, forward curves are not relevant because there are no financial derivatives markets for chemicals.

Ice Brent Crude Forward Curve

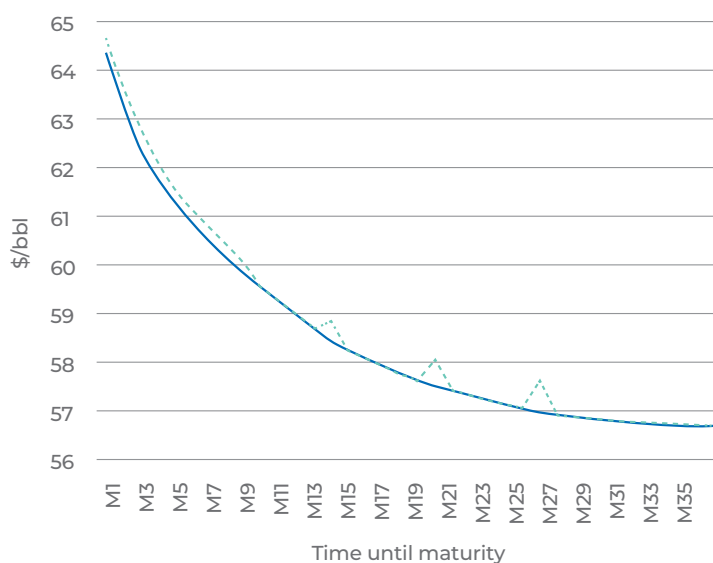


Figure D: ICE BRENT CRUDE forward curve



The shape of the forward curve is determined by (oil) futures markets. The oil price forward curve can be upward sloping (contango) or downward sloping (backwardation). In a backwardated market there is less demand for tank storage than in case of a contango. Inventory levels are also lower in a backwardation compared to a contango. Both demand and tank availability are therefore affected, and this influences the commercial setting.

Supply and demand in a competitive market

The competitive market structure consists of a supply-side and demand-side market structure. Tank capacity and market shares of various terminal operators are key factors that determine the supply-side competition. The number of players, their size and diversity are key factors on the demand-side of the market. Both demand- and supply-side competition influence commercial performance of the terminals.

Factors that influence Tank Terminal demand

Tank terminals are part of the oil and chemical products supply chain and therefore logistical factors such as local product demand, regional refinery and chemical plant output, imbalances and trade flows are very relevant. Developments in these factors influence the demand and requirements for tank terminal capacity.

Product demand levels

Inventories are needed at various locations in the supply chain to balance variations in supply and demand. Inventory levels managed by suppliers should be set at sufficient levels in order to ensure proper service levels. The minimum inventory level needed for a certain service level is proportional to - amongst other factors - the volume that is supplied from that inventory point.

Strategic storage requirements are proportional to oil product and chemical consumption levels. If consumption in a certain region is declining, less inventory is needed to balance variations in supply and demand and less is needed for security of supply reasons.

Oversupply

A frequently occurring situation related to both logistics and forward curves is a global oversupply of crude oil and/or oil products; Supply and demand will be structurally out of balance and as a result inventory levels rise in order to balance physical oil markets. Tank terminal capacity is needed to store the excess product and to stimulate players to hold on to such inventories a contango price forward curve emerges. Because of the nature of the crude oil and oil products markets such periods of oversupply and **contango** tend to last for quite some time, sometimes lasting over three years. This requires a considerable amount of spare tank capacity.

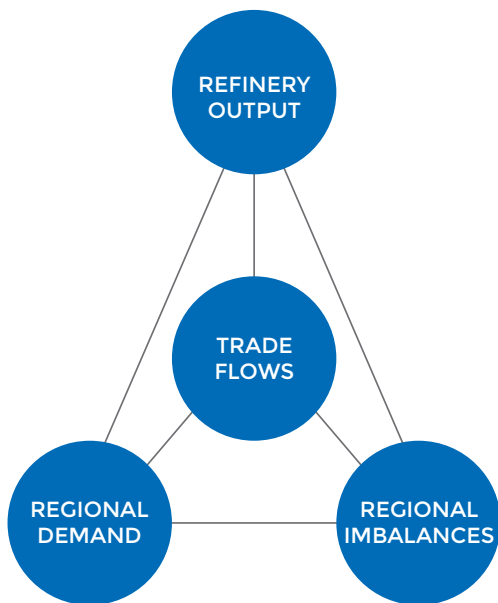


Figure C2

If in a certain location or region there is an **imbalance** between refining or chemical plant output (production) and consumption, this difference will sooner or later be imported or exported from or to other regions, see figure C2. In order to facilitate these trade flows, tank storage capacity is needed. The larger the imbalance, the more tank storage capacity is needed. If these **trade flows** travel over large distances, transport lots become larger in order to capture economies of scale and lower freight costs per ton. This also increases demand for tank storage capacity because tank-sizes are generally related to transport lot-sizes.

MARKET DYNAMICS

Market fundamentals from the previous section are closely linked to market dynamics.

Relevant market dynamics for the oil storage business are

- inventory levels
- arbitrage and trade flows
- changes in product specifications
- variation in vessel sizes

These market dynamics have a direct influence on operations and terminal requirements. A terminal that adapts to these dynamics better and faster than competitors is likely to show superior commercial performance.

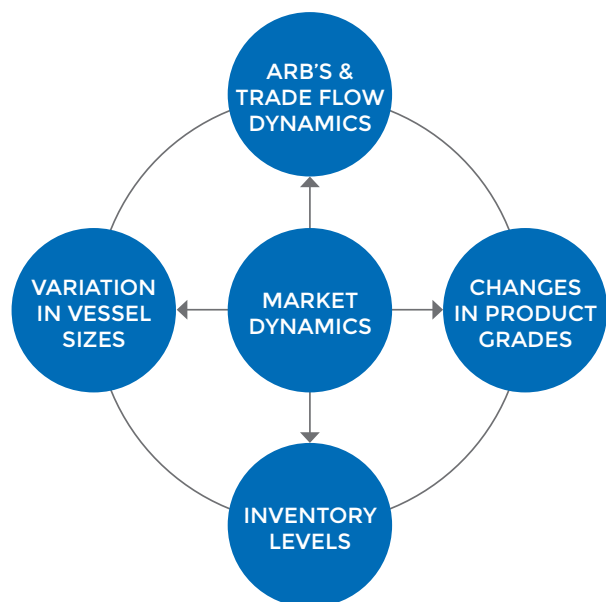
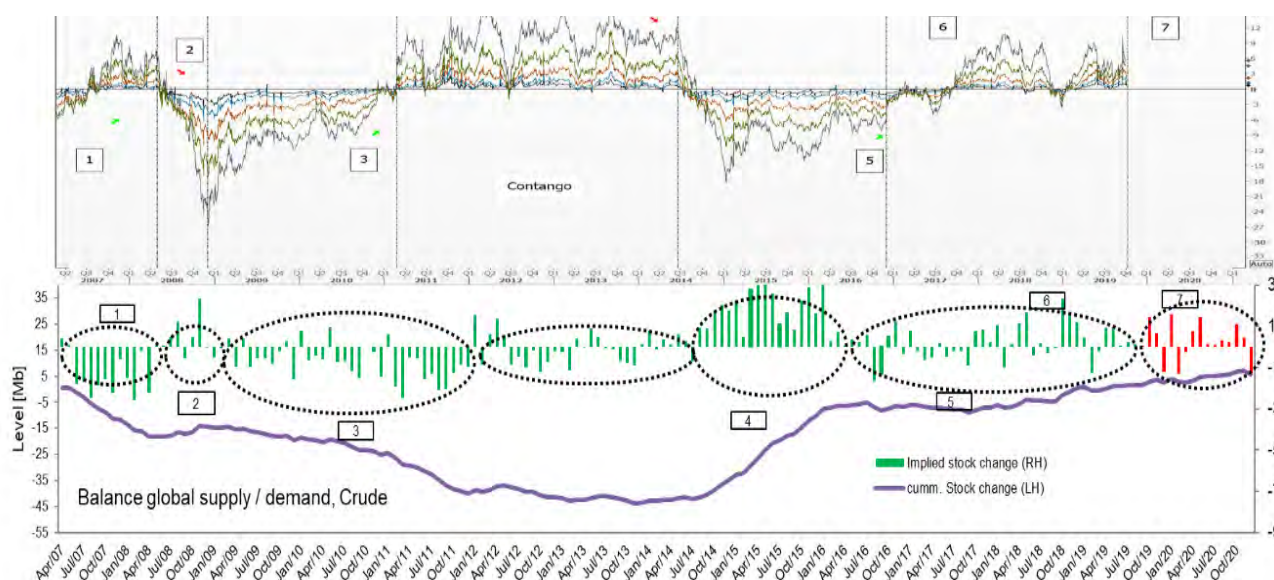


Figure C3

Inventory levels

The shape of the forward curve and global imbalances between supply and demand are both related to inventory levels. In an oversupply situation inventory levels are likely to rise, and the forward curve is likely to be in contango. High inventory levels reduce tank capacity availability and create a shortage in the market. Furthermore, the contango supports storage rates.

But we can also turn this around: In a tight market inventory levels are low, and the forward curve is likely to be in backwardation. Low inventory levels increase tank availability and the backwardation weighs on storage rates.



Source: EIA, Ice Europe

Grade is good

Arbitrage and trade flow dynamics and variation in vessel sizes are linked to each other and to logistical fundamentals as highlighted in the Marketing Fundamentals section of this White Paper. Changes in oil product grades are linked to fuel demand and fuel requirements, which is 22 part of the fundamental 'logistics'. **A market that requires more different grades of product needs more tanks to segregate such grades.** This supports demand.

An aerial photograph of a large industrial facility, likely a refinery or petrochemical plant, situated along a body of water. The facility features numerous large, cylindrical storage tanks, complex piping systems, and a long pier extending into the water. Several large ships are docked at the pier. The foreground shows a road and some greenery, while the background shows more industrial structures and a distant shoreline under a clear sky.

Insights Global provides accurate insights as proven analytics and sound data are used and the findings are verified with on-the-ground-experts.



HOW TO USE INSIGHTS-GLOBAL DUE DILIGENCE REPORTS FOR TERMINAL ASSETS

Our unparalleled due diligence report gives you a sharp view on the commercial outlook of terminal assets. The report is crystal clear in its conclusions and advice.

In the report, you get the answer to three main questions:

- How attractive/favorable is the location of the tank terminal?
- What's the tank terminal's competitive position in the regional market?
- What's the regional market outlook for the tank terminal?

Location factors

Locational aspects are analyzed by studying regional markets with regards to local activity, infrastructure and main trade flows that are applicable and relevant for the specific product market segments, like the Amsterdam Gasoline market, the Antwerp Chemicals market, the Rotterdam Bunkerfuel market or the Singapore middle distillates market and the Houston methanol market.

Competitive and commercial factors

We determine the competitive position and the commercial outlook by analyzing developments and outlook in relevant market fundamentals and market dynamics.

Specifically, we analyze the different relevant KPI's like tank occupancy and utilization rates, tank turns and berth occupancy rate compared to competitors.

Market outlook

In our market research we deploy our extensive market intelligence.

We have access to data on

- storage rates
- logistical performance
- market segments
- terminal's clients
- production capacities refineries and chemical plants

In addition, our own tanks terminal database contains necessary valuable comprehensive data you can't get anywhere else.

Furthermore, we have developed forecasting models based on econometric research that enables scenario planning. And – like no other consultancy does – we confirm research results with our market contacts on the ground.

That's why our reports will give you the best information and the advantage you need over competing bidders.

Users of our reports say that they really value the clear structure of our due diligence reports. Clear and comprehensive conclusions allow you to quickly assess the potential of your potential tank terminal investment and make the informed intelligent decision you want to make during the stressful and time constraint bid process.

You don't have to worry about missing details or being distracted by irrelevant facts.

BACK TO MR. JOHN

If John had his hands on the Insights-Global due diligence report, he would have entered the bid process with the highest confidence and would have maximized his chances of winning the bid for CityTerminal101 at the right price.

In the process, John would not only have saved his company FictiveFund and team time and money in preparing for the bid. John would also greatly increase his own capacity and reputation as an investment manager. He would not only know what relevant questions to ask for tank terminal investments, he would have access to his dedicated contacts at an independent market research consultant specialized in international petroleum and petrochemical industries for making the most intelligent decisions for his future investments.

What's in a name?

Big consultancy LargeConsultant may have been able to provide John with general (global) insights, but what you need is relevant detailed insights - global.

Are you planning to get into the tank terminal investment game?

To win, you will need advice from highly experienced experts in the tank terminal business.



PROVIDING INSIGHTS TO HELP YOU MAKE INTELLIGENT DECISIONS

If you consider participating in a bid for a tank terminal investment, we offer a full-blown analysis of your teaser document. This Teaser Analysis is **completely free of charge**, because we want to make sure you make the right decision.

[Click here to request your Teaser Analysis](#)

Want to learn more?

Join a FREE Tank Terminal Market Update Webinar

Are you not yet participating in any bid, but do you want to be prepared for the game?

We like to offer you the option of joining one of our free webinars:

MARKET UPDATE WEBINAR

We share the latest updates on tank terminal markets. This webinar usually takes 35 to 45 minutes.

[CLICK HERE TO JOIN](#)

METHODOLOGY WEBINAR

We share details about solutions to your investment and due diligence challenges. This webinar usually takes 40 minutes to an hour.

[CLICK HERE TO JOIN](#)

[Let us help you get the most out of your tank terminals investments.](#)

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