



# How to Use JD Edwards Operations Data for Treasury & Efficiency Analysis

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Treasury and supply chain operations complement each other. Treasury involves turning supply chain data from ERP systems into valuable financial information. Typical treasury activities like liquidity forecasting and cash flow can contribute to optimisation of working capital and cash on hand balances. If your organisation is a multinational or a small or medium-sized company, working capital management impacts the P2P and O2C process within your organisation.

So, what kind of ERP data can you use for treasury and how can you structure these data to support your treasury activities?

**Treasury has increasingly become an important role in manufacturing, trading and distribution companies. Treasury departments use data from bank applications and data from ERP applications like JD Edwards. This article describes some practical examples on how you can use JD Edwards data to set up and support your treasury activities. Cadran has prebuilt solutions on both Oracle BI EE (on premise) and on Oracle BI Cloud (BICS) that can expose the data from the JD Edwards database. This can be an accelerate to quick start any treasury reporting requirements and create actionable intelligence using KPIs and alerts. These can help you act in and on time. The pre-built solutions range from Inventory, Manufacturing, Sales, Procurement and Commodity Trading up to Finance. Data are available real-time.**

### Working capital, liquidity forecast and cash flow

First some background about treasury terminology.

**Cash flow statements** present an overview of the incoming and outgoing cash from operations and investments. Cash flow has a direct link with daily supply chain operations. A company can generate significant operating profit from sales order deliveries, but this can lead to insufficient cash due to high levels of outstanding customer invoices.

**Liquidity forecasting** can give insight in future

cash positions. This will support treasury managers to mitigate financial risks and to manage future currency positions. Working capital shows the difference between your current assets and short term liabilities.

**Current assets** can be identified as outstanding customer invoices, cash & bank balances and inventory. Short term liabilities can be supplier invoices and short term tax-obligations.

If working capital has a positive balance, then an organisation has sufficient current assets to cover short term debts and liabilities. If you'd like to learn more about treasury in general, the website of the Association of Corporate Treasurers (ACT) can be very useful.

The ACT has published an extensive treasury knowledge base on their wiki page. [https://wiki.treasurers.org/wiki/Main\\_Page](https://wiki.treasurers.org/wiki/Main_Page)



## Which data from JD Edwards?

The first thing you need to do, is to determine the selection criteria for the data extraction. Which positions and transactions do we need to include, from each functionality within JD Edwards?

These “raw” data will then need to be structured and presented into an understandable format. A liquidity forecast will use data from various functionalities within JD Edwards, like contracts, sales orders, purchase orders, general ledger account balances and outstanding invoices.

Each data-extraction will have to be defined in detail. If for example we look at sales orders in JD Edwards, you would select sales orders from the sales order detail file (F4211) with a status next between order confirmation and sales update. All other sales orders with a status next below order confirmation, intercompany orders and quotations in F4211 would be excluded.

Future currency related cash positions can be determined by allocating outstanding invoice positions per currency in the accounts receivable file F03B11 to each monetary bank account. You can also consider entering your expected future payments like the monthly wages and TAX/VAT-payments by applying a dedicated financial budget ledger type (like BA) in the account balances file F0902. These business requirements will result in a business script for the extraction of data from JD Edwards into your treasury analysis tool.

The next step is to decide how you will structure the data in a comprehensible format and to group these data in time buckets on a time horizon. Choose the right dates for each transaction/document-type in JD Edwards to ensure that the financial impact of the transaction is presented in the right time bucket for liquidity forecasts. A simple example will show the importance of dates:

For customer invoices in accounts receivable (F03B11), it can make a huge difference for liquidity forecasting if you use the invoice due date instead of the net due dates as the expected cash receipt date.

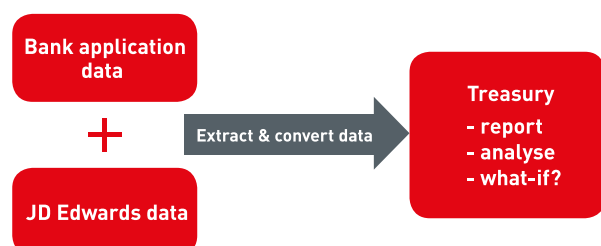
Moreover, you can consider to use the real-life payment behaviour from your top 25 customers to add a number of days to the net due dates. The statistical history file F03B16 can provide you with statistical data at customer group level.

The third step is to decide what frequency you will apply to extract the data from JD Edwards. A liquidity prognosis will present data in weekly and monthly time buckets for future months. If for example you process a weekly payment run in JD Edwards accounts payable, and if you schedule your extraction of outstanding supplier invoices from F0411 before the weekly payment run, then this will affect cash flow reporting and liquidity planning. The company’s payment terms policy will affect the time horizon. Payment terms like Cash-on-delivery will probably narrow down your forecast horizon in smaller time-buckets.

## BI or treasury reporting tool

Working capital balances can easily be derived from the F0902 Balance Sheet account balances in JD Edwards. However, if you want to optimise the working capital balance, you will have to dig deeper into the underlying JD Edwards data such as in Inventory, Accounts receivable and Accounts payable. This requires a reporting tool for treasury analysis and treasury reporting. You can build a tailored data warehouse and use a business intelligence tool to define your own set of treasury reports. A second option is to create treasury reports directly on the JD Edwards database with Oracle BI. Purpose-built treasury applications offer such functionality as well and combine data from JD Edwards with real-time information from bank applications.

If you have some kind of archiving possibility to store each periodic data extraction or snapshot in the data warehouse or treasury application, you can analyse changes in working capital positions.



## Converting the data extraction into relevant financial data

Each kind of transaction in JD Edwards is reflected by a document type, such as SO for Sales Orders, OP for Purchase orders and RI for Customer invoices.

For each treasury related transaction you need to define the data extraction and transformation rules. If we translate this to JD Edwards terminology, you have to define per document-type the data-selection rules and the way these data must be grouped for treasury purposes.

You can, for example, use the promised delivery date and then add the number of days from the payment term to calculate the expected cash receipt date for sales orders (SO) in F4211. For outstanding customer invoices (RI) in F03B11 you can use the net due date. Moreover, you can decide to exclude bad debt customers or to use the actual days sales outstanding per customer to calculate the expected cash receipt date. The JD Edwards work day calendar can be useful to age your transactions in weekly time-buckets.

For purchase orders (OP) in F4311, you can decide to select a user defined % of the outstanding orders (last status approved, and with a promised delivery date from the supplier).

Extend your liquidity prognosis by adding other payment obligations like the monthly wages, interest and the periodic VAT-payments. Add these expected payments as a financial budget in a different budget ledger type (like the BA ledger) in the corresponding period, and use these balances as well for the data extraction.

## Asset based lending

Additionally to treasury and cash planning activities, some organisations use their current assets positions for asset based lending or financial funds. The lender (a bank for example) can use this position to determine the borrowing base.

In JD Edwards terminology, this means that you have to retrieve the balance amounts of inventory, cash and banks balances in general ledger and outstanding invoices in accounts receivable. It's

easy to obtain the end-of-month inventory value from the AS-OF inventory file F41112. If you apply category codes to items at item branch level in F4102, you will be able to select certain groups of inventory. If your inventory is lot based, you can consider applying aging logic by using the lot dates from the lot master file F4108 to depreciate inventory value per lot expiration date.

Assign category codes to your chart of accounts in general ledger to select the cash and banks related general ledger balances from F0902.

In accounts receivable, you can assign category codes to customer groups and intercompany addresses to exclude these outstanding invoices when you extract data from F03B11.

## Key Treasury Value and Risk Indicators

In addition to the treasury reporting, you can consider to use JD Edwards supply chain data to analyse Key Value Indicators, like Days Sales Outstanding (DSO), Days Inventory Outstanding (DIO) and Days Payables Outstanding (DPO). Input for these indicators can easily be derived from JD Edwards transaction history files. These indicators can help you to determine the Cash Conversion Cycle (CCC) of your business, and to use it as a benchmark to compare the efficiency of your supply chain operations with your business competitors. A CCC represents the total number of days that it will take your business to complete the full cycle from paying your suppliers for (raw material) inventory purchases up to the receipt of cash from customer invoices.



DIO shows how long it takes to turn inventory into sales. If your Sales & Operation planning is in control, then this will lead to lower inventory levels, and this will result in lower working capital levels. You can use the inventory ledger file F4111 and the general ledger account balance file F0902 for inventory cost accounts to calculate the average value. For further in-depth inventory analysis you can use the Item As of file (F41112).

The DSO shows the number of days it will take to receive cash on sales invoices. A low DSO will lead to lower working capital. Data from the accounts receivable statistics file (F03B16) in JD Edwards can be useful to analyse and calculate the DSO and its effect on your liquidity forecast.

The DPO shows the number of days it takes to pay supplier invoices. You can calculate this indicator by combining the due dates from the supplier invoice file (F0411) with the payment details (F0414).

If you use a BI-tool to combine treasury management activities with such financial supply chain performance indicators, you involve your supply chain staff in your treasury activities. The examples in the table below show how such indicators can be calculated.

The cash conversion cycle can be calculated with these figures:

DIO =  $145 \text{ days} / (450 \text{ GBP} / 365 \text{ days}) = 117.6 \text{ days}$   
 DSO =  $45 \text{ days} / (750 \text{ GBP} / 365 \text{ days}) = 21.9 \text{ days}$   
 DPO =  $75 \text{ days} / (450 \text{ GBP} / 365 \text{ days}) = 60.8 \text{ days}$

The Cash Conversion Cycle =  $117.6 + 21.9 + 60.8 = 200.3 \text{ days}$ , meaning that it would take on average 200 days to convert cash paid to suppliers up to the receipt of cash from sales orders.

## Keep it simple

The implementation and roll out of treasury reporting doesn't have to be a complex and expensive project. The objective of this article is to show you that it doesn't require much effort to start a basic treasury project with JD Edwards data.

Start with a pilot with easy to understand business scripts for the definition of data extraction. Like in operations, there will always be some kind of uncertainty in accuracy.

Discover how your business organisation can learn from using operations data as your backbone for treasury reporting and supply chain efficiency analysis.

	Fiscal Year 31/12/15 (x 1000 GBP/EUR)	Fiscal year 31/12/16 (x 1000 GBP/EUR)
Inventory value (Balance sheet account balances F0902 or Inventory as of (Unit cost x QOH) file F41112)	150	140
Accounts receivable position (or As of Aging report in JD Edwards) from F03B11	50	40
Accounts payable Position (or As of Aging report in JD Edwards) from F0411	80	70
Sales/Revenue (P&L revenue account balances in F0902)	750	
Cost of goods sold (P&L cost account balances in F0902)	450	
Average inventory level	$(150+140)/2=145$	
Receivables position	$(50+40)/2=45$	
Average Payables position	$(80+70)/2=75$	

Treasury analysis and reporting isn't just about managing financial risks. It will result in better coordination between treasury and supply chain. You will be able to analyse each step of the cash conversion cycle. It will improve your net working capital, and it will help you to further optimise your supply chain set up in JD Edwards.

Keep it simple and then you will automatically start to learn about the interaction between treasury, financial management and supply chain management in JD Edwards.





**Cadran** is a certified Oracle Platinum Business Partner and reseller. Since 1998 we have implemented and sold Oracle JD Edwards ERP software and now also Oracle Cloud.

Our specialization in the manufacturing industry and wholesale companies ensures that we can support our customers with our in-depth knowledge in these sectors.

Cadran is also co-founder of **Redfaire International**, a joint venture between four European JD Edwards consultancy organizations with more than 200 JD Edwards specialists combined.

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