

SPLC <GO>

SUPPLY CHAIN ON BLOOMBERG

(Updated 9/23/2011)

SPLC <GO> offers industry-leading insight into a company's supply chain relationships. Users can map a company to its customers, suppliers, and competitors, and therefore begin to measure and analyze a company's supply-chain health based on the wealth of financial data available on the Bloomberg terminal. Bloomberg is currently covering the supply chain relationships of 35,000 companies from source documents in over a dozen languages. Additionally, Bloomberg offers a vast amount of *proprietary* supply chain relationship data unavailable from other sources. As a function, **SPLC <GO>** takes this data and answers several questions, including (but not limited to):

- Who are a company's biggest customers?
- Who are a company's biggest suppliers?
- What suppliers are most exposed to a given company?
- How have a company's customers and suppliers performed in terms of recent financial results?
- What are Street expectations for a company's customers and suppliers relative to the company itself?

What is Supply-Chain Data?

Unlike competitive, peer, or sector-based relationship data, supply chain data is focused on *actual business relationships* between companies. Supply-chain data helps uncover money flows between companies on both a customer (revenue) and supplier (cost) basis. Supply-chain data can help the user predict changes in a company's business based on events in its supply chain.

Why is this Data Difficult to Procure?

Unlike other types of financial data, supply-chain data are typically incomplete. There is little in the way of mandated supply-chain disclosure requirements among public companies globally. In the US, the SEC's Regulation S-K governs what financial data must be disclosed by public companies that trade on a US exchange. Reg S-K states only that customers must disclose customers that are greater than 10% of revenues on an annual basis. There are no other customer requirements, and no supplier requirements. Other countries' exchanges lack even this level of relationship disclosure.

Compounding this lack of mandated disclosure is the fact that companies disclose this data in a variety of media, including but not limited to:

1. Public filings, including annual and other periodic reports
2. Conference call transcripts
3. Capital markets presentations
4. Sell-side conferences
5. Company press releases
6. Other items on company websites

How Does Bloomberg Solve this Problem?

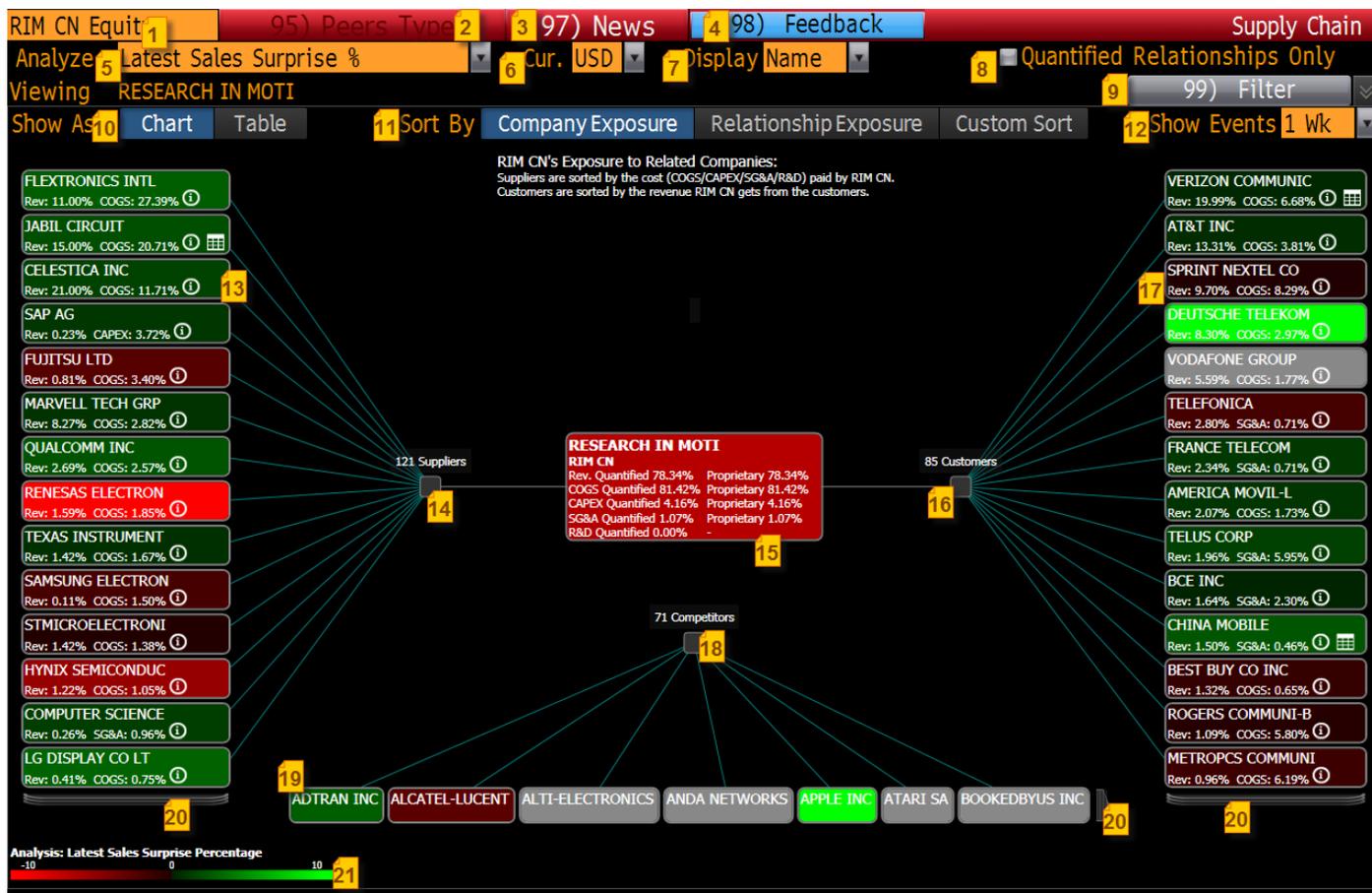
Bloomberg employs both human and computerized methods to aggregate publicly disclosed data. In addition, because this data set is incomplete, Bloomberg also provides proprietary quantified supply-chain data. This proprietary data consists of two types: 1) mathematically derived, and 2) algorithmically derived.

Mathematically Derived Data.

Bloomberg presently has hundreds of thousands of supply-chain relationships, and this number is growing daily. For each of these relationships, we determine how the product or service that is being sold is accounted for by the customer, and we put it into one (or more) of four "cost buckets": COGS, CAPEX, R&D, and SG&A. Thus when INTC tells us in its 10-K that it receives 21% of its revenues from HPQ, we identify the fact that INTC is selling semiconductors to HPQ, and that HPQ accounts for these semiconductors as a COGS item on its income statement. We then multiply 21% times INTC's revenues and divide that by HPQ's COGS, and derive that INTC represents 9.5% of HPQ's COGS. This number, while proprietary derived and currently unique to Bloomberg, is nevertheless factual, insofar as the number that INTC gives us (21%) is correct.

Algorithmically Derived Data.

Bloomberg has an algorithm that takes into account numerous types of data -- including but not limited to quantified and unquantified relationships, accounting types, financials, geographies, end markets, operating segments, products, channels, and a variety of industry data. We are then able to assign quantified values to relationships where no quantification is publicly known. Take, for example, AAPL and T. Many people know that T is a customer of AAPL, but neither AAPL nor T disclose the size of the relationship. Bloomberg's algorithm determines that AAPL receives 5.11% of its revenues from T, and further that AAPL accounts for 9.49% of T's COGS (at the time of this writing). Further, we plan to provide statistical confidence intervals to provide users the range for which we have high confidence in which this single-point estimate resides.



Summary: Chart View

As the screenshot above indicates, a company's supply chain is laid out with its suppliers on the left, customers on the right, and competitors or peers above.

- Autocomplete:** like other Bloomberg functions, use this box to type in a company's name or ticker. Hit <GO> and that company loads. Alternatively, clicking on any company in the diagram will make it the center company.
- Peers Type:** if the center company is covered by Bloomberg Industries (BI), allows user to select which BI Peer Index to compare to the center company.
- News/Content:** This is a link to NI SPLC<GO>, which shows real-world stock idea generation examples using the SPLC function
- Feedback:** clicking this allows user to submit feedback on the function.
- Analyze:** provides user with several financial templates, allowing them to analyze supply chain by price change, revenue expectations, inventory growth, etc.
- Currency:** by default, shows currency of center company; allows user to select numerous other currencies.
- Display:** toggles between showing Ticker and Company Name on each node
- Quantified Relationships Only:** selecting this check box displays only quantified relationships (i.e., those with a numerical value).
- Filter:** user can click this button and filter on multiple criteria, including indices, portfolio(s)/monitor(s)/watch list(s), market cap, BICS/GICS/ICB classification, and other data.
- Show As:** allows the user to toggle between Chart and Table view.
- Sort By:** allows user to choose between three sort orders:
 - Company Exposure:** this view sorts suppliers in descending order according to the cost of the central company, and customers in descending order as a percentage of the central

company's sales. In other words, this answers the question, "To whom is the center company most exposed?"

- b. **Relationship Exposure:** this view sorts suppliers in descending order according to revenues received from the central company, and customers in descending order as a percentage of the central company's costs from their perspective. It is the inverse of Company Exposure. In other words, this answers the question, "What companies are most exposed to the center company?"
 - c. **Custom Sort:** this allows the user to completely customize the sort order, based on accounting type, analyzed metric, or other criteria
12. **Show Events:** user can show events throughout the supply chain on a 1-day, 1-week, or 1-month basis; events are displayed as a calendar icon on each node. Clicking each node launches EVTS for that company. Further, events can be sorted via the Sort By dropdown.
 13. **Suppliers:** suppliers are listed according to the sort order selected. Right clicking on any node reveals a host of additional Bloomberg functionality attached to that node, including FA, DES, GP, EEO, CN, BRC, RSKC, OMON, BI, MGMT, and TBR.
 14. **Supplier Node:** Shows the number of suppliers to the center company, according to any filtering that is applied
 15. **Center company:** summarizes the percent of the company's revenues, COGS, CAPEX, SG&A, and R&D that Bloomberg has quantified, as well as the percent of that data that is proprietary to Bloomberg.
 16. **Customer Node:** Shows the number of customers of the center company, according to any filtering that is applied
 17. **Customers:** customers are listed according to the sort order selected. Right clicking on any node reveals a host of additional Bloomberg functionality attached to that node, including FA, DES, GP, EEO, CN, BRC, RSKC, OMON, BI, MGMT, and TBR.
 18. **Competitor node:** if the center company is under Bloomberg Industries (BI) coverage, then a BI Peers index appears. Otherwise, a list of competitors from the companies themselves appears. This list is a union of a) all companies that the center company says are its competitor, and b) all companies that say they are the competitor of the center company. This list can be a bit noisy as a result, with many small companies claiming to be competitors of larger, more mature ones. Right clicking on any node reveals a host of additional Bloomberg functionality attached to that node, including FA, DES, GP, EEO, CN, BRC, RSKC, OMON, BI, MGMT, and TBR.
 19. **Competitors:** competitors are listed in alphabetical order by default. Right clicking on any node reveals a host of additional Bloomberg functionality attached to that node, including FA, DES, GP, EEO, CN, BRC, RSKC, OMON, BI, MGMT, and TBR.
 20. **Scroll buttons:** clicking these buttons will scroll to the next group of suppliers, customers, or competitors
 21. **Color legend:** used to quantify the color scheme described in 11) above.

Summary: Table View

Clicking on the Table tab described in 10) above reveals the Table View, which is presented below. This is the same unique data set that is available in the Chart view, only in tabular format. Elements that are also part of the Table view that have already been addressed earlier (such as the Autocomplete functionality, the Defaults button, etc.) are not repeated for this section.

RIM CN Equity		95) Peers Type		97) News		98) Feedback		Supply Chain		
Analyze	Latest Sales Surprise %	Cur. USD	Display Name	Quantified Relationships Only						
Viewing	RESEARCH IN MOTI								99) Filter	
Show As	Chart	Table	View	Suppliers	Customers	Peers	93) Fields			
			Add Column							
Name	Country	Market Cap	Sales Surprise	%Revenue	Relationship Value	Account As Type	%Cost	Source	As Of Date	
RESEARCH IN MOTI	CA	11.08B	-6.73%							
2) FLEXTRONICS INTL	SG	3.98B	2.81%	11.00%	3.15B	COGS	27.39%	*2011A CF	04/27/2011	
3) JABIL CIRCUIT	US	3.52B	2.07%	15.00%	2.01B	COGS	20.71%	*2010A CF	09/27/2010	
4) CELESTICA INC	CA	1.54B	1.53%	21.00%	378.02M	COGS	11.71%	*2011Q1 CF	04/21/2011	
5) SAP AG	DE	59.61B	1.01%	0.23%	38.69M	CAPEX	3.72%	Estimate	05/18/2011	
6) FUJITSU LTD	JP	9.64B	-2.46%	0.81%	104.57M	COGS	3.40%	Estimate	08/24/2011	
7) MARVELL TECH GRP	BM	8.83B	0.86%	8.27%	298.70M	COGS	2.82%	Estimate	02/09/2011	
8) QUALCOMM INC	US	84.04B	2.35%	2.69%	295.66M	COGS	2.57%	Estimate	03/03/2011	
9) RENESAS ELECTRON	JP	2.71B	-11.70%	1.59%	53.36M	COGS	1.85%	Estimate	06/14/2011	
10) TEXAS INSTRUMENT	US	30.30B	0.69%	1.42%	48.13M	COGS	1.67%	Estimate	06/08/2011	
11) SAMSUNG ELECTRON	KR	95.77B	-1.76%	0.11%	38.15M	COGS	1.50%	Estimate	09/21/2011	
12) STMICROELECTRONI	CH	5.66B	-0.09%	1.42%	145.72M	COGS	1.38%	Estimate	02/02/2011	
13) HYNIX SEMICONDOC	KR	10.29B	-5.38%	1.22%	30.36M	COGS	1.05%	Estimate	06/06/2011	
14) COMPUTER SCIENCE	US	4.04B	1.36%	0.26%	10.77M	SGA	0.96%	Estimate	07/08/2011	
15) LG DISPLAY CO LT	KR	5.63B	3.04%	0.41%	95.11M	COGS	0.75%	Estimate	06/03/2011	
16) ROHM CO LTD	JP	5.79B	2.79%	1.94%	19.86M	COGS	0.65%	Estimate	09/09/2011	
17) SANDISK CORP	US	9.91B	2.76%	1.56%	75.07M	COGS	0.63%	Estimate	06/14/2011	
18) ANADIGICS INC	US	152.58M	-0.26%	26.00%	56.35M	COGS	0.49%	*2010A CF	03/09/2011	
19) BROADCOM CORP-A	US	18.26B	-0.59%	0.69%	47.05M	COGS	0.44%	Estimate	02/03/2011	

- Show As:** shows Table View (as opposed to Chart View) selected
- View:** Allows the user to select suppliers, customers, or peers
- Add Column:** Here a user can search for any financial data on the terminal, using the autocomplete feature. Examples include valuation metrics (P/E, P/B, P/S, etc), liquidity measures (average daily trading volume, etc.), and virtually any other data on the terminal. This type of functionality is the same that is available in other Bloomberg functions like EQS and RV. Hitting <GO> brings that column into the grid, and the user can then drag it to the position they'd like, and also sort on that value.
- Column Headers:** Column headers can be dragged to any horizontal position. In the screenshot above, "Ticker" appears first, but the user could drag this column to the third position, after Market Cap, for example. Additionally, right-clicking column headers reveals sort options (ASC/DESC), a Definition for that column/field, the ability to delete that column from view, etc.
- Center company:** The center company is presented in light blue text, to allow for comparative purposes
- Stats:** Users can select these items, which appear at the top for comparison purposes.

Contact

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