TOWER SEMICONDUCTOR LTD
Form 6-K
February 16, 2012

FORM 6-K

SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

For the month of February 2012 No. 6

TOWER SEMICONDUCTOR LTD.
(Translation of registrant's name into English)

Ramat Gavriel Industrial Park
P.O. Box 619, Migdal Haemek, Israel 23105
(Address of principal executive offices)

Indicate by check mark whether the registrant files or will file annual reports under cover Form 20-F or Form 40-F.

Form 20-F x Form 40-F o

Indicate by check mark whether the registrant by furnishing the information contained in this Form is also thereby furnishing the information to the Commission pursuant to Rule 12g3-2(b) under the Securities Exchange Act of 1934.

Yes o No x

On February 16, 2012, the registrant filed presentation following its Q4 and 2011 financial results release.

SIGNATURES

Pursuant to the requirements of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized.

TOWER SEMICONDUCTOR LTD.

Date: February 16, 2012 By: /s/ Nati Somekh Gilboa
Name: Nati Somekh Gilboa
Title: Corporate Secretary

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2011 Results
and Growth Engines
February 16, 2012

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Safe Harbor and Disclaimers

This presentation contains forward-looking statements within the meaning of the “safe harbor” provisions of the Private Securities Litigation Reform Act of 1995. These statements are based on management’s current expectations and beliefs and are subject to a number of risks, uncertainties and assumptions that could cause actual results to differ materially from those described in the forward-looking statements.

All statements other than statements of historical fact are statements that could be deemed forward-looking statements. For example, statements of expected synergies from Tower’s merger with Jazz or TowerJazz Japan, customer benefits, costs savings, financial guidance, industry ranking, execution of integration plans and management and organizational structure are all forward-looking statements. The potential risks and uncertainties include, among others, that expected customer benefits, synergies and costs savings will not be achieved or that the companies are unable to successfully execute their integration strategies, as well as other risks applicable to the companies’ business described in the reports filed by Tower and Jazz with the Securities and Exchange Commission (the “SEC”) and, in the case of Tower, the Israel Securities Authority. These filings identify and address other important factors that could cause the companies’ respective financial and operational results to differ materially from those contained in the forward-looking statements set forth in this document. Accordingly, no assurances can be given that any of the events anticipated by the forward-looking statements will transpire or occur, or if any of them do so, what impact they will have on the companies’ results of operations or financial condition. Tower is providing this information as of the date of this presentation and Tower does not undertake any obligation to update any forward-looking statements contained in this document as a result of new information, future events or otherwise.

A more complete discussion of risks and uncertainties that may affect the accuracy of forward-looking statements included in this presentation or which may otherwise affect the companies’ business is included under the heading "Risk Factors" in Tower’s most recent filings on Forms 20-F, F-4, F-3 and 6-K, as were filed with the SEC and the Israel Securities Authority and Jazz’s most recent filings on Forms 10-K and 10-Q, as were filed with the SEC. Actual results may differ materially from those projected or implied by such forward-looking statements. Tower and Jazz do not intend to update, and expressly disclaim any obligation to update, the information contained therein.

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Outline

• 2011 FY and Q4 Financials Results Overview

• Business and Strategy Overview

• Past, Present, Future

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2011 FY and Q4
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Q4 & FY 2011 Financial Results Highlights

§ FY 2011: $611M, up 20% Y/Y vs. $509M in 2010 and up 2X vs. $299M in 2009

§ Q4 2011: $175M, up 29% vs. $135M in Q4 2010

Revenue

§ EBITDA of $187M in FY 2011, a 31% EBITDA margins

§ In Q4 2011 achieved EBITDA of $40M with $30M Positive cash from operations

Profitability

§ After $100M principal payment for bonds in last 3 months

§ 1.7X Net debt/EBITDA ratio, based on 2011 EBITDA, vs. 2.3X in 2010

§ $175M positive shareholders' equity vs. $118M on Dec' 31, 2010

§ Strong & solid financial ratios

Balance Sheet

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The Big Question

The world is going digital… correct?

So why is TowerJazz focused on analog?

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Market Leading Smart Phones

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Apple iPhone4 - a Closer Look

Apps Processor

+ DRAM

NAND Flash

NOR Flash

Quad

Baseband

Logic/Memory

4 Chips

Power

Audio

Display

Touch

PA

Switch

Controller

ESD

Discretes

Gyroscopes

Compass

Analog

Many Chips

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Another example..
Deep digital is the brain..
BUT without analog:
It won’t turn on
Screen won’t display
No wireless, among others…
Analog
Inside!

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The Answer
The world is going digital… correct?
So why is TowerJazz focused on analog?
Because the world is going digital
BUT without analog it won’t work!

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Emerging microelectronics : Two Roads to Follow

350nm-130nm technology nodes

Moderate investments (tens of millions US $) +

lots of Innovation and Creative Thinking

Specialty products : More than Moore

Specialized Image

Sensors

Specialty IC for mobile

applications:

Power Management Ics

(drivers, converters,etc.)

MEMS

ICs for space applications

Example: TSMC

High-performance microprocessors, CPUs, GPUs

(graphic processing units), etc; High Volumes

Plain vanilla CMOS; Moore's roadmap

45nm -22 nm technology nodes

Multibillion US $ investments

Only very large IDMs and huge foundries

(TSMC , UMC, GF, SMIC) can follow this road

Source: Global Foundries

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Capacity Capex	High	Low
Technology Capex	High	Low
Product Lifetime	Short	Long
Customer Engagement	Typically multi-source	Sole or limited source
Technology Differentiation	At leading edge only	Across process technologies
Segment Sizes	Large	Many niches through mid-size
Process Technologies	CMOS	SiGe, BiCMOS, MEMS, CIS
Technology Nodes	65nm-22nm	350nm-110nm

Digital Moore's Law Foundries

Specialty Analog Foundries

Two Types of Foundries

Specialty Foundry Enjoys Several Advantages

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Annual Revenues 2005-2011

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1. Source: IC Insights, Company reports, SemiMD January 2012

Foundry Revenue Landscape: Consistent superior performance

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Specialty Foundry
CMOS SPECIALTY

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Total 8” Equivalent Capacity of
~1.7M WPY

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HPA/RF
CMOS
TOPS-IDM
Corporate Business and
Applications
Power
CIS

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RF and HPA Applications and Technology
RF CMOS and SiGe BiCMOS
§ Cell Phone, WiFi TxRx
§ Basestation, Specialty Wireless
§ TV, Satellite, STB Tuners
RF and Tuners
SOI Switch and SiGe Power Amplifiers
§ Power Amplifiers
§ Antenna Switch
§ PA Controllers
§ IPD
Front-End Modules
High Performance SiGe
§ Optical Fiber Networks
§ Automotive Radar
§ 60 GHz WiFi, 24GHz Backhaul
§ Light Peak and Thunderbolt
mmWave
Complementary BiCMOS
§ Line Drivers DSL, HomePlug, ATE
§ HDD PreAmp
§ OpAmps, DAC, ADC
High Performance Analog
Best-in-Class SiGe, RF CMOS, RF Models and Design Enablement

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Front-End Module

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Switch Market shift to SOI
SOI Wafer Foundry Revenue TAM ($M)
SOI TAM going from ~$30M in 2011 to ~$200M in 2014
Technology Split (%)
Source: company analysis

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Drivers of Demand : Front End Module

Market Trend

• GaAs Switch => SOI technology

• GaAs PA => SiGe PA for several applications

• Silicon based IPD

• PA controller advances but remain RFCMOS

TowerJazz advantages

• Long term customer relationship with FEM leaders

• Best of class SiGe technology

• Qualified SOI technologies

• IPD customer alignment

Hence - Gen+2 market leader development engagements.

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Power: Key Growth Markets

§ Voltage requirements vary by make and Model: Scalable 20 to 80V and low layer count are the primary advantage

FPD DC/DC, LED Backlighting

§ 1.8V CMOS combined with the High voltage module provides the correct balance of performance and cost for medium currents

Digital Controlled Power - PMIC

§ High Power with isolated buried layer Provides the noise Immunity required for >2 Amp applications

High Power/Motor Driver

§ AC to DC conversion

§ Industrial LED lighting

§ High side driver for FETs

AC to DC up to 700V

Enabling our customer base to compete with incumbent solutions with a Modular Platform optimized to cover large voltage range and power requirements

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TowerJazz can take market
shares over all three segments

Drivers of Demand : Power Electronics Market

20 Billion US $ today; Stable ~ 8% market growth rate

Substantially higher foundry growth rate

TowerJazz PM platforms advantages:

• 180nm technology (most competitors
are at older nodes)

• Unique 700V devices

• Unique low-cost embedded NVM

• Original isolation technologies

• Flexible integrated solutions

• World-class modeling

Hence - Gen+2 market leader
development engagements.

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Samsung Selects TowerJazz's "unrivaled" 700V Power Technology
Platform for its Next Generation High Voltage Products
Power Management IC Market Estimated at $14.6B in 2013 according to iSuppli
Samsung Electro-Mechanics Vice President Dr. Jae Shin Lee
and TowerJazz Chief Executive Officer, Mr. Russell Ellwanger

MIGDAL HAEMEK, Israel and SEOUL, Korea, September 5, 2011 - TowerJazz, the global specialty foundry leader, and Samsung Electro-Mechanics, today announced they have signed a Memorandum of Understanding (MOU) to develop and volume produce a variety of product families based on TowerJazz's 700V (TS100PM) power management process.

"We chose to work with TowerJazz on our next-generation of high voltage products because of their superior 700V technology which is unrivaled by other foundries. We were looking for a true partner who would be committed to our success and provide excellent support and the required manufacturing capacity," said Samsung Vice President Dr. Jae Shin Lee. "TowerJazz is well-known in Korea, especially in the power management market, and we are looking forward to our collaboration on many high volume products."

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CIS Key Markets

§ Highest requirements for image quality

§ Large sensors, very high resolution, demanding frame rate

§ Very low defect count allowed

§ Very high sensitivity, dynamic range & low noise

Professional Photography

§ Market Leader for dental x-ray CMOS

§ Supplying all Tier-1 vendors

§ Smallest endoscopy solution

Medical & X-Ray

§ 2D and line sensors

§ High speed and high accuracy

§ “Intelligent” pixels

Industrial Cameras

§ Linear HDR for color imagers

– Reverse & parking assist

– Airbag inflation control

– Dimming mirrors

– Night vision / Obstacle Detection

Automotive & Security

Technology, Flexibility, Experience and Commitment allows our customers to bring to the market the best in class products

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TowerJazz market focus is
specialty CIS
Drivers of Demand : CMOS Image Sensor Market
6 Billion US $ today; stable ~ 7-8% growth rate
TowerJazz CIS advantages:
•Ultra-low noise and dark current
•Specialized solutions for high-end
applications
•Large area images employing unique
stitching technology
•The smallest in the world CIS camera
(<1mm size)
•Flexible pixel development environment
, extremely advantageous for foundry
customers
Source: HIS iSuppli
Hence - Gen+2 market leader
development engagements.

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Jazz Semiconductor
Newport Beach, California, USA
• Converted to 200mm wafers in 1994
• Expanded to 25K WPM in 2010
Geometries
• 0.5um-0.13um
Technologies:
SiGe, BiCMOS, MS / RF
Representative customers:
Skyworks
RFMD
Entropic
Marvell
A&D US
Employees: 650
• Fab 1 built in 1984 - running at full utilization with fundamentally same equipment set(1)
• Fab 2 built in 2001 - became operational in 2003 - Expansion Capex through 2011
Geometries
• Fab 1 - 1um-0.35um
• Fab 2 - 0.18um-0.13um
Technologies:
CIS, PM, MS / RF, MEMS
Representative customers:
Vishay
IR
Samsung
Qualcomm
Ikanos
Nuvoton
Employees : 1,200
World Headquarters
Migdal Haemek, Israel
Fab 1 & Fab 2
TowerJazz Japan
Nishiwaki City, Japan
• Built in 2 segments of 30K wafer capacity in 1992 and 1997
Geometries :
• 0.18um-0.095um
Technologies:
DRAM transfer into CMOS and PM
Representative customer:
Micron
Employees: 1,300
Fab 4
Fab 3
Facilities Overview

Sole source with diverse geographic back-up

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Japan Acquisition

• Micron 3 years take-or-pay

• Already gained business from multiple Japanese IDMs

• Announced Japanese government grants for CapEx

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"Significant progress has been
made in our talks with
potential contenders.“
R. Chandrashekhar, secretary of India's
Department of Information Technology.
India 300mm wafer fab decision

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India Government Sponsored 300mm Factory

• Signed binding MOU with a leading Indian infrastructure conglomerate, to build and operate a 300mm facility in India.

– Roadmap to long term 300mm wafer size, 90nm analog technology

– Enables companion chips in deep submicron technologies (65-45nm)

– High $$ revenue stream

• Presented to empowered government committee as 3-way consortia with Indian conglomerate, TowerJazz and a WW leading technology provider.

• We believe our consortia is strong, but cannot predict outcome of government selection.

Note: Tower has already been successful in India in government fab project

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Pursuit of Excellence

• We are going through every group in the company asking:

1. Define excellence in your group in 4-5 bullets
2. Present the top 3 initiatives to achieve it

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Pursuit of Excellence

• We are going through every group in the company asking:

1. Define excellence in your group in 4-5 bullets

2. Present the top 3 initiatives to achieve it

• There is a common theme for excellence - which boils down to 3 things:

- Personal capability
- Adequate work tools
- Passion.

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Pursuit of Excellence
Mediocrity

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Pursuit of Excellence
Waste

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Pursuit of Excellence
Frustration

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Pursuit of Excellence

• We are going through every group in the company asking:

1. Define excellence in your group in 4-5 bullets

2. Present the top 3 initiatives to achieve it

• There is a common theme for excellence - which boils down to 3 things:

- Personal capability
- Adequate work tools
- Passion.

We are creating an environment in which we have a worldwide impassioned employee base

What excites our customers - impassions our employees - 1st time success!

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Summary

• We have been the #1 growth foundry over the past 5 years AND became the #1 specialty foundry by revenue in 2010 and expanded the lead in 2011.

• We target to continue to lead the specialty market over the next years by

1. Growing specialized capabilities in sync with our customers immediate to long term needs
2. Providing an environment enabling impassioned employees
3. Innovative business initiatives

§ Successful execution of Nishiwaki Fab into high volume foundry

§ Materializing the presented India opportunity and/or other such opportunities

§ Asian market - with special focus on Korea

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2011 FY and Q4
Financials Results Overview

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Q4 & FY 2011 Financial Results Highlights

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Balance Sheet

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TowerJazz Balance Sheets (in millions of $)

	Dec. 31, 2011	Dec. 31, 2010
CURRENT ASSETS		
Cash, short-term deposits & designated deposits	101	198
Trade accounts receivable	75	68
Other receivables	5	5
Inventories	69	43
Other current assets	16	8
Total Current Assets	266	322
Long-term investments	13	31
Property and equipment, net	498	376
Intangible assets, Net	59	54
Goodwill	7	7
Other assets, Net	14	12
TOTAL ASSETS	857	802
CURRENT LIABILITIES		
Short-term debt	48	122
Trade accounts payable	112	49
Deferred revenue	6	40
Other current liabilities	64	39
Total Current Liabilities	230	250
Long-term debt	301	360
Employees related liabilities	98	27
Other long-term liabilities	53	47
TOTAL LIABILITIES	682	684
Shareholders' Equity	175	118
TOTAL LIABILITIES & EQUITY	857	802

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Q4’11 Financial Statements (vs. Q3’11)

Fully detailed footnotes are available at the press release as filed on February 16, 2012 by the Company

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Fully detailed footnotes are available at the press release as filed on February 16, 2012 by the Company

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We Know How to Create Value

• Jazz Pre acquisition:

§ $15M/ year EBITDA, negative net profits

• Jazz post acquisition:

§ $60-90M / year EBITDA run rate

• Ebitda growth by 4X to 6X in 3 years

• Added benefits:

§ New technologies and new customers from Tower to Jazz (e.g CIS)

§ New technologies and new customers from Jazz to Tower (e.g RFMD, SiGe)

§ Cost reduction synergies

§ Satisfied Jazz employees and increased employee count

§ Satisfied customers

§ Dual sourcing from MH & NPB fabs

§ Enabled >$500M revenue, #1 specialty foundry

Our Ambition is to Duplicate the Success with
the Recent Japan Fab Acquisition

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Jazz US Debt Summary

Security Type	Linked to	Outstanding principal ($M)	Key Terms
Wells Fargo Bank Credit Line	$	15	
Bonds due 2015	$	94	

TowerJazz Debt Summary | January 31, 2012

Tower Israel Debt Summary

Security Type	Linked to		
Series A+B+C		0	
Series D	Israeli price index	30	
Series E	Israeli price index	27	Principal is due Dec’ 2012; Convertible into ordinary shares until Dec’ 2012; last annual coupon of 8% is to be paid in Dec’2012
Series F	$	110	7.8% coupon payable twice / year; convertible into ordinary shares commencing Sept’ 2012; principal is due in 2 installments on
Bank Loans	$	131	

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Debt/ Balance Sheets Metrics

* These charts are based on an assumption that Ebitda in 2012 and on will be the same as 2011

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Future Debt Payment
Assuming no conversion of any bond series

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Future Debt Payment
Assuming conversion of all bond series

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Future Debt Payment
Assuming conversion of all bond series

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Past, Present, Future

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Past

• 2008 - major shift from digital 2nd source to analog value add provider

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Present
of premier 1st tier customers
(such as Samsung) creating
greater than $100M cash
from operations.
• We now supply to the top market leaders in every
one of our chosen business segments.
• Nishiwaki factory, purchased with a sound business
model, provides capacity for large customer growth.

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Future

• Continue market growth within FEM, power management, high end image sensor, IDM transfer and JDPs and within specific MEMS opportunities.

• Entrance into 300mm with the presented India deal or other such initiatives.

We are the #1 Israeli Seller of Commercial Hi-Tech Hardware

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THANK YOU!!
WWW.TOWERJAZZ.COM