Information, Controls and Issues

Martin Kelly

Presentation Date: May 2008
Financial Control Issues

Internal Constraints → Current State Issues → Risks → Action Plan & Opportunities

Ext pressures
Business Evolution

- Technology
- Data Quality
- People

- Control framework
- BS & PL breaks
- Info quality & dependencies

- Reg developments
- Media/Invest scrutiny
- Localization (Asia / LatAM)

- Reporting Integrity

- Upgrade controls & process
- Upgrade people
Current State Issues

- Weak LE control, unclear job definitions and limited ownership
- Poor B/S controls, no B/S by BPM, substantiation is weak, mitigating control
- Financial regulatory reporting is manually intensive
- Weak teams in high risk & strong teams in low risk areas
- Substantiation as an overlay mitigating control & not timely
- Weak F/S controls, late UK stat A/Cs, lost tax certs in Mumbai, deferrals pressure in Asia, errors in US
- Poor PL control = high timing & deferral balances
- Weak application of accounting policies
- Breaks between all key systems & reconciliation controls weak
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Control concerns and inefficiencies

Weak application of accounting policies

Weak teams in high risk & strong teams in low risk areas

Breaks between all key systems & reconciliation controls weak

Weak F/S controls, late UK stat A/Cs, lost tax certs in Mumbai, deferrals pressure in Asia, errors in US

Poor PL control = high timing & deferral balances

Control concerns and inefficiencies
Information flows (Feb 08 balances)

Front Office Systems

Processing / Settlement Systems

GFS

Unexplained var: $1.5b

Unexplained var: $141t

>8k breaks due to:

MV Unit/ Pricing var

GQUEST / PALS

$81b manual adj

72k journals

# staff: 484

Unexplained var: $3.2b

Unexplained timing differences $750mm

DBS GL

Deferrals
Net debits $219mm &
Businesses with net debit $462mm

Balance Sheet
$1.2t no BPM attribution
$0.5t with BPM

Unsubstantiated: $325b

DBSGL

Hyperion

Year End substantiation
Total gross A&L: $3,025b
Substantiated clean: $2,030b
Sub with exceptions: $658b
Exceptions: $12b
Unsubstantiated: $325b

$5.6t manual adj
8k journals
>1,200 approved staff
>500 staff post

$193b manual adj
20k journals
>2,000 approved staff
26 staff post entries

$1.2t no BPM attribution
$0.5t with BPM

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LEHMAN BROTHERS HOLDINGS, INC.
Substantiation

• LEC-lead activity. PC assist but are not fully engaged
  • Performed quarterly, completed 2-3 months after quarter end
    → considered substantiated if agreed to underlying systems or manual support

• Review is performed by LECs and then Mumbai team (of 4) for >1,000 LEs
  • No standard format, guidance given but not universally adopted by LECs or PC
  • Many $ billions of ‘substantiated’ balances rejected by Mumbai for poor support

• Limited awareness and buy-in around finance – considered a low priority

<table>
<thead>
<tr>
<th>REGION</th>
<th>SUBSTANTIATED</th>
<th></th>
<th>EXCEPTION</th>
<th></th>
<th>NOT SUBSTANTIATED</th>
<th></th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td># of A/Cs</td>
<td>ABS $ BN</td>
<td>%</td>
<td># of A/Cs</td>
<td>ABS $ BN</td>
<td>%</td>
<td># of A/Cs</td>
</tr>
<tr>
<td>AMERICAS</td>
<td>3,305</td>
<td>1,307</td>
<td>98%</td>
<td>847</td>
<td>8</td>
<td>1%</td>
<td>792</td>
</tr>
<tr>
<td>EUROPE</td>
<td>1,149</td>
<td>1,256</td>
<td>80%</td>
<td>818</td>
<td>3</td>
<td>0%</td>
<td>1,573</td>
</tr>
<tr>
<td>ASIA</td>
<td>2,052</td>
<td>126</td>
<td>95%</td>
<td>577</td>
<td>1</td>
<td>1%</td>
<td>410</td>
</tr>
<tr>
<td>TOTAL</td>
<td>6,506</td>
<td>$ 2,688</td>
<td>89%</td>
<td>2,242</td>
<td>$ 12</td>
<td>0%</td>
<td>2,775</td>
</tr>
</tbody>
</table>

• In Nov 07: 89% of the B/S is substantiated by system & manual inputs to the G/L
  • 11% of B/S is not looked at & only a small % is ‘economically’ substantiated
  • ~100% of tier 1 & 2 LEs certified in Nov 07
External Pressures & Business Evolution

Regulatory Developments
- FED regulation
- IFRS
- Basel II
- CSE

External Constituents
- Media scrutiny
- Investor demands
- Increased disclosure on liquidity / capital & valuations / exposures

Business Evolution
- Localization in Asia and Lat Am
- De-leveraging

With a backdrop of tighter budgets & IA control points doubling in the last year
Foundation for Progress: B/S by BPM

Creating environment capable of economic substantiation of business’ balance sheets

Jan 2007 –
CFO Mandate

May 2007 – three
person project team
established

Q1 ’08 – 90% of
inventory booked
with BPM

Q2 ’08 – PC
certification
tool goes live
(PCMAP)

Q2 ’08 – PC review and validate G/L
inventory for select businesses in
Europe and Americas

By Q4 ’08 –
• 75% of G/L B/S booked
  w/BPM
• Inventory substantiation
  process by business
  established

Q3 ’07
Q2’08
Q2’09
Opportunities

• Staff development, increase mobility and embrace succession planning

• Global improvement and standardization of controls

• Increase responsiveness to external demands

• Revisit the role of Finance across Lehman Brothers
  • FC / PC / Risk / Treasury / Operations / Audit

• Decrease remedial processing time and direct resources to valuable analytics

• Improve budget efficiencies by decreasing maintenance and re-investing in longer term solutions
# Financial Control - Strategy

<table>
<thead>
<tr>
<th>Project</th>
<th>Objectives</th>
<th>Inter-Dependencies</th>
</tr>
</thead>
</table>
| Control Validation, Assessment & Oversight | ◆ Improve information integrity  
◆ Focus on key controls over books and records systems | ◆ Finance-wide  
◆ Operations  
◆ Risk Management |
| Balance Sheet Substantiation          | ◆ Identify info flows & strengthen overall & related controls  
◆ Drive urgency and timeliness  
◆ Align with BS & capital utilization | ◆ Product Control  
◆ Treasury  
◆ Ops & Technology |
| Re-define LEC Function               | ◆ Globally define roles & responsibilities of LECs  
◆ Implement consistent reviews | ◆ Product Control  
◆ Treasury |
| Fin Systems Architecture Roadmap     | ◆ Develop roadmap to improve financial systems architecture consistent with  
- Focus on controls, efficiency needs & current economic environment | ◆ Finance-wide |
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| Regulatory Capital/Risk Management | - Implement data flow controls for regulatory capital  
                                  | - Prepare for possible Fed oversight                                                            | - Risk Management  
                                  |                                                                                  | - Product Control                                                             |
| Global Booking Matrix           | - Develop matrix of all products & related booking entities  
                                  | - Strengthen LEC ownership of all business booked into each LE                                  | - Product Control  
                                  |                                                                                  | - Tax  
                                  |                                                                                  | - Treasury  
                                  |                                                                                  | - Operations                                                                   |
| Streamline MIS                  | - Valuable, not redundant info  
                                  | - Validate need for existing allocations system                                                 | - Product Control |
                                  |                                                                                  | - Align with shareholder metrics                                                               |
| People Development              | - Succession planning  
                                  | - Career development  
                                  | - Rotations, lateral moves                                                                    | - Finance-wide |

Financial Control - Strategy
Financial Reporting Update

Current Quarter Items
- Marubeni valuation/insurance recoverable
- Real estate held for sale – depreciation
- RIF 2
- Europe SPML exit
- Compensation accrual
- Deferrals
- Other secured borrowings
- Secondary trading interests in QSPE’s (deals > $500mm)

Next Quarter Items
- Repo 105/108
- Contra revenues
- Secondary trading interests in QSPE’s (deals < 500mm)
High manual intervention, low system integrity

- **Manual intervention increasing**
  - Total G/L transactions increased 55% (Dec 05 – Feb 08)
  - Manual G/L journals increased 60% to 7,800 (Dec 05 – Feb 08)
  - $5.6 trillion of manual adjustments to G/L in Feb 08
  - $193 billion of manual adjustments to GFS in Feb 08
  - $81 billion of manual adjustments to GQUEST in Feb 08

- **Many entities and people involved**
  - >1,200 staff have access to make G/L entries
  - >1,000 legal entities with >100 LECs and incomplete links to PCs
  - Recent staff turnover and limited procedures in place

- **Progress**: 90% of long inventory in G/L by BPM so FC & PC can communicate
# Financial Control – Quality/Risk Assessment

<table>
<thead>
<tr>
<th>Area</th>
<th>Strength of Team</th>
<th>Inherent Risk</th>
<th>Team Headcount</th>
<th>Comments/Changes</th>
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</table>
| Legal Entity & Balance Sheet Control | Weak              | High          | 30             | Replacing Matthew Lee and Brian Nicholson  
Separating day to day function (Kristie Wong) from project team (Liliana Chiu)                                                                        |
| Financial (External) Reporting | Weak              | High          | 10             | Removed Steve Rossi and Fred Steinberg  
Ryan Traversari is key man  
Need to add an SVP and a VP under Ryan                                                                                                                  |
| Regulatory Reporting        | Mixed             | High          | 23             | Weak team led by Stucchio (moderate strength) and Anna Yu (very strong)  
Highest risk is LBHI/CSE implementation under Anna Yu. Will reallocate additional resources from management reporting team |
| Management (Internal) Reporting | Strong            | Low           | 15             | Scikutella to replace Azeraad  
Looking to streamline workload/free capacity to relocate elsewhere                                                                                 |

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<th>Team Headcount</th>
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</tr>
</thead>
</table>
| Accounting Policy & Acquisition Due Diligence | Strong           | High          | 6              | Strong individuals at global, US and Europe level  
                                    |                  |               |                                                            | Asia weak and considering options                                         |
| Compensation Control        | Mixed            | Moderate      | 6              | Traversari to replace Emmert and reorganize process  
                                    |                  |               |                                                            | Sharyn Angley needs to move                                                |
|                             |                  |               |                | Will reallocate additional resource from management reporting team                                       |
| Europe                      | Mixed            | High          | 74             | Replaced Marcus Jackson with Dominic Gibb                                                              |
| Asia                        | Mixed            | High          | 75             | Team stretched/stressed  
                                    |                  |               |                                                            | May need to add to headcount depending on localization plans               |
New Financial Control Structure
Direct Reports

Marie Stewart
MD
Accounting Policy &
Acquisition Due
Diligence

Len Scicatella
MD
Management
Reporting

Tony Stucchio
SVP
Regulatory Reporting

Ryan Traversari
SVP
Financial Reporting,
Compensation and
Control Improvement

Kristie Wong
SVP
Legal Entity and
Balance Sheet
Control

Liliana Chui
MD
B/S Substantiation/
Re-engineering and
Process/Systems
Re-design

Dominic Gibb
MD
Europe Financial
Controller

Kayoko Nishimura
SVP
Asia Financial
Controller

Martin Kelly
MD
Global Financial
Controller
$5.6 trillion of manual adjustments to G/L

<table>
<thead>
<tr>
<th>Group</th>
<th>Amount $b</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Controllers - US</td>
<td>2,172</td>
<td>39%</td>
</tr>
<tr>
<td>Controllers - London</td>
<td>1,103</td>
<td>20%</td>
</tr>
<tr>
<td>Treasury London</td>
<td>279</td>
<td>5%</td>
</tr>
<tr>
<td>Equity PC - London</td>
<td>186</td>
<td>3%</td>
</tr>
<tr>
<td>Others</td>
<td>1,896</td>
<td>34%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>5,636</strong></td>
<td><strong>100%</strong></td>
</tr>
</tbody>
</table>

Majority of postings relate to:
- Secured Funding booking/reclass
  - Intercompany
  - Intracompany
  - Borrow/Loan
- Netting of T/D pay/receive
- Derivatives Netting

**Risk:** High dollar volume of low-risk mature activity reduces scrutiny of higher risk manual entries.

**Actions:** BS by BPM Secured Funding automation in progress, increase management attention to manual activity in FC
$193 billion of manual adjustments to GFS

Majority of postings relate to:

- >50% due to derivatives not being posted directly to GFS
- Currently derivatives post directly from PALS/GEDS to the DBS general ledger system but have not been posted directly to the GFS system.

- Gross Ups (e.g. FAS 140, FIN 46 etc)
  - There are no automated feeds to bring the grossed up values of financing trades and special purpose vehicles into GFS. Due to the subjective nature of some gross ups, it is not possible automate all these processes.

Risk: Incomplete and incorrect postings causing breaks in the reconciliation between GFS and settlement systems

Actions: GFS Derivatives project should ensure full direct postings into GFS and straight through processing of gross and net balances to DBS by the end of the year. Automation and straight through processing of GFS adjustments.
$81 billion of manual adjustments to GQUEST

<table>
<thead>
<tr>
<th>Region</th>
<th>SYS</th>
<th>Division</th>
<th>No. of adjustments</th>
<th>All Adj</th>
<th>USD($) Net</th>
<th>USD($) ABS</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>USD($)</td>
<td>Manual Adj</td>
<td>USD($)</td>
</tr>
<tr>
<td>Americas</td>
<td>Quest</td>
<td>EQUITY / Prime Services</td>
<td>4,921</td>
<td>(402 )</td>
<td>1,825</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Quest</td>
<td>FID</td>
<td>5,991</td>
<td>(4,158 )</td>
<td>9,906</td>
<td></td>
</tr>
<tr>
<td>Europe</td>
<td>Quest</td>
<td>EQUITY / Prime Services</td>
<td>3,385</td>
<td>13,370</td>
<td>24,039</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Quest</td>
<td>FID</td>
<td>11,497</td>
<td>(343 )</td>
<td>19,862</td>
<td></td>
</tr>
<tr>
<td>Asia</td>
<td>Quest</td>
<td>EQUITY / Prime Services</td>
<td>2,117</td>
<td>(4,300 )</td>
<td>8,813</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Quest</td>
<td>FID</td>
<td>984</td>
<td>(211 )</td>
<td>1,437</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Quest</td>
<td>FID</td>
<td>2,480</td>
<td>(245 )</td>
<td>504</td>
<td></td>
</tr>
<tr>
<td>Manual Total</td>
<td></td>
<td></td>
<td>28,895</td>
<td>3,955</td>
<td>65,882</td>
<td></td>
</tr>
</tbody>
</table>

Key postings relate to:

- Delays in front end booking, books close after 5pm deadline
- Front end processing errors being corrected late in the day by PC
- System limitations with mainframe producing difference product/price multipliers than ITS

<table>
<thead>
<tr>
<th>Region</th>
<th>SYS</th>
<th>Division</th>
<th>Systematic Adj</th>
</tr>
</thead>
<tbody>
<tr>
<td>Americas</td>
<td>Quest</td>
<td>FID</td>
<td>24,339 (81 )</td>
</tr>
<tr>
<td></td>
<td>Quest</td>
<td>EQUITY / Prime Services</td>
<td>17,333</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>41,672 (37 )</td>
</tr>
<tr>
<td>Europe</td>
<td>Quest</td>
<td>FID</td>
<td>1,306 (9 )</td>
</tr>
<tr>
<td></td>
<td>Quest</td>
<td>EQUITY / Prime Services</td>
<td>21,656</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>22,962 (7,292)</td>
</tr>
<tr>
<td>Asia</td>
<td>Quest</td>
<td>FID</td>
<td>21 (9 )</td>
</tr>
<tr>
<td></td>
<td>Quest</td>
<td>EQUITY / Prime Services</td>
<td>2,480</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>2,501 (254 )</td>
</tr>
<tr>
<td>Systematic Total</td>
<td></td>
<td></td>
<td>67,135 (7,583)</td>
</tr>
<tr>
<td>Grand Total</td>
<td></td>
<td></td>
<td>96,030 (3,628)</td>
</tr>
</tbody>
</table>
Reporting teams use different sources for data

• **CSE reporting (Anna Yu)**
  • 174 separate spreadsheets to filter into ‘trading vs banking book’
    • initially from GQUEST system as a G/L proxy. *20% of time spent on validation / 30% processing*

• **B/S team (Matthew Lee)**
  • GFS to DBS month end reconciliation ends $1b-$8b variance after 6 days. *50% of time spent on validation/processing*

• **External Reporting (Ryan Traversari)**
  • 100% manual checks using reconciliations of Hyperion, GFS, CWS and source material. Inventory data from Hyperion, CWS & GFS. *80% of time spent on validation*

• **Risk CWS to DBS rec (Brian Nicholson)**
  • CWS to DBS month end rec $90m-$2b asset variance with full month review

• **Revenue Reporting (Chris Deegan)**
  • Manual topsides for all segment reporting and ‘double counting’ for banking
THE END
Problem Statement

• Rapid growth without system & process investment has resulted in sub-optimal financial data........................ strong enough for future demands?

• Process and system breaks throughout the organization have resulted in:
  • knowledge and data silos
  • significant off-line processing
  • heavy reliance on compensating controls
  • budget being used up on tactical fixes
  • published financial data cannot be fully substantiated

• It is an issue that relates to the entire firm from the initial trade entry, to operations, processing, settlement, risk and financial systems.
  → It is related to both system and process deficiencies

• As the firm increases in size and complexity the amount of resource and the risk of material misstatement will increase exponentially
We need to increase the proportion of information we extract directly from systems and reduce our dependence on non-systemic information to ensure completeness and accuracy.

External
- Market conditions have deteriorated, information demands have escalated
- Requirement to de-leverage the B/S
- Disclosures are tougher: FAS157 & B/S classifications
- Basel II
- CSE

Internal
- Data continues to be stored in function-specific systems + Excel
- Finance teams with different perceived objectives?
- Technical/CMT resource is being used up for tactical fixes
- Headcount is being used up in manual processing
- Internal Audit aged Control Concerns increased from 38 to 102 May 2007 to 2008
Current State Issues

- Highly manually intensive environment:
  - Multiple sources, spreadsheets, manual data capture

- Data quality & consistency
  - System breaks, inputs not fixed but outputs reconciled, unclear control owners

- Balance sheet controls
  - G/L not have B/S by business (except Inventory), substantiation as an overlay and mitigating control, not timely closing

- Profit & Loss controls
  - Material deferrals and timing balances

- People Quality
  - Weaker teams in high risk areas, stronger teams in low risk areas

- Weak Legal Entity controls
  - Unclear job definition, ownership and interaction with PC

- Weak F/S controls
  - Errors in several F/S, late UK stat a/cs, lost tax certificates in Mumbai, pressure reallocation of deferrals

- Co-ordination of inbound data requests and consistency of information

LEHMAN BROTHERS
Fundamental problems in systems and process

Control environment has not evolved commensurate with Firm growth

Systems
• Insufficient efforts to identify issues at source and resolve permanently
• Controls degraded/risks increased by non systemic data aggregation
• Incomplete system feeds – neither full population (completeness) or relevant fields
• Data out of date and not automatically updated in systems
• Reference data spread throughout many systems
• Huge reliance on Excel rather than fixing underlying systems

Process
• Controls are not a primary goal, reactively put in place (Reg or problem-specific)
• Effective controls are assumed to exist without adequate proof
• Routine Risk and Finance Control indicators not established and integrated
• Poorly defined roles and responsibilities regionally and functionally
• No common focus on the financial impact on B/S and P/L
• No overview or full ownership due to silo approach
• Lack of understanding of upstream and downstream implications of actions
Consistent sources for external information?

Rating Agencies, Regulators, Investors, Creditors, Other Stakeholders

Chris

Martin
- Financial Statements
- Reg Reporting
- Disclosures

Erin

Paolo
- Exposures
- Leverage
- MV Liabilities

Ed
- Key investor data
Finance Target Operating Model

Finance to define its future role with a major transformation required to move from the current to a future state.
How will we move forward?

Leadership
• Senior management to actively sponsor the change required to update the Finance Function
• Advocacy of a control mindset that supports the mission statement of Lehman Brothers
• Creation of a culture of change with resources empowered to own and solve issues

Organization
• Develop a target state for the organization and staff accordingly to establish continuous improvement, full accountability in every department at every level
• Empower individuals to identify root cause of problems, assign ownership and accountability
• Establish business unit controllers owning front to back controls through B/S substantiation.
• Hold businesses accountable for economic consequences of control failures
• Pay for performance – publicly reward people for continuous improvements
• Job requirements to reflect full B/S and P/L involvement for FC, PC and Risk

Process
• Key reference data readily attainable
• Have firm-wide agreed processing timetables and cut-offs
Target Audience and Objectives

First audience: Erin Callan DRs
  • Americas, Europe & Asia

Other stakeholders:
  • Front office
  • Middle office / Operations
  • Treasury
  • CAO
  • Risk
  • Technology
  • CMT

Objective of the presentation
  • Tell: educate around the problem
  • Sell: short-term actions and solutions
  • Tell: long-term potential pathway