

Special points of interest:

- Measuring Operational Risk: The Data Challenges
- Risk Management VERSUS Enterprise Risk Management
- The Need for Continuous Controls Monitoring
- ACL Continuous Controls Monitoring Solution
- ACL User Community Sharing Session
- Opening of Prodigy's Indonesia and Malaysia Offices
- ACL 2005 Support Renewal Premium Upgrade Offer
- Limited Period ACL V8 Upgrade Offer

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Measuring Operational Risk: The Data Challenges

By Sabyasachi Bardoloi, Pinnacle Research Group

Introduction

Cleanliness is next to godliness goes that age-old proverb. It applies not only to us human beings but are more importantly it is gaining importance in all sectors of business applications and more so in the domain of Financial Services Industry (FSI) with regard to the dirty data that it frequently encounters.

As the timeline for implementation of the Basel II accord nears, banks are recommended to collect three to five years of historical data. Banks as well as supervisors are expected to familiarise themselves and develop necessary systems and processes in order to meet up with the high quality data standards prescribed by the Basel II accord.

Loss Data Factor

Collection and analysis of loss data tops the agenda of all financial institutions today. This loss data factor has become a key issue in the realm of Operational Risk as well as in the development of regulatory capital requirements. Moreover, Basel II's recommendation of collection of loss data for a period of 3 to 5 years has added fuel to the fire.

Financial institutions are thus gearing up all their energies to meet up this mammoth challenge. No wonder that quite a number of financial institutions has already initiated measures to collect and analyse operational loss data through internal capital assessment along with allocation mechanism as the basis. But, an industry wide standard approach ac-

ceptable to all is yet to emerge.

Data loss is a major risk that financial institutions are facing today. However, it is totally controllable. The first step to counteract this risk proficiently is through subsequent awareness and education. Educative measures of the same needs to be provided at all levels of an organisation be it executive, management, IT staff or end users.

Data collection is important for the assessment of Operational risk among financial institutions. There is also an increasing recognition amongst banks and supervisors that the sharing of loss data, based on consistent definitions and metrics, is necessary to arrive at a comprehensive assessment of Operational Risk.

The need clearly is to focus on data collection, tracking, monitoring, analysis and reporting for Operational Risk Management. Certain enhancement to comply with Basel II requirement needs to focus on technology that will lead to:

- Proper identification and gathering of key risk indicators
- Thorough monitoring of databases for internal, external, current and historical data
- Gathering loss data
- Identifying and estimating frequency and severity of losses
- Efficient management of reporting

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Risk Management VERSUS Enterprise Risk Management

The Essential Differences..... Where does your organisation belong

Traditional Risk Management

- Risk as individual hazards
- Risk identification and assessment
- Focus on all risks
- Risk mitigation
- Risk limits
- Risks with no owners
- Haphazard risk quantification
- Risk is not my responsibility

Enterprise Risk Management

- Risk in the context of business strategy
- Risk "portfolio" development
- Focus on critical risks
- Risk optimization
- Risk strategy
- Defined risk responsibilities
- Monitoring and measurement
- Risk is everyone's responsibility



Announcement

ACL User Community Sharing Session

As mentioned during the ACL Asia Pacific User Conference 2004, Prodigy is pleased to announce the launch of the maiden ACL User Community in the coming first quarter of 2005.

This ACL User Community is another sharing initiative through smaller user community by industry. It will involve more in-depth discussion and sharing on ACL applications and implementation between the veteran and newer users. The user community session will also be covering areas that require problem-solving with the assistance of the veteran users of ACL.

We are NOW calling all users to drop us an email should you be interested to be part of the user community. Kindly email to info@prodigy.com.sg for updates on the coming ACL user community.



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A Real Menace

Data quality continues to occupy the attention of management to an extraordinary extent. This is the finding of a report issued by IDC, "Business Analytics Implementation Challenges—top 10 Considerations for 2003 and Beyond", which analyses the issue of data quality and its impact on business.

IDC lists data quality as the number two issues for companies implementing enterprise-wide business analytics software. As of today, majority of banks are yet to adopt any kind of high-end Operational Risk assessment procedures. However, the main challenge for the banks in the coming months will be to spot and locate the required data and build up a data storehouse or data warehouse for storing the ready data for analysis. Moreover, banks must ensure effectual integration of different risk types and accurate computation of the various risk measures.

Banks must now also ensure that the data used in these calculations are thoroughly clean. A study conducted by The Data Warehousing Institute some time back revealed that the US businesses spend \$600 million a year in cleansing their data. Another study conducted by Gartner points out that 80 percent of Customer Relationship Management (CRM) projects fall due to lack of clean data.

These figures clearly points out that the current data cleansing mechanisms are significantly inadequate. Banks need to take a fresh look at the techniques they are currently using and get their data into shape in order to be ready for the next round of capital changes. The Basel II accord has for the first time recommend capital allocations in the area of Operational Risk.

Banks had miserably failed to realise that they have unnecessary dirty data until a mammoth project like Basel II recommending for clean data awaken them from their deep slumber. This unrecognized dirty data is undoubtedly proving to be a real menace. With stockpiles of them in their systems, banks' computers fail to interpret information accurately and thus have the probability to lose or delete important files or losing track of customer lists and executives.

Finally, banks may be forced to abandon entire business strategies. Basel II is making the problem even more urgent since dirty data that has not been captured correctly from CRM or other business applications will not meet the standards required for accurate risk management assessments.

Sources of Dirty Data

Dirty data enters any systems through various sources. The main sources being:

- Purposeful entry of incorrect data by online customers
- Call-center operators enter truncated data to save time
- Errors in third-party data
- Customers key in errors into front-office systems
- Data in varied systems conforms to divergent formats

Churning in Quality Data

A survey conducted by Risk Waters magazine indicated that incomplete, imprecise or archaic data is the main reason for financial institutions losing up to \$120 million a year through Operational Risk. The survey interviewed 400 risk managers from 300 financial institutions and is the largest survey ever conducted on operational risk management. It aimed at assessing the losses suffered through operational risk and what steps financial service firms are adopting to minimise them.

28% of the respondent felt that the problems of collecting data for precise identification and management of operational risk is the major stumbling block in preventing losses. 33% of the respondent felt that poor data quality is a major concern.

The cornerstone for any successful customer relations lies in the accurateness and aptness of the core data. Data quality affects profits of customers in countless ways, and it is least surprising that IDC, the global market intelligence and advisory firm, has identified it as the second biggest challenge faced by organisation today.

Towards a Cleaner Road

To stay ahead and maintain a competitive edge, well-organised banks have adopted steps to monitor and clean up all information it encounters, be it internal or external. The high-end quality priority of all financial institutions as of today is to maintain clean and quality data by investing in appropriate data collection systems. An organisation's capacity to limit and measure risk will be much greater once these enhanced data collecting and intelligence tools are applied since it will help them to better understand their customer's position. Proper customer intelligence will help define and recover bad loans. These will thus lead to an effective debt management strategy thereby reducing the money required for capital allocation as prescribed by Basel II for Operational Risk Management.

The Need for Continuous Controls Monitoring

By John Van Decker

META Trend: During 2004/05, Global 2000 firms will significantly improve enterprise financial management by deploying integrated solutions from ERP, BI and niche vendors for financial value chain, compliance (e.g. Sarbanes-Oxley), and business performance management (BPM) functions. By 2006, 35% of large organisations will consolidate standalone BI infrastructures that support reporting/disconnected analytics into consistent enterprise BPM frameworks. By 2007, 60% of firms will outsource at least one transactional financial component to reduce costs.

Most enterprise business processes extend past multiple business applications, and firms often struggle with ensuring that the data has been consistently accurate throughout the end-to-end process. This capability becomes even more critical as firms wander further into outsourcing and understand the full impact of regulatory compliance initiatives (e.g. Sarbanes-Oxley, Bill 198) that require firm financial controls in enterprise business processes.

Currently, the CFO in an organisation is faced with several priorities that call for emerging business applications, and IT include corporate governance, managing regulatory compliance, reducing financial process costs, improving revenue assurance processes, improving asset utilisation, outsourcing, and monitoring cross-organisational/ cross-unit processes. All these point to the need to refocus on financial controls in business transactions. The transaction is the lifeblood of a firm's financial management and forms the basis for internal and external financial reporting. Unfortunately, most organisations still have a "silo" view of transactions that do not ultimately impact the firm's financial condition, and there are few firms that can be assured that they are not exposed to control breaches. Consequently, end-to-end processes must be understood. Finance and IT must ensure that transactions are correctly passed/ transformed within outsourced and internal processes and that there is insight / visibility for access (real-time, if required; the levels of risk attributed to each business rule or control test should dictate the frequency of testing required for that rule — the higher the risk, the most frequently tests need to be performed). Ideally, firms should have tools in place that can provide continuous monitoring of transactions as they cross business processes and applications. In the absence of a continuous monitoring process, organisations may be further exposed to fraud, error, and abuse—representing a significant cost as well as profit erosion through revenue leakage. Although many firms have moved to an integrated ERP environment, few have the necessary control-monitoring processes in place to provide assurance that data has effectively moved and transformed itself from one process to the next, often extending multiple business processes in a loosely controlled fashion at best.

Recently, a set of applications that has its roots in traditional auditing processes presents an opportunity to provide this capability. Business assurance analytics (BAA) is an emerging application space that may provide a solution to ensure accountability and ultimately reduce risk, which is proving to be an important business requirement given the focus on financial controls due to regulatory compliance.

Through 2005, this market will emerge to become an important backbone of business process auditability and control. By 2007/08, this will be critical to managing global business processes typically deployed across disparate systems. *Currently, ACL has the sole entry in the BAA market, providing offerings to independently monitor controls in the financial value chain* (e.g. expense management, procure to pay), though we believe many will fill this void using BI tools. Although application spaces can rarely be defined by the efforts of one vendor, we believe this will become a focus of many auditing, BI, BPM, and ERP vendors as they develop platforms to monitor controls.

Two BPMs May Not Be Enough

Most firms have relied on BI solutions (e.g. Cognos, Business Objects) and lately BPM solutions (e.g. Hyperion, Longview) to provide insight into results through standard reports and drill-down analysis. However, this is usually period-based reporting (e.g. monthly, quarterly) and relies on data delivered and processed by ETL, data mart, and data warehousing solutions. Many business process management (the other BPM) solutions contain business activity monitoring processes to provide more real-time insight into business processes. To date, these tend to focus on monitoring single processes and rarely span the scope of the complete enterprise business process.

Auditing Processes May Expose Control Weaknesses But Represent a Point in Time

Auditors (internal and external) have been successful in developing solutions that can identify control weaknesses and that have been vital catalysts to the organisation in suggesting that the enterprise change to business process controls. Traditionally, an internal audit

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validates controls through point-in-time analysis, with a delay between the time the process error is discovered (typically long after the transaction has taken place) and action is taken (unfortunately, if significant, this can lead to a restatement that will hinder stock price).

Ideally, firms should be able to leverage some of these tools in an attempt to provide an ongoing analysis of internal controls to capture and correct problems before they become material. Firms require timely confirmation that controls in application systems are operating effectively. This will lead to tools that automate sophisticated analytics and embed audit best practices in organisations' business operations, providing rapid notification of anomalies, mitigating lack of controls within application systems, and enhancement of management insight by comparing data across disparate systems. The ultimate goal should be to provide an independent assurance of integrity of transactions.

The Benefits of BAA

As BAA evolves and becomes incorporated into enterprise processes (e.g., order to cash, supplier sourcing to payment), we believe that many firms will respond to the benefits of BAA once they understand how such solutions can provide the continuous monitoring capability that most lack:

Immediate notification to management of problems in enterprise processes: This will be critical as firms seek to enable compliance dashboards and understand the risk critical to Sarbanes-Oxley 409.

Prevention of having to report control problems: Repositioned auditing solutions will provide an "early warning system"



On A Lighter Side



where control weaknesses can be fixed before they need to be reported externally. The ability to identify anomalies at the transactional level will prove to be critical.

Improvement in external auditor assurance: The Public Company Accounting Oversight Board requires that auditors make an assessment as to the effectiveness of a firm's corporate governance process. This may improve the overall effectiveness of the controls framework.

Reduction in the reliance on internal auditing: This can be done by embedding control mechanisms in enterprise business processes that evaluate financial controls. Analytic tests can run automatically on a scheduled basis to generate alerts when controls are breached or are no longer sufficient. Fraud reduction and improved risk management: This is accomplished by identifying weaknesses that may lead to error, fraud, abuse, and inefficiencies.

Extensibility to multiple end-to-end business processes: This is controls assurance for multiple business and compliance processes.

Improvements to efficiency and effectiveness: A properly designed and implemented continuous controls process has the potential to increase profitability by containing costs, minimising losses, and improving revenue collection.

Provision of controls in outsourced processes: As firms outsource transactional finance and accounting, business intelligence and the auditability of outsourced processes move to the forefront. A robust BI platform is required to provide extensive analysis capability. In addition, applications that independently monitor transactions and check for controls compliance across business processes will be critical to monitoring data across applications. Outsourcing does not mean out of mind.

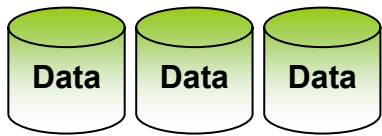
Independent testing of controls: This should provide the capability of auditing data by a third-party vendor that is independent of the actual business processes and that may provide an "unbiased" opinion.

Bottom Line: Business assurance analytics is a developing enterprise business application market that may provide a solution to the need for continuous controls monitoring. By 2007/08, it will become part of the backbone for monitoring and ensuring the accountability of enterprise business processes. It will complement the current processes of ad hoc analysis and repeated control reviews.

Business Impact: Firms must ensure that accounting transactions are accurate, adhere to internal controls, and evaluate emerging solutions to ensure auditability.

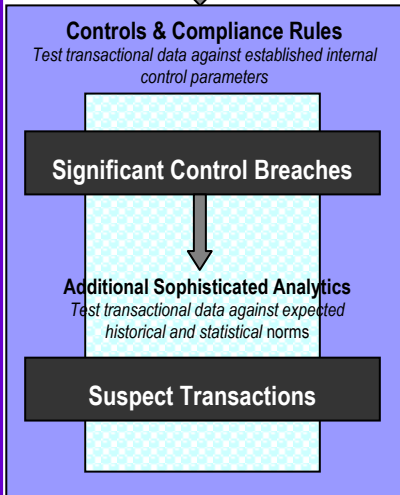
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ACL Continuous Controls Monitoring Solution

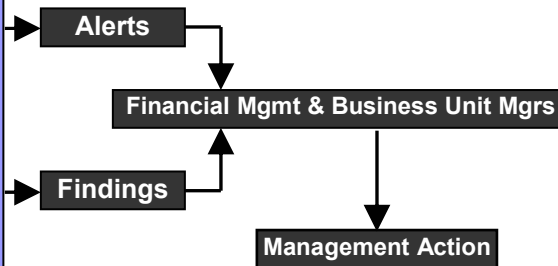


ACL Continuous Controls Monitoring builds on powerful ACL technology to extend best practices in controls compliance and expertise in transaction analysis into core business processes. ACL solutions provide an independent control mechanism to help organisations assure internal controls compliance, reduce operational risks, minimise profit erosion, and mitigate the risk of fraud while meeting increasing regulatory requirements.

Transactional Data



Continuous Controls Monitoring in Action
Take best practices for analysis of data performed during traditional audit processes, incorporate additional sophisticated analytics, and embed them in day-to-day operational monitoring processes.



PRODIGY NEWS & EVENTS

Opening of Prodigy Data Solution's Indonesia and Malaysia Offices

Prodigy Data Solution is pleased to announce the opening of Prodigy Data Solution's Indonesia and Malaysia offices in the November 2004. We aim to provide our users the full value of ACL and that our users be able to implement ACL throughout their organisation in optimal capacity and thus enhanced its existing business processes and operations. Feel free to visit us in any of our 3 offices and our consultants will be pleased to assist you.

Gain Significant Improvements in Productivity Reduce audit cycles from weeks to days

ACL now has more options for you to get better, faster, easier access to all your data—wherever it resides within your organisation—on mainframes, servers, legacy systems, or ERP applications such as SAP. You can take advantage of these enhanced data access and analytic capabilities through the same ACL desktop interface you are already familiar with—no new training is required.

Over 400 organisations worldwide use ACL™ Server Editions and/or Direct Link for SAP R/3 to increase the efficiency and effectiveness of their analysis of large data populations. Let us show you how to save time and increase performance. And you can enter the draw to win a Palm® handheld. Go to www.acl.com/power/consultation.aspx NOW, as this offer is only valid until 15 Nov 2004. For more info, please write to info@prodigy.com.sg.



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Calling All Supported ACL Users!

Renew Your Support By 15 Nov To Enjoy Premium Upgrade Offer

Renew your ACL Support today guarantees that you will continue to enjoy uninterrupted access to the support services you have relied on throughout the year:

- The latest software releases and product documentation, ensuring you maintain the currency of your technology investment
- Round-the-clock access to the Support Center Knowledge Base, providing you with troubleshooting tips, operational hints, and FAQs to help you optimise your use of ACL
- Product and technical advice from the professionals at our Global Help Desk

For maximum support value, upgrade to Premium Support which builds on all the advantages of Standard Support, and provides valuable time-saving extras, including:

- 24x5 access to the Global Help Desk where our software support experts help you maximise your productivity
- QuickSteps pre-defined data analysis tests that you can run quickly and with less effort from start-to-finish
- QuickResults ready-made scripts to enable you to apply the versatility and power of ACL at the push of a button
- 10% discount towards the ACL Certified Data Analyst designation exam
- On-demand access to Online Learning allows you to set your own pace and focus on only those areas you want

You gain the full benefits of the Premium Support package at substantial savings if you **act before 15 Nov 2004** . Pay only **USD396 per use license** instead of USD420.

What's More!!!

In addition to the features offered by ACL Support Program, Prodigy is pleased to offer the following value-added services especially to our valued customers in the region.

- 10% discount for all open enrolment ACL certified training courses
- 5% discount for all onsite ACL certified training courses
- Access to our local offices in Kuala Lumpur and Jakarta
- Access to our senior adviser for fraud detection & prevention or corporate governance advices

RENEW NOW and continue to receive all the benefits of the Support Program. For further information or assistance, please contact us at support_acl@prodigy.com.sg.

ACL V8 UPGRADE OFFER

Limited Period Till 31 Dec 2004 for Malaysia, Indonesia, Thailand and Philippines

For a limited period only, ACL is **WAIVING OFF UPGRADE FEE** when purchase Standard SupportSM. **Simply sign up for two (2) years standard support till 31st December 2006 before 31st December 2004 to enjoy this offer.**

Robust yet easy-to-use, ACL Version 8 will expand the depth and breadth of your analysis, increase your personal productivity and give you greater confidence in your findings. It offers improved user interaction while maintaining the outstanding performance and sophisticated analytics that are the cornerstones of ACL technology. ACL Version 8 enables you to:

- Adapt ACL to your process - convenient folders let you organise project items such as files, tables, views, and scripts to suit the way you work.
- Compare analyses with ease - the new hierarchical log display lets you quickly retrieve and compare results more easily than ever.
- Share easy-to-read, pre-formatted tabular results with other applications. Reports can be sent to working paper packages, report documents, or any application that accepts HTML. Version 8 also features seamless integration with Crystal Reports®.
- Rapidly isolate records of interest by drilling down from the tabular results generated from your analysis.
- Easily access web-based ACL resources such as the Online Support Centre and Online Learning by clicking links on the Welcome tab.

RENEW NOW and continue to receive all the benefits of the Support Program. For further information or assistance, please contact us at info@prodigy.com.sg.

NOTE: This offer is only valid for users from Malaysia, Indonesia, Thailand and Philippines

2-Day Operational Risk Management Workshop 16-17 December 2004, Singapore

This 2-day course provides participants with a comprehensive background to risk management concepts and focuses on the application of risk management at an operational level. The course provides participants with tools for the identification, assessment and treatment of risk. At the conclusion of this course participants will be familiar with the fundamentals of risk management, and will be competent to develop a risk assessment, risk profile or risk management plan for their work area.

Topics Covered:

- Evolution of operational risk management
- Importance of risk management in the workplace
- Risk Management—communication and consultation
- Risk Management—establishing the context
- Risk Management—risk identification
- Risk Management—risk analysis
- Risk Management—risk evaluation
- Risk Management—risk treatment
- Risk Management—monitor and review
- Recording the risk management process (risk assessment, risk profiles, risk management plans)
- Utilising operational risk management—making it work for you!

Sign up NOW to confirm your seat! For more information, please contact us at info@prodigy.com.sg



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www.prodigy.com.sg

ACL Open Enrolment Training Schedule

Venue	Course Name	Dec-04	Jan-05	Feb-05
Singapore	ACL 105 - Foundation of ACL: Concepts & Practice	01-03; 13-15	05-07	01-03
	ACL 201 - Data Analysis Techniques	06-07; 16-17	10-11	14-15
	ACL 301 - Advanced ACL Concepts & Techniques: Functions	08	12	16
	ACL 302 - Advanced ACL Concepts & Techniques: Scripts	09-10	13-14	17-18
	ACL 303 - Advanced ACL Concepts & Techniques: Functions & Scripts	08-10	12-14	16-18
	Fraud Detection Techniques Using ACL	20-21	17-18	21-22
	ACL Data Access	23	24	23
	ACL Version 8: Refresher	22	25	24
Malaysia	ACL 105 - Foundation of ACL: Concepts & Practice	01-03; 13-15	05-07	02-04
	ACL 201 - Data Analysis Techniques	06-07; 16-17	10-11	14-15
	ACL 301 - Advanced ACL Concepts & Techniques: Functions	08	12	16
	ACL 302 - Advanced ACL Concepts & Techniques: Scripts	09-10	13-14	17-18
	ACL 303 - Advanced ACL Concepts & Techniques: Functions & Scripts	08-10	12-14	16-18
	Fraud Detection Techniques Using ACL	20-21	24-25	21-22
	ACL Data Access	23	17	23
	ACL Version 8: Refresher	22	18	24
Indonesia	ACL 105 - Foundation of ACL: Concepts & Practice	01-03	05-07	01-03
	ACL 201 - Data Analysis Techniques	06-07	10-11	14-15
	ACL 301 - Advanced ACL Concepts & Techniques: Functions	08	12	16
	ACL 302 - Advanced ACL Concepts & Techniques: Scripts	09-10	13-14	17-18
	ACL 303 - Advanced ACL Concepts & Techniques: Functions & Scripts	08-10	12-14	16-18
	Fraud Detection Techniques Using ACL	02-03; 20-21	24-25	24-25
	ACL Data Access	23	17	21
	ACL Version 8: Refresher	22	18	22
Thailand	ACL 105 - Foundation of ACL: Concepts & Practice	-	05-07	-
	ACL 201 - Data Analysis Techniques	-	10-11	-
	ACL 301 - Advanced ACL Concepts & Techniques: Functions	-	12	-
	ACL 302 - Advanced ACL Concepts & Techniques: Scripts	-	13-14	-
	ACL 303 - Advanced ACL Concepts & Techniques: Functions & Scripts	-	12-14	-
	Fraud Detection Techniques Using ACL	-	27-28	-
	ACL Data Access	-	17	-
	ACL Version 8: Refresher	-	18	-
Philippines	ACL 105 - Foundation of ACL: Concepts & Practice	-	-	02-04
	ACL 201 - Data Analysis Techniques	-	-	14-15
	ACL 301 - Advanced ACL Concepts & Techniques: Functions	-	-	16
	ACL 302 - Advanced ACL Concepts & Techniques: Scripts	-	-	17-18
	ACL 303 - Advanced ACL Concepts & Techniques: Functions & Scripts	-	-	16-18
	Fraud Detection Techniques Using ACL	-	-	28 Feb - 01 Mar
	ACL Data Access	-	-	23
	ACL Version 8: Refresher	-	-	24

Coming Up in the Next Issue of Prodigy Newsbyte

- ♦ More Useful ACL Tips
- ♦ More Articles on Business Analysis Analytics and Enterprise Risk Management
- ♦ ACL User Community
- ♦ And many other useful industries information

Feel free to write us any questions, comments or feedbacks on Prodigy Newsbyte via email at info@prodigy.com.sg