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THEME:

The global adoption of International Public Sector Accounting Standards (IPSAS): The benefits and challenges

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EDITORIAL

Reporting entities around the world including governments and other public sector organizations often apply financial reporting standards to guide the preparation of their financial statements. Reporting standards are important because they objectively define accounting numbers which often form the basis for contractual entitlements in corporate organizations. Some organizations apply reporting standards developed by national standard setters and others adopt reporting standards developed by international standards setting bodies. This article discusses the arguments for and against financial reporting standards and assesses the global adoption of International Public Sector Accounting Standards (IPSAS).

Over the past few years, Bitcoin has gained significant importance throughout the world. Bitcoin is a prominent digital currency backed by a computer code rather than a physical substance such as gold. Despite its prominence on account of transaction cost, faster funds transfer system, protection of user's identity and promotion of financial inclusion; it is, however, associated with crime such as money laundering and narcotics as well as an alarming level of price volatility, high degree of anonymity of users and poor consumer protection scheme. All these developments in Bitcoin trading and transactions have culminated in governments, regulators and financial system participants to be wary of its potential implications. The writer talks about the prospects, challenges, and effects on the economy if Ghana wants to introduce this virtual currency in the country.

Integrated Reporting enhances the way organizations think, plan, and report the story of their business. Many organizations use Integrated Reporting as an opportunity to communicate a clear, concise, integrated story that explains how value is created within these organizations. Integrated Reporting is an approach that helps businesses think holistically about their strategy and plans, make informed decisions, manage key opportunities and risks to build investor and stakeholder confidence, and help manage the organization's performance. The writer mentions that, understanding value creation is enabled by what is called integrated thinking, a central theme of Integrated Reporting, which is based on breaking down internal silos between people and departments so that the organization can collectively better understand the key elements of the business.

The responsibility for fraud prevention and detection has been a thorny issue for some time now especially among non-financial accountants. While a lot of people have the believe that it is the duty of the auditor to detect and or prevent fraud and other irregularities, there are even many more who do not know or appreciate the work auditors are supposed to do or their responsibilities in relation to audit engagements. The writer explains the responsibilities of both the management and persons charged with governance and that of auditors when it comes to the issue of prevention and detection of fraud and other irregularities.

These and many more are being presented in this edition for your reading. Please forward your comments on any of the articles or this edition of the journal to:

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1. **IFAC NEWS**

IFAC Releases Report on Sustainability: Challenges and Opportunities for SMPs and SMEs

Small- and medium-sized entities (SMEs) might think that sustainability is only relevant to large companies. Maybe they think they cannot afford to be sustainable, that measuring and managing environmental performance amounts to a costly and unnecessary burden. Moreover, their accountants, both those employed by the business (accountants in business) and those providing services to the business (accountants in practice), will tell you it is a hard sell getting SMEs to embrace sustainability. However, SMEs that integrate sustainability into their core business strategy can benefit from lower costs, reduced risk, and new opportunities. And their accountants, typically operating in small- and medium-sized practices (SMPs), can play a key role in their journey.

SMEs are crucially important to the health and stability of the global economy: they account for over 95% of all businesses and for the majority of private sector gross domestic product (GDP), wealth and employment creation, and social and environmental impacts. Meanwhile, there is immense pressure on the natural environment and a recognition that finite resources are fast depleting. Today, SMEs are increasingly being faced with pressure to measure and manage their impact on the environment. They are an integral part of the supply chain where there is a growing demand for sustainability management both from customers and suppliers, especially for those SMEs seeking to secure contracts with governments or larger companies. SMEs also need to ensure they have access to the resources they need to be able to continue offer their products and services in the future. That said, many SMEs may still feel they can delay addressing sustainability issues.

Our global SMP poll indicates there are other more urgent issues preoccupying businesses, including economic concerns and keeping up with new standards, prompting sustainability to slide down their list of priorities. This may explain why few SMPs are presently offering sustainability services. But in the longer term, the sustainability issue is here to stay. The good news is that there is growing evidence that sustainability initiatives, such as those to reduce an SME's carbon footprint, can also help improve their bottom line. SMEs of all shapes and sizes — for profits and not-for-profits, public or private, across all industrial sectors — stand to yield significant benefits from adopting sustainable business practices. The initial cost of integrating sustainability into the core business strategy, and reporting on it, can be more than offset by cost savings, reduced risk, positive brand association, and the ability to meet consumer, investor, and supplier demand for environmentally conscientious products and services. In this way, the initial cost is more than an investment.

Opportunities for SMPs

Accountants working in SMEs can help their employers at each step of the way, from advising on the costs/benefits of behavioural changes aimed at reducing waste, to investment in new equipment and alternate sources of energy, to developing a comprehensive environmental management system (EMS). However, many SMEs lack the capability to this without outside help. They will likely seek the help of someone they trust, their accounting firm, a demand that can generate new revenue opportunities for SMPs. But first SMEs need to know that they can expect assistance of this nature from their accountants. Given that SMEs are keen to realise the financial benefits of adopting more sustainable practices, a starting point for SMPs might be to offer to help their clients implement the plan-do-check-act method for the control and continuous improvement of processes and products. This advisory service could include improving business opportunities and creating efficiencies, identifying the risks to cash flow that social, economic, and environmental change will present, and ensuring that clients or employers take advantage of the cost reductions, minimise any cost increases, and maximise the potential revenue by adopting business strategies that identify and address those sustainability issues that are most relevant to their particular business circumstances. In addition, SMPs might wish to encourage their SME clients or employers to have an EnvironReady Report, an engagement based on ISRS 4400 that confirms that the business has an environmental management system (EMS) in place that meets the requirements in ISO 14001:2004.

Some accountants might also help SMEs do some form of sustainability reporting, such as the Global Reporting Initiative's Level C. They could employ a step-by-step approach of making a public commitment to take action, assessing the business's impact, setting targets for reducing impact, acting to reduce impact, and publishing the business's policies and actions. Some SMPs are already helping their clients to develop metrics and the systems needed to capture and report on the metrics. If reporting is deemed valuable, SMPs could progressively do more, culminating in getting some form of assurance on what the client/ employer reports, perhaps using the IAASB's ISAE 3000 series of engagement standards, such as ISAE 3410 for greenhouse gas emissions.

Initial Steps in Offering a Sustainability Service

It was suggested that SMPs take the following steps to ensure they have the prerequisite expertise to offer a sustainability service:

1. Build partnerships — SMPs should establish collaboration with local environmental sustainability experts in order to gain local access to credible knowledge.

2. Gain experience — This begins in the SMP's own business. Practitioners should review the environmental sustainability of their own business and then use that valuable experience to have rounded, relevant conversations, based on genuine experience, with their clients.

3. Seek information — Practitioners should familiarise themselves with information sources that they could recommend to others or use to broaden their own knowledge.

4. Formalise commitment — Where appropriate, practitioners should formalise their commitment to offering environmental sustainability advice through marketing and awareness raising in newsletters, their documentation, and website. Ultimately, offering a sustainability service can help SMPs both add value to the services they offer and help their clients/ employers improve the way they run their businesses. Applying the same principles to the practice itself can help accountants improve the way they run their businesses as well.

Source: www.ifac.org/gateway-publications

IFAC Global Survey Reflects Growing Accountancy Talent and Technology Challenges

Accountants working in small- and medium-sized practices (SMPs) around the world are facing heightened staffing challenges, according to the latest IFAC Global SMP Survey results. While attracting new clients, keeping up with new regulations/ standards, and pressure to lower fees remained key challenges faced by SMPs, attracting new/retaining existing staff made the top four challenges for the first time since the survey was conducted in 2011. Additionally, the anticipated impact of technology developments over the next five years increased substantially in 2016 over 2015. Staying current with new hardware and software, as well as moving to the cloud, topped the list of technology challenges. Despite these challenges, SMPs' future performance expectations increased slightly from a year ago in three of the four service areas, with the exception of tax. Growth is expected to be driven by advisory/consulting services, along with accounting, compilation, and other non-assurance/related services, with 45% and 44%, respectively, predicting fee revenue increases in these areas in 2017. "The ever-increasing pace of technological change represents both a challenge and opportunity for SMPs," said IFAC CEO Fayez Choudhury. "As trusted business advisors to small- and medium sized entities or SMEs, a sector critical to global economic stability and growth, SMPs need to consider how they can best leverage technological advances to reduce costs and offer value-added services to meet clients' changing demands and expectations. In addition SMPs that keep pace with developments in technology are likely to do better in attracting, retaining, and nurturing talent.

Source: www.ifac.org/gateway-publications

The Accountancy Profession– Playing a Positive Role in Tackling Corruption

"The accountancy profession seeks to create an ethical framework to assist its members in speaking out when they identify fraud and corruption."

– IFAC President Rachel Grimes

"Corruption is a severe impediment to sustainable economic, political, and social progress for countries at all levels of development…This underscores the importance of intensifying efforts to improve governance frameworks and strengthen actions to improve the prevention, detection, and sanctioning of corruption. Any effort to fight corruption requires a holistic and coordinated approach."

– Putting an End to Corruption, Organisation for Economic Co-operation and Development

Over the last two years, IFAC has commissioned the independent Centre for Economics & Business Research (Cebr) to analyze our membership data, and to examine the accountancy profession's role in society.

The Accountancy Profession—Playing a Positive Role in Tackling Corruption is the third report in this series and provides a snapshot of the accountancy profession's role in the global fight against corruption.

The Accountancy Profession—Playing a Positive Role in Tackling Corruption summarizes research into the crucial role professional accountants play, alongside other key actors in the economy, to tackle corruption globally.

Corruption is among the most harmful and urgent issues facing the world's citizens today. Among its effects are a corrosive impact on economic growth that frustrates poverty reduction efforts and erodes public trust in business, government, and the rule of law.

The positive role played by accountants worldwide in the fight against corruption is clear, and professionalism is highlighted as an essential component for success. Professional accountants are one group among a number of vital actors in the economy, including business leaders, governments, and the financial sector, which are key to tackling corruption.

An increased determination and great deal of constructive work in the global fight against corruption has been evident in recent years and this momentum is set to continue in 2017. However, this is a never-ending mission, and the problem is age-old. In order to achieve meaningful success, it is vital that three things happen:

• collaborative efforts across all sectors—business, government, and the professions—must be intensified to enact clear organizational governance standards and whistle-blowing protections for those who suspect or identify wrong-doing;

• given vast public sector spending, global interest in robust, transparent, and accountable public financial management must be reinvigorated; and

• to support the public interest, there must be greater global adoption of high-quality international standards on financial reporting, auditing, and ethics.

In the fight against corruption, silence must never be the safer option for any individual. The accountancy profession, acting in the public interest, has supported this fight for decades—and we will continue to do so.

Highlights of the findings from the IFAC's commissioned research are as follows:

Where the governance architecture is stronger, the role played by professional accountants in tackling corruption is amplified.

Professional accountants are a part of the governance architecture that serves to tackle corruption, and their positive contribution is amplified where the rest of that architecture is stronger. The link between the prevalence of professional accountants in the workforce and more favorable scores on the main global measures of corruption is stronger in G-20 countries, and in countries that have adopted anti-money laundering laws in line with international recommendations.

Professional accountants are playing a major, positive role in tackling corruption, along with other key actors in the global economy.

The work of professional accountants is crucial to the governance architecture of economies, and along with other key elements serve to underpin transparency, accountability, and the rule of law. There is a strong link between the percentage of professional accountants in the workforce, and more favorable scores on the main global measures of corruption.

Professional ethics, education, and oversight—at the core of the global accountancy profession—are key to the positive role played in tackling corruption.

Core qualities that make accountancy a global profession are its robust international ethical code, comprehensive educational requirements, and ongoing monitoring and oversight mechanisms. The link with more favorable corruption scores is three times stronger for professional accountants that have committed to these qualities than for individuals who may identify as accountants but do not possess professional qualifications (for example, in countries where professional qualifications are not required, or individuals working in support roles).

Working together to strengthen governance and transparency, and combat corruption

All key players in the governance architecture of our economies, including professions, business, and government, in both private and public sectors, must collaborate to adopt clear governance standards for all organizations.

Improving government accounting

Poor government financial management, including cash rather than accrual based accounting, remains a significant issue in many regions and has a negative impact on decision making, accountability, and transparency. Adoption of accrual-based accounting, and International Public Sector Accounting Standards™ (IPSAS™), by all governments and public sector institutions is an urgent priority.

Consistent international standards

To support the public interest, there must be greater global adoption of high-quality international standards on financial reporting, auditing, and ethics. This includes adoption and implementation, across all jurisdictions, of International Financial Reporting Standards, International Standards on Auditing, the Code of Ethics for Professional Accountants™, issued by the International Ethics Standards Board for Accountants® (IESBA®), and IPSAS. These standards have a nexus across integrity in both private and public sectors.

Source: www.ifac.org/gateway-publications

2. ICAG NEWS TIT-BITS

ICAG Donates to Accra Psychiatric Hospital

The Institute of Chartered Accountants (Ghana) on Wednesday, 3rd August, 2017 made a cash donation of Ghs 10,000.00 to the Accra Psychiatric Hospital to support in the running of the facility. The donation forms part of the 2017 Accountants Week Celebration which was held from Saturday, 27th May to Friday, 2nd June, 2017. The conference was under the theme **"Transformation of Ghana's economy @ 60".**

[FIX PICTURES]

The presentation at the Accra Psychiatric Hospital was made by the President of ICAG, Mr. Christian Sottie who briefed the gathering of the purpose for the donation. He informed the Management of the facility that the donation was in response to the call of the hospital for organisation to support the facility to improve the living and health conditions of inmates. Mr. Sottie made a special mention of the hospital's laboratory which required a facelift to assist the hospital run important tests on the inmates.

Receiving the cash donation on behalf of the hospital was Dr. Adwoa Pinaman Apau, the Medical Director of the Accra Psychiatric Hospital. She expressed her profound appreciation on behalf of the Management of the hospital to the Institute for the kind gesture showed the facility. She said that the hospital was still seeking support and funding from groups, individuals, corporate companies and many others to assist run the facility. Dr. Pinaman Apau assured the ICAG President that the money would be used judiciously for the benefit of the inmates of the facility.

Present at the donation with the ICAG President was the Ag. CEO of the Institute, Mr. Augustine Addo, Mr. John Hansen, Assistant Manager, Events and some of the staff of the Institute.

Accountants advised to shun corrupt practices – ICAG President

Mr. Christian Sottie, the President of the Institute of Chartered Accountants, Ghana (ICAG) has said, professional accountants should value their profession and always be careful of the critical role they played in national development, and be tact in the discharge of their duties. He was speaking at the 2017 edition of the annual presidential luncheon of the ICAG, dabbed *"Government's subsidies and market interventions; the strategic approach to economic development,"* in Accra. Welcoming the audience, Mr Christian Sottie, President, ICAG, underscored the importance of the role of accountants in growing the economy.

According to him, the presidential luncheon was established purposely to create a platform for professional accountants to interact with their employers and clients in a suitable atmosphere outside the office environment, to discuss issues of mutual and national benefits. Mr Sottie stressed that, government is very much committed in creating an enabling environment for businesses to grow, and he attributed it to the various tax cuts and subsidies in the 2017 budget. "Most of the developed economies that we admire today enjoy a lot of tax exemptions or reliefs, making the movement of goods and services cheaper and this goes a long way to determine reasonable prices of goods and services," he emphasized.

[FIX PICTURES]

Delivering the key note address, the President of the Association of Ghana Industries (AGI), Mr James Asare-Adjei, urged government to institute measures to check abuses and poor implementation of subsidies and market interventions. Mr Asare-Adjei noted that a good number of the world's leading economies have been able to transform on account of government subsidies and market interventions—citing China whose economy was being driven by low production costs and good export incentives. However, in the case of Ghana, he said, several interventions and subsidies, though well-intended, and with a view to growing the economy, had been abused.

He described the subsidy on pre-mix fuel for fishermen, subsidy for agricultural sector, subsidy for lifeline consumers of electricity, stimulus package for distressed companies, subsidies for investment in solar and energy saving devices and subsidies for investment to encourage fledgling sectors as interventions that were either misplaced or abused to the detriment of the beneficiaries and the state.

He noted that Foreign Direct Investments (FDIs) and certain strategic investments to Ghana had enjoyed significant exemptions that were beginning to take a toll on Ghana's national budget, citing statistics from an ActionAid Study indicating that Ghana lost US $1.2 billion annually on account of exemptions granted such investments. He expressed worry that billions of Cedis from state and local economic incentives aimed at small businesses ended up with a few large and well-established businesses.

Mr Asare-Adjei urged government to prioritize some of the exemptions and stressed the need for indigenous businesses to get their fair share of the roll out of exemptions and tax holidays, adding that if government subsidized indigenous businesses, business could expand and the prospects of job creation would increase. He also called on government to use market interventions to address the high cost of credit in Ghana and also adopt a targeted tax policy where imports/raw materials which already existed locally, should attract higher taxes. Furthermore, he said, policy makers should leverage the provisions under the Common External Tarrif (CET) to cushion local products which were exposed to competition from imports.

In an address, Mr. John Awuah, Chief Executive Officer, Universal Merchant Bank and the guest speaker for the occasion, said even though a good number of the world's leading economies had been able to transform on account of government subsidies and market interventions, implementation abuses have often defeated the purpose of the interventions in other countries.

Mr Awuah mentioned Kenya and the Asian Tigers—South Korea, Taiwan, Singapore and Hong Kong—who employed effective government interventions in the market economy to register exceptionally high economic growth rates. He said although subsidies and market interventions were inextricable elements in economic development, they could not reflect a strategic approach to Ghana's economic development, unless they were borne out of well-thought-out strategies, rather than of political expediencies. He, therefore, urged Government to, strategically and in a consultative manner, use subsidies and market interventions to create the facilitating environment for the private sector to drive its vision and to promote economic growth.

Source: ISD (G.D. Zaney)

ICAG Organises Public Lecture

The Institute of Chartered Accountants Ghana has organised Public Lecture for the members and the general public. The lecture was on the theme "VAT Reforms in Ghana: Any Policy Alternatives? The lecture was well attended and the participants were highly satisfied about the delivery of the lectures. The lecture took place at the Movenpick Ambassador Hotel in Accra on the 4th of October, 2017. The facilitators gave the background of the introduction of VAT in Ghana, various challenges and prospects encountered over the period, various reforms and amendments which have taken place over the period, and concentrated much attention on the 3% Flat Rate Scheme (VFRS) recently reintroduced by the government.

[FIX PICTURES]

The rationale behind the VFRS as stated by government is to make VAT simple to calculate and easy to understand; minimize the incentive of cheating; and to minimize the incidence of VAT avoidance. The presenters were of the view that contrary to the opinion that the introduction of the 3% flat rate will lead to a reduction in prices, the VFRS would lead to cascading taxes and an increase in the tax burden on consumers through an increase in the price of commodities. The cascading effect of a tax occurs in a tax system in which a rate of tax is applied at every stage in the supply chain, without any deduction for the taxes incurred at earlier stages.

While the VFRS may have its advantages of generally being simpler to calculate and perhaps increasing tax revenue for the government, its impact on businesses, the consumer and the economy far outweighs its intended benefits. The cascading effect of the tax would lead to an increase in cost for businesses down the value chain which would consequently lead to an increase in the cost of commodities for the consumer.
The implementation of VFRS in its current form reaffirms the belief that the country lacks a coherent and comprehensive tax policy design. Going forward, an effective implementation of presumptive taxation under the Income Tax Act, 2015 (Act 896) would be able to meet the goals which government seeks to impose a VAT flat rate with a more favourable effect.

3. FEATURES

The Hindsight of the Ghanaian Economy and the Investment Factor: Taking Cue from the 2017 CEO Survey, PWC.

By Eli Kofi Avickson

Ghana's economic growth, which had slowed from 4.0% in 2014 to 3.7% in 2015, is expected to recover to 5.8% in 2016 and 8.7% in 2017, following consolidation of macroeconomic stability and implementation of measures to resolve the crippling power crisis, According to the Africa Economic Outlook (AEO), 2016 reviews.

Moving from a lower income status to a medium income regime, it should be relevant to survive a turbulent global economic outlook with focus on attracting investors. Building, maintaining and retaining fruitful investor-partnerships should be governments' aim. And it's time the Ghanaian businessman/woman and Government Business Entities (GBEs) as a whole adopt an-all-strategic-best-practices approach towards surviving the global economic circumstances. Job creation, poverty alleviation, industrial and infrastructural growth are directly related to increase in domestic and foreign investments.

According to the 20th CEO Survey conducted by the PricewaterhouseCoopers (PwC), Over 550 investment professionals gave their views on the impact of globalization and technology on growth, talent, trust and society for the companies they follow.

Over the past 20 years CEOs have witnessed tremendous upheavals as a result of globalization and technological change. In the Survey, nearly 1,400 CEOs share their views. Bob Moritz, Global Chairman, PwC took some reflections and said; “for leaders it’s now time to both raise and communicate the role of business in society and the positive impact it can have on the impact of these forces on growth, talent, trust and society”.

DIVERGENT INDUSTRIAL COMPETITON

According to the Survey, over the past 20 years CEOs have witnessed huge upheavals as a result of globalization and technological change. Both were core to the survey when they conducted the first Annual Global CEO Survey in 1997. Since then, trade flows have quadrupled, the emerging economies have mushroomed and a billion people have been lifted out of poverty. But the benefits have been unevenly distributed. Research by economist Branko Milanovic, shows the super-rich and Asia’s expanding middle class have fared well, while those of modest means in developed countries have missed out and of course once again, the Ghanaian economy is no exception.

Now, anger over the way the pie has been sliced is increasingly shaping domestic and global political discourse – just as CEOs foresaw nearly a decade ago when they predicted a growing gap between rich and poor and warned of rising political and religious tensions. By 2016, most CEOs anticipated a world in which multiple beliefs, value systems, laws and liberties, banking systems and trading blocs would prevail.

In short, greater convergence has come with greater divergence. So how are CEOs competing in a world that’s simultaneously becoming more connected and more divided, and far polarized?

Ironically, the reports shows that growth in global trade is slowing, even as public discontent mounts. CEOs are changing their growth strategies accordingly. Twenty years ago, they saw emerging markets as the ticket to success. As recently as 2014, China was their first choice. Brazil, India, Russia and Mexico also featured high on their list of top spots. But CEOs are now turning to a broader mix of countries.

They’re targeting the US, which is prospering despite the challenges it faces as it redefines its role on the world stage. China also remains a priority, for all that it’s dealing with a worrying debt bubble. Germany is a steady favourite, and the UK has soared in popularity – an ascent that’s particularly noteworthy, given the vote to leave the EU (Brexit). However, over time, CEOs have become much less enthusiastic about the prospects in Brazil, India and Russia. In other words, they're shopping around carefully, as the opportunities and risks in different markets become both more distinctive and more changeable, rather than heading straight down the BRIC road.

Of course, CEOs worry about economic and geopolitical uncertainties. Nevertheless, they've become surprisingly optimistic. In 1997, only a third of the business leaders surveyed were very confident about their company's three-year revenue outlook, even though they were riding the wave of an extraordinary bull market. This year, by contrast, 51% are very positive about the longer-term prospects for growth.

Why such optimism? CEOs have undoubtedly had to cope with stormy conditions, so perhaps natural selection has played a part; anyone who reaches the top has already adapted to uncertainty. Alternatively, perhaps, CEOs have learned to look for the upside and seize on the opportunities uncertainty brings. One thing is clear; they're not waiting things out. CEOs recognize that it's not enough to focus on organic growth and cost reductions, important though these are. So they're prioritizing investment in innovation and digital capabilities.

THE REALITIES OF THE GHANAIAN ECONOMY:

According to the African Economic Outlook (AEO), 2016, in 2015, the Ghanaian economy grew at an estimated 3.7%, down from 4% in 2014. The 2015 slowdown resulted from a number of economic challenges, most of which were in play in 2014. These include a 3-year power crisis (also known as 'Dumsor'), rising fiscal deficit and public debt levels, a significant external sector deficit and unpredictably low world market prices for the country's oil and gold exports. The services sector was the main driver of growth. The industrial sector also posted a positive growth rate of 9.1%. Over the medium term the country should see a recovery with a projected GDP growth of 5.8% in 2016 and 8.7% in 2017. The forecasted recovery in economic growth in 2016/17 depends on fiscal consolidation measures remaining on track, quick resolution of the power crisis, two new oil wells coming on-stream, and improved cocoa harvest and gold production etc.

Ghana maintained a tight monetary and fiscal policy in 2015. The government's fiscal consolidation programme aimed to address demand pressures exacerbated mostly by the wage bill and by public debt services, which account for most un-earmarked revenues. Monetary policy in 2015 continued to be tightened with measures to contain rising inflation and the rampant depreciation of the domestic currency. To address these challenges, government entered into a 3-year Extended Credit Facility (ECF) agreement with the International Monetary Fund (IMF) in April 2015, successfully undertaking two reviews under the programme. The fiscal consolidation stance is expected to meet the conditions of the reviews in 2016 as well. Ghana's national election in December 2016 generated much appreciated peace characterized by free, fair credible elections will be key for policy continuity and for solidifying the country's democratic dividend, especially after the closely contested 2012 elections and the judicial adjudication of the presidential elections.

By 2010 over half of Ghana's population lived in urban areas (localities with a population of 5000 or more), as compared to 30% at independence in 1957. The urbanization rate is projected to increase to 72% by 2035. While rural-urban disparities are still significant, there are signs that Ghana's cities are facing considerable challenges with land use, infrastructure and services provision (particularly with regard to housing, sanitation and transportation), and the absence of gainful and productive employment opportunities, especially for the youth. The critical policy challenge has been to ensure orderly and sustainable spatial development, co-ordination and planning, and measures to enable metropolitan and municipal authorities to secure adequate financing for infrastructure and services

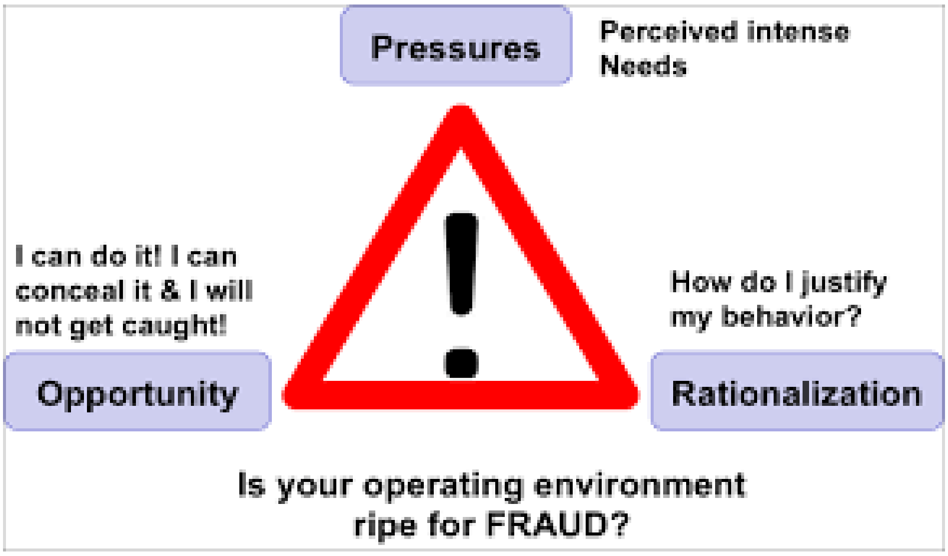
CONCLUSION:

It's relevant from the face of this insights that a middle income economy like ours (Ghana) needs to take a retrospective look at certain sustainable Key Performance Indicators (KPIs) so as to thrive on within the framework of world economic space. The country's per sectoral outlooks (Agriculture, Industry & Service), Industrial drive, human resource development, per capita income, GDP growth and entrepreneurial growth must commensurate the changing times with keen attention on investment as the main driver. Most importantly, critical assessment of overall domestic economy and external trade management, public policy on spending and income generating streams should be earmarked, controlled and monitored so as to ensure investor-friendliness, trust and returns on investments within geopolitical economic purviews. Definitely, the hindsight of market players must turnaround with significant focus on domestic trade and investments.

Fraud Detection and Prevention in Financial Reporting – Is it Directors' or Auditors' Responsibility?

By Desmond Aidoo, FAIA, FIAAP, CA, CIT*, BSc, ExCertFCL

The issue of fraud has been in existence for ages leading to the collapse of most businesses due to misleading financial reporting and misappropriation of funds. It has also questioned the integrity of some key industry players as well as major accounting firms. Unfortunately, fraud is not in any physical form such that it can easily be seen or held. It refers to an intentional act by one or more individuals among management, those charged with governance, employees, or third parties, involving the use of deception to obtain an unjust or illegal advantage.



According to the Association of Certified Fraud Examiners, fraud is defined as any intentional or deliberate act to deprive another of property or money by guile, deception, or other unfair means. It classifies fraud as follows:

- Corruption: conflicts of interest, bribery, illegal gratuities, and economic extortion.
- Cash asset misappropriation: larceny, skimming, check tampering, and fraudulent disbursements, including billing, payroll, and expense reimbursement schemes.
- Non-cash asset misappropriation: larceny, false asset requisitions, destruction, removal or inappropriate use of records and equipment, inappropriate disclosure of confidential information, and document forgery or alteration.
- Fraudulent statements: financial reporting, employment credentials, and external reporting.
- Fraudulent actions by customers, vendors or other parties include bribes or inducements, and fraudulent (rather than erroneous) invoices from a supplier or information from a customer.

Fraud involves the motivation to commit fraud and a perceived opportunity to do so. A perceived opportunity for fraudulent financial reporting or misappropriation of assets may exist when an individual believes internal control could be circumvented, for example, because the individual is in a position of trust or has knowledge of specific weaknesses in the internal control system. Fraud is generally fuelled by three variables: pressures, opportunity and rationalization as depicted in the diagram.

There is the need to distinguish between fraud and error in financial statement preparation and reporting. The distinguishing factor between fraud and error is whether the underlying action that results in the misstatement in the financial statements is intentional or unintentional. Unlike error, fraud is intentional and usually involves deliberate concealment of the facts. Error refers to an unintentional misstatement in the financial statements, including the omission of an amount or disclosure.

Although fraud is a broad legal concept, the auditor is concerned with fraudulent acts that cause a material misstatement in the financial statements and there are two types of misstatements in the consideration of fraud - misstatements resulting from **fraudulent financial reporting** and those arising from **misappropriation of assets.** (par. 3 of ISA 240).

Misappropriation of assets involves the theft of an entity's assets and can be accomplished in a variety of ways (including embezzling receipts, stealing physical or intangible assets, or causing an entity to pay for goods and services not received). It is often accompanied by false or misleading records or documents in order to conceal the fact that the assets are missing. Individuals might be motivated to misappropriate assets, for example, because the individuals are living beyond their means.

Fraudulent financial reporting may be committed because management is under pressure, from sources outside and inside the entity, to achieve an expected (and perhaps unrealistic) earnings target – particularly since the consequences to management of failing to meet financial goals can be significant. It involves intentional misstatements, or omissions of amounts or disclosures in financial statements to deceive financial statement users. Fraudulent financial reporting may be accomplished through:

i. Deception i.e. manipulating, falsifying, or altering of accounting records or supporting documents from which the financial statements are prepared.

ii. Misrepresentation in, or intentional omission from, the financial statements of events, transactions, or other significant information.

iii. Intentionally misapplying accounting principles with regards to measurement, recognition, classification, presentation, or disclosure.

The case of Directors in Fraud Detection and Prevention in Financial Reporting

Many directors or those charged with governance have over the years been blaming auditors for failure to identify fraud during their audit work, and only to be slapped with fraud issues later in the period. Even most users of accounting information including shareholders hold the view that, the certification of financial statements by auditors is a confirmation that financial statements are "correct" in all aspects.

It is a general practice that the directors are responsible for the preparation of financial statements for each financial year which gives a true and fair view of the financial position of a company and of the financial performance and cash flows for that period. This the directors do by selecting suitable accounting policies and then apply them consistently, make judgements and estimates that are reasonable and prudent, in accordance with relevant national and international regulations and standards respectively.

Many users of financial information conclude that, the mere fact that an auditor failed to detect or prevent fraud in financial statements or reporting, means that the audit was not properly conducted because of the expectation that the audit is supposed to unravel every irregularity in accounting records.

The case of Auditors in Fraud Detection and Prevention in Financial Reporting

Auditors maintain that an audit does not guarantee that all material misstatements will be detected due to the inherent limitation of an audit and that they can obtain only reasonable assurance that material misstatements in the financial statements will be detected. It is also known that the risk of not detecting a material misstatement due to fraud is higher than that of not detecting misstatements resulting from error because fraud may involve sophisticated and carefully organized schemes designed to conceal it, such as forgery, deliberate failure to record transactions, or intentional misrepresentations being made to the auditor.

Such attempts at concealment may be even more difficult to detect when accompanied by collusion and as such the auditor's ability to detect a fraud depends on factors such as the skillfulness of the perpetrator, the frequency and extent of manipulation, the degree of collusion involved, the relative size of individual amounts manipulated, and the seniority involved. However, users of financial information expect auditors to take steps to detect fraud during the audit because they are often displeased when fraud goes undetected and is later uncovered by a tip or accident whiles the resulting investigation or financial statement restatement creates negative consequences for the company and its employees.

Who then has the responsibility to detect and prevent fraud in financial reporting?
Auditors' responsibilities and roles in audit are enshrined in the International Standards on Auditing (ISA) which serves as the "bible" for auditors in the discharge of their duties and to ensure that their reporting complies with international standards. The provisions of the standard which are under consideration for this purpose are ISA 240 (i.e. The Auditor's Responsibilities Relating to Fraud in An Audit of Financial Statements) and ISA 315.

Paragraph 4 of ISA 240 deals with the responsibility for the prevention and detection of fraud and it states that "the primary responsibility for the prevention and detection of fraud rests with both those charged with governance of the entity and management. It is important that management, with the oversight of those charged with governance, place a strong emphasis on fraud prevention, which may reduce opportunities for fraud to take place, and fraud deterrence, which could persuade individuals not to commit fraud because of the likelihood of detection and punishment. This involves a commitment to creating a culture of honesty and ethical behavior which can be reinforced by an active oversight by those charged with governance. Oversight by those charged with governance includes considering the potential for override of controls or other inappropriate influence over the financial reporting process, such as efforts by management to manage earnings in order to influence the perceptions of analysts as to the entity's performance and profitability".

Paragraph 5 also states that "An auditor conducting an audit in accordance with ISAs is responsible for obtaining reasonable assurance that the financial statements taken as a whole are free from material misstatement, whether caused by fraud or error. Owing to the inherent limitations of an audit, there is an unavoidable risk that some material misstatements of the financial statements may not be detected, even though the audit is properly planned and performed in accordance with the ISAs".

Notwithstanding the above, ISA 315 requires auditors to evaluate the effectiveness of an entity's risk management framework in preventing misstatements, whether through fraud or otherwise, during an audit and that auditors should consider the risk of misstatement from fraud or error of each significant account balance, recognizing the material classes of transactions included therein, in order to identify specific risk and if a material misstatement is found due to the possibility of fraud, then that could cause them to question management's integrity and the reliability of evidence obtained from management in other areas of the audit.

It can therefore be concluded that the Directors are responsible for ensuring that the company keeps proper accounting records that disclose with reasonable accuracy at any time the financial position of the Company as well as responsible for safeguarding the assets of the Company and taking reasonable steps for the prevention and detection of fraud and other irregularities. They do this indirectly by engaging a team of management personnel to carry out such policy, hence the failure of these management personnel to prevent and detect fraud in financial statements or reporting is the ultimate failure of the directors or those charged with governance.

Conversely, auditors' responsibility is to express an opinion on whether the summary financial statements are consistent, in all material respects, with the audited financial statements based on their procedures, which were conducted in accordance with International Standards on Auditing (ISA) and the relevant internal controls instituted by the directors or those charged with governance of the company.

And it is not surprising that, all annual financial reports completed having the directors and auditors' responsibilities with respect to financial statement preparation and reporting clearly spelt out.

Conclusion

Obviously, it can be concluded that auditors play just a complementary role in the detection and prevention of fraud in financial reporting and that the ultimate responsibility rests with those charged with governance.
The Institute of Internal Auditors (IIA) standard 1210.A2 in this regard however requires auditors to possess "sufficient knowledge" to identify indicators of fraud meaning that while auditors cannot be expected to develop these skills to the level of a fraud examiner, they should try to become more proficient through training, hands-on experience, reading the professional literature, brainstorming, and using fraud detection skills during the audit so they be aware of the impact of both fraud and error on the accuracy of the financial statements.

Creating value for SMEs through Integrated Thinking

OVERVIEW

Integrated Reporting (<IR>) enhances the way organizations think, plan, and report the story of their business. Many organizations use <IR> as an opportunity to communicate a clear, concise, integrated story that explains how value is created within these organizations. <IR> is an approach that helps businesses think holistically about their strategy and plans, make informed decisions, manage key opportunities and risks to build investor and stakeholder confidence, and help manage the organization's performance.

Organizations of all sizes can use <IR> to build understanding and trust in their business. As a business owner or manager, securing your customers', suppliers', finance providers', and other external stakeholders' trust is paramount. Using <IR>, trust in the business is built by succinctly highlighting what drives value. Understanding value creation is enabled by what is called integrated thinking, a central theme of <IR>, which is based on breaking down internal silos between people and departments so that the organization can collectively better understand the key elements of the business. This includes the governance, strategy, business model, and opportunities and risks in the context of trends and issues affecting the business. Integrated thinking also involves an organization considering the different resources consumed, and the relationships it relies on, leaving it in a better position to make decisions that help ensure its viability and resilience over time.

In addition to improving internal management processes, <IR> can also lead to other significant benefits, including:

- Creating greater trust and credibility with customers, suppliers, other stakeholders, and society. This is increasingly important in light of government agencies and not-for-profit organizations searching for commercial partners that can not only supply the goods and services that they need, but also do so sustainably;
- Maximizing the potential to transfer, sell, or hand over the business by providing a better basis for valuation; and
- Securing financing at a reasonable cost. Among other things, many lenders will want to know how financial capital has been deployed in the past and future intentions, based on a holistic strategy and a well-rounded business plan.

This publication is specifically for small- and medium-sized entities (SMEs), including those that are not-for-profit, that can achieve significant benefits from adopting <IR> and the International Integrated Reporting Council (IIRC)'s framework.

International Integrated Reporting Framework.

The Framework is principles-based—affording SMEs flexibility in applying <IR> and using a personal approach. The IIRC is a diverse coalition that includes business leaders and investors shaping a global evolution in corporate reporting.

IFAC strongly supports the IIRC and the implementation of the Framework. IFAC's Policy Position Paper 8, Enhancing Organizational Reporting: Integrated Reporting Key, highlights that <IR> is a way to achieve a more coherent corporate reporting system, fulfilling a need for a single report that provides a fuller picture of organizations' ability to create value over time. It can also be applied in a proportionate and scalable manner to all organizations regardless of size and sector.

How do SMEs Create Value?

A good place to start thinking about <IR> is with the question, how do SMEs create value? SMEs create value in various ways. Accruing financial capital through profits and dividends for owner(s) and shareholders requires delivering value to others, including:

• customers, by delivering desirable products and services;

• employees, by providing a great place to work; and

• society, by creating jobs and contributing taxes.

For many SMEs, created value is not adequately captured or explained in financial reports, such as intellectual property, customer and supplier relationships, human capital, and brand and reputation. A balance sheet usually only shows a small proportion of the intrinsic and real value of an SME. Whether young or established, high or low tech, in a well-developed or emerging economy, various aspects about how an SME creates value over time are common.

• It needs financial capital. An SME will not survive for long without financial capital: debt, equity, or, commonly, both. Whether it comes from family, friends, venture capitalists, crowdfunding, banks, the markets, or elsewhere, SMEs need money to create value.

• It relies on other capitals, or resources and relationships. Financial capital is only part of the value creation story. The extent to which an SME can create value over time will be affected to a greater or lesser extent by the continued availability, quality, and price of a full range of resources and relationships, or "multiple capitals." For example, a manufacturer who has invested in training to develop its workforce in specific areas such as quality management will expect to see higher productivity on the factory floor, and greater efficiency.

• It operates in the context of, and interacts with, the external environment. SMEs exist within an ever changing context and interact with innumerable external factors that together shape its economic, political, social, regulatory, market, and technological environment, which, in turn, affects its ability to create value. For example, technology presents opportunity as well as risk. For some SMEs, technology might be the key to their unique value proposition.

• In creating value for itself, it creates, and may sometimes destroy, value for others. Value is almost always co-created. Like two sides of a transaction, neither party will close the deal unless it perceives there is value in it for itself. For example, poor environmental practices, such as in water and waste management, may impact a factory's ability to access the clean water needed for production in the future.

Although these aspects are common to all SMEs, it is how each organization considers, manages, and combines these factors in its particular circumstances that make it unique. <IR> is an effective way to help an SME better understand and manage how it creates value, as well as report on that value creation. More integrated information and thinking should lead the organization to make better decisions about the key areas that affect its ability to create value that can then be communicated through an integrated report, which demonstrates a compelling business case to providers of finance, and others interested in the business. Collectively, the process of creating value and telling the story is integrated reporting.

Understanding the Benefits of Integrated Reporting <IR>

The Framework defines integrated thinking as: "The active consideration by an organization of the relationships between its various operating and functional units and the 'multiple capitals' that the organization uses or affects. Integrated thinking leads to integrated decision making and actions that consider the creation of value over the short, medium, and long term."

Integrated thinking results in a periodic integrated report by an organization about value creation over time and related communications regarding aspects of value creation. An integrated report is intended to be concise and highlight how an organization's strategy, governance, performance, and prospects, in the context of its external environment, lead to the creation of value over time.

Multiple Capitals

Through integrated thinking, <IR> can help an SME build a better, more concrete understanding of the factors that determine its ability to create value over the short, medium, and long term. It enhances an SME's business planning and development by taking a fully connected, holistic view, including its use of, and effect on, all capitals or resources that are important to its business model and future.

<IR> uses the term "capitals" and a multi-capital model to recognize the fact that value is not stored in financial capital alone, but in all sorts of capitals.

Just like financial capital, when these other capitals are properly understood and managed, they can continue to release value over time, while simultaneously growing in their capacity to continue to drive value in the future. <IR> identifies these other capitals as manufactured, intellectual, human, social and relationship, and natural.

Financial capital—the equity, debts, and grants available to an SME to be used in the provision of goods or services.

Manufactured capital—the tangible goods and infrastructure that an SME owns, leases, or has access to that are used in the provision of goods or services.

Social and relationship capital—An SME's brands and reputation, including its relationships with the community in which it operates, its customers, and business partners and others in its value chain, such as various government agencies.

Natural capital—An SME's access to environmental resources that it can use to provide a return and/or that it affects through its activities or the goods and services it creates.

Intellectual capital—the knowledge, intellectual property, systems, and processes that an SME has at its disposal that provide it with a competitive advantage and positively affect its future earning potential.

Human capital—the skills, experience, and motivation that employees and management in an SME possess that provide the foundation for future development and growth.

Better understanding

<IR> involves fully considering the many implications of connectivity between the capitals, the external environment, and internal factors through the lens of the business model. The business model is a pivotal component of <IR>. An increasing number of organizations are developing innovative ways to integrate information about their business model into a management report as it can be a key element of investors'
analysis and understanding of a company. Transparency on business models is potentially even more important for young and emerging businesses.

<IR> helps break down any internal silos and ensure that information flows fully and freely between different parts of the business to promote more creative cross functional thinking. Even in micro businesses where there are fewer people sharing the load, silos can develop inadvertently, if only because people don't have the opportunity to stop, think, and share information in a deliberative way. Adopting an <IR> approach can create opportunities to improve information flow and a shared understanding of value creation within an SME. <IR> helps organizations consider creating value over a longer time frame through a deeper understanding of how the various capitals that impact it affect how value is created and preserved, giving the necessary insights to act.

Better communication

SMEs are often judged by their recent financial performance, which can be limiting and an impediment to long-term value creation. On the other hand, having access to audited financial statements is important to providers of finance. But funders and other stakeholders, including customers and employees, are as much interested in other areas, like strategy and business model, that will drive the organization forward to meet its objectives. To meet this need, a concise integrated report provides the information required to understand the business and its future outlook. The integrated report includes key financial information, but that information is kept in context alongside, and connected to, significant "non-financial" measures and narrative information. This provides context to current and prospective equity investors, banks, and other providers of financial capital who can appreciate "the full picture" of how an SME creates value, and its capacity to continue creating value over time.

<IR> is not about more reporting or endless detail. While it's important for an integrated report to include sufficient context for a reader to understand an SME's strategy, governance, performance, and prospects, it should not be burdened with irrelevant information. Where appropriate, an integrated report can link to information elsewhere, like more detailed information on financials (e.g., audited financial statements), environmental or social performance (e.g., a sustainability report), or external sources (e.g., assumptions about future economic conditions and market trends on a government website).

It is important to recognize that an <IR> approach is not "just adding another report." Rather, the flexibility of <IR> means it can be used to move beyond the limitation of short-term financial results. It is a possible springboard to rationalize and harmonize other reports and communications and focus on integrated thinking about long-term value creation.

By taking a holistic, or "integrated," approach, <IR> provides a pathway for the organization to properly consider the full range of factors, such as multiple capitals, that make up the SME's value creation story. The Framework has a number of helpful guiding principles:

- strategic focus;
- future orientation;
- conciseness in reporting; and
- stakeholder responsiveness to provide insight into the nature and quality of an SME's relationships with key stakeholders, including how and to what extent it understands, takes into account, and responds to their legitimate needs and interests.

But perhaps the most important guiding principle, and the one that really sets <IR> apart, relates to connectivity and more creative, dynamic thinking.

If a compelling and candid story of an SME's value creation is to be understood and communicated, then the capitals, the external environment, and the significant internal value and performance drivers need to be considered together.

This guiding principle is about the interplay between these three aspects of value creation. It prompts the organization to consider the effects of connectivity between, for example:

- quantitative and qualitative factors, including both financial and non-financial considerations;
- the particular capitals the SME uses and affects, and the critical interdependencies, including the trade-offs, between them;
- past performance, present resource allocation, and future outlook and prospects;
- the SME's strategy, business model, and the specific opportunities and risks it faces;
- the nature and rate of change in external factors—for example, competitors' activities, economic conditions, demographics, technology, natural capital availability, and stakeholders' legitimate needs and expectations—and how they can affect the SME's ability to continue creating value in the future.

<IR> also provides a significant opportunity to establish, or enhance, processes and systems for identifying, measuring, and analysing essential data in various capitals. Important areas driving

value creation can then be built into setting objectives and targets, managing opportunities and risk, undertaking project and investment appraisals, and aligning performance to objectives with relevant performance measures.

SMEs can also build trust in the information they report by being transparent on where the business currently is in terms of how it measures, manages, and discloses performance.

SMEs can usefully reveal how far they are in measuring different aspects of their performance, and speak to their professional accountant and business advisor about how an assessment and subsequent intervention can help plug in-house competence gaps in preparing non-financial information, and communicate progress to internal and external audiences. This can be done in stages.

Navigating Ethics in a Digital Age

by Narayanan Vaidyanathan, Head of Technology Insight, ACCA

"Life is really simple, but we insist on making it complicated."

— Confucius

This may offer some food for thought in a fast moving digital age, where organizations grapple with new technology-linked ethical dilemmas. Sustainable progress will be driven by the middle ground between stubborn resistance and blind insistence. Finding this middle ground may well depend on the ability to stay connected with the simple idea of "doing the right thing."

It is not always clear what the "right thing" actually is. But that is the next level of detail—a matter that can be tackled with sufficient education and application. In the context of ethics and technology, figuring out what the right thing is can be an iterative process. A process that requires pro-actively engaging with technology, reflecting on errors of judgement, and incorporating the learning into the next, hopefully improved, iteration.

Why does this matter?

For the simple reason that in a digital age one is dealing with a moving target. No sooner has one come to grips with a new ethical dilemma than one is faced with the next big unknown. So *what* to learn is arguably less important than *how* to learn. Integral to this is a mind-set of continuous learning and professional development—a willingness to continually challenge one's comfort zone. Equally important is the other side of the coin: how to unlearn! Challenging, and if necessary changing, historical ways of thinking can be one of the most important barriers to overcome.

The accountancy profession plays an important role in developing individuals with the knowledge, skills, and mind-set to support the ability to do the right thing. Being a credible steward of the organization's values, and acting as its "ethical conscience" are important contributions that professional accountants can and do make. This becomes valuable in a digital age where there is new information to be understood and interpreted. Having a strong grasp of the potential ethical pitfalls in a digital environment is a value-added contribution that supports the organization's risk management.

Consider the case of using analytics-driven insights. Data has famously been called the new oil. One might argue this is a somewhat misplaced analogy. The amount of oil under the ground is finite, while the volume of data is constantly increasing and allows for more robust analytics and greater monetization potential.

This can have the effect of incentivizing companies to acquire data by all available means in the hope of gaining an edge within a competitive marketplace. Professional accountants, with a good grasp of the digital dimension, will be better placed to interrogate the systems and processes that underpin the acquisition, management, analysis, and disposal of this data. They are crucial connectors between the technology, the processes, and the resultant financial performance. Their ability and opportunity to ask the right questions drives the organization's ability to do the right thing.

Ethical judgement and business judgement are two sides of the same coin. Sustainable commercial returns are backed by sound ethical behavior. The reputational damage from unethical practices can take years to repair. Professional accountants, therefore, have a role to play in focusing the organization on generating sustainable returns, and championing ethical behavior.

Another element that is closely allied with the concept of ethics is trust. For professional accountants, being ethical is closely associated with being reliable, truthful, and having the necessary abilities. The *Code of Ethics for Professional Accountants*, issued by the International Ethics Standards Board for Accountants, specifically mentions the principles of objectivity, confidentiality, integrity, professional competence, due care, and professional behavior. The public cannot trust a professional accountant if ethics are in doubt. Against a backdrop of on-going change in the digital age, stakeholders in organizations seek a few familiar certainties. One of these can be to trust the judgement of their professional accountant when confronted with new information or situations. This is much more likely to happen if there is a strong belief that the accountant is unquestionably ethical. The ethics of the accountants is, therefore, a key enabler that helps with building trust with stakeholders.

Ultimately, technology may have an impact on the details one needs to understand in order to be ethical, but it does not change the centrality of being ethical. Navigating ethical challenges in a digital age must come back to a simple reality as true in the time of Confucius as it is today: that ethics is about human behavior not technology.

In conclusion, technology may have an impact on how, when, where information is gathered and distributed—this challenges ethics. But unethical behavior doesn't come from technology, we have to remind ourselves that navigating the digital age is navigating human behavior.

The global adoption of International Public Sector Accounting Standards (IPSAS): The benefits and challenges

By
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Reporting entities around the world including governments and other public sector organizations often apply financial reporting standards to guide the preparation of their financial statements. Some organizations apply reporting standards developed by national standard setters (Epstein 2009) and others adopt reporting standards developed by international standards setting bodies (Booth and Cocks 1990). This paper discusses the arguments for and against financial reporting standards and assesses the global adoption of International Public Sector Accounting Standards (IPSAS).

Reporting standards prescribe the accounting treatment for financial transactions and the minimum disclosure requirements regarding those financial transactions. According to Elliot and Jamie (2012) reporting standards are important because they objectively define accounting numbers which often form the basis for contractual entitlements in corporate organizations. Hail et al. (2010a) argued that high quality reporting standards lead to improved financial reporting which improves the quality of financial information and ultimately leads to improvement in corporate decision making. The application of reporting standards have been claimed to have several benefits. Bryane (2005) noted that the observance of standards help to improve economic policy making through the enhancement of transparency which ultimately lead to improved governance. Additionally, accounting standards establish a body of theory and practice that guide the resolution of accounting issues in controversy (Larson and Holstrum, 1973). Hail et al. (2010a) argue that reporting standards help to reduce confusing variations in the methods used to prepare financial statements. Reporting standards also oblige reporting entities to disclose critical issues in the financial statements that will lead to better understanding of the financial information than reporting entities would otherwise be willing to do (Jahangir Ali, Ahmed and Henry, 2004). Compared to legislation, standards are a less rigid alternative to enforcing uniformity in the practice of accounting (Meeks and Swann, 2009). Elliot and Jamie (2012) maintain that reporting standards enhance the comparability of financial statements among firms, forces management to be disciplined and bring credibility to the accounting profession. Accounting standards are however not without challenges.

Standards represent a preference for selected methods in place of others which may have some merits. The selected methods may be inappropriate in some circumstances (Hail et al. 2010a). The standards setting process have the tendency of being subjected to lobbying thereby tending to serve the interest of lobbyists (Elliot and Jamie, 2012; Larson, 1997). Georgiou (2005) argued that the real user groups are often not actually involved to a larger extent in the standards setting process. Elliot and Jamie (2012) argue that there could be standards overload.

Owing to the limitations outlined, Pearcy (1982) argued that professional judgment is preferred to standards in certain cases. On balance, the case for the application of accounting standards seems stronger. Several countries have set up accounting standards setting bodies to spearhead the development of standards and others are adopting standards developed by international accounting setting bodies (Roje, Vašiček and Vašiček, 2010). Many governments and other public sector organisations have adopted the International Public Sector Accounting Standards (IPSAS) developed by the International Public Sector Accounting Standards Board (IPSASB) (Chan, 2003; Monfardini, 2010). The remaining part of the discussion assesses the global adoption of IPSAS by public sector organizations.

Financial statements that comply with IPSAS enhance public accountability. According to IPSASB (IFAC, 2009) IPSAS are high quality global financial reporting standards for use by public sector entities around the world, and are meant to serve the public interest by requiring the presentation and disclosure of financial transactions in a comprehensive and consistent fashion to enhance transparency and the accountable management of public resources. Müller-Marqués Berger and Ernst & Young (2012, p.7) explain that IPSAS regulate "the recognition, measurement, presentation and disclosure requirements in relation to transactions and events in general purpose financial statements". Chan (2003) and Tickell (2010) reported that the call for increased accountability has led many governments and NGOs around the world to adopt IPSAS. A few developed countries such as Australia, Canada, New Zealand, United Kingdom and United States of America have adopted and are implementing the accrual basis IPSAS or have issued standards that are consistent with accrual basis IPSAS (Pina Vicente and Torres, 2003). Some other countries such as Liberia, Cyprus, Nepal, The Gambia to mention but a few have adopted the Cash Basis IPSAS which require financial statements to focus mainly on reporting the receipts and payments of cash and cash equivalents by government (IPSASB, 2010 November). Chan (2003) asserts further that accounting policies of governments that have not yet adopted IPSAS are significantly influenced by IPSAS. Anderson (2009) and Torres (2004) demonstrated that IPSAS compliant financial statements improve transparency and accountability. According to Chan (2003, p.16) "the most significant development in government accounting in recent history is the development of IPSAS" which he argued, has brought significant benefits by way of improving the financial reporting systems of governments, raising the prestige of government accountants, and facilitating the mobility of private sector accountants into government.

Some scholars have admitted that the implementation of IPSAS is a challenging project (Lapsley Mussari and Paulsson, 2009; Nistor, Deaconu, Cirstea and Filip, 2009). Tickell (2010) in supporting this position noted that the successful implementation of accrual basis IPSAS is predicated on factors such as the level of skill of available accounting personnel, rate of labor turnover, and the level of investment in technological and capital equipment in public sector organizations. He therefore advised that, governments and institutions with different levels of endowments in these resources must approach IPSAS implementation differently to ensure success. Michael and Bates (2003) suggested that there is the need for public scrutiny of government financial management programs, and a critical need for grassroots participation in the development of standards in order to ensure successful adoption of standards. It can therefore be concluded that to successfully implement IPSAS, governments must develop a framework for implementation and invest in building capacity among the personnel that will be responsible for implementation. Government must as well build strong institutions and systems to facilitate the process of implementation.

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4. TECHNOLOGY CORNER

How are governments using drone technology?

By Tan Wee Kwang

Lightweight, inexpensive and versatile, Unmanned Aerial Vehicles (UAVs) continue to find new applications in numerous fields. From medical aid, scientific research to law enforcement, we take a look at how government agencies are using drone technology to aid their operations. A UAV is defined as a "powered, aerial vehicle that does not carry a human operator, uses aerodynamic forces to provide vehicle lift, can fly autonomously or be piloted remotely, can be expendable or recoverable, and can carry a lethal or nonlethal payload". Compared to manned aircraft, UAVs were originally used for missions too "dull, dirty or dangerous" for humans. While they originated mostly in military applications, their use is rapidly expanding to commercial, scientific, recreational, agricultural, and other applications, such as policing, peacekeeping, and surveillance, product deliveries, aerial photography, agriculture, smuggling, and drone racing. Civilian UAVs now vastly outnumber military UAVs, with estimates of over a million sold by 2015, so they can be seen as an early commercial application of Autonomous Things, to be followed by the autonomous car and home robots.

1. Medical aid

In 2016, Rwanda launched the world's first national drone delivery system, which is being used to deliver blood to patients in remote areas of the country. Poor roads and infrastructure have often made it difficult for blood to reach patients at transfusing facilities. Robotics company Zipline, partnering with the Rwandan government, provided 15 custom-built drones which can carry up to 1.5 kilograms of blood and fly up to 150 kilometres roundtrip. Hospitals can order blood via text message and have it parachuted to their location in 15 minutes, eliminating the need for onboard refrigeration or insulation.

Madagascar has also been using drones to deliver medical aid to villages in rural areas. With drones provided by Vayu, blood and stool samples were flown from rural villages to a research station for further testing. The drone program will accelerate the diagnosis of tuberculosis and speed up the delivery of vaccines.

2. Disaster management

In 2014, an earthquake struck Ludian County in Yunnan, southwest China, destroying over 12,000 homes and displacing 200,000 people. Due to the mountainous terrain, dense rubble and thick vegetation, drones played a crucial role in search and rescue efforts. The China Association for Disaster and Emergency Response Medicine (CADERM) used drones to rapidly search for survivors and assess damage. By providing a bird's eye view of the damage, drones enabled emergency teams to plan and prioritize search and rescue operations, resulting in proper allocation of time and resources. It also allowed CADERM to map and monitor a quake-formed lake that threatened to flood areas downstream.

3. Law enforcement

Police agencies in China are employing drones to fight crime. According to the Police Aviation Administration Office, more than 300 police drones are being used in 25 provinces, to patrol areas that are difficult for police officers to access. In Huidong County, Guangdong, drones have provided surveillance data and actionable intelligence on drug production dens, enabling police to conduct successful raids. "Drones fly every day, mainly over local mountains, forests, large orchards and other target areas where police officers find it difficult to patrol and where secret drug dens might hide," said Zhou Yongkun, Party chief of Huidong's Baihua township.

4. Border patrol

Nearly half of the US-Mexican border is patrolled by drones. Known as "change detection" missions, the Predator B drones sweep remote mountains, canyons and rivers with a video camera and return within three days to conduct another sweep in the same spot. The two high resolution videos are then overlaid for software analysis to identify tiny changes, tracks and evidence of human activity on the terrain. About 2% of the missions have offered evidence of illegal border crossings.

4. Marine operations

The Maritime and Port Authority of Singapore has deployed a sea drone to detect harmful oil and chemical spills. Named Water Spider, the drone provides aerial surveillance for port inspectors, giving a more comprehensive assessment on the extent of an oil spill. In search and rescue operations, the drone enables a quick assessment of the area, enabling a faster and more targeted response compared to the use of patrol crafts to comb through the waters. Made of carbon fibre, the Water Spider can take off and land on sea surfaces, allowing it to be launched from patrol crafts. It is equipped with a video camera and sensor for collecting data, and is able to send information back to its operator in real-time.

5. Oceanic research

In USA, the National Oceanic and Atmospheric Administration (NOAA) will be launching unmanned ocean vehicles, called Saildrones, to collect data from the Arctic and Pacific Ocean, reaching areas never before surveyed with specialized technology. Resembling sailboats, the research drones are wind and solar-powered, and will track melting ice, measure the ocean's levels of carbon dioxide, and count fish, seal and whale populations. The research data will help scientists better understand how changes in the ocean are affecting weather, climate, fisheries and marine mammals.

6. Fire drone

The US National Park Service has successfully used a drone to ignite prescribed fires at Homestead National

Monument. Prescribed burns are used to control invasive plant species, restore grassland ecologies and prevent wildfires, but poses dangers to firefighters. Developed by researchers at the University of Nebraska-Lincoln, the drone drops ignition balls that create a chemical-reaction based flame after one or two minutes, and flies over fire lines to gather data about fire conditions.

7. Drones Scare Geese to Protect Other Animals

On the beaches of the Ottawa River, geese reign wide swaths of land as tyrants, proving resistant to all efforts to dislodge them and rendering most of the watery real estate uninhabitable.

Ottawa, however, has a new trick up its sleeve. The Goose Buster is a drone fitted with speakers blaring the howl of a grey wolf as it zooms through the air (geese hate flying wolves). Unsurprisingly, it's done wonders, scaring off the winged bullies at lightening speeds. Aside from terrifying geese, drones can also be used to protect endangered animals.

8. Drones Capture the Eye of the Storm

Because drones are unmanned and cheap, scientists can send them into all kinds of dangerous situations. One explorer, Sam Cossman, even sacrificed a camera-mounted drone to capture mind-blowing images and footage of active volcano Vanuatu.

For those more interested in academics, drones can venture inside a tornado. Right now, scientists have a lot of questions about how tornadoes are formed, and although the movie Twister showed otherwise, humans can't safely collect data from the center.

Engineering students at Oklahoma State University could be changing that in the future. They are working to develop drones capable of flying into dangerous storms and collecting data.

Source: www.enterpriseinnovation.net

5. YOU AND YOUR HEALTH

How Does Traffic Affect Our Health

Traffic affects our mental as well as physical health in many ways. Some of the most common effects of traffic on our health are frustration, stress, headache, and cough. Apart from these, there are other ill effects of traffic, which are elaborated in this article.

On-road vehicles are responsible for 44% of all carbon dioxide emissions in the US, one-third of all nitrogen oxide emissions and one-quarter of all volatile organic compound emissions.

- Center for Transportation Excellence

Everyone encounters traffic, either vehicular or denizen traffic. The feeling of being stuck in a place full of vehicles or people gets overwhelming for many individuals, and is the main cause of stress-related disorders cropping up in today's time.

At the 49th Annual Conference on Cardiovascular Disease Epidemiology and Prevention, the American Heart Association stated, "People who have had a heart attack are likely to report having been in traffic shortly before their symptoms began." This statement was from a German study, that determined that exposure to traffic was a key contributor to heart attacks.

When talking about traffic woes, we also need to take into consideration the pollution that we are exposed to. Breathing in toxic emissions from motto-bikes, cars, trucks, and buses harm our lungs making us targets to various respiratory-related diseases. Given below is an in-depth exposition on how traffic affects our health and what we can do to retard some of these effects to live a longer and healthier life.

Health Effects of Traffic

Aches and Pains

Imagine yourself being tied down in one place, with your arms holding a wheel in front of you, but no scope for movement, with horns blaring in the background and poisonous smoke being sent your way, well, that is your situation when you are driving in traffic. Due to your confinement, you tend to neglect your posture, and end up slouching in the car seat. While driving in a slouched position, pressure comes on your back and neck. The neck muscles are interrelated to your back and shoulders. Back pain is often due to poor posture which can have a negative effect on your health.

In the long run, this is not good as it makes a difference on your appearance, and also makes you prone to ailments like spondylitis, frozen shoulder, etc. Your bad posture also puts stress on the joints of your elbows and knees, causing pain and fatigue to these areas of your body.

You might be wondering how driving in traffic puts stress on your joints? When you are driving in traffic, you are constantly shifting between the accelerator and brake (in automatic transmission cars), and clutch, brake, and accelerator (in manual transmission cars). This constant shifting puts pressure and stress on your knees, causing knee-related problems and aches.

The same goes for the elbows, if the car seat is not at a comfortable distance from the steering wheel, your elbows are constantly straight, or locked. This position is very bad for the ball-and-socket joints of the elbow.

What can you do: You can counteract these ill effects and posture problems, by sitting upright and having a support for your lower back and neck. Adjust the position of your seat in such a way that you can drive at ease without any discomfort. The backrest of the seat should be straight up, and not pulled down too much. These methods take off a lot of stress and help you drive the right way.

Risk of Heart Disease

Prolonged exposure to traffic pollution, is dangerous to your heart, and is associated with an increased risk of heart diseases. According to a study presented at the EuroPRevent 2013 congress in Rome, people who are exposed to fine particle matter (PM) air pollution derived from traffic pollution, for a prolonged period of time, are at an increased risk of developing atherosclerosis.

Dr Hagen Kälsch, from West-German Heart Center in Essen, Germany explained that this study was conducted to establish whether the risk of heart diseases is associated with traffic noise or pollution, or both. He confirmed that long-term exposure to fine particulate matter air pollution and traffic noise are both linked with the risk of cardiovascular diseases.

The heart is a delicate organ and needs to be treated with care. Pollution, fluctuating stress levels, loud noises, inhalation of harmful gases, etc. are reasons why the condition of the heart may weaken and deteriorate with time. These factors are significantly associated with the risk of heart attack.

Dealing with inconsistent and rash drivers increases your stress levels, as you constantly get irate with the way they ride or drive, or jittery when they cut and zoom past you when you are driving peacefully. This can take a toll on your cardiovascular health.

What can you do: Regular exercise in fresh air, relaxing by getting massages, eating the right food, etc. can help your heart recover from the stress that it has gone through due to the chaotic traffic conditions. Deep breathing and meditation also help in reducing stress levels.

Respiratory Problems

Exposure to heavy traffic implies exposure to poisonous gases that are emitted by vehicles. It is believed that the transportation sector in the US, is responsible for a quarter of the greenhouse gas emissions. Our lungs are like sponges, soaking in everything that is inhaled by our respiratory system. The smoke coming out of the tailpipes of cars, bikes, and buses have hydrocarbons, particulate matter, nitrogen oxides, carbon monoxide, sulphur dioxide, benzene, acetaldehyde, butadiene, and carbon dioxide, which present a serious threat to human health. Prolonged exposure to vehicular traffic emissions can cause various respiratory diseases like, bronchitis, whooping cough, asthma, etc.

Another lung-related ailment, which can be blamed on long-term exposure to the hazardous pollutants emitted from vehicles in traffic, is cancer. Emissions from diesel vehicles are said to increase the risk of lung cancer.

What can you do: There are ways to avoid breathing in polluted air. If you can, avoid driving in parts of your town with heavy traffic congestion. However, if you find yourself driving through such areas, roll up your car windows to minimize exposure to harmful toxins. If you plan to go out for a stroll or run, do it in a place where you get loads of fresh air. Eat food that are rich in antioxidants, and exercise regularly so that your immune system is strong enough to fight off potential threats to your health.

Other Problems

Traveling from one place to another is inevitable. Given below are some other potential health risks associated with long-term exposure to traffic pollution. The impact of traffic jams on the brain may be a causative factor in DNA and gene alteration.

Being exposed to harmful pollutants, leads to vitiated brain capacity and risk of brain damage.

Brain lesions, low IQ, lack of retention and concentration, epilepsy, migraines, blurry vision, etc. are the negative effects of pollutants on our central nervous system. Long-term exposure to neurotoxins which are present in the smoke emitted from vehicles, causes degeneration, and in some extreme cases, irreparable damage to the central nervous system.

Fatigue, anxiety, and irritability, are also faced by thousands of commuters.

Exposure to high volume traffic, brings about mental and physical exhaustion.

Dealing with strangers on an everyday basis, especially in traffic, makes you lose your patience and cool. You actually feel like getting out of your car and giving everyone around you a piece of your mind.

You get irritated easily, you are snappy, and sometimes even get anxiety attacks.

Many a time you feel agitated and anxious while traveling. This may be because you worry that the traffic will make you late, which increases your stress levels.

What can you do: Cover your mouth and nose with a scarf so that you do not breathe in the harmful smoke directly. Keep your

cool while driving, by listening to music that you enjoy. Get a car freshener that soothes your mood (pleasant fragrances have the power to change moods drastically, from bad to good!). Turn your car into a comfort zone and remind yourself that getting agitated over other people is never going to help you, it will just make things worse.
Travel and traffic are two things that are absolutely unavoidable, that is why we should try to be as comfortable as possible, to be stress-free and illness-free!

Disclaimer: This Buzzle article is for informative purposes only, and does not in any way attempt to replace the advice offered by a medical professional.

Source: www.buzzle.com/articles/how-does-traffic-affect-our-health.html

6. TECHNICAL MATTERS

Survey of Legal and Regulatory Framework of Bitcoin and its Implications for Central Banks and the Economy

Executive Summary

Bitcoin, which is one of the cryptocurrencies, was developed in 2009, by a computer programmer using pseudonym Satoshi Nakamoto. It is backed by a computer code rather than a physical substance such as gold and a fiat money. Also, its supply is not determined by a central bank. Bitcoin system does not require a third-party intermediary such as bank or payment institution to verify or process transactions. The system is decentralized, with all transactions validated by the users of the system.

The main advantages of Bitcoin compared with fiat currencies or other payment schemes are its low transaction cost, faster funds transfer system, protection of users' identity and promotion of financial inclusion. Bitcoin is however, associated with money laundering, illicit trading, high level of price volatility, tax evasion and lack of consumer protection.

In most countries, the use of Bitcoin is permitted. However, only few countries notably France, Philippines, Japan, Canada and United States (States such as New York and California) have some level of regulations applicable to Bitcoin use or exchange operations.

Some countries including Nigeria, Kenya, Malaysia, South Africa and India, which seem to be skeptical about Bitcoin and its perceived use for criminal activities have issued public statement or circulars to warn the public against the risk of Bitcoin use. Meanwhile, other countries or institutions have also taken the option to study the entire Bitcoin concept before they initiate any regulation.

The total number of Bitcoins in circulation globally, was BTC 16,247,888 with market capitalization of approximately USD$17.5 billion as at March 31, 2017. The daily average market price of Bitcoin was USD$1,080 as at March 31, 2017. Studies have shown that Bitcoin's current scale of use is low and would not significantly affect the central bank's ability to conduct monetary policy and achieve its goals.

The Bank of Ghana has an option to continue to monitor the developments in the advance Bitcoin countries such as Japan, Canada, Hong Kong and Singapore. This transition period will also afford the Bank the opportunity to observe the reaction from the public with respect to statements issued by countries such as Kenya, Nigeria and South Africa to warn them against the use of Bitcoin, before it contemplates any regulation or statement on Bitcoin in Ghana.

1.0 Introduction

Over the past few years, Bitcoin has gained significant importance throughout the world. Bitcoin is a prominent digital currency backed by a computer code rather than a physical substance such as gold.

Despite its prominence on account of transaction cost, faster funds transfer system, protection of user's identity and promotion of financial inclusion; it is, however, associated with crime such as money laundering and narcotics as well as an alarming level of price volatility, high degree of anonymity of users and poor consumer protection scheme. All these developments in Bitcoin trading and transactions have culminated in governments, regulators and financial system participants to be wary of its potential implications.

Studies have shown that, although the scale of Bitcoin use has increased, the volume of transactions as compared to other traditional payment systems, such as the use of payment cards and fiat currencies is not significant.

2.0 Features of Bitcoin

Bitcoin was developed in 2009, by a computer programmer using pseudonym Satoshi Nakamoto. The invention has the following characteristics:

i. It is an open source (its computer code is open to public view);
ii. Peer to peer (transactions do not require a third-party intermediary such as bank or payment institution but users interact directly);
iii. Digital currency (being electronic with no physical manifestation or form);
iv. It is not legal tender, and not backed by any government or any other legal entity, and its supply is not determined by a central bank;
v. No traditional financial institutions are involved in its transactions; and
vi. Bitcoin network is completely decentralized, with all parts of transactions performed by the users of the system (no central controlling person or entity).

3.0 How to Obtain Bitcoin

Once connected to the Bitcoin network, a participant can obtain Bitcoin through the following methods:

i. User can exchange conventional or fiat currency (for example, dollars, Cedis and Euros) at Bitcoin exchange;
ii. User can obtain Bitcoins in exchange for the sale of goods or services; and
iii. User can acquire new Bitcoins by serving as a miner through computer processing of defined transactions.

4.0 How Bitcoin System Works

Bitcoin is sometimes referred to as a cryptocurrency on account of its reliance on the principles of cryptography (communication that is secured from view of third parties) to validate transactions.

Each Bitcoin and user are encrypted with a unique identity, and each transaction is recorded on a decentralized public ledger (also called a distributed ledger or a block chain) which is visible to all computers on the network but does not reveal any personal information about parties involved.

Traditionally, transactions between two parties have operated under a centralised payment system, where an independent intermediary (bank or payment institution) sits between the two parties to securely process payment. However, the technology underpinning Bitcoin operates using a decentralised payment system, where there is no intermediary and relies on copies of the ledger being distributed on the Bitcoin network.

5.0 Benefits and Advantages of Bitcoin

Bitcoin offers users the following benefits and advantages;

i. Lower transaction costs (no third-party intermediary such as bank to charge extra fees)
ii. Increased privacy (parties to transactions are anonymous). However, full record of every user and every Bitcoin transaction is preserved on the publicly available ledger. Therefore, some consider the Bitcoin system to be "pseudonymous" rather than fully anonymous.
iii. Fast international payments (no intermediaries to delay the transactions)
iv. Simple to use (users do not need a bank account or credit card to use Bitcoin – An internet connection is sufficient for its use worldwide)
v. No special limitations on the minimum or maximum amount to transact.

6.0 Challenges and Disadvantages

The main challenges and disadvantages that characterize the use of Bitcoin include the following:

i. High price volatility may result in investment risk or exchange risk (see chart 1 and Appendix 2).
ii. Bitcoin stored in electronic wallet may be hacked and stolen, or attacked by computer virus.
iii. The transaction platform risk of being closed down by governments on account of being classified as illegal transactions.
iv. Lack of transaction protection scheme.
v. The anonymity embedded in the system has the potential to facilitate money laundering, drug trafficking and tax evasion.

7.0 Review of Legal and Regulatory Framework for Operation of Bitcoin and its implication for Central Banks

7.1 Legal and Regulatory framework of Bitcoin use in some Jurisdictions

We surveyed thirty-one (31) countries to ascertain whether there are regulatory frameworks or legislative instruments regulating the use of Bitcoin for financial transactions (see Appendix 1). The survey also ascertained whether the absence of legislative instrument on Bitcoin would permit or prevent the public from owning or transacting with Bitcoin. Consumer protection schemes and perception of being used for criminal activities were also assessed and the steps taken by some jurisdictions to address these problems were examined.

Stratified sampling method was used to select countries in order to obtain representative data.

The use of Bitcoin is permitted in almost all the countries surveyed. However, only few, notably France, Philippines, Japan, Canada and United States (States such as New York and California) have some level of regulations applicable to Bitcoin use or its exchange operations. Countries such as France, Philippines and Japan have issued public statements or guidelines to regulate the exchanges. These exchanges are expected to observe the country's anti money laundering laws, and keep records of customers as well as report suspicious transactions to Anti-crime agencies.

Some countries, including Australia, European Union, Singapore and United Kingdom are proposing a review of their regulations, in particular, Anti-Money Laundering and Countering Terrorist Financing (AML/CFT) laws to address crime related issues associated with Bitcoin transactions.

We noted that some countries which were skeptical about the use of Bitcoin and the perceived criminal activities on the network had issued public statement or circulars to warn the public about the risk of Bitcoin use. The statement indicated among others that Bitcoin is not a legal tender, and not backed by the central bank. The statement also provides that it has high price volatility and also not regulated by the monetary authorities or the central bank. The countries which have issued these statements or circulars to warn the public about the risks of Bitcoin include Nigeria, Kenya, Malaysia, South Africa and India.

We also observed that some countries have no specific regulation concerning the legality or otherwise of the use of Bitcoin. These countries are still studying the entire Bitcoin concept before initiating any regulation.

Another concern observed as possible regulatory impediment in some jurisdictions was the proper classification of Bitcoin into type of currency or payment system. Bitcoin was classified in some jurisdictions as either, virtual currency (Singapore), digital asset (USA), private money (Germany) or virtual commodity (Hong Kong), while others define it as payment instrument, payment system, intangible asset or private asset. It is expected that the appropriate classification would determine the legitimate institution or regulatory body (Central Bank, Securities and Exchange Commission, Tax Authority or AML/CFT Taskforce) that is to initiate the regulatory framework for Bitcoin use.

8.0 Potential Impact of Bitcoin and Other cryptocurrencies on an Economy

The total number of Bitcoins in circulation globally on networks was 16,247,888 as at March 31, 2017. The total market capitalization of Bitcoins in circulation, as calculated by the daily average market price across major exchanges was approximately USD$17.5 billion with average market price of USD$1,080 as at March 31, 2017.

8.1 Impact of the scale of Bitcoin use on Central Bank's monetary policy

Central bank conducts monetary policy to regulate the flow of money and credit to the economy with the view of achieving price and financial stability as well as economic growth.

Current level of Bitcoin use seemed to be marginal to significantly affect the central bank's ability to conduct monetary policy and achieve its goals. The total daily volume of Bitcoin transaction on December 30, 2016 was BTC 286,818 with average price per Bitcoin at USD$952 resulting in approximate value of transaction per day of USD$273,050,736.00, globally (Blockcchain.info).

Though data on Bitcoin transactions in Ghana is not readily available, we infer from global Bitcoins trading that this virtual currency considering its size and volume of transaction is not likely to impact significantly on the Bank's monetary policy.

8.2 Demand for Bitcoins and its Effect on the Cedi

Demand and use of Bitcoin in the economy may have impact on the demand and value of Ghanaian cedi. The more economy agent prefers a currency as a medium of exchange, the more it becomes attractive to the agent. The legal tender status of the Ghanaian cedi as medium of exchange, a store of value, and unit of account has made it a preferred currency to facilitate economic transactions compared to Bitcoin.

However, a substantial use of Bitcoin as currency for financial transactions in the Ghanaian economy may threaten the cedi as the preferred currency. Bitcoin does not currently pose a significant challenge to the cedi as the principal circulating currency on account of its scale and use as a medium of exchange globally.

8.3 Effect on roles played by Intermediary in Bitcoin Transactions

Usually, payment transactions between two parties are operated under a centralised payment system with an independent intermediary such as bank or payment system operator processing and supervising the payment. Invariably, the main intermediary for all payment transactions is the central bank. However, the technology underpinning Bitcoin, operates using a decentralized payment system, which means that a payment between two parties is direct and relies on copies of the ledger being distributed on the Bitcoin network.

Preference for decentralized payment systems might render the use of a banking intermediary redundant, and this may affect the intermediary role of banks and limit the central bank's authority.

The absence of central authority to perform the crucial role of validating payment transactions and report on suspicious transactions renders Bitcoin transactions vulnerable and prone to fraudulent activities.

8.4 Bitcoin as a universal trading currency

Invariably, transactions on the Bitcoin network are not denominated in any fiat currency such as Cedis, Dollars or Euros but are instead denominated in Bitcoin. As a universal currency, Bitcoin allows consumers to shop and send money internationally irrespective of the prevailing currencies of the jurisdictions the parties reside. Bitcoin transactions are not denominated in any foreign currency hence increase in the use of Bitcoin for foreign payments may reduce pressure on the country's foreign exchange.

8.5 Lack of Consumer Protection

In most jurisdictions Bitcoin lacks transaction protection schemes on account of lack of regulation framework in the space and its unique operational features such as system being decentralized and anonymous.

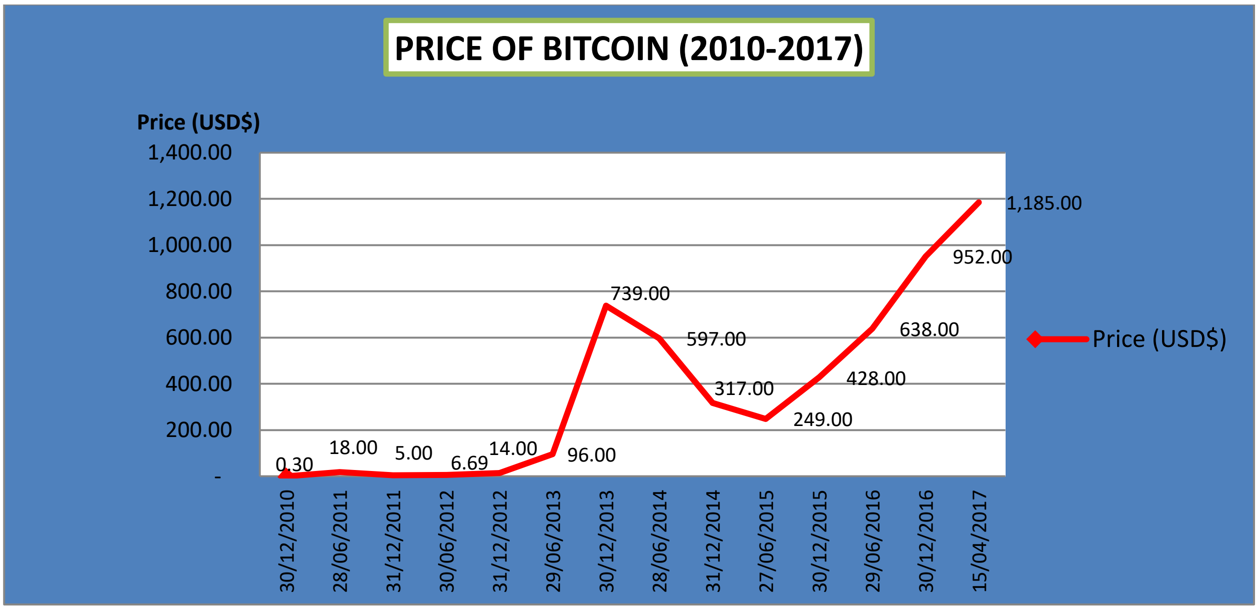
The users are also exposed to inherent risks coming from high volatility in Bitcoin price, hacker attacks on Bitcoin platforms and potential collapse of some Bitcoin exchanges. Consequently, some economies have evolved regulatory framework or issued statements to address some of the consumer protection issues and also safeguard suspicious transactions.

8.6 Price volatility

The price volatility of Bitcoin has been a subject of concern since its creation in 2009. Studies have attributed the price volatility to media coverage, regulatory stance, speculation on exchanges, hacking and shutting down of some exchange platforms, as well as performance of the national economy. The volatility of Bitcoin price is likely to discourage potential users.

There is also a school of thought that the instability in prices is one of the main hurdles to use of Bitcoin as a medium of exchange. The price instability may affect central bank objective of maintaining price stability and by extension affect consumers and businesses in planning their consumption and investment decisions. Chart 1 below illustrates the volatility in the Bitcoin price.

Chart 1: Volatility in Bitcoin Price



8.7 Security threats

The rise in cybercrime has raised concerns about security of exchange platforms and Bitcoin wallets. Bitcoin operates outside the banking system and also not backed by any central body hence users are not likely to recover losses resulting from cybercrime. Bitcoin systems have encountered serious system attacks resulting in loss of millions of United States dollars. Notably among these attacks, was the hacking of the Mt. Gox, Bitcoin exchange in 2011, with over 60,000 usernames and passwords stolen. In February 2014 Mt. Gox was hacked again, resulting in $500 million losses. The company filed for bankruptcy in Japan in February 2014.

Bitcoin's security and operational robustness may be exposed to unforeseen challenges in the future as Bitcoin matures and handles larger transaction volumes.

9.0 Conclusion and Recommendation

Bitcoin system has better and faster technology that provides convenience and easier means for financial services which leads to global financial inclusion. However the technology is associated with crime such as money laundering and cybercrime. Bitcoin price is exposed to high level of volatility, while transaction is anonymous and also lack consumer protection.

The Bank needs to initiate discussion with stakeholders including the AML/CFT taskforce, revenue authority and security and exchange commission with the aim of continuously identifying developments in these new financial technologies such as Bitcoin and their impact on the economy.

The Bank in the interim may also take the following steps to protect participants on Bitcoin network and the entire financial system against cybercrime, illicit trading, money laundering, security breaches, tax invasion, terrorist financing and other related activities:

- Issue public notice warning the public that transactions in virtual currencies such as Bitcoin are largely untraceable and anonymous and not regulated by the central bank, hence making them susceptible to abuse by criminals. (Similar to Notices Central Bank of Kenya and Central Bank of Nigeria)

- Register the Bitcoin exchanges since they are engaged in the business of exchanging fiat currency with virtual currency and issue guidelines for their operations. The provisions in the guidelines may include requirement for the exchanges to collect personal data on their customers, comply with AML/CFT laws and report suspicious transactions. Also the exchanges may be made to submit their books and systems for inspection by regulators and law enforcement agencies.

The Bank also has an option to remain silent for now, and monitor the developments in the advance countries such as Japan, Canada, Hong Kong and Singapore and also the reaction from Kenya, Nigeria and South Africa with regard to public statement warning the public against the use of Bitcoin before it issues any regulation or statement on Bitcoin.

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QUOTES

When one door closes, another opens; but we often look so long and so regretfully upon the closed door that we do not see the one that has opened for us.

- Alexander Graham Bell

Work like you don't need the money, love like you've never been hurt and dance like no one is watching.

- Randall G Leighton

Life is too short to wake up in the morning with regrets. So love the people who treat you right, forget about the ones who don't and believe that everything happens for a reason. If you get a chance, take it. If it changes your life, let it. Nobody said that it'd be easy, they just promised it would be worth it.

- Unknown

Being sad with the right people is better than being happy with the wrong ones.

- Philippos

You have enemies? Good. That means you've stood up for something, sometime in your life.

- Winston Churchill