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Monday, April 2, 2018

Top 10 risk and compliance management related news stories
and world events that (for better or for worse) shaped the week's agenda,
and what is next

Dear members and friends,

I was reading an interesting presentation, "The Role of the IAIS in Times of Turbulence" from Jonathan Dixon, Secretary General of the International Association of Insurance Supervisors.

He said: "In August 2016, the IAIS published an *Issues Paper on Cyber Risk to the Insurance Sector*, to raise awareness of the challenges presented by cyber risk."

I remember this paper. When I saw it for the first time, I didn't want to read it, thinking that it would discuss some scary statistics and some well known general principles. *I was wrong,* it was an excellent, practical paper. For example:

"Missing or Incomplete Overview of the IT-Landscape. While all insurers should have an inventory of IT hardware and licensed software, even those maintaining such records on a current basis may not recognise the data flow between those IT systems, applications, and components.

If data flows exist between systems with high levels of protection and systems with lower security levels, cyber criminals may be able to gain access to otherwise secure systems.

Inadequate Control Process Regarding User Privileges. There are typically two types of problems associated with user identity management:

(1) the failure of controls within the allocation process of user rights, i.e., allowing users to have higher system privileges than warranted; and

(2) the failure to recognise when an account no longer needs certain system privileges.

Both types of failures could lead to insider abuse and exposure to cyber risks. Software products which can perform identity management checks on an automated basis are available.

Improper Access to Superuser Accounts. Direct employee access to "superuser" accounts (accounts with privilege levels far beyond those appropriate for most users) without sufficient controls presents risks to insurers.

First, if a hacker gained access to any of the accounts held by the employees with access to the superuser account, the hacker could effectively control the entire system through the superuser account (including hiding criminal acts by modifying or deleting log files or by disabling detection mechanisms).

Second, common use of superuser accounts could lead to unintended errors affecting the entire system."

The paper continues:

"Cyber risk presents a growing challenge for the insurance sector, and one which, under the ICPs, supervisors are obliged to address. Insurers collect, store, and manage substantial volumes of confidential personal and commercial information. Because of these reservoirs of data, insurers are prime targets for cyber criminals who seek information that later can be used for financial gain through extortion, identity theft, or other criminal activities.

In addition, because insurers are significant contributors to the global financial sector, interruptions of insurers' systems due to cybersecurity incidents may have far-reaching implications.

The insurance sector faces cyber risk from both internal and external sources, including through interconnections with third parties.

Insurance sector cybersecurity incidents may result in severe and lingering harm for the policyholders affected and significant legal, regulatory, and operational costs, including reputational damage.

Moreover, the insurance sector as a whole may be affected by a loss in public trust. Because of the growing frequency and severity of cybersecurity incidents on all commercial entities, cyber resilience must be achieved by all insurers, regardless of size, specialty, domicile, or geographic reach."

You must read the paper, it is great:
https://www.iaisweb.org/page/supervisory-material/issues-papers/file/61857/issues-paper-on-cyber-risk-to-the-insurance-sector

Read more about the presentation "The Role of the IAIS in Times of Turbulence" from Jonathan Dixon, at Number 6 below. Welcome to the Top 10 list.

Best Regards,

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Number 1 (Page 9)

Looking at Funds through the Right Glasses

Commissioner Hester M. Peirce, Remarks at the 2018 Mutual Funds and Investment Management Conference, San Antonio, TX

"Mutual funds play an important role in Americans' retirement planning, particularly for American workers. Over $7.5 trillion in retirement savings are invested in mutual funds.

Assets in Section 529 savings plans increased nine percent in 2016 and now make up more than $250 billion in assets."

Number 2 (Page 21)

The future of money

Mark Carney, Governor of the Bank of England and Chairman of the Financial Stability Board, to the inaugural Scottish Economics Conference, Edinburgh University, Edinburgh.

"This £20 note is significant. Significant because it honours Adam Smith, the great moral philosopher and hero of the Scottish Enlightenment.

Significant because it is a significant amount of money, enough to buy you a burger and a few pints at the Pear Tree pub this evening, or if you fancy a

quieter but highly stimulating night in, copies of Smith's Wealth of Nations and The Theory of Moral Sentiments at Blackwell's."

Number 3 (Page 23)

Phishing emails deemed number one threat by UK Businesses

Industry research by security company Clearswift has reported that malicious links within emails are perceived as posing the biggest cyber threat to UK businesses, with 59% of business decision makers highlighting this as their chief concern.

This is indicated to be far more than any other cyber threat.

Number 4 (Page 25)

Banking regulation and supervision - you can't have one without the other

Sabine Lautenschläger, Member of the Executive Board of the European Central Bank and Vice-Chair of the Supervisory Board of the European Central Bank, at the 9th Annual EFR Stakeholder Round Table on "Financial Fragmentation or Integration", Brussels.

"The financial crisis showed what can happen when banks are not safe and sound. So the goal is to make banks safe and sound, and avoid future crises.

To that end, we have revamped regulation, and we have strengthened supervision. It's indeed vital to work on both fronts."

Number 5 (Page 28)

Living with fragmentation - post-Brexit realities in financial services

Dr Andreas Dombret, Member of the Executive Board of the Deutsche Bundesbank, at the AIMA Global Policy and Regulatory Forum, Dublin.

“Most economic policymakers currently have their hands full trying to escape the doom loop of a trade war and a potentially hard Brexit. At the same time, banks, investors and most other firms have to prepare for these worst-case scenarios - not least, because supervisors urge them to.

And of course such fragmentation in financial services and its regulation may cause nightmares for many in the industry as well as for policymakers. And I do understand that - because it implies a great deal of uncertainty.”

Number 6 (Page 35)

The Role of the IAIS in Times of Turbulence

Jonathan Dixon, IAIS Secretary General, Geneva Association, 34th Annual Progres Seminar

“The principles and standards we develop, and the guidance we provide, must be firmly rooted in practical experience. They need to be capable of being applied proportionately to different types of businesses in different

markets. Our Members know that when it comes to effective supervision "one size does not fit all"."

Number 7 (Page 45)

Money laundering valued at up to $200 billion through cryptocurrencies

A joint report between Surrey University and researchers at security vendor Bromium estimates that the proceeds of cyber crime make up to 8-10% of total illegal profits laundered globally, believed to be valued at up to $200 billion.

Number 8 (Page 46)

From mission to supervision

Klaas Knot, President of the Netherlands Bank, at the Bundesbank Symposium "Banking Supervision in dialogue", Frankfurt am Main.

"Let me begin though by highlighting that if I would have told you 5 years ago that today at this very Symposium "Bankenaufsicht im Dialog", we would spend half the day discussing sustainability, not only would none of you have believed me, but most likely many of you would have taken me for a sort of tree hugger rather than a central banker.

And yet here we are today. It's a clear indication of the significant shift in thinking that has occurred in the financial sector and in the supervisory community over the past few years."

Number 9 (Page 48)

Financial stability - taking care of unfinished business

Carolyn Wilkins, Senior Deputy Governor of the Bank of Canada, at the Rotman School of Management conference "Are We Ready For the Next Financial Crisis?", Toronto, Ontario.

A clear lesson of history is that a "sine qua non" for sustained economic recovery following a financial crisis is a thoroughgoing repair of the financial system.

“Here we are, 10 years after the financial crisis, still tallying the costs, studying causes and drawing lessons from it. The outcome would have been worse in 2008 and the following years had it not been for the swift and coordinated efforts of policy-makers around the world to boost demand and repair the financial system.”

Number 10 (Page 51)

Nonsurgical Neural Interfaces Could Significantly Expand Use of Neurotechnology

New program seeks high-resolution neural interfaces for use by able-bodied Service members

Over the past two decades, the international biomedical research community has demonstrated increasingly sophisticated ways to allow a person's brain to communicate with a device, allowing breakthroughs aimed at improving quality of life, such as access to computers and the internet, and more recently control of a prosthetic limb. DARPA has been at the forefront of this research.

Number 1

Looking at Funds through the Right Glasses

Commissioner Hester M. Peirce, Remarks at the 2018 Mutual Funds and Investment Management Conference, San Antonio, TX

Thank you, Susan Olson, for that kind introduction. I appreciate the invitation from the Investment Company Institute and the Federal Bar Association to deliver remarks this afternoon.

It is particularly fitting that my first speech as a Commissioner is here at a conference dealing with issues related to mutual funds and other investment companies. I first came to the Securities and Exchange Commission ("Commission") in 2000 when I joined the Office of Regulatory Policy in the Division of Investment Management.

Working on issues related to mutual funds is how I spent my early years at the Commission, and improving fund regulation remains one of the most important issues for me.

As you all know, more than 95 million people in the US own funds, and US registered investment companies manage more than $19 trillion in assets.

Mutual funds play an important role in Americans' retirement planning, particularly for American workers. Over $7.5 trillion in retirement savings are invested in mutual funds.

Assets in Section 529 savings plans increased nine percent in 2016 and now make up more than $250 billion in assets.

Workers rely on the expertise of the investment advisers to these funds to ensure that they will have the means to live out their lives with dignity and enjoy their retirement years. Families rely on the expert management

provided by funds to ensure, among other things, that they will have the ability to pay for their children's college education and their own retirements.

We owe it to the many Americans for whom funds play such an important role to take a step back and examine our regulatory regime for funds. Before I continue, I need to provide the standard disclaimer that the views I express today are my own and do not necessarily reflect those of the Commission or my fellow Commissioners.

The last time I was in San Antonio, I was twelve or thirteen years old. I had come from my hometown of Cleveland, Ohio to run a cross country race.

I remember the drive from the airport in Houston and visiting the Alamo, but I don't remember anything about the race, which probably means that I didn't run very well. One factor in some of my poor performances was that I preferred to run without glasses, and I didn't have contacts.

Not surprisingly, there was more than one time that I got lost on an unfamiliar cross country course. You walk part of the course in advance to get an idea of where you are going, but it really helps to see the markers along the way as you are running the race.

Finally, after one too many wrong-turn races, an annoyed coach ordered me to wear my glasses. Lo, and behold, I stopped getting lost, which greatly improved my race times. The SEC too is hampered when it runs without its glasses. Let me give you a few examples of ways in which we could improve our regulatory performance by sharpening our vision.

I. Seeing the Cost Big Picture

The SEC often wears blinders when it comes to cost assessment. We tend to underestimate the costs of individual rule changes.

The costs incurred by funds in complying with our rules overwhelmingly come out of investors' pockets. Depending on the competitive landscape, fund advisers may cover a fraction of the expenses, but typically the costs are covered by fund assets and fund assets are investors' assets.

Even if we get the cost assessment right on an individual rule, we rarely think about aggregate costs resulting from the cumulative regulatory burden. More is not necessarily better in regulation.

Investors pay in ways other than direct expenditures on compliance. In addition to the monetary costs of our regulations, we also must consider the time burden associated with our rules.

The reason for funds' existence is to manage investors' assets with an eye toward generating a return.

The time consumed trying to comply with the rules translates into less time available to manage investors' assets. Nowhere is this more evident than in all of the regulatory obligations faced by boards.

Board books keep getting thicker and board agendas focus increasingly on compliance, rather than on the primary business of the funds—making money for investors. We need to let boards get back to their core functions.

The volume and cost of fund regulation also act as a barrier to the entrance of new fund sponsors. While existing fund complexes continue to add to their offering menus, potential new fund sponsors are unable to meet the costs associated with entering the fund industry. Investors lose when new competitors can't come in to serve them.

Another cost comes in the form of lost returns. As we place restrictions on what funds can do, we also make it harder for them to achieve returns for investors. Careful scrutiny of costs and benefits before adopting rules helps to ensure that investors are protected and able to achieve their reasonable investment objectives.

Yet another too-often-ignored effect of our rules is the substitution of the Commission's investment judgment for that of investors and investment advisers. Our rules can have the effect of prejudging what is right for investors.

In other words, they shut off some options for investors. We must be exceedingly careful in taking steps that substitute our judgment for the judgment of investors.

II. Retrospective Review of Fund Regulations

Once a rule is in place, the SEC should not stop looking at costs and benefits. As is typical of most regulatory agencies, the SEC rarely puts on its hindsight glasses. In many ways, the dearth of retrospective review is not surprising.

We face a constant stream of new regulatory challenges, so looking back at how well we have dealt with old ones is not at the top of anyone's list.

Nevertheless, perhaps the most important action the Commission can take to improve fund regulation is to conduct a retrospective review of our regulations to see whether they, individually and collectively, accomplish what they were designed to do.

We need to look at the actual cost—based on experience—of each regulation. If a rule's costs outweigh its benefits, we should eliminate it and, if necessary, replace it with something more cost-effective. We need to consider the aggregate costs of our regulations, which entails looking at how regulations interact with one another.

The retrospective review exercise is more than simply a numbers game. Retrospective review involves thinking back to the problem we were trying to solve when we put a regulation in place.

We need to ask whether the regulation has stood the test of time. Is it accomplishing the intended objective? Is it causing unintended harm or generating unanticipated benefits?

Retrospective review typically occurs after a rule is already in effect, but the Commission currently has a rare opportunity to review a rule before it takes full effect. I am referring to rule 22e-4, which we adopted under the Investment Company Act of 1940 in October 2016 to address fund liquidity.

Since then, we have learned that the liquidity classification requirement in the rule, commonly referred to as "bucketing," is a much tougher implementation project than anticipated and that the role for third-party service providers is going to be more extensive than we had originally understood.

Among other problems, the rule is insufficiently flexible to accommodate different types of funds and requires numerous difficult judgment calls.

In response to what we learned, we issued an interim final rule extending the bucketing compliance date by six months.

At the same time, Commission staff released a set of Frequently Asked Questions, the length of which underscores the emerging complexity of the bucketing requirement. The interim final rule release also indicated that more interpretations likely are coming.

Indeed, I have heard from funds that the FAQs, while helpful, prompted a new set of questions. Clearly, the liquidity classification requirement is proving to be much more burdensome than the Commission thought at the time it was adopted.

Last week, we again addressed issues dealing with funds' liquidity classification. We issued a proposing release that included changes to the information required on Form N-PORT and Form N-1A regarding funds' liquidity classification.

The Commission proposed to rescind the requirement that open-end funds publicly disclose aggregate liquidity classification information about their portfolios. We proposed that funds instead disclose information about the operation and effectiveness of funds' liquidity risk management programs in their annual report to shareholders.

In addition, all registrants would have to report on Form N-PORT their holdings of cash and cash equivalents. The proposed amendments to Form N-PORT also would allow funds to classify the liquidity of their investments in multiple liquidity classification categories for a single position under certain circumstances.

These changes are positive, but the bucketing elephant is still very much in the room. We did not take the opportunity last week to ask whether we should eliminate the bucketing requirement altogether. We gave only a slight nod to the idea suggested by the Department of Treasury, that we look for a principles-based alternative to bucketing.

In light of the proposed changes—the proposed qualitative liquidity disclosure and the proposed N-PORT cash and cash equivalents disclosure—and the additional complexities the Commission has witnessed since adoption of the bucketing requirement, wouldn't it make sense to ask for comment on whether bucketing remains a meaningful requirement?

The proposed requirement that registrants disclose their cash and cash equivalents on Form N-PORT, when combined with our other requirements, might be a more efficient and effective alternative to the liquidity classification requirement.

The bucketing information provided to the Commission will not be comparable across funds and may not even be comparable within the same fund. It is not, therefore, clear to me that the bucketing data will be useful to the Commission.

The information might be interesting to the Commission staff, but I don't get the sense that it will be particularly useful in monitoring fund activity. Even assuming that we would find some benefit in the bucketing information, for us to retain the requirement, the benefit must outweigh the one-time and ongoing costs to funds in terms of money, time, and opportunity costs.

Failing to ask now—prior to full implementation—whether the benefits outweigh the costs virtually ensures that the bucketing requirement, as so many requirements before it, will become an everlasting fixture of our regulatory regime and another barrier to entry for new fund sponsors.

For the Commission, funds' liquidity risk management programs, funds' qualitative liquidity disclosure, disclosure of their portfolio holdings (as will be required by Form N-PORT), identification of the holdings funds consider illiquid, the 15 percent limit on illiquid investments, and disclosure of funds' cash and cash equivalents likely provide sufficient information for an evaluation of fund liquidity. Yet we are not even asking whether bucketing remains necessary.

To make matters worse, the proposal foreshadows future "public dissemination of [granular] fund-specific liquidity classification information."

This idea, one we rejected when we adopted the bucketing rule and one I opposed adding to this release, fits rather awkwardly in a proposal to eliminate public disclosure of aggregate fund-level information because it is useless and potentially misleading to investors.

I have heard from some fund sponsors that they view the bucketing chapter as closed. Lots of money already has been spent, so why stop now? The would-be economist in me cringes at such logic.

In any case, my responsibility to investors requires me not to close my eyes to the way bucketing is playing out, but to keep asking questions. After all, investors are the ones who will pay, whether through higher fees or lower returns, for ill-conceived liquidity regulations.

III. International Shaping of US Regulatory Policy

The Commission undertook its fund liquidity rulemaking under pressure from the Financial Stability Oversight Council ("FSOC") and the Financial

Stability Board ("FSB"), both of which view fund liquidity as a potential systemic risk.

The Commission ought not to put on glasses that contain the distortive lenses favored by our international banking regulator friends. Funds are not banks and should not be regulated as if they were.

I recognize that if the Commission proposed to eliminate the bucketing requirement or even to modify it to allow for a principles-based approach, international regulatory bodies might seek to incorporate a bucketing system into recommendations or standards. Such tactics have been used in the past.

Given the changes that we proposed earlier this month—the cash and cash equivalents disclosure coupled with a qualitative liquidity risk management program disclosure—we stand on strong ground to argue in response that we have addressed liquidity issues in a form that is appropriate for funds.

Fund liquidity is only one of many subjects that together spawn volumes of principles, standards, recommendations, and guidance promulgated by international organizations, particularly the FSB and the International Organization of Securities Commissions ("IOSCO").

The Walgreens located next door to the SEC ought to stock up on reading glasses, if it has not done so already, to outfit the many pairs of SEC eyes worn down by these international documents.

I cannot even begin to name all of the FSB and IOSCO work streams, working groups, and committees, let alone what each one does. It's not only the volume, but also the substance that has me worried.

An example of this overreach painfully familiar to everyone here was the FSB's attempt in the wake of the 2007-2009 global financial crisis to extend banking regulations to non-banks, including funds, by designating certain non-bank financial institutions as global systemically important financial institutions ("G-SIFIs").

A G-SIFI designation paved the road to prudential regulatory supervision and oversight. Such attempts to fundamentally change regulation in a way that in turn would change the entities being regulated have serious implications for American investors.

International organizations, of course, play an important role in fostering effective regulation and supervision. It is a role to which I am committed. These groups provide a framework within which countries assist one another in enforcement and oversight efforts.

Many of the Commission's investigation and enforcement efforts have an international component, so such cooperation is essential. International organizations also can help to encourage technical training initiatives, which build relationships among regulators from different parts of the world.

International organizations also play an important role in bringing together supervisors, who can share perspectives on firms operating across borders and compare notes on how they approach regulatory and supervisory challenges.

International organizations can document different regulatory approaches in different countries, which other securities regulators may find informative in tailoring their regulations to the particular characteristics and circumstances present in their own securities markets.

Building strong relationships in times of relative calm in the financial markets is essential. Writing countless pages of reports is not. That brings me to the topic of disclosure—another area where we have sometimes allowed volume to be a measure of success.

IV. Fund Disclosure

Many of you probably purchased special glasses to watch last year's solar eclipse. The filters in those glasses enabled scores of people to watch the solar eclipse without damaging their eyes. The pinhole viewers of the past gave way to this new technology.

The Commission likewise has the opportunity to use technology to enable investors to get more out of fund disclosures. I hope to be able to work toward this end during my tenure at the SEC.

Moving forward with rule 30e-3 would be a first step. In 2015, the Commission proposed to allow website transmission of fund shareholder reports. Rule 30e-3 was the one component of the reporting modernization proposal that promised a reduction in costs for fund shareholders. While the rest of the data modernization package was adopted in 2016, rule 30e-3 was not.

For me, it is about more than saving fund investors money—although that is important. It is about facilitating a larger effort of harnessing technology to provide investors with information in a way that they can better understand and analyze.

That effort also will require us to revisit other disclosure rules with an eye toward providing investors with what they need, rather than what a bevy of Washington lawyers thinks they ought to read. Practical reality—i.e., legal risk—means that we will always have lots of disclosure.

Nevertheless, I hope that we can make real progress on creating documents that are investor friendly. The Commission should amend our disclosure requirements to reflect the information that investors consider important in making their investment decisions and present it in an easily accessible, readable, layered format.

One positive contribution in the otherwise disappointing Dodd-Frank Act is section 912, which allows the Commission to undertake temporary investor testing programs.

The Commission should use this authority to devise creative approaches for getting investors the information they need in a format they want to use.

The Commission got off to a good start on revamping fund disclosures with its adoption of the mutual fund summary prospectus.

A similar variable annuity summary prospectus would be a valuable project. The Commission also should consider tackling shareholder reports.

In all of these initiatives, we ought to be thinking about how new technology can assist investors in viewing with greater focus and—dare I say, greater enjoyment—the information they need to make their fund investment decisions.

V. Exchange-Traded Funds

I've talked a lot about glasses, but the Commission also needs to come to terms with its version of contact lenses—the exchange-traded fund ("ETF").

For years, ETFs have been operating under exemptive orders, rather than pursuant to a rule. Because of that, they are second-class citizens in the fund regulatory world.

As all of you know, ETFs are more than a passing fad—they are here to stay. An article was posted to SSRN last week by University of Texas law professor Henry Hu and coauthor John Morley explained the problem as follows:

ETF regulation spills haphazardly from an odd mix of stock exchange listing rules and a motley group of statutes designed for older, fundamentally different products.

Appropriate ETF regulation is so lacking that the SEC has managed to hold it together only through the system of improvisatory, ad hoc administrative review at the moment of each new fund's creation.

This regulatory state of affairs causes two basic problems: first, it introduces pathologies in the process of regulatory administration, and second, it fails to address the ETF phenomenon's most distinctive characteristics.

The make-it-up as you go approach to regulation and the virtual absence of the commissioners from the process is a real concern to me.

Back in March 2008, the Commission recognized that ETFs "are an increasingly popular investment vehicle" and proposed an ETF rule that would have codified our ETF exemptive orders.

The Commission noted then that there were 601 ETFs holding $580 billion in assets.

The proposed rule would have streamlined the process for new ETFs coming to the market and would have subjected all ETFs to the same conditions for relief, rather than allowing some ETFs to operate under more favorable conditions than others.

Instead, the financial crisis hit and, as is known to happen in Washington, people got squeamish about possible criticisms that might accompany enactment of any exemptive rule. In the understandably timorous mood of the time, anything perceived as being deregulatory was identified as something that might lead to a future financial crisis.

Crises are all about enacting onerous regulations on your wish list for which you would not find support in calmer times. The famous "you never let a serious crisis go to waste" mantra was not a call for finalizing the ETF rule.

So, back to contact lenses. Contact lenses make many people—including me—squeamish. Glasses are a lot easier to put on and remove.

They are familiar.

Contact lenses, once viewed as "a novel and strange medical device," made their way into common use and have revolutionized the lives of many people.

ETFs have done the same.

A decade after the ETF proposal, there are approximately $3.6 trillion in ETF assets.

Just as contact lenses were normalized, we need to normalize ETFs.

That means adopting a carefully crafted rule that allows enough flexibility to accommodate a variety of models, while reserving the exemptive application process for ETFs with novel features in need of extra scrutiny.

It also means working across divisions at the Commission to ensure that we address the full problem of regulation by one-off staff action.

VI. Conclusion

I call on all of you to help us at the Commission to put our glasses on (or our contacts). It is important that the Commission make sure that its fund regulatory framework is working efficiently and for the benefit of investors. A retrospective review of our regulations is long overdue.

We need to pay particular attention to the collective costs and burdens of our regulations and the effect they have on funds' ability to achieve what they were formed to do: provide a return on investments for millions of Americans so that they are able to provide for themselves and their families.

I am delighted that we have Dalia Blass, our Director of the Division of Investment Management, as a partner in this effort.

As was evident from her remarks this morning, Dalia brings a wonderful enthusiasm to the Division's work.

She is committed to looking out for the interests of investors and works tirelessly to make sure not only that important issues are addressed

expeditiously, but that the Commission gets the rules right. Dalia embraces difficult issues with a grace and determination that serves the American investor well.

As she noted, you are all a critical part of getting fund regulation right. Thank you for the opportunity to share my thoughts, and I am happy to take questions.

Number 2

The future of money

Mark Carney, Governor of the Bank of England and Chairman of the Financial Stability Board, to the inaugural Scottish Economics Conference, Edinburgh University, Edinburgh.

It is a great pleasure to join the inaugural Scottish Economics Conference, which brings together students from six universities with proud intellectual traditions. I would like to congratulate the students who have shown such initiative in creating this event. My only regret is that the '#BeastFromTheEast' has prevented me from joining you in person, though given my topic, there is something appropriate about joining you virtually.

This £20 note is significant.

Figure 1: a £20 banknote

Significant because it honours Adam Smith, the great moral philosopher and hero of the Scottish Enlightenment.

Significant because it is a significant amount of money, enough to buy you a burger and a few pints at the Pear Tree pub this evening, or if you fancy a quieter but highly stimulating night in, copies of Smith's Wealth of Nations and The Theory of Moral Sentiments at Blackwell's.

Significant because without money the decentralised exchange of Smith's invisible hand could not operate.

Money unlocks the specialism of labour in the pin factory and "the great increase in the quantity of work that results."

And only money can solve the coincidence of wants between the butcher, the brewer, the baker and the student on a Friday evening.

Many of you probably don't see Adam Smith notes too often. Not just because you're impoverished students. Or because you live in Scotland where you're more likely to encounter Sir Walter Scott or Nan Shepherd on a banknote when you do have cash.

But because you use electronic forms of money such as debit cards and mobile phones for your everyday purchases and go online for your larger ones.

A number of you may hold other forms of electronic money – crypto or virtual currencies such as Bitcoin, Ether or Scotcoin.

And a few may view paper money – even the Bank of England itself – as archaic vestiges of an old centralised order of payments that will soon be swept aside by a digital, distributed future.

And that's my topic today: the future of money.

To read more:
https://www.bis.org/review/r180323a.pdf

Number 3

Phishing emails deemed number one threat by UK Businesses

Industry research by security company Clearswift has reported that malicious links within emails are perceived as posing the biggest cyber threat to UK businesses, with 59% of business decision makers highlighting this as their chief concern.

This is indicated to be far more than any other cyber threat.

The research surveyed 600 senior business decision makers and 1,200 employees across the UK, US, Germany and Australia.

When asked what they see as the biggest threat to their organisation, business decision makers ranked phishing emails as the top threat in all four surveyed regions:

Cyber Threatscape Top 10

1. Malicious links within emails – 59%
2. Employees sharing usernames/passwords – 33%
3. USB memory sticks/removable storage – 31%
4. Users not following protocol/data protection policies – 30%
5. Ex-employees retaining access to network – 28%
6. Infection via malware from personal devices – 26%
7. Hackers – 25%
8. Employees using non-authorised tools/applications for work purposes (personal email drives/file sharing) – 25%
9. Social media viruses – 24%

10. Critical information on stolen devices – 23%

The survey findings are aligned to previous NCSC assessments; email remains a popular tool for attackers to launch cyber attacks, distribute ransomware and other forms of malware, or to commit fraud via business email compromise.

Number 4

Banking regulation and supervision - you can't have one without the other

Sabine Lautenschläger, Member of the Executive Board of the European Central Bank and Vice-Chair of the Supervisory Board of the European Central Bank, at the 9th Annual EFR Stakeholder Round Table on "Financial Fragmentation or Integration", Brussels.

The financial crisis showed what can happen when banks are not safe and sound. So the goal is to make banks safe and sound, and avoid future crises.

To that end, we have revamped regulation, and we have strengthened supervision. It's indeed vital to work on both fronts.

Without supervisors, rules would have little effect; without rules, supervisors would have no job - or at least no firm basis for doing their job.

You can't have one without the other: regulation and supervision need to be aligned.

But are they? Let us take a look at the euro area.

In 2014, banking supervision was transferred from national to European level. And since then, we've achieved a lot. However, we could do more, and that brings me to regulation.

How European is regulation? Well, it's true, of course, that there is a single rulebook. But by and large, regulation in Europe remains fragmented to a degree that makes it hard to reap the full benefits of European banking supervision.

And the problem starts with the scope of that supervision. Large investment firms and third-country branches are still not covered by it. This situation should be changed to restrict regulatory and supervisory arbitrage.

Then there are the options and national discretions contained in European regulation.

Some of them are still exercised differently across the euro area. It's up to legislators to harmonise them.

The same is true for fit and proper assessments. The rules here are also very diverse. And finally there are the tools for crisis management.

We still have no common approach to such things as insolvency laws and moratoriums. This too needs to change.

Likewise, the rules for early intervention measures need to be streamlined.

All this begs the question: is the banking union living up to its full potential? I would say: it's not, at least not yet. But it could if the rules were further harmonised.

Now let's turn to the global level. With Basel III finalised, we have a global set of regulatory standards. As standards, they are not always detailed and they are not binding, of course.

So they still need to be transposed into hard law. And this is crucial; the banking sector is global in scope, and the rules that govern it need to reflect that - at least so far as the big banks are concerned.

But as I said just now, rules can only work together with supervision. How effective global rules are also depends on how supervisors apply them. Supervisors must faithfully apply the rules which transpose the Basel standards.

To do so, they need adequate resources and they must be shielded from political interference.

And there's more. There is also a strong case for supervisors from around the world to exchange information, to cooperate and to coordinate. This would help to facilitate strong and effective banking supervision worldwide.

We have done a lot to make banks safer and sounder, both at European and global level. The important thing is that we keep working together - within Europe and around the world.

Thank you for your attention.

Number 5

Living with fragmentation - post-Brexit realities in financial services

Dr Andreas Dombret, Member of the Executive Board of the Deutsche Bundesbank, at the AIMA Global Policy and Regulatory Forum, Dublin.

1 Introduction

Ladies and gentlemen

Thank you for the kind introduction. It is a pleasure to be in Dublin and at the 2018 AIMA Forum.

"Managing a fragmented world" is, in my view, a well-chosen topic. Most economic policymakers currently have their hands full trying to escape the doom loop of a trade war and a potentially hard Brexit. At the same time, banks, investors and most other firms have to prepare for these worst-case scenarios - not least, because supervisors urge them to.

And of course such fragmentation in financial services and its regulation may cause nightmares for many in the industry as well as for policymakers. And I do understand that - because it implies a great deal of uncertainty.

But we should not, I believe, panic: greater fragmentation seems inevitable after Brexit. Though, repercussions will not be as bad, as some fear, when we succeed in managing this greater fragmentation constructively - that means without resorting to nationalism that would just be destructive for all of us.

My topic today, then, is to look at the estimated extent of fragmentation in regulation of financial services after Brexit and what we should do about it.

2 Brexit and financial services

In Brexit negotiations common ground still seems hard to find. Even the basic principles of a new partnership remain vague. Given that and because time for preparation is running out for firms, uncertainty among businesses weighs heavier every day.

From an economic and financial market perspective, the two most important questions probably are:

- Will there be a free trade or a comparable agreement?

- Would a possible free trade agreement also include financial services?

In my view, there is substantial scope for a general free trade agreement. The main question to me is therefore how far-reaching can this future relationship be.

For example an agreement without tariffs would be of high value and is possible. Another, less clear and highly complicated question is how to deal with non-tariff barriers like product standard regulations.

However, with a view to the financial services sector, a far-reaching free trade agreement is rather unlikely given the UK's aspired exit from the single market and the customs union.

Likewise, I am rather sceptical about the approach via mutual recognition or about similar approaches based on regulatory harmonisation through technical committees and independent arbitration mechanisms.

Approaches of this kind could well undermine the ability of jurisdictions to set their own rules and the ability to safeguard financial stability.

The options that remain on the table are a "no deal" scenario or one with quite limited freedoms for financial services, as in the case of CETA.

What would such scenarios mean to financial transactions between the UK and the EU?

First, the "no deal" scenario would mean that the EU and the UK would trade under rules set by the World Trade Organization - where services sectors are only thinly covered.

Service providers would then have to apply for comprehensive licenses in both jurisdictions and have all the necessary elements of a fully functioning bank ready in both places.

And second, even a CETA-like deal would most likely not mean far-ranging freedoms to provide financial services in the respective foreign jurisdiction.

3 Living with fragmentation

Therefore, it is - like it or not - quite likely that we will see greater fragmentation in financial regulation and supervision in Europe. What exactly that will mean is, however, unclear up to now.

It is this uncertainty about the exact nature of fragmentation post-Brexit that makes it so hard to assess the costs and benefits of more fragmentation.

Financial firms highlight that fragmentation is likely to mean organisational inefficiencies and higher organisational costs. And there can be no doubt that at least the transition to a new regime and new organisational structure will be costly.

However, these costs may be less substantial in the long term - once firms have adapted to the new regime, clever managers will find new organisational solutions that integrate new compliance realities with organisational efficiencies.

Significant as these costs may be, politicians, regulators, and supervisors nevertheless have to take a broader perspective, one that is in line with the changed democratic preferences.

Thus, from the UK perspective, a far-reaching free trade agreement for financial services - and services in general - could be considered an obstacle to taking back legal and regulatory power.

At the same time, from the EU perspective, we cannot accept a liberalised common market, without a common supervision. Otherwise, as a supervisor, I would be concerned about financial stability. It seems therefore that some degree of fragmentation is almost inevitable.

But, should we simply wait for the end of EU-UK financial relations? Should we simply hope for the best?

Of course not. We have to manage fragmentation constructively - we have to find innovative approaches for a new reality.

But let me make one thing very clear: this must not result in a race to the bottom. Fragmentation should not lead to competition through lax regulation or supervision. Such policies may seem to be in the best national interest, but ultimately they represent special interest politics. We must expose these policies for what they really are: threats to financial stability.

And that is why politicians, firms and supervisors have to deliver on three crucial points: first, a transition agreement; second, pragmatic supervisory cooperation; and third, managerial innovation.

Let me take each of these briefly, starting with the transition - or implementation phase, as it is now called.

4 The need for a transition phase

A transitional deal between the UK and the EU was agreed yesterday on negotiators' level. During the implementation phase, which is to last until end 2020, EU rules would continue to apply in the UK and the exact terms of the future partnership shall be worked out. It is of utmost importance in order to give firms more time to adjust to the new realities.

It furthermore can reduce the long-term costs of Brexit. Firms can weigh up their options and decide which markets they want to serve and with which organisational design. They have now time to re-arrange their organisations on the basis of an analytical and forward-looking approach, rather than an approach of simply minimising uncertainty.

The inefficiencies and potentially higher costs of financial intermediation can be reduced with this agreement.

I am confident that both sides have apparently recognised the importance of a transition phase in making Brexit less abrupt and, in the long run, less painful.

Despite all this positive news, it is still too early to lay back. Many issues are still to be discussed and the transitional period is still not fully guaranteed. It remains to be subject to a successful conclusion of an Article 50-deal within the next twelve months. For instance, the Irish question - i.e. keeping the border between the Republic of Ireland and Northern Ireland

invisible - needs to be resolved. Hence, the recently widely used phrase that "nothing is agreed until everything is agreed" still holds true.

5 Managing financial firms in a fragmented world

But even after a transition phase, Brexit and fragmentation would mean two things.

First, future access to financial services markets would be more like the access given to a third country.

Second, a successful conclusion of the Brexit negotiations is not guaranteed as it depends on whether a fully-fledged long-term agreement is achieved and ratified.

This is why I see no alternative to timely preparation, and to preparing for the worst-case scenario of a hard Brexit without any free trade agreement.

Looking at banks, proper preparation would include establishing at least basic entities in the other economic area - that is, the EU27 or the UK - in order to continue doing business there.

The concept of a "basic entity" is not easy to define. As far as we are concerned, I can repeat that we will certainly not accept empty shells or letterbox companies where the business effectively continues to be run from London.

For critical functions such as management, controlling and compliance, qualified personnel need to be present at the EU entity at all times. We expect any branch or subsidiary to retain chief responsibility for its business.

And banks have to begin implementing their plans and submitting their license applications no later than at the end of the second quarter of 2018. Otherwise, it will be very difficult to prevent a cliff edge.

Firms have a lot to complain about with regard to Brexit, and I do not mean to play this point down.

But if the UK and the EU are attractive markets, I think there is something to be said for innovative approaches to comply with this new regime.

That's why firms will have to find new, efficient organisational strategies. For example, I am convinced that profitable business models can be organised with two independently licensed entities.

6 Managing regulation and supervision in a fragmented world

But don't get me wrong: regulators and supervisors, too, have to be pragmatic and innovative to achieve our goals of efficiency, stability, and ensuring the real economy is provided with credit.

With financial sector firms relocating their business between London on the one hand and Frankfurt, Dublin and other cities on the other hand, close supervisory cooperation becomes even more important, especially over the coming years when we have to break new ground in supervision.

The cooperation between the EU and the UK authorities will have to be put on a new foundation. We will need to ensure information exchange, and of course we will have to think about how we can reduce unnecessary burdens from double licensing.

Whatever political decision is taken, bank supervisors will not only do all they can to make the transition to a new regime as smooth as possible; they will also, in the long run, try to reduce unnecessary inefficiencies where possible.

In December last year, the PRA2 published a draft proposal for a post-Brexit supervisory approach. I very much appreciate the spirit behind this approach. It reflects a solution-oriented, pragmatic, yet stability-oriented stance.

In the same vein, the SSM has developed quite pragmatic, cooperative policy stances on many of the relevant issues. I am confident that this cooperative style can make an important contribution towards a smooth transition.

7 Conclusion

Ladies and gentlemen, greater fragmentation will most likely be an inevitable result of Brexit.

Instead of wishing to do away with what is beyond our control, we should set about finding pragmatic and at times innovative solutions to managing Brexit and the ensuing fragmentation constructively.

However, such a constructive approach will take time, because it means many complex answers have to be developed - which is why we need a sufficiently long transition phase.

And I have to say that I was really facilitated well and truly relieved when I heard the news yesterday that a transition phase had been agreed, because this could make Brexit less abrupt and, in the long run, less painful.

During that phase, supervisors will have to find solutions that enhance financial stability without undermining economic efficiency.

And financial firms will have to find innovative and pragmatic ways to comply with the new demands while maintaining their efficiency and profitability.

For all the bullet points on our to-do list, we need an honest dialogue - if unnecessary problems and burdens arise, firms and investors should always come and talk to us. Brexit is both too complex and too important to muddle through.

Thank you for your attention.

Number 6

The Role of the IAIS in Times of Turbulence

Jonathan Dixon, IAIS Secretary General, Geneva Association, 34th Annual Progres Seminar

1. Introduction

Good afternoon. Thank you for the invitation to speak at this superb annual event. It is good to see so many familiar faces.

Coming straight from 3 days of intensive IAIS Committee meetings, I am pleased to be able to take a step back and benefit from some thought-provoking exchanges between industry and regulatory leaders.

Engagements like this event – and more broadly engagement with our stakeholders – are of huge benefit to the IAIS. As a global standard setting body, there is a great challenge in developing principles and standards that can be universally applied.

The principles and standards we develop, and the guidance we provide, must be firmly rooted in practical experience.

They need to be capable of being applied proportionately to different types of businesses in different markets. Our Members know that when it comes to effective supervision "one size does not fit all".

Involvement of our stakeholders and forums such as this support these efforts, so I would like to start off by expressing our appreciation to the contributions so many of you have made - and continue to make - to the work of the IAIS, whether as an insurance supervisor, industry leader, consumer representative, or peer organisation.

This session is styled as an Introductory Address. 'Introductory' in the sense that this is my first time speaking to you as Secretary General of the

IAIS and an opportunity to give you my perspectives on what the IAIS stands for and where it is heading.

‘Introductory’ also in the sense that it comes at the outset of an exciting agenda – one that is very much focused on emerging (and in some cases emerged) risks - with all the uncertainty it poses; hence the title the ‘Role of the IAIS in Times of Turbulence’.
Whilst many of us are asked to speak about our priorities and the wider environment, “turbulence” is an interesting choice of word to have been given for my speech today.

It comes from a Latin word “turbulentus”, which means “full of commotion” and means either “violent or unsteady movement of air or water” or, in this context, “a state of conflict or confusion”.

Having been involved in the work of the IAIS since the global financial crisis, I can vouch for the amount of commotion I have seen and confusion that I have occasionally felt, even if I have yet to see all out conflict!

Of course, we have all seen a great deal of turbulence or commotion in financial services and I will talk about the role of the IAIS in addressing three areas of turbulence:

- The buffeting we received from Global Financial Crisis, which we as standard setters continue to work on;

- Current changes in the environments of both insurers and regulators; and,

- The future potential of turbulence and disruption from emerging risks.

2. The buffeting we received from Global Financial Crisis, which we as standard setters continue to work on

The Global Financial Crisis was an event unlike any other we have experienced in living memory and, unfortunately, the insurance sector did have a role to play.

I cannot avoid mentioning AIG, whose problems stemmed from it being exposed to Mortgage Backed Securities (MBS) - the common exposure which was central to the Global Financial Crisis.

Monoline insurers also experienced problems due to a common exposure to the default of the assets underlying the mortgage-backed securities and as they were significantly interconnected, whilst in the Netherlands, Government support was provided to bancassurance conglomerates because of concerns that exposure of the banks in the group to mortgage-backed securities could have a knock-on effect on the insurers of the group.
Our experience of the Crisis and the insights we gained led to domestic, regional and international regulatory reforms.

Completing the IAIS' international framework is vital to help promote a more stable global financial system.

This means we must deliver on our current commitments; covering our work on the mitigation of systemic risk in the insurance sector and the development of ComFrame, including an ICS that is implementable by the end of 2019 in the form of confidential reporting to supervisory colleges.

We remain very much on track, with our meetings this week taking us another few steps forward.

In particular, our work on an activities-based approach (ABA) to the mitigation of systemic risk is taking on increased importance globally.

This past November, the FSB emphasised the development of an ABA in its public communiqué on systemic risk.

The IAIS has always advocated that insurance poses a different set of systemic threats than, say, banking and that these are related to insurance activities that involve liquidity risks and macroeconomic exposure.

This thinking naturally lends itself to an ABA to systemic risk.

In early December, we published an interim consultation on the work to date.

This is a very preliminary but important step. The public comment period closed two weeks ago and we are reviewing the feedback received.

We will continue to liaise with the FSB on the direction of this area of work.

The interaction between an Entities Based Approach (EBA) and an ABA, specifically whether an ABA is a complement to, or substitute for, an EBA,

is a key question the IAIS will discuss in the year ahead, with the benefit of this stakeholder input.

What is clear is that any approach will need to be able to articulate how the IAIS and its Members intend to mitigate potential systemic risk at the global level arising from the collective exposures of insurers and the potential for a systemic impact due to the failure of an individual insurer. The IAIS plans to outline its thinking on a holistic approach in a consultation document for public consultation by year-end 2018.

3. Current changes in the environments of both insurers and regulators

Even if the global financial crisis is now behind us, some of the socioeconomic impact lives on. As we have seen in recent years through UK political developments and the wider environment in Europe, the US and elsewhere, we live in turbulent times that have a real impact on insurers and their supervisors.

For me, such an environment has only served to reinforce the importance of the IAIS and to reflect its strengths:

International supervisory co-operation

We are an inclusive Association of more than 200 members, bringing together insurance supervisors from across the globe.

Reflecting the purpose of the Association, we are maintaining our focus on increasing co-operation between our members.

For example, our Multilateral Memorandum of Understanding (MMoU) continues to grow and now stands at 65 member organisations, representing more than 70% of the global insurance market, with 12 more in the validation process.

A strong dialogue between our members and industry stakeholders

Being inclusive extends to our stakeholders – an area in which we have made significant improvements in recent years.

In 2017, we held substantially more stakeholder meetings on a broader range of issues than ever before.

We are committed to strengthening our engagement activities, which was reflected in the launch of our stakeholder engagement strategy last year, with nearly two dozen new commitments to expand our dialogue with consumers, industry, and academic and professional organisations.

Global standards that our members have the capacity to implement and that work in practice

As our policy work advances, we must be mindful of the need to begin our pivot towards supporting implementation and assessing observance.

We have adopted a new strategy to strengthen our approach to implementation.

Key to our strategy are:

1. Our continuing efforts to build the strategic partnerships needed to support capacity building amongst supervisors.

Most recently, we entered into a five year agreement with the International Actuarial Association and the Access to Insurance Initiative to support supervisory capacity building in the area of actuarial services;

2. Providing greater opportunities for supervisors to exchange views and share best practices on emerging / emerged risks and the on-going challenge of implementation;

3. Supporting cooperation and information exchange amongst supervisors through our MMoU and other platforms; and, lastly,

4. Strengthening our approach to assessment, building off the success of our self assessment and peer review programme to better address the demands of our members for comprehensive and credible assessments of the IAIS standards.

4. The future potential of turbulence and disruption from emerging risks

Turning to the future, the IAIS has begun a process to set out its next Strategic Plan and Financial Outlook (SPFO).

This next five-year plan will begin in 2020 and we aim to present it for approval at our 2018 AGM.

Given our commitment to engaging with our stakeholders, we sought comments from stakeholders by late February and we are reviewing the input provided.

There will be further opportunities to discuss our plans as the year progresses, when we consult on our initial thoughts.
As part of its initial blue sky conversations to inform our strategic plan work, a specific and key theme emerging from IAIS Executive Committee members, and from the input received from Geneva Association Board members this morning, has been the importance of monitoring, evaluating and developing actions in response to emerging risks.

The IAIS is increasingly focused on responding to emerging risks and trends in the insurance marketplace and developing appropriate supervisory guidance relevant to all of our Members.

We recognise that further discussion on our approach to emerging risks is needed and that coordination is a critical challenge.

There are some common implications of all of these emerging trends and risks:

1. They impact all of our Members, whether from developed or developing jurisdictions – hence the imperative to respond in a proactive and robust way.

2. They have cross-sectoral impacts – many beyond the broader financial sector.

We will have to grapple with what this means for the traditional silo model of insurance supervision – and for the way that the IAIS goes about its work on these topics.

3. They are all areas in which there is a relatively high degree of alignment in the objectives of both supervisors and industry stakeholders – promoting market development, while mitigating risks.

For me, this means that as we look to our future agenda as the IAIS, we need to explore ways to move from consultation to collaboration.

Standard setting is constantly evolving and we will become stale if we are not alert to emerging risks and changes in our sector.

We also need to find ways to be more nimble and agile going forward in responding to these changes; we will create 'forums' or networks of supervisors to interact on these issues.

This also provides an opportunity to increasingly look to shifting from a 'consultation approach' to a 'collaboration approach'.
The IAIS will continue to be forward-looking and help shape supervisory responses to the emerging insurance landscape on issues such as FinTech, cybersecurity, climate change, and sustainable finance.

We have put processes in place to provide further guidance to supervisors on these topics.

Let me share some examples of the work we are doing in this area:

FinTech

As we will hear during this seminar, FinTech is already having a noticeable impact on insurer business models and these innovations could benefit consumers but also expose them to new, or evolving, risks.

Our aim in the new environment is to keep protecting policyholders, while also being careful not to stifle socially useful innovation.

Due to both the scope and pace of change, insurance supervisors must be alert to new developments and make necessary adjustments in their supervisory practices and skills.

Last year the IAIS published a foundational paper entitled "FinTech Developments in the Insurance Industry".

The report highlights several challenges for insurance supervisors, including:

• Balancing the risks and benefits of innovations and creating an environment that fosters innovation through approaches such as regulatory sandboxes or innovation hubs.

• Evaluating and, if needed, adjusting the prudential regulation framework.

• Considering the adequacy of current reporting requirements in monitoring trends and the potential build-up of risk connected to new technologies.

• Understanding how innovations work and are applied to ensure adequate assessments of new product and business models.

In response to this report, the IAIS is looking at the increasing use of digitalisation in the insurance business model, which particularly has conduct implications.

The result of this work will be an IAIS paper that focuses on its impact on the fair treatment of customers as well as what this could mean for conduct supervision.

This more general paper will build on the Application Paper on the Use of Digital Technology in Inclusive Insurance, on which we launched a public consultation two weeks ago.

Also in the coming months, we will launch a FinTech virtual forum for supervisors to exchange perspectives towards the potential development of supervisory guidance.

We will also begin identifying supervisory challenges in connection with algorithms and artificial intelligence used by insurance firms.

Given the cross-sectoral nature of these challenges, we also continue to participate in the FSB Financial Innovation Network and the ad hoc group on financial innovations.

Collectively, our work at the global level will help support supervisors to respond to FinTech developments, be alert to the impacts on insurer business models and consumers and formulate the necessary regulatory strategies.

Cyber Risk

Cyber risk is one of the more pernicious emerging risks. IAIS Members are taking this issue very seriously.

We have been doing some work – but we need to do more.

In August 2016, the IAIS published an Issues Paper on Cyber Risk to the Insurance Sector to raise awareness of the challenges presented by cyber risk.

The paper provides background, describes current practices, identifies examples, and explores related regulatory and supervisory issues and challenges.
The IAIS is digging deeper with its follow-up paper on Cybersecurity. This has an expected release date of late 2018.

This Application Paper will provide further guidance to supervisors seeking to develop an approach to supervising the cybersecurity of insurers.

Recognizing the benefits of regulatory harmonization, the paper will consider incorporating recommendations and guidance from other international bodies, including the G7 Fundamental Elements of Cyber Security for the Financial Sector and from the CPMI-IOSCO Guidance on Cyber Resilience for Financial Market Infrastructures.

The IAIS is actively contributing to the CPMI-IOSCO Working Group on Cyber Resilience work as an Observer Organization.

IAIS Members are now examining existing ICPs to determine which aspects should be strengthened to reflect cybersecurity considerations.

In sum, for now, the IAIS is focused on addressing cyber in its ICPs and providing guidance to Members in the development of effective supervisory approaches.

We recognise however, that the market for cyber insurance is evolving rapidly.

Our focus has primarily been on understanding cyber risks and the impact for supervisors, but we are also monitoring the market side to determine what, if any, further action will be necessary for the IAIS to help support the development of the nascent cyber market.

Climate change and sustainable insurance

Lastly, the IAIS is also alert to issues in sustainable insurance, particularly as it relates to climate change and climate-related risks such as those wrought by natural disasters.

We have worked to raise Member awareness through papers, panel discussions, and collaboration with other organisations such as the UN Environment Programme (UNEP) through its Sustainable Insurance Forum (SIF).

We are currently working with the SIF to develop lessons for supervisory practices and climate-related financial disclosures to mitigate risk and support sustainability.
IAIS ExCo Member Geoff Summerhayes from APRA recently took over as SIF Chair.

Our primary aim thus far has been to support our Members who are increasingly engaging in discussions on the importance of insurance in addressing climate-related risks.

5. Conclusion

In closing, the current global mix of political, economic, social and technological forces at work shaping and in some cases disrupting and transforming the environment in which we operate makes for exciting times not only for the IAIS, but also for the global insurance sector and international insurance regulation and supervision.

At times like this, the IAIS, with the involvement of our stakeholders, has been successful in achieving global consensus on critical issues affecting the insurance sector and moving it towards greater regulatory convergence.

This is a role we will continue to play, regardless of the ever-changing global environment. Thank You

Number 7

Money laundering valued at up to $200 billion through cryptocurrencies

A joint report between Surrey University and researchers at security vendor Bromium estimates that the proceeds of cyber crime make up to 8-10% of total illegal profits laundered globally, believed to be valued at up to $200 billion.

The report surmises that virtual currencies such as Bitcoin are becoming the primary tool used by criminals to launder proceeds. While Bitcoin has long been viewed as the criminal's choice for cryptocurrency, they have been seen moving to other virtual currencies appearing to offer greater anonymity, including Monero and Zcash.

The purchasing of digital items within computer games is also being used to launder profits, offering many different platforms for exchanging funds. Digital payment systems add an extra layer of complexity for law enforcement to unravel.

Number 8

From mission to supervision

Klaas Knot, President of the Netherlands Bank, at the Bundesbank Symposium "Banking Supervision in dialogue", Frankfurt am Main.

Dear herr Dombret, herr Otto, thank for your kind introduction, and thank you very much for having me. It's a great privilege for me to speak to you at this Symposium Banking Supervision in Dialogue.

Let me begin though by highlighting that if I would have told you 5 years ago that today at this very Symposium "Bankenaufsicht im Dialog", we would spend half the day discussing sustainability, not only would none of you have believed me, but most likely many of you would have taken me for a sort of tree hugger rather than a central banker.

And yet here we are today. It's a clear indication of the significant shift in thinking that has occurred in the financial sector and in the supervisory community over the past few years.

Sustainability has become more and more part of mainstream finance, evidenced by so many initiatives and examples worldwide, of which the Sustainable Finance Action Plan, which the European Commission will publish tomorrow, is only just the latest.

At De Nederlandsche Bank, which is both the central bank and the supervisor of banks, pension funds and insurance companies, we have been active on the issue for a few years now.

I can imagine though that many of you might be wondering why we have been active on this issue for a few years already. What happened there?

Today, in my speech 'From mission to supervision', I want to share with you precisely what happened.

I will firstly share how this issue got on our agenda, highlighting how and why sustainability is relevant for central banks, supervisors and the financial industry.

I will then turn to a thematic review of climate-risks in the Dutch financial sector that we did in 2017, which led to a publically available report, called Waterproof.

As Andreas has already explained to you how and why our economies and financial sectors could be impacted by climate change and the energy transition, I will not bore you with repeating that. Instead, I would like to share with you the outcome of our thematic review on the risks we are seeing for the Dutch financial sector.

Third and finally, I will say a few things on what this means for bank risk management and supervision.

All in the hope that we all will walk away here with a better understanding of how sustainability can affect our different organizations.

And convinced that it makes perfect sense to incorporate sustainability into our day-to-day operations.

To read more:
https://www.bis.org/review/r180322e.pdf

Number 9

Financial stability - taking care of unfinished business

Carolyn Wilkins, Senior Deputy Governor of the Bank of Canada, at the Rotman School of Management conference "Are We Ready For the Next Financial Crisis?", Toronto, Ontario.

A clear lesson of history is that a "sine qua non" for sustained economic recovery following a financial crisis is a thoroughgoing repair of the financial system.

Introduction

Here we are, 10 years after the financial crisis, still tallying the costs, studying causes and drawing lessons from it.

The outcome would have been worse in 2008 and the following years had it not been for the swift and coordinated efforts of policy-makers around the world to boost demand and repair the financial system.

Even so, it has been estimated that the crisis cost the global economy 62 million jobs and more than US$10 trillion in lost output.

Although Canada's recession was less deep than experienced in countries at the epicentre of the crisis, it was still painful for many people.

It took more than a decade—and a series of aftershocks—to get to a place where we feel that emergency measures, such as ultra-low interest rates, may at last no longer be needed.

While uncertainty about trade polices continues to cloud the global and Canadian outlooks, for a central banker like me, this moment feels like it has been a long time coming.

We responded to contagion from abroad with aggressive monetary policy actions. We have estimated that without these actions, the recession might have been a year longer and an additional half a million jobs would have been lost.

We worked with our Canadian and international colleagues—and some of you here—to put critical programs in place to ensure liquidity in core funding markets during the crisis.

And, we co-operated on a series of global financial reforms.

Having been personally involved on several fronts, I know just how much of a collective effort this was.

Many of you here today have worked hard in your own institutions to comply with new rules and shore up risk management. We have all accomplished a lot.

But, let's face it, the job is still not done. Winston Churchill once said, "All men make mistakes, but only wise men learn from their mistakes."

So, it is wise to have conferences like this one, where we can continue to reflect on what went wrong.

That is why I am pleased to be here; I would like to thank the organizers for the invitation.

The experts who spoke before me gave us insights into the genesis of the crisis and the subsequent lessons.

My intention is to push the conversation forward and spark discussion in three areas where I believe we have unfinished business:

1. Understanding the role of monetary policy in financial stability—if there is one thing we have learned since the turn of the century, it is that price stability does not guarantee financial stability.

2. Keeping policy current as risks to the system evolve—leverage and liquidity are important usual suspects, but the trickiest part may be understanding the risks that stem from interconnectedness in an ecosystem that is changing rapidly.

3. Being ready for when things go wrong—being well prepared will help keep the financial damage to a minimum, especially for people who did not take the risk in the first place.

Central banks, along with other authorities and financial system participants, have a strong role to play in all these areas.

To read more:
https://www.bis.org/review/r180327b.pdf

Number 10

Nonsurgical Neural Interfaces Could Significantly Expand Use of Neurotechnology

New program seeks high-resolution neural interfaces for use by able-bodied Service members

Over the past two decades, the international biomedical research community has demonstrated increasingly sophisticated ways to allow a person's brain to communicate with a device, allowing breakthroughs aimed at improving quality of life, such as access to computers and the internet, and more recently control of a prosthetic limb. DARPA has been at the forefront of this research.

The state of the art in brain-system communications has employed invasive techniques that allow precise, high-quality connections to specific neurons or groups of neurons. These techniques have helped patients with brain injury and other illnesses. However, these techniques are not appropriate for able-bodied people.

DARPA now seeks to achieve high levels of brain-system communications without surgery, in its new program, Next-Generation Nonsurgical Neurotechnology (N3).

"DARPA created N3 to pursue a path to a safe, portable neural interface system capable of reading from and writing to multiple points in the brain at once," said Dr. Al Emondi, program manager in DARPA's Biological Technologies Office (BTO). "High-resolution, nonsurgical neurotechnology has been elusive, but thanks to recent advances in biomedical engineering, neuroscience, synthetic biology, and nanotechnology, we now believe the goal is attainable."

Noninvasive neurotechnologies such as the electroencephalogram and transcranial direct current stimulation already exist, but offer nowhere near the precision, signal resolution, and portability required for advanced applications by people working in real-world settings. Potential N3 researchers will face numerous scientific and engineering challenges to bypass those limitations, but by far the biggest obstacle will be overcoming

the complex physics of scattering and weakening of signals as they pass through skin, skull, and brain tissue.

“We’re asking multidisciplinary teams of researchers to construct approaches that enable precise interaction with very small areas of the brain, without sacrificing signal resolution or introducing unacceptable latency into the N3 system,” Emondi said. The only technologies that will be considered in N3 must have a viable path toward eventual use in healthy human subjects.

If early program deliverables overcome the physics challenges, along with the barriers of crosstalk and low signal-to-noise ratio, subsequent program goals would include developing algorithms for decoding and encoding neural signals, integrating sensing and stimulation subcomponents into a single device, evaluating the safety and efficacy of the system in animal models, and ultimately testing the technology with human volunteers.

DARPA intends the four-year N3 effort to conclude with a demonstration of a bidirectional system being used in a defense-relevant task that could include human-machine interactions with unmanned aerial vehicles, active cyber defense systems, or other properly instrumented Department of Defense systems.

If successful, N3 technology could ultimately find application in these and other areas that would benefit from improved human-machine interaction, such as partnering humans with computer systems to keep pace with the anticipated speed and complexity of future military missions.

“Smart systems will significantly impact how our troops operate in the future, and now is the time to be thinking about what human-machine teaming will actually look like and how it might be accomplished,” Emondi said. “If we put the best scientists on this problem, we will disrupt current neural interface approaches and open the door to practical, high-performance interfaces.”

DARPA has invited federal regulators to participate from the beginning of the N3 program, serving as aids for researchers to help them better understand regulatory perspectives as they begin to develop technologies.

Later in the program, these regulators will again serve as a resource to guide strategies for submitting applications, as needed, for Investigational Device Exemptions and Investigational New Drugs.

DARPA is being similarly proactive in considering the ethical, legal, and social dimensions of more ubiquitous neurotechnology and how it might affect not only military operations, but also society at large.

Independent legal and ethical experts advised the agency as the N3 program was being formed, and will continue to help DARPA think through new scenarios that arise as N3 technologies take shape.

These individuals will also help to foster broader dialogue about how to maximize societal benefit from those new technologies. Separately, proposers to N3 must also describe mechanisms for identifying and addressing potential ethical and legal implications of their work. As the research advances, published N3 results will further facilitate broad consideration of emerging technologies.

DARPA is hosting a Proposers Day on April 3, 2018, in Arlington, Virginia, to provide more information about N3.

For additional information, including registration, you may visit:
https://www.fbo.gov/spg/ODA/DARPA/CMO/DARPA-SN-18-38/listing.html

Full program details will be included in a forthcoming Broad Agency Announcement to be published to the Federal Business Opportunities website.

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