was 45 cm^2. Copper wire was used for the electrical connection. Before applying the coat to the steel surface, surface preparation was performed using grit blasting according to Swedish standard (ST 2 1/2) (up to near white metal surface). The coat was applied according to the manufactures instruction and specifications using conventional spray (C. spray) nozzle method, coat thickness measurements was performed using a coating thicken gauge, DeSelsko 6000 model 6000-1 coat, the total obtained dray film thickness (D.F.T) is 500-600μm.
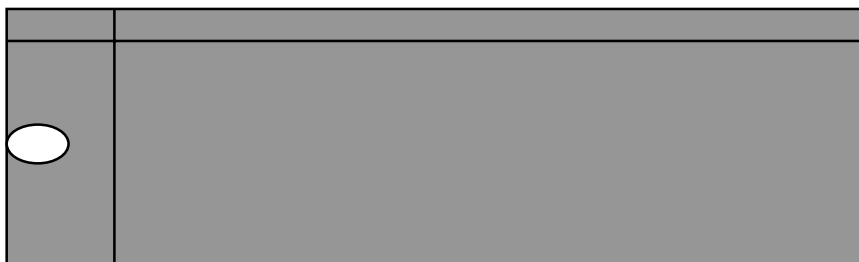

Figure 2: schematic diagram of the coated steel specimen.

3.0. RESULTS AND DISCUSSION

3.1. Open circuit potential (OCP)

Figure 3 shows the open circuit potential (OCP) function of time of bare mild steel behavior, in natural seawater. Measuring the variation of the (OCP) with time for the investigated working electrode is important in defining domains of test sample free corrosion behavior. The OCP measurement also is a simple additional tool that provides complementary information to EIS results regarding the corrosion undergone by the steel substrate after exposure to aggressive solutions (*Ramirez et al., 2005)*. The variation of OCP over time for bare steel panel (BSP) and coated carbon steel (CSP) panels are shown in Figures 3 & 4 respectively.

2.1. Working electrode

2.1.1. Bare mild steel

Bare Steel samples of 1cm diameter were used. The chemical composition of these specimens is given in Table1.

Table.1: Chemical composition of low alloy steel specimens

| Cr	Mn	Si	C	Mo	S	P	Fe
1.1	0.9	0.35	0.33	.0.25	0.04	0.035	Balance

The working electrodes of bare samples were fabricated, cut and shaped, in cylindrical and rectangular Shapes. A long screw fastened to one end of the cylindrical working electrodes for electrical connection The Teflon gasket thereby forms water – tight seal with the specimen electrodes that prevents ingress of any electrolyte and thus avoiding crevices effect. During EIS and potentiodynamic polarization measurements, the exposed area of samples to the corrosive seawater was only $0.785cm^2$ for cylindrical, and was 45 cm^2 for the rectangular one. The exposed area was mechanically abraded with a series of emery papers of variable (320-600) grades, starting with a coarse one and proceeding in steps to the finest (600) grade up to a mirror finish. The samples were then washed thoroughly with double distilled water, followed with acetone and finally with distilled water, just before insertion in the cell.

2.1.2. Coated steel

Steel samples of dimensions 0.3 x 3 x 7 cm were used, of the same composition given in Table 1. Figure 2 shows schematic diagram of the coated steel specimen. Two types of epoxy coating were applied to the steel surface such as tar free epoxy; the exposed area

2.0. EXPERIMENTAL

EIS measurements of coated steel panels and polarization curves for bare steel in natural seawater were collected by connecting the electrochemical cell, figure.1.a to Gil ACM Instrument, figure 1.b. The instrument was controlled by personal computer for data logging and data analysis for EIS measurements. Usually, 100 points were measured for each decade of frequency that ranged between 30 kHz - 0. 1 Hz. The amplitude of the superimposed a.c potential was 10 mV. Polarization curves measurements were carried out at scan rate 20 mV/min. Impedance and polarization measurements were carried out employing the three-electrode mode, at the rest potential. Saturated calomel electrode (SCE), and/or Silver/Silver (Ag/AgCl), ware used as reference electrodes (R). A platinum wire 0.5 mm in diameter acted as a counter electrode (C). The polarization cells and their components were carefully cleaned after each experiment to insure cleaning from any possible foreign residues such as metallic products formed during polarization process. The cell and all electrodes were cleaned by distilled water after and before performing each experiment.
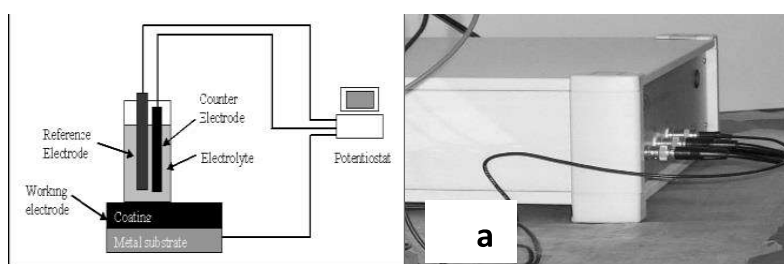
Figure 1: Electrochemical Cell of EIS a, Gill ACM connected instrument

small fraction of the exposure time required for those changes to be detectable by the traditional mechanical or visual methods.[2-3] The barrier properties of organic coatings create a high electrical resistance across the coating thickness.[4] As coatings age, the interconnecting network of pores within the epoxy matrix eventually becomes saturated with water, salts, etc., exposing the metal substrate to a corrosive environment. The saturation of the pores also creates lower resistance paths through the coating itself. Aged organic coating systems also possess other electrical properties. For instance, dielectric properties cause coatings to act as capacitors to an electrical current. Corrosion occurring at a metal surface possesses related to the corrosion rate, and an electric double layer also behaves as a capacitor. Since Bacon, Smith, and Rugg released their pioneering work in the late 1940s, coatings with impedance$>10^9$ Ωcm^2 at 0.1 Hz are said to provide excellent corrosion protection; in contrast, those possessing $<10^6$ Ωcm^2 are said to provide poor corrosion protection.

The impedance modulus at low frequency ($|Z|$) is an appropriate parameter for characterizing the protective properties of the coatings.[5] The impedance data will demonstrate the changes in capacitance and resistances. The higher the value of coating capacitance, the more current is conducted passing through the capacitor. This response shows a capacitive behavior.

Polyaniline has been widely used as components of nanocomposite coating formulation due to catalytic activity to form a passivating oxide layer [6]. On the other hand, the addition of nanosilica in the nanocomposite coating increases the superiority of polyaniline as a passivating layer in anticorrosion formulations[7]. EIS equivalent circuit model-fitting has been used as a powerful technique that allows electrical fingerprinting providing an insight into properties and behavior of a large verity of materials[8-10].

الملخص

تم إجراء التحليل الطيفي للمقاومة الكهروكيميائية (EIS) وكذلك إمكانات الدائرة المفتوحة (OCP) لكل من الألواح الفولاذية الطرية المطلية بنظام الايبوكسي العاري والكامل، في بيئة مياه البحر الطبيعية. تم الحصول على جميع معلمات التحليل الطيفي للمعاوقة الكهروكيميائية مثل كثافة تيار التآكل (icorr.) ، وإمكانية التآكل Ecorr ، ومعدل التآكل الكمي (CR) ، ومقاومة نقل الشحنة (Rct)، وسعة الطبقة المزدوجة (Cdl) لكل من الألواح الفولاذية الخفيفة العارية والمغلفة. مقارنة ومناقشة وعرض. تم رسم وتقديم مقارنات بين منحنيات الدائرة المفتوحة المحتملة، ومؤامرات Nyquist وbode لكل من الظروف العارية والمختلفة من الفولاذ الطري المطلي بالإيبوكسي. تم أيضًا إجراء قياسات الاستقطاب الديناميكي الفعال، على الفولاذ الطري العاري وتم تقديم جميع المعلمات الكهروكيميائية التي تم الحصول عليها. تم حساب الفولاذ الطري العاري الذي حصل على كفاءة الحماية من التآكل (PE) باستخدام الطلاءات الواقية العضوية ووجد أنه حوالي 100%.

الكلمات المفتاحية: مطياف المعاوقة الكهروكيميائية، جهد الدائرة المفتوحة، الطلاء.

1.0 INTRODUCTION

Water, ions, and oxygen are the three main agents responsible for the corrosion of metals under coatings. Their diffusion processes through coatings play an important role in corrosion processes. Therefore, it is vital to study their diffusion behavior through coatings to clarify the present understanding of the corrosion mechanism of the metal underneath[1]. EIS allows one to quantitatively determine several coating properties without affecting the coating and its performance. It also facilitates detection of changes in a coating's behavior at a

Corrosion protection of mild steel in natural sea water, by protective organic coatings and rapid assessment using an electrochemical impedance spectroscopy (EIS)

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Abstract

Electrochemical impedance spectroscopy (EIS) as well as open circuit potential (OCP) of both bare and complete epoxy system coated mild steel panels, have been conducted in natural sea water environment. All obtained electrochemical impedance spectroscopy parameters such as corrosion current densities ($i_{corr.}$), corrosion potential E_{corr}, quantitative corrosion rate (CR), charge transfer resistance (Rct) and double layer capacitance (Cdl) of both bare and coated mild steel panels have been compared, discussed and presented. Comparisons between open circuit potential curves, Nyquist and bode plots of both bare and different conditions of epoxy coated mild steel have been plotted and presented. Potentiodynamic polarization measurements have been also performed, on bare mild steel and all obtained electrochemical parameters are presented. The bare mild steel obtained corrosion protection efficiency (PE) % using the organic protective coatings has been calculated and found to be approximately 100 %.

Key Words: Electrochemical impedance spectroscopies, open circuit potential, coating

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more effective when inflation expectations are well anchored because the central bank need not worry that, for example, a policy easing will lead counterproductively to rising inflation and inflation expectations rather than to stronger real activity.

Contrary, when the inflation expectations are not well anchored to the belief in a long-run tradeoff between inflation and unemployment held by many economists in the 1960s, unemployment and inflation in the 1970s were both high and unstable. (Dennis, 1997)

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mandate of price stability, the level of maximum sustainable employment is not something that can be chosen by the Federal Reserve because no central bank can control the level of real economic activity or employment over the longer run. (…) monetary policy can certainly help improve the maximum sustainable employment of the economy by maintaining low and predictable inflation. However, any attempt to use simulative monetary policy to maintain employment above its long-run sustainable level will inevitably lead to an upward spiral of inflation and therefore will actually undermine the productive capacity of the economy, with severe adverse consequences for household income and employment." (Frederic, 2007)

Under constrained discretion, the central bank is free to do its best to stabilize output and employment in the face of short-run disturbances, with the appropriate caution born of our imperfect knowledge of the economy and of the effects of policy, (this is the "discretion" part of constrained discretion). However, a crucial proviso is that, in conducting stabilization policy, the central bank must also maintain a strong commitment to keeping inflation--and, hence, public expectations of inflation--firmly under control (the "constrained" part of constrained discretion). Because monetary policy influences inflation with a lag, keeping inflation under control may require the central bank to anticipate future movements in inflation and move preemptively. Hence, constrained discretion is an inherently forward-looking policy approach.

The maintenance of price stability and equally important, the development by the central bank of a strong reputation for and commitment to it serves to anchor the private sector's expectations of future inflation. Well anchored inflation expectations not only make price stability much easier to achieve in the long term but also increase the central bank's ability to stabilize output and employment in the short run. Short-run stabilization of output and employment is

relationship in the control of inflation. That is, the central bank can use the real-nominal (unemployment-inflation) correlations in the empirical data as a reliable lever with which to trade off between these variables.

The other tradition, the quantity theory, makes monetary control the central behavioral relationship. That is, to control inflation, the central bank must control the rate at which nominal money grows relative to real money demand by the public. The former tradition, but not the latter, implies that the control of inflation imposes a tradeoff between variability in real output and inflation. **(Hetzel, 2005)**

"During the 1980s and 1990s, the Federal Reserve succeeded in bringing inflation down from double-digit levels to the average rate of about 2 percent that has prevailed over the past decade. Moreover, when some measures of inflation were close to 1 percent in 2003, the Federal Open Market Committee's official statements specifically noted that any further substantial decline in inflation would be unwelcome, mainly because of the risk that a falling price level (which has not occurred since the Great Depression) could cause a significant disruption to economic activity and employment.

In recent years, the Federal Reserve has been quite successful in maintaining a nominal anchor. Not only has the inflation rate remained within a reasonably narrow range, but inflation expectations, as measured by spreads between inflation-indexed and non-inflation-indexed Treasury securities and by surveys of professional forecasters and the general public, have also been well anchored.

In particular, although the Federal Reserve can determine and achieve the long-run average rate of inflation in keeping with its

aggressively without being worried that the easing will cause inflation expectations to rise.

Inflation targeting is a recent monetary policy strategy that encompasses five main elements:

1. The public announcement of medium-term numerical targets for inflation.
2. An institutional commitment to price stability as the primary goal of monetary policy, to which other goals are subordinated.
3. An information inclusive strategy in which many variables, and not just monetary aggregates or the exchange rate, are used for deciding the setting of policy instruments.
4. Increased transparency of the monetary policy strategy through communication with the public and the markets about the plans, objectives, and decisions of the monetary authorities.
5. Increased accountability of the central bank for attaining its inflation objectives. (Mishkin F. S., 2001)

These elements reflect both theory and experience that suggest central banks cannot consistently pursue and achieve multiple goals, such as low inflation and low unemployment, with only one basic instrument the policy interest rate (for example, the federal funds rate in the United States or the bank rate in the United Kingdom). These elements also recognize that over the long term monetary policy can influence nominal but not real (inflation-adjusted) variables; high inflation harms growth and the equitable distribution of income; and expectations and credibility significantly influence the effectiveness of monetary policy. **(Scott, 2010)**

Moreover, there are two additional different frameworks for explaining how central banks control inflation. One framework makes an "exploitable" Phillips curve the central behavioral

authorities to the achievement of these targets", with the target usually in the "low single digits." In addition, inflation targeting is often associated with changes in the central bank law that enhances the independence of the institution. In practice, while few central banks reach the "ideal" of being "fully fledged" inflation-targeting institutions, many nonetheless focus on fighting inflation to the virtual exclusion of other goals. (Epstein & Yeldan, 2008)

Inflation targeting requires a decision be made on what price stability means in practice. Alan Greenspan has provided a widely cited definition of price stability as a rate of inflation that is sufficiently low that households and businesses do not have to consider it in making everyday decisions. This definition of price stability is a reasonable one and operationally, any inflation number between zero and 3% seems to meet this criterion. Although some economists such as Feldstein (1997) argue for a long-run inflation goal of zero, others, such as Akerlof, Dickens and Perry ((1996), argue that setting inflation at too low a level produces inefficiency and will result in increase the natural rate of unemployment. The Akerlof, Dickens and Perry argument is, however, highly controversial, and a possible stronger argument against setting the long-run inflation target at zero is that a target of zero would make deflations more likely and deflations can lead to financial instability and sharp economic contractions. In practice, all inflation targeters have chosen long-run inflation targets above zero, with point targets or midpoints of target ranges between 1 and 3%. Once inflation has reached low levels, inflation targeters have also made their inflation targets symmetrical, with undershoots of the targets considered as costly as overshoots. Indeed, inflation targeters have argued that symmetrical inflation targeting helps central banks to stabilize real output, because in the face of a weak economy, an inflation targeters can ease more

the trade balance. It might lead to unemployment in export industries and in industries that compete with imports.

● **Uncertainty:** Not only might there be reduced investment due to a fall in the availability of savings, and higher nominal interest rates, but also firms may be discouraged from investing due to the uncertainty associated with inflation. Again, this has negative implications for economic growth.

● **Labor unrest:** This may occur if workers do not feel that their wages and salaries are keeping up with inflation. It may lead to disputes between unions and management. (AMADEO, 2019)

Inflation targeting

Along with inflation target rates and calendar dates to be used as performance measures, an inflation targeting policy may have established steps that are to be taken depending on how much the actual inflation rate varies from the targeted level, such as cutting lending rates or adding liquidity to the economy. **(CHAPPELOW, 2010)**

Further, inflation targeting has become the dominant monetary policy prescription for developing and industrialized countries alike. Initially adopted by New Zealand in 1990, the norms surrounding the inflation-targeting regime have been so powerful that virtually all Central Banks have declared that maintaining price stability with inflation in the "low single digits" is their only mandate. It is further maintained that price stability will lead to sustained growth and employment creation.

Furthermore, the inflation targeting policy framework involves "the public announcement of inflation targets, coupled with a credible and accountable commitment on the part of government policy

employed. Thus, inflation reduces the purchasing power of their incomes, and will reduce their living standards. It is important to realize that expectations about inflation are important. Even when people's incomes are linked to inflation, they can be negatively affected if the actual rate of inflation turns out to be higher than the expected rate. For example, if the expected rate of inflation is 1.5% and wages are therefore increased by 1.5%, then workers will lose purchasing power if inflation turns out to be 2.5%.

● **Effect on saving:** If you save $1,000 in the bank at 4% annual interest, then in one year's time you will have $1,040. If the inflation rate is 6%, then the real rate of interest (the interest rate adjusted for inflation) will be negative, and your savings will not be able to buy as much as they could have in the previous year. You would have been better off spending the money rather than saving it, because it will have lost some of its purchasing power. Therefore, we say that inflation discourages saving. If people do want to save money, rather than spend on consumption, then they may choose to buy fixed assets, such as houses or art. This means that there are fewer savings available in the economy for investment purposes, and this has negative implications for economic growth.

● **Effect on interest rates:** Commercial banks make their money from charging interest to people who borrow money from them. If there is a high rate of inflation, then banks raise their nominal interest rates in order to keep the real rate that they earn positive.

● **Effect on international competitiveness:** If a country has a higher rate of inflation than that of its trading partners, then this will make its exports less competitive, and will make imports from lower-inflation trading partners more attractive. This may lead to fewer export revenues and greater expenditure on imports, thus worsening

Inflation targeting thus eliminates the inefficiencies associated with sticky prices. (Fuerst & S., 2002)

Costs of Inflation

One widely examined cost of inflation is the welfare loss that results when anticipated inflation leads agents to reduce their real money balances. An optimizing agent will demand real balances until the marginal benefit they yield is just equal to their marginal cost. If real balances bear no interest, the opportunity cost of holding them is proportional to the nominal rate of interest. Higher inflation then leads to higher interest, and hence lowers real balances, and this reduction in real balances involves a welfare loss because the social cost of producing real balances has remained substantially unaffected. (Dowd, 1994)

Additionally, the reason that governments wish to have a low rate of inflation is there are a significant number of negative consequences associated with high levels of inflation.

● **Loss of purchasing power:** If the rate of inflation is 2%, then this means that the average price of all goods and services in the economy has risen by 2%. If your income remains constant, then you will not be able to buy as many goods and services as you could before the increase in the average price level. We say that there is a fall in real income, which means that there is a decrease in the purchasing power of income. If your income is linked to the inflation rate, so that you automatically get a 2% "cost-of-living" increase, then you will not face a fall in your real income. This is the case for many jobs, particularly where there are strong unions. However, many people have jobs that do not offer the security of inflation-linked incomes. This may be because they are on fixed incomes, because they have weak bargaining power, or because they are self-

promotes long term growth. Some of the numerous benefits of using inflation targeting are as follows:

- Enhanced financial growth.
- Reduced relative price variability.
- Less arbitrary redistribution.
- Less twisting inflation taxation.
- Lowers inflation and makes it less volatile.
- Reduces the real costs of disinflation.
- Inflation anchors long-run inflation expectations at, or very close to, the inflation target. (MARTÍNEZ, 2008)

Inflation targeting is an effective monetary policy, which provides better nominal anchor for monetary policy and inflation expectations.

Inflation targeting appeals to so many central banks because variable inflation is thought by many to be costly. One cost of variable inflation is that if it is unanticipated, it can lead to excessive output variability. Another problem with variable inflation is the misallocation of resources caused by sticky prices. With sticky prices, an increase in the money supply will lead to an increase in the demand for the goods of firms that do not he raise their price relative to those that do. The result is that while real output increases, resources (labor and capital) are misallocated between firms that adjust their prices and firms that cannot. Eventually, these resources flow back to where they are most valued, but adjustments are costly. Once again, inflation variability may lead to excessive variability in output.

The presumed benefit of inflation targeting is clear. If prices are predictable, firms can preset their prices without risk. Prices will be the same tomorrow whether or not firms can adjust their prices.

industrialized countries during the 1970s, when a bad economy was combined with OPEC raising oil prices.

Causes of Inflation

There are many causes for inflation, depending on a number of factors. For example, inflation can happen when governments print an excess of money to deal with a crisis. As a result, prices end up rising at an extremely high speed to keep up with the currency surplus. This is called the **demand-pull Inflation**. "Inflation caused by increases in aggregate demand due to increased private and government spending, etc. Demand inflation is constructive to a faster rate of economic growth since the excess demand and favorable market conditions will stimulate investment and expansion." (Ball, 1993) Moreover, in the old Quantity Theory tradition (e.g. Friedman, 1956) inflation results from a simple exogenous increase in money supply in which the money was thrown from an ad hoc but memorable helicopter. In modern versions (e.g. Friedman, 1968) an output-inflation tradeoff and the policymakers intention to maintain full employment are the essential force behind inflation. The older version proclaims that inflation is always a monetary phenomenon, while the modern affirms that monetary policy determines inflation in the long run, but in the short run it has effects on the level of unemployment. The existence of a tradeoff between inflation and unemployment, and the willingness of governments to exploit it, is seen as the main explanation for the existence of persistent inflation in developed countries. (McCallum & Nelson, 2010)

Benefits of Inflation Targeting

The most important benefit of inflation targeting is that it helps the central banks to maintain low inflation and low inflation eventually

associated with larger tradeoff between output and inflation, but the effects are only statistically significant in the IT regime.

Villavicencio, & Pourroy, (2019) estimated the effects of different forms of inflation targeting (IT) in the exchange rate pass-through (ERPT). To this end, they first estimate the ERPT for a large sample of countries using state-space models. Then they consider the adoption of an inflation targeting framework by a country as a treatment to find suitable counterfactuals to the actual targeters. By controlling for self-selection bias and endogeneity of the monetary policy regime, Villavicencio, & Pourroy, confirm that the ERPT tends to be lower for countries adopting explicit IT. However, the researchers uncover that older regimes, adopting a range or point with tolerance band and keeping inflation close to the target, outperform other IT regimes. They also show that IT is effective even with a relatively high inflation target or low central bank independence.

Inflation is a quantitative measure of the rate at which the average price level of a basket of selected goods and services in an economy increases over some period of time. **(CHEN, 2020)**

There are several variations on inflation:

- **Deflation:** is when the general level of prices is falling. This is the opposite of inflation.
- **Hyperinflation:** is unusually rapid inflation. In extreme cases, this can lead to the breakdown of a nation's monetary system. One of the most notable examples of hyperinflation occurred in Germany in 1923, when prices rose 2,500% in one month!
- **Stagflation:** is the combination of high unemployment and economic stagnation with inflation. This happened in

the fact that emerging market economies adopted the regime much later than industrial economies.

Araujo, Araújo, & Filho (2018) studied and analyzed theoretically and empirically the relationship between monetary institutions and macroeconomic performance in Brazil, in the period after the adoption of the inflation targeting regime (ITR), in 1999. The hypothesis is that the monetary institutions inhibited economic growth, rather than being effective at controlling inflation, whose main causes are related to structural and institutional factors, indexation process and domestic and external shocks. The main results of the ITR, embodied in the highly restrictive monetary policy, are the following negative effects: A reduction in Gross Domestic Product (GDP) growth rates, a rise in the stock of public debt and an appreciation of the domestic currency. Likewise, the ITR has not been successful in maintaining inflation rate below its target. In this respect, revisions in the Brazilian monetary institutions would be essential to improve the results of the ITR, both in terms of actual inflation and economic performance.

Huang, Yeh, & Wang (2019) in their article assesses whether the adoption of inflation targeting (IT) helps reduce the output-inflation tradeoff. They address the self-selection problem of IT policy adoption by the endogenous switching regressions, and show that the output-inflation tradeoffs are significantly lower in IT countries not only over the whole sample but also across the developed and developing country subsamples. In addition, Huang, Yeh, & Wang also find strong evidence supporting the positive selection hypothesis, i.e., countries have higher probability of adopting IT are exactly those who benefit more (larger reduction of output-inflation tradeoff) from the implementation of IT. Additional results reveal that economies with higher trade openness, lower financial openness, and less flexible exchange rate regime are

وكيف يمكن أن تنخفض بسبب السماح بهذه النسبة الصغيرة من التضخم (استهداف

التضخم).

Lecture review

(Mishkin, 2001) Inflation targeting Prepared for Brian Vane and Howard Vine, *An Encyclopedia of Macroeconomics* (Edward Elgar: London, forthcoming). The views expressed in this paper are exclusively those of the author and not those of Columbia University or the National Bureau of Economic Research.

Goncalves and Salles (2008) Inflation targeting in emerging economies: What do the data say? extend Ball and Sheridan's analysis (Does inflation targeting matter?) for a subset of 36 emerging market economies and find that, for them, the story is quite different. Compared to non-targeters, developing countries adopting the inflation targeting regime not only experienced greater drops in inflation, but also in growth volatility, thus corroborating the view that the regime's "constrained flexibility" to deal with adverse shocks delivered concrete welfare gains.

Mollick, Cabral, & Carneiro, (2011) examined the effects of inflation targeting on output growth over the "globalization years" of 1986–2004. Employing static panel data methods that control for traditional growth determinants, trade openness and financial globalization, the paper finds that the adoption of a fully-fledged IT regime results in higher output income per capita for industrial and emerging economies. However, under dynamic model specifications, the estimated long-run output impact of inflation targeting for emerging market economies is found to be lower than in the case of static models. We argue that this might be due to the long lags until the full effects of greater credibility are felt in the real economy and

A LITTLE INFLATION IS A GOOD THING

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Abstract

Inflation considers one of the monetary policy important tools to control the economic and posh it to a considerable stability. On the other hand, to achieve that goal the economic policy makers have to allow small percentage of inflation. That percent of inflation we will talk about it in this paper. Therefore, we gave some concepts on the causes of the inflation as well as its costs. In addition, the researchers looked to the inflation impacts on the purchasing power and the exchange rates.   Further, we looked to the unemployment and how decreased due to allowing that small percent of inflation (inflation targeting).

الملخص

يعتبر التضخم من أهم أدوات السياسة النقدية للسيطرة على الاقتصاد، وإعطائه استقرارًا كبيراً من ناحية أخرى، لتحقيق هذا الهدف، يتعين على صانعي السياسة الاقتصادية السماح بنسبة صغيرة من التضخم. تلك النسبة المئوية للتضخم هي ما سنتحدث عنه في هذه الورقة، لذلك قدمنا بعض المفاهيم حول أسباب التضخم بالإضافة إلى تكاليفه. زيادة على ما تقدم، قام الباحثون بالتعريج على تأثيرات التضخم على القوة الشرائية وأسعار الصرف، علاوة على ذلك، نظرنا إلى البطالة